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MEDS 043 DYNAMICS OF URBAN PLANNING AND DEVELOPMENT

Dear Learner,

Welcome to the Course MEDS – 043 on “Dynamics of Urban Planning and Development”. As you all are aware that the most crucial problem in the process of urbanization in India surrounds around the issues of sustainable development. Now sustainable development is an important development agenda of the 21st century and is one of the vital paradigm shifts in development. All countries have to take appropriate measures for the promotion of sustainable development, therefore, the United Nations has emphasized its institutional framework for sustainable development. This has led to the formation of new development plans, policies, programmes under the institutional framework of United Nations. The nation states have initiated a number of urban reforms, giving more emphasis on urban finance and issues related with various components of disaster management. The course is divided into following five blocks.

The Block 1 comprises of basic components and significance of public administration and meaning and importance of sustainable development, and the role of public administration in achieving the goals of sustainable development. The concepts and dynamics of natural resource management in urban planning and development set up and role and significance of environment management system have also been covered in this unit.

The Block 2 deals with urban development plans, policies and programmes by giving global overview and then it discusses urban development policies in India, and finally analyses the various urban development programmes conducted by the Government of India since independence.

The Block 3 describes the urban reforms done under various sectors with particular emphasis on the legal and structural reforms. It explains the role of decentralization in quick decision making and people's participation in urban governance. Finally, it discusses the role and importance of rural – urban continuum as a model in governance.

The Block 4 deals with emerging issues in municipal finance, wherein the role and significance of fiscal decentralization has been discussed at the global and national level. It also describes the various issues related to municipal finance in India citing various examples and case studies.

The Block 5 deals with the importance and growing significance of disaster management. It classifies the disaster and highlights the recent trends in disaster management, and how community can participate in the disaster management. It also discusses the various strategies used in disaster management.

BLOCK 1 SUSTAINABLE DEVELOPMENT: AN OVERVIEW

Enormous amount of writing and literature has been prepared on different components of sustainable development by the scholars all over the world including international institutions like the World Bank, United Nation Organizations and European Commission and many others. There is also a growing concern and interest on seeing the sustainable development in the context of urban development. Growth of urban population is only one of dimensions of urbanization. This particular block on Sustainable Development will give an holistic understanding about the various dynamics and concepts of urban development within the framework of sustainable development.

Unit 1, Sustainable Development: An Overview, discusses and differentiates the merits and demerits of different measures of economic development. It defines the components of sustainable development, analyzes the sustainable development path, sustainable community ecosystem approach, and different indicators of sustainable development. Finally, the unit suggests measures for the promotion of sustainable development.

Unit 2, Public Administration and Sustainable Development, deals with the role and significance of public administration in achieving the goals of sustainable development. It describes the effectiveness and efficiency of public services institutions in the management and governance of resources including human resource in the areas of human rights, information sharing, and gender equality, rule of law, integrity and transparency.

Unit 3, Management of Natural Resources, discusses the issues related with the management of natural resources. It also shows, how the exponential increase in human population and increased technological advancement has led to the ruthless exploitation of natural resources, and suggests that there is a need for optimization of its usage. This unit also covers, how, effective management of natural resources is significantly required for sustainable development.

Unit 4, Environment Management System, deals with the management of an organization's environmental programs in a comprehensive, systematic, planned and documented manner. It includes the organizational structure, planning and resources for developing, implementing and maintaining policies for environmental protection.

UNIT 1 SUSTAINABLE DEVELOPMENT: AN OVERVIEW

Structure

- 1.1 Introduction
 - 1.2 Sustainable Development: Concept and Definition
 - 1.3 Components of Sustainable Development
 - 1.4 Indicators of Sustainable Development
 - 1.5 Measures to Promote Sustainable Development
 - 1.6 Let Us Sum Up
 - 1.7 References and Selected Readings
 - 1.8 Check Your Progress - Possible Answers
-

1.1 INTRODUCTION

Sustainable development has become a buzzword in different forums, seminars, and workshops. You might have read and heard about this concept. In this unit you will know more about the concept. Sustainable development stands for meeting the needs of present generations without compromising the ability of future generations to meet their own needs. In other words, it's a better quality of life for everyone now, and for the generations to come. It offers a vision of progress that integrates immediate and longer term objectives, local and global action. It regards social, economic and environmental issues as inseparable and interdependent components of human progress.

After studying this unit, you should be able to:

- Explain the meaning of sustainable development;
 - Describe various components of sustainable development;
 - Discuss various indicators of sustainable development; and
 - Suggest measures for the promotion of sustainable development.
-

1.2 SUSTAINABLE DEVELOPMENT: CONCEPT AND DEFINITION

Sustainable development has become a buzzword in different forums, seminars, workshops. It is found much in environmental and economics literature these days. The concern for sustainable development is becoming increasingly louder with the rapidity of economic growth. Around the globe, throughout history, most modern human institutions have evolved in ways that are at best, oblivious, and, at worst, positively hostile to the health of environment. Economic development, till today, is based on two fallacious premises:

- 1) It considers needs of mankind alone and ignores the interdependent ecosystem
- 2) It treats the environment as a commodity.

Human being strives ceaselessly for riches as enslaved and obsessed by technological advancement and by obtaining higher GNP. This obsession has sullied the environment and is tending to ruin the carrying capacity that is, capacity

of the ecosystem to support life of Mother Earth. The land lays scarred and eroded. The waters of rivers, lakes and oceans are contaminated with industrial waste, which is nearly unfit for either industrial use or for human consumption. The air is filled with gaseous and particulate pollutants that are toxic to life. Pesticides used to promote agricultural production and public health has severely poisoned the environment. Each agent of production and consumption regards the disposal cost of waste as zero and uses the environmental sector as long as it permits human being to improve their own welfare. They do not have to pay anything to anybody. The environment is still regarded as common property, each agent acting as if the human being owns it. The reckless use continues, without any heed to the damage inflicted, and causes degraded environmental standards, unhealthy and detrimental to all.

“Our Common Future” marks the beginning of the sustainable development concept that has generated all the literatures. New books on sustainable development have been appearing with increasing rapidity since the United Nations Conference on Environment and Development popularly known as the Earth Summit held in Brazil in 1992. Divergent economic theorists like E. F. Schumacher of Britain, environmentalists like Barry Commoner and Lester R. Brown, population analysts like Paul Ehrlich, politicians like Willy Brandt of Germany and Jimmy Carter of the United States, all played significant roles in formulating ideas.

The era of modernisation has created an atmosphere of excitement of instant economic growth. In fact, all sectors of developing countries seem to be vibrating with economic buoyancy. There is expansion of trade, investment, market, and increase in Gross National product (GNP) productivity, per capita income, profit, efficiency, salary, etc, across the globe. The free trade system could more tellingly be called the free ride system. As the producers do not have to include in their product costs all the indirect costs they cause society. It includes pollution of the land, sea and air, ozone holes, disappearing topsoil, exploding health costs, allergies, global warming, destruction of species, pesticides in food, antibiotic-resistant bacteria, crime, unemployment, escalating social costs, etc. Many of the most common and most damaging products on the market would never be manufactured if they were priced at their real costs to society as a whole. The road to success in global business today is to find a way to pass on as many of your costs as possible to the public, preferably to another country’s public. The most profitable companies at this time are those that are most successful at getting someone else to pay the real costs of their doing business. Present economic process maximises only the profits to the shareholders, while all the other stakeholders are left bearing the costs, such as, cleaning up the environment and dealing with unemployment.

The term, sustainable development, was coined by the Brundtland Commission, which defines sustainable development as development that “*meets the needs of the present without compromising the ability of future generations to meet their own needs*”. Sustainable development is defined as balancing the fulfilment of human needs with the protection of the natural environment so that these needs can be met not only in the present, but in the indefinite future. Sustainable development is a pattern of resource use that aims to meet human needs while preserving the environment. The field of sustainable development is conceptually divided into four general dimensions: social, economic, environmental, and

institutional. The first three dimensions address key principles of sustainability, while the final dimension addresses key institutional policy and capacity issues.

There is, now, a worldwide movement of environmentalism parallel to the more enthusiastic global movement of economic growth. Every section of people around the globe now expresses some amount of concern towards the deterioration of environmental standards. The rise in economic welfare is increasingly accompanied by a considerable decline in the quality of environment and loss of ecological stability. Some groups of environmentalist are very pessimistic while the other group of environmental scientists is very optimistic. But the fact remains that there is acid rain, global warming, the greenhouse effect, erosion and sterility of soil, degradation of land, environmental pollution and ozone layer depletion. There is widespread desertification in one hemisphere and deforestation in another hemisphere of the globe. Deeper and wider concern for environmental degradation springs from two major sources.

- 1) Rise in material production effluents and use of synthetic materials
- 2) Increased demand for environmental goods.

The first refers to the problems of environmental externality and the second, to depletion of natural resources. In addition to the increased supply of economic goods, there is also an increased demand for environmental goods. Environmental goods signify any external environmental conditions that affect human welfare. The following elements are connected with the human welfare

- Absence of all types of pollution
- Availability of clean water and air
- Quality of natural environment (outdoor recreation, etc)
- Quantity of natural environment(forest, wildlife)
- Availability of public utility systems
- Average space availability for inhabitants

In this session you read about the concept of sustainable development, now answer the questions given in *Check Your Progress 1*.

Check Your Progress 1

Note: a) Write your answer in about 50 words.

b) Check your answer with possible answers given at the end of the unit

- 1) What is the need for sustainable development?

.....
.....
.....

- 2) What do you mean by sustainable development?

.....
.....
.....

1.3 COMPONENTS OF SUSTAINABLE DEVELOPMENT

In this section you will read about the various components of sustainable development. The three main components of sustainable development discussed here are

- i) Interconnectedness of the system
- ii) Sustainable development path
- iii) Intergenerational approach.

i) Interconnectedness of the System

Traditionally we use numbers to show progress. Employment rose by 0.8 percent in January, or, the economy grew by 2% last year, air pollution has declined by 0.2 per cent, dowry death has increased by 1.3%, etc. However, the traditional numbers only show changes in one part of the community without showing the various links between the community's economy, society, and environment.

It is as if a community was made of three separate parts:

- i) An economic part
- ii) A social part
- iii) An environmental part.

In this view, the parts do not overlap like the picture below (figure-1)

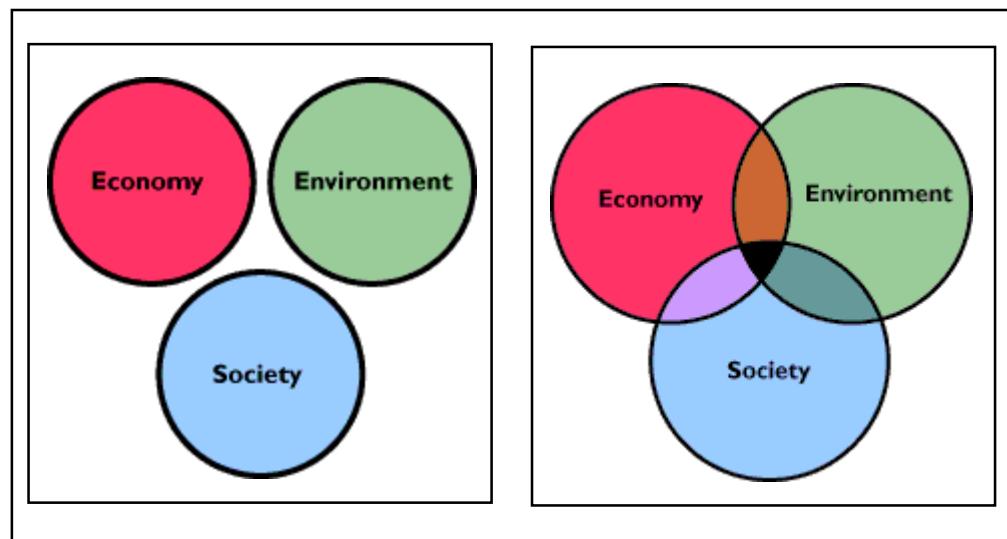


Fig. 1.1: Interconnectedness of the three systems

However, when society, economy, and environment are viewed as separate, unrelated parts of a community, the community's problems are also viewed as isolated issues. This piecemeal approach has a number of negative side effects. Sustainable development depends on the links between the economy, the environment and the society. Figure-1, above, is frequently used to show the interconnectedness of three systems. Understanding the three parts and their links is the key to understanding sustainability as sustainability is about more than just quality of life. It is about understanding the connections and achieving balance among the social, economic, and environmental pieces of a community.

Sustainable development is a dynamic concept, as a wide array of views fall under its umbrella. There may be as many definitions of sustainability and sustainable development. All the definitions have to do with:

- Living within the limits
 - Understanding the interconnections among economy, society, and environment
 - Equitable distribution of resources and opportunities.

Sustainable development involves the simultaneous pursuit of economic prosperity, environmental quality and social equity. Sustainable community development is the ability to make development choices which respect the relationship between the three E's, that is economy, ecology, and equity.

- **Economy** - economic activity should serve the common good, be self-renewing and build local assets and self-reliance.
 - **Ecology** - humans are part of nature, nature has limits, and communities are responsible for protecting and building natural assets.
 - **Equity** - the opportunity for full participation in all activities, access, benefits and decision-making of a society.

Figure 1.2 illustrates all three dimensions of sustainable development. Sustainable development cannot ignore any of the three. If we neglect the social dimension, the development process may be viable, if we disregard the environmental dimension, development process may be equitable and if we pay no heed to the environmental dimension, the development process may be bearable, but not sustainable.

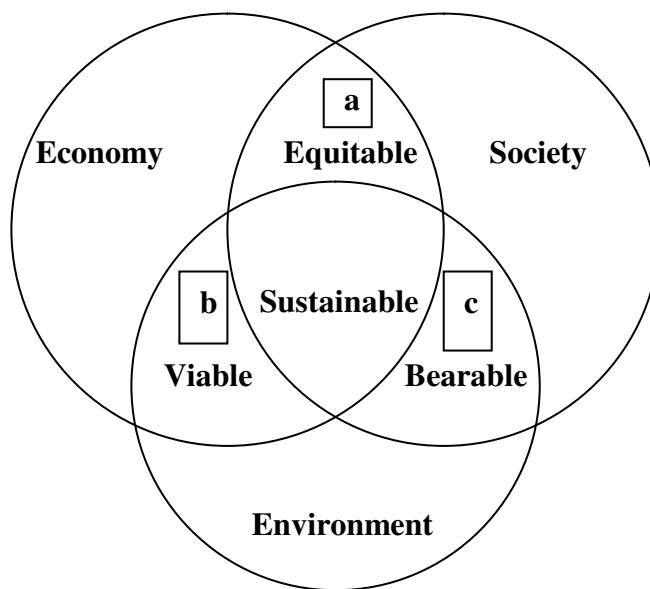


Fig.1.2: Sustainable Development

In other words, the search for equity

- a) Neglects environmental aspects and the search for viability;
 - b) Neglects social dimension and the search for bear ability;
 - c) Ignores economic efficiency.

Thus, a sustainable development process is that trajectory which is a synergy of efficiency, equity and social acceptability. Sustainable development shows a compassionate concern for the posterity and for the world as a whole. It contends that social development, environmental soundness, and economic growth are not contradictory or incompatible. Healthy environment and good society are, rather, prerequisites for sustainable development. Sustainable development is based on a broader economic system which fulfils inter-generational equity criteria. Its objectives are focused on the future, not the present, quality not quantity, protection not production, conservation not consumption.

ii) The Path of Sustainable Development

Sustainability implies irreversibility in the process of development. It necessitates the maintenance of the level of wellbeing so that it improves, and, at the least, never allows a decline over time. Thus, sustainable development has three interdependent and mutually reinforcing pillars:

- i) Economic development,
- ii) Social development
- iii) Environmental protection.

It does not focus solely on environmental issues. We should differentiate between green development and sustainable development. The proponents of green development prioritise environmental sustainability over economic and cultural considerations. But cultural diversity is as necessary for humankind as biodiversity is for nature. It is one of the roots of development understood not simply in terms of economic growth but also as a means to achieve a satisfactory social, intellectual, emotional, moral and spiritual existence. In this sense, cultural diversity is the fourth policy area of sustainable development. Developing countries are not only rich in biodiversity but also in cultural diversity. In Figure.3 illustrates the path of sustainable development. It shows that Path N is unsustainable and non-survivable. Development path E is efficient but not sustainable. But path S is sustainable. Path E looks more attractive, but Path S is not impressive in the early stage. Path E has a maximum point after which it curls down. But Path-S is slow and steady, having no maximum survival limit.

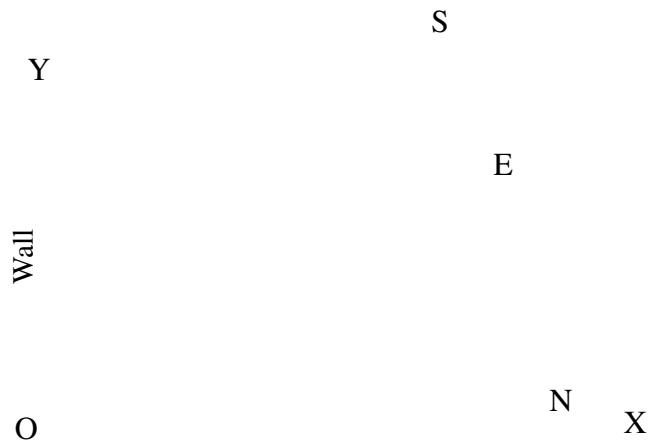


Fig.1.3: Sustainable Development Path

Source: Das (2009) Sustainable Development Path

Sustainability is related to the quality of life in a community. Whether its economic, social, and environmental systems that make up the community and it is providing a healthy, productive, meaningful life for all community, either present or in future. It involves following three questions -

- i) How has your community changed, economically?
- ii) How has your community changed, socially?
- iii) How has your community changed, environmentally?

Thus, the field of sustainable development can be conceptually broken into three constituent parts:

- i) Environmental sustainability
- ii) Economic sustainability
- iii) Socio-political sustainability.

Sustainable development integrates the imperatives of developmental and environmentalism. It highlights the long term doomsday scenario and puts emphasis on economic, social, and ecological integration. It has three objectives.

- i) Economic efficiency
- ii) Social acceptability
- iii) Ecological sustainability.

Sustainability is an issue encompassing all the communities starting from small rural milieu that are fast losing the natural environment on which their livelihoods depend to large metropolitan cities where crime and poverty are decreasing the quality of life. Sustainability does not mean static equilibrium where nothing ever changes. Rather, it does mean a utopia where nothing bad ever happens. Sustainability is not about maintaining the *status quo* or reaching perfection. It is not a community where nothing ever goes wrong. Sustainability does not mean that businesses never fail, or that people never go hungry, or that pollution never happens. The process of a sustainable development seeks to maintain and improve the economic, environmental and social characteristics of an area. The improvement helps its members so that they can continue to lead healthy, productive, enjoyable lives at present and in future. Sustainability implies that when problems arise, we look for solutions that take into account all three dimensions of the community instead of applying a quick fix in one area that causes problems in another. It is not against growth nor does it imply unlimited growth. Rather, at some point, a sustainable community stops getting larger but continues to change and improve, to develop in ways that enhance the quality of life for all its inhabitants.

iii) Intergenerational Approach

Sustainable development improves the economy without undermining the social or environmental imperatives. Sustainable development focuses on improving our lives without continually increasing the amount of energy and material goods that we consume. A sustainable community does not consume resources energy and raw materials faster than the regenerative capacity of the natural systems. We are currently living unsustainable lives.

If we are not careful how we use and dispose of resources, our children, grandchildren and great-grandchildren will have a poorer, more polluted world to live in. A sustainable community interacts with four types of capital:

- i) Natural,
- ii) Human,
- iii) Social,
- iv) Built capital.

All four types of capital need to be cared for. A sustainable community wisely manages all its capital - using and improving the social, natural and built capital in ways that allow that capital to continue to support that community in the future. Sustainability requires that human activity only uses nature's resources at a rate at which they can be replenished naturally. An unsustainable situation occurs when natural capital (the sum total of nature's resources) is used up faster than it can be replenished.

Inherently, the concept of sustainable development is intertwined with the concept of carrying capacity. In fact natural capital, social capital, and economic capital are often complementary. Carrying capacity is the size of the population that can be supported indefinitely upon the available resources and services of supporting natural, social, human, and built capital. Living within the limits of an ecosystem depends on three factors:

- i) The amount of resources available in the ecosystem
- ii) The size of the population, and
- iii) The amount of resources each individual consumes.

Thus, there is urgent need to develop an ecosystem approach, or inter generational approach for the management of natural capital and social capital. Ultimately, an ecosystem approach tends to evolve and change from a consumptive economy to an economy oriented towards conservation, maintenance of capital stock, and recycling of materials. Impoverishment of an ecosystem means the devastation of the entire society that depends upon it. Thus, an ecosystem approach is a compassionate concern for posterity and for the planet as a whole. Dismal economic growth is not enough to bring welfare to mankind. Man is an organic being, whose total development depends, to a large extent, on the non-economic, sociological, psychological factors, and, on a meaningful sustainable balance between him and the environment (social and natural) in which he lives.

There are many contradictions and inconsistencies in the goal of sustainable development. It poses a great dilemma and a great challenge. Confronting the challenge is very costly, but not facing the challenge is really disastrous for the whole society. However, the idea of sustainable development should be less idealistic and more practical. We do not have to choose between an environmentally healthy and economically robust nation. Both are compatible. We can have both. We are intelligent enough have the ability to develop enough new technologies and can change our behaviour enough to confront all the problems facing us, and to create optimal solutions.

1.4 INDICATORS OF SUSTAINABLE DEVELOPMENT

Indicators of sustainable development are more in the nature of indices that reflect the state of overall concepts or social goals such as human development, sustainable development, the quality of life, or socioeconomic welfare. Indicators provide early warnings about non sustainable trends of economic activity and environmental deterioration. They are the ‘nutshell’ indicators favoured by policy makers. Sustainable development indicators proliferated in the wake of the Rio Earth Summit’s call for indicators of sustainable development (United Nations 1994, Agenda 21). Let us discuss a few selected indices of sustainable development.

Important indicators of sustainable development are:

- i) Gross Sustainable Development Product
- ii) Environmental Kuznets Curve
- iii) Social Indicators for Sustainable Development

i) Gross Sustainable Development Product

Among different aggregation methods, green accounting is a common physical or monetary averaging. It is most commonly applied. The concept of Green GDP has been modified as Gross Sustainable Development Product (GSDP), which is defined as the total value of production after giving due care to social capital and natural capital of a region over a specified period of time. It is designed to replace the Gross Development Product (GDP) as the primary indicator of the economic performance of a nation. It takes into account:

- The economic impact/costs of environmental degradation
- Impacts of changes in quality systems on national income and wealth
- Global concerns and their impacts on the economy and ecology and society
- The welfare, economic development, and quality of life of future generations
- Expenditures on pollution abatement and clean-ups
- The status of each resource and the stocks and productive capacities
- The depreciation or appreciation of natural assets
- The ecological processes and biological diversity
- The costs of economic growth, resources uses of present and future generations.

The measurement of GSDP shows that consumption levels can be maintained without depleting and depreciating the quality and quantity of services for the present and future. It indicates the solutions to the problems as well as the directions to take, such as:

- Invest in technology, R and D
- Increase productivity and end-use efficiency

- Modify social services, educational programs
- Slow down or increase economic growth
- Remediate components of major quality systems; and
- Rectify present shortcomings of income and wealth accounts.

The measurement of GSDP also gives a proper and sound signal to the public, government and industry about the rate and direction of economic growth. It identifies environmental, health, and social quality; it identifies sustainable and unsustainable levels of resource and environmental uses; it measures the success or failure of sustainable development policies and practices; and it identifies resource scarcity. The primary goal of a sustainable local community is to meet its basic resource needs in ways that can be continued in the future.

ii) Environmental Kuznets curve

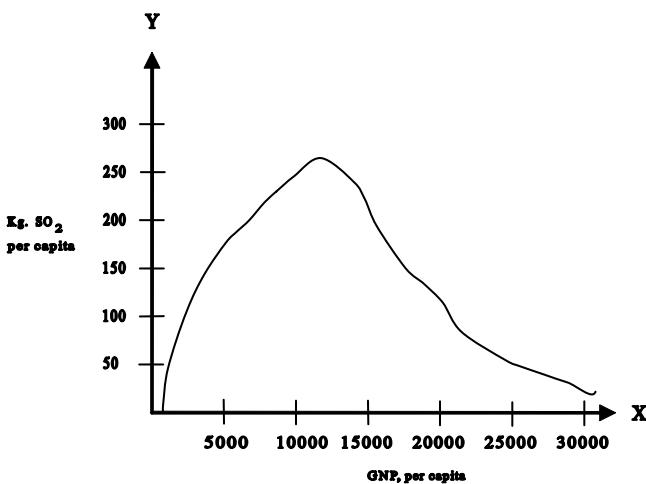
Some forms of pollution appear first to worsen and later to improve as countries' incomes grow. The world's poorest and richest countries have relatively clean environments, while middle-income countries are the most polluted. As of its resemblance to the pattern of inequality and income described by Simon Kuznets (1955) this pattern of pollution and income has been labelled an 'Environmental Kuznets Curve' (EKC). Grossman and Krueger (1995) and the World Bank (1992) first popularised this idea, using a simple empirical approach. Data are regressed on ambient air and water quality in cities worldwide on a polynomial in GDP per capita and other city and country characteristics. Then, plot the fitted values of pollution levels as a function of GDP per capita, and demonstrate that many of the plots appear inverse U-shaped, first rising and then falling. The peaks of these predicted pollution-income paths vary across pollutants, but 'in most cases they come before a country reaches a per capita income of \$8000' in 1985 dollars (Grossman and Kruger, 1995, p. 353). In simple terminology, the EKC shows the relationship between the environmental degradation and the per capita income. The proponents of EKC are of the opinion that in the early stages of economic growth, degradation and pollution increase. But beyond some level of per capita income, the trend reverses, so that at high-income levels, economic growth leads to environmental improvement. This implies the environmental impact indicator is an inverted U shaped function of per capita income.

In the years since these original observations were made, researchers have examined a wide variety of pollutants for evidence of the EKC pattern. It includes automotive lead emissions, deforestation, greenhouse gas emissions, toxic waste, and indoor air pollution. Some investigators have experimented with different econometric approaches, including higher-order polynomials, fixed and random effects, splines, semi- and non-parametric techniques, and different patterns of interactions and exponents. Others have studied different groups of jurisdictions and time periods as well as have added control variables. It includes measures of corruption, democratic freedoms, international trade openness, and even income inequality (bringing the subject full circle back to Kuznets's original idea). However, some generalisations across these approaches emerge. Roughly speaking, pollution involving local externalities begins improving at the lowest income levels. Faecal coli form in water and indoor household air pollution are

examples. For some of these local externalities, pollution appears to decrease steadily with economic growth and we observe no turning point at all. This is not a rejection of the EKC; pollution must have increased at some point in order to decline with income eventually, and there simply is no data from the earlier period. By contrast, pollutants involving much-dispersed externalities tend to have their turning points at the highest incomes or even no turning points at all, as pollution appears to increase steadily with income. Carbon emissions provide one such example. This, too, is not necessarily a rejection of the EKC; the turning points for these pollutants may come at levels of per capita income higher than in today's wealthiest economies.

Another general empirical result is that the turning points for individual pollutants differ across countries. This difference shows up as instability in empirical approaches that estimate one fixed turning point for any given pollutant. Countries that are the first to deal with a pollutant do so at higher income levels than following countries, perhaps because the following countries benefit from the science and engineering lessons of the early movers. Most researchers have been careful to avoid interpreting these reduced-form empirical correlations structurally, and to recognise that economic growth does not automatically cause environmental improvements. All the studies omit country characteristics correlated with income and pollution levels, the most important being environmental regulatory stringency. The EKC pattern does not provide evidence of market failures or efficient policies in rich or poor countries. Rather, there are multiple underlying mechanisms, some of which have begun to be modelled theoretically. An example of EKC of sulphur emission is given below in Figure.4.

Environment Kuznets Curve for Sulfur Emission



Source: <http://www.ecoeco.org/pdf/stern.pdf>

Fig. 1.4:

iii) Social Indicators of Sustainable development

The social indicators of sustainable development as framed by the United Nations Commission on Sustainable Development (CSD) in 1995 are broadly categorised as:

- i) Poverty
- ii) Governance

- iii) Health
 - iv) Education
 - v) Demography.
- i) **Poverty:** Poverty is considered as one of the key indicators of sustainable development. Nations with a high percentage of people living the poverty line can not sustain their level of development. The sub themes as well as the core and other indicators to be covered in the area of poverty are given in Table 1.1.

Table 1.1: Poverty Indicators for Sustainable Development

Sub Themes	Core Indicators	Other Indicators
Income Poverty	Proportion of population living below poverty line	Proportion of population below \$1 a day
Income Inequality	Ratio of share in national income highest to lowest quintile	—
Sanitation	Proportion of population using an improved sanitation	—
Drinking Water	Proportion of population using an improved water sources	—
Access to Energy	Share of household without electricity or other modern energy services	Percentage of population using solid fuel for cooking
Living Conditions	Proportion of urban population living in slums	

Source: *Indicators of Sustainable Development: Guidelines and Methodologies*, United Nations, New York, 2007

- ii) **Governance:** Governance is the second key indicator of sustainable development. Good governance is an essential element of sustainable development. The sub themes of the governance in sustainable development are corruption and crime. The indicators are given in Table 1.2.

Table 1.2: Governance Indicators for Sustainable Development

Sub Themes	Core Indicators	Other Indicators
Corruption	Percentage of population having paid bribe	—
Income Inequality	Number of international homicides per 1,00,00 population	—

Source: *Indicators of Sustainable Development: Guidelines and Methodologies*, United Nations, New York, 2007

- iii) **Health:** The key indicators of sustainable health care are mortality, health care delivery, nutritional status and health status and risks. The core areas of these health care themes are delineated in Table 1.3.

Table 1.3: Health Indicators for Sustainable Development

**Sustainable Development:
An Overview**

Sub Themes	Core Indicators	Other Indicators
Mortality	Under Five Mortality Life Expectancy at Birth	Proportion of population below \$1 a day
Health Care Delivery	Percentage of population with access to primary health care facilities Immunization against child hood diseases	Contraceptive prevalence rate
Nutritional Status	Nutritional status of children	—
Health Status and Risks	Morbidity of major diseases such as HIV/AIDS, malaria, tuberculosis	Prevalence of tobacco use Suicide rate

Source: *Indicators of Sustainable Development: Guidelines and Methodologies*, United Nations, New York, 2007

- iv) **Education:** As far as education is concerned, sustainable education includes educational levels and literacy. The core indicators of education are given in Table 1.4.

Table 1.4: Education Indicators for Sustainable Development

Sub Themes	Core Indicators	Other Indicators
Educational Level	Gross intake ratio to last grade of primary education Net enrolment rate in primary education Adult secondary (tertiary) schooling attainment level	—
Literacy	Adult literacy rate	—

Source: *Indicators of Sustainable Development: Guidelines and Methodologies*, United Nations, New York, 2007

- v) **Demography:** The two vital demographic indicators of sustainable development are population growth and the dependency ratio. The indicators of demographic themes for sustainable development are given in Table 1.5. The high fertility rates and higher dependency ratios retard development. Therefore, sustainable development goals become difficult to attain.

Table 1.5: Demography Indicators for Sustainable Development

Sub Themes	Core Indicators	Other Indicators
Population growth rate	Total Fertility Rate	Ratio local residents to tourists in main tourist regions and destinations
Dependency ratio	Dependency ratio	—

Source: *Indicators of Sustainable Development: Guidelines and Methodologies*, United Nations, New York, 2007

In this session you have read about the indicators of sustainable development, now answer the questions given in *Check Your Progress 2*.

Check Your Progress 2

Note: a) Write your answer in about 50 words.

b) Check your answer with possible answers given at the end of the unit

- 1) What do you mean by Gross Sustainable Development Product?

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- 2) What is the Environmental Kuznets Curve?

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1.5 MEASURES TO PROMOTE SUSTAINABLE DEVELOPMENT

Sustainable development is an important development agenda of the 21st century and is one of the vital paradigm shifts in development. Countries have to take appropriate measures for the promotion of sustainable development. The United Nations has emphasised its institutional framework for sustainable development. It has mentioned for its attainment in its institutional framework for sustainable development, that good governance, sound economic policies, social democratic institutions responsible to the needs of the people and improved infrastructure is much needed. Moreover these are also the basis for sustained economic growth, poverty eradication, and employment generation.

Some suggested measures for the promotion of sustainable development follow.

- 1) The conservation of land, water and energy resources is fundamental for the promotion of sustainable development. Appropriate action has to be taken for the conservation of scanty resources. Conservation of resources by the present generation will provide future generation with widest range of possibilities.
- 2) The development of technologies and approaches which will minimise the environmental damages. Such development requires scientific knowledge and continuous investment.
- 3) Political and public support is critical to implement environmental targets.
- 4) Increasing the scope of public participation in environmental issues and, in particular, in planning processes.

5) Some countries have initiated good practices which are concomitant with the promotion of sustainable development:

- a) In Brazil, the bio-fuels programme has saved the country \$100 billion in external debt-a fact that makes such fuels attractive in many countries
- b) In China, the promotion of vehicles that are more efficient.
- c) In South Africa, the implementation of carbon capture and storage technology brings benefits in terms of technology transfer.

The United Nations has strengthened and integrated the three dimensions of sustainable development policies and programmes, and to promote the full integration of sustainable development objective with social development issues.

In this session you read about measures to promote sustainable development, now answer the questions given in *Check Your Progress 3*.

Check Your Progress 3

Note: a) Write your answer in about 50 words.

b) Check your answer with possible answers given at the end of the unit.

1) What are the important measures for the promotion of Sustainable Development?

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2) Write a few good practices for sustainable development?

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1.6 LET US SUM UP

In this unit, we dealt with the definition of economic growth and characteristics of economic development. We discussed the merits and demerits of different measures of economic development. We dealt with the definition and components of sustainable development. We analysed sustainable development path, sustainable community ecosystem approach. We analysed different indicators of sustainable development: Green Economic GDP, Gross Sustainable Development Product, Genuine Progress Indicator and Global Living Planet Index. Finally, we discussed the role of indigenous knowledge in sustainable development.

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1.8 CHECK YOUR PROGRESS - POSSIBLE ANSWER

Check Your Progress 1

1) What is the need for sustainable development?

The need for sustainable development arises for two important reasons. Those are: (i) the current system of development considers development of mankind alone and ignores the interdependent ecosystem; and (ii) it treats environment as a commodity.

2) What do you mean by sustainable development?

According to the Brundt and Commission “Sustainable development” is that which “meets the needs of the present without compromising the ability of future generations to meet their own needs.” It has three components: a) Economy - economic activity should serve the common good, be self-renewing, and build local assets and self-reliance. b) Ecology - humans are part of nature, nature has limits, and communities are responsible for protecting and building natural assets. c) Equity - the opportunity for full participation in all activities, access, benefits, and decision-making of a society. It has three objectives: i. Economic efficiency, ii. Social acceptability, and iii. Ecological sustainability

1) What do you mean by Gross Sustainable Development Product?

The Gross Sustainable Development Product is the total value of production after giving due care to the social capital and natural capital of a region over a specified period of time.

2) What is the Environmental Kuznets Curve?

In simple terminology, the EKV shows the relationship between the environmental degradation and the per capita income. The proponents of EKV are of the opinion that in the early stages of economic growth, degradation and pollution increases, but beyond some level of per capita income, the trend reverses, so that at high income levels, economic growth leads to environmental improvement. This implies the environmental impact indicator is an inverted U shaped function of per capita income.

Check Your Progress 3**1) What are the important measures for the promotion of sustainable development?**

The conservation of land, water and energy resources is fundamental to promotion of sustainable development. Appropriate action has to be taken for the conservation of scanty resources. Development of technologies, which would minimize the environmental damages, such development requires scientific knowledge and continuous investment. Increasing awareness of the public and policy makers on environmental quality and natural resources issues is critical to sustainable development.

2) Write a few good practices for sustainable development.

Some countries have initiated good practices which are concomitant with the promotion of sustainable development:

- a) In Brazil, the bio-fuels programme has saved the country \$100 billion in external debt-a fact that makes such fuels attractive in many countries.
- b) In China, the promotion of vehicles that are more efficient and have similar “footprints” has the potential to address both energy security concerns and infrastructure constraints in a fast growing economy.
- c) In South Africa, the implementation of carbon capture and storage technology brings benefits in terms of technology transfer.

UNIT 2 PUBLIC ADMINISTRATION AND SUSTAINABLE DEVELOPMENT

Structure

- 2.1 Introduction
 - 2.2 Public Administration: Meaning, Scope and Significance
 - 2.3 Role of Public Administration in Development of Nation States
 - 2.4 Public Administration and Sustainable Development
 - 2.5 Measures for Revitalization of Public Administration
 - 2.6 Recent Global Challenges of Public Administration
 - 2.7 Let Us Sum Up
 - 2.8 References and Selected Readings
 - 2.9 Check Your Progress- Possible Answer
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2.1 INTRODUCTION

There is an increasing global realization that public administration can certainly help in achieving the goals of sustainable development. A number of international organizations including the UN have expressed their concern on the urgent need for public administration reforms. It has been demonstrated at various levels world wide that goals of sustainable development can be achieved through a number of institutional innovations and reforms such as democratization and decentralization of decision making; developing legal and institutional frameworks and economic governance systems; implementing ethics and anti-corruption strategies at various levels in and outside government institutions; improving resource mobilization at various levels; introduction of better financial management systems; and tapping the potential of e-governance. In order to update and broaden the scope and the understanding of public administration roles in various sectors of government and non government institutions the UN agencies have been highlighting for greater interest targeting a variety of public administration revitalization measures undertaken world wide, to promote macroeconomic stability and economic growth, human development and achievement of the Millennium Development Goals. There is more thrust on the civil society participation in the policy and development process. More and more importance is laid in all development projects for responsiveness to citizen concerns, conflict prevention and resolution efforts, public safety and security. Some of the time tested components of management and governance like transparency and accountability, efficiency and effectiveness are also being considered components in all development projects. In this unit, an attempt has been made to describe, how to build public institutions at all levels, from local to national to global, in order to create a sustainable future.

After going through this unit, you should be able to:

- Describe concept and significance of public administration;
- Explain the scope of public administration in development projects;
- Analyse the role of public administration in meeting the goals of sustainable development;

- Discuss role of various institutions and people in achieving sustainable development.

2.2 PUBLIC ADMINISTRATION: MEANING, SCOPE AND SIGNIFICANCE

According to Handbook of Public administration, 1989 “Public administration houses the implementation of government policy and an academic discipline that studies this implementation and that prepares civil servants for this work”. As a “field of inquiry with a diverse scope” its “fundamental goal... is to advance management and policies so that government can function.” Some of the various definitions which have been offered for the term are: “the management of public programs”; the “translation of politics into the reality that citizens see every day”; and “the study of government decision making, the analysis of the policies themselves, the various inputs that have produced them, and the inputs necessary to produce alternative policies.” Public administration is “centrally concerned with the organization of government policies and programmes as well as the behavior of officials (usually non-elected) formally responsible for their conduct”.

Administration is as old as Mankind. It has existed ever since Man began to organize himself. Administration is a process common to all group effort, public or private, civil or military, large scale or small scale. The word ‘Administration’ is derived from the Latin word ‘ad’ and ‘ministrare’ which means to serve. Considered as an concrete activity, administration includes all types of Work necessary to achieve the goal in view it assumes myriad of shapes and forms in various subject matter fields; it is both skill and on art and its process is universally identical administration has been practiced from time immemorial only it form and style have been undergoing changes to suit the changing needs over the period of time.

Woodrow Wilson, who is considered the founder of the American Public Administration (the discipline), has worked on American public administration, and the big question for Wilson was how Americans could incorporate Public Administration into the Constitution which did not mention it. Also in developing Public Administration, Wilson’s basic difficulty was how to reconcile the differences in notions of democracy (popular rule) and the systematic rules. To do this he says there are two spheres: “Politics” and “Administration” Politics = choices of government are made by the elected and Administration = carries out the choices by the (popular consent) free of political meddling “politics-administration dichotomy”. Before entering into the science of administration Wilson felt it was needed that first there should be some account of the history of what others have done in the field, secondly there should be an ascertainment of its subject-matter, and thirdly the it should be determined the best methods to develop it and the most clarifying political conceptions to carry into it. Public administration is a segment of the wider field of Administration. Woodrow Wilson defines Public administration as “detailed and systematic application of law”.

Scope of Public Administration

- Public administration is the whole government in action, it includes all operations having for their purpose the, fulfillment or enforcement of public policy.

- The science of public administration is an enquiry as to how Policies may best be carried in to operation.
- Public administration is concerned with “What”- the technical knowledge of a field which enables the administrator to perform his tasks; and the ‘how-the technique of management according to which the programmes are carried to success.
- It involves, managing, directing and supervising the activities of thousands or even millions of workers so that some order and efficiency may result from their efforts.
- The core of the public administration is not the method management but the goods and services that are produced or tendered.

Significance of Public administration

The full scope of public administration would cover administrative theory and applied administration. The wellbeing of the nation (society) is increasingly dependent on the efficiency of the government (i.e.) public administration. The future of the civilized government and even the civilization rests on the competence, efficiency and efficacy of the Public administration. Every Individual in the modern society is concerned with and totally interlinked with public administration at every form of his or her life right from the cradle to the grave; nay even before his or her birth (in the form of pre-natal care of the expectant mother) to even after his or her death (proving his will and thereby taking care of his property in certain ways). Thus on account of the importance of public administration, it has been rightly described as the “Heart of Modern civilization”.

Public administration deals with the organization of government policies and programs and the behaviour of officials who are responsible for this conduct. The role of a public administrator is to analyze public policies so that they come out in the right context and are eventually implemented as policies that benefit people at large. They are basically public servant and their role is seen across all government departments and agencies and they include police officers, cabinet secretaries, city managers, municipal budget analysts and census analysts. In other words, the aim of public administration is to ensure that all government bodies function normally and that there is no corruption in the handling of government activities. It further seeks to improve the effectiveness and efficiency of public services. UNDP has tried to define the role of public administration in the following words “Public administration seeks to foster relationships that are guided by respect for human rights, information sharing, and gender equality, rule of law, integrity and transparency. Our initiatives focus on building robust institutions at both national and sub-national levels, and are therefore closely integrated with UNDP’s work in the area of local governance”.

The UNDP focuses its support of public administration in four priority areas:

- Public administration and democratic change: UNDP promotes incremental steps towards reform, supporting the efforts of developing countries to shape public administration institutions into robust, representative, responsive and democratic institutions.
- Public administration and the MDGs: Public administration can play a key role in the equitable distribution of benefits and opportunities to all —

especially the poor, women and minorities — which is of particular significance in areas directly linked to the achievement of the MDGs.

- Public administration for state- and peace-building in post-conflict societies: UNDP seeks to increase attention to public administration and civil service management as an essential component of state-building in post-conflict societies.
- Public administration for environmental sustainability: UNDP works to strengthen public administration to better address climate change challenges, environmental sustainability and disaster risk reduction.

The role of public will need to provide the legitimate rules and organizational capacity required to promote societal transformations at all levels for a greener and more equitable economy. Many governments and public administrations still operate in an old development paradigm and do not have the capacity to mobilize the full range of stakeholders and introduce the wide spectrum of policies involved in bringing the three pillars consisting of society, economy and environment components of sustainable development together in an effective manner. In addition to the challenge of implementing cross-sectoral policies, they are struggling to translate global concerns into local action and local concerns into global actions. The mismatch between the international governance system and national and sub-national administrations leads to ineffective agreements and regimes with regards to implementation (Pinto and Puppimde Oliveira, 2008). The capacity to accelerate the transition to a greener economy rests necessarily on how public administrations can effectively incorporate the concept of sustainable development into their objectives and translate these objectives into results in practice.

2.3 ROLE OF PUBLIC ADMINISTRATION IN DEVELOPMENT OF NATION STATES

According to the Report of the Secretary General of the United Nations, in its 60th Session Item 43, Report of the Economic and Social Council, “Africa is a case in point. The dominant public policy and management issues in this region of approximately 650 million people are how to sustain ongoing governance and public administration reforms, alleviate poverty, restore normalcy to countries emerging from conflict and reconstruct institutions devastated by civil strife and, in some circumstances, by decades of dictatorial rule. Under the leadership of the African Union, and within the context of the New Partnership for Africa’s Development (NEPAD), wealth creation is being pursued as a new strategy in the war on poverty”.

At the present time, access to the basic necessities of life (food, potable water, housing, fuel and energy) is highly restricted in Africa. Social services and infrastructure have largely collapsed owing to a lack of resources for their upkeep. Life expectancy in the region declined from 49 years in 1999 to 46 years in 2001 owing largely to the impact of HIV/AIDS, malaria and tuberculosis.³ However, life expectancy in Africa is projected to rise to 51.3 years by the end of 2010 and to reach 69.5 years by 2045.⁴ Nevertheless, recent forecasts indicate that, in the absence of a substantial infusion of resources, child poverty in the world’s poorest countries (a significant number of which are in Africa) will not be reduced within

the 15 years expected by the Millennium Development Goals, but in 150 years. The Human Development Index has not improved significantly from 1997 (0.463) to 2001 (0.468). Between 1975 and 1999, 22 countries suffered setbacks in the human development index. Of that number, 13 (that is, more than half) were in Africa (UN, 2005).

Similarly, with respect to the Middle East and North Africa, the dominant revitalization concerns are how to enhance the capacity of public administration systems to engineer high economic growth rates, respond to the needs of the people (particularly young persons) and ensure peace and security within and across countries. Like sub-Saharan Africa, the Middle East and North Africa is confronted with the challenges of economic growth and, to a lesser degree, of poverty alleviation. Not so long ago, the Middle East and North Africa achieved high (almost 10 per cent) gross domestic product (GDP) growth rates. Impressive economic performance enabled the region to invest in human and infrastructure development. In recent years, GDP growth rates within the region have averaged less than 2 per cent. Trade deficits and falling per capita growth continue to pose significant public policy and management challenges in the diversified (non-oil) economies.

With regard to Asia and the Pacific, the revitalization of public administration has to address enormous poverty alleviation and human development challenges. With a population of 3.4 billion, Asia and the Pacific is faced with enormous challenges in the area of human development. Of the 1.2 billion people living in extreme poverty (living on less than one United States dollar per day) worldwide, two thirds are in Asia. While the aggregate poverty ratio has fallen in recent years (rural poverty declined from 39 to 28 per cent and urban poverty fell from 24 to 20 per cent between 1990 and 2000), poverty remains a formidable challenge in the region. The solution would at first appear to lie in the design and implementation of policies geared towards economic growth. However, the tsunami tragedy of December 2004 introduced another dimension in public policy — the need for the capacity to anticipate climatic, environmental and other changes impacting on the life and well-being of the people. Therefore, in addition to economic growth and poverty alleviation concerns, public administration revitalization must of necessity include the competence to read early warning signals and institute the necessary proactive measures (UN, 2005).

The challenges facing the Commonwealth of Independent States (CIS) include how to build and strengthen the institutions capable of engaging in a variety of activities, among them, sustaining the wide-ranging governance and economic transformation that started in the 1990s; confronting the risk of State capture by organized crime; generating economic growth; creating gainful employment; improving the people's living standards; and ensuring regional peace and stability. Proximity to the European Union (EU) serves as an additional incentive to public administration reform in a number of the CIS member States. 17. Latin America and the Caribbean, with a combined population of 518.8 million, face a major challenge in poverty eradication. Of the total population, close to 221 million, or 44 per cent, live in poverty. Of the 221 million classified as poor, 19 per cent are in a state of extreme poverty. The incidence of poverty is higher in rural than in urban areas (54 per cent of rural and 30 per cent of urban households can be classified as poor). The region made substantial progress towards poverty reduction in 1997 only to backslide since then. Between 1999 and 2002, the

incidence of poverty rose from 43.8 to 44.0 per cent, while the ratio of people in extreme poverty stayed at 19.4 per cent. Over-reliance on market mechanisms contributed to jobless growth, the gradual collapse of public services and the deepening of poverty and inequality. There are, however, growing signs of a turnaround. Besides taking proactive measures at home, Governments within the region are sponsoring regional cooperation initiatives aimed at stimulating economic growth and improving people's living standards (UN, 2005).

2.4 PUBLIC ADMINISTRATION AND SUSTAINABLE DEVELOPMENT

Sustainable development can be defined as the environmental, economic and social well-being for today and tomorrow. The term 'Sustainable Development' became popular in the beginning of the 1990s, particularly after the 1992 Rio Conference (United Nations Conference on Environment and Development) and the release of the Brundtland Report. The term definitively broke the competition between environmental protection, economic and social development objectives, offering the possibility that all three could come together without a trade-off, at least in theory. However, this has not always held true in practice. Even though social and environmental awareness have increased and there are many good examples of sustainable development at the small scale, the world has become dangerously more unsustainable over the past two decades. The challenge of sustainable development cannot be underestimated. It will require a substantial transformation of the present economic development model, analogous to the transition economies underwent with the industrial revolution. According to the most frequent definition as given by the Brundtland Report, which defines sustainable development as the development that meets the needs of the present without compromising the ability of future generations to meet their own needs. It has two key concepts of needs and the idea of limitations.

The ecosystems have been suitable examples of sustainable biological systems along with the biogeochemical cycles. A condition of unsustainability occurs when the natural resources are used up faster than it can be replenished. The long-term result of environmental degradation is the inability to sustain human life and such degradation on a global scale would result in the extinction of the humanity. On our planet's 20% of the population consumes 80% of the natural resources making sustainable development almost impossible.

The history of sustainable development is littered with well-intended but ill-designed or ill-executed policy initiatives. The past 20 years has witnessed a number of institutional innovations at the local, national and global levels to facilitate the integration of the three pillars of sustainable development and better align global, national and local actions. Developing countries have an opportunity to introduce these policies, managerial and technological innovations in the early stages of economic development and to avoid the costs associated with some of the unsustainable paths taken by today's developed countries. This write up tries to examine some of these innovations and to discuss options to scale them up to produce wide-reaching governance and economic change. A broader policy dialogue on public administration reforms is needed if we are to steer a course towards a new 'industrial' revolution towards sustainability. The role of public administration discusses the political, managerial and social challenges of

translating the concept of sustainable development into action. It reviews the two-century-old debate surrounding the existence of limits to growth and the different economic development paradigms rooted in this debate.

Industrial revolution had resulted in an exponential increase in the human consumption of resources and an increase in health, wealth and population. The combination of population increase in the developing world and unsustainable consumption levels in the developed world poses a challenge to sustainability. Other human impacts like air pollution, the pollutants like nitrous oxide, sulphur oxides, particulate matter, carbon dioxide etc accumulate in the atmosphere lead to the global warming and climate change. The impacts of global warming have resulted in the unsustainable conditions for the humans as well as ecosystems. The rising sea level, increasing temperature, variable precipitation and drought conditions, increasing weather extremes like cyclones, heat and cold waves are all impacting the sustainability. The corals are bleaching due to ocean warming and ocean acidification due to increasing levels of dissolved carbon dioxide. Increasing urbanization pollutes clean water supplies hence making it unfit for use. The changes in the land use change pattern by the humans are resulting in the loss of biodiversity due to habitat loss and fragmentation. Land use change is fundamental to the operations of the biosphere because alterations in the relative proportions of land dedicated to urbanization, agriculture, forest, woodland, grassland and pasture have a marked effect on the global water, carbon and nitrogen biogeochemical cycle and this can impact negatively on both natural and human systems. The environmental costs of food production are topsoil depletion, erosion and desertification, overgrazing, salinization, sodification, water logging, high levels of fossil fuel use, reliance on inorganic fertilizers and synthetic organic pesticides, reductions in genetic diversity by the excessive use of monocultures, water resource depletion, pollution of water bodies by run-off and ground water contamination. In the second half of the 20th century world population doubled, food production tripled, energy use quadrupled, and overall economic activity quintupled. Unsustainable economic growth has been compared to the malignant growth of a cancer because it eats away the Earth's ecosystem services which are its life-support system. All of these environmental problems associated with industrial agricultural and agribusiness are now being addressed through such movements as sustainable development and organic farming and more sustainable business practices.

In this session you have read about public administration: concept and significance, role of public administration in development of nation states and public administration and sustainable development. Now answer the questions given in *Check Your Progress-1*.

Check Your Progress 1

Note: a) Write your answer in about 50 words.

b) Check your answer with possible answers given at the end of the unit

- 1) What is the meaning and significance of public administration?

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- 2) What is the relation between public administration and sustainable development?

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2.5 MEASURES FOR REVITALIZATION OF PUBLIC ADMINISTRATION

The complex and dramatic challenges facing the world place a heavy burden on public administration. The signs on the horizon also point to increasing awareness on the part of Governments and their civil society partners that the world of public administration is on the threshold of change and that assistance is needed in making the right choices. The countries that responded to the questionnaire confirmed this observation and provided concrete evidence of measures instituted to reform and revitalize their public administration systems during the past 10 years. The measures adopted by many countries in recent years to reform and strengthen public administration systems differ from those instituted in the 1980s and the early 1990s. First, in contrast to the revitalization agendas of the 1980s, which were formulated at the insistence of external financial and donor institutions, recent reforms are more likely to be “home-grown” and directed at specific problems and challenges. Second, rather than focusing narrowly on cost-cutting issues and seeing public administration revitalization from a doctrinaire, supply-side economics angle, recent revitalization measures have multiple objectives and rely on a variety of pragmatic change management strategies. Above all, contemporary revitalization measures differ from earlier ones in terms of the emphasis given not only to the application of “business” and “customer satisfaction” techniques — a carry-over from the early days of New Public Management — but also to the entrenchment of fundamental public service values and ethics.

The challenges highlighted in the preceding paragraphs have in one way or another informed the actions taken to revitalize public administration systems in the past 10 years. While the responses to the questionnaire administered by the Secretariat pointed to the differences in the Member States’ priorities, they also highlighted issues of common concern. Fine-tuning and consolidating New Public Management reforms and applying information and communication technologies to internal management and external service-delivery processes are among the dominant concerns in well-established public administration systems. By contrast, in the former command economies of Central and Eastern Europe, the western Balkans and the Commonwealth of Independent States, and in many of the emerging market economies of Asia, Latin America and, to some extent, the Middle East and Africa, the raison d’être of public administration revitalization was to prepare public administration systems for the challenges of democratic governance and for the implementation of market reforms. In countries emerging from conflict, revitalization was expected to be an integral part of the State

reconstruction process, and a means of stemming the decay of State and civil society institutions.

Within the European Union (and among the Organization for Economic Cooperation and Development (OECD) member countries), public administration revitalization is at once a straightforward and complex exercise. For the older members of the European Union, whose administrative systems are founded on more or less similar and deep-rooted values, revitalization simply entails reorienting internal processes towards external demands, rather than subjecting the systems to radical, roots-and-branch restructuring. In recent years, however, the longer standing members of the Union have had to grapple with complex public policy challenges, not the least of which is the reconciliation of citizen expectations with fiscal and budget constraints. The recent “No” vote in France and the Netherlands is putatively a rebuff to the draft constitution of the European Union, but the verdict actually highlights a deepening concern on how to resolve the crisis of the welfare state. That crisis has far-reaching implications for public administration revitalization in the EU as a whole. For the new members, entry into the Union marks a major turning point at which difficult public choices have to be made, and substantial adjustments in institutions, management practices, and processes become absolutely essential. Since the EU is a community of values, the new entrants would, in forging ahead with their public administration revitalization plans, need to bring recruitment, promotion and service-delivery standards up to the EU level and ensure that public officials subscribe to a common code of professional ethics (Glemarec and Oliveira, 2012).

2.5.1 Emerging Revitalization Measures and Trends

According to Glemarec and Oliveira (2012) there are strong indications of commitment to the revitalization of public institutions worldwide. The recent eagerness to embrace change goes against the trend that started in the 1980s when public service reform was, in many countries, a part of cost-cutting economic restructuring programmes, implemented at the urging of international financial and donor institutions, and widely perceived as an “external imposition”. In much of today’s world, and as Governments acknowledge the necessity to reassess the workings of public administration and to orient public institutions towards citizen concerns, revitalization is viewed not as a bitter pill to be reluctantly swallowed, but as a natural and prudent response to escalating challenges. The major challenge is how to make a transition from commitment to action. This requires forging strong coalitions for change.

Notwithstanding differences within and across regions, the rationale frequently cited for embarking on revitalization efforts includes the following:

- a) Promoting ethics, transparency and accountability;
- b) Enhancing public service efficiency and effectiveness, especially in the delivery of public services (however, interest in performance and productivity management and in value-for-money auditing has been particularly observed in developed economies, emerging markets and economies in transition);
- c) Ensuring the responsiveness of public administration to citizen needs and legitimate demands (through the adoption of citizen charters, dissemination of service pledges, and implementation of quality service initiatives);

- d) Promoting human development (and achieving the Millennium Development Goals);
- e) Promoting economic growth and macroeconomic stability (by acquiring and applying the capacity to implement programmes geared towards promoting investor confidence and creating an environment conducive to private sector participation in development).

Other reasons cited for revitalizing administrative systems, though less frequently than the preceding ones, are as follows:

- a) Preventing and resolving conflict, and development of emergency preparedness and community policing (for countries faced with threats to security or emerging from conflict);
- b) Applying information and communication technologies to improve internal management processes and external service delivery systems, and promoting civil service automation (this is especially the case in well-established and rapidly changing administrative systems);
- c) Repositioning the public service for the challenges of democratization and economic liberalization (Africa, Central, Eastern and South eastern Europe and the Commonwealth of Independent States);
- d) Promoting popular participation in local governance and implementing decentralization programmes (an aspect of democratic reform);
- e) Creating an environment conducive to private sector growth and development;
- f) Coupling pay and employment reforms with the reassignment of posts and miscellaneous redundancy management programmes.

Among the issues on which there is a convergence of views are those relating to the integrity, efficiency, effectiveness and responsiveness of public institutions, as well as to the significance of the role played by those institutions in promoting economic growth, macroeconomic stability and human development. Without reading too much unanimity into the responses from the Member States, it is possible to add that the measures and strategies frequently applied by countries in achieving their revitalization objectives include the enactment of new laws and regulations (cited by 73.7 per cent of the respondents), personnel and human resources management and training (68.4 per cent), organizational restructuring (65.8 per cent), the adoption of anti-corruption measures (55.3 per cent) and the deployment of information and communication technology capacities to provide quality service (55.3 per cent). At the same time, privatization and enhancement of the law-making capacities of the legislature were among options not frequently cited (36.8 and 39.5 per cent respectively). A few of the responses indicated the challenges encountered in outsourcing essential services, particularly the challenges of accountability and quality control (Glemarec and Oliveira, 2012).

For countries emerging from dictatorial rule, particular emphasis has been given to the enactment of career-oriented civil service laws; the creation or strengthening of institutions responsible for public service management; the review of recruitment practices to ensure that they conform to the highest standards of integrity, competence and professionalism; entrenchment of the values of political

impartiality and non-partisanship; adoption of measures to insulate the “career service” from political influences; and the organization of programmes to provide training and upgrade skills. Reports of experiences in “engaged governance” in some countries further testify to the importance accorded by recent revitalization programmes to issues of concern to the people. In addition to promoting the adoption of participatory development planning and budgeting approaches, the programmes have led to the establishment of one-stop service-delivery centres in national public administration systems. Variously termed “citizen centres”, “service assistance to citizens”, or “people first”, these quality service initiatives have one common objective — to place public administration at the service of the people and, by so doing, to alleviate poverty and promote development.

One item that consistently appears on revitalization agendas in all regions of the world is public integrity. It is a revitalization challenge that transcends geographic, economic, socio-political and cultural boundaries, and it serves as a linchpin in contemporary revitalization efforts. The growing interest in public integrity (also referred to as “ethics and values”, “ethics and accountability”, “transparency”, etc.) should not come as a surprise. Aside from its role in consolidating the gains of fiscal, macroeconomic, management, institutional and other “technocratic” reforms, the focus on integrity proves critical in reviving and reasserting traditional public administration values and ethos, particularly those that had, in a number of countries, succumbed to systematic politicization or had been subverted by the tendencies of New Public Management towards “corporatization” and the downgrading of rules.

Over and above the measures reported by the respondents, the actions taken to date attest to the importance accorded to public integrity worldwide. Particularly in the last five years, when reports of ethical violations have undermined citizen trust in public and business organizations, Governments in different parts of the world have mounted multipronged assaults on grand and petty corruption. Among the measures adopted are the enactment of strict anti-corruption laws; the establishment of anti-corruption, assets declaration and allied watch-dog bodies; the restructuring of judicial and law enforcement agencies; and the enhancement of the agencies’ investigative, data-gathering and information-sharing capacities. Freedom-of-information laws were enacted in a few countries, and in many others civil society organizations and the media were enlisted as allies in the fight against corruption. Over time, a broad measure of consensus was reached on the outline and contents of global and regional anti-corruption conventions — examples of which are the United Nations Convention Against Corruption;⁹ the United Nations Convention against Transnational Organized Crime;¹⁰ the Inter-American Convention Against Corruption adopted by the Organization of American States on 29 March 1996; the Convention on Combating Bribery of Foreign Officials in International Business Transactions, adopted by the Organization for Economic Cooperation and Development on 21 November 1997; and the African Union Convention on Preventing and Combating Corruption, adopted by the Heads of State and Government of the African Union on 11 July 2003.

The measures adopted within and across countries to entrench the principles of merit, professionalism, accountability, “customer care” and citizen responsiveness complement efforts at mainstreaming high ethical standards in public administration systems. From the western Balkans, through Central and Eastern

Europe, the Commonwealth of Independent States, to Latin America, the Middle East, Asia and the Pacific, and Africa, a great deal of effort has gone into the enactment of laws and the formulation of codes aimed at delineating the “career service” from offices falling within the political patronage net. Examples include the miscellaneous civil service laws enacted in countries preparing to join the EU, the Charter for the Public Service in Africa adopted in Windhoek, Namibia, by the Third Pan-African Conference of the Ministers of Civil Service in February 2001 and the Ibero-American Charter of Public Service adopted in Santa Cruz de la Sierra, Bolivia, by the fifth Ibero-American Conference of Ministers for Public Administration and State Reform on 27 June 2003. The “customer care” and the supporting productivity measurement and performance management initiatives launched in various countries should, if vigorously pursued, give concrete expression to the quest for professionally competent, ethically sound and citizen-responsive public administration systems, and strengthen the capacity of public institutions to meet development challenges. The challenge, however, is how to ensure enforcement of those measures (Glemarec and Oliveira, 2012).

2.6 RECENT GLOBAL CHALLENGES OF PUBLIC ADMINISTRATION

There is a global consensus that urbanization and economic development are complementary to each other. Global urban population being only three per cent in 1800, 13 per cent in 1900 and 30 per cent in 1950 has crossed 50 per cent mark in the year 2007 (UN, 2007). This journey of urbanization has witnessed a rapid pace of industrialization and expansion of business, industry and trade covering a sequence from Europe to America, Japan, NICS (Newly Industrialized Countries), ASEAN (Association of South East Asian Nations), China and South Asia. This dispersal of economic activities associated with competitive edge confirms that cities and towns are specifically known for their economic function and have economies of scale and economies of settlements (Michael Cohen, 1990). It is noted that urban economies account for 55 per cent GDP in low income countries, 73 per cent in middle income countries and 85 per cent in higher income countries (World Bank, 1999, Elements for a New Strategy on Urban Development and Municipal Issues, Washington, D.C., World Bank). Therefore, cities and towns being engines of economic growth acquire crucial role to achieve national policy objectives of a welfare state. Accordingly national policies across the board are giving emphasis on urban development and associated delivery of services and infrastructure to a cross section of households (Pandey, 2012).

In order to address the issues arising due to the process of urbanization and other related unsustainable economic issues, increasing gap between rich and the poor, unsustainable harvesting of natural resources at different levels and increasing social maladies led to grow pubic concern at national and international levels. As a result, in 1992 the world leaders met at the United Nations Conference on Environment and Development (UNCED) in Rio de Janeiro, the largest gathering of heads of states or governments to have ever been organized until then, promising to chart a development path that is equitable, environmentally just and economically rewarding. They recognized, under the call for ‘sustainable development’ that a different kind of development was needed, one which would simultaneously achieve the economic, social and environmental objectives of

human development. Twenty years after UNCED, the Rio + 20 Summit again met to re affirm past commitments, but, even more importantly, accelerate their implementation by focusing on the greening of the economy, promoting social equity and improving environmental governance. A fundamental and often overlooked pre-requisite to achieve sustainable development is the role and capacity of public institutions. Practice has shown that public institutions faced a number of challenges to translate political will and policy change into action. Therefore, to deliver a new development paradigm, we need to strengthen the ‘visible hand’ of public institutions worldwide to supplement the so-called invisible hand of markets. In view of these initiatives by the UNCED, there started more discussions and actions on the role and newer dynamics of public institutions all across the world particularly after liberalization and globalization of economy all across.

The social and economic fibre of global societies have undergone tremendous change due to the process of urbanization, modernization, increased awareness and public participation in development and decision making. The processes of globalization and political and economic change have introduced socio-economic changes taking place worldwide. The challenges confronting public administration systems as the developed and the developing countries have implemented different types of innovative and capacity-strengthening initiatives at different levels. All these have also multiplied and introduced new challenges into the realm of public administration worldwide. The world has also witnessed the accelerated development of information and communication technologies, the emergence of trading blocs and economic unions. The rural to urban mass migrations accompanied by the increasing pressure on urban resources and the increasing number of urban poor and unemployed youths have posed serious rich and poor divide in developing countries particularly India are some of the new challenges before the government and the public administration. The other types of new emerging challenges include growing intercultural interactions economic liberalization, expanding opportunities for the movement of goods and capital, climatic and environmental changes with catastrophic consequences. Some of the more recent ones include the marketing of new drugs and genetically modified food products and the discovery of mysterious diseases that recognize no political or geographical boundaries have compounded the ever increasing challenges for public administration.

Many developing and under developed countries are still struggling with the new realities of globalization and liberalization and are yet to introduce few desired and required reforms in governance and economic policy. While the developed nations have already moved much ahead in terms of certain reforms in the functioning of the government and administration, but many developing countries are yet to begin their reforms in order to meet the new challenges due to liberalization and globalization of world trade, production and economy. Some of the events, which have far reaching consequences world wide like the events of 11 September 2001, which has placed security firmly on the public policy agenda in a number of issues and countries. Now, there is more realization that security needs to be broadly defined to include human concerns, particularly concerns for the socio-economic welfare of the people.

It is also important to understand here that how quickly the developing countries, particularly the least developed ones, improve their economy, and emerge from

poverty and achieve improved living standards depends partly on the support of the international community but also on the effectiveness of national public administration systems in implementing the poverty reduction components of the Millennium Development Goals. Those concerns explain the attention given in recent years to measures aimed at enhancing the policymaking capacity and the service-delivery capacities of public administration systems worldwide. The objectives and strategies of public administration revitalization are as varied as the challenges encountered at different times and places. This is to be expected. In a world characterized by diversity of culture and by disparities in socio-economic and political conditions, public administration revitalization cannot be projected in a monochromatic format, but rather in a way that vividly brings out the various hues and circumstances distinguishing one environment from another (UN, 2005).

In this session you have read about means for revitalizing of public administration, recent global challenges and public administration. Now answer the questions given in *Check Your Progress-2*.

Check Your Progress 2

Note: a) Write your answer in about 50 words.

b) Check your answer with possible answers given at the end of the unit

- 1) What are some of the measures for revitalizing public administration?

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- 2) Discuss some of the recent global challenges with regard to public administration?

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2.7 LET US SUM UP

Public Administration can certainly help in achieving the goals of sustainable development. Sustainable Development can take place in a more efficient manner if public administration officials are honest and willing to take risks to perform better. For this there is an urgent need for public administration reforms. It has been demonstrated at various levels worldwide that goals of sustainable development can be achieved through a number of institutional innovations and reforms such as democratization and decentralization of decision making; developing legal and institutional frameworks and economic governance systems;

implementing ethics and anti-corruption strategies at various levels in and outside government institutions; improving resource mobilization at various levels; introduction of better financial management systems; and tapping the potential of e-governance. Ultimately, an efficient government is an instrument of change, a change which will secure and preserve resources for the future generations.

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2.9 CHECK YOUR PROGRESS - POSSIBLE ANSWERS

Check Your Progress 1

1) What is the meaning and significance of public administration?

Public administration is the whole government in action; it includes all operations having for their purpose the fulfillment or enforcement of public policy. The wellbeing of the nation (society) is increasingly dependent on the efficiency of the Government (i.e.) Public administration. The future of the Civilized Government and even the Civilization rests on the competence, efficiency and efficacy of the Public administration.

2) What is the relation between public administration and sustainable development?

The role of public administration discusses the political, managerial and social challenges of translating the concept of sustainable development into action. Public administration can implement ethics and anti-corruption strategies at various levels in and outside government institutions; improving resource mobilization at various levels; introduction of better financial management systems etc.

Check Your Progress 2

1) What are some of the measures for revitalizing public administration?

Some of the measures for revitalizing public administration are:

- a) Promoting ethics, transparency and accountability;
- b) Enhancing public service efficiency and effectiveness, especially in the delivery of public services
- c) Ensuring the responsiveness of public administration to citizen needs and legitimate demands

2) Discuss some of the recent global challenges with regard to public administration?

Some of the recent global challenges include growing intercultural interactions, economic liberalization, expanding opportunities for the movement of goods and capital, climatic and environmental changes with catastrophic consequences. The marketing of new drugs and genetically modified food products and the discovery of mysterious diseases that recognize no political or geographical boundaries have compounded the ever increasing challenges for public administration.

UNIT 3 NATURAL RESOURCE MANAGEMENT AND ENVIRONMENT

Structure

- 3.1 Introduction
 - 3.2 The Meaning and Types of Natural Resources
 - 3.3 Biodiversity: Our Strength
 - 3.4 Exploitation of Natural Resources
 - 3.5 Threats to Biodiversity
 - 3.6 Conservation of Biodiversity
 - 3.7 Management of Natural Resources
 - 3.8 Let Us Sum Up
 - 3.9 References and Suggested Readings
 - 3.10 Check Your Progress - Possible Answers
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3.1 INTRODUCTION

The need to preserve natural resources for future generations is one of the most critical issues on the national and the global agenda is the need to preserve. It also meets present day requirements. Today, the entire world has awakened to the need for sustainable development by maintaining judicious use of the natural resources and adopting developmental models and policies assuring proper environmental protection. It is well known that humans across the globe are not only polluting nature and destroying it thorough an aggressive expansion of urbanisation *vis-à-vis* consumerism. Rightly it was pointed out by Mahatma Gandhi, that *there is enough in nature for human need but not for human greed*. Some 11,000 years ago, agriculture started in the lap of nature. In the beginning, it was a beautiful synergy between human technique and rhythmic nature, gradually this relationship became less friendly and finally it became tarnished. In the aftermath of the Second World War, unabated mechanisation as well as increasing use chemicals have transformed our agriculture into a huge source of pollution of the environment.

After studying this unit, you should be able to:

- Explain the role of natural resources in the lives of human beings
- Discuss the impact of development activities on the natural resource base
- Describe the impact of development on the natural resource management strategies
- Explain the role of various government bodies in the management of natural resources
- Differentiate the factors responsible for the depletion and over exploitation of natural resources
- Identify the various threats in the management of natural resources.

3.2 THE MEANING AND TYPES OF NATURAL RESOURCES

Nature has been defined as the omnipresent expanse, definite and indefinite, created and evolving, having all the biotic, abiotic and social dimensions, evolving within, and around life forms and life process.

The following definition may be used for understanding the natural resources:

“The sum total of all physical, chemical, biological and social factors which construct the surroundings of man is referred to as environment and each element of these surroundings constitutes a resource on which man thrives in order to develop a better life”. Any part of our natural environment, such as land, water, air minerals, forest, rangeland, wild life, fish, micro organisms, or even human population – that man can utilise to promote the welfare, may be regarded as a natural resource.

There are two types of natural resources:

- i) Exhaustible
- ii) Inexhaustible.

Exhaustible resources are limited in nature and liable to be degraded in quantity and quality by human activities. The examples are forests, soil, water and fossil fuels, etc. Inexhaustible natural resources are unlimited in nature, and they are not likely to be exhausted by human activities, like solar radiation, air, and precipitation.

Environment: The environment is everything which surrounds an organism and influences its life in many ways. It includes physical and biological components. The physical components of the environment are soil, water, air, light and temperature. These are termed abiotic components. The plants and animals are collectively referred to as biotic components. All these components of the environment work together, interact and modify the effects of one another.

Water: About 70-73 per cent of the earth is covered by water. Water is available in the form of oceans, seas, rivers, lakes, ponds, pools, polar ice caps, and water vapour, and this forms the hydrosphere. The main component of the hydrosphere is water. Water exists in all the three forms, i.e., solid (snow), liquid (water), and gas (water vapour).

Air: This is an inexhaustible natural resource and essential for the survival of all the living organisms on earth. In the atmosphere, about 95 per cent of the air is present up to a height of 20 km above the earth's surface. The remaining 5 per cent of air is present up to a height of about 280 km. Air is a mixture of different gases; nitrogen and oxygen are the major components. Thus, the total volume of air present in the atmosphere consists of 78 per cent nitrogen, 21 per cent oxygen, while the remaining 1 per cent is made up of other gases, such as argon, neon, helium, krypton, xenon, and radon.

Soil: The word, soil, is derived from a Latin word, *solum*, meaning ground. It is a stratified mixture of inorganic and organic materials, both of which are products of decomposition.

Minerals: The Earth's crust is rich in inorganic materials which include ores that are used on a large scale to yield metals such as iron, aluminium, copper, tin, nickel, silver, gold, and platinum. These minerals are useful in industrial and technological growth. Some of the metals are used as catalysts, e.g., vanadium, tungsten, and molybdenum. Some of the non metallic materials (minerals) are vital to industrial growth such as sand, fluxes, clay, salt, sulphur, phosphorus, diamonds, gems, coal, and by products of petroleum (petrol, kerosene, lubricants).

Flora and fauna: Flora refers to plant species and fauna refers to animal species. The term biota includes both plants, as well as the domesticated and wild species of animals. Our country has a rich diversity of flora and fauna. There are over 45,000 plant species and 81,251 animal species. This represents about 7 per cent of world's flora and 6.5 per cent of world's fauna.

3.3 BIODIVERSITY: OUR STRENGTH

Biodiversity is the variation of life forms within a given ecosystem, biome, or, on the entire Earth. Biodiversity is often used as a measure of the health of biological systems. The biodiversity found on Earth today consists of many millions of distinct biological species, which is the product of nearly 3.5 billion years of evolution.

Biological diversity or biodiversity can have many interpretations, and it is most commonly used to replace the more clearly defined and long established terms, species diversity, and species richness. Biologists most often define biodiversity as the “totality of genes, species, and ecosystems of a region”. An advantage of this definition is that it seems to describe most circumstances and present a unified view of the traditional three levels at which biological variety has been identified

- Genetic diversity
- Species diversity
- Ecosystem diversity.

One of the most pressing issues on the national and global agenda is the need to conserve biodiversity for future generations while trying to understand and document the indigenous knowledge of resource management practices. So far, this challenge has been partially addressed by the national and global agencies, which have restricted themselves to conservation of biodiversity as outlined by the World Commission on Environment and Development (1987), which led to calls for sustainable development. As a result, the model of development was foisted upon the so called Third World for the last fifty years. A strong argument has been made that development dictated from outside rather anchored in the knowledge base of the target population is, in principle, modernisation disguised, and not fully concerned with local needs. This is evidenced by the continuing marginalization of already marginalised populations in Latin America and elsewhere at a global level, and similarly, marginalisation of the tribal, pastoralists and marginal farmers in far flung and remote areas, especially in the mountains in India. Only recently, it has been realised by scholars and researchers that indigenous knowledge systems should constitute the core of development models in the Third World. Because indigenous knowledge has permitted its holders to exist in harmony with nature, allowing them to use it in a sustainable manner, it is seen as especially pivotal in discussions of sustainable resource use.

In agricultural systems, a diversity of crops and varieties is needed to combat the risks farmers face from pests, diseases, and variations in climate. Crop biodiversity also underpins the breadth of dietary needs and services that consumers demand as societies become wealthier. For some time, scientific experts have been concerned about declining diversity of crop genetic resources on farms. Many argue that the very processes that engendered the remarkable advances in agricultural productivity during the 20th century, such as the Green Revolution, also eroded the valuable stocks of genetic resources long maintained by farmers. Sampling these resources and housing them in gene banks, while fundamental, is only a partial solution. *Ex situ* conservation stops the evolutionary clock and raises proprietary concerns as genetic material is transferred out of the hands of its historical custodians for safeguarding. Economists often view the loss of diversity as an unavoidable, unintended consequence of technical change and specialisation—a negative externality of progress. In the longer term, managing crop genetic diversity through a combination of strategies and approaches (in gene banks, breeding programs and on farms) is essential for sustained social and economic development. The overall categories of floral and faunal biodiversity available to us are as under:

Flora

Item	No. of species
Bacteria	830
Algae	2500
Fungi	23000
Lichens	1600
Bryophyte	2700
Pteridophyta	1022
Gymnosperms	64
Angiosperms	17000
Total	48736

Fauna

Item	No. of species
Fishes	2546
Amphibians	204
Reptiles	428
Birds	1228
Mammals	372
Total	1,26,188

Protozans-2577, Porifera-519, Enidaria-237, Ctenophora-10, Platyhelminthis-1622, Ctenophora-10, Platyheminthis-1622, Nematoda-2350, Rotifern-310, Mollusca-5042, Anthrapoda-57525, Protocordata-116, Echinodermata-705, Annelida-1093.

In this section you studied meaning and types of natural resources. Now, you should be able to answer some questions relating to this section given in *Check Your Progress-1*.

Check Your Progress 1

Note: a) Write your answer in about 50 words.

b) Check your answer with possible answers given at the end of the unit.

- 1) What do you mean by Natural Resources Management (NRM)?

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- 2) Write in brief what do you understand by environment?

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- 3) What do you understand by biodiversity?

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3.4 EXPLOITATION OF NATURAL RESOURCES

Number of activities relating to development including construction activities of all kinds, forest based industries, hydel and irrigation projects, mining, oil drilling, pollution, resource extraction and road and transportation put enormous pressure on natural resource base. There are some human induced activities, which relates to agriculture, fishery, expansion of forest villages, grazing/increased domestic animals habitat, habitat depletion and exchange due to horticulture, monoculture forestry have led to different kinds of encroachment on natural resources.

Collections made by scientific/ educational institution

- Exploitation by local authorities as revenue resource
- Fuel wood collection

- Food gathering
- Food hunting
- Smuggling of timber/ forest produce
- Trophies/ specimen collection of medicinal plants and orchids and
- Unregulated trade / market forces.

Human induced disasters causing stress on natural resources

- Floods
- Major oil spills/ leakage
- Wildlife depredation
- Epidemic
- Forest fires due to humung and
- Intentional forest fire.

Threats to NRM- wrong and faulty approaches

- Diseases
- Fire as management tool
- Genetic uniformity
- Hybridisation
- Inadequate water and food for wildlife
- Increased competition
- Introduction of exotic species
- Lack of patronage of local / native species
- Low population/ restricted range (protectionism).

Management of human resources

- Change in people's life style
- Conflicting / increasing demands
- Dilution of traditional values
- Erosion of indigenous knowledge
- Generation gap
- Human harassment
- Ignorance / lack of awareness
- Inadequate trained human resource
- Inappropriate land use
- Lack of effective management
- Negative attitude
- Tourism development.

Political and policy issues

- Civil unrest / political movement

- Change in use/ tenure/ legal status
 - Insurgency or armed conflict
 - Intercommunity conflict
 - Intervention failure
 - Lack of clear policy implementation
 - Lack of interdepartmental coordination
 - Lack of intervention
 - Military activities
 - People's pressure.
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3.5 THREATS TO BIODIVERSITY

The categories of threats that follow have been recognised by the International Union for Conservation Nature (IUCN).

Endangered

This category includes *taxa* whose number have been reduced to a critical level, and those whose habitats have been so drastically reduced that they are seemed to be in immediate danger of extinction, as for example *Nepenthes khasiana*, *Rhinanthera imschootiana*, *Vanda cerulean*.

Vulnerable

Taxa is likely to move into the endangered category in the near future, if the casual factors continue operating due to over exploitation, extensive destruction of habitats or other environmental disturbances. Some of the examples are *Discora deltoidea* and *taxus wallichiana*.

Rare

This includes *taxa* with a small world population that are not at present endangered or vulnerable but are at risk. These *taxa* are usually localised within restricted geographical areas, or habitats, or are thinly scattered over a more extensive range, the examples are *Farictia macrantha* and *Rauvolfia serpentina*.

Threatened

The term threatened is used in conservation for species which are in one of the three categories: endangered, vulnerable and rare. India's biodiversity is one of the most significant in the world. As many as 45,000 species of wild plants, and over 77,000 if wild animals have been recorded, which comprise about 6.5 percent of the world's known wildlife. In the last few decades, India has lost at least half of its forests, polluted over 70 per cent of its water bodies, built on, or, cultivated much of its grasslands, and degraded most of its coast.

3.6 CONSERVATION OF BIODIVERSITY

Why Conservation?

The Indian region is a treasure house of wild genetic resources. Wild species and relatives of crop plants contain valuable genes that are of immense genetic value

in crop improvement programmes. The important wild related species and types in various crop groups, prevailing under different phytogeographic zones in the country needs particular attention in the agro-biodiversity management system for sustainable use, to help maintain food, nutritional, and agricultural economic security. The main objectives of biodiversity conservation are

- The conservation of biological diversity
- The sustainable use of components of biodiversity.

India's efforts at Biodiversity Conservation

Dr. M.S. Swaminathan (1983) suggested the following conservation measures

- Cultivated varieties in current use
- Obsolete cultivars
- Primitive cultivars or land races
- Wild species and weedy species closely related to cultivated varieties
- Wild species of potential values to man
- Special genetic stock developed by man
- Fair and equitable sharing of benefits arising from the utilization of genetic resources.

In-situ Conservation

- This includes conservation of plant and animals in their native ecosystems, or even in a man-made ecosystem, where they naturally occur.
- It applies only to wild fauna and flora.
- It aims at preservation of land races with wild relatives in which genetic similarities exists.

Ex-situ Conservation

- This is done through the establishment of gene banks.
- It is the chief mode for preservation of genetic resources.
- Generally, seeds or *invitro* maintained plants cells, tissue, and organs are preserved under appropriate conditions.

The drawbacks of *ex-situ* conservation are

- Loss of viability over passage of time and susceptibility to insect or pathogen attack
- Inability to maintain distinct clones except for inbreed and apomicts species
- Non applicability to vegetative propagated crop.

3.7 MANAGEMENT OF NATURAL RESOURCES

There is an urgent need to think deeply about the destruction of natural resources. With the exponential increase in human population and increased technological advancement, the natural resources get relentlessly exploited. There is a need for optimisation of its usage. This is possible only when we adopt the concepts of management and conservation of natural resources. Management and conservation mean scientific utilisation of resources while maintaining their

sustained yield and quality. India produces only half of the national requirement of petroleum products and it imports the rest from other countries. Natural gas is the most popular petroleum product and its consumption during last two decades has increased tenfold. If we need to save fossil fuels from total exhaustion, we should encourage the usage of non conventional resources of energy, such as solar energy, wind energy, biomass energy, etc. Biogas is a natural gas. It is produced from animal, water and weeds and other plants. India comes first in developing and using biogas technology. It is a cheap, non-polluting and labour saving fuel. Biogas can be used for cooking and lighting, and in vehicles.

According to the world conservation strategy on natural resource management (NRM), it is the management of human use of the biosphere, lithosphere, and hydrosphere so that it may yield the greatest sustainable benefit to the present generation while maintaining its potential to meet the needs and aspiration, not the greed, of future generation. With the current rate of development, population growth, and migration, communities are increasingly unable to meet their sustained needs, growing demand for fuel wood and other forest products, pollution due to industrialization, and a market for rare animal species and medicinal plants have all threatened the biological diversity; and thereby have hampered sustainable human development. Further, the race for development and cultivation of improved varieties in larger areas has threatened the biodiversity to a considerable extent. The complex dynamics of resource management system can be well understood by the flowchart (figure 1) and various issues and dimensions involved in resource management are represented in figure 2.

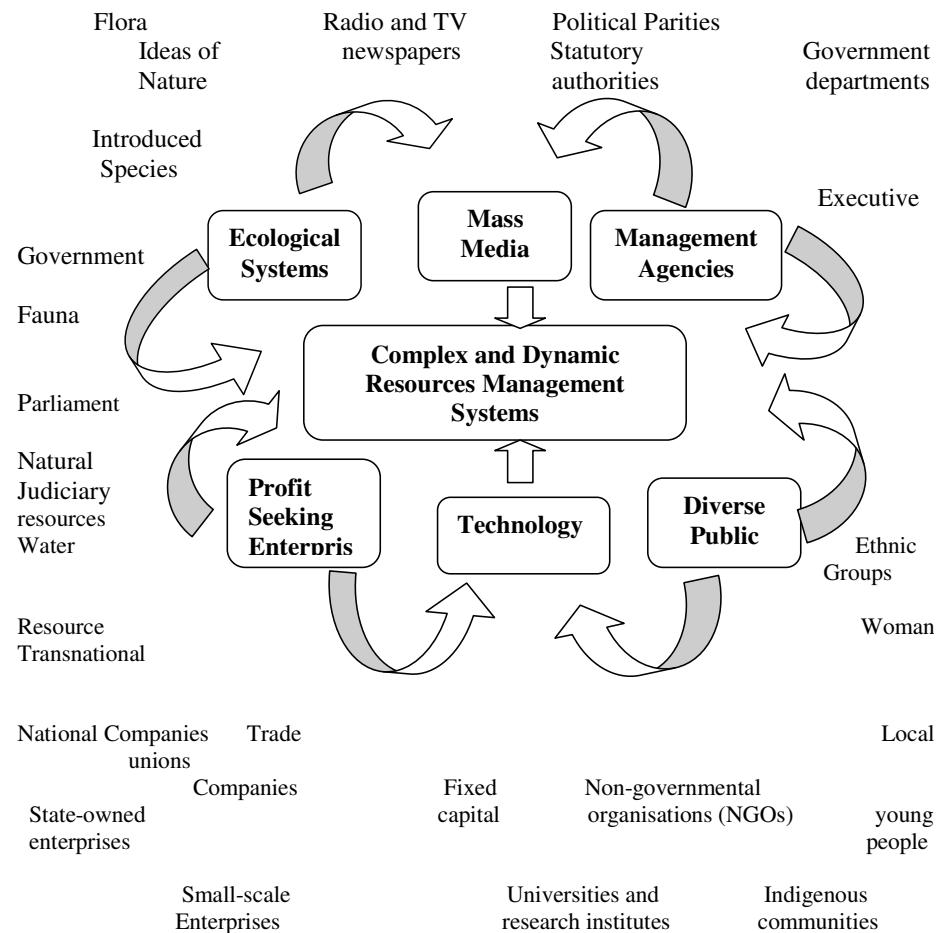


Fig.4.1: Complex and Dynamic Resources Management Systems

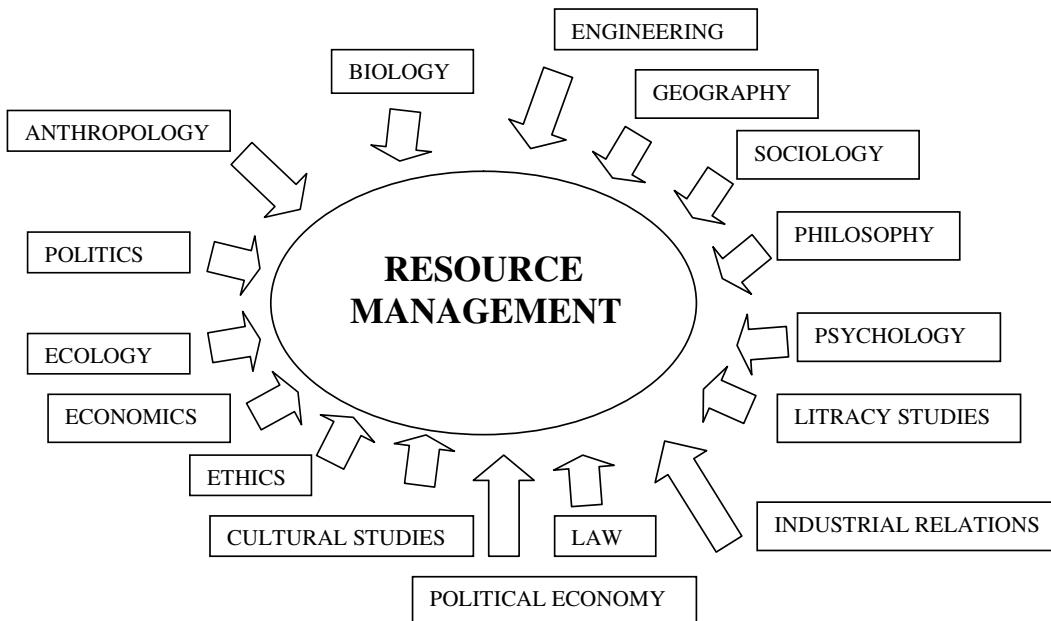


Fig.4.2: Various issues/dimensions involved in resource management

3.7.1 Meaning and Need for Resource Management

The main driving forces of resource consumption are population and economic growth, and the pattern of development, broadly defined to include technological level, economic structure, and the patterns of production and consumption. The projected 50 per cent growth in the global population over the next fifty years will put a significant pressure on the environment. If, over the next fifty years, the population of the developing countries achieves levels of material wealth similar to today's levels in industrialised countries, world consumption of resources would increase by a factor ranging from two to five. Without dramatic technological improvements or changes in the patterns of consumption, growth in resource use and environmental impacts due to increased population and economic growth in developing countries are likely to outweigh technological efficiency gains in industrialised countries.

Human wealth is based on the use and consumption of natural resources, including materials, energy and land. Continued increase in resource use and the related environmental impacts can have a multitude of negative effects leading to ecological crises and security threats. The sustainable use and management of natural resources have, therefore, come into focus and has been the subject of many policy discussions over more than a decade, beginning with the summit in Rio de Janeiro in 1992.

Over the past 50 years, humans have changed ecosystems more rapidly and extensively than in any comparable period in human history, largely to meet rapidly growing demands for food, fresh water, timber, fibre and fuel. This has resulted in substantial gains in human wellbeing and economic development. But these gains have been achieved at growing costs in the form of the degradation of many ecosystems (Millennium Ecosystem Assessment, 2005). What is driving our material and energy use to the extent that it is becoming a global environmental problem and a threat to future generations? There is no simple answer to this question, because a number of interdependent socioeconomic and environmental factors are at play. Nevertheless, there are three basic factors which determine

the growth of resource consumption, and the resulting environmental impacts of human production and consumption patterns.

3.7.2 Dynamics of Resource Management

Public policy in India has, for long, appreciated that access to shared or common natural resources (NR) is crucial to local livelihood strategies. Many of the rural poor depend directly on shared NR, yet they often live in ecologically marginal areas and have limited and insecure rights to NR. A recurrent question in the rural development debate has been: how are poverty and access to NR linked and what are the policy implications of these linkages? A principal conclusion has been that decentralised NR management regimes will enhance both sustainability and equitable access to NR by the poor. Policy has focused principally on institutional frameworks conferring rights, responsibilities and roles in decentralised NR management (DNRM). In India, two formal institutional systems have been identified as having the legitimacy and potential to enhance rural livelihoods: partnership models. In the last decade there have been significant moves towards formal NR management partnerships between the public administration and local user groups. The two most institutionally evolved examples, for which Guidelines have been promulgated, are Joint Forest Management (JFM) and Watershed Management (WM). A Constitutional Amendment passed in 1993 aimed to strengthen local government, collectively called *Panchayati Raj* Institutions, at District, Block and Village levels. Some of the seats at these levels are reserved for marginal and vulnerable community members, and for women. Village level *Panchayats* have become responsible for preparing plans for the management of NR within their boundaries. The support for decentralisation is based less on any proven success than on ideological convictions related to the importance of local involvement and self determination in the development process. There is, however, a growing realism about the strong centralising forces within the polity and bureaucracy that inhibit meaningful transfer of access and control over NR. Equally, earlier optimism regarding collective action has been tempered by failed participatory common resources are not considered worth collective action.

The decentralisation agenda has however led to changes in the institutional arrangements for managing shared NR. Through partnership models, and indirectly through *Panchayati Raj*, communities have been given some autonomy in deciding priorities for NR management, funds to develop NR assets and guidelines to promote community mobilisation. These decentralisation initiatives represent major achievements in challenging the previous dominance of line department control over all aspects of NR management. The objective of sustainable, equitable and efficient DNRM is, however, far from being realised as our examination of the source of political demand for decentralisation and the content of the programmes and projects themselves revealed.

3.7.3 Management of Forests

The world forest is derived from the Latin word *foris* meaning outside, the reference being to a village boundary, or fence and it must have included all uncultivated and uninhabited land. Today, a forest is any land managed for the diverse purpose of forestry, whether covered with trees, shrubs, climbers, etc., or not. The Indian word, jungle, has been adopted in the English language to describe a collection of trees, shrubs, climbers, etc., that are not grown in a regular manner,

as contrasted with a forest, which is any vegetation under systematic management. Technically, a forest is defined below.

- a) Generally, a forest is an area set aside for the production of timber and other forest produce, or maintained under woody vegetation for certain indirect benefits which it provides, e.g., climatic or protective.
- b) From an ecological point of view, a forest is a plant community predominantly of trees and other woody vegetation, usually with a closed canopy.
- c) From a legal point of view, it is an area of land proclaimed to be a forest under a forest law.

Forestry is the theory and practice of all that constitutes the creation, conservation, and scientific management of forests, and the utilization of their resources to provide for the continued production of the required goods and services. Forests are a very striking feature of the land surface. They vary greatly in composition and density, and stand in marked contrast with meadows and pastures. The scenic effect of forests changes with the seasons like the patterns in a kaleidoscope. Certain forests are evergreen, like the Deodar forests of Kashmir, while others are deciduous, becoming leafless either before the advent of winter when vegetative activity almost ceases, such as the oak forests of the Himalayas, or else just before the onset of intense dry summer, to reduce transpiration to the minimum, like the Teak forests of Central India. The falling leaves in some species become bright orange or golden yellow. In others, the young foliage is pink. Such autumnal and verbal tinges are in vivid contrast with the general green or straw-coloured background, and are extremely pleasing. Unlike animals, plants do not have the power of locomotion. They also cannot construct shelters or generate heat to withstand the adverse effects of the environment of which they are captives. Therefore, to survive they wear the evidence of this fact in the form of structural adaptations, such as leaflessness in summer to minimize transpiration, thorns to ward off browsers, poisonous sap, etc.

The forests of a country are a natural asset of immense value. Unlike its minerals resources, including fossil fuels, which in course of time either get exhausted or their utilisation will become uneconomic due to increased costs for obtaining and processing them, the forests, if of adequate extent, ideally dispersed, scientifically managed and judiciously utilised can be kept perpetually productive and useful, conferring many benefits, direct and indirect, on the people. Thus, forests are a renewable resource. Directly, forests meet the needs of small timber, fuel, bamboos and a variety of other products, including fodders which are indispensable requirements of the people living in close proximity of the forests. They also provide the facility of grazing for their livestock, and yield a variety of products of commercial and industrial value such as structural timber, charcoal, and raw materials for making paper, newsprint, rayon, panel products, *bidi* leaves, gums, resin, dyes, tans, and a number of other economic products including medicinal drugs. Forests also provide employment to a large population engaged in their protection, tending, harvesting and regeneration as also in ancillary occupations processing forest raw material and marketing them. These are productive functions of the forests.

i) Management of State Forests

No forest should be permitted to be worked without the government having approved the management plan, which should be in a prescribed format and in keeping with the national forest policy. In order to meet the growing needs for essential goods and services which the forests provides, it is necessary to enhance the forest cover and productivity of the forests through the application of scientific and technical inputs. Production forestry programmes while aiming at enhancing the forest cover in the country and meeting national needs should also be oriented to narrowing, by the turn of the century, the increasing gap between demand and supply of fuel wood. No such programme, however, should entail clear felling of adequately stocked natural forests.

Rights and concessions: the rights and concessions, including grazing, should always remain related to the carrying capacity of forests. The capacity itself should be optimized by increased investment, silvicultural research and development of the area. Stall feeding of cattle should be encouraged. The requirements of the community which cannot meet by the rights and concessions so determined should be met by development of social forestry outside the reserved forests.

The holders of customary rights and concessions forest areas should be motivated to identify themselves with the protection and development of forests from which they derive benefits. The rights and concessions from forests should primarily be for the *bonafide* use of the communities living within, and around forest areas specially the tribal communities.

Division of forest lands for non forest purposes: forest land or land with tree cover should not be treated merely as a resource readily available to be utilised for various projects and programmes, rather, as a national asset which requires proper safeguards for providing sustained benefits to the entire community.

Wildlife conservation: forest management should take special care of the needs of wildlife conservation, and forest management plans should include prescriptions for this purpose. It is specially essential to provide ‘corridors’ linking the protected areas in order to maintain genetic continuity between artificially repeated sub sections of migrant wildlife.

Tribal people and forests: there exists a symbiotic relationship between the tribal people and the forests, which means that both depend on each other for their survival and existence. Therefore, the primary task of all agencies responsible for forest management, including the forces development corporations should be to associate the tribal people closely in the protection, regeneration and development of forests as well as to provide gainful employment to the people living in and around the forests.

Shifting cultivation: Shifting cultivation is affecting the environment and productivity of the land adversely. Alternative avenues of income, harmonized with the right land use practices, should be devised to discourage shifting cultivation.

Forest based industries: as far as possible a forest based industry should raise the raw material needed for meeting its raw material requirements. Forest based industries must, not only provide employment to the local people on priority, but involve them fully in raising trees and raw material.

Forest extension: forest conservation programmes cannot succeed without the willing support and cooperation of the people, a direct interest in forests, their development and conservation, and awareness of the value of trees, wildlife, and nature in general.

Forestry education: forestry should be recognized both as a scientific discipline as well as a profession. Agriculture universities and institutions dedicated to the development of forestry education should formulate curricula and courses for imparting academic and professional excellence, keeping in view the manpower needs of the country.

Forestry research: with the increasing recognition of the importance of forests for environmental health, energy, and employment, emphasis must be laid on scientific forestry research necessitating adequate strengthening of the research base, as well as new priorities for action.

ii) Promote More Public and Private Forests

The issue of sustainability has twin challenges of environmental degradation and rural impoverishment. In many developing countries including India, conservation for sustaining natural resources sometimes become very fundamentalist and results against the people. But natural resource management must have to be done in a productive manner which benefits the local community. About one-third of the Indian population lives below poverty line and most of them live in rural area and dependent on the forests and other natural resources. Managing the natural resources effectively with the involvement of local community can play a great role in reducing poverty and environmental degradation. Promoting public and private forestry is both environmentally and socioeconomically desirable, given the multiple roles that forests can play in the provision of food, livelihood and the maintenance of the natural resource base. The concept of sustainability implies ideas about forest stewardship and quality of life. Forest stewardship means the active investment of time, money, knowledge, and other resources into the management of forest for the benefits to the public and future generations. Forest based industries have a great role to play. They should fund the local people to plant trees and manage them and meet the requirement of the industry from those community or private forests in a sustainable way. The National Forest Policy of 1988 also declared that forest based industries shall increasingly meet their requirements from private lands and forests. This will decrease the pressure on the natural forests and wildlife. Proper land exchanges between public and private as well as government sectors can also support conservation of critical natural resources. Recognizing the private property rights held by indigenous communities and compensating them for continuing to conserve their private or community owned forest resources can lead to effective and efficient sustainable management and conservation of forest resources. Community using the surrounding natural resources traditionally acquires good practical knowledge and skill of judging the condition of those resources. These people with great indigenous knowledge can manage community forests by getting economical and institutional help from government in an efficient way.

Active involvement of Village *Panchayats* (forest councils) is very crucial to implement the community forestry. Some states in India has legal framework to manage forests by community rather than forest department. Uttarakhand has a

long history of local peoples' participation in forest management. The *Van Panchayats* have been managing the forests surrounding the villages for a long time in the region though the forest area managed under *Van Panchayat* is relatively very low. Given more funding and power to the *Van Panchayats* would encourage the local people in forest management.

3.7.4 Promote Non-conventional and Renewable Energy Sources

Growing energy needs and environmental protection are two major challenges today. Energy production by burning conventional fossil fuels is responsible for the global warming and significant levels of air pollution. But access to sustainable energy services is necessary for economic growth. Increasing the renewable energy capital is the only solution to cope with these challenges and achieving sustainable development as it reduces the dependency on fossil fuel resources and provides opportunities for mitigating greenhouse gases. Technological improvement of renewable energy resources has been carried out for last decades and a number of renewable energy resources have been discovered.

i) Hydro energy

Hydro energy is one of the oldest sources of energy. Today over 80% of all electricity produced by renewable sources is produced by large hydroelectric dams. But there have been some devastating negative impacts of large hydro projects on the environment. Hydro turbines in hydro projects produce electricity by converting hydraulic potential energy of water into the mechanical kinetic energy of the turbine runner, which in turn is converted into electrical energy by the generator. In a *run-of-the-river system*, the force of the water current applies the needed pressure to rotate the turbine, while in a *storage system*, water is accumulated in reservoirs created by dams and then released with huge potential energy. Small hydro projects are very popular due to its advantage to be installed in small area and lower installation cost. Depending upon the capacity of the project, Small Hydro Project can be classified as- (a). micro (up to 100 KW), b. mini (up to 2000 KW) and c. small (up to 25000 KW) hydro power project.

ii) Solar energy

The Solar Photo Voltaic (SPV) technology converts the solar radiation directly into electricity without producing any noise or pollution. Remote and isolated areas can easily get power using photo voltaic plate whether it is a top mountain or an island in the middle of an ocean. Solar Thermal Device on the other hand captures and transfers the heat energy of solar radiation which can be used for thermal applications and generating mechanical or electrical energy. The United Nation's "Global Trends in Sustainable Energy Investment 2010" report said that the solar sector attracted investments worth 24 billion dollars in 2009. In the four years from end-2004 to end-2008, solar photovoltaic (PV) capacity increased six fold to more than 16?giga watts (GW) and solar heating capacity doubled to 145 gigawatts-thermal (Gwth).

iii) Wind energy

Wind has considerable amount of kinetic energy when blowing at high speeds. This kinetic energy of wind is converted into mechanical energy and rotates the blades of wind tower and the connected generator, thereby producing electricity. The wind speed plays an important role for energy generation which varies with latitude, land-sea disposition, altitude and season.

iv) Bio energy

Biomass is an important source of energy with potential to generate power. Plants use the solar energy to convert atmospheric CO₂ to sugars during photosynthesis and when the plant materials are combusted, energy is released as the sugars are converted back to CO₂. This energy can be harnessed using bio-energy technologies viz., biogas, gasifier, biomass combustion, co-generation etc. India has huge potential in biomass energy due to large quantity of biomass available in the form of husk, straw from agriculture field, wild bushes and large quantities of cattle dung.

Energy can also be generated from solid wastes. The heat produced by burning the wastes heats a water boiler which produces steam that powers a turbine to produce electricity. Some of the basic technologies for treatment of municipal solid wastes are incineration, pelletisation, pyrolysis, sanitary landfill and biomethanation. Household and industrial waste is sent to a combined heat-and-power (CHP) incineration plant. Waste segregation is an important prerequisite of waste to energy system. In bio-digesters, the decomposing food generates methane (CH₄) gas that can be used to generate electricity and fuel. It is estimated that through adoption of waste to energy technologies more than 1000 MW of equivalent power can be generated from urban and industrial wastes in India.

Ethanol is another source of bio energy. It is produced from alcohol (obtained from different crops such as sugar canes and other grains). The technology for manufacture of ethanol (dehydrated/anhydrous alcohol) involves special processing of alcohol. There are three commercial routes for the manufacture of dehydrated ethanol from alcohol. These are *a*. Azeotropic Distillation Technology, *b*. Molecular Sieve Technology and *c*. Membrane Technology.

3.7.5 Management of Soil Resources

Rapid deterioration of soil health and degradation of soil environment as a consequence of persistent nutrient depletion and operating process of erosion, salinisation, acidification, and desertification have been of concern to soil scientists in recent years, as these are posing a threat to the potentiality of our soil resources to support the increasing food demands in the future.

Soil Degradation

- Physical: soil erosion, water logging, desertification, compaction, crusting, overgrazing
- Chemical: nutrient runoff, acidification, salinisation, alkalinisation, loss of organic matter, nutrient imbalance, nutrient depletion, accumulation of toxicants.
- Biological: monoculture, pesticides and herbicides, disposal of industrial waste, toxic containing sewage water, genetic manipulation

Approaches towards soil conservation

- The primary purpose of soil conservation is to prevent soil erosion and heal the damage where it has not advanced too far to respond to curative methods.
- The land should wear a vegetative cover throughout the year.
- Engineering and agronomic practices should be applied conjointly.

Reclamation of eroded lands

- Ravines should be provided with sufficient and suitable vegetative cover.
- Instead of agriculture, these lands should be reclaimed for forestry, pasture, or horticulture.
- Their deficiency in nutrients and moisture for plants growth should be improved.
- Further misuse of such land should be prevented, over transplanting by man, and fenced cattle trails. for example.
- Vegetative cover provided, should be protected against reckless destruction by local population.

Measures for controlling soil erosion deposition hazard

- Plantation at wind breaks and shelterbelts
- Sand dune stabilisation
- Stubble mulching
- Wind string cropping
- Primary and secondary tillage
- Conserving soil moisture.

3.7.6 The Management of Water Resources

Ground water has been exploited in India quite substantially in the past few decades for irrigation. However, unlike surface water resources, there has been a conspicuous lack of scientific assessment of groundwater resources. Availability of this important natural resource has been taken for granted; utilisation of ground water has not been commensurate with the available potential in a state, e.g., about 86 per cent in Gujarat and 3 per cent in Assam, indicating considerable regional imbalance. India has 4 per cent of the world's water resources. The present water demand of India's agriculture is nearly 83 per cent of the total water use in the country and shall not change appreciable by the end of the century. The Ministry of Environment (1992) had made projections for water demand of various utility sectors for 2000 and 2025 AD.

Use of most of this allocated water for agriculture is confined to 33 per cent irrigated area and the remaining 67 per cent is still dependent on monsoon rains. The disproportionate use of water in certain pockets results in wastage. Excessive use of water makes the field more vulnerable to soil erosion. Irrigation, thus, can be identified as the most important single activity responsible for agriculture induced environmental stress, although other activities such as deforestation for expanding agriculture, production oriented agronomic practices, use of fertilizers, and plants protection chemicals have their individual contribution.

Approaches towards water conservation

Management at surface water resources such as

- canal water
- run-off water
- *khadins*

- *nadis*, Tanks
- Gully
- plugging
- water harvesting dams
- water spreading
- percolation tank

Management of ground water resources

The ground water resources in arid region have four major problems

- 65 per cent area has saline ground water with total soluble salt content over 3200 ppm
- Deep static water level
- Poor yield from wells
- Due to over exploitation, static water level is declining, soluble salt content have increased, and the yield is reduced.

The following methods are available for artificially recharging aquifers

- Water spreading
- Recharging through pits
- Wells and shafts
- Pumping to induce recharge from surface water bodies.

Extension approaches for NRM

- Creation of natural resources like forests, water bodies etc.
- Conservation of resources in an ecology niche.
- Regeneration of natural resources by organizing self-propelling processes.
- Preservation through social fencing.
- Recycling of waste water by products.
- Rejuvenation of degraded or age old resource base.
- Protection of target species.
- Pollution control through policy formulation.
- Elimination of negative factors operating in the eco-systems.
- Social fencing for protection, preservation.
- Integration of biotic, abiotic and social factors.
- Rationalisation in the use of dwindling resources.
- ITK and ITW: appropriate use and application.
- Watershed management to generate livelihood and conserve natural resources.
- Monitoring : Benefit monitoring evaluation (BME)
- Auditing is required to get accounts of depletion, and to suggest interventions
- People's participation: this is the most important and critical way to accomplish any objective in NRM.

In this section you studied about the role of forests and various aspects of conservation. Now, you should be able to answer some questions relating to this section given in *Check Your Progress-2*.

Check Your Progress 2

Note: a) Write your answer in about 50 words.

b) Check your answer with possible answers given at the end of the unit.

- 1) What are the important roles of forests in our society?

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- 2) Write five major extension approaches which are very much needed for NRM.

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- 3) What are the right approaches to soil conservation?

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- 4) How can you manage surface water resources?

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3.8 LET US SUM UP

In this unit we dealt with various concepts and issues relating to the Natural Resource Management and Environment. We also discussed how these challenges have been partially addressed by global and national agencies. We explained how the exploitation of natural resources causes threats to the biodiversity, and various conservation issues and initiatives taken at global and national levels. The sustainable development approach, based on the complex dynamics of resource management, is the desired goal and objective of all national and international bodies. We also discussed how the decentralization agenda has led to changes in the institutional arrangements for managing shared natural resources including the sustainable management of the forests, soil resources and water resources.

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3.10 CHECK YOUR PROGRESS – POSSIBLE ANSWERS

Check Your Progress 1

1) What do you mean by Natural Resources Management (NRM)?

The following definition may be used for natural resources: “the sum total of all physical, chemical, biological and social factors which construct the surroundings of man is referred to as environment and each element of these surroundings constitutes a resource on which man thrives in order to develop a better life”. Any part of our natural environment, such as land, water, air minerals, forest, rangeland, wild life, fish, micro organisms, or even human population – that man can utilize to promote the welfare, may be regarded as a natural resource.

2) Write in brief, what do you understand by environment?

The environment is everything which surrounds an organism and influences its life in many ways. It includes physical and biological components. The physical components of the environment are soil, water, air, light, and temperature. These are termed as abiotic components. The plants and animals are collectively referred to as biotic components. All these components of the environment work together, interact, and modify the effect of one another.

3) What do you understand by biodiversity?

Biodiversity is the variation of life forms within a given ecosystem, biome, or for the entire Earth. Biodiversity is often used as a measure of the health of biological systems. Biological diversity or biodiversity can have many interpretations and it is most commonly used to replace the more clearly defined and long established terms, species diversity and species richness. Biologists most often define biodiversity as the “totality of genes, species, and ecosystems of a region”.

Check Your Progress 2

1) What are the important roles of forest in our society?

A forest is considered as an ecological kingdom, where many animals and the ecosystem live in perfect balance. The green cover produces enough oxygen, and, as well, carbon dioxide, for photosynthesis. The wild animals and other beings get enough protection from the solar heat, temperature, and the leaf cover formed on the earth gives cooling effect to the earth. The rivers and lakes in the forests give enough food and shelter for the animals and also the water for drinking for sustaining life. While the dense forests atmosphere acts as enormous sink for green house gases.

2) Write five major extension approaches which are very much needed for NRM.

- 1) Creation of natural resources like forests, water bodies, etc.
- 2) Conservation of resources in an ecology niche.

- 3) Regeneration of natural resources by organizing self-propelling processes.
- 4) Preservation through social fencing.
- 5) Recycling waste water by products and social fencing for protection, preservation.

3) What are the right approaches to soil conservation?

The right approaches towards soil conservation are:

- 1) The primary purpose of soil conservation is to prevent soil erosion and heal the damage where it has not advanced too far to respond to curative methods.
- 2) The land should wear a vegetative cover throughout the year.
- 3) Engineering and agronomic practices should be applied conjointly.

4) How can you manage surface water resources?

Surface water resources can be managed in different ways: canal water, run-off water, *khadins*, nadies, tanks, gully, plugging, water harvesting dams, water spreading, percolation tanks, etc.

UNIT 4 ENVIRONMENT MANAGEMENT SYSTEM

Structure

- 4.1 Introduction
 - 4.2 The Concept of Environmental Management System
 - 4.3 Management System: An Overview
 - 4.4 Basic Elements of Environmental Management System (EMS)
 - 4.5 Environment Management Systems in Municipalities
 - 4.6 Let Us Sum Up
 - 4.7 References and Selected Readings
 - 4.8 Check Your Progress –Possible Answers
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4.1 INTRODUCTION

Environmental Management System (EMS) refers to the management of an organisation's environmental programmes in a comprehensive, systematic, planned and documented manner. It includes the organisational structure, planning and resources for developing, implementing and maintaining policy for environmental protection. The International Organisation for Standardisation (ISO) has defined environmental management system as that "*part of the overall management system that includes organisational structure, planning activities, responsibilities, practices, procedures, processes and resources for developing, implementing, achieving, reviewing and maintaining the environmental policy*" (ISO, 1996). It provides a systematic way to ensure environmental issues are managed consistently and systematically throughout an organisation. For cities and local authorities, an EMS can assist in comprehensively addressing environmental issues, while achieving increased credibility with key stakeholders, including regulatory agencies and citizens. Effectively applied, an EMS can help integrate environmental considerations with overall operations. It sets out environmental policies, objectives and targets with pre-determined indicators that provide measurable goals, and a means of determining if the performance level has been reached.

An EMS is an excellent mechanism for both understanding and promoting positive change within a city or local authority. It enables private companies, central and state agencies, and other organisations to establish and assesses the effectiveness of, procedures to set environmental policy and objectives, achieve compliance, and demonstrate such compliance to others. This is because EMS focuses attention upon a number of critical organisational factors, including productive processes and technologies, management styles and systems, worker education and participation, internal communications, and relations with regulatory agencies, other governments, and neighbouring communities. The process of establishing an EMS requires "buy-in" from different levels of management and from employees. The successful implementation of an EMS creates positive change, environmental awareness and continuous improvement.

EMS applied to local authorities provides a systematic approach to develop policies, practices and procedures that are able to respond to the social, economic and environmental challenges ahead. In order to accomplish their goals for implementing an EMS efficiently, accurately and effectively, organisations need tools to assist them. In particular, experts and city managers recognise and highlight a lack of education and training tools specifically designed to enable local authorities assess the benefits, design and implement an EMS that meets their specific needs. Organisations in particular local authorities of cities and towns need a sound understanding of the environmental effects and impacts of the lifestyles, behaviours and values of its citizens. Need to understand that the environment has strategic implications which must be addressed by all stakeholders - at the global and local levels. Need for decision-making tools and decision support systems that enable implementation of EMSs. After reading this unit, you will be able to:

- Describe the key environmental issues concerning urbanization and in particular the opportunities for better environmental management of cities and urban areas.
- Explain to decision-makers the need for co-operation
- Develop easy to use environmental management tools that can be used to implement coordinated environmental policies and programmes involving all concerned stakeholders.

4.2 THE CONCEPT OF ENVIRONMENTAL MANAGEMENT SYSTEM

4.2.1 What Is an Environmental Management System?

The International Organisation for Standardisation (ISO) defines environmental management systems as “*that part of the overall management system which includes organisational structure, planning activities, responsibilities, practices, procedures, processes, and resources for developing, implementing, achieving, reviewing, and maintaining the environmental policy.*”

In other words, an EMS focuses on environmental management practices, rather than the activities themselves. The EMS provides the structure by which the specific activities can be carried out efficiently and in a manner consistent with key organisational goals, but does not specify levels of performance (just for instance the EMS will ensure that proper procedures are in place and that operator training exists, but won’t specify methods or frequency of sampling). The EMS allows an organisation the flexibility to adapt the system to its needs and priorities, rather than forcing a “one size fits all” mentality. Implementation of an EMS is a voluntary approach to improving environmental performance. Over the years, many public and private sector organisations have implemented EMSs, and their numbers grow daily. These organisations report a number of important EMS benefits.

4.2.2 Why to Introduce an Environmental Management System?

The environment has become an important factor in the decision-making process of companies around the world. Environmental issues are becoming more

complex and interconnected. Traditional ways of addressing environmental issues - in a reactive, ad-hoc, end-of-pipe manner - are proving to be highly inefficient. As competition increases within the expanding global market, environmental laws and regulations are setting new standards for business in every region of the world. But good environmental performance is not just a legal or moral obligation. It also makes good business sense. Reducing pollution means increasing efficiency and wasting fewer resources. Improved health and safety conditions result in a more productive workforce. Supplying goods and services that respect the environment helps to expand markets and improve sales.

In short, companies become more competitive when they practice good environmental management system.

On the other hand, the risks posed by mismanaging environmental issues are complex and varied. They include the obvious, such as damage to the environment with negative consequences for the overall standard of living. They can also include damage to a company's reputation and a resulting loss of confidence among customers, neighbours and shareholders, the loss of market share, and, of course, legal liabilities. Such risks cannot be dealt with on an ad-hoc basis. As with any financial or commercial risk, only a well-founded and properly implemented management approach can provide a measure of confidence that good performance is not an accident and that poor performance can be identified and rectified. By properly implementing an appropriate environmental management system (EMS), any company, large or small, can ensure that they effectively manage environmental risks while identifying and exploiting the myriad opportunities proper environmental management can bring. Such a systematic approach to environmental management is at the very heart of the ISO 14001 standard. This checklist is intended to allow managers of industrial facilities to review existing operations and management approaches against this standard to determine how well they measure up to what is soon to be considered as "state-of-the-art" in effective approaches to environmental management.

An Environmental Management System (EMS) performs the following functions:

- Serves as a tool to improve environmental performance
- Provides a systematic way of managing an organisation's environmental affairs
- Is the aspect of the organisation's overall management structure that addresses immediate and long-term impacts of its products, services and processes on the environment
- Gives order and consistency for organisations to address environmental concerns through the allocation of resources, assignment of responsibility and ongoing evaluation of practices, procedures and processes
- Focuses on continual improvement of the system

4.2.3 What is ISO 14000?

ISO 14000 is a family of standards intended to support environmental protection and prevent pollution in balance with socioeconomic needs. The international standard does not establish absolute requirements for environmental performance beyond commitment to compliance with applicable legislation and regulations and to continual improvement. Thus, two organisations carrying out similar activities but having different environmental performance may both comply with

ISO 14000 requirements. ISO 14000 encompasses 16 standards that address organisational issues and products. ISO 14001 is the EMS specification document outlining the requirements that an organization must meet for its EMS to be registered or certified to the standard. It is a tool to measure the effectiveness of environmental management programmes. ISO 14001 is being used by private corporations to enhance their competitiveness in both foreign and domestic markets. Federal and other public agencies are evaluating the potential of ISO 14001 or alternative EMSs to improve performance, and some agencies have already launched pilot projects.

4.2.4 Characteristics of EMSs and ISO 14001

Many federal and state agencies as well as private companies find ISO 14001 to be a flexible, its baseline approach that can be adapted to organisations of all sizes and types, and to a variety of cultures, processes, and businesses. The fundamental principles of ISO 14001 promote a programme of continual improvement to achieve objectives and targets set by the organisation itself. The objectives and targets derive from an assessment of significant environmental aspects and commitments made in the organisation's policy. The Code of Environmental Principles (CENT), another type of environmental management system, is also important in this regard. The CENT specifically addresses compliance, assurance, and pollution prevention, a distinguishing difference from ISO 14001.

4.2.5 Incorporating EMS into Corporate Business Practices

As an EMS is integrated into an organisation's business decision-making processes, it can improve programme management and enhance environmental performance. Some speakers' organisations found that the EMS improved overall productivity. As an EMS is incorporated into central management systems and organisational strategies, there is less need for external oversight as core business operations take ownership of environmental responsibility. The full cost of implementing an EMS includes the salary and time costs of in-house staff devoted to the project, as well as costs of any certification program. Total costs will vary, depending on the quality of the organization's existing environmental management/protection systems. Several speakers concluded that an EMS, once implemented, should result in cost savings over time. One speaker from a large corporation stated that, with the implementation of a corporate wide management system, his organisation's long-term vision includes facility self-governance, incorporating self-auditing of their compliance with environmental regulations. Several speakers addressed the benefit of dealing with environmental, safety, and health issues together as part of business planning and operational risk assessment. They agreed that integrating these issues into the same management concepts makes good business sense.

4.3 MANAGEMENT SYSTEM: AN OVERVIEW

4.3.1 Basics about Management

The management process involves performance of certain fundamental functions. One useful classification of managerial functions has been given by Luther Gulick, who abbreviating them using the word POSDCORB - Planning, Organising, Staffing, Directing, Coordinating, Reporting and Budgeting. There is no

commonly held opinion about the managerial functions proposed by different experts. By combining many of those views, this unit discusses the managerial functions under the headings

- i) Planning
- ii) Organising
- iii) Staffing
- iv) Directing
- v) Coordinating
- vi) Controlling
- vii) Budgeting
- viii) Delegation
- ix) Leading

4.3.2 Management Process

Management is a distinct process consisting of various functions of management to determine and accomplish stated objectives by the use of human and other resources. As a process, management consists of three aspects:

- i) **Management is a social process** – Since people are central in the process of development, human factor is most important among the other factors. As managers of developmental programmes are concerned with developing relationship among people. It is the duty of manager to make interaction between people for attaining developmental goals.
- ii) **Management is an integrating process** – Manager undertakes the job of bringing together human, physical and financial resources so as to achieve organisational purpose. As it is an important function to bring harmony between various resources and integrate them to attain the developmental goals.
- iii) **Management is a continuous process** – It's a never ending process and concerned with constantly identifying the development problems and solving them by taking adequate steps.

4.3.3 Objectives of Management

The main objectives of management are:

- i) **Getting maximum results with minimum efforts** – Management is basically concerned with thinking and utilising human, material and financial resources in such a manner that would result in best combination to secure maximum outputs with minimum efforts and resources.
- ii) **Increasing the efficiency of factors of production** – Through proper utilisation of various factors of production, their efficiency can be increased to a great extent which can be obtained by reducing spoilage, wastages and breakage of all kinds, this in turn leads to saving of time, effort and money.
- iii) **Maximum prosperity** – Management ensures smooth and coordinated development and helps in providing maximum benefits to the people.

- iv) **Human betterment and social justice** – Through increased productivity and development, management ensures better standards of living for the society. It provides justice through its uniform policies.

4.3.4 Importance of Management

- i) **It helps in achieving group goals** – It arranges, organise and integrate the resources in effective manner to achieve developmental goals. It directs group efforts towards achievement of pre-determined goals. By defining objectives of development clearly, there would be no wastage of time, money and effort.
- ii) **Optimum utilisation of resources** – Management utilises all the physical and human resources productively in the process of development. Management provides maximum utilisation of scarce resources by selecting its best possible alternate use.
- iii) **Reduces costs** – It gets maximum results through minimum inputs by proper planning of physical, human and financial resources in such a manner which results in best combination to reduce costs.
- iv) **Establishes sound organisation** – It establishes effective authority and responsibility relationship that is who is accountable to whom, who can give instructions to whom, who are superiors and who are subordinates. Management fills up various positions with right persons, having right skills, training and qualification.
- v) **Establishes equilibrium** – It adapts organisation to changing demand of people / changing needs of society.
- vi) **Essentials for prosperity of society** – Efficient management leads to better economical production which helps in turn to increase the welfare of people. Good management makes a difficult developmental task easier by avoiding wastage of scarce resources.

4.4 BASIC ELEMENTS OF ENVIRONMENTAL MANAGEMENT SYSTEM (EMS)

4.4.1 What Are the Key Elements of an EMS?

The key elements of any environmental management system are:

- **Environmental policy** - Develop a statement of the organisation's commitment to the environment. Use this policy as a framework for planning and action.
- **Environmental aspects** - Identify environmental attributes of products, activities, and services. Determine those that could have significant impacts on the environment.
- **Legal and other requirements** - Identify and ensure access to relevant laws and regulations, as well as other requirements to which the organisation adheres to.
- **Objectives and targets** - Establish environmental goals for the organisation, in line with the policy, environmental impacts, the views of interested parties, and other factors.

- **Environmental management programme** - Plan actions necessary to achieve objectives and targets.
- **Structure and responsibility** - Establish roles and responsibilities for environmental management and provide appropriate resources.
- **Training, awareness, and competence** - Ensure that the employees are trained and capable of carrying out their environmental responsibilities.
- **Communication** - Establish processes for internal and external communications on environmental management issues.
- **EMS documentation** - Maintain information on EMS and related documents.
- **Document control** - Ensure effective management of procedures and other system documents.
- **Operational control** - Identify, plan, and manage the operations and activities in line with the policy, objectives, and targets.
- **Emergency preparedness and response** - Identify potential emergencies and develop procedures for preventing and responding to them.
- **Monitoring and measurement** - Monitor key activities and track performance. Conduct periodic assessments of compliance with legal requirements.
- **Non conformance and corrective and preventive action** - Identify and correct problems and prevent their recurrence.
- **Records** - Maintain and manage records of EMS performance.
- **EMS audit** - Periodically verify that the EMS is operating as intended.
- **Management review** - Periodically review the EMS with an eye to continual improvement.

4.4.2 Elements of ISO 14001

ISO/DIS 14001 is one of a series of emerging international environmental management standards, which aims at promoting continual improvement in company environmental performance through the adoption and implementation of an environmental management system. The (draft) standard specifies the core elements of an EMS, but contains only those elements that may be objectively audited for certification or self-declaration purposes. A companion guidance standard, ISO/DIS 14004 includes examples, descriptions and options that aid in the implementation of an EMS and in integrating the EMS into overall management practices. It is not intended for use by certification/registration bodies. ISO/DIS 14001 defines an overall environmental management system, closely modelled on the ISO 9000 quality systems standard, and covers the following key elements:

- i) **Establishment of an appropriate environmental policy** that is documented and communicated to employees and made available to the public, and which includes a commitment to continual improvement and pollution prevention, regulatory compliance and a framework for setting objectives.

- ii) A planning phase that covers the identification of the environmental aspects of the organization's activities, identification and access to legal requirements, establishment and documentation of objectives and targets consistent with the policy, and establishment of a program for achieving said targets and objectives (including the designation of responsible individuals, necessary means and timeframes).
- iii) Implementation and operation of the EMS including the definition, documentation and communication of roles and responsibilities, provision of appropriate training, assurance of adequate internal and external communication, written management system documentation as well as appropriate document control procedures, documented procedures for operational controls, and documented and communicated emergency response procedures.
- iv) Checking and corrective action procedures including procedures for regular monitoring and measurement of key characteristics of the operations and activities, procedures for dealing with situations of non-conformity, specific record maintenance procedures and procedures for auditing the performance of the EMS.
- v) Periodic management reviews of the overall EMS to ensure its suitability, adequacy and effectiveness in light of changing circumstances. The EMS provides a structured process for the achievement of continual improvement, the rate and extent of which is determined by the organization in light of economic and other circumstances. Although some improvement in environmental performance can be expected due to the adoption of a systematic approach, it should be understood that the EMS is a tool which enables the organization to achieve and systematically control the level of environmental performance that it sets itself. The establishment of an EMS will not, in itself, necessarily result in an immediate reduction of adverse environmental impact. Indeed, care needs to be taken that the mere establishment of an EMS does not lull the organization into a false sense of security. But effectively used, an EMS should enable an organization to improve its environmental performance and avoid or reduce adverse environmental impacts over time.

An organisation has the freedom and flexibility to define the boundaries of its system and may choose to implement an EMS throughout the entire organization, or within specific operating units or activities of the organisation. If it is implemented for a specific operating unit or activity, policies and procedures developed by other parts of the organization can be used to meet the requirements of an environmental management system, provided that they are applicable to the specific operating unit or activity that will be subject to the environmental management system. The level of detail and complexity of the environmental management system, the extent of documentation and resources dedicated to it will be dependent on the size of the organization and the nature of its activities. This may be the case in particular for small and medium-sized enterprises.

Integration of environmental matters with the overall management system can contribute to the effective implementation of the environmental management system, as well as to the efficiency and clarity of roles. In many aspects, the ISO

14001 standard shares common management system principles with the ISO 9000 series of quality system standards. In the beginning of the ISO 14001 standard, it states that “organisations may elect to use an existing management system consistent with the ISO 9000 series as a basis for its environmental management system. It should be understood, however, that the application of various elements of the management system may differ due to different purposes and different interested parties. While quality management systems deal with customer needs, environmental management systems address the needs of a broad range of interested parties and the evolving needs of society for environmental protection.”

4.5 ENVIRONMENTAL MANAGEMENT SYSTEMS IN MUNICIPALITIES

Since its publication in 1996, the manufacturing industry has embraced the concept of Environmental Management Systems. However the ISO standard was not designed specifically for implementation in manufacturing, or even just for-profit businesses; it specifically uses the word “organization” to imply any group of individuals that come together for a specific purpose under a specific administrative structure. The benefits of the EMS approach – which will also be discussed in this section – have led to its application in other locations, such as local governments, with similar success. Several pilot studies have been commissioned at the International, Federal and State levels to demonstrate this, and the evidence is clear that municipalities can realise benefits at least equal to those achieved by business. Much like businesses, municipal governments have a complex system of organizational management and are subject to large number of regulatory requirements. However, unlike many businesses, municipalities typically have a very wide scope of activities that encompass power generation, water and wastewater treatment, solid waste collection and disposal, maintenance of the local infrastructure, and enforcement of numerous federal, state and local codes. Further, many of these operations interact directly with the environment and have a high potential for significant impact if a problem occurs. For these reasons, an EMS may in fact be more useful for protecting the environment in a municipal setting than in a business setting.

i) Municipal EMS Pilot Project

The Pennsylvania Department of Environmental Protection (DEP), in conjunction with Five Winds International, conducted a Municipal EMS Pilot Project with seven Pennsylvania municipalities from 2001 – 2003. The materials used by those municipalities form the core of this guidebook, having been refined based on their experiences and recommendations.

ii) Municipalities Participating in the PA EMS Pilot Project

- Brockway Borough – Wastewater Treatment Facility
- Crawford County – Crawford County Correctional Facility
- City Of Erie – Erie-Western Pennsylvania Port Authority
- Hampden Township – Wastewater Treatment Facility
- Lawrence County – Long-Term Care Facility

- City of Philadelphia – Solid Waste Collection Operations and NW Transfer Station
- Venango County – Two Mile Run County Park

Examples from these case studies are included throughout this section to illustrate the benefits of implementing an EMS as have been realized by Pennsylvania municipalities. Additionally, success factors for implementation identified by pilot municipality participants are described.

iii) Benefits of a Municipal EMS

Multiple studies have been performed to examine the benefits of the EMS approach, several of which are referenced in 4.4.1. The evidence indicates that the systems approach to managing environmental issues that is fundamental to an EMS causes a deep, cultural shift in how the organisation addresses these issues. Every employee must incorporate environmental considerations into their daily job functions. Thus the documented benefits of implementing an EMS range from improved compliance with environmental regulations and often a reduction in fines to increased management efficiency, and even a reduction in waste production and energy consumption. The systematic EMS approach to the daily management of energy and environmental objectives leads to benefits that can only be created by an integrated effort across the entire organisation, and are typically difficult to foresee prior to the implementation of the EMS.

A particularly useful element of an EMS is the incorporation of stakeholder requirements and external communications. Because municipalities are public entities designed to serve local communities, the increased transparency and ability to respond to the needs of the community typically improves relationships between the municipality and its various stakeholders. The increased management and operational efficiency gained with an EMS also improves the ability of the municipality to provide its services to the community inexpensively and with greater effectiveness. The Pennsylvania EMS Pilot Project Participants anticipate realizing many of the benefits common to EMS implementation; however it is still relatively early to predict whether long-term benefits, such as improved relationships with regulators and regulatory compliance, will be achieved. Despite this, numerous benefits have been noted by Pilot Project Participants, including:

- Capturing Institutional Knowledge;
- Streamlining Operations.

iv) Primary EMS Benefits for Municipalities

- Positive effect on environmental performance and compliance
- Improved EHS/ emergency response training, awareness, involvement and competency
- Increased management and operational efficiency
- Improved relationships with regulators and the community
- Reduced waste production and energy consumption
- Process for inclusion of multiple stakeholder requirements
- Increased transparency and ability to respond to community requests for information

- Demonstration of management control over highly complex and varied activities
- Regulatory Fine and Cost Avoidance
- Improved Emergency Response Procedures and
- Increased Awareness and Participation.

Each of these benefits is discussed below in three broad heads:

a) Capturing Institutional Knowledge

All municipalities involved in the Pilot Project strongly agreed that the most significant, initial benefit they recognised from the EMS implementation process was to capture the institutional knowledge contained in the heads of employees. By consulting with employees and documenting the “how-to” of routine municipal operations, the participants found that the time required for training new staff decreased, and that they were protected from the loss of critical operating knowledge when senior employees retire. Additionally, the documentation of ongoing maintenance efforts required of the EMS has allowed many municipalities to coordinate municipal activities with greater efficiency and improve service delivery in some instances.

b) Streamlining Operations

By documenting the processes used to complete routine municipal duties, many Pilot Project Participants also found that they were able to reduce the number of steps involved in the process, saving time, energy and money. Further, the documents allowed them to standardize the way routine tasks were performed, improving processes and creating additional savings. The EMS implementation process also forced participants to document training, compliance and maintenance schedules, which helped them to stay current with these items, plan staff schedules more effectively, and avoid schedule conflicts with other municipal activities.

c) Regulatory Fine and Cost Avoidance

Pilot Project participants observed significant savings through the avoidance of fines and costs that it could have incurred had the EMS not been in place. Specific cost savings resulted through reducing incidents due to improper maintenance, reducing the need for on-the-job training, and retaining and communicating of critical information over time. One participant even cited a reduction in regulatory fines due to increased employee awareness from EMS training programs.

4.5.1 Case Studies

The *Hampden Township* EMS effectively “caught” information that a pump was out of service at a lift station and allowed corrective action to begin before a total loss of pumping capability occurred.

Hampden Township was apprehensive at first, but an EMS is a great way to translate the old ‘verbal’ way of doing things into documented written procedures. It forced them to organize and write everything down, something one talked about doing for years but never accomplished..

The *Lawrence County* long-term care facility effectively reduced solid waste disposal by 1.5 tons per year by switching to a coffee concentrate that was brewed on demand, reducing staff time and waste coffee sent to the wastewater collection system.

4.5.2 Key Success Factors

Several important lessons were learned in the course of the Pennsylvania EMS Pilot Project that will be useful to other municipalities seeking to improve their environmental performance through an EMS approach. The experience to date suggests that while there are many operations/facility-specific factors that influence the success of EMS development and implementation, there are some key factors in determining success that apply to almost all operations/facilities. Some of these factors include:

- Commitment from senior management
- A clear project team and dedicated project manager
- Routine meetings
- Publication of the municipal commitment to improved environmental performance
- Integration into existing municipal systems
- Recognition that an EMS is a continuous commitment that does not end with implementation

In this section you have read about the concept of environmental management system, basic elements of environmental management system, environment management system in municipalities. Now answer the questions given in *Check Your Progress-1*.

Check Your Progress 1

Note: a) Write your answer in about 50 words.

b) Check your answer with possible answers given at the end of the unit.

1) What do you understand by ISO14001?

.....
.....
.....
.....

2) What are the key elements of environmental management system?

.....
.....
.....
.....

4.6 LET US SUM UP

Environmental management system (EMS) refers to the management of an organization's environmental programs in a comprehensive, systematic, planned and documented manner. It includes the organizational structure, planning and resources for developing, implementing and maintaining policy for environmental protection. The term can also refer to software systems for organizational environmental management. An environmental management system can also be classified as a system which monitors, tracks and reports emissions information, particularly with respect to the oil and gas industry.

4.7 REFERENCES AND SELECTED READINGS

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- 2) ISO 14001 Environmental Systems Handbook by Ken Whitelaw Second edition 2004 published Elsevier Ltd.
- 3) *Design Guidelines for Environmental Auditing at Federal Facilities* (EPA 300-B-96-011). EMS Primer for Federal Agencies (Spring 1998).
- 4) *Environmental Management System Benchmark Report: A Review of Federal Agencies and Selected Private Corporations.* (EPA 300-R-94-009).

4.8 CHECK YOUR PROGRESS- POSSIBLE ANSWERS

1) What do you understand by ISO14001?

ISO/DIS 14001 is one of a series of emerging international environmental management standards aimed at promoting continual improvement in company environmental performance through the adoption and implementation of an environmental management system. The (draft) standard specifies the core elements of an EMS, but contains only those elements that may be objectively audited for certification or self-declaration purposes

2) What are the key elements of environmental management system?

The key elements of any environmental management system are:

- **Environmental policy** - Develop a statement of the organization's commitment to the environment. Use this policy as a framework for planning and action.
- **Environmental aspects** - Identify environmental attributes of products, activities, and services. Determine those that could have significant impacts on the environment.
- **Legal and other requirements** - Identify and ensure access to relevant laws and regulations, as well as other requirements to which the organization adheres to.
- **Objectives and targets** - Establish environmental goals for the organization, in line with the policy, environmental impacts, the views of interested parties, and other factors.
- **Environmental management program** - Plan actions necessary to achieve objectives and targets.

MEDS-043: Dynamics of Urban Planning and Development

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URBAN DEVELOPMENT PLANS, POLICIES AND PROGRAMMES

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BLOCK 2 URBAN DEVELOPMENT PLANS POLICIES AND PROGRAMMES

It is well known fact that the percentage of urban population in the globe has crossed the fifty percent mark few years back. We now live in an urban world with lot of disparity and contradictions in the developed and the developing world. The developing world is confronting urban development as a phenomenon amidst widespread poverty, unemployment, lack of basic infrastructure and a number of environmental issues. Further, there are wide variations in the urban development trajectories among the developing countries too. Now there is also a growing concern and interest on seeing that urban development policies, plans and programmes are in conformity with the ground realities of the place. This block will discuss about the urban development policies worldwide and will give an overview of policies in India.

Unit 1, Urban Development Policies: A Global Overview, discusses the existing wide variations in the urban development trajectories between the developed and developing countries. The unit also discusses the existence of different approaches to urban development as adopted by different countries. It analyses the urban development policies of the developed countries like USA and UK and provides an overview of urban development policy perspectives of a few developing nations, i.e. China, Brazil and South Africa.

Unit 2, Urban Development Policy Perspectives in India, deals with the development policy perspectives India has adopted for the development of its urban areas. It is more significant due the fact that India's urban population is likely to reach 575 million by 2030 (40.90 percent of total population). The importance of India's urban sector is indisputable, and the urban sector's contribution to India's net domestic product is estimated at between 50 to 52 %, while at the same time, 64.7 % of employment in trade, commerce, and financial services; 65 % in manufacturing and 68 % in the transport sector are concentrated in urban areas.

Unit 3, Urban Development Programmes in India, discusses various urban development programmes launched by the government of India since independence. It has also given a detailed description of JNNURM a recently launched urban development programme in India.

UNIT 1 URBAN DEVELOPMENT POLICIES: A GLOBAL OVERVIEW

Structure

- 1.1 Introduction
 - 1.2 Changing Global Perspectives on Urban Development
 - 1.3 Urban Development Policy Perspectives in USA
 - 1.4 Urban Development Policy Perspectives in China
 - 1.5 Urban Development Policy Perspectives in Brazil
 - 1.6 Urban Development Policy Perspectives in South Africa
 - 1.7 Drawing Lessons
 - 1.8 Let Us Sum Up
 - 1.9 References and Selected Readings
 - 1.10 Check Your Progress-Possible Answers
-

1.1 INTRODUCTION

In 1995, the world passed through a decisive phase. For the first time in history, the percentage of urban population in the globe crossed the 50 percent mark. We now live in an urban world. However, the meaning of urban is very different in the developed and the developing world. The developing world is confronting urban development as a phenomenon amidst widespread poverty. It looks towards urbanisation as a path to economic growth and development. Further, there are wide variations in the urban development trajectories among the developing countries too. There is a lot that one can learn from a study of these different approaches to urban development. It enables one to reflect upon the development choices of our own country. China, Brazil and South Africa in particular, are countries that are seen as newly emerging economies in the world along with India. These are all countries that had extremely low levels of urbanisation at the turn of the twentieth century. At least two of these, South Africa and Brazil have had a prolonged experience of colonisation. Thus they have a lot in common and hence the differences in development choices are even more interesting to study.

After studying this unit, you should be able to:

- Explain the changing global perspectives of urban development
 - Describe features of urban development in Brazil, China, South Africa
-

1.2 CHANGING GLOBAL PERSPECTIVES ON URBAN DEVELOPMENT

Till the mid half of the twentieth century, urbanisation was considered a concomitant of the development process and in particular, the state of industrialisation of society. The urbanisation of the Western or the developed world was seen as the norm and by those standards; the urbanisation, which was occurring in the developing countries was seen as ‘over urbanisation’. Urbanisation was seen to be disproportionate to the state of industrialisation.

The high population growth of these cities which was non commensurate with the development of infrastructure was seen as a problem. The solutions offered were more balanced, even growth and rural industrialisation.

This outlook changed towards the end of the twentieth century. Urbanisation began to be recognised not as a problem but as a positive force that was capable of driving economic growth. This changed perspective is clearly reflected in the World Development Report of 2009. The report titled ‘Shaping New Economic Geography’ argues that unevenness of development is a natural process. Given the concentration of innovation, knowledge in the urban areas, these areas are bound to develop and attract further investment thereby becoming growth centres. It sees migration as a positive force which evens out the impacts of growth over a period of time. This changed outlook on urbanisation is currently influencing many developing countries across the world to pursue aggressive strategies of urbanisation, seeking to make their cities more competitive and able to attract investment that has now become transient across national borders.

It is interesting to note that the axis of urbanisation which was in the West in the nineteenth and twentieth century has now shifted towards the East and the Global South. The earlier problems of poverty, underdevelopment, still persist but some of these countries have charted impressive growths in the last few decades. Developments in the BRICS (Brazil, India, China, and South Africa) in particular have attracted global interest. Almost all of these countries have focused attention on urbanisation as a key strategy of development. All these countries are part of the developing countries and though there are several clear differences in their regimes, governance systems, starting points on urbanisation; there are several lessons that they offer for us. This is the backdrop of the stories of urbanization in China, Brazil and South Africa that followed.

1.3 URBAN DEVELOPMENT POLICY PERSPECTIVES IN USA

USA does not have a specific urban policy, however, it has strategically addressed the urban development issues. The main thrusts are poverty reduction, social justice, ensuring employment, infrastructure networks and housing. The USA urban policy can be broadly categorised into five phases (Harvey, 2008):

- i) Carter Urban Development Policy (1977-1981);
- ii) Reagan Urban Development Policy (1981-1989);
- iii) George H. W. Bush Urban Development Policy (1989-1993);
- iv) Clinton National Urban Policy Report 1995; and
- v) Current Urban Development Policy.

I) Carter Urban Development Policy (1977-1981): The deterioration of urban life in the United States is one of the most complex and deeply rooted problems of this age. The Federal Government has a clear duty to lead the effort to reverse that deterioration, these efforts are: (i) the leadership will deal with complex and deeply rooted problems; (ii) federal efforts alone will never be enough, everyone has a role; and (iii) if one has to preserve the special values of urban, suburban, and rural life, one must recognize that these values are interdependent. To a greater extent, than ever before, the

future of cities and the destiny of the Nation are joined. This link is now recognized by almost every American. Yet, throughout most of its history, America has been ambivalent about its cities.

II) Reagan Urban Development Policy (1981-1989): Some of the Prospective of Regan Urban Development Policy are: (i) considered by many to be a retreat from proactive inner city revitalisation (ii) built on the premise of efficient national economic growth and allowing private enterprise to facilities revitalisation in distressed areas with minimal public sector involvement (iii) mix and quality of public services should be made by informed administrations at the state and local level (iv) economic investment was key, not social investment, and (v) retreated from a city explicit policy basis.

III) George H. W. Bush Urban Development Policy (1989-1993): The focus was on housing policy, affordability and tax relief rather than holistic urban development policy.

IV) Clinton National Urban Policy Report 1995: Some of the important features of Clinton Urban Development Policy are: (i) maintaining fiscal integrity (ii) middle class tax relief (iii) expanding opportunities to all (iv) expanding access to metropolitan opportunities (through leveraging private investment and jobs, not infrastructure) (v) ensuring access to financial capital (vi) expanding homeownership opportunity (vii) freedom from fear; and (viii) empowerment zones and enterprise communities.

V) Current Urban Development Policy: Some of the important urban policy perspectives of current government are as follows:

i) **Strengthening Federal Commitment to cities:**

- a) create a Whitehouse office on urban policy.
- b) fully fund the community development block grant.

ii) **Stimulate Economic Prosperity in Metropolitan Regions:**

- a) support job creation and access to jobs;
- b) enhance workforce training;
- c) increase access to capital for underserved businesses;
- d) create nation network of public-private business incubators;
- e) convert manufacturing to clean technology;
- f) strengthen core infrastructure;
- g) invest in skilled clean tech workforce;
- h) housing;
- i) tax reform, access to affordable credit; and
- j) increase supply of affordable housing through trust funds.

1.4 URBAN DEVELOPMENT POLICY PERSPECTIVES IN CHINA

In 1950, when the people's republic of China was formed, the level of urbanisation was just 10 percent. For four decades after that, rural development and social

transformation was a priority for China. Thus even till 1990, the level of urbanization was just 20 percent. However, after 1990, the country's approach towards urbanization has changed rapidly. Thus by 2000, urbanization had increased to 36 percent and by 2007, it had reached 46 percent. Some of the cities in China like Beijing have an urban tradition that spans millennia, while there are several others where urban development has been rapid and has transformed erstwhile villages and small towns into booming cities in a span of just a decade or so.

The country's urbanisation history is rather uneven. The period of the Great Leap Forward (1958-1960) and the Cultural Revolution(1966-76) were two periods in particular where there was a very strong attempt to reverse an urbanising tendency through deliberate population movement to rural areas and encouragement of rural development policies. This period also witnessed the strengthening of the system of Hukou (a household registration system for key benefits) which acted essentially as a block to geographical mobility. The period of reform which followed in 1980 onwards saw the opening of Chinese borders to Foreign Direct Investment through the setting up of Special Economic Zones and a concomitant creation of cities. This pattern has continued through the turn of the century to unleash a period of unprecedented economic growth and urbanisation.

During post reform period, cities have played a central role in China's social and economic development. In 2001, urbanization (Chengzhenhua in Chinese) was, for the first time, written into the 10th Five Year Plan (2001-2005) as an explicit development strategy. In 2001, cities and towns accounted for half of the national industrial output, 70 per cent of GDP and 80 per cent of all national tax revenue. Some 90 per cent of higher education and scientific research resources were located in cities and town (Human Settlement Group, IIED, UNFPA, 2011).

As noted in the *Outline of the 10th Five Year Plan*

“..... enhancing the level of urbanization and shifting rural population benefits an increase in peasants' income, enlarges the consumer market, optimizes the rural/urban economic structure..... with the advance of productivity in the agricultural sector and acceleration of industrialisation, the time is ripe for the promotion of urbanization and we should not miss such a chance to implement the strategy of urbanisation.”

(Human Settlements Group IIED, UNFPA, 2011)

Urbanisation was viewed as a stimulus for economic growth and a solution for rural-urban disparities. The significance of urbanisation was reiterated in the 11th Five Year Plan (2006-2010). The resolution to promote further urbanization was confirmed, with emphasis on a healthier development trajectory:

“..... adhere to the coordination of the development of large, medium and small size cities and towns; enhance the carrying capacity of cities and towns; promote urbanisation actively and steadily to transform the dual rural/urban structure under the principles of step by step, saving land, intensive development and rational distribution.”

(Human Settlements Group IIED, UNFPA, 2011)

Given this backdrop, it may be easy to assume that China's urbanisation story has been led by the centralisation of governance. On the contrary, the urban growth in China is local. It has been spurred by the enterprise of local bureaucrats and the freedom with the city governments to take several decisions with implications for local economic growth. Each city in China thus competes with each other for opportunities of economic growth. They have pursued distinct trajectories towards the same. According to the McKinsey report (2006), the bulk of China's urban population resides in industrializing cities whose main challenge is to attract labour intensive industries and pull people out of poverty. There are other cities that are slowly transforming from an industrializing economy to one that is more specialised. Finally, there are only a handful of cities that have become modern cities. In these varying trajectories, cities employ a wide variety of tools to attract investment. These include facilitating land supply, using infrastructure development as a driver for economic growth, offering incentives for investors, loosening of migration policies and investing in technology development through a synergy between academic institutions and industry.

This rapid growth has human and environmental costs. The first is the unevenness of growth where the East coast has become the prime beneficiary while Western and Southern China remains underdeveloped. The second is the disenfranchisement of several thousand migrants to cities who work in cities but are denied other civic rights and the consequent separation of families wherein children stay in villages while parents work in cities. The thought of sustainability and justice, of conservation is muted and several cities face challenges of natural resources but these considerations are seen to be rising in the transforming cities. The potential in the Chinese story of urbanisation is however in the entrepreneurship and capacity for pragmatic solutions in city governments to deal with issues that confront them. The story of Chinese urbanisation is thus where there are several innovations, many of which are undocumented but all of these are nonetheless interesting ideas of how urban development can be an engine for economic growth.

1.4.1 Case Study of Shenzhen

Till 1983, Shenzhen was a sleepy fishing village in the Pearl River Delta. China's first SEZ (Special Economic Zone) was set up here in 1979. In late 1980, its population was 94,000 rising up to 8.3 million in 2005. It has an annual growth rate of 19.6% with 80% of its current population being migrants. Its status as the SEZ meant a strong Central Government support for infrastructure creation, ability to offer considerable incentives to investors and a favourable geographic location in proximity to Hong Kong. The first few years saw massive investments of FDI in Shenzhen for high intensity low cost labour industries. However this began to decelerate in 1990s. This is when Shenzhen rediscovered itself as a centre for financial services, high technology and logistics. The continuous high growth has generated several pressure points- availability of land and high density, availability of water and electricity, high levels of pollution and availability of educated and skilled labour. The city has coped with this through transformation of the city centre and its redeployment for high tech industries, through additions to the water and electricity supply and through the extension of some of the most extensive policies towards migrants seen in China. These however continue to be areas of challenge for the city which epitomises China's transformative urbanisation.

In this section you studied the changing global perspective on urban development and urban development in USA and China. Now, you should be able to answer the question relating to this section given in *Check Your Progress-1*.

Check Your Progress 1

Note: a) Write your answer in about 50 words.

b) Check your answer with possible answers given at the end of the unit

- 1) What is the current urban development policy of the Obama government in the USA?

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- 2) What are the features of urbanisation in China?

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1.5 URBAN DEVELOPMENT POLICY PERSPECTIVES IN BRAZIL

Brazil is South America's largest country, occupying nearly half the continent; and with a population of 187 million, it is the fifth most populous country (and the fourth most populous democracy) in the world. Brazil has urbanised rapidly over the past few decades. According to a 2000 census, over 80 percent of the population lives in urban areas. However, much of this urbanisation has been unequal; population has grown around state capitals and neighbouring municipalities of larger metropolitan areas, while other regions have experienced negative growth rates. The result has been pockets of poverty with increased social exclusion and environmental hazards. Brazil began as a federated republic in 1889. Throughout the twentieth century, the country experienced periods of development where the government sought to manipulate urban space to shape society. Post-Brasilia, from 1964 to 1985, the country was under the rule of military leaders, and until 1990 there were no popular elections for President. However, beginning in the late 1970s, Brazil gradually returned to democratic rule, and in 1982, direct elections were held for state governorships. This process of re-democratisation has actively shaped the nature of urban development policies in Brazil.

The process of re-democratisation expanded the political arena to include diverse sections of society who demanded urban reform through active struggles. The struggle for urban reform began in the 1960s, when progressive sectors of Brazilian society demanded structural reforms to the legal regulation and use of public land. The main issue was agrarian reform in the countryside. However the military coup of 1964 gave rise to an authoritarian political system (lasting until 1984) which did not allow these reforms to be carried out. Urban reform issues reappeared in the 1970s and 1980s during a period of slow and gradual political openness in which social movements slowly gained greater visibility and political weight, and were able to construct an autonomous discourse and social practice. The movement's demands were presented as rights in an effort to reverse social inequalities on the basis of a new social ethic. At the time, Brazil's urban landscape had undergone significant changes. Marked by a high rate of rural-urban migration between 1940 and 1991 during which time the urban population increased from 31.2% to 75% of the country's total population. Brazilian cities grew without basic infrastructure. Major consequences resulted, especially the spatial segregation of neighbourhoods which were largely neglected, lacked the basic conditions for adequacy and developed with the complicity of the public authorities.

In 1988, the struggle for urban reform was taken up again. In the beginning, the movement's struggle was focused on local issues, such as demands for housing. However, by the end of the military regime, it had begun to incorporate ideas of the right to a more social life: the idea of the city, the city of all people, a home beyond one's house, a home accessed by paved roads, public services, schools, and transportation. In 1986, the National Urban Reform Movement defined the concept of urban reform as a new social ethic which rejects the use of the city as a source of profit for a few while conversely subjecting many to poverty. Thus, this new social ethic politicizes the debate about the city and creates a discourse and political platform for urban social movements, in which access to the city is the right of all its residents and not restricted to a few, or rather, the wealthiest. The struggle brought together several organizations, movements, professional organisations .The church too came out strongly in defence of the social role of property which was a major contribution in a deeply religious society like Brazil.

The culmination of these struggles was the establishment of an internal regulation in the Constituent Assembly which permitted the use of popular initiatives to present amendments to the Brazilian Constitution of 1988. More than 12 million signatures were gathered for popular amendments which contained the earlier discussed reforms. Conservative forces argued that the principles of social justice were being used as a pretext to prevent the country's development (development was a term long used to disguise the issue of the inequality of urban space) and that intervening in urban policy would give the state too large of a role. While all the proposals for reform were not incorporated in the constitution, some important ones were. With the popular amendment, Brazilian public rights began to guarantee not only private property and individual interest, but also the protection of collective interest above the various uses of individual property. Other achievements at that time were the affirmation and establishment of effective municipal autonomy and the expansion of popular participation in city management, both through direct institutional mechanisms like plebiscites, referendums, popular initiatives and public consultation, as well as other forms of direct participation such as councils, conferences, forums and public hearings.

This ensured the community's participation in the development of Master Plans, the main urban planning instrument for municipalities. Further they paved the way for many other reforms such as the recognition of the right to housing as a fundamental right in the Brazilian Constitution in 2000 and the approval of the City Statute in 2001.

The City Statute (Federal Law No. 10.257/01) is the Brazilian development law that regulates the chapter on urban policy in the 1988 Brazilian Constitution. It sets the overall guidelines to promote urban policy that must be observed by the Union (federal government), the states (state governments) and municipalities. The City Statute specifically addresses:

- instruments designed to ensure the fulfilment of the social function of property, progressive taxation over time on urban property and expropriation for urban reform purposes;
- criteria for municipalities to develop and apply Management Plans;
- regulatory instruments for the use of and access to urban lands occupied by low-income people; and
- democratic city management instruments; public hearings; councils; and city conferences in national, state and municipal plans.

These reforms have set the stage for several policy innovations in cities of Brazil which incorporate the elements of inclusivity and sustainability. The case of Curitiba where the principle of planning for the poor first was incorporated to create a model of a clean and green city, Porto Allegre, where participatory budgeting enabled the city to set its priorities for the poor first, the city of Rio where a massive up gradation programme of *favelas* (slums) is undertaken are all examples of these innovations that have been made possible due to a high degree of decentralisation, popular participation and political commitment to goals of inclusivity and sustainability. Brazil's urbanisation story is thus one of possibilities of how problems such as squalor, poverty and inequity can be dealt with through determined action by both people and policy makers. It is not without pitfalls. Thus, high proportions of external and public debt are concomitants of the urbanization in the country. However, the country still has the potential to become one of the largest growing economies of the world.

1.5.1 Case of Porto Allegre

Porto Allegre is a city in the state of Rio Grande do Sul in Brazil and is home to about 1.3 million residents. The local government of Porto Allegre, like several other local governments functioned as a consortium of landed and business interests till 1988. In 1988, a coalition of Left Parties led by the Worker's Party was elected to power and held it for consecutive terms in 1992 and 1996. The coalition government faced a challenge similar to most Brazilian cities – that is to build a city government responsive to needs of those who were excluded from city services .The coalition government began an effort at participatory budgeting which has progressed to transform the nature of local governance in the city.

The making of the municipal budget in Porto Alegre today is in effect a bottom-up process. The key innovation has been the creation of district and citywide budget councils constituted of delegates elected in open assemblies at the neighbourhood and district levels. Over the years, these councils have come to play an increasingly significant role in negotiating both the broad objectives and

details of the budgetary allocations. The councils also play a role in organizing people, build skills in articulating demands, translating them into specific proposals and advocating for them. The introduction of participatory budgeting has considerably changed the priorities of local government spending to prioritise needs like sanitation, housing as opposed to the patronage interests reflected earlier. As the experiment has advanced, it has also widened the scale of participation and advanced representation at every stage in the programme. The municipality has expanded its range of services and a redistributive dimension has been introduced.

In this section you studied urban development in Brazil. Now, you should be able to answer the question relating to this section given in *Check Your Progress-2*.

Check Your Progress 2

- Note:** a) Write your answer in about 50 words.
b) Check your answer with possible answers given at the end of the unit
1) Mention some of the urban reforms in Brazil?

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1.6 URBAN DEVELOPMENT POLICY PERSPECTIVES IN SOUTH AFRICA

South Africa is another nation that is urbanising very rapidly. Over 55% of its population is urban and estimates indicate that the current rate of urbanization is about 4.9%. The largest proportion of this urban population (about 67%) is located in the four metropolitan areas of Pretoria/Johannesburg, Durban, Cape Town and Port Elizabeth. The country also has a number of medium sized towns in the South and the East but the four metropolitan areas are the real engines of its economy, generating over 80% of the GDP of South Africa. The system of apartheid which characterised the country is expressed in almost every aspect of South African cities, in particular the larger ones. The system of apartheid with its accompanying town planning, transport policies and systems of governance perpetuated by economic forces resulted in cities with extremely high proportion of inequity and exclusion. Thus, there is low-density, well serviced white neighbourhoods and there are extremely over crowded, poorly serviced black neighbourhoods which are spatially segregated. Black townships and housing is usually the worst in these cities and is either in the form of matchbox housing or shacks. Cities like Durban and Elizabeth have about half their population in such shack housing which is informal. Most of the economic opportunities are located in the well services parts of cities. The neighbourhoods were governed by distinct authorities. Spatial segregation thus was a marker of differential opportunities.

In 1990, when the system of apartheid ended and the country embarked on a truly democratic path, the crucial challenge that it faced in terms of urban development was to continue its high growth trajectory while tackling the challenge of systemic exclusion. Several legislations were passed to materialize this vision. The South African constitution thus enshrines an access to adequate housing as a Constitutional right. The Local government Transition Act,1996 attempted to bridge the distinct local governance systems while the Development Facilitation Act,1995 provides for fast tracking of land development for urban growth while also providing for integrated planning of cities.

Like the Chinese system, local governments in South Africa are seen to be primarily responsible for service delivery as well as local economic development while the tasks of redistribution, etc. are entrusted to the provincial governments. This has meant that most city governments are engaged in attracting new investment opportunities and in improving service delivery. The country has very successfully used the organization of events such as World Cup football (which took place in 2010) to enhance its infrastructure and economic competitiveness.

The downside of the South African urbanization story remains that apartheid no longer continues in its original form but is expressed substantially enough in the access to housing, services, and economic and other opportunities. However, the system of ‘Soweto’ where cities were considered the preserves of the rich and blacks whose access to city was otherwise restricted were brought in mainly to serve as labour has been broken. Migration is now free. This has brought some of the contradictions to the fore as witnessed by the increasing occupation of public lands by poor black population and thus an increase in informal housing. New challenges are thus being generated in South African cities.

1.6.1 Case Study of Johannesburg

Johannesburg is a city of about 3.0 million populations but forms a conurbation with nearby provinces of Pretoria and Vereeniging of about 8.0 million. In the apartheid era, the city ,home to white South Africans had extremely visible areas of prosperity with standards equivalent to the First World. Poverty, on the other hand, was invisible and hidden in the Soweto. The post apartheid era has thrown up the simultaneous challenges of commitment to redistribution and reconciling the same with need to enhance economic investment, identify resources and counter powerful vested interests at multiple levels.

The period 1980-2000 saw a reducing rate of economic growth for the country as a whole. In Johannesburg, this translated into a closure of manufacturing industries, creating high levels of unemployment especially among African youth. While the South African constitution is committed to the autonomy of local municipal governments, the above mentioned pressures and the resultant restructuring of governments and challenges of service provision in under serviced areas have preoccupied the local officials . Further while much of the poverty in South Africa continues to be rural, urban poverty has increasingly become more visible. Post apartheid Johannesburg thus demonstrates several of the symptoms of a transitional economy. The end of apartheid saw a system of weak decentralisation at the local level. However by the end of 2000, autonomy of local governments was fully established. In Johannesburg, basic service provision

to under-served areas has been considerably enhanced. The planning frameworks for the city were also revised. Economic opportunities thus also came to be much more spatially distributed.

Poverty in Johannesburg continues to be geographically concentrated and been unable to fully counter the impacts of exclusion perpetuated by apartheid planning systems. However, there is evidence to show that the situation has become much more dynamic with many more middle class blacks and emergence of significant social differentiation among the blacks themselves. Johannesburg thus stands as a testimony to how a challenge of systematised exclusion can be countered while managing economic growth.

In this section you studied urban development in South Africa. Now, you should be able to answer the questions relating to this section given in *Check Your Progress-3*.

Check Your Progress 3

Note: a) Write your answer in about 50 words.

b) Check your answer with possible answers given at the end of the unit

1) What are the features of urbanisation in South Africa?

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1.7 DRAWING LESSONS

India is a large country characterised by diversity and a democratic system which has developed strong roots. The country also is characterised by inequalities and in particular, institutionalized systems of inequity like those based on caste, religion and ethnicity. Policy making in India has few parallels with the systems in the countries described earlier and yet there are several lessons that we can learn from these countries.

The first is about the outlook towards urbanisation. The experience of all these countries shows that urbanization as a conscious strategy of development yields positive results. At a stage where agricultural employment becomes stagnant, it helps to relieve the pressure of employment on the farming sector and brings in new modes of enhancing productivity. It thus also channelizes the energies and the creativity of the youth, thereby cashing on the demographic dividend available to these countries. India has urbanised at a moderate pace, our outlook towards urbanisation is unclear. The spatial dimension to policies is by and large neglected; our cities develop in an unplanned manner. The experience of China in particular, offers immense lessons for an integrated approach to economic and spatially directed development.

The second major area for learning is in terms of the difference that effective local governments make to the growth potential and quality of life in cities. In China and South Africa, the stakes of local governments in economic development have enabled these governments to devise ways in which to attract investments and growth opportunities. In Brazil, decentralisation has enabled the inclusivity and sustainability to become political agendas, allowing local governments to pursue pro-poor and inclusive policies through innovations. In India, the decentralisation agenda began to be developed through the 74th Constitutional Amendment but the task remains unaccomplished. Most urban local bodies in the country have very little autonomy to either chart their economic futures or innovate for inclusivity. The potency of effective decentralisation is thus, a tremendous lesson offered by these countries.

Another area for learning is the management of migration. China discouraged migration directly through the Hukou; it has been forced to engage in a gradual reform of the system to encourage urban development. South Africa created divided cities by compelling labour to move to cities in allotted areas. It is still grappling with the impacts of the systematised apartheid on its cities. Brazil encountered migration and inequity through a revolutionary process which then transformed the principles of urban governance totally. In India, cities are theoretically open to migrants but we have not redressed the issues of identity, inclusion in city fabric and services in a systematic way, instead forcing them to find their own solutions by way of slums and informal livelihoods. The experiences of the three countries should illustrate to us that dealing with urban poverty and migration is an urgent challenge, especially if it is to be channelled to improving the prospects of a city.

1.8 LET US SUM UP

As the world becomes urban and the axis of urbanisation shifts to the Global South, challenges of urbanization that did not exist before and for which little knowledge is available are emerging. There is thus a lot of value in such countries learning from each other than following the prescriptions of the West which never experienced such challenges. China, Brazil, South Africa represent countries which have followed broadly the same developmental trajectory as India and thus their urbanization experience offers several invaluable lessons for us. However, the urban policy perspectives of the USA have also been discussed in this unit. The experiences of these countries offer a lot of lessons, particularly in the areas of perspective on urbanisation, decentralisation and management of migration.

The current phase of urbanisation is one which the world has never experienced before. Urbanization amidst poverty, the experience of large scale cities urbanization while the climatic changes create new risks for living environments are daunting aspects of this urban experience, for which little knowledge exists. Learning from each other is perhaps the best way of learning at this stage. Lessons from China, Brazil, and South Africa with broadly similar development trajectories are thus very useful for us to reflect on our own policies and work towards redesigning them.

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1.10 CHECK YOUR PROGRESS-POSSIBLE ANSWERS

Check Your Progress 1

- 1) What is the current urban development policy of the Obama government in USA?
 - i) **Strengthening Federal Commitment to cities.**
 - a) Create a Whitehouse office on Urban Policy.
 - b) Fully fund the community development block grant.

ii) Stimulate Economic Prosperity in Metropolitan Regions.

- a) Support job creation and access to jobs.
- b) Enhance workforce training.
- c) Increase access to capital for underserved businesses.
- d) Create Nation Network of Public-Private Business incubators.
- e) Convert manufacturing to clean technology.

2) What are the features of urbanisation in China?

The features of urbanisation in China are

- a) Strong decentralised system of local government
- b) Local governments as the key stakeholders in economic development
- c) Economic strategy to attract investment on a long term basis
- d) Infrastructure creation to drive urbanisation
- e) Use of land as a leverage for investment and
- f) Gradual reform of migration policies.

Check Your Progress 2

1) Mention some of the urban reforms in Brazil

The process of urban reforms in Brazil is characterized by popular struggles. These struggles were rooted in the inequity in Brazilian cities whose governments represented landed and patronage interests. The key agendas of the reform were:

- a) Decentralisation and empowerment of local governments;
- b) Participation; and
- c) Equity and inclusion through acceptance of social ends along with private interests.

This has helped to subsequently open up the doors for several innovative practices and systems at the local level directed at social and environmental sustainability.

Check Your Progress 3

1) What are the features of urbanisation in South Africa?

Urbanisation in South Africa has been fairly rapid. Over 55% of its population is urban and estimates indicate that the current rate of urbanization is about 4.9%. The largest proportion of this urban population (about 67%) is located in the four metropolitan areas of Pretoria/Johannesburg, Durban, Cape Town and Port Elizabeth.

Another key feature of urbanisation in South Africa is the legacy of colonization which restricted opportunities of urbanization only to the White population and used black labour only as a servile population. South Africa has a high proportion of decentralisation. Thus responsibilities of economic growth and planning, service provision are key functions of these governments.

UNIT 2 URBAN DEVELOPMENT POLICY PERSPECTIVES IN INDIA

Structure

- 2.1 Introduction
 - 2.2 India's Urbanisation: Basic Features and Pattern
 - 2.3 Urban Policies and their Impact
 - 2.4 Challenges of Managing Urbanisation
 - 2.5 Let Us Sum Up
 - 2.6 References and Selected Readings
 - 2.7 Check Your Progress – Possible Answers
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2.1 INTRODUCTION

Cities around the world are playing an ever increasing role in creating wealth, enhancing social development and, attracting investment. It's also harnessing human and technical resources for achieving unprecedented gains in productivity and competitiveness. At the same time, cities play a critical role in driving the transition to sustainable development and promise better access to improved social amenities such as health, education, culture and recreation among others and a range of civic services namely water, power, sewerage, sanitation, roads and transportation to upgrade the quality of life of its inhabitants. As countries develop, cities and urban settlements account for a larger share of the national income. Often it generates a disproportionate share of Gross Domestic Product (GDP) and provides huge opportunities for investment and employment.

However, in reality cities, particularly in developing countries, are often plagued with severe shortcomings. Displaying a differentiated pattern, they contain centres of affluence as well as concentrations of abject poverty and neglect. While they offer some of the best social services including world class education and health facilities, cities are also host to a great many social ills – chronic poverty, poor sanitation, crime, environmental pollution and social unrest.

After studying this unit, you should be able to:

- Explain the trends and pattern of urbanisation
- Describe the role played by various policies and programmes in urban development and management
- Analyse the impact and outcome of these policies and programmes

2.2 INDIA'S URBANISATION: BASIC FEATURES AND PATTERN

Though, India is less urbanised in comparison with many Asian countries like China, Indonesia and South Korea. Nevertheless with nearly a third of the population – in absolute numbers about 286 million urban inhabitants in 2001 – India had the second largest urban population in the world, next only to China.

Given current trends in population growth and migration, estimates of the United Nations indicate that India is witnessing an ‘urban explosion’ with India’s urban population likely to reach 575 million by 2030 (40.90 percent of total population).

The importance of India’s urban sector is indisputable. The urban sector’s contribution to India’s net domestic product is estimated at between 50 and 52 %, while at the same time, 64.7 % of employment in trade, commerce, and financial services; 65 % in manufacturing and 68 % in the transport sector are concentrated in urban areas.

As may be seen from Table 1, India’s urban population increased from 62.4 million in 1951 to 159.5 million in 1981 i.e. the absolute increase during the three decades was of the order of 94 million (1951-1981). This increase may be attributed to faster pace of industrialisation adopted in five-year plans by Government of India. During 1981-1991 the urban population increased by 59.4 million which indicates the growing trend towards urbanisation. Urban population in absolute terms reached 286.1 million in 2001, which constituted 27.8 percent of India’s total population of 1.02 billion in that year. The percentage of urban population to total population in the 1991 Census including interpolated population of Jammu and Kashmir where census could not be conducted in 1991) was 25.7 percent. Thus, there has been an increase of 2.1 percentages in the proportion of urban population in the country during 1991 – 2001.

Table 2.1: India: Urbanization and Decadal Growth, 1951 – 2001

Year	Total population (million)	No. of towns and UAs	Urban population (million)	Share of urban to total population (%)	Decadal Growth of urban population (%)	Index of Urban Population (Base 1951=100)
1951	361.1	2843	62.4	17.3	41.4	100
1961	439.2	2365	78.9	18.0	26.4	126
1971	548.1	2590	109.1	19.9	38.2	175
1981	683.3	3378	159.5	23.3	46.1	256
1991	846.3	3768	217.6	25.7	36.4	349
2001	1028.6	5161	286.1	27.8	31.5	458

Source: Census of India, Final Population Tables 2001, GOI, New Delhi

Basic feature of urbanization in India can be highlighted as:

- 1) Skewed and lopsided urbanisation
- 2) Urbanisation occurs without industrialisation and strong economic base
- 3) Urbanisation is mainly a product of demographic explosion and poverty Induced rural - urban migration.
- 4) Rapid urbanisation leads to massive growth of slum followed by misery, poverty, unemployment, exploitation, inequalities, degradation in the quality of urban life.
- 5) Poor quality of rural-urban migration leads to poor quality of urbanisation.

The pattern of urbanization in India is characterised by continuous concentration of population and activities in large cities. Urbanisation process is not mainly “migration lead” but a product of demographic explosion due to natural increase. India’s urbanisation is followed by some basic problems in the field of:

- 1) Housing,
- 2) Slums,
- 3) Transport
- 4) Water supply and sanitation,
- 5) Water pollution and air pollution,
- 6) Inadequate provision for social infrastructure (school, hospital, etc).

Indian urbanisation is involuted not evolved. Poverty induced migration occurs due to rural push. The megacities like Delhi, Mumbai, Kolkata, Chennai, Hyderabad and Bangalore grew in urban population not in urban prosperity. Hence it is urbanisation without urban functional characteristics. These mega cities are subject to increasing slum and inadequate shelter, drinking water, electricity and sanitation.

Urbanisation is degenerating social and economic inequalities which warrant social conflicts, crimes and anti-social activities. Lopsided and uncontrolled urbanisation leads to environmental degradation and degradation in the quality of urban life that is pollution in sound, air, water, created by disposal of hazardous waste.

In this section you studied the basic features and pattern of India’s urbanisation. Now, you should be able to answer some questions relating to this section given in check your progress-1.

Check Your Progress 1

Note: a) Write your answer in about 50 words
b) Check your answer with possible answers given at the end of the unit.

- 1) What are the basic features of Urbanisation?

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- 2) Explain the pattern of India’s Urbanisation.

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- 3) What are the basic problems in India's rapidly growing cities?

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2.3 URBAN POLICIES AND THEIR IMPACT

Urban planning and policy discussions in India have invariably only dealt with issues like relationship between urbanisation and economic development, distribution of urban population in various size-classes of settlement, regional development, growth of large, especially metropolitan cities, infrastructure and services, urban local bodies and institutional aspects including finance and legal issues .A good number of reports, documents and papers have been published on these issues.

Basically the thrust of most of these reports have been that

- i) large cities have grown faster than, and at the expense of, small and medium towns;
- ii) this is undesirable;
- iii) measures should be taken to arrest large city growth; by making greater investment in small and medium towns; and
- iv) effective industrial location policy, set to achieve at intra-regional balance in industrial location.

This section focuses on an analysis of urban policy at the national level. It should be remembered however that urban development, housing, urban policy and urban planning in India are state subjects under the Constitution. Therefore, without a thoroughgoing analysis of urban development policies in different states, it is not possible to paint a comprehensive picture of urban policy in India. The Centre can, at the most, “issue directives, provide advisory services, set up model legislation and fund programmes which the states can follow at will”. The urban policy existing in the states is largely an off shoot of that outlined in the national five years plans and other policies and programmes of the Central Government. It is in this context that an analysis of the national level urban policies and programmes become important to understand the general direction of urban policy in India.

2.3.1 The First Phase: 1951-56

The 1st Five Year Plan (1951-56) was mainly concerned with housing and rehabilitation of refugees. The Ministry of Works and Housing was set up to ensure speedy spatial and occupational rehabilitation of refugees. A large number of rehabilitation colonies and sub-towns were set up in Delhi, Bombay, Ahmedabad, Uttar Pradesh, Haryana, Punjab and Calcutta. The city of Chandigarh was created in the same period as a symbol of ‘modern’ India. In the same plan

period the National Buildings Organisation and the School of Planning and Architecture were set up in order to improve the quality and efficiency of built environment building, research and develop housing technologies and create a cadre of trained town planners. Furthermore, the Central Government also set up the Town and Country Planning Organisation to provide guidance and assistance to Central and State governments on urban problems and also to prepare the Delhi Master Plan which was conceived as the model plan which was subsequently to provide a framework for master plans to be prepared for other cities. The other two issues that the 1st Plan was concerned about were industrial and employer housing and slums.

The Plan was categorical about the need for slum clearance. Terming slums a ‘national problem’ and a ‘disgrace to the country’ it stated that “it is better to pay for the cost of clearing than to...suffer their destructive effects upon human lives and property indefinitely”. It is to be noted however, that the use of the term ‘slum’ in the First Plan refers exclusively to dilapidated and over-congested areas such as the Walled City in Delhi. The 2nd Plan (1956-61) identified “rise in land values, speculative buying of lands in the proximity of growing towns, high rentals and the development of slum areas” as features common to most large towns and cities. It also predicted an escalation in these problems given the trends in industrialisation. The Plan thus introduced the theme of regional planning and emphasised the importance of preparing master plans. While recognising growing housing deficits in urban areas, it placed the problem of housing in the wider context of urban and regional planning and called for construction of housing for low income groups. Thus Town and Country Planning legislation was enacted and in many states institutions were set up for the preparation of master plans. In 1956, the *Slums Areas (Improvement and Clearance) Act* was passed. The Act defined slums as: “any area (where) buildings...(a) are in any respect unfit for human habitation, or (b) are by reason of dilapidation, over-crowding, faulty arrangement and design of such buildings, narrowness or faulty arrangement of streets, lack of ventilation, light or sanitation, or any combination of these factors, are detrimental, to safety, health or morals”. For preventing the growth of slums, the Plan recommended strengthening local authorities and mobilising “the support of enlightened public opinion” in enforcing the implementation of building codes and municipal by-laws.

It was in the 3rd Plan (1961-66) that urban policy and development planning began to acquire a cogent form. During this period, Master Plans for various cities were prepared and the need to strengthen urban local governments, especially their financial and administrative aspects, was recognised. In order to guide and enforce the planned development of cities through the implementation of master plans, para-statal development authorities, such as Delhi Development Authority (DDA), Mumbai Metropolitan Regional Development Authority (MMRDA), Madras Metropolitan Development Authority (MMDA), were set up. It is noteworthy that the master planning approach to tackling urban problems was an uncritical import from the then prevalent town planning and regulatory practices in Britain and the United States of America.

The important features of these master plans were:

- a) Designing of land use with a future perspective;
- b) A city without slums, or in other words, a standard ‘decent’ housing for everyone;

- c) Detailed modernised Central Business District;
- d) Division of major land use into zones;
- e) An efficient highway and transportation system; and
- f) Adequate community facilities with residential areas divided into neighbourhoods.

The master plans give pre-eminence to the planned and orderly development of cities through a strict spatial segregation of functions such as housing, commerce, industries, etc. in mono-use zones.

The 3rd Plan also emphasised the need for balanced spatial and demographic development through locating new industries far away from cities, adopting the concept of the ‘region’ in the planning of large industries and strengthening rural-urban linkages. The Plan expressed concern about increase in land prices in cities and the growth of slums. The concept of urban community development was introduced to tackle problems of urban slums. Earlier the central government had introduced a scheme in 1959 to “give loans to state governments for a period of ten years acquisition and development of land in order to make available building sites in sufficient numbers”. Moreover, “various measures such as freezing of land prices, acquisition and development of land and taxation of vacant land were suggested to control and regulate the urban lands”. The Plan period also saw significant dispersal of urban planning and development activities from the centre to the states with massive amounts of investment poured into developing state capitals and new cities such as Gandhinagar in Gujarat and Bhubaneswar in Odisha. Thus, we see that the first phase of urban policy was characterised by the lack of a comprehensive vision on urbanisation or urban process in India. The Plans prepared during this period largely had an adhoc and piecemeal approach towards urban issues and problems. Though from the second plan onwards, planned development of cities became a major theme , there was little attempt to reconcile the technocratic blueprint of master plans with the complex realities of a predominantly poor, newly independent, post colonial country.

2.3.2 The Second Phase: 1969-1984

Achieving balanced urban growth through dispersing populations in smaller urban centres was the overriding thrust of the 4th Plan (1969-74). This was to prevent the concentration of population in metropolitan cities such as Delhi, Bombay, Calcutta and Madras. The creation of small towns and ensuring the spatial location of economic activity in a planned manner consistent with the objectives of the Plan was underscored.

The Plan articulated the need for urban land policy at the state level and provided specific guidelines for the formulation of the same. It recommended that -the state level urban policies should aim at:

- a) The optimum use of land;
- b) Making land available to weaker sections;
- c) Checking the concentration of land ownership, rising land values and speculation of land; and
- d) Allowing land to be used as a resource for financing the implementation of city development plans.

In 1970, the Housing and Urban Development Corporation (HUDCO) was set up to provide loans to urban development authorities and state housing boards for housing and other development projects such as infrastructure development, land acquisition and essential services. One of the main goals of the HUDCO was the “promotion of housing for the persons belonging to low income groups and economically weaker sections” .The Central Government launched the Environmental Improvement of Urban Slums (EIUS) scheme in 1972-73 to provide a minimum level of services, such as, water supply, sewerage, drainage, pavements in 11 cities with a population of 8 lakhs and above. The scheme was later extended to 9 more cities. In 1973, towards the end of the fourth plan, the World Bank started its urban sector operations in India with the launching of the Calcutta Urban Development Project. The 5th Plan (1974-79) was mainly concerned with introducing measures to control land prices in cities; providing a framework for the development of small and medium towns; augmenting basic services in cities and towns; addressing the problems of metropolitan cities with a regional perspective and assist development projects having national significance in metropolitan cities. The priorities expressed in the Plan were based partly on the National Urbanisation Policy Resolution of the Town and Country Planning Organisation. In order to evolve a framework for the development of small and medium towns the central government constituted a Task Force on Planning and Development of Small and Medium Towns in 1975. The main objectives of the Task Force, were to “examine laws relating to local administration and urban development, and to suggest suitable modifications of these laws, keeping in view the need to assist in the planned growth of small and medium towns, and to formulate guidelines and regulations in the matters such as zoning, setbacks, building control and such other relevant matters”. The report of the Task Force was published in 1977 and recommendations included giving priority to the development of existing towns and cities within a population range of 50,000-3,00,000. The framework for the selection and consequent development of small and medium towns consisted of the following recommendations:

- a) Formulation of a national urban policy;
- b) Urban land policy to ensure proper use of land;
- c) Development of small and medium towns, cities and metropolises with organic linkages to their immediate areas;
- d) Identification of growth points in the region that may be delineated;
- e) Evolution of location policies in the context of regional development;
- f) Provision of inviolable greenbelts around settlements of certain sizes;
- g) Working out of rational and feasible norms and standards of urban development; and
- h) Creation of appropriate statutory local government agencies at various levels.

The Plan also emphasised the need for infrastructural development of cities with population over 300,000. To achieve this goal a scheme called Integrated Urban Development Programme (IUDP) was launched. Also, the Sites and Services Scheme for making serviced land available to the poor was launched in this Plan period.

One of the most important steps that were taken to check land prices and speculation in land during the fifth plan period was the promulgation of the Urban Land (Ceiling and Regulation) Act (ULCRA), 1976. The ULCRA aimed

at preventing concentration of urban land in the hands of a few thereby checking speculation in and profiteering from land. It enabled the socialisation of urban land to ensure equitable distribution amongst various social classes and orderly development of urban built environment. The Act provided for fixing ceiling on the possession and ownership of vacant land in urban areas and acquisition of excess land for creating housing stock for the poor.

The focus of the 6th Plan (1980-85) was largely on the development of small and medium towns and provision of basic services in urban slums. Though the Plan underlined the need to improve environmental conditions in slums through improvement in drainage, sewerage and sanitation, the urban component of the 6th Plan is remembered primarily for the introduction of a centrally sponsored scheme called the Integrated Development of Small and Medium Towns (IDSMT) with the objective of promoting growth in towns with less than 100,000 population through provision of infrastructure and basic services. The components eligible for central assistance under the IDSMT included land acquisition and services, construction of new markets, provision of industrial estates, provision of other services and processing facilities for the benefit of agricultural and rural development in the hinterland and low cost sanitation. The state components included slum improvement, small-scale employment generation, low-cost water supply schemes, drainage and sanitation, sewerage, preventive medical facilities, parks and playgrounds. To begin with, the scheme included 231 towns in various states and union territories, selected on the basis of the ratio of urban population in the state to the total urban population in the country. Later on, a few additional towns were added to this list. There was also a lot of emphasis on containing the growth of metropolitan cities by dispersing industrial and economic activities in small and medium towns in general and satellite towns of large cities in particular. However, stagnation in agriculture and skewed investment policies coupled with favourable economies of agglomeration enjoyed by large cities thwarted all attempts at ‘balanced regional development’.

2.3.3 The Third Phase: 1986 Onwards

In mid 80s, the Indian economy started taking its first tentative steps towards liberalisation. The urban policy reflected the trend in economic policy. The 7th Plan heralded a shift in urban policy by initiating a process of opening up avenues for private sector participation in urban development. The Plan called for “radical (re)orientation of all policies related to housing” and entrusted the main responsibility of housing construction to the private sector. The government’s role was sought to be reduced to “mobilisation of resources for housing, provision for subsidised housing for the poor and acquisition and development of land”. In order to boost the housing finance market, it recommended setting up of the National Housing Bank. It also proposed to set up a National Urban Infrastructure Development Finance Corporation to augment the capacity of urban local bodies to undertake infrastructure creation, particularly water supply and sewerage facilities.

In 1988, the first ever National Housing Policy (NHP) was announced. The objectives of the NHP included removal of homelessness, improving the conditions of the inadequately housed and provision of minimum level of basic services to all. The Policy conceived the role of the government as “a provider for the poorest and vulnerable sections and as a facilitator for other income groups

and private sector by the removal of constraints and the increased supply of land and services". The IDSMT continued to be the most important scheme for the urban sector under the Seventh Plan as well. In the Plan period, the coverage of the scheme was extended to 102 additional towns. The Plan reiterated the need to integrate town level plans into the regional systems. In 1985 the National Capital Region Planning Board was formed to reduce population pressure on Delhi by dispersing and diverting population and economic activity to other urban centres within the National Capital region, thereby ensuring the balanced development of the region as a whole. Emphasis was also laid on community participation at the town/city level. Recognising the need to directly address the problem of urban poverty, the Plan also launched an urban poverty alleviation scheme called the Urban Basic Services (UBS) with a focus on improving the status of women and children in urban low-income families through community participation, integrated development and cost effectiveness. The UBS was later merged into the EIUS in 1990 and renamed as Urban Basic Services for Poor (UBSP). Another important scheme, namely, *Nehru Rozgar Yojana* (NRY) was launched in 1989 to generate employment opportunities for the urban poor. The NRY had three basic components of microenterprises, wage employment and shelter upgrading. In the same year, the National Commission on Urbanisation (NCU) submitted its report. The Commission was entrusted with the task of making a detailed investigation into the process, pattern, trends and issues of urban development and planning and suggesting appropriate framework and guidelines for urban policies and programmes in the coming years. The NCU emphasised close link between urbanisation and economic development. The NCU marked a significant departure from the policy pronouncements of earlier government policies and plans as it abandoned the concept of backward area because "it was felt that instead of forcefully inducing investments in areas which are backward and have little infrastructure and in which the concessions are likely to be misused, the identified existing and potential urban centres at intermediate levels could be developed to attract the migrants as they are located in closely related regions". Consequently, the Commission identified 329 cities called GEMs (Generator of Economic Momentum) which were further divided into NPCs (National Priority Centres) and SPC (State Priority Centres). Apart from GEMs, National and State Priority Centres, the Commission also identified 49 Spatial Priority Urban Regions (SPURs). The future growth in urbanisation was expected to take place along these nodes and corridors.

The Plan expressed the need to link urban growth with economic development and advanced the following policy directives:

- a) Consolidation and operationalisation of spatial and economic dimensions of planning by:
 - i) involving an integrated hierarchy of rural and urban settlements based upon primary economic functions;
 - ii) linking the urban development plans with respective district level planning processes including the programmes of various state level and central departments like agriculture; and
 - iii) rural development, environment, telecommunications, industries and other such organisations.

- b) Convergence of all related programmes that is IDSMT, housing and infrastructure development programmes of HUDCO, NRY and UBSP aims to create the desired impact in small and medium towns beyond the threshold level.
- c) Taking legal, organisational and financial measures for enhanced and equitable supply of urban land and promotion of housing, including review of master plan standards, amendments to Land Acquisition Act, Urban Land Ceiling and Regulation Act, Transfer of Property Act and Rent Control Laws.
- d) Promoting public-private partnerships in the urban development sector.
- e) Developing appropriate specialised institutional support at the central and state levels to deal with financing and development of urban infrastructure.

In the same Plan period, in 1995, another programme called Prime Minister's Integrated Urban Poverty Eradication Programme (PMIUEP) was launched. The PMIUEP was a five year long scheme applicable to all class II cities with a population ranging between 50,000 to 1,00,000 subject to the condition that elections to local bodies had been held. In 1992, the Town and Country Planning Organisation prepared a draft National Urban Policy.

The main objectives of the draft NUP were to:

- a) Evolve a spatial pattern of economic activities and population distribution based on regional development and planning considerations;
- b) Secure a balanced distribution of population among the urban centres of various sizes, so as to maximise economic gain and minimise social costs of urbanization;
- c) Control further growth of metropolitan cities by dispersal of economic activities in the new growth centres;
- d) Prioritise development of those urban centres which have been identified as prime economic movers in national economic development, such as the National Priority Cities (NPCs), State Priority Cities (SPCs) and Spatial Priority Urbanisation Regions (SPURs); and
- e) Improve the efficiency of the urbanisation process by removing bottlenecks and breakdowns in the supply of urban services.

At the beginning of the 8th Plan period, in 1992, the 74th Constitutional Amendment Act was promulgated. It was a landmark Act which sought to decentralise decision making in cities and towns through creation of elected urban local bodies (ULBs) as institutions of democratic self governance and devolution of essential functions related to city planning and service provision to these bodies. The salient features of the 74th CAA are:

- introduction of the Twelfth Schedule which lists the functions of the ULBs;
- establishment of ward committees in areas having a population of over 3 lakhs;
- periodic and timely elections of ULBs; and
- devolution of finances to ULBs as per the suggestions of the State Finance Commissions (SFCs).

The Mega City Scheme, a centrally sponsored scheme launched in five cities, namely, Mumbai, Kolkata, Chennai, Hyderabad and Bangalore during the 8th Plan had the express purpose of preparing municipalities to use institutional finance and eventually market instruments like municipal bonds for capital investment requirements. One of the highlights of the 8th Plan period was the publication of the India Infrastructure Report. India Infrastructure Report was widely considered a landmark document in the push towards privatisation and/or commercialization of infrastructure creation and management, service provision and regulatory and governance systems.

The 9th Plan (1997-2002) was greatly influenced by the India Infrastructure Report. The Plan recognized the skewed nature of urban process in India with urbanization and economic growth mainly concentrated in certain parts of the country and certain parts of a state. It thus admitted that the IDSMT that had been launched in the Sixth Plan to reduce regional disparities had largely been a failure. The 9th Plan reiterated its commitment towards reducing regional disparities; however, the primary responsibility for achieving the same was now with the state governments who were urged to raise resources for their activities from outside the Plan, specifically from financial institutions and capital markets. The Plan sought to make ULBs and parastatal agencies accountable and financially viable by cutting down on budgetary allocations for urban infrastructural development. The Plan recognised that while larger municipalities may be in a position to raise funds from capital market and financial institutions directly, the smaller ULBs simply do not have the financial and technical capability to do so. It thus proposed to create an ‘Urban Development Fund’ based on the principle of ‘pooled finance’ to help smaller towns realize commercial borrowings.

In terms of focus, the Plan recommended streamlining of employment generation programmes and creating housing stock for economically weaker sections and lower income groups through rationalisation of existing centrally sponsored urban poverty alleviation programmes. The sectoral objectives of the Ninth Plan were:

- a) Development of urban areas as economically efficient, socially equitable and environmentally sustainable entities;
- b) Accelerated development of housing, particularly for the low income groups and other disadvantaged groups;
- c) Development and up gradation of urban infrastructure services to meet the needs of a growing population;
- d) Alleviation of urban poverty and unemployment;
- e) Promoting accessibility and affordability of the poor to housing and basic services;
- f) Improvement of urban environment;
- g) Promoting private sector participation in the provision of public infrastructure and of the community and NGOs in urban planning and management of specific component of urban services; and
- h) Democratic decentralisation and strengthening of municipal governance.

The Hashim Committee, set up to review and streamline these programmes suggested phasing out NRY, PMIUPEP and UBSP and introducing *Swarna Jayanti Shahari Rozgar Yojana* (SJSRA) to reorganise self-employment and wage

employment parts of the earlier programmes. The shelter upgradation component of NRY and PMIUEP was merged with the National Slum Development Programme (NSDP).

The SJSRY had two sub-schemes, namely, (a) Urban Self Employment Programme and (b) Urban Wage Employment Programme. The SJSRY sought to “provide gainful employment to the urban unemployed or underemployed poor by encouraging the setting up of self-employment ventures or provision of wage employment”. The implementation of the scheme was to be done through the setting up of community organisations like Neighbourhood groups, Neighbourhood Societies and Community Development Societies. The responsibility of identifying beneficiaries, viable projects suitable for the area, preparation of applications, monitoring of recovery and general support was entrusted to the Community Development Societies. The Urban Self Employment Programme included schemes on self employment through setting up Micro-enterprises and Skill Development, confined to BPL beneficiaries who have education up to the 9th standard, and Development of Women and Children in Urban Areas for poor women who decide to set up self-employment ventures on a group basis. The Urban Wage Employment Programme was conceived to provide employment to persons Below Poverty Line in urban local bodies with a population of less than 5 lakhs. The Plan also suggested that the responsibility of distribution of water in urban areas should be given over to local bodies or to the private sector. It encouraged private sector participation in construction and maintenance of water supply and sanitation schemes.

In 1998, the National Housing and Habitat Policy (NHHP) was announced which specifically emphasised that housing construction in both rural and urban areas should be left in the hands of the private sector and that the government should restrict itself to the role of a facilitator. The Policy promised “Shelter to All” by the year 2001 but this promise was to be realized through the invisible hand of the market which was supposed to ensure affordable housing to all if all impediments to its efficient functioning were removed. As a follow up to the recommendations of the NHHP 1998, the Two Million Housing Programme was launched in 1998-99. It was a loan based scheme promoting the construction of 20 lakh additional housing units every year (13 lakh for rural areas and 7 lakh for urban areas). Out of this, HUDCO was to meet the target of 4 lakh dwelling units in urban areas and 6 lakh in rural areas annually. In 1999, the Draft National Slum Policy was announced which proposed the integration of slum dwellers in the mainstream of urban life through in-situ up gradation. The Draft Policy included all underserviced settlements in its definition of slums and proposed their up gradation and improvement as opposed to eviction. It also spoke about granting tenure to slum dwellers inhabiting government land apart from providing them with basic civic amenities. The Draft National slum Policy was never adopted, however in 2001, a Rs. 20 billion subsidy based scheme called the *Valmiki Ambedkar Awas Yojana* (VAMBAY) was started with the aim to provide/ upgrade shelter to urban slum dwellers.

In the 9th Plan period, two other major steps were taken to further the process of liberalization of land and real estate markets. The first step was the repeal of the Urban Land (Ceiling and Regulation) Act in 1999. The second major step was taken in 2002 when the government allowed 100 percent Foreign Direct Investment (FDI) in integrated townships, including housing, commercial

premises, hotels and resorts. FDI was also permitted in infrastructure projects such as roads, bridges, mass rapid transit systems and for the manufacturing of building materials. The minimum area to be developed was fixed at 100 acres.

The 2001 Census had shown that contrary to the expectations and predictions of a wide array of actors, the rate of growth of urban population was steadily declining. This has been attributed to cities becoming inhospitable to poor migrants due to the promulgation of neo-liberal urban policies. However, the 10th Plan celebrates this fact and attributes it to “the success of rural development programmes along with the limited availability of land for squatting in central urban areas”. The Plan identifies urbanization as “a key determinant of the economic growth in the 1980s and 1990s, boosted by economic liberalisation”. The 10th Plan (2002-07) was prepared in the backdrop of the Union Budget of 2002-03 which had announced radical measures to push cities into carrying out comprehensive urban reforms. The overriding thrust of the 10th Plan was to promote overhauling of the legislative, governance and administrative structure of cities through a set of market-friendly urban reforms and promotion of PPPs in urban infrastructure and services. A lot of emphasis was placed on making urban local bodies financially strong so that they have to rely less and less on state transfers. To enable ULBs to raise their own resources the Plan advocated reform in property tax, levying of user charges, increasing non-tax revenues, controlling establishment costs, better utilization of municipal assets and overhauling municipal accounting systems. These reforms, it was suggested, would enhance the credit-worthiness of ULBs and make them capable to mobilising funds from capital market and investors. The Plan also spoke about substantially increasing investment in up gradation of urban infrastructure and services but made it clear that central assistance in this regard would be made conditional upon states and ULBs carrying out sector reforms, in particular better standard of services and levying of user charges.

2.3.4 Current On-Going Programmes

The process of urban reforms which tentatively began in the 8th Plan reached its high point when in December 2005, the Prime Minister launched the Jawaharlal Nehru National Urban Renewal Mission (JNNURM). The JNNURM is basically a reform linked incentive scheme for providing assistance to state governments and urban local bodies (ULBs) in selected 63 cities, comprising all cities with over one million population, state capitals and a few other cities of religious and tourist importance for the purpose of reforming urban governance, facilitating urban infrastructure and providing basic services to the urban poor. The total budget of the Mission is estimated to be Rs. 1,26,000 crores out of which the central government shall provide Rs. 50,000 crores. It is thus by far the single largest initiative of the central government in the urban sector.

The broad framework of the Mission is as follows:

- i) Preparation of City Development Plans (CDPs) by respective cities with a 20-25 years perspective.
- ii) Sector-wise detailed project reports to be prepared by identified cities listing projects along with their financial plans.
- iii) A Memorandum of Agreement (MoA) to be signed between the central government, state governments and ULBs containing the time bound

commitment on the part of states/ ULBs to carry out reforms in order to access central funds under the Mission.

- iv) Funding pattern in terms of percentages would be 35:15:50 (between Centre, States and Urban Local Bodies) for cities with over 4 million population, 50:20:30 for cities with populations between one and four million, and 80:10:10 for other cities.
- v) Assistance under the Mission to be given directly to nominated State Level Nodal Agencies, who in turn would give the same to state government/ ULB in the form of soft loan or grant-cum-loan or grant.
- vi) The assistance thus provided would act as seed money to leverage additional funds from financial institutions/capital markets.
- vii) Public Private Partnership (PPP) to be the preferred mode of implementing projects.

The Mission comprised of two sub missions, namely, Sub-Mission for Urban Infrastructure and Governance and Sub-Mission on Basic Services to the Urban Poor. The admissible components under both these sub-missions together include urban renewal, water supply and sanitation, sewerage and solid waste management, urban transport, slum improvement and rehabilitation, housing for urban poor, civic amenities in slums. The priorities of the government become even clearer when we look at the set of reforms that the state governments and ULBs are supposed to carry out if they wish to avail central assistance under the JNNURM. These reforms have been divided into two parts - Mandatory reforms and Optional reforms.

i) Mandatory Reforms

A) Mandatory Reforms: State Level

The state governments seeking assistance under the JNNURM would be obliged to carry out the following mandatory reforms:

- a) effective implementation of decentralisation initiatives as envisaged in the Constitution (seventy-fourth) Amendment Act, 1992;
- b) repeal of Urban Land (Ceiling and Regulation) Act, 1976;
- c) reform of rent control laws;
- d) rationalisation of stamp duty to bring it down to no more than 5 percent within seven years;
- e) enactment of a public disclosure law;
- f) enactment of a community participation law, so as to institutionalize citizens' participation in local decision making; and
- g) association of elected municipalities with the city planning function.

B) Mandatory Reforms: Municipal Level

- a) Adoption of a modern, accrual-based, double entry system of accounting;
- b) Introduction of a system of e-governance using IT applications, GIS and MIS for various urban services;
- c) Reform of property tax so as to raise collection efficiency to 85 per cent;

- d) Levy of user charges to recover full cost of operation and maintenance within seven years;
- e) Internal earmarking of budgets for basic services to the urban poor; and
- f) Provision of basic services to the urban poor, including security of tenure at affordable prices.

ii) Optional Reforms

Apart from these mandatory reforms, there is a set of optional reforms common to both state governments and ULBs, any two of which they are supposed to implement each year. These include:

- a) revision of bye-laws to streamline the approval process for construction of buildings, development sites etc;
- b) simplification of legal and procedural frameworks for conversion of agricultural land for non-agricultural purposes;
- c) introduction of property title certification;
- d) earmarking of at least 20-25 per cent developed land in housing projects for economically weaker sections and low income groups with a system of cross-subsidisation;
- e) introduction of computerised registration of land and property;
- f) administrative reforms including reduction in establishment cost by introducing retirement schemes and surrender of posts falling vacant due to retirement;
- g) structural reforms; and
- h) encouraging public private partnership.

The JNNURM was accompanied by another scheme called the Urban Infrastructure Development Scheme for Small and Medium Towns (UIDSSMT) which is more or less the same in content except for the minor difference that towns under the UIDSSMT do not have to prepare City Development Plans. 5098 cities and towns which have a population of less than one million and are thus not covered under the JNNURM come under the UIDSSMT. Earlier schemes such as IDSMT and Accelerated Urban Water Supply Programme (AUWSP) have been merged with the UIDSSMT. Similarly the Mega City Scheme and the VAMBAY have been partially subsumed under the JNNURM.

There seems to be a formidable consensus that the urban reform agenda, as enunciated in the JNNURM, the UIDSSMT and several other programmes and policies, is one of the key instruments for keeping the country on the path of high growth.

In this section you studied urban policies and their impact. Now, you should be able to answer some questions relating to this section given in check your progress-2.

Check Your Progress 2

Note: a) Write your answer in about 50 words

b) Check your answer with possible answers given at the end of the unit.

- 1) In which five-year plan period, the emphasis was laid on the preparation of master plans? Please specify the major features of master plans?

- 2) Specify the main thrust of National Housing and Habitat Policy, 1998.

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3) What is the broad framework of Jawaharlal Nehru National Urban Renewal Mission (JNNURM)?

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2.4 CHALLENGES OF MANAGING URBANISATION

The challenge of urbanisation in India is to ensure service delivery at the enhanced minimum standards that are necessary when planning ahead.

The major challenges of Urbanisation are the following:

- Strengthening ULBs through better capacity building and financial management;
 - Increasing the efficiency and productivity of cities with emphasis on reducing incidence of poverty and promoting sustainable development;
 - Provision of essential urban infrastructure, amenities and services with public – private partnerships;
 - Establishing regulatory/ institutional framework to oversee the functioning of public and private sector;
 - Integration of economic and spatial planning with a view to achieving a rational spatial – economic development at city, state and national levels;
 - Strict enforcement of anti – pollution laws and to reduce dangerous levels of air pollution particularly in metro cities; and
 - To establish a cost effective, energy efficient, socially desirable and transport system.

The challenge of managing urbanisation will have to be addressed through a combination of increased investment, strengthening the framework for governance and financing, and a comprehensive capacity building programme at all levels of government.

In this section you studied challenges of managing urbanisation. Now, you should be able to answer some questions relating to this section given in check your progress-3.

Check Your Progress 3

- Note:** a) Write your answer in about 50 words
b) Check your answer with possible answers given at the end of the unit.
- 1) What are the main challenges of Urbanisation?

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- 2) What needs to be done to facilitate sustainable urbanisation in India?

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2.5 LET US SUM UP

India is urbanising. This transition, which will see India's urban population reach a figure close to 600 million by 2031, is not simply a shift of demographics. It places cities and towns at the centre of India's development trajectory. In the coming decades, the urban sector will play a critical role in the structural transformation of the Indian economy and in sustaining the high rates of economic growth. Ensuring high quality public services for all in the cities and towns of India is an end in itself, but it will also facilitate the full realisation of India's economic potential.

India's economic growth momentum cannot be sustained if urbanisation is not actively facilitated. Nor can poverty be addressed if the needs of the urban poor are isolated from the broader challenges of managing urbanisation. Cities will have to become the engines of national development. India cannot afford to get its urban strategy wrong, but it cannot get it right without bringing about a fundamental shift in the mindset which separates rural from the urban.

India's municipal corporations, municipalities and *nagar panchayats*, commonly known as Urban Local Bodies (ULBs) need to be strengthened as local self-

government. It has clear functions, independent financial resources, and autonomy to take decisions on investment and service delivery. They must also be made accountable to citizens. Elements of this shift are already present in the local government framework as reflected in the 74th Constitutional Amendment, the Jawaharlal Nehru National Urban Renewal Mission (JNNURM), and the emphasis placed on the urban sector by the Thirteenth Central Finance Commission.

To sum up, the steps needed to facilitate sustainable urbanisation in India are:

- Increasing investment in urban infrastructure.
- Engaging in renewal and redevelopment of urban areas including slums.
- Improving regional and metropolitan planning with integration of land use and transportation.
- Ensuring access to services for all including the poor to meet the recommended norms.
- Reforming systems of service delivery.
- Improving governance of cities and towns.
- Strengthening and securing the financial base of ULBs.

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2.7 CHECK YOUR PROGRESS- POSSIBLE ANSWERS

Check Your Progress 1

1) What are the basic features of Urbanisation?

Urbanisation is characterised by continuous concentration of population and activities in cities and towns. It is a process characterised by rural-urban migration, natural increase in population and increase in municipal area. Rapid urbanisation leads to massive growth of slum followed by misery, poverty, unemployment, exploitation, inequalities, degradation in the quality of urban life. Poor quality of rural-urban migration leads to poor quality of Urbanisation.

2) Explain the pattern of India’s Urbanisation.

The pattern of urbanisation in India is skewed and is characterised by growth of cities and towns in regions of agricultural surplus, stagnant or backward region. The big cities attained inordinately large population size leading to virtual collapse in the urban services and quality of life. Migration and natural increases are the predominant factor of urban growth.

3) What are the basic problems in India’s rapidly growing cities?

Problem of urbanisation is manifestation of lopsided urbanisation, faulty urban planning, urbanisation with poor economic base. Due to rising demand for infrastructural provisions in the rapidly growing cities, and ineffective supply of services and facilities, the cities and towns environment is deteriorating in terms of :

- 1) poor housing
- 2) increase slums
- 3) inefficient transport
- 4) ineffective provision of water supply and sanitation
- 5) increase in air and water pollution
- 6) inadequate provision for social infrastructure.

Check Your Progress 2

1) In which five-year plan period, the emphasis was laid on the preparation of master plans? Please specify the major features of master plans.

It was in the 3rd Plan (1961-66) that emphasized the preparation of Master Plans for various towns and cities. The important features of these master plans were

- a) designing of land use with a future perspective;
- b) a city without slums, or in other words, a standard ‘decent’ housing for everyone;
- c) detailed modernised Central Business District;
- d) division of major land use into zones;
- e) an efficient highway and transportation system,
- f) adequate community facilities with residential areas divided into neighbourhoods

2) Specify the main thrust of National Housing and Habitat Policy, 1998.

In 1998, the National Housing and Habitat Policy (NHHP) was announced which specifically emphasised that housing construction in both rural and urban areas should be left in the hands of the private sector and that the government should restrict itself to the role of a facilitator. The Policy promised “Shelter to All”. As a follow up to the recommendations of the NHHP 1998, the Two Million Housing Programme was launched in 1998-99.

3) What is the broad framework of Jawaharlal Nehru National Urban Renewal Mission (JNNURM)?

The JNNURM is basically a reform linked incentive scheme for providing assistance to state governments and urban local bodies (ULBs) in selected 63 cities, comprising all cities with over one million population, state capitals and a few other cities of religious and tourist importance for the purpose of reforming urban governance, facilitating urban infrastructure and providing basic services to the urban poor. The total budget of the Mission is estimated to be Rs. 1,26,000 crores out of which the central government shall provide Rs. 50,000 crores. It is thus by far the single largest initiative of the central government in the urban sector.

Check Your Progress 3

1) What are the main challenges of Urbanisation?

The major challenges of Urbanisation are the following:

- Strengthening ULBs through better capacity building and financial management,
- Increasing the efficiency and productivity of cities with emphasis on reducing incidence of poverty and promoting sustainable development,
- Provision of essential urban infrastructure, amenities and services with public – private partnerships,
- Establishing regulatory/ institutional framework to oversee the functioning of public and private sector;

2) What needs to be done to facilitate sustainable urbanisation in India?

Some of the steps that need to be taken are the following:

- Increasing investment in urban infrastructure
- Engaging in renewal and redevelopment of urban areas including slums
- Ensuring access to services for all including the poor

UNIT 3 URBAN DEVELOPMENT PROGRAMMES IN INDIA

Structure

- 3.1 Introduction
 - 3.2 Urban Development Programmes Initiated Since Independence
 - 3.3 Jawaharlal Nehru National Urban Renewal Mission (JNNURM)
 - 3.4 Mission Toolkit
 - 3.5 Mission Framework
 - 3.6 Mission Process
 - 3.7 Monitoring Framework
 - 3.8 Outcomes of the Project
 - 3.9 Status of the Mission
 - 3.10 Let Us Sum Up
 - 3.11 References and Selected Readings
 - 3.12 Check Your Progress-Possible Answers
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3.1 INTRODUCTION

As per 2001 population census 285.35 million people reside in urban areas. It constitutes 27.8% of the total population of the country. In post-independence era, while population of India has grown three times, the urban population has grown five times. The rising urban population has also given rise to increase in the number of urban poor. As per 2001 estimates, the slum population is estimated to be 61.8 million. The ever increasing number of slum dwellers causes tremendous pressure on urban basic services and infrastructure. In order to cope with massive problems that have emerged as a result of rapid urban growth, the government of India has launched many programmes since independence. One of the illustrious examples is JNNURM launched recently to rejuvenate urban development in India.

After studying this unit you should be able to:

- Describe various urban development programmes launched in India since independence.
 - Discuss JNNURM.
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3.2 URBAN DEVELOPMENT PROGRAMMES INITIATED SINCE INDEPENDENCE

Urban development programmes with a focus on reduction and alleviation of poverty, has been one of the objectives of five-year plans in the country since the beginning of the planned era. This was, however, brought into the core of planning exercise only during the Fifth Year Plan. The consumption levels of different commodities were projected in this plan by taking higher growth rates for people in lower consumption brackets. Extensive research has since then been carried out to study the dimensions of poverty, its temporal trend, spatial pattern etc.

This led to identification of theoretical solutions for reduction of poverty and launching of programmes during the past Five Year Plans.

An analysis of the government policies and programmes and investment pattern during the fifties, sixties and seventies reveals a distinct bias for urban areas. Public sector investment in infrastructure and basic services improved the level of services in urban centers, which accentuated the rural urban disparity. These investments were concentrated mostly in the large cities that attracted private investments as well as subsidized institutional funds. This resulted in creation of employment opportunities at a higher level of productivity earnings than in rural areas, widening the gap between their income levels. This period also witnessed the creation of a number of Boards and Corporations at the state level and development authorities at the city level. Considerable funds were routed through these agencies that improved the level of services for at least a section of the urban population.

Removal of poverty received attention initially in the Fifth Five Year Plan. The earlier plans did not emphasize on proper analysis of the dimension of poverty. The Fifth Plan noted that the consumption levels of the bottom 30 per cent of the country's population remained below the minimum of Rs.40.6 per capita per month at 1972-73 prices. No distinction was, however, made between rural and urban poverty. The plan stressed poverty could be removed by promoting economic growth and through proper implementation of the national level programmes like Minimum Needs Programme. The Sixth Plan addressed the problem of poverty in a more focused manner and recognized that economic growth process by itself was not enough to tackle poverty. It noted that about 51 per cent of the rural population and 41 per cent of the urban population were living below the poverty line in 1979-80. Specific programmes like Integrated Development of Small and Medium Towns, Minimum Needs Programme, Urban Basic Services, Integrated Rural Development Programme, National Rural Development Programme (NRDP) etc. were recommended for urban and rural areas. The Sixth Plan showed a distinct bias in favour of rural poverty by implementing specific programmes. The programmes that have been launched since independence have been briefly discussed in the following section.

- i) **Integrated Development of Small and Medium Towns (IDSMT):** The programme was launched in 1979-80 basically for developing small and medium towns partly by providing basic services to poor and also by improving their economic conditions so that the growth of metro cities could be arrested. Initially, the scope of the programme was restricted to towns with population below one hundred thousand as per the 1971 Census. It had been decided in the Eighth Plan to include cities having population of five hundred thousand as per the Census of 1991.
- ii) **Low Cost Sanitation Programme (LCS):** The goal of providing sanitation facilities to eighty per cent of urban population was fixed in the early eighties with the announcement of the UN Decadal Programme for Water Supply and Sanitation. Accordingly, a centrally sponsored scheme was launched in 1980-81, with the objective of eliminating manual scavenging through conversion of dry latrines. It covered all the households, which have dry latrines and those having no latrines including slum and squatter settlements.

Under this scheme, loan and Central subsidy were both channeled through HUDCO.

- iii) **Shelter and Sanitation for Pavement Dwellers (SSPD):** This programme was launched in large urban areas including metropolitan cities, having sizable shelter less population. The Tenth Plan has pointed out that the provision of subsidy under the scheme has to be adequate to make it feasible for the NGOs to take up shelter construction. The grants per bed should also be revised to achieve the objective of providing a sufficient number of nights – shelters for the homeless women and children. The Pay and Use component of this scheme is being merged with the Nirmal Bharat Abhiyan of VAMBAY.
- iv) **Accelerated Urban Water Supply Programme (AUWSP):** This is another centrally sponsored scheme launched during the Eighth Plan for providing water to the towns having less than 20,000 population as per the Census of 1991, operationally under the State PHED to be funded by the Central Government, State Government and concerned ULBs on 50:45:5 ratio. The Centre met the entire cost in Union Territories.
- v) **National Slum Development Programme (NSDP):** The NSDP initiated in 1996 as a scheme of Special Central Assistance for slum improvement, has been providing additional central assistance to state governments to provide water supply and sanitation among other facilities to the slums.
- vi) **VAMBAY (Valmiki-Ambedkar Awas Yojana):** This scheme has been launched in 2001-02 to provide shelter or upgrade the existing shelter of the people living below poverty line in urban slums implemented in partnership with state governments who will set up the implementation machinery, arrange for land where required and for the credit component for housing. The state funds under the scheme will be in proportion to their slum population.
- vii) **Nehru Rozgar Yojana (NRY):** In order to alleviate the conditions of urban poor, a Centrally Sponsored Programme - Nehru Rozgar Yojana - was launched at the end of the Seventh Five Year Plan (October 1989) with the objective of providing employment to the urban unemployed and underemployed poor. The Central Government indicated its overall contribution while the essential task of identifying, earmarking and coordinating the relevant sectoral inputs was undertaken by the State Governments. The NRY consisted of three schemes namely (i) the Scheme of Urban Micro Enterprises (SUME); (ii) the Scheme of Urban Wage Employment (SUWE); and (iii) the Scheme of Housing and Shelter Upgradation (SHASU). During the Eighth Plan, 92% of the available funds were utilized but for the shortfall in the number of dwelling units upgraded/ in progress under SHASU, the targets have been achieved under all the other schemes.
- viii) **Urban Basic Services for the Poor (UBSP):** The UBSP Programme was implemented as a Centrally Sponsored Scheme during the Eighth Five Year Plan with the specific objectives of effective achievement of the social sector goals; community organization, mobilization and empowerment; and convergence through sustainable support system. The expenditure on the

Programme was being shared on a 60:40 basis between the Central and the State Governments and UTs (with legislatures). Further, the per capita expenditure on any slum pocket is Rs.75/- in the first year and Rs.50/- from the second year onwards after the basic infrastructure is developed.

- ix) Prime Minister's Integrated Urban Poverty Eradication Programme (PMI UPEP):** Recognizing the seriousness and complexity of urban poverty problems, especially in the small towns, the PMI UPEP was launched in November, 1995 applicable to all Class II urban agglomerations with a population ranging between 50,000 and one lakh subject to the condition that elections to local bodies have been held.
- x) The Swarna Jayanti Shahari Rozgar Yojana (SJSRY):** The Nehru Rojgar Yojna (NRY) and Prime Minister's Integrated Urban Poverty Eradication Programme (PMI UPEP) were two important direct poverty alleviation programmes in urban areas. Although their thrust was on employment and income generation for urban poor, these had components for provision of basic services as well. PMI UPEP was launched in the year 1995-96 with the objectives of employment generation, shelter upgradation, social development and community empowerment. It may, however, be noted that during 1997, the three programmes of UBSP, NRY and PMIUPEP have been merged into a single employment generation programme called Swarna Jayanti Shahari Rojgar Yojana (SJSRY).

The SJSRY is a Centrally Sponsored Scheme applicable to all the urban areas with expenditure to be shared in ratio 75:25 between the Centre and States/UTs. The programme has two sub-schemes namely: (a) Urban Self –Employment Programme and (b) Urban Wage Employment Programme.

The self-employment and wage employment components of the NRY and PMIUPEP have been re-organised under this single programme. The shelter upgradation components of both NRY and PMIUPEP have been merged with the National Slum Development Programme.

The SJSRY seeks to provide gainful employment to the urban unemployed or underemployed poor by encouraging the setting up of self-employment ventures or provision of wage employment. This programme is based on the creation of suitable community structures on the UBSP pattern and delivery of inputs under this programme was devised through urban local bodies and similar community institutional structures and rests on the foundation of community empowerment. Community organisations like Neighbourhood Groups (NHGs), Neighbourhood Committees (NHCs) and Community Development Societies (CDSs) have been set up in the target areas based on the UBSP pattern. The CDSs is the focal point for purposes of identification of beneficiaries, preparation of applications, monitoring of recovery and generally providing whatever other support is necessary to the programme. The CDSs identifies viable projects suitable for that particular area.

In this session you read about various urban development programmes initiated since independence in India by the government . Now answer the questions given in *Check Your Progress-1*.

Check Your Progress 1

**Urban Development
Programmes in India**

Note: a) Write your answer in about 50 words.

b) Check your answer with possible answers given at the end of the unit

1) Briefly describe the programme launched for urban sanitation.

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2) Write short note on Nehru Rozgar Yojana (NRY).

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3.3 JAWAHARLAL NEHRU NATIONAL URBAN RENEWAL MISSION (JNNURM)

Urban Renewal, with a focus on inclusive development of urban centers, is one of the thrust areas in the National Common Minimum Programme of the Government and accordingly Jawaharlal Nehru National Urban Renewal Mission (JNNURM) was launched on 3rd December 2005 with an investment of Rs.50,000.00 crores in the Mission period for seven years beginning from 2005-06. The Mission aims to encourage reforms and fast-track infrastructure development with a focus on efficiency in urban infrastructure and services delivery mechanism, community participation, and accountability of ULBs towards citizens. The primary objective of the JNNURM is to create economically productive, efficient, equitable and responsive cities. To achieve this objective, the Mission focuses on integrated development of infrastructure services; securing linkages between asset creation and maintenance for long-run project sustainability; accelerating the flow of investment into urban infrastructure services; planned urban development; renewal of inner-city areas and universalisation of urban services to ensure balanced urban development.

The Mission has also succeeded in getting the state and city governments to commit themselves to structural reforms which the Central government had failed to achieve despite adopting several measures and incentive schemes proposed since early nineties through other programmes and legislations (Kundu, et.al 2007). In fact, a set of 23 mandatory reforms have to be introduced by the respective state governments and cities as per the commitments made by them in the Memorandum of Agreement (MoA) at the beginning of the mission period.

The JNNURM is thus a mission of macro economic growth wherein ground conditions have been created through reform measures and infrastructural investment in 65 select cities for attracting domestic and foreign investment. The JNNURM has two sub-missions for the mission cities, viz, (1) Urban Infrastructure and Governance (UIG) and (2) Basic Services to the Urban Poor (BSUP).

3.3.1 Mission Strategy

- i) Planned urban perspective frameworks for a period of 20-25 years (with 5 yearly updates) indicating policies, programmes and strategies of meeting fund requirements would be prepared by every identified city. This perspective plan would be followed by preparation of Development Plans integrating land use with services, urban transport and environment management for every five year plan period.
- ii) Cities/Urban Agglomerations/Parastatals will be required to prepare Detailed Project Reports for undertaking projects under identified areas.
- iii) Private Sector Participation in development, management and financing of Urban Infrastructure would be clearly delineated.
- iv) Funds for the identified cities would be released to the designated State Nodal Agency, which in turn would leverage, to the extent feasible, additional resources from the financial institutions/private sector/capital market.
- v) Funds from Central and State Government will flow directly to the nodal agency designated by the State as grant. The nodal agency will disburse central assistance to ULBs or para-statal agencies as the case may be, as soft loan or grant-cum-loan or grant.
- vi) A revolving fund will be created to meet the operation and maintenance costs of the assets created under the Mission.

3.3.2 Mission Objectives

- i) Focused attention to integrated development of infrastructural services in the cities covered under the Mission.
- ii) Secure effective linkages between asset creation and asset management so that the infrastructural services created in the cities are not only maintained efficiently but also become self-sustaining over time.
- iii) Ensure adequate investment of funds to fulfill deficiencies in the urban infrastructural services.
- iv) Planned development of identified cities including peri-urban areas, out growths, urban corridors, so that urbanization takes place in a dispersed manner.
- v) Scale up delivery of civic amenities and provision of utilities with emphasis on universal access to urban poor.
- vi) To take up urban renewal programme, i.e., re-development of inner (old) cities area to reduce congestion.

3.3.3 Mission Components

- i) **Admissible Components:** Projects pertaining to the following will be admissible under the Sub-Mission on Urban Infrastructure and Governance.
 - i) Urban Renewal i.e. redevelopment of inner (old) city areas (this would include items like widening of narrow streets, shifting of industrial/commercial establishments from non-conforming to ‘conforming’ areas to reduce congestion, replacement of old and worn-out water pipes by new/higher capacity ones, renewal of sewerage/drainage/solid waste disposal systems, etc).
 - ii) Water Supply (including de-salination plants) and sanitation,
 - iii) Sewerage and Solid Waste Management,
 - iv) Construction and improvement of drains/storm water drains,
 - v) Urban Transport, including roads, highways/expressways/ MRTS/metro projects,
 - vi) Parking lots/spaces on Public Private Partnership basis,
 - vii) Development of heritage areas,
 - viii) Prevention and rehabilitation of soil erosion/landslides only in case of Special Category States where such problems are common, and
 - ix) Preservation of water bodies.

Note: Land cost will not be financed except for acquisition of private land for schemes/ projects in the North Eastern States and hilly States viz Himachal Pradesh, Uttarakhand and Jammu and Kashmir.

- ii) **Inadmissible Components:** Projects pertaining to the following will not be admissible under the Sub-Mission:
 - i) Power
 - ii) Telecom
 - iii) Health
 - iv) Education
 - v) Wage employment programme and staff component

3.3.4 Mission Coverage

Keeping in view the paucity of resources and administrative constraints in taking up all cities and towns under this intensive urban infrastructure improvement programme, it is suggested that under JNNURM only selected cities/Urban Agglomerations (UAs) as per 2001 Census will be taken up, as per norms/criteria mentioned below.

- A) Cities/UAs with 4 million plus population as per 2001 census
- B) Cities/UAs with 1 million plus but less than 4 million population as per 2001 Census
- C) Selected Cities/UAs (State Capitals and other cities/UAs of religious/historic and touristic importance)
- D) The cities should have elected bodies in position.

3.4 MISSION TOOLKIT

The Jawaharlal Nehru National Urban Renewal Mission (JNNURM) requires cities applying for assistance to lay down a time schedule for implementing the proposed reform agenda. The reform agenda consists of reforms that are to be undertaken: (i) by urban local bodies (ULBs) and (ii) by the state governments. This Toolkit is designed to seek information from the applicant cities that will enable the Ministry of Urban Development (MoUD) or the Ministry of Urban Employment and Poverty Alleviation (MoUEPA) to set the following: (i) the benchmarks on each of the constituents of the reform agenda, and (ii) a time schedule for implementing the reform agenda. The timeline for implementing the reform agenda will be attached to the Memorandum of Agreement (MoA). In addition, Toolkits separately provide details of the criteria that are proposed to be used for appraising project proposals and the timeline for urban reform agenda. The Urban Reforms shall broadly fall into two categories:

(a) Mandatory reforms and (b) Optional Reforms.

All the mandatory and optional reforms shall be implemented by the State/ ULB/ parastatals within the mission period. Core reforms at ULB/Parastatal level aims at process re-engineering through deployment of technology to enable more efficient, reliable, timely services in a transparent manner. The other set of reforms are framework related at State level.

Reforms	
State Level	ULB Level
<i>Mandatory Reforms</i>	<i>Mandatory Reforms</i>
Implementation of decentralization measures as envisaged in 74 th Constitution Amendment Act. States should ensure meaningful association/ engagement of ULBs in planning function of parastatals as well as delivery of services to the citizens.	Adoption of modern, accrual-based double entry system of accounting in Urban Local Bodies
Repeal of Urban Land Ceiling and Regulation Act.	Introduction of system of e-governance using IT applications like, GIS and MIS for various services provided by ULBs
Reform of Rent Control Laws balancing the interests of landlords and tenants.	Reform of property tax with GIS, so that it becomes major source of revenue for Urban Local Bodies (ULBs) and arrangements for its effective implementation so that collection efficiency reaches at least 85% within next seven years.
Rationalization of Stamp Duty to bring it down to no more than 5% within next seven years.	Levy of reasonable user charges by ULBs/ Parastatals with the objective that full cost of operation and maintenance or recurring cost is collected within next seven years.

Enactment of Public Disclosure Law to ensure preparation of medium term fiscal plan of ULBs/Parastatals and release of quarterly performance information to all stakeholders.	Internal earmarking within local body, budgets for basic services to the urban poor.
Enactment of Community Participation Law to institutionalize citizen's participation and introducing the concept of Area Sabha in urban areas.	Provision of basic services to urban poor including security of tenure at affordable prices, improved housing, water supply, sanitation and ensuing delivery of other already existing universal services of the Government for education, health and social security.
Assigning or associating elected ULBs with "city planning function". Over a period of seven years, transferring all special agencies that deliver civic services in urban areas to ULBs and creating accountability platforms for all urban civic service providers in transition.	
Repeal of Urban Land Ceiling Act	
Reform of Rent Control Act	

Optional Reforms(Common to State and ULBs)

Revision of bye-laws to streamline the approval process for construction of buildings, development of sites etc.
Simplification of legal and procedural frameworks for conversion of agricultural land for non-agricultural purposes.
Introduction of Property Title Certification System in ULBs.
Earmarking at least 20-25% of developed land in all housing projects (both Public and Private Agencies) for EWS/LIG category with a system of cross subsidization.
Introduction of computerized process of registration of land and property.
Revision of bye-laws to make rain water harvesting mandatory in all buildings and adoption of water conservation measures.
Bye-laws for reuse of recycled water.
Administrative reforms i.e. reduction in establishment by bringing out voluntary retirement schemes, non-filling up of posts falling vacant due to retirement etc., and achieving specified milestones in this regard.
Structural reforms
Encouraging Public Private Partnership

- Note:** 1. Any two optional reforms to be implemented together by State & ULBs/Parastatals in each year.
2. All the reforms (mandatory as well as optional) shall be implemented by State/ULB/Parastatal within the Mission period.

The State Governments and the ULBs including parastatal agencies wherever necessary would execute Memorandum of Agreement (MoA) with Government of India indicating their commitment to implement identified reforms. MoA would spell out specific milestones to be achieved for each item of reform. Signing of MoA will be a necessary condition to access central assistance. This tripartite MoA would be submitted along with Detailed Project Reports (DPRs). The central assistance will be predicated upon the State Governments and the ULBs/ Parastatals agreeing to the reforms platform.

3.5 MISSION FRAMEWORK

The framework was evolved to provide incentives for reforms in urban development and thereby facilitate sustainable investments in urban infrastructure.

3.5.1 Institutional Arrangement for Policy Oversight

National Steering Group (NSG): At the national level, the JNNURM shall be steered by the NSG. It shall be chaired by the Minister of Urban Development (MOUD) and co-chaired by Minister of State (Independent charge) Urban Employment and Poverty Alleviation (MoUEPA). The NSG, a coordinating arm of the Government of India, shall provide policy oversight and evolve policies to facilitate the achievement of JNNURM objectives. The NSG shall review the agenda of reforms and may add additional reforms to the identified reforms. The NSG shall review the progress of the Mission. Besides, the NSG shall monitor the progress status of urban development and associated reforms in eligible cities.

Under the Sub-Mission on Basic Services for Urban Poor, there will be a high level committee chaired by Minister for Urban Employment and Poverty Alleviation with Joint Secretary (UEPA) as Member-Convener.

3.5.2 Institutional Arrangements for Mission Operationalisation

A) Sub-Mission Directorates (SMD): At the national level, the Mission shall be operationalised through two Sub-Mission Directorates one under the charge of Joint Secretary in Ministry of Urban Development (MoUD) and other under Ministry of Urban Employment and Poverty Alleviation (MoUEPA) for ensuring effective co-ordination with State Governments and other agencies for expeditious processing of the project proposals. The Joint Secretary in charge of each Mission Directorate would be designated as Mission Director. National Technical Advisor will be a member of both the Directorates.

The two Sub-Mission Directorates established are:

- i) **Sub-Mission Directorate for Urban Infrastructure and Governance:** The Sub-Mission of Urban Development and Governance has the charter of achieving development of urban infrastructure with a focus across sectors in the urban context.
- ii) **Sub-Mission Directorate for Basic Services to the Urban Poor:** The Sub-Mission for Basic Services to the Urban Poor shall focus on access to infrastructure for the urban poor. This Sub-Mission shall have a seven-point charter: security of tenure, housing, water supply, sanitation, education, health and social security cover.

B) Central Sanctioning and Monitoring Committee: There will be two Central Sanctioning and Monitoring Committees headed by respective Secretaries for Urban Infrastructure and Governance, and Basic Services to the Urban Poor. The CSMCs shall be entrusted with sanction and monitoring of the projects and associated reforms.

C) State-Level Steering Committee (SLSC): In order to identify, decide and prioritize the projects for inclusion in JNNURM, an apex body in each State, namely the SLSC shall be constituted. The SLSC shall screen and prioritize the identified projects. The identified projects shall be recommended to the respective CSMCs for sanction. The SLSC shall also monitor the implementation of the projects and review the progress of urban reforms in the State. In pursuing these tasks, the SLSC shall be assisted by the State Level Nodal Agency (SLNA), to be appointed for the said purpose.

D) State Level Nodal Agency (SLNA): The scheme would be implemented by a SLNA designated by the respective State governments. The SLNA would perform various functions, key ones being:

- Assisting ULBs/Parastatal agencies in the preparation of CDPs and DPRs and in training and capacity building.
- Appraising projects submitted by ULBs/ Parastatal agencies.
- Obtaining sanction of State Level Sanctioning Committee for seeking assistance from the Central Government under NURM.
- Managing grants received from the Central and State governments.
- Monitoring the implementation of reforms as committed in the MoA and submitting quarterly reports to that effect.

JNNURM Directorate, Ministry of Urban Development (MoUD), has evolved a state level mechanism for third party Monitoring and Review of the projects sanctioned under the JNNURM Sub-Mission-I (Urban Infrastructure and Governance) component. It is intended that the review and monitoring process in the 63 Mission cities will keep track of the physical and financial progress of projects throughout the project development life-cycle. This toolkit is to enable the State Level Nodal Agencies (SLNAs) set in motion the process of appointing the Independent Review and Monitoring Agencies (IRMAs) for monitoring and review of all projects implemented under JNNURM by urban local bodies, parastatals and other state agencies.

At the state level, it is envisaged that a Program Management Unit (PMU) shall be established and housed in each SLNA to provide strategic coordination and support for all JNNURM related reforms, projects, capacity building initiatives and other activities in the State. The PMU within the SLNA will play the key role of coordination and oversight of the IRMA on behalf of the SLNA. Likewise at the city or urban local body level, it is envisaged that a Project implementation Unit (PIU) shall be established and housed in the ULBs of the Mission Cities, to take the lead charge with respect to implementation of all JNNURM projects and reforms in the city. The PIU will play a key role in facilitating the work of the IRMA and coordinate between the IRMA and the Project Executing Agency (PEA).

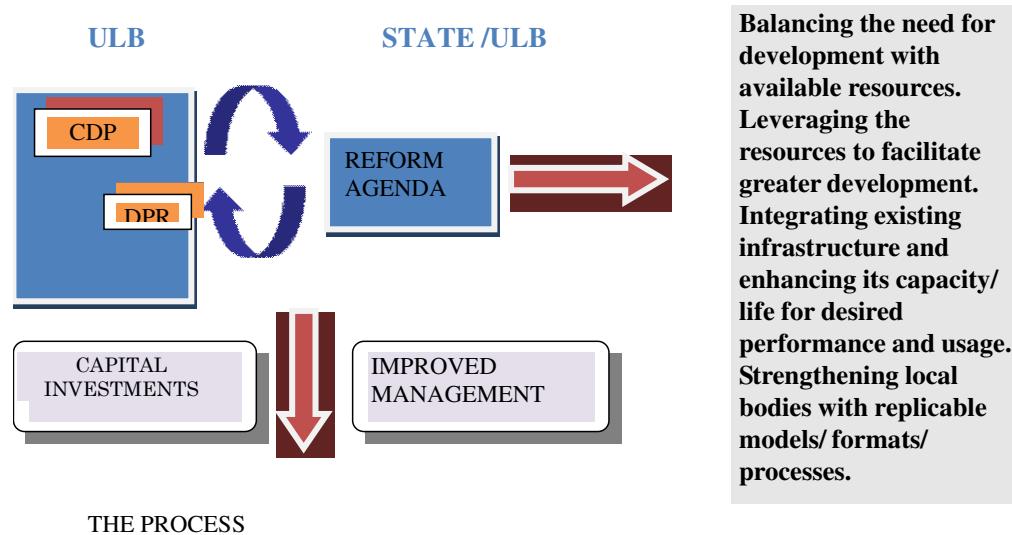
3.5.3 Institutional Arrangement for Advisory Support

For successful deployment of assistance targeted through JNNURM, advisory support is envisaged. Advisory assistance is expected through the Technical Advisory Group (TAG) comprising professionals across the legal, environment, social and urban infrastructure sectors that would assist the CSMCs, SLSC, SLNA and ULBs. The TAG shall provide advisory support at the macro and micro level for obtaining financial assistance within the provisions of JNNURM. Detailed Project Reports would be scrutinized by the Technical wings of the Ministry or if necessary by specialized/technical agencies before placing such proposals for sanction by Central Sanctioning and Monitoring Committee which are submitted by the states. The Committee would assign higher priority in sanctioning projects of urban renewal, water supply including sanitation, sewerage, solid waste management, drainage, urban transport including roads.

3.6 MISSION PROCESS

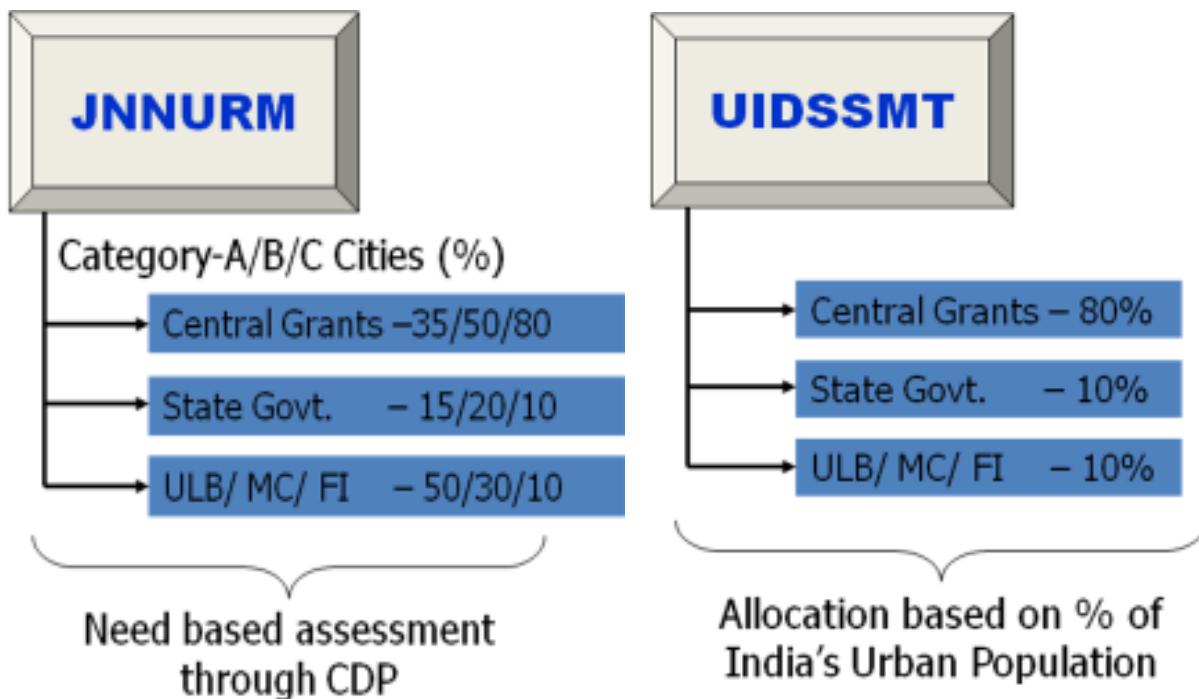
The JNNURM is expected to cater to the non-mission towns and cities under the two components, namely: (i) Urban Infrastructure and Governance (UIG) of UIDSSMT and (ii) Integrated Housing and Slum Development Programme (IHSDP). The programme is expected to cover all other Census towns under Urban Infrastructure Development Scheme for Small and Medium Towns (UIDSSMT) . The existing programme of IDSM, AUWSP has been subsumed under UIDSSMT. Likewise, the existing VAMBAY and the discontinued NSDP have been subsumed in the IHSDP.

The objective of the Mission would be met through preparation of City Development Plans (CDPs), Detailed Project Reports (DPR) and signing of MoA between the Centre, State, and Urban Local Body (ULB). Every city is expected to formulate a City Development Plan (CDP) indicating policies, programmes and strategies, and financing plans. The CDP would include identification of projects leading to the formulation of Detailed Project Reports (DPRs). The Urban Local Bodies (ULBs) / Parastatal agencies have to prepare DPRs for undertaking projects in the identified spheres. The projects should be planned so as to optimize the life-cycle costs. A revolving fund would be created to meet the O & M requirements of assets created, over the planning horizon.



Source: M. Mathur, (2009); Urban Reforms: JNNURM, Presentation, National Institute of Urban Affairs, New Delhi.

In order to seek JNNURM assistance, projects need to be developed in a manner that would ensure and demonstrate optimization of the life-cycle costs over the planning horizon of the project. On approval of the CDPs and DPRs, the State Government and ULBs including parastatal agencies, wherever necessary would execute a MoA with GoI indicating commitment along with a timeline to implement identified reforms. The pattern of funding is illustrated below:



FINANCING PATTERN

Source: M. Mathur, (2009); Urban Reforms: JNNURM, Presentation, National Institute of Urban Affairs, New Delhi.

The first installment of 25% will be released on signing of Memorandum of Agreement by the State Government/ULB/Parastatal for implementation of JNNURM projects. The balance amount of assistance shall be released as far as possible in three installments upon receipt of Utilization Certificates to the extent of 70% of the grants (Central and State) and subject to achievement of milestones agreed for implementation of mandatory and optional reforms at the State and ULB/Parastatal level as envisaged in the Memorandum of Agreement.

3.7 MONITORING FRAMEWORK

- The MoUD/MoUEPA would periodically monitor the schemes through designated representatives.
- SLNA would send quarterly progress report to the MoUD/MoUEPA.
- Upon completion of the Project, the SLNA through the State Government shall submit a completion report of activities undertaken as a part of JNNURM.
- The CSMC may meet as often as required to sanction, review and monitor the progress of projects sanctioned under the Mission.
- Monitoring of progress and implementation of reforms would be outsourced to specialized/technical agencies.

3.8 OUTCOMES OF THE PROJECT

On completion of the Mission period of seven years, it is expected that ULBs/Parastatals will achieve the following outcomes:-

- a) Modern and transparent budgeting, accounting, financial management systems designed and adopted for all urban services and governance functions.
- b) City-wide framework for planning and governance will be established and become operational.
- c) All urban residents will be able to obtain access to a basic level of urban services.
- d) Financially self-sustaining agencies for urban governance and service delivery will be established through reforms to major revenue instruments.
- e) Local services and governance will be conducted in a manner that is transparent and accountable to citizens.
- f) e-Governance applications will be introduced in core functions of ULBs/Parastatals resulting in reduced cost and time of service delivery processes.

3.9 STATUS OF THE MISSION

As a result of the reforms implementation, the community participation law has been passed by nine states, public disclosure law has been enacted by 16 states, Maharashtra and Andhra Pradesh have abolished the urban land ceiling legislation, nine states have rationalized stamp duty to the desired level of 5%, 29 local bodies have shifted to accrual-based double entry system of accounting, 45 local bodies out of 65 mission cities have started earmarking funds for the urban poor, three states of North East have for the first time passed legislation for constitution of urban local bodies and Jharkhand held urban local body election after a gap of 22 years. Twenty four states have introduced computerized process of registration of land and property and 47 city bodies have undertaken revision of by-laws for rain water harvesting.

Status at a Glance		
1.	Number of cities covered under JNNURM	65
2.	Number of City Development Plans (CDPs) appraised	64
3.	Number of Memorandum of Agreements (MoAs) signed	65
4.	Number of projects approved (Till 09-Feb-10)	524
5.	Total approved project cost (For 524 projects)	58283.33 crores
6.	Central Share (ACA) released for Projects (till 31-Mar-10):	11280.69 crores
7.	Number of States for which projects approved (Out of 31States/UTs)	30
8.	Number of Cities for which projects approved (Out of 65 cities)	62
9.	Number of completed projects	61

In this section, you have studied about JNNURM, mission toolkit, mission framework, mission process, monitoring framework, outcomes of the project and status of the mission, and now answers the questions given in *Check Your Progress-2*.

Check Your Progress 2

- Note:** a) Write your answer in about 50 words.
- b) Check your answer with possible answers given at the end of the unit
- 1) What are the objectives of JNNURM?

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- 2) Briefly write various components of JNNURM.

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3.10 LET US SUM UP

Urban development programmes with a focus on reduction and alleviation of poverty, has been one of the objectives of five-year plans in the country since the beginning of the planned era. This was, however, brought into the core of planning exercise only during the Fifth Five Year Plan. In order to cope with massive problems that have emerged as a result of rapid urban growth, it has become imperative to draw up a coherent urbanization policy/strategy to implement projects in select cities on mission mode. The need for the mission also rose in order to harness the potential of reforms in urban infrastructure, for National-Level Reform-linked Investments, for sustainable infrastructure development and efficiency enhancements. The JNNURM is the outcome of the mission strategy and is in vogue since 2005 for fastening the process of urban development.

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3.12 CHECK YOUR PROGRESS – POSSIBLE ANSWERS

Check Your Progress-1

1) Briefly describe the programme launched for urban sanitation.

The goal of providing sanitation facilities to eighty per cent of urban population was fixed in the early eighties with the announcement of the UN Decadal Programme for Water Supply and Sanitation. Accordingly, a centrally sponsored scheme was launched in 1980-81, with the objective of eliminating manual scavenging through conversion of dry latrines. It covered all the households, which have dry latrines and those having no latrines including slum and squatter settlements. Under this scheme, loan and Central subsidy were both channeled through HUDCO.

2) Write short note on Nehru Rozgar Yojana (NRY).

In order to alleviate the conditions of urban poor, a Centrally Sponsored programme - Nehru Rozgar Yojana - was launched at the end of the Seventh Five Year Plan (October 1989) with the objective of providing of employment to the urban unemployed and underemployed poor. The Central Government indicated its overall contribution while the essential task of identifying, earmarking and coordinating the relevant sectoral inputs was undertaken by the State Governments. The NRY consisted of three schemes namely (i) the Scheme of Urban Micro Enterprises (SUME); (ii) the Scheme of Urban Wage Employment (SUWE); and (iii) the Scheme of Housing and Shelter Upgradation (SHASU). During the Eighth Plan, 92% of the available funds were utilised and but for the shortfall in the number of dwelling units upgraded/in progress under SHASU, the targets have been achieved under all the other schemes.

Check Your Progress 2

1) What are the objectives of JNNURM?

The various objectives of JNNURM are as follows:

- a) Focused attention to integrated development of infrastructural services in the cities covered under the Mission.
- b) Secure effective linkages between asset creation and asset management so that the infrastructural services created in the cities are not only maintained efficiently but also become self-sustaining over time.
- c) Ensure adequate investment of funds to fulfill deficiencies in the urban infrastructural services.
- d) Planned development of identified cities including peri-urban areas, out growths, urban corridors, so that urbanization takes place in a dispersed manner.

2) Briefly write various components of JNNURM.

Two types of components under JNNURM are described below:

- i) **Admissible Components:** Projects pertaining to the following will be admissible under the Sub-Mission on Urban Infrastructure and Governance.
 - a) Water Supply (including de-salination plants) and sanitation
 - b) Sewerage and Solid Waste Management
 - c) Construction and improvement of drains/storm water drains.
 - d) Urban Transport, including roads, highways/expressways/ MRTS/metro projects.
- ii) **Inadmissible Components:** Projects pertaining to the following will not be admissible under the Sub-Mission:
 - i) Power
 - ii) Telecom
 - iii) Health
 - iv) Education

MEDS-043: Dynamics of Urban Planning and Development

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	Unit 2	Public Administration and Sustainable Development
	Unit 3	Natural Resource Management and Environment
	Unit 4	Environment Management System
II		URBAN DEVELOPMENT PLANS, POLICIES AND PROGRAMMES
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III		URBAN REFORMS
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2

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BLOCK 3 URBAN REFORMS

At present enormous amount of discussions and debate is going on different facets of urban reforms all over the world. Institutions like World Bank, UNDP, European Commission and a number of others are not only studying the on going process of urban reforms but are also supporting the process of decentralization at various level. The primary aim of legal and structural reforms and decentralization is to engage the people in democracy and development, and achieving economic development and social justice through a participatory process is an imperative in the new institutional set-up. The Local Bodies are now strengthened through a process of devolving adequate powers, functions, functionaries and funds in order to build the skill, capacity and capability of the elected representatives and functionaries and create a support structure for the Local Body.

Unit 1, **Legal and Structural Reforms**, discusses the existing wide variations in the urban development trajectories between the developed and developing countries. The unit also discusses the existence of different approaches to urban development as adopted by different countries. It analyses the urban development policies of the developed countries like USA and UK and provides an overview of urban development policy perspectives of a few developing nations, i.e. China, Brazil and South Africa.

Unit 2, **Decentralization: An Overview**, focuses on building our understanding on the meaning and concepts of people's participation in the local self governance in development. This unit will give you knowledge about the context, the reasons, the promises and expected risks involved in decentralization. Further it will make you aware about the difference between the new wave of decentralization with the old one.

Unit 3, **Decentralized Planning Process**, discusses about the multilevel planning, planning from below, decentralised planning, peoples planning, participatory planning, district level planning, integrated district planning and planning at the grassroots are being used interchangeably by the practitioners and policy makers. Broadly speaking, they are one and the same and they are not new to India. This concept and discussion emanated from the arguments initiated by Mahatma Gandhi on Panchayati Raj, or the bottom up approach of planning and development.

Unit 4, **Rural – Urban Continuum**, discusses the pattern of urbanisation in Kerala, the rural-urban continuum (*rurban*), is facilitated, to a greater extent, by 'provision of social infrastructure', in spatially distributed manner, based on careful public policy of the State Government. It is a continuum of rural and urban areas. The human development approach of the State, popularly known as the Kerala Model, resulted in developing social infrastructure like public distribution system, schools, hospitals, agriculture offices, etc. spatially distributed all over the State. It is important to underline the fact that all these achievements have been made without high level of industrialisation and urbanisation characterised by rural-urban migration.

UNIT 1 LEGAL AND STRUCTURAL REFORMS

Structure

- 1.1 Introduction
 - 1.2 Urban Reforms Initiatives
 - 1.3 Urban Reform Initiatives: Legal and Regulatory Reforms
 - 1.4 Urban Reform Initiatives: Structural Reforms
 - 1.5 Let Us Sum Up
 - 1.6 References and Selected Readings
 - 1.7 Check Your Progress-Possible Answers
-

1.1 INTRODUCTION

Law by itself may not be sufficient to bring about development in urban areas; however, legislative support is absolutely necessary for undertaking various measures for improving infrastructure and governance as well as the conditions of the poor in urban areas. Equally important is that such laws should be implemented effectively. The Constitution of India has assigned the subjects pertaining to the urban areas to the State Legislature. In so far as the urban issues are concerned, the legislative powers of the Union are limited only to the following subjects/areas:

- Delhi and other Union Territories
- Property of the Union
- A subject of the state list which two or more state legislatures authorise Union Parliament to legislate
- Amendment of the Constitution of India

In exercise of these legislative powers, the Parliament of India has enacted the following legislations which are administrated by the Ministry of Urban Development, Government of India.

After studying this unit, you should be able to:

- Explain the significance of legislative support in urban development sector;
- Describe the rationale and benefits of urban reforms specifically legal and structural reforms; and
- Analyze the features of legal and structural reforms in urban sector.

1.2 URBAN REFORMS INITIATIVES

The process of urban reforms which tentatively began in the 8th Plan reached its high point when in December 2005 with the launching of Jawaharlal Nehru National Urban Renewal Mission (JNNURM). The JNNURM is basically a reform linked incentive scheme for providing assistance to state governments and urban local bodies (ULBs) in selected 63 cities, comprising all cities with

over one million population, state capitals and a few other cities of religious and tourist importance for the purpose of reforming urban governance, facilitating urban infrastructure and providing basic services to the urban poor. The total budget of the Mission is estimated to be Rs. 1,26,000 crores out of which the central government shall provide Rs. 50,000 crores. It is thus by far the single largest initiative of the central government in the urban sector. The broad framework of the Mission is as follows:

- Preparation of City Development Plans (CDPs) by respective cities with a 20-25 years perspective.
- Sector-wise detailed project reports to be prepared by identified cities listing projects along with their financial plans.
- A Memorandum of Agreement (MoA) to be signed between the central government, state governments and ULBs containing the time bound commitment on the part of states/ ULBs to carry out reforms in order to access central funds under the Mission.
- Funding pattern in terms of percentages would be 35:15:50 (between Centre, States and Urban Local Bodies) for cities with over 4 million population, 50:20:30 for cities with populations between one and four million, and 80:10:10 for other cities.
- Assistance under the Mission to be given directly to nominated State Level Nodal Agencies, who in turn would give the same to state government/ ULB in the form of soft loan or grant-cum loan or grant.
- The assistance thus provided would act as seed money to leverage additional funds from financial institutions/capital markets.
- Public Private Partnership (PPP) to be the preferred mode of implementing projects.

The Mission is comprised of two sub missions, namely, Sub-Mission for Urban Infrastructure and Governance and Sub-Mission on Basic Services to the Urban Poor. The admissible components under both these sub-missions together include urban renewal, water supply and sanitation, sewerage and solid waste management, urban transport, slum improvement and rehabilitation, housing for urban poor, civic amenities in slums and so on. But the Mission document clearly states that: (a) funds accessed cannot be used to create wage employment; (b) land costs will not be financed (c) housing to the poor cannot be given free of cost; (d) privatisation or Public Private Partnership (PPP) will be the preferred mode of implementing projects; (e) a ‘reasonable’ user fee will be charged from the urban poor for services so as to recover at least 25% of the project cost and (f) the onus of minimizing risks for the private investor would be on state governments/ULBs. The priorities of the government become even clearer when we look at the set of reforms that the state governments and ULBs are supposed to carry out if they wish to avail central assistance under the JNNURM. These reforms have been divided into two parts - mandatory reforms and optional reforms.

1.2.1 Mandatory Reforms

State Level

The state governments seeking assistance under the JNNURM would be obliged to carry out the following mandatory reforms: a) effective implementation of

decentralization initiatives as envisaged in the Constitution (seventy-fourth) Amendment Act, 1992; b) repeal of Urban Land (Ceiling and Regulation) Act, 1976; c) reform of rent control laws; d) rationalisation of stamp duty to bring it down to no more than 5 percent within seven years; e) enactment of a public disclosure law; f) enactment of a community participation law, so as to institutionalize citizens' participation in local decision making; and g) association of elected municipalities with the city planning function.

Municipal Level

At the municipal level following reforms are proposed: a) adoption of a modern, accrual-based, double entry system of accounting; b) introduction of a system of e-governance using IT applications, GIS and MIS for various urban services; c) reform of property tax so as to raise collection efficiency to 85 per cent; d) levy of user charges to recover full cost of operation and maintenance within seven years; e) internal earmarking of budgets for basic services to the urban poor; and f) provision of basic services to the urban poor, including security of tenure at affordable prices.

Apart from these, there is a set of optional reforms common to both state governments and ULBs, any two of which they are supposed to implement each year. These include: a) revision of bye-laws to streamline the approval process for construction of buildings, development sites etc; b) simplification of legal and procedural frameworks for conversion of agricultural land for non-agricultural purposes; c) introduction of property title certification; d) earmarking of at least 20-25 per cent developed land in housing projects for economically weaker sections and low income groups with a system of cross-subsidisation; e) introduction of computerized registration of land and property; f) administrative reforms including reduction in establishment cost by introducing retirement schemes and surrender of posts falling vacant due to retirement; g) structural reforms; and h) encouraging public private partnership.

In this section you studied urban reform initiatives. Now, you should be able to answer some questions relating to this section given in *Check Your Progress-1*.

Check Your Progress 1

Note: a) Write your answer in about 50 words

b) Check your answer with possible answers given at the end of the unit

- 1) What is the broad framework of Jawaharlal Nehru National Urban Renewal Mission (JNNURM)?

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- 2) What are the mandatory urban reforms at State level under Jawaharlal Nehru National Urban Renewal Mission (JNNURM)?

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- 3) What are the mandatory urban reforms at municipal level under Jawaharlal Nehru National Urban Renewal Mission (JNNURM)?

.....

1.3 URBAN REFORM INITIATIVES: LEGAL AND REGULATORY REFORMS

Some of the legal and regulatory reforms initiated by the government in the urban development sector are narrated below:

1.3.1 Constitution (Seventy-Fourth Amendment) Act 1992

This is a revolutionary piece of legislation by which Constitution of India was amended to incorporate a separate Chapter on urban local bodies, which seeks to redefine their role, power, function and finances. The salient features of this Act are:

- Urban local bodies, to be known as Municipal Corporations, Municipal Councils and Nagar Panchayat depending on the population shall be constituted through universal adult franchise in each notified urban area of the country.
- These shall be constituted for a period of five years and if dissolved earlier, an election to reconstitute it shall be completed before the expiration of a period of six months from the date of its dissolution.
- Not less than one-third of total number of seats in each urban local body shall be reserved for women.
- The Legislature of a State may by law entrust on these bodies such power and authority as may be necessary to enable them to function as institution of local self government, including those listed in the Twelfth Schedule.
- The Twelfth Schedule of the Constitution has listed the following functions of the urban local bodies:
 - 1) Urban Planning including town planning.

- 2) Regulation of land-use and construction of buildings.
- 3) Planning for economic and social development.
- 4) Roads and bridges.
- 5) Water supply for domestic, industrial and commercial purposes.
- 6) Public health, sanitation, conservancy and solid waste management.
- 7) Fire services.
- 8) Urban forestry, protection of the environment and promotion of ecological aspects.
- 9) Safeguarding the interests of weaker sections of society, including the handicapped and mentally retarded.
- 10) Slum improvement and up gradation.
- 11) Urban poverty alleviation.
- 12) Provision of Urban amenities and facilities such as parks, gardens, playgrounds.
- 13) Promotion of cultural, educational and aesthetic aspects.
- 14) Burials and burial grounds; cremations, cremation grounds and electric crematoriums.
- 15) Cattle pounds; prevention of cruelty to animals.
- 16) Vital statistics including registration of births and deaths.
- 17) Public amenities including street lighting, parking lots, bus stops and public conveniences.
- 18) Regulation of slaughter houses and tanneries.

In order that the urban local bodies can perform the functions assigned to them, the Legislature of a State shall assign them specific taxes, duties, tolls and levies and authorise them to impose, collect and appropriate the same. Each State shall also constitute a Finance Commission which shall review the financial position of the urban local bodies and recommend the principles which should govern the devolution of resources, including grant-in-aid from the Consolidated Fund of the State of these bodies. The superintendence, direction and control of the preparation of electoral rolls for and the conduct of all elections to the urban local bodies shall vest in the State Election Commission. In each district, a District Planning Committee shall be constituted to consolidate the plan prepared by the urban and rural local bodies. Similarly, for each metropolitan area, a Metropolitan Planning Committee shall be constituted to prepare a development plan for the metropolitan area as a whole.

All the State Governments have either enacted new Municipal Law or amended the existing laws to conform these to the Constitution (74th Amendment) Act, 1992. All the States (except Jharkhand and Pondicherry) have conducted the election to the local bodies. All the States (except Arunachal Pradesh) have constituted State Finance Commissions and most of the Commissions have submitted their reports to the State Governments, recommending significant devolution of resources to the urban local bodies. The national Eleventh Finance Commission has also recommended devolution of Rs. 2000 crores as grant-in-

aid from the Central Government to the urban local bodies. Constitution (74th Amendment) Act 1992 has made the urban local bodies into vibrant self governing institutions. This has ushered in a new era of urban governance and urban management in India. Besides this, Government of India has proposed a series of reforms in related areas to create an enabling legal environment for speedier implementation of urban development schemes and for attracting larger participation of private sector. Some of these proposals are:

- Amendment of Land Acquisition Act, 1894 to speed up the process of acquisition and to de link the process of taking over possession of land from the process of determining compensation.
- Amendment of the Transfer of Property Act, 1882 to bring the concept of categorisation of mortgages in line with recent practices of housing and financial institutions, in particular English Mortgage and Equitable Mortgage, lay down uniform Mortgage documents, introduce speedy and predictable system of foreclosure of mortgages and to give legal shape to rights of owners in multi storied apartments.
- Amendment of the Indian Stamp Act, 1899 and the Indian Registration Act, 1908 to delink the process of registration from the payment of stamp duty, to liberate the registration process from the requirement of various no objection certificates and to rationalise stamp duties on various instruments.

1.3.2 Rent Control Reform

State Level

The rent control laws were initially enacted as temporary acts and short-term measures to overcome transient problems emanating from unusual situations. In many states, these laws incorporated a sunset clause stating the period at which the law will terminate. The provisions in the laws were designed keeping in view the short-term nature of the enactments. Continuation of these acts over a long period without amending such provisions has had adverse consequences like depletion in supply of rental housing, distortions in rental housing market and negative impact on urban finances.

The major provisions of rent laws, which need to be amended, are as follows:

- Control of rents: Under most rent laws, rent is fixed much below the market or economic rent and there is no provision for its revision over time.
- Obligations of landlords and tenants: The landlord is obliged under law to keep the premises in good condition and pay all taxes relating to the property. The tenant is obliged to pay the rent on time, but has no obligation towards even day-to-day maintenance.
- Repossession of the premises by the landlord is permissible only on grounds specified in the law. Main grounds include non-payment of rent; misuse or non-use of premises; requirement of premises by the landlord for repair or for self-use; non-requirement of premises by the tenant; and sub-letting of premises without the permission of the landlord.
- The long judicial process, at times extending over ten to twenty years, denies quick repossession of the property to the landlord.
- Tenancy rights are inheritable under most state (rent) laws. Thus, once a house is let, getting repossession is well next to impossible.

Why is it important to reform the Rent Control Law?

Legal and Structural Reforms

The combination of the provisions listed above leads to the following consequences. Low or negative rate of return from investment in rental housing and decline in supply of rental housing due to:

- Withdrawal of rental housing from existing stock.
- Accelerated depreciation of the premises due to inadequate maintenance.
- Disincentive to new investment in rental housing.
- Reduced supply of rental housing in the “controlled” market segment leads to increased rents in the uncontrolled market segment.
- Ineffective implementation of the rent laws leads to emergence of a black market in rental housing and of unlawful practices like payment of “key money” at the point of entry in tenancy.
- Exclusions of lower income groups from the rental housing market, due to inability to pay high rents in the uncontrolled market and huge deposits as key money in the controlled market.
- Inefficient and wasteful use of scarce resource (rental housing) in the controlled market due to low rents.
- Negative impact on the value of tenanted properties with repercussions on the saleability and/or mortgagability of the premises.
- Contentious relationship between the landlord and the tenant.
- Increased litigation and resort to criminal practices for getting repossession of the house by the landlord and consequent increased administration cost for resolution of disputes.
- Stagnation of revenue from property taxes, which is the major source of revenue for urban local bodies.

1.3.3 Benefits of Reform in Rent Laws for States, ULBs and Citizens:

i) States

- Increased investment in housing will have positive multiplier impact on State Domestic Product (SDP) and will generate additional employment.
- Increased supply of rental housing will lead to reduced rent levels and a decline in number of slums.
- Improved housing situation will reduce the need to allocate government funds for housing and release additional resources for financing other social objectives.
- More efficient allocation of existing housing stock will lead to increased productivity with beneficial impact on economy of the state.
- Decline in the number of rent related litigations.
- Mitigation of social disharmony.

(ii) ULBs (Urban Local Bodies)

Some of the benefits to be accrued to the ULBs are as follows:

- Increased revenue from property tax.

- Reduction in the number of sub-standard housing units leading to improved quality of housing stock in the city.
- Reduced burden on municipal finances on account of diminished need to allocate funds for up gradation of dilapidated housing, etc.

iii) **Citizens**

Some of the benefits of the reform to the common man are as follows:

- Development of a healthy rental housing market.
- Increased accessibility and affordability of rental housing.
- Improved security of tenure.
- Reduction of black money deals on account of unlawful payments (e.g., key money) by landlords or tenants.
- Improved access to housing finance for owners of rented properties.

Recognizing the negative impact and social tensions created by the rent control laws, the Government of India came out with a Model Rent Legislation (MRL) in 1992 .Following the formulation of the model rent legislation, many states have repealed their old acts and formulated new ones. These states include Karnataka, Rajasthan, Maharashtra and West Bengal. Several other states are in the process of reforming their acts.

1.3.4 Repeal of Urban Land Ceiling & Regulation Act (ULCRA)

State Level Reform

The objective of the Urban Land Ceiling & Regulation Act, 1976, (hereafter ULCRA) was to facilitate the availability and affordability of urban land by increasing its supply in the market and by establishing an efficient land market. The ULCRA provided for imposition of a ceiling both on ownership and possession of vacant land; acquisition of excess vacant land by the state government with powers to dispose off the land for the common good; payment of compensation for the acquisition of the excess land; and granting exceptions in respect of certain specific categories of vacant land. The ULCRA came into force in 1976 in 64 urban agglomerations spread over 17 states and three union territories (UTs) and covered towns with a population of more than two lakh as per the 1971 Census.

The implementation of the ULCRA in the states and UTs was, however, dismal mainly due to:

- Absence of clarity and too much discretionary powers given to the state governments for granting exemptions.
- Compensation provided for the acquired land was very little, which often led to lengthy litigation disputes. The maximum compensation was Rs.10 per sq. meter and the total compensation could not exceed Rs.2 lakhs per owner. This made landowners reluctant to declare their vacant land as surplus.
- Absence of a mechanism to encourage the entry of the vacant urban land into the land market through appropriate fiscal measures. Land prices in cities reached astronomical heights due to artificial scarcity of land created by ULCRA.

Since the ULCRA has not met its intended objectives, the Government of India decided to repeal the Act with the passing of the Urban Land (Ceiling and Regulation) Repeal Act, 1999. Various states subsequently repealed the Act. The states yet to repeal ULCRA are Andhra Pradesh, Assam, Bihar and West Bengal. Repeal of the ULCRA has been included as one of the mandatory reforms suggested in the JNNURM. States have to commit to repealing it within a committed time frame. It is envisaged that the repeal of the Act would go a long way in reviving the stagnant housing industry and facilitate construction of dwelling units both in the public and private sector.

Rationale for the reform

The following are the principal reasons why the ULCRA should be repealed:

- Vast tracts of land in cities are expected to be released for development. This will bridge the gap between demand and supply in the real estate sector of various states.
- The housing sector will receive a big boost. The increase in the supply of land will improve accessibility and affordability for the urban poor.
- It will tend to improve transparency and efficiency in land acquisition, which would encourage domestic and foreign investment in the real estate sector.
- The administrative fees payable under ULCRA for getting permission for land development, which are sometime as high as Rs.100 per square feet, would be done away with and the benefits passed on to the consumers.

Some of the specific advantages of repealing the ULCRA for states, ULBs and citizens are as follows:

States

- Increased supply of land and investment in housing will have multiple effects in generating direct and indirect income and employment generation, besides, improving productivity levels and the overall social well-being.
- It will ensure faster granting of building permissions and promote real estate development in selected cities, shorten project execution time, and save on interest. These benefits can be passed on to consumers.
- Large tracts of land that earlier would have required urban land ceiling clearance from the government can now be taken up for construction and development of integrated townships and construction of houses for Economically Weaker Sections (EWS)/Low Income Groups (LIG).
- Decline in number of litigation cases.
- New supply of land is expected to have a moderating effect on property prices.
- It will remove the impediments to land supply and free it from obsessive government control.

ULBs (Urban Local Bodies)

- Increased housing supply will help in mobilizing property tax.

Citizens

- Increased accessibility and affordability of housing for the urban poor.
- Reduced corruption and unlawful payments to get permission for development.

1.3.5 Community Participation Law: State Level Reform

The Community Participation Law (CPL) is aimed at strengthening municipal governments by:

- Institutionalizing citizen participation.
- Introducing the concept of Area Sabhas (consisting of all registered voters of a polling booth) in urban areas.
- Involving citizens in municipal functions like setting priorities, budgeting provisions, exerting pressure for compliance of existing regulations, etc.

JNNURM contemplates the creation of another tier of decision-making in the municipality which is below the ward level, called the Area Sabha. All the Area Sabhas in a ward will be linked to the ward level committee through Area Sabha representatives, who will be representatives of the community. Thus, there will be minimum 3 tiers of decision-making in a municipality, namely, the municipality, the ward committee, and the Area Sabhas. In addition, states may choose to have an intermediary level for administrative reasons, clustering multiple wards into a regional structure between the ward and the municipality.

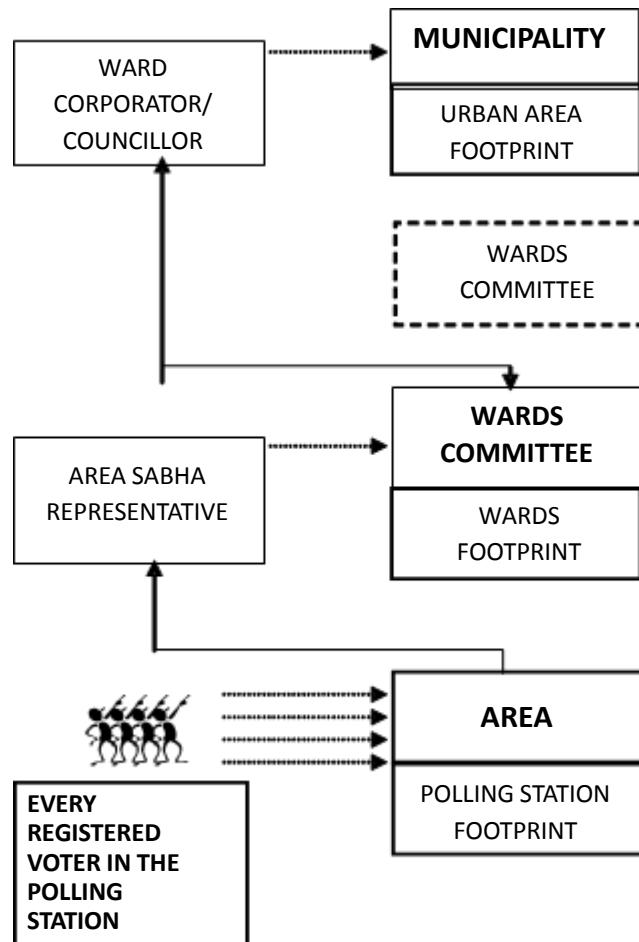


Fig 1.1

The CPL is a mandatory reform under the JNNURM and it refers to making appropriate provisions in the state-level municipal statute(s) for the establishment of such a three/four-tiered structure. The JNNURM makes it mandatory for states to either enact a separate CPL or make appropriate amendments to their existing municipal laws. These enactments will need to ensure clear definition of functions,

duties and powers of each of these tiers, and provide for appropriate devolution of funds, functions and functionaries to these levels. The figure above (Fig 1.1) illustrates the proposed structure. Citizen participation is essential for making democratic processes effective and for strengthening them. It provides a platform to citizens to influence policy/program development and implementation. While various platforms and systems for citizen's participation have developed organically, there is a need to institutionalize them to make them effective and sustainable. The CPL aims to institutionalize such community participation platforms/systems. If implemented in true spirit, it will have the following advantages:

- It will help deepen democracy, facilitate efficiency and sustained socio-economic growth, and promote pro-poor initiatives.
- It will help in improving urban governance and service delivery.
- It will promote transparency and accountability in governance.
- It will improve the quality of decision making, as these would be based on knowledge of local realities and requirements.
- It has significance for regional planning structures like the District Planning Committee and the Metropolitan Planning Committee both of which require citizen participation in planning from the grassroots.
- Citizens will have a say in determining how information is shared, policies are set, resources are used and plans/programs are implemented.

1.3.6 Public Disclosure Law: State Level Reforms

The goal of public disclosure is to institute transparency and accountability in the functioning of municipalities through publication of information pertaining to various facets of municipal governance, namely: personnel, particulars of administrative structure, and finances and operations. The JNNURM envisages the enactment of a Public Disclosure Law (PDL) to ensure release of quarterly performance information to all stakeholders.

The core objectives of the Public Disclosure Law are:

- To provide appropriate financial and operational information on various municipal services to citizens and other stakeholders.
- To promote efficiency and consistency in the delivery of public goods and services by the municipality.
- To enable comparison over time (of a particular ULB) and space (between ULBs) by disseminating information in a structured, regular and standardized manner.

The JNNURM reform toolkit clearly states that "JNNURM requires that municipalities and parastatal agencies will have to publish information about the municipality and its functioning on a periodic basis. Such information includes, but is not limited, to statutorily audit quarterly statements of performance covering operating and financial parameters and service levels for various services being rendered by the municipality."

The enactment of the Public Disclosure Law refers to making appropriate provisions in the state-level municipal statute(s) and/or other state-level statutes to ensure that these disclosures are mandatory.

Rationale for the reform

Public disclosure is essential for accountability within as well as outside the municipal system for the following reasons:

First, this criterion builds a channel between the local, state and the union levels of India's federal government structure for effective communication through voluntary disclosure of information. This aids the audit of finances and operational performance of ULBs. It also helps create an environment of healthy competition between different ULBs in the delivery of quality of life to their citizens.

Second, by making information accessible to the citizenry, it plays a lead role in enabling them to effectively use the participatory platforms to influence municipal policies. This reform can also be seen as supplementing another key reform criterion of JNNURM, namely, enactment of the Community Participation Law by helping it achieve informed participation. Thus, public disclosure makes ULBs more accountable not only within the federal structure but also to the citizen.

Third, the PDL also allows ULBs to be accountable to a variety of other stakeholders with which it must increasingly interact including lenders, credit rating agencies, donors, private contractors and so on. The creation of a robust platform for the disclosure of municipal finances will facilitate easier evaluation of municipalities in accessing funding from lenders and capital markets, as well as reduce the cost of borrowing over time. This is especially important given that ULBs may need to access market-based financing for at least some portion of their capital investment requirements.

Some of the advantages of a law on Public Disclosure are:

- A PDL will make it mandatory for municipalities to publish information *suo motu*.
- A well drafted PDL will provide clear guidelines to the ULBs/parastatals on the areas and manner of disclosure and hence prevent inconsistencies and conflicts.
- It will enhance transparency and accountability in government processes and in the process check corruption.
- It will help citizens to play an effective role in their local governance through informed participation, thus strengthening citizen-state partnership.
- Access to information will enhance the ability of citizens to exercise a whole range of other rights. In this sense, public disclosure supplements the Right to Information (RTI) Act, 2005, by making available regular information on ULB activities *suo motu* as follows:
- This will ease the load on the Information Department by reducing the number of RTI requests on such matters.
- This will ensure the periodicity of *suo motu* disclosure.
- The reform also provides for the structuring of large volumes of information in an easily comprehensible format.
- Disclosure of information will bring critical issues to the fore and exert pressure on all stakeholders to resolve them. In other words, such a law will enable an informed and sound analysis of urban challenges, thereby, assisting in identifying and implementing sustainable solutions.

1.3.7 Land Title Certification System: State Reform

Urbanising India urgently requires a robust system to protect land rights. There are two important aspects to land title: the first is the formal recognition by the state of property rights through a system of titles; and second the facilitation by the state, of efficient trade in rights, through a process of registration. Both of these elements exist in India, but in incomplete form.

While Indian law requires compulsory registration of sale of land, the Indian Registration Act of 1908 doesn't ask the registration authority to verify history of the land or ownership from the seller, weakening the protection to the buyer. Hence, land registration is not registration of title, but of deed of transaction. It is a fiscal instrument for the state, allowing it to collect a "fee", not providing the statutory support of certainty to title. Neither does the Transfer of Property Act, 1882 require verification of ownership. In addition, Section 18 of the Registration Act does not demand compulsory registration of all land related transactions. State legislation on land acquisition, court decrees, land orders, heir ship partitions, mortgages, agreements to sell, etc, do not require mandatory registration. The provision related to land in the Indian Contract Act of 1872, does not require contracts to be registered.

All of these forces combine to weaken land records and security of tenure. What we have in India today is a presumed ownership to land which is questionable and can be challenged on multiple fronts: ownership, extent of boundaries, clauses, financial encumbrances, inheritance subdivisions, etc. The formation of modern markets has required the replacement of traditional systems of common property rights and development, with a system that provides for individual rights and the ability to trade these rights. In such a scenario, it becomes important to strengthen formal system of registration and title, of individual property rights. For more information, refer to "Ground Rules" published by India Urban Space Foundation and Ministry of Urban Development, Government of India.

Irrespective of one's misgivings about the long-term implications of modern tenure systems, the edifice of a modern state/market ecosystem is premised on the paradigm of individual land and property rights. Any social or community concerns will have to find answers within this emerging paradigm; for example, the means of protecting group titles, or legal mechanisms of community ownership. Implementing a system of land title certification is one of the mandatory reforms suggested in the Jawaharlal Nehru National Urban Renewal Mission (JNNURM or the Mission hereafter). States are expected to implement the reform within the Mission period.

Rationale for the reform

Guaranteed title certification systems that protect rights to land and property have been developed in most of the democratic developed economies. The essential aspect to guaranteed title is that it relates to so many aspects of the functioning of both state and markets: it helps in social justice programmes like low income housing; it helps in more effective urban planning, in the protection of specified land parcels like environmental or heritage assets; it helps faster implementation of infrastructure projects, it reduces delays in judicial processes and unnecessary litigations; it helps in a more efficient mortgage market, with fewer delinquencies and greater transparency; and so on.

Benefits of the Guaranteed Title reform

Clearly providing security of title through robust records, improved registration and guaranteeing title, are significant next generation reforms on land. After two decades of advocacy and recommendations from Planning Commissions, the country is ready to take a leap towards these reforms. The impact of these reforms will be significant.

Social impact: There will be reliable data on property and land and hence a dramatic reduction in litigations, and encroachments will go down. Government records of land assets that are currently in shambles, will be vastly improved. This in turn will make land available for social development and infrastructure. There will be improved value to property assets, easier access to credit, increasing number of transactions. Transactions on land become simpler, cheaper, quicker, and will be accurate and secure.

Governance impact: Urban planning and management will be immeasurably improved with reliable data of the individual cadastre that will provide the smallest building block on which layers of data can be built. Data at the property level will be the building block for multiple uses, accurate assessment of land market valuation by street, updated voter lists, enforcement of zoning laws, etc. Tax and utilities collection will be better administered and allow fewer loopholes. Infrastructure projects will be done faster with clarity on title, and development policies like Transfer of Development Rights (TDR) will have an enabling environment.

Financial impact: The access to credit through land and property assets is an on-going study. This is especially important for the urban poor, who currently cannot use their property as collateral to access credit, due to lack of certainty of tenure rights. Guaranteed title will unlock the potential of land to generate capital. While the small holdings of the poor might not individually attract credit from formal financial institutions, they could become attractive as aggregated land collateral. For example, the total value of informal urban and rural land Karnataka alone is estimated to be \$90 billion, or Rs. 350,000 crores (extrapolated from Hernando De Soto data on Asia in “Mystery of Capital”)

Sources of revenue to the state and local governments -direct and indirect – will increase substantially -property tax collection, stamp duty for registration, building licenses, company and individual taxes with employment generation in an improved land development and construction sector.

Robust records and secure title bring informal land and property holdings into the formal system. The resultant benefits accrue to the property holders, improved sources of revenue to the local and state governments, and efficiency in social programmes of government.

In this section you studied legal and regulatory reforms in the housing and urban development sector. Now, you should be able to answer some questions relating to this section given in *Check Your Progress-2*.

Check Your Progress 2

Note: a) Write your answer in about 50 words

b) Check your answer with possible answers given at the end of the unit

- 1) What are the salient features of Constitution (Seventy-fourth Amendment Act), 1992?

2) What are the advantages in implementing the Community Participation Law?

3) What are the core objectives of Public Disclosure Law?

1.4 URBAN REFORM INITIATIVES: STRUCTURAL REFORMS

JNNURM envisages certain structural reforms that aim at making the institutions of urban management at both the State and City levels more effective. These reforms will be effective not merely by notification of changes in rules and Government Orders, but by actually carrying out these change in institutional structures on the ground. These reforms are significant as they bring long-term and sustainable change, even though their impact may not be immediately visible.

Efficiency and effectiveness of institutions to its external stakeholders (front-end) is critically dependant on the internal capacities of the institution at its back-end. In the context of ULBs, internal capacities would be defined by – Structures; People; Systems and Processes. While reforms in people management, systems and processes are addressed under Administrative Reforms, reforms in inter and intra-organisational issues are addressed under Structural Reforms.

Administrative reforms and Structural reforms must go hand-in-hand. Changes in systems and processes must be commensurately followed-up by changes in structures aligned to the processes, and vice-versa. Structural reforms are envisaged to provide an enabling and supporting institutional context for governance improvements to strike roots and sustain them. They include:

- Reforms in the institutional structures of urban management at the State level;

- Creation of cadre of municipal staff for different disciplines;
- Decentralisation of municipal administration, and synchronisation of internal jurisdictions, organisation structure review and optimisation of staffing patterns;
- Implementation of these reforms requires concurrent actions by both at the State level and ULB level. The Department for Urban Development / Municipal Administration (or its equivalent) in every state should take the lead in enabling implementation of the above mentioned structural reforms.

1.4.1 Rationale, Impact and Benefits of Structural Reforms

1) Rationale for the reform

Strength of an institution lies in its ability to respond to changes in the external environment. The vast and diverse sets of changes that have taken place in the urban context, requires Urban Local Bodies, other civic institutions and State Governments to respond through making long-lasting structural changes. The key rationale for prioritising and undertaking Structural Reforms has been discussed earlier, viz. to enable the accomplishment and sustenance of other reforms under JNNURM in its true letter and spirit. Structural reforms are more difficult to implement, as it creates significant changes in status-quo i.e. it changes hierarchy and reporting relationships, requires realignment of many systems and processes, redefines responsibility, jurisdictions and mandates, and brings in new people into the structure that should be accommodated.

Structural reforms cannot be easily undone or reversed. Therefore, the benefits of such reforms will surely endure beyond the tenure of elected councils, or tenure of elected or administrative leaders who would anchor such changes. One of the key challenges in implementing structural reforms is in managing internal communication, so that all internal stakeholders accept and adapt to the changes.

1) Impact and benefits

Reforms in Institutional structures of urban management at the State level should lead to:	Reforms in Creation of cadre of municipal staff for different disciplines should lead to:	Reforms in Decentralisation of municipal administration, and synchronisation of internal jurisdictions should lead to:	Reforms in Organisation structure review and optimisation of staffing patterns should lead to:
<ul style="list-style-type: none"> - Clear delineation of regulatory, administrative and capacity development support functions rendered by State level agencies. Gaps, duplication and overlaps in mandates of state agencies resolved. - ULBs having issue-specific clear lines of reporting hierarchy to the State Govt. agencies 	<ul style="list-style-type: none"> - ULBs have full time staff with specialised skills, within the hierarchy of the municipal setup. - Clear career growth path is available to staff. - Experiences are shared across cities through movement of personnel. 	<ul style="list-style-type: none"> - Alignment of political, administrative(managerial) and operational accountability. - Costs, revenues and service delivery standards can be matched for each ward. - Better resource allocation decisions - for both capital expenditure and operational improvements. 	<ul style="list-style-type: none"> - Improved alignment of organisation structure to the demands of municipal mandate. - Pockets of staff deficiency and staff redundancy resolved through redeployment and training. - Service delivery through optimal mix of in-house staff, contractual deployment (outsourcing) and PPP.

2) Generic set of reform initiatives for each reform area

To achieve the goals and objectives mentioned above in each area of structural reform, multiple initiatives will need to be undertaken. Each city and state government will need to contextualise and refine the reform initiative as relevant to its context. The priorities too may differ across different cities. However, it should be ensured that such adoption and prioritisation does not compromise on the goals and objectives of the reform.

A generic set of reform initiatives in each area is listed in the table below. Please note that this set is only illustrative and not exhaustive.

Ref. No.	Reform Area	Generic set of steps / initiatives
A1	Redefining institutional mandates – realigning the functions of multiple institutions that exist at State level.	<p>Mapping functional mandates of all institutions at State level, both as defined in respective acts / articles of association of those organisations, etc. and as practiced in recent past. Identify overlaps and gaps. Classify regulatory, administrative, program management and technical support functions.</p> <p>Evolve revised institutional structure, clearly segregating the above 4 types of functions and eliminating any conflict of interest. Merge entities where appropriate. Reduce administrative redundancies. In large states, decentralise administrative functions (such as that of DLB) to regional offices.</p> <p>Revise the powers, official hierarchy and seniority of heads of the organisations, as per revised institutional structure.</p> <p>Institutionalise reforms being managed by Program Agencies/SPVs, through mainstream agencies (such as DLB).</p> <p>Draft charters of mutual accountability, defining their roles, inter-linkages and performance accountability to one another. Bring ULB leadership in the governance structures of Program Agencies / SPVs involved in program management and technical support.</p> <p>Prepare a time-bound transition plan from current structure to the revised one. Communicate plan to all stakeholder agencies and obtain their buy-in.</p> <p>Effect changes in staffing structures and patterns aligned to the revised institutional arrangements. Transition plan can be gradual where some functions, staff, commensurate databases and processes are transferred.</p> <p>The time bound transition should be periodically monitored, by senior level (Secretary – UD of State Govt.), and emerging issues addressed immediately.</p>
Creation of cadre of municipal staff for different disciplines		
B1	Creation of Cadre of municipal staff for both Administrative and Technical Functions.	<p>Identify skill gaps – skill areas and number of professionals required.</p> <p>Notify the position vacancies, grade and scale for that position (linked to ULB size, role, etc.).</p> <p>Define qualifications, experience and competencies required. Finalise pay scale, grade (equivalence) with existing cadres, etc.</p>

		<p>Institute a standardised selection process, operated in transparent manner, (for e.g. Govt. of Karnataka's approach for posting municipal cadre officers through counselling).</p> <p>Define performance management process for the cadre.</p> <p>Ensure cadre is able to attract young qualified professionals, with the ability and aptitude to work in public institutions.</p>
B2	Cadre management systems – all systems, processes, rules and norms for managing the cadre.	<p>Define career growth path for cadre officers. Growth should offer higher responsibilities, learning opportunities, apart from higher emoluments.</p> <p>Define process and norms for absorbing existing personnel with related qualifications and experience into the cadre at appropriate levels.</p> <p>Define process that provides balance of authority in cadre management between State level and city level leadership. For all positions, process may be adopted of providing the ULB leadership a panel of at least 3/5 shortlisted names, and final selection by the ULB leadership. Similar balance should be created with respect to transfers, disciplinary action, etc.</p> <p>Institute processes for intensive training to personnel hired into the cadre, and periodic retraining and learning opportunities.</p> <p>Institutionalise processes for managing the cadre with regard to all personnel management functions.</p>
Decentralisation of municipal administration, and synchronisation of internal jurisdictions		
C1	Synchronising jurisdiction boundaries.	<p>All sub-ULB jurisdictions (electoral wards, zones, engineering circles, etc.) should be represented spatially on the city map. Examine the extent of incongruity.</p> <p>Identify bottlenecks to merging boundaries. For network services (water supply, sewerage, SWM) the network design, and logistics may pose peculiar problems in some places. Resolve these problems one by one (introduce intermediate metering in case of water supply, or club more than one ward to constitute a zone, etc.).</p> <p>In case of large cities, divide the wards into few zones (3 / 5), define routine service delivery functions to be monitored from these zonal offices. Zonal offices may also be cost centres to recording service delivery costs incurred in that zone. Transfer adequate powers to zonal administrative and engineering heads, to take decisions for uninterrupted operations.</p> <p>In the event, municipal wards are being redrawn under a delimitation exercise, leverage the opportunity to alter municipal ward boundaries and synchronise with other sub-ULB spatial units.</p>
C2	Realigning internal organisation structures and processes	<p>Review deployment of operations staff, and realign with new jurisdictions. Alter reporting relationships where necessary.</p> <p>Review flow of information regarding operations from field to Zonal office / Head of Dept. Make appropriate changes.</p>

D1	<p>Staffing review</p> <p>Provide information swiftly to municipal staff, citizens and all other stakeholders about the change in boundaries. Communicate widely through maps and charts, with adequate level of detail (scale not more than 1:1000).</p> <p>Provide training to all municipal staff about the revised structures, reporting lines.</p> <p>Undertake indepth review of staffing patterns in the ULB, covering staff in position, vacancies, sanctioned posts, etc. Examine skill and experience profile. Compare with norms. Examine ageing profile and examine superannuation rate (by department, level and skill base).</p> <p>Conduct interviews, time and motion studies, and undertake other measures to identify number of personnel required for the job. Also project increase / decrease in requirement if any. Focus on field level service delivery functions, citizen interface points and administrative support roles.</p> <p>Analyse skill availability Vs requirement, to lead to identification of gaps and redundancies. Prepare redeployment plan to bridge gaps and eliminate redundancies.</p> <p>Examine span of control, reporting hierarchy and adequacy of decision-making staff at all levels. Many a times, the Commissioner has a large span of control, with some minor departments such as Nursery / Urban Forestry directly reporting to the Chief Executive / Commissioner. These departments never get adequate attention, and consequently performance and effectiveness of the department suffers.</p> <p>Abolish redundant posts, many of which would have lost relevance.</p> <p>If gaps still remain, explore options of outsourcing staff on contract basis, or outsourcing the activity itself. Many functions can be taken up under PPP, reducing the staffing burden of the ULB.</p> <p>Prepare a detailed and timebound transition plan, with small incremental steps being taken up every day.</p> <p>Communicate the plan, and hold detailed dialogue with staff unions, counsel them and all staff being redeployment on individual basis.</p> <p>Take up measures for people to take pride in new role, improve hygiene factors and work conditions such as providing proper working spaces, uniforms, tools and devices, communication devices, etc. Often these minor issues are neglected, which snowball into larger issues, making transition difficult.</p> <p>The time bound transition should be periodically monitored, by senior level (Mayor and Municipal Commissioner), and emerging issues addressed immediately.</p>
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In this section you studied structural reforms- optional reform. Now, you should be able to answer some questions relating to this section given in *Check Your Progress-3*.

Check Your Progress 3

Note: a) Write your answer in about 50 words

b) Check your answer with possible answers given at the end of the unit

- 1) What are structural reforms?

.....

- 2) What are the benefits of reforms in decentralisation of municipal administration?

.....

1.5 LET US SUM UP

Administration of urban local self-governments is an important element in the overall realm of public administration. From an urban citizens' perspective, administration of local governments (Urban Local Bodies – ULBs) impacts their lives far more than any other tier of government. Therefore, legislative and structural reforms institutions of urban local bodies potentially have a significant positive impact on the quality of governance, service delivery and overall quality of life in urban areas. Efficiency and effectiveness of institutions is critically dependant on the internal capacities of the institution. In the context of ULBs, internal capacities would be defined by:

- **Structures** – organisation structures of ULBs, organisation structure of urban development departments of State Government, and hierarchical relationships between the two.
- **People** – human resources who staff ULBs, and systems for developing and managing them.
- **Systems and Processes** – Quality, reliability and effectiveness of systems and processes that are both internal to the ULB, and those that enable the external interface with citizens and other stakeholders.

Technically speaking, legislative and structural reforms cut across various reform elements, and are not a stand-alone reform of a specific aspect of functioning of

ULBs. Reforms in systems / processes have been addressed in a number of reform elements such as –

- Streamlined processes for public disclosure.
- Administration of property taxes under Property Tax reforms.
- Administration of user charges under User Charge reforms.
- Usage of Information Technology under e-Governance, which also requires re-engineering of business processes.
- Implementation of modified accrual based accounting under Accounting Reforms.
- Streamlining processes for building plan approvals.
- Reforms in processes for conversion of land-use, registration of transactions on land and property.

However, apart from all of the above further reforms are required in a few key areas, to enable ULBs function as effective units of urban local governments. Generally, a number of systems and processes for functioning of ULBs are laid down as per Rules notified under the Municipal Acts and Procedures notified through Government Orders, etc. However, many of these systems and processes have become obsolete and redundant over time, and require substantial change. Also for a number of areas procedures are not defined, practices have evolved over time and carried on only on the basis of past-precedence. Therefore, a thorough review of systems and processes is called for in order to address multiple challenges that have emerged over time, such as:

- Municipal boundaries have expanded over time, requiring expansion in the administrative structure of the ULBs to address larger volume of work. Municipal functions have increased and become more complex. Most issues require multi-functional expertise to plan for, develop and manage. Thus the scale and skill requirements of municipal management have changed.
- Information Technology can be significantly leveraged to manage large volumes of data, citizen information, spatial information, etc. Ability of IT software tools to store, transfer and retrieve large amounts of data, makes it possible to simplify and speed up many municipal processes. Information and communication technologies can also be leveraged for easier, faster and more accessible two-way communication with citizens and other stakeholders.
- Many processes have become redundant over time. For e.g. the process of delivery of demand notices for Property Tax is redundant in the changed Self-Assessment System.
- Adding more staff to deal with these changes is not an option, as it is important for ULBs to be cost effective in its delivery of services.
- Citizens have legitimate expectations for higher levels of service and responsiveness by ULBs.
- All the above reasons, therefore require extensive legislative and structural reforms to be undertaken in ULBS.

1.6 REFERENCES AND SELECTED READINGS

- 1) World Bank (2007), *World Development Report*, World Bank
 - 2) Kamal Siddiqui (2004), *Mega city Governance in South Asia*, The University of Press Limited.
 - 3) O.P.Mathur (1999), *The Challenges of Urban Governance*, NIPFP, New Delhi.
 - 4) Marino R. Pinto (2007), *Metropolotan City Governance in India*, Sage Publications, New Delhi.
 - 5) Ramesh.K.Arora and R.M.Khadelwal (2008), *Good Governance Initiatives and Impact*, Paragon International Publishers, New Delhi.
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1.7 CHECK YOUR PROGRESS – POSSIBLE ANSWERS

Check Your Progress 1

- 1) **What is the broad framework of Jawaharlal Nehru National Urban Renewal Mission (JNNURM)?**
The broad framework of the Mission is as follows:
 - Preparation of City Development Plans (CDPs) by respective cities with a 20-25 years perspective.
 - Sector-wise detailed project reports to be prepared.
 - A Memorandum of Agreement (MoA) to be signed between the central government, state governments and ULBs containing the time bound commitment on the part of states/ ULBs to carry out reforms.
- 2) **What are the mandatory urban reforms at State level under Jawaharlal Nehru National Urban Renewal Mission (JNNURM)?**
 - a) effective implementation of decentralization initiatives as envisaged in the Constitution (seventy-fourth) Amendment Act, 1992;
 - b) repeal of Urban Land (Ceiling and Regulation) Act, 1976;
 - c) reform of rent control laws; d) rationalisation of stamp duty to bring it down to no more than 5 percent within seven years;
 - e) enactment of a public disclosure law;
 - f) enactment of a community participation law, so as to institutionalize citizens' participation in local decision making; and
 - g) association of elected municipalities with the city planning function.
- 3) **What are the mandatory urban reforms at municipal level under Jawaharlal Nehru National Urban Renewal Mission (JNNURM)?**
 - a) Adoption of a modern, accrual-based, double entry system of accounting;
 - b) introduction of a system of e-governance using IT applications, GIS and MIS for various urban services;
 - c) reform of property tax;

- d) levy of user charges to recover full cost of operation and maintenance
- e) internal earmarking of budgets for basic services to the urban poor; and
- f) provision of basic services to the urban poor, including security of tenure at affordable prices.

Check Your Progress 2

1) What are the salient features of Constitution (Seventy Fourth Amendment) Act 1992?

The salient features of this Act are:

- Urban local bodies, to be known as Municipal Corporations, Municipal Councils and Nagar Panchayat shall be constituted through universal adult franchise in each notified urban area of the country.
- These shall be constituted for a period of five years .
- Not less than one-third of total number of seats in each urban local body shall be reserved for women.
- The Legislature of a State may by law entrust on these bodies such power and authority as may be necessary to enable them to function as institution of local self government, including those listed in the Twelfth Schedule.

2) What are the advantages in implementing the Community Participation law?

It will help deepen democracy, facilitate efficiency and sustained socio-economic growth, and promote pro-poor initiatives and will help in improving urban governance and service delivery.

- It will promote transparency and accountability in governance.
- It will have citizen participation in planning from the grassroots.
- Citizens will have a say in determining how information is shared, policies are set, resources are used and plans/programs are implemented.

3) What are the core objectives of Public Disclosure Act?

The core objectives of Public Disclosure Act are:

- To provide appropriate financial and operational information on various municipal services to citizens and other stakeholders.
- To promote efficiency and consistency in the delivery of public goods and services by the municipality.
- To disseminate information in a structured, regular and standardized manner for and through urban local bodies.

Check Your Progress 3

1) What is structural reforms?

Structural Reforms include:

- Reforms in the institutional structures of urban management at the State level
- Creation of cadre of municipal staff for different disciplines

- Decentralisation of municipal administration, and synchronisation of internal jurisdictions

- Organisation structure review and optimisation of staffing patterns

2) What are the benefits of reforms in decentralisation of municipal administration?

The benefits of reforms in decentralisation of municipal administration are:

- Alignment of political, administrative (managerial) and operational accountability
- Costs, revenues and service delivery standards can be matched for each ward
- Better resource allocation decisions - for both capital expenditure and operational improvements

UNIT 2 DECENTRALIZATION: AN OVERVIEW

Structure

- 2.1 Introduction
 - 2.2 Decentralized Planning Process: Meaning and Importance
 - 2.3 Guidelines in Decentralized Planning Process
 - 2.4 Software Available for Decentralised Planning
 - 2.5 Steps in Preparation of Decentralised District Plan
 - 2.6 Steps in Preparation of a Village Panchayat Plan
 - 2.7 Steps to be Followed in the Preparation of a Urban Local Bodies Plan
 - 2.8 Consolidation of District Plan
 - 2.9 Let Us Sum Up
 - 2.10 References and Selected Readings
 - 2.11 Check Your Progress-Possible Answers
-

2.1 INTRODUCTION

One cannot find adequate literature on decentralised planning in India. Although, the discussions and deliberations were on even before the days of independence and subsequently after independence in all Five Year Plans, sporadically and sparingly it was put into practice at the ground and of course there were isolated experiments. Hence, inadequate literature on this area. After passing of the 73rd and the 74th Amendments to the constitution of India, decentralised planning gained much currency among the policy makers and administrators. Kerala emerged as model for decentralised planning and the experiences of Kerala were given in a separate unit. In the previous unit we have seen the need for decentralised planning contextually and the importance of peoples participation in the planning process at the grassroots and the approaches of decentralized planning. In this unit of principles and steps in decentralised planning you will understand the general principles to be followed and steps to be taken and followed in the preparation of a perspective participatory decentralised planning from below.

After reading this unit, you should be able to:

- i) Explain the meaning and importance of decentralized planning and process involved
- ii) Discuss various guidelines of decentralized planning
- iii) Explain steps in decentralized district planning
- iv) Describe steps to be followed in the preparation of village plan, urban local bodies plan and integrated district plan

2.2 DECENTRALIZED PLANNING PROCESS: MEANING AND IMPORTANCE

Decentralised participatory district planning involves people of all sections through an appropriate devise mechanism and strategy in gathering relevant data, analyzing it to set priorities, matching the set priorities with available budget and schemes and programmes of the state and central government. It involves in defining process of implementation and the setting and monitoring of targets. This plan comprises what different planning units within a district can achieve by envisioning collectively, operating their targets, exercising their skills and leveraging their initiative. In this planning process each planning unit namely panchayats at gram level, intermediate and district levels, municipalities of different categories, line departments and parastatals would prepare a plan for implementation of each of their functions and responsibilities after consultations with people. While collaborating and coordinating with each other, they would not trespass into each other's area of responsibility, unless there are definite gains to be had and with mutual consent. The final plan would result from a buckling together of these unit plans through a consultative process of consolidation. It is the design of government of India.

Box I: Planning Unit

A planning unit is a body that is entrusted with responsibility of planning. In a logically organized system of local government the panchayats and municipalities are easily recognizable as distinct, self contained planning units. In India the position, status, responsibilities, powers, functions, finance, functionaries of Local Bodies vary from state to state. Planning exercises are being done not only by the local bodies but also government line departments and community organizations by making use of the schemes and programmes of the state and central governments. In the same way the donor agencies operate projects through NGOs and they also plan for activities. Keeping all variations the district planning committee has to accommodate all without trespassing the others domain.

Source: Planning Commission, Government of India, **Manual for Integrated District: Planning**
New Delhi: Planning Commission, 2008.

India is at a critical and unique juncture where participatory decentralised planning is felt imperative and it receives much attention from all segments of the society. It gains currency at all levels. To operationalise this exercise more scientifically and in scale and mobilize people of all segments of the society, the innovations in information and communication technology help is inevitable and essential. In every sense the time is ripe for preparation of participatory decentralised plan from below. Local institutions, needed technology, man power and resources are available now along with the guidelines for preparation of plan from every local institution and to consolidate the same at the district level through the District Planning Committee. By making use of the opportunity, people's felt needs could be fulfilled and better outcome and results could be achieved in terms of human development indicators. In the whole process, people will be mobilized for development tasks and level of awareness and capacity of the people could be enhanced. Participatory district planning is multi dimensional in nature and hence it calls for adoption of sequence of steps to achieve meaningful targets.

2.3 GUIDELINES IN DECENTRALIZED PLANNING PROCESS

The decentralized planning process follows certain guidelines which are delineated below:

There are certain key principles to be followed in the whole process of planning at the grass root level. They are non negotiable principles. A new mind set is needed for every one who is involved in the process of decentralized planning. Following are the principles;

- i) Ensuring the participation of stakeholders
- ii) Bridging regional disparities
- iii) Keeping ecology and environment in the backdrop
- iv) Strengthening the planning machinery at all levels
- v) Building the capacity of the functionaries
- vi) Transforming a vertical planning process in to a horizontal process
- vii) Using the ICT effectively for participatory planning
- viii) Global vision and local action
- ix) Proper assessment of resources
- x) Law of subsidiary
- xi) Downward accountability

i) Ensuring the participation of stakeholders

The prime objective of this plan is to make the unreached, neglected and marginalized to participate in the process of planning. The poor do not find time to take up responsibilities and they concentrate more on their livelihood. Hence, it is necessary to mobilize the marginalized for development action. By involving them in the process of decision making and planning confidence is instilled in the minds of the poor that they are also being considered as a factor to reckon with and by doing so the whole process is made inclusive. It requires new mind set and special skill for the leaders and the functionaries of the local bodies to bring them to the new exercise for inclusion.

ii) Bridging Regional Disparities

Within a district, wide variations are noticed among the regions. While seeing the blocks from the perspective of human development indicators, one will find the wide variations among the blocks within the district and variations among the districts within a state and among the states within a country. Removing such variations within the district should be one of the key principles and perspectives of decentralized participatory district planning. The district planning committee has to look into the disparities among the regions, while micro plan is developed. Allocation has to be ensured according to the needs of the region.

iii) Keeping Ecology, Environment in the Backdrop

You should know that we are living in a context where ecology and environment are in peril. Global warming and climate change will affect food production and disturb the eco system. Against this background, when decentralised rural planning is initiated, it should be done in the backdrop of ecology and environment. Natural resource conservation, protection and enrichment are key elements to be considered for decentralised participatory planning. While planning is initiated in the context of globalization liberalization and privatization, activities have to be chalked out on the available new opportunities with the aim of achieving economic development and prosperity. While doing so care has to be taken to protect ecology, biodiversity and environment. Optimum utilization of natural resources has to be kept in mind.

iv) Strengthening the planning machinery at all levels

Since planning at grassroots has been made mandatory, planning units at every level right from Gram Panchayat to District Panchayat, and Town Panchayat to municipal corporation have to be created and strengthened. Planning, monitoring and evaluation are to be done continuously and for which the units have to be equipped with staff, needed technology and resource support. Unless otherwise planning at grassroots will be adhoc and irregular and not people centric participatory planning.

v) Building Capacity of the Functionaries

Capacity building is an imperative need for effective functioning of the planning units. The key functionaries both elected representatives and officials have to be trained and oriented periodically in the new process and principles of evolving decentralised micro plan for poverty alleviation and development of the poor and marginalized sections. For collection and analysis of data and prioritization of activities at grassroots, they need perspective, understanding and vision. In order to make the functionaries capable, capacity building exercise is an imperative need.

vi) Transforming a vertical planning into horizontal process

Planning exercises have to be done both horizontally and vertically. So far the line departments, mission units, donor projects and local bodies act in their own orbit without bringing any synergy. Now the weaknesses of the process is realized and synergy is the missing link and the need for such a link is felt and hence institutions working in a given geographical space have to work together keeping their autonomy intact. This is crucial for the success of the micro plan. By doing this synergization, every unit gets advantage. In a village, gram panchayat health committee is functioning, health mission unit is also working, a small NGO getting funds from a donor agency is also working in the same area and health department personnel is also functioning. All are working on the health issues. But they are all working not together but separately and they are accountable to their departments. But now in the planning exercise, all the units are brought together and work together by keeping their autonomy intact and towards acting the target and goals. So the vertical processes have to be transformed into a horizontal process.

vii) Using ICT effectively for participatory planning

At present information is power. People can be empowered through information. Information are essential need for planning. Data generation, validation, maintenance, updation should be done in a scientific way and for which the new technologies are needed. Every planning unit be it a Gram Panchayat or a small town panchayat, they are to be connected with newer technologies for transfer of information, generation of data and analysis of data. ICT can be used effectively not only to collect, collate, transfer and analysis of data but also for updation, maintenance and validation of the same. Moreover information dissemination has to be done in an effective way for wider mobilization of people for development activities and for which it helps immensely. Moreover it helps to maintain transparency.

viii) Global Vision and Local Action

We have millennium development goals. They are to be achieved. Countries have to work for it through their policies, programmes and resources allocation. But activities have to be carried out only in the society. So work has to be done only at the grassroots. Macro issues have to be tackled through micro actions. Be it literacy, poverty reduction, malnutrition or anemia or HIV, they are to be tackled massively by the involvement of people locally. If macro issues are broken and disaggregated it is easily manageable at the micro level. If each gram panchayat is empowered functionally and financially to tackle issues of health and education many of the MDG targets can be achieved at ease. Vibrant local actions are necessary. The beneficiary syndrome has to be changed and it is the look out of the people to participate in the process of development and act on the issues.

ix) Proper Assessment of Resources

Local units are traditionally spending units. Now it has to be changed. Available local resources have to be assessed and mobilized. Natural resources, human resources, and material resources available within the jurisdiction of the local governance units have to be assessed and accordingly decisions have to be taken for resource mobilization. The whole planning exercise will yield result only if resource planning is done properly. Fund flow mechanism has to be tracked and assess the resources available at the unit. Resources identification and tracking is the basic works in the process of planning at the grassroots.

x) Law of Subsidiarity

Every unit is autonomous and hence things that could be done at the lowest level could be allowed to be done at the lowest level. It should not be replicated or duplicated at the next level. From that perspective, planning exercise has to be carried out at the grassroots. We find overlapping of activities among the institutions and they are to be avoided. By doing so resources and time can be saved. Over a period of time capacity, skill and capability will be increased.

xi) Downward Accountability

In a traditional sense, in our governance and administration, accountability is built upwards. Every unit is accountable to the higher level unit and in the

same way every official is accountable to his / her superior official in terms of his / her roles and responsibilities. Now it has been reversed and accountability is built towards the stakeholders. They are empowered to evaluate the activities through the process of social audit. All units working at the ground are autonomous in their functional jurisdiction. Hence the units can work together without trespassing into the jurisdiction of the other. So far we have seen the basic principles that one has to follow while preparing the micro plan. Now we will move on to the next aspect the available software for preparation of micro plan.

After reading and understanding the concept of decentralized planning process, now attempt the question given in *Check Your Progress-1*.

Check Your Progress 1

Note: a) Write your answer in about 50 words

b) Check your answer with possible answers given at the end of the unit

- 1) Bring out the basic principles in decentralised participatory planning.
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2.4 SOFTWARE AVAILABLE FOR DECENTRALISED PLANNING

For planning exercise data generation, data validation and data analysis tools are so important and imperative needs. For continuous exercises, data storage, retrieval, validation and updating modern tools are imperative as it will reduce the wastage of time, resources and manpower. Hence using modern technology is unavoidable and necessary also.

For the preparation of decentralised participatory planning, government and other agencies have developed software and many of them are in use and they are listed hereunder:

- i) “**Plan plus**” is software developed by the NIC for the Ministry of Panchayati Raj Government of India to simplify and strengthen the decentralised planning process. It is well developed interactive local language software. It is suitable software for both the local bodies and line departments of the government.
- ii) “**National Panchayat Portal**” <http://panchayat.gov.in>. This is also developed by the NIC for the Ministry of Panchayati Raj, Government of India. It is a dynamic website for all panchayats. It provides data pertaining to panchayats. The whole responsibility of managing the content can be undertaken by the panchayats themselves.

- iii) “**Gram ++**” is a software developed by the IIT of Mumbai and it enables integration of numerical data on to a global information system for spatial display.
- iv) “**Riddhi Soft**”. This software is developed by a private company and it provides a cost effective and versatile GIS platform for local planning.
- v) “**DISNIC**”. It is also a software initiative aimed at collecting extensive data on local resources in a detailed village wise data base.
- vi) “**NIC’sGIS**”. The NIC has an in house GIS system that accesses data from remote sensing sources and provides detailed topography, soil; land use and water cover details which is ideal for watershed and agricultural planning.
- vii) “**PRIASOFT**”: It is a yet another software developed by the NIC taking into account the accounting formats developed by the CAG for panchayats accounts. It can be customized for meeting the requirements of state specific systems of accounting for panchayats.
- viii) “**CDAC**”: It is software specifically designed to provide Indian language interfaces that can be adopted and interlinked with other software for easy multi language use.
- ix) “**Performance Tracking System**”: It is developed by the centre for Good Governance, Hyderabad for easy monitoring of implementation targets on a user friendly MIS platform. It is useful for monitoring plan implementation and it permits feedback to flow back in to the planning process.
- x) “**District Information and Planning System**”. It is developed by a private vendor and it integrates GIS applications with data and permits resource allocation to preferences indicated by the people.
- xi) “**NRDMS**”: The Natural Resources Data Management System is a three decade old initiative of the Ministry of Science and Technology to provide natural resource data gathered from remote sensing source for local planning. The data is available on GIS maps in districts covered by the system.

2.5 STEPS IN PREPARATION OF DECENTRALISED DISTRICT PLAN

- i) **Stock Taking:** Preparation of a district stock taking report for presentation in the district planning committee is the first step. This becomes the basis for vision building exercise for the whole district. Where is the district in terms of poverty, employment, health, education, productivity and where it wants to reach have to be understood. Once the existing reality is perceived and understood and from where target can be fixed and strategy can be worked out. To build vision for the district, the existing conditions have to be projected through scientific data. So this is the first exercise in the preparation of the decentralized district plan.
- ii) **SWOT Analysis:** In the vision building exercise a SWOT analysis has to be made. Based on the SWOT analysis vision for development has to be developed in the backdrop of the national and state goals. The distance

between the current status and the goals fixed can be assessed and accordingly strategy could be worked out to bridge the gap between the two.

- iii) **Vision Building:** The District Planning Committee based on the existing conditions in human development indicators and the report of the SWOT analysis visioning exercise has to be done for the whole district. The vision should indicate the target to be reached and the approach to be followed based on the National and State Governments vision and approaches. MDG should be in the backdrop of the visioning exercise.
- iv) **Vision Dissemination:** Communicating the district vision to different planning units functioning down below the district planning committee is the prime task of the District Planning Committee and making them to fix their vision and target to realize the vision of the district is the next task. Each and every unit of planning should have clarity on the vision of the district. To achieve the vision each and every unit has to fix their target in the form of vision.
- v) **Finance Tracking:** Simultaneously communicating the resources available for development action to different units is crucial for planning. It is not a mere document. It is set of implementable targets and reachable goals. Hence available resources have to be communicated to different agencies. There are multiplicities of agencies involved in development action. The total amount spent by various agencies in a specific geographical location should be communicated to the difficult units of planning.
- vi) **Enabling the Planning Units:** Enabling the planning units at different levels namely gram panchayat level to District panchayat, town panchayats to municipal corporations, village mission units to district mission, field office at the grassroots to district office of line departments to collect data pertinent to the needs of the people based on the participation of stakeholders.
- vii) **Preparing the Plan:** At every unit the collected data have to be analysed, prioritization has to be done through a wider consultation by conducting development seminar and match the needs with the available resources come through various agencies.
- viii) **Plan Integration:** Integrating the plan documents of the different units of planning and creating a district plan document. At a gram panchayat level plan of the field office of the line departments, mission units of the scheme mission and donor agencies have to be integrated. In the same way block panchayat plan has to be created through the process of integration. Likewise integration of plans has to be done both for rural and urban planning units at different levels.
- ix) **Monitoring and Evaluation:** Establishment of monitoring systems and social audit mechanisms to ensure effective implementation of the district plan is the final step in the process of decentralised district planning. So far we have seen the steps to be followed for the preparation of district plan.

After reading and understanding the various steps in preparation of decentralized planning, now attempt the question given in *Check Your Progress-2*.

Check Your Progress 2

Decentralization: An Overview

Note: a) Write your answer in about 50 words

b) Check your answer with possible answers given at the end of the unit

- 1) Explain the steps to be followed in preparing the decentralised district plan

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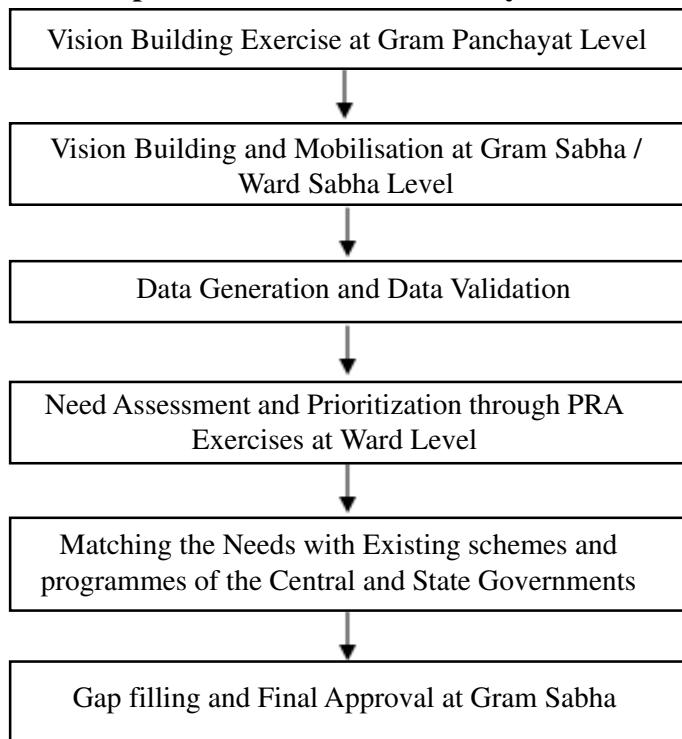
2.6 STEPS IN PREPARATION OF A VILLAGE PANCHAYAT PLAN

The village panchayat planning process comprises the following steps:

- i) **Vision Building Exercise:** Having got the district vision, the village panchayat has to take stock of the existing conditions of the people in terms of human development indicators. Where is the Gram Panchayat in terms of poverty reduction, education, health, agriculture productivity, employment and so on has to be captured. On each goal the panchayat has to fix the target based on the district vision. Thus the vision of the panchayat has to be stated.
- ii) **Gram Sabha Discussion:** Vision of the panchayat has to be discussed with the people in the Gram Sabha. People have to be mobilized and sensitized to think of the development issues. Through a process of discussion in the Gram Sabha the major issues to be tackled will be listed and they are the targets.
- iii) **Data Generation and Data Validation:** Relevant data have to be generated from the community and borrowed from the line departments and other agencies from their data bank for the purpose of preparation of village plan. The collected data have to be scrutinized and validated.
- iv) **Need Assessment and Prioritization:** Through participatory Rural Appraisal method needs have to be assessed and the prioritization has to be done. Major issues have to be tackled will be identified and fixed as targets. The whole exercise has to be done through organizing a development seminar in each Gram Panchayat.
- v) **Matching Exercise:** The Gram Panchayat has to identify the available resources through various institutions and match them with the needs of the people.
- vi) **Gap Filling Exercises:** After matching the available resources and the felt needs of the people, the gaps have to be filled up where the role of the panchayat is crucial. Schemes and programmes can be easily linked to achieve target. The gap has to be filled up with the own resources or to borrow the same.

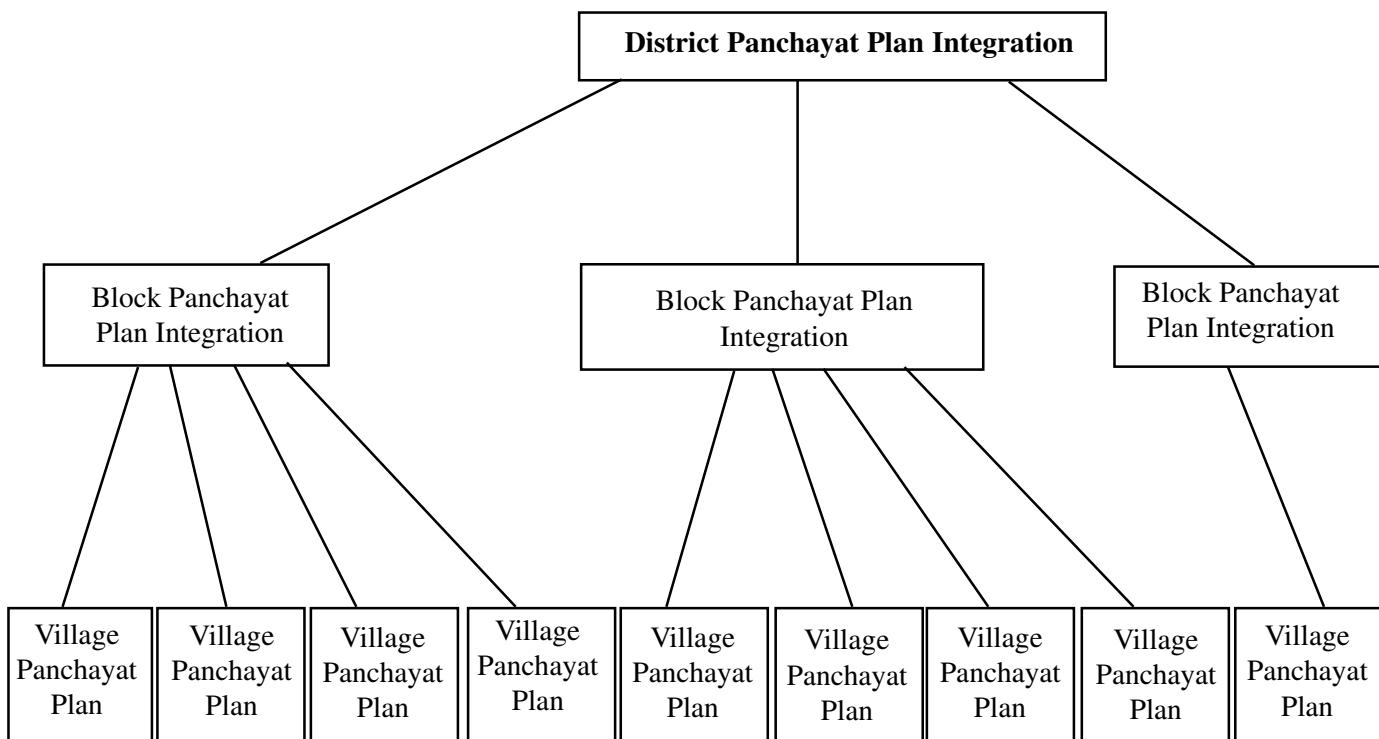
vii) **Draft Plan Approval:** After completing the above steps, the plan document has to be placed before the Gram Sabha for discussion and approval. Once it is approved it is a legal plan document of the Gram Panchayat.

Preparation of a Gram Panchayat Plan



Once village plans are approved, the approved village plans are consolidated at the block level. The approved plans of the blocks are integrated and consolidated at the district panchayat level. They are shown in the form of an organogram below:

Consolidation and Integration of Rural Plans



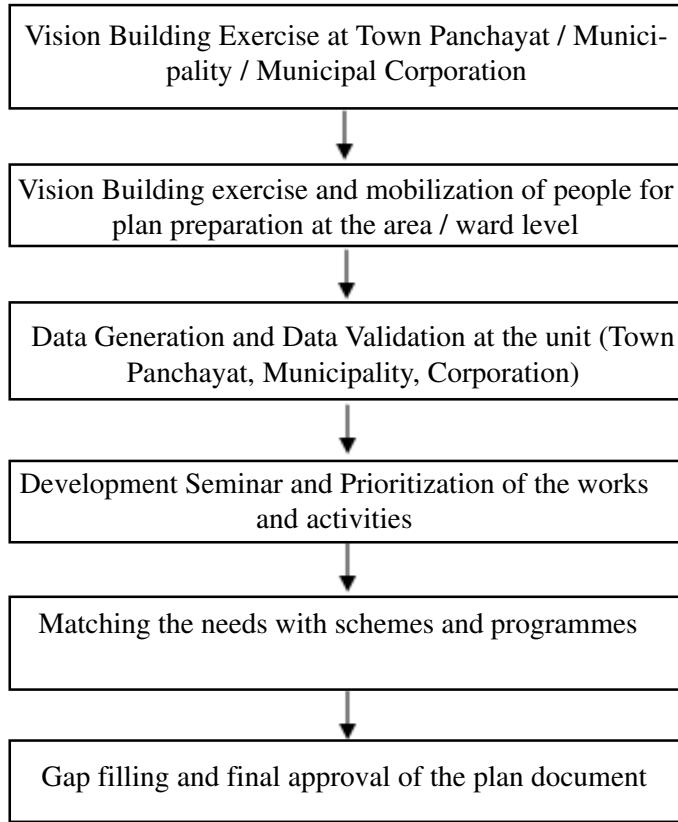
2.7 STEPS TO BE FOLLOWED IN THE PREPARATION OF A URBAN LOCAL BODIES PLAN

Unlike the rural planning process, urban planning exercise has to be done separately for each unit whether it is a town panchayat, or a small municipality or a big municipal corporation. They are all separate entities and they are not linked with each other functionally. The plan prepared by these institutions will be integrated separately at the district level. They are consolidated only at the district level in the District Planning Committee. Whereas in the case of rural local bodies they are integrated and consolidated every next level as they are in a continuum. But urban local bodies are functioning separately. Following are the steps to be followed in plan preparation in urban local bodies:

- i) **Vision Building:** Vision building exercise has to be done in every Town Panchayat, every municipality and in every corporation based on the district vision document. For the vision building exercise yet another document is necessary. The existing conditions of the people in terms of the development indicators. By doing this exercise every Town Panchayat, Municipality and City Corporation should have a vision document.
- ii) **Mobilization of People:** Vision building exercise has to be done in every ward and every area with the active participation of the people of all sections. Poor people's presence and voices are important. The vision of the institution and the district has to be shared with the people through an exercise. It is a process by which people have to be mobilized and sensitized on the issues of development.
- iii) **Plan Preparation:** Data generation, data validation and data analysis have to be done for the whole unit. For prioritization, development seminar has to be conducted at the institutional level (Town panchayat, Municipality and corporation). Once development seminar is over, the needs have to be matched with the schemes and programme of the central and state governments and with available local resources.
- iv) **Gap Filling Exercise:** It has to be done by the institution itself and finally the plan document has to be approved by the competent body in the respective institutions and all the plan documents will be consolidated and integrated at the district planning committee level.

The above process is explained through an organogram.

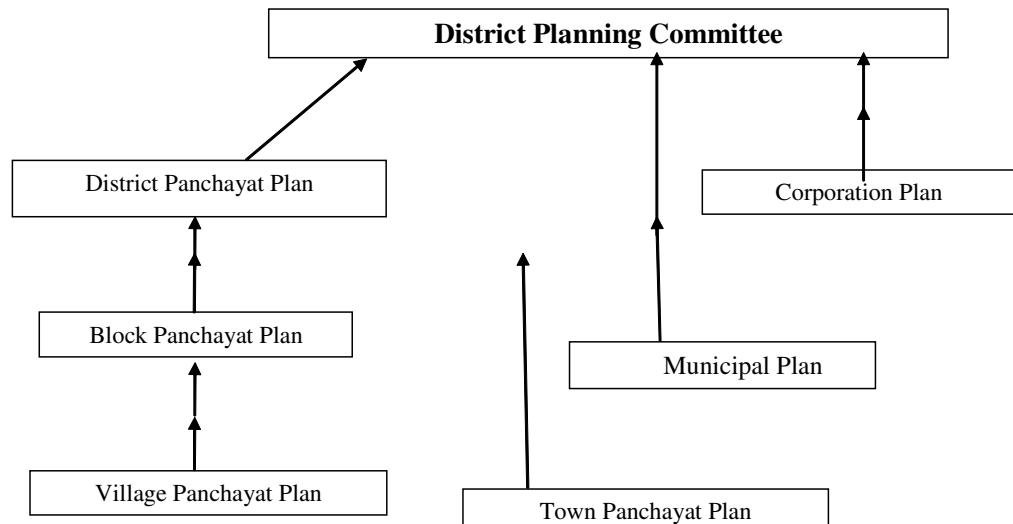
Preparation of an Urban Plan



Urban local bodies whether it is town panchayat, or a municipality, or a city corporation, they are independent of each other. There is no linkage among these units. So the plans of these local bodies are consolidated only at the district planning committee. The rural plans consolidated through the district panchayat and the plans of the town panchayat, municipality and city corporation will be consolidated and integrated only at the District Planning Committee.

2.8 CONSOLIDATION OF DISTRICT PLAN

The District Planning Committee has to integrate the rural plan document from the District Panchayat and the urban plan documents from town panchayat, municipalities and corporations. Once they are integrated and they are to be formally approved by the District planning committee after the development seminar conducted at the district level. It is explained in the following organogram:



Here it is to be noted that the mission units, line department units and civil society initiatives are to be integrated in the respective level of the planning units wherever the units are functioning.

After reading and understanding the steps to be followed in the preparation of a urban local bodies plan, now attempt the question given in *Check Your Progress-3*.

Check Your Progress 3

Note: a) Write your answer in about 50 words

b) Check your answer with possible answers given at the end of the unit

- 1) How a urban local body for instance a municipality prepares a participatory decentralised perspective development plan?

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2.9 LET US SUM UP

In this unit we have discussed the meaning and importance of decentralised planning and the process involved in it. What are the guidelines of decentralised planning, have also been seen in this unit. So also the steps to be followed in decentralised district planning, village plan and urban local bodies plan have been discussed.

2.10 REFERENCES AND SELECTED READINGS

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2.11 CHECK YOUR PROGRESS-POSSIBLE ANSWERS

Check Your Progress 1

1) Bring out the basic principles in decentralised participatory planning.

The basic principles in decentralised participatory planning are:

- i) Ensuring the participation of stakeholders
- ii) Bridging regional disparities
- iii) Keeping ecology and environment in the backdrop
- iv) Strengthening the planning machinery at all levels
- v) Building the capacity of the functionaries
- vi) Transforming a vertical planning process in to a horizontal process
- vii) Using the ICT effectively for participatory planning
- viii) Global vision and local action
- ix) Proper assessment of resources
- x) Law of subsidiary
- xi) Downward accountability

Check Your Progress 2

1) Explain the steps to be followed in preparing the decentralised district plan.

The steps to be followed in preparing the decentralised district plan are:

- i) Stock Taking
- ii) SWOT Analysis
- iii) Vision Building
- iv) Vision Dissemination Finance Tracking
- v) Enabling the Planning Units
- vi) Preparing the Plan
- vii) Plan Integration
- viii) Monitoring and Evaluation:

Check Your Progress 3

1) How a urban local body for instance a municipality prepares a participatory decentralised perspective development plan?

- i) **Vision Building:** Vision building exercise has to be done in every Town Panchayat, every municipality and in every corporation based on the district vision document. For the vision building exercise yet another document is necessary. The existing conditions of the people in terms of the development indicators. By doing this exercise every Town Panchayat, Municipality and City Corporation should have a vision document.
- ii) **Mobilization of People:** Vision building exercise has to be done in every ward and every area with the active participation of the people of all sections. Poor people's presence and voices are important. The vision of the institution and the district has to be shared with the people through an exercise. It is a process by which people have to be mobilized and sensitized on the issues of development.
- iii) **Plan Preparation:** Data generation, data validation and data analysis have to be done for the whole unit. For prioritization, development seminar has to be conducted at the institutional level (Town panchayat, Municipality and corporation). Once development seminar is over, the needs have to be matched with the schemes and programme of the central and state governments and with available local resources.
- iv) **Gap Filling Exercise:** It has to be done by the institution itself and finally the plan document has to be approved by the competent body in the respective institutions and all the plan documents will be consolidated and integrated at the district planning committee level.

UNIT 3 DECENTRALISED PLANNING PROCESS

Structure

- 3.1 Introduction
 - 3.2 Decentralized Planning: Meaning and Concept
 - 3.3 Principles of Decentralized Planning
 - 3.4 Meaning of Popular Participation
 - 3.5 Goals of Decentralized Planning
 - 3.6 Actions and Ways Needed for Decentralized Planning
 - 3.7 Ways of Practicing Decentralized Planning
 - 3.8 Let Us Sum Up
 - 3.9 Key Words
 - 3.10 References and Further Suggested Readings
 - 3.11 Check Your Progress-Possible Answers
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3.1 INTRODUCTION

Multilevel planning, planning from below, decentralised planning, peoples planning, participatory planning, district level planning, integrated district planning and planning at the grassroots are being used interchangeably by the practitioners and policy makers. Broadly speaking they are one and the same and they are not new to India. The moment the centralized planning was initiated, decentralised planning was also thought of from the first five year plan period itself. The whole discussion emanated from the arguments initiated by Mahatma Gandhi on Panchayati Raj. He is the author of decentralisation and bottom up approach of planning and development. He was responsible for a major debate on Panchayati Raj in Indian National Congress during the freedom struggle which ultimately extended to constituent assembly first and planning commission subsequently. Methodology, approach strategy, institutional mechanism may vary from period to period. The basic objectives and broader meaning are the same. But the new exercise started in many of the states under the new dispensation ‘decentralisation’ is due to the creation of ‘District Planning Committee’ constitutionally in each and every district in India. It is to be remembered here that the planning commission at the centre and the planning boards at the states are not the creations of the constitution of India. In order to make it clear to every one that it is a constitutional mandate to prepare plan below from the lowest unit of governance and administration namely gram panchayat or town panchayat. District Planning Committee is created in the constitution of India.

This unit will make you to understand the context, the objectives, the goals, the reasons for involving stakeholders (people) in the process of planning and the approaches adopted in decentralised planning.

After going through this unit, you should be able to:

- explain the meaning of decentralized planning

- describe the principles of decentralized planning
- judge the need for decentralized participatory multi level planning
- discuss the role of the stakeholders (people more particularly the poor) participation in the process of decentralised planning
- and discuss the ways of practicing decentralized planning

3.2 DECENTRALIZED PLANNING: MEANING AND CONCEPT

Decentralised planning is a strategy suggested over a period of time to prepare perspective development plan from the lowest unit of governance and administration with an objective of meeting the felt needs of all sections and all regions of a country with vast variations in terms of socio economic conditions and wider cultural diversity. Decentralization and decentralized planning is a worldwide phenomenon in recent years. According to Hanumantha Rao, decentralization through the involvement of local level representatives institutions in the formulation of planning for development as well as their implementation is being advocated in the interest of efficient utilization of resources and for ensuring more equitable sharing of benefits from development. As opined by Arvind Kumar, decentralization is referred to as a process of sharing of powers by the central ruling groups with other groups, each having authority within the specific area or the state. Though it had been discussed, debated and argued and justifications were given, from the first five year plan period onwards, real impetus was given throughout the country only after incorporating a provision in article 243ZD in the Constitution of India. The debate was also on among the academics and policy makers for sometime whether the planning unit can be created for decentralised planning activities either at block level or at district level. Now it is created at the district level constitutionally and it is recognized as a mandatory process by which people have to be involved in the preparation of plan from the village panchayat constitutionally.

3.2.1 Historical Background

Even before the dawn of independence, micro level planning or decentralised planning was thought of and discussed after the publication of a document “District Development Scheme: Economic progress by Forced Marches” in 1939 by M.Visvesvaraya. It was the first attempt made in this country to evolve methodology for decentralised planning. In his attempt Visvesvaraya chalked out an action programme for the economic development of the rural areas. His aim was to engage people to ensure security to the people for food, clothing recreation, amusement and to work for their skills. To achieve the above he suggested a few steps namely, a) people to work systematically and scientifically to increase production in close cooperation with the community; b) conducting a survey to assess the economic conditions of the people and identify the problems and suggest avocation which gives profit; c) every district should have institutional structure to promote such a kind of development activities; d) spread elementary education among adults to create informed citizenry and thereby efficiency, improvement and prosperity could be achieved. To perform the above he suggested creation of a council called District Economic Council, a plan, budget and schedule of activities. This was the first visualization of decentralized planning in India before achieving independence.

The first two five year plan documents had unequivocally and emphatically argued for decentralised planning but they did not put into practice as the two plan documents had not spelt out the needed mechanism to prepare decentralised plan. The third Five Year Plan though took some initiatives to prepare district and block plans, in some of the states, they were not integrated in to the state plan. Only in the fourth Five Year Plan guidelines have been evolved for the preparation of district plan. Based on the guidelines several states have prepared their district plans but they could not integrate them with the annual plan of the states barring Maharashtra, Gujarat and Karnataka. The Fifth Five Year Plan talked much about block level planning. In this regard a working group was constituted in the central planning commission to suggest ways and modalities for planning from below. Based on the guidelines issued by the Planning Commission some of the states have prepared block plans with the help of private agencies. During this period another land mark event took place for strengthening of Panchayati Raj. A committee on Panchayati Raj popularly called Ashok Mehta Committee was constituted to review the progress of Panchayati Raj Institutions. The committee submitted its report in the year 1978. The committee also recommended that unit for planning should be at the district level.

Sixth plan document also reiterates the importance of local level planning. For the first time in planning, recognition was accorded to reliable, updated, timely, Scientific data for micro level planning. Thus data generation at the micro level gained importance. It also stressed the need of strengthening Panchayati Raj Institutions and of involving people in the process of implementation of development programmes. During the same period, a working group was set up in planning commission on district planning and the same submitted its report in the year 1984. The working group provided a detailed guideline and methodology for the preparation of plan at the district level. This working group unequivocally reiterated the need of such a plan at the district level. The Seventh Five Year Plan also reiterates the need of decentralised district plan as recommended by the working group of the commission. It is also recommended that the decentralised planning has to move from district to block. The Eighth Five Year Plan emphasized the need and relevance of the decentralised planning along with peoples participation through peoples institution. Ninth Five Year Plan document made it as an objective to promote and develop peoples participation in planning through democratic institution like Panchayati Raj Institutions. The district development plans will have to be prepared through the institutions of the District Planning Committee which is the creation of the Indian Constitution. 243ZD of the constitution enables for creation of District Planning Committee. Yet much progress was not achieved. Tenth and Eleventh Five Year Plans are pushing the concept of decentralised planning through a centralized drive. Thus decentralised planning was much discussed and debated subject over a period of time but less practiced at the ground. It is to be registered here that Kerala is a model the whole country for pushing decentralised planning through its powerful campaign approach.

S. No.	Year	Item	Ideas and Concepts
1.	First Plan 1951-56	Community Development Blocks	To break up the planning exercise into national, state, district, block and local community levels
2.	Second Plan 1956-61	District Development Councils	Drawing up of village plans and popular participation in planning through the process of democratic decentralisation
3.	1957	Balwant Raj Mehta Committee	Village, Block, District Panchayat institutions established
4.	1967	Administrative Reforms Commission	Resources to be given / local variations accommodated, purposeful plan for area
5.	1969	Planning Commission	Formulated Guidelines; detailed the concept of the district plan and methodology of drawing up such a plan in the framework of annual plans, medium – terms plans and perspective plans
6.	1978	Prof. M.L. Dantwala	Block level planning to form link between village and district level planning
7.	1983-84	CSS/Reserve Bank of India	Strengthen district plan / district credit plan
8.	1984	Hanumantha Rao Committee	Decentralisation of Functions, powers, finances; setting up of district planning bodies and district planning cells
9.	1985	GVK Rao Committee	Administrative arrangements for rural development; district panchayat to manage all development programmes

Source: Report of the Expert Group; **Planning at the Grassroots Level: An Action Programme for the 11th Five Year Plan**

One has to understand why decentralised planning is brought to practice constitutionally. What are all the merits we find in decentralised planning have to be explained. Before coming to the merits of decentralised planning we have to understand the demerits of the centralized planning. Though ‘decentralised planning’ as a concept is in discussion from the dawn of independence, we practice in India is centralized planning.

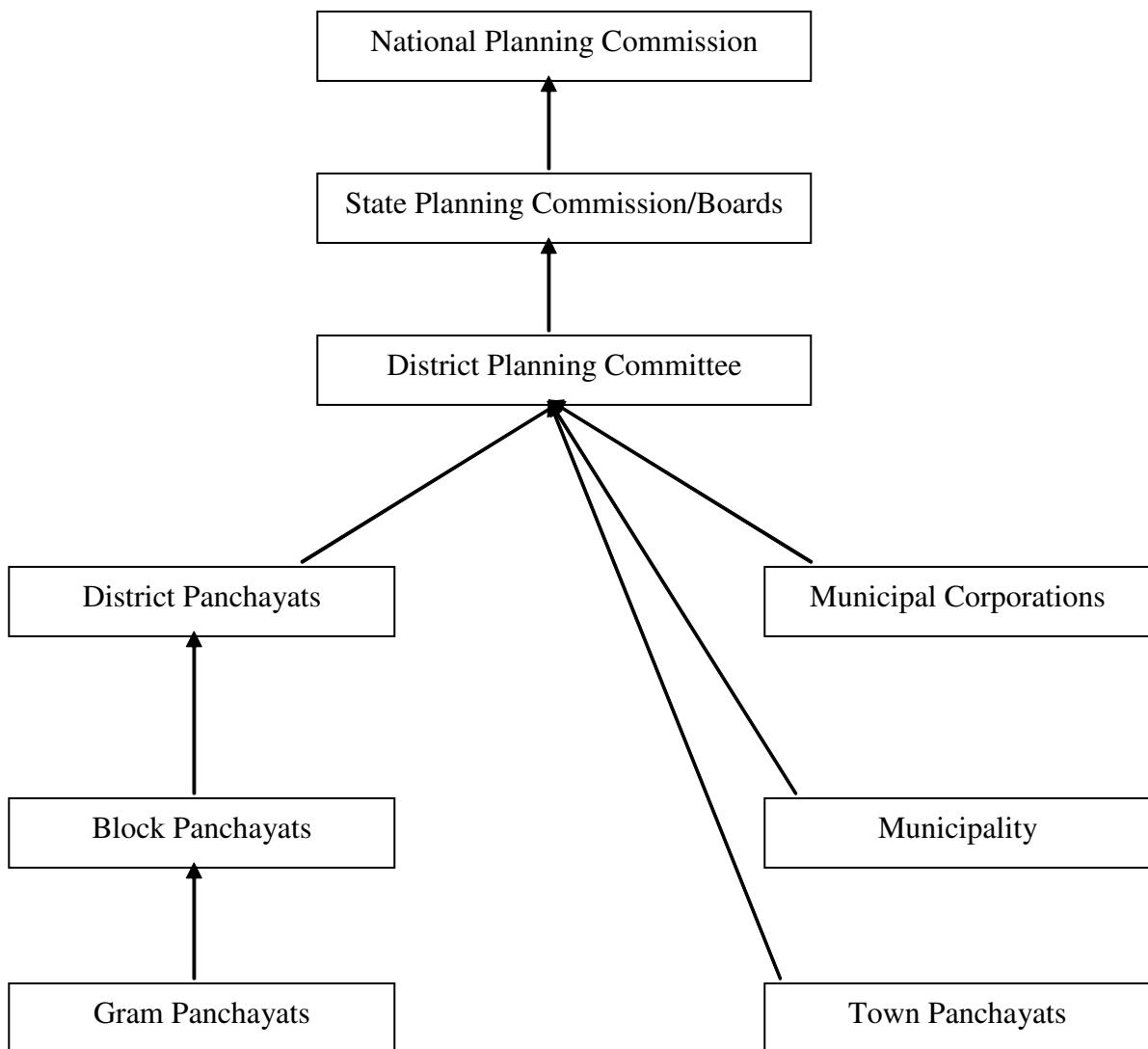
In the centralized planning process macro targets for socio- economic development had been fixed periodically and strategies and programmes had been evolved and implemented and yet unmet needs are increased, inequality increased, regional imbalance has grown, gap between the people and governance is increased and peoples skill and knowledge are not utilized properly and

profitably. To overcome all those problems decentralisation is through off. One has to understand the advantages and merits of decentralised planning.

3.2.2 Institutional involvement in Decentralized Planning

In this context in India 73rd and 74th Amendments to the Constitution were passed and provided opportunity for the people to participate in the process of preparing micro plan from the villages to the District level. The institutions at the grassroots are created with a provision to include women and the other deprived sections. Thus the plan has to be prepared from the lowest unit of governance to highest level. It is explained through an organ gram below:

Governance Units involved in Planning



3.2.4 Merits of Decentralised Planning

Decentralized planning enjoys strategic advantages over that of centralized planning. According to Rondinell(1983) true decentralization could reduce bureaucratic red-tape, reduce delays, overcome administrations indifferences towards their clientele; improve quality of service, act as effective channels of communication between national government and local communities, promote

greater participation of people in planning and decisionmaking. Some of the merits of decentralized planning are discussed below:

- 1) Spatial level specific requirements and needs of the people will be met through the decentralised planning;
- 2) Efficiently resources will be utilized and wastages could be reduced and thereby the gap between the supply and demand can be narrowed down;
- 3) Greater sustainability can be achieved through the decentralised planning;
- 4) Decentralised planning is cost effective as solutions are found out locally with the involvement of the stakeholders;
- 5) Elite capture of the programmes will be eliminated;
- 6) Corruption in Rural Development and Poverty Alleviation programmes can be reduced;
- 7) Poor can emerge from livelihood to achieve economic development;
- 8) Poor can build vision for their development;
- 9) Resources and skills available locally will be utilized profitably for the advantage of the stakeholders;
- 10) Natural resources will be protected preserved and nurtured;
- 11) People capacity will be enhanced;
- 12) Possibility for matching the needs of the people and schemes of the governments;
- 13) People's felt need will be met;
- 14) It will bridge the gap between people and bureaucracy and thereby government is brought closer to the people;
- 15) Regional imbalance will be reduced;
- 16) People's talents will emerge and they will be utilized for community development;
- 17) Productivity will be increased;
- 18) Development will be made people centric;
- 19) Greater mobilization of resources internally; and
- 20) Partnership will be achieved between the people and development agencies.

All the above are the advantages and merits of the decentralized planning. They are drawn from the limited experience of decentralized planning prepared in different places. From the above one could visualize the potentials of decentralized planning. But to realize the potentials of decentralized planning lot of efforts are needed from the state governments and local bodies and more particularly the civil society. It could be possible when movement is built up from below for mobilizing the people for participation in the development process. According to Narayana (2000), the success of decentralized planning depends on following factors: (i) the degrees of willingness of political leaders and bureaucracies to

support decentralization and transfer responsibilities; (ii) degree of dominant behavior, attitudes and culture conducive to decentralized decision making and administration mechanism; (iii) proper designing of policies and programmes; and (iv) adequacies of financial, human and physical resources.

After reading and understanding the concept of decentralized planning, now attempt the question given in *Check Your Progress-1*.

Check Your Progress 1

Note: a) Write your answer in about 50 words

b) Check your answer with possible answers given at the end of the unit

1) Evaluate the merits of decentralised planning

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3.3 PRINCIPLES OF DECENTRALIZED PLANNING

There are certain principles which are imperative for the success of decentralized planning. They are: a, principle of functional clarity; b, principle of financial availability and autonomy; c, principle of decentralized administration; d, principle of public participation; and e, principle of integration.

3.3.1 Principle of Functional Clarity

Decentralised planning would be effective only when all the institutions and organizations involved in planning process are clear about their roles and responsibilities. Planning process involves multiplicity of institutions and they are to work with each other and enable each other. It is possible in the government sector only when adequate clarity is given to the role every institution has to play. It not only involves government but also civil society and other agencies. Having trained in narrow specialization and compartmentalization bringing synergy among the institutions is not so easy. There should not be any conflict or overlapping among the institutions and organizations and they should be mutually helpful and harmonious. Precision and clarity are needed for all involved in the preparation of plan.

3.3.2 Principle of Financial Availability and Autonomy

Institution which are having earmarked responsibilities should have adequate resources and autonomy to spend the resources to discharge their responsibilities. Activities which are earmarked as per the plan document to the units should have financial autonomy to spend the resources on earmarked activities. At every level untied funds and autonomy to spend the money are imperative for the preparation of implementation of decentralised and participatory planning.

3.3.3 Principle of Decentralised Administration

To perform the decentralized function, adequate administrative powers have to be devolved to achieve efficiency. Many of the occasions even for a small scheme to be implemented at a lower level all night long will be worked out at the point where the schemes are evolved and resources are allocated. When the conditions are different at the ground, they could not implement properly and as a result one will find wastage of money and another is corruption. Hence no rules can be laid down at the higher level for operation at a lower level. Rules can be evolved at the appropriate level for operation of project and activities. In such a way administrative flexibility should be given to different units of governance.

3.3.4 Principle of Public Participation

For achieving success and efficiency in decentralised planning public participation is an imperative. Even this public participation has to be achieved through the process of empowerment as the marginalized and deprived sections could be involved in decision making. The public participation should not be a mobilized participation but an empowerment participation. Normally in the mobilized participation the participation will raise voice. But it is not their voice. It is a voice of somebody who mobilized them. In empowered participation, the individuals at their will participate and reflect their voice. Problems of the poor, excluded and marginalized could be reflected only through empowered participation.

3.3.5 Principle of Integration

Hallmark of decentralised planning lies in integrating and harmonizing the plan documents of different sectors and units at all levels. It requires appropriate framework and skill to integrate the plans from the lowest level. To make the plan document operation able only through the process of harmonizing and synthesizing the plan documents. Village level plans are integrated at the blocks and block plans are to be integrated with District plans. While integrating plans of different units both urban and rural sectoral plans of different units will be harmonized with district plan.

After reading and understanding the principles of decentralized planning, now attempt the question given in *Check Your Progress-2*.

Check Your Progress 2

- Note:** a) Write your answer in about 50 words
- b) Check your answer with possible answers given at the end of the unit
- 1) Explain the basic principles of decentralised planning
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3.4 MEANING OF POPULAR PARTICIPATION

The whole exercise of decentralised planning has to be done only through the participation of people and more particularly the poor. Here it is necessary to understand the meaning of popular participation. Popular participation in the development process first noticed in the developed societies as they had high literacy rate, increased democratic institutions from the top to bottom and the increased spread of communication. Popularly it has been described that modern societies are participatory and traditional societies are non participatory. Because it was a well established truth and fact that in the developed countries more number of people involved in decision making process whereas in the developing countries only elites involved in decision making process. But the concept and practice have been changed in the Third World Countries after 1990's. The concept 'Popular Participation' gained currency in the academic circle and literature towards the end of 1960s and 1970s. It is in response to a dominant top-down, blue print development paradigm, arguments emerged for the importance of a development process which began with the needs and knowledge of the people themselves. The seed for the new thinking on participation was sown by Paulo Freire through the book 'Pedagogy of the oppressed" projecting an argument that development process is not a gift received from outside but is a process of transformation gained through critical reflection and action by the people themselves. Paulau's approach was picked up and shared by not only development activists, new generation academics but also the national leaders. They argued that knowledge and skill of the people have to be used for the development of the community. The demand for popular participation was strengthened by popular movements in the south. Thus popular participation was seen as a process through which those who had been excluded from the decision making process affecting their lives asserted their demands for inclusion. It is defined as 'the organized efforts to increase control over resources and regulatory institutions on the part of groups and movements hitherto excluded from such control.

The above definition and explanation are about challenging the existing order in decision making power. But in the 1980's arguments had been slowly changed in the development discourse and practice and popular participation was considered as a form of involvement by the beneficiaries who could help large development actors better achieve their goals. The conventional argument for participation is that with the active participation of the beneficiaries or stakeholders projects would be better targeted and made more appropriate to needs of the local population, ownership would be built, resource contributed, and programmes would become more sustainable over time. Though space is created for peoples knowledge and involvement in development planning and implementation, this beneficiary approach still maintained.

During the 1990s with the mainstreaming of participation in large scale development programmes terms like the 'excluded' or 'beneficiary' began to give way in mainstream development discourse to use neutral terms as 'stakeholders'. Thus the World Bank has defined the concept participation is a process through which stakeholders influence and share control over development initiatives and the decisions and resources which affect them. Subsequently the same concept 'Participation' is being perceived deliberately not as an opportunity to be beneficiaries but as a right of the citizens. A renewed emphasis has been

added to include the so far marginalized groups in the process of development and governance. Many aid agencies have made it clear that it is enabling people to realize their rights to participate in, and access information relating to, the decision making processes which affect their lives. But it has some pre-requisites. They are:

- a) the presence of democratic institutions which have got the representation for the poor;
- b) the institutions should have the inclusive character based on values of equality and non-discrimination
- c) the institutions should have accountability mechanism to ensure and promote rights.

In the same line of argument UNDP report in the year 2000 argues that the fulfillment of human rights requires democracy that is inclusive in character and nature. When the participation is conceived as a right, the argument moves from rights of beneficiaries and rights of stakeholders to rights of citizens. It is more of political ideas stems from the argument that citizens have not only rights they have responsibilities also. Participation of poor and marginalized as citizen has several problems and challenges in the societies where inequality and discriminations, and patriarchy are high.

3.4.1 Advantages of Participatory Plans

- 1) Participatory planning gives ownership to the stakeholders and hence the project or development initiative is taken off the ground immediately.
- 2) It provides the needed exact information about the problems and issues from the stakeholders with the active participation of them, for the planners.
- 3) It makes the stakeholders to accept the change willingly to transform themselves and transform the community and society at large.
- 4) It reduces the cost as it uses local manpower with local skill and local knowledge and most often unused resources. Hence it is cost effective.
- 5) It reduces the time also as the stakeholders involve consciously in the whole exercise of development programme and completion of the programme and project will be quick. Because stakeholders are interested in seeing the results and implications.
- 6) It increases efficiency and effectiveness. Because the stakeholders have the perception that they are going to get benefits out of the programme, people want to maximize the benefits and hence they want to maximize the efficiency.
- 7) It envisages a self mentioning mechanism which reduces the cost. Stakeholders are getting benefits and hence monitoring is integral and continuous. It is the most efficient way of monitoring the progress and process of the project.
- 8) It not only achieves the target outcome but also educates the people. Thus participatory planning is an educative process. It contributes to human resource development.

3.5 GOALS OF DECENTRALIZED PLANNING

Decentralised participatory planning has got some fundamentals and they are popularly called as goals. The goals are the referral points and lens to look at the whole process of decentralised participatory micro plans in the backdrop. They are; a. economic development b. social justice, c. welfare d. environmental protection e. coordination f. peoples involvement.

3.5.1 Economic Development

The plan should be developed in such a way that it has to achieve economic development by increasing the production in agriculture, land reforms, small irrigation system, animal husbandry, dairy and poultry and fisheries. Economic development is the key in this process. To achieve economic development, the whole process should rely on peoples knowledge, skill and integrated use of appropriate technologies.

3.5.2 Social Justice

The benefits of economic development should reach the various categories of the community, particularly, it should reach the poor and the socially weaker and marginalized sections. Further, the plans should facilitate increased income by providing employment opportunities to the socially disadvantaged and the marginalized. At every level components for women and Dalits could be integrated into the plan or sub-plans could be created for Dalits and women.

3.5.3 Welfare

The plan should incorporate schemes for providing infrastructural facilities like road, water supply, housing, street lights, waste disposal, and also social welfare schemes like education, welfare of women, children and cultural activities. In the neo liberal framework, state moves away from the basic welfare activities and hence in order to overcome that deficiency, welfare activities should be made integral of the decentralised plan.

3.5.4 Environmental Protection

The plans should have the component to protect nature and environment. It should not cause damage to the eco-system, flora and fauna. It should have devices to manage natural resources. It should aim for creating green, clean and thus eco-friendly villages.

3.5.5 Coordination

The plan should ensure the total development and growth of the entire unit by incorporating all the development plans of the concerned area, plans of the respective departments, schemes for individual benefits, schemes that are implemented by the government departments, schemes that are implemented by banks, NGOs and other development agencies.

3.5.6 People's Involvement

The plan should be on the basis of collection of data, confirmation of the same, assessing the needs, evolving activities and prioritizing the same with the active involvement of the citizens. At every level people have to be involved and people

should own the plan. For this purpose people have to be mobilized and more particularly the poor and other marginalized sections. When they are mobilized for participation, it should reflect opinion and voice of the poor and not the voice of others. Hence mobilization of people should be on empowerment mode and not as beneficiaries. This process of mobilization is different from that of political mobilization. Often political mobilization reflects the voice of the mobilizers not the mobilized.

3.6 ACTIONS AND WAYS NEEDED FOR DECENTRALIZED PLANNING

Following are the imperative activities needed to initiate vibrant decentralised planning:

- a) There should be an organic linkage among the three layers of planning units namely District Planning Committee, State Planning Commission and Central Planning Commission.
- b) Planning units must be created at different levels of governance down below the District and District Planning Committee is only the integrating and consolidating unit.
- c) Data generation mechanism, data updation and data validation process have to be done at all levels up to the level of the District Administration.
- d) Capacity Building for the Elected Representatives and the officials involved in planning has to be conducted periodically.
- e) Enabling information flow from the lowest unit to the highest unit of planning and vice versa has to be done.
- f) Planning machinery has to be created at every level where planning executive is done.
- g) Decentralised planning module has to be prepared and it is to be followed at every level.

3.7 WAYS OF PRACTISING DECENTRALIZED PLANNING

For effective decentralised participatory planning civil society organizations, retired government officials and academic institutions can support the Gram Panchayats and other layers of local governance for the preparation of participatory micro plan in the following ways:

- To generate data from the field
- To conduct PRA exercise for prioritizing the activities based on the needs of the people.
- To draft the plan document
- To organize development seminar at the grassroots level
- To Mobilise people for participation in plan preparation

- To train Local Body Leaders and Functionaries in Decentralised plan preparation
 - To implement the plan activities
 - To monitor the implementation of the planned activities
 - To evaluate the plan activities through social audit.
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3.8 LET US SUM UP

In this unit we have discussed the meaning and importance of the concepts ‘decentralised planning’ and ‘popular participation’ in the new concept of globalisation of economy and decentralisation of powers. What are the principles, goals and merits of decentralised planning, have also been seen in this unit. So also the importance and advantages of participatory planning have been discussed. We have seen totally the general background and principles of decentralised participatory planning.

3.9 KEYWORDS

Decentralisation	: Decentralisation refers to transfer of authority to plan, make decision and manage public functions from the national level to any organization or agency at the sub-national level. This would mean assigning both powers and responsibilities for activities.
Decentralised Planning	: It is a strategy to prepare perspective development plan with an objective of meeting the felt needs of all sections and all regions of a country with vast variations in terms of socio economic conditions and wider cultural diversity.
Participation	: Participation is a process through which stakeholders influence and share control over development initiatives decisions and resources which affect them.
Participatory Decentralised Planning	: It is a process of involving stakeholders in the preparation, design, implementation and evaluation of the plan inclusive of programmes and battery of schemes. The initiatives start from below and they are integrated with National plan.

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3.11 CHECK YOUR PROGRESS- POSSIBLE ANSWERS

Check Your Progress 1

1) Evaluate the merits of decentralised planning

Some of the merits of decentralized planning are discussed below:

- i) Spatial level specific requirements and needs of the people will be met through the decentralised planning;
- ii) Efficiently resources will be utilized and wastages could be reduced and thereby the gap between the supply and demand can be narrowed down;
- iii) Greater sustainability can be achieved through the decentralised planning;
- iv) Decentralised planning is cost effective as solutions are found out locally with the involvement of the stakeholders;
- v) Elite capture of the programmes will be eliminated;
- vi) Corruption in Rural Development and Poverty Alleviation programmes can be reduced;
- vii) Poor can emerge from livelihood to achieve economic development;
- viii) Poor can build vision for their development;
- ix) Resources and skills available locally will be utilized profitably for the advantage of the stakeholders;
- x) Natural resources will be protected preserved and nurtured;

- xi) People capacity will be enhanced;
- xii) Possibility for matching the needs of the people and schemes of the governments;
- xiii) People's felt need will be met;
- xiv) It will bridge the gap between people and bureaucracy and thereby government is brought closer to the people;
- xv) Regional imbalance will be reduced;
- xvi) People's talents will emerge and they will be utilized for community development;
- xvii) Productivity will be increased;
- xviii) Development will be made people centric;
- xix) Greater mobilization of resources internally;
- xx) Partnership will be achieved between the people and development agencies.

Check Your Progress 2

1) Explain the basic principles of decentralised planning

Some of the basic principles are outlined below:

- 1) Principle of Functional Clarity
- 2) Principle of Financial Availability and Autonomy
- 3) Principle of Decentralised Administration
- 4) Principle of Public Participation
- 5) Principle of integration

UNIT 4 RURAL - URBAN CONTINUUM

Structure

- 4.1 Introduction
 - 4.2 Rural-Urban Continuum: Concept and Importance
 - 4.3 Rural-Urban Continuum - Kerala Model (*RURBAN*)
 - 4.4 Salient Features of the Kerala Model
 - 4.5 Factors Promoting Rural-Urban Continuum in Kerala
 - 4.6 Let Us Sum Up
 - 4.7 References and Selected Readings
 - 4.8 Check Your Progress - Possible Answers
-

4.1 INTRODUCTION

Urbanisation is a process of increasing the proportion of people living in towns and cities, as a result, people move from rural areas (countryside) to urban areas (towns and cities). Usually urbanisation and economic development go hand-in-hand, reinforcing the upward trend from both the sides. People migrate from rural areas to urban areas looking for employment opportunities and as a result of this, the density of population in urban areas increase. The mismatch between the trend in urbanisation and the development of basic services results in scarcity of housing, drinking water, sanitation and other basic services leading to the emergence of slums in urban sector. Thus, an offshoot of urbanisation is emergence of slums.

Kerala is an urban village. The pattern of urbanisation in Kerala, the rural-urban continuum (*rurban*), is facilitated, to a greater extent, by ‘provision of social infrastructure’, in spatially distributed manner, based on careful public policy of the State Government. It is a continuum of rural and urban areas. The human development approach of the State, popularly known as the Kerala Model, resulted in developing social infrastructure like public distribution system, schools, hospitals, agriculture offices, etc. spatially distributed all over the State. It is important to underline the fact that all these achievements have been made without high level of industrialisation and urbanisation characterised by rural-urban migration. Thus, entire Kerala has become an urban village and whatever the achievement in development is found to be spatially distributed. The Kerala experience, therefore, underlines the importance of ‘Provision of Social Infrastructure’, in spatially distributed manner, will facilitate the settlement pattern towards ‘*rurban*’ (rural-urban continuum). Such a pattern of urbanisation avoids emergence of slum settlements and deprivations.

After studying this unit, you will be able to:

- describe the process of urbanization
- discuss the rural-urban continuum of Kerala
- explain the features of Kerala Model of Development
- narrate the importance of social infrastructure for encouraging rural-urban continuum

4.2 RURAL-URBAN CONTINUUM: CONCEPT AND IMPORTANCE

Rural-Urban Continuum and ‘Trickle Down’ Effect

The diffusion of the fruits of growth in an economy to all section of the people is known as ‘the trickle down’ effect. Looking at the effect, in terms of space, the diffusion may be seen as the change from the industrial urban centers to the rural countryside resulting in a rural-urban continuum. In other words, the rural-urban differences developed in a unilinear fashion which led to a breakdown of rural urban differences. Thus one can delineate three inter-related aspects of urbanization. One is the sequential sectoral development of the economy. Second is the growing concentration of population in areas where secondary and tertiary activities are located. Third is the diffusion of the development process leading to the disappearance of rural urban differences.

‘rural’ means far away from large towns or cities.

‘continuum’ – each thing is closely related to the thing that is next to it in the order, but the things at the beginning and end of the order are very different from each other.

‘urban’ means belonging to a town or a city. ‘urbanisation’ – it is made more like a town, with more buildings, industry and business.

Oxford Learner’s Dictionary

Thus, the rural-urban continuum may be defined as a dynamic equilibrium wherein the development process involves the people in both rural and urban areas and the returns of development are also distributed to the people whose settlement pattern is distributed spatially.

As noted earlier, the state of Kerala can be described as an urban village with hardly any demarcation between urban and rural area. Thus, one of the notable features of Kerala’s development performance is that there is no significant disparity between achievements in the urban areas and the rural areas. The absence of disparity is mainly because of the targeted public policy in developing infrastructure, particularly social infrastructure. The special geographical configuration of towns and villages in Kerala has been favourable for the development of the rural-urban continuum. The distinction between rural and urban areas is less sharp in Kerala than in other parts of the country.

In the case of Kerala, the urban quality of life has improved in terms of availability of water and sanitation, power, health, education, telephones, and the like, while poverty has fallen. These improvements must be viewed against the fact that they have been achieved under the difficult fiscal situations, and with strained human resource for the emerging needs of public management. The policy of the government has been to spatially distribute the settlements by means of providing connectivity to all villages so as to provide maximum convenience to the citizens. In this effort, co-operation of the people and the local self-governments are substantial.

4.3 RURAL-URBAN CONTINUUM – THE KERALA MODEL (*RURBAN*)

between achievements in the urban areas of Kerala and its rural areas. The absence of great disparities is because, public action policy is so targeted, public policy has been helped in this regard by the special geographical configuration of towns and villages in Kerala. The distinction between rural and urban areas is less sharp in Kerala than in other parts of the country. The literature is full of references to Kerala's 'rural-urban continuum'; a new Kerala coinage is 'rurban'.

The occupational structure of Kerala's villages also distinguished them from villages elsewhere. There is larger proportion of workers outside agriculture, in waged and salaried non-agricultural occupations, in Kerala's villages than in villages elsewhere. In other parts of India, the inhabited part of a village and the cultivated part – that is, where people live and where the fields are – are easy enough to distinguish. Not so in Kerala, where houses are scattered, not clustered, and are located near cultivated fields. That Kerala's habitation pattern was distinct was noted by writers as early as Ibn Batuta. The origins of the present pattern have been ascribed to the relationship between landowning castes and the unfree tillers of the soil; they have also been traced to features of Kerala's distinct topography, hydrology, and cropping pattern.

The development of road transport since the nineteen-sixties, and particularly after the mid-seventies, has had the effect of accentuating the urbanisation of Kerala's villages. Every village in the state is connected by motorable road. There are, as a result, increased opportunities for commuting to work for members of the non-agricultural work-force who live in villages and work in towns. The growth of retail trade, construction, and other forms of economic activity in villages after the sharp increase in the volume of remittances from workers in the Gulf countries has also contributed to the urbanisation of Kerala's villages.

Kerala's villages are not the same kind of distinct socio-economic unit that village in other parts of the country are; boundaries between villages, which have been demarcated for purposes of administration, are somewhat arbitrary. The average size of a village at the Census of 1981 was 16,967 persons (the all-India average was 911 persons) (Ramachandran, 1996).

An idiosyncratic feature of the development trends in Kerala is the absence of rural-urban polarisation. The public policy has been so targeted that the disparity between the rural and urban area is reduced to the minimum. These developments in Kerala – 'rural-urban continuum' – have resulted in the coinage of a new term 'rurban'. Woodcock, during the late Sixties, described the situation very beautifully in the following way.

Kerala villages bear little resemblance to the tight, squalid settlements of North India which huddle along a single street or in a knot of houses for mutual protection. In spite of their unorganised appearance, the Malayali villages have quite elaborate social structures. Each will have at least one school and a public library; it will have a public health service, trade union branches and political party groups, places of worship (often a temple, a church and a mosque) and always a few tea shops which serve as meeting places for the various communities. Many Malayali intellectuals and officials return to their native villages in middle age and take an active part in local activities, so that there is a cultural sophistication about rural life in Kerala. In many respects, it is urban (Woodcock, 1967, pp.44-45).

About twenty five per cent of the population in Kerala live in urban areas. This is a little less than the National average. However unlike the other parts of the country the Urbanisation in Kerala is not limited to the designated cities and towns. Barring a few Panchayats in the hilly tracts and a few isolated areas here and there, the entire state depicts the picture of a rural-urban continuum. The Kerala Society by and large can be termed as urbanised (Govt. of Kerala, 2002).

Now that you have studied what is meant by trends in urbanization and the rural-urban continuum, answer the questions given in *Check Your Progress-1*.

Check your Progress 1

Note: a) Write your answer in about 50 words

b) Check your answer with possible answers given at the end of the unit

- 1) Describe the Trends in Urbanisation in the State of Kerala.

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- 2) Give a Brief Account of Rural-Urban Continuum of Kerala Model.

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- 3) Describe rural-urban continuum.

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4.4 SALIENT FEATURES OF THE KERALA MODEL

The important salient features of Kerala model of rural-urban continuum are:

4.4.1 Human Development

Kerala's achievements in development are legendary, particularly in quality of life measured in terms of human development index. The index of human development of Kerala is found to be comparable to that of the middle-income countries in the world whereas its per capita income is lower than that of the average per capita income of the low-income countries. Thus, the Kerala model

shows how an economy can achieve high quality of life with low per capita income. Many of the development trends/features in Kerala have been tending towards the capacity building of local level planning, and recently, these centrifugal forces have gained momentum and resulted in sustained improvement in the quality of life, despite very low per capita income.

HUMAN DEVELOPMENT INDEX

The Human Development Index (HDI) is a summary measure of human development. It measures the average achievements in three basic dimensions of human development. As per United Nations Development Programme (UNDP), these dimensions are as follows:

- 1) A long and healthy life, as measured by life expectancy at birth.
- 2) Knowledge as measured by the adult literacy rate.
- 3) A decent standard of living, as measured by Gross Domestic Product (GDP) per capita.

Kerala rank at the top among Indian states with respect to the human development index. The HDI of Kerala found to be continuously increasing from 0.685 in 1991 to 0.773 in 2001. It is interesting to note that there exists an almost uniform distribution of the development within Kerala. Table 2 shows that the district-wise distribution of human development indices of Kerala all lie above 0.740. The highest HDI is recorded in Ernakulam with 0.801 and lowest index is observed for Malappuram with 0.749 which itself lie far above the index compared with other regions in India.

Table 2: Human Development Index (HDI), by District, Kerala, 2005

Sl. No.	Name of District	HDI
1	Ernakulam	0.801
2	Kottayam	0.796
3	Pathanamthitta	0.795
4	Alappuzha	0.794
5	Thrissur	0.794
6	Kollam	0.787
7	Kannur	0.783
8	Kozhikode	0.781
9	Thiruvananthapuram	0.773
10	Palakkad	0.761
11	Kasargod	0.760
12	Idukki	0.754
13	Wayanad	0.753
14	Malappuram	0.749
	KERALA STATE	0.773

Source: CDS (2005), *Human Development Report 2005*, State Planning Board of Kerala Board, Government of Kerala.

4.4.2 Public Action

Kerala's accomplishments show that the well-being of the people can be improved, and social, political, and cultural conditions transformed, even at low levels of income, when there is appropriate public action. In Kerala, the action of mass organisations and mass movements against social, political, and economic oppression and the policy actions of government have been the most important constituents of public action. When understanding the sources of Kerala's current levels of achievement, it is apparent that Kerala has special features in respect of a host of social circumstances. There are many lessons to be learned from Kerala experience for the rest of India and, perhaps, for other developing societies (CDS, 1977).

The support-led process does not wait for dramatic increases in per capita levels of real income, and it works through priority being given to providing social services (particularly health care and basic education) that reduce mortality and enhance quality of life. Amartya Sen has observed that, 'Despite their low levels of income, the people of Kerala, or China, or Sri Lanka enjoy enormously higher levels of life expectancy than do much richer populations of Brazil, South Africa and Namibia, not to mention Gabon' (Sen 2000).

4.4.3 Developing Social Institutions

Social development of a society depends to a greater extent on the development of social institutions and social capital. Social capital is the networking that helps create linkages which in turn forge rules, conventions and norms governing the development process. When a society undergoes change certain institutional factors, which has a spiralling effect on deepening democracy, may gain ground, if the unleashed energy of people deliberately consolidated by the intelligentsia. In the case of Kerala, after the formation of the State in 1956 a notable development in the area of participation of the people was people's science movement. It was basically a conscientisation of the mass; the activists worked above interests of their political affiliation/inclination. This was followed by a total literacy movement. Apart from making the people capable of reading and writing, it was a mass movement for understandings the 'self' and the 'society' in the background of democratic principles. The ordinary people came to understand the importance of human development and to some extent the concept of sustainable development. With emerging demand from below the Government had to provide basic services like education, health, sanitation, etc. Media also played an important role by means of highlighting activities relating to development and also reporting the apparent failures in providing these basic services. The State Government has allocated a substantial portion of its investment for developing social infrastructure like schools, hospitals, etc. In 1996, as noted earlier, participatory planning was introduced and the responsibility of local level development entrusted with local bodies. Again, in 1998, for ensuring comprehensive social protection, *Kudumbashree* (the poverty reduction by prosperity of family through empowerment of women) was introduced.

Now that you have studied what is meant by human development index (HDI) and the importance of Social institutions for development, answer the questions given in *Check Your Progress-2*.

- Note:** a) Write your answer in about 50 words
b) Check your answer with possible answers given at the end of the unit
- 1) Define Human Development Index.

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- 2) Describe the role of social institutions in development.

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4.5 FACTORS PROMOTING RURAL-URBAN CONTINUUM IN KERALA

Kerala's achievements are an outstanding example of the power of public action. Now we may look at some of the important areas wherein these public actions are taken. Human insecurity is both cause for, as well as an outcome of poverty. Kerala State has been providing a range of welfare programmes aiming to enhance socio-economic security of her people (CDS, 2005). Some of the factors promoting rural-urban continuum in Kerala are described below.

i) Public Distribution System (PDS)

Kerala has universal coverage of public distribution system for providing food-grains, sugar, and other essential materials. The system began even before independence under the rule of *Maharajas*. By 1965, the system was expanded to cover the entire households. In addition to PDS, the State Government intervenes in the market through procurement and distribution of essential commodities with a view to controlling prices. This is done through the Kerala State Civil Supplies Corporation (KSCSC), which has its outlets scattered all over Kerala for distributing the materials. The prices in these shops are lower than the open market prices by a reasonable margin. In addition, by their strong market intervention to sell essential items during festival seasons, such as *Onam*, Christmas, and *Ramzan*, the State is able to provide a measure of stability to the prices of essential commodities.

ii) Free Noon Meal Scheme for School Children

Under this scheme food is distributed free to the targeted groups. The origin of this programme may be traced to the mid-forties, when the princely states of

Travancore and Cochin had established a system of free mid-day meals for poor children in the lower primary schools. The Noon Meal Scheme was reoriented in 1961 and spread throughout the State.

A supplementary nutrition programme is implemented with the help of a large number of women's welfare organisations called *Mahila Samajams* and other organisations in the State. *Anganwadis* and *Balawadis* have been set up with the help of these organisations. Young educated women in rural and urban areas are recruited as volunteers and receive only a monthly honorarium for their service. There is one *Anganwadi* centre for every 1000 population in rural and urban areas and one for every 700 population in tribal areas (Government of Kerala 2005).

iii) Old Age Pensions to Destitutes and Rural Labourers

The scheme is targeted at the poor, based on their social or physical vulnerability or their status as labourers in the unorganized sector. The system of giving old-age pension has come to occupy an important place in the social security provisioning in Kerala because of its coverage progressively being extended to most rural labourers. The four important old age pension for the poor are: 1) Pension to Destitutes and Widows, 2) Pension for the Handicapped, 3) Pension for Old Aged Agricultural Labourers, and 4) Pension for Old Aged Fish Workers. The number of pension schemes now operating in Kerala is around 17.

More than 90 per cent of the aged poor in the State are covered with pension schemes. The assured assistance in old age and other contingencies acts as an incentive to spend on children's continued education, better health care, etc. It also raises the beneficiary's status in the family. There are also schemes for providing marriage assistance to daughters of widows and destitute mothers. There is an insurance scheme called *Mangalya* under which assistance for marriage of adult daughters up to Rs.10,000 is paid.

iv) Housing Security Schemes

Kerala's initiatives in providing housing security deserve special attention. In 1971, the landless labourers were given the right to retain and own 10 cents of land belonging to landed households for whom they worked. Those who could not get such land and were homeless were brought under a massive programme called 'One Lakh Housing' through mobilizing resources from the State Budget, public institutions and voluntary labour. This housing scheme is considered as a landmark in the history of Kerala in social development. At present, various housing schemes, including the provision for purchasing land for the landless, is being implemented by the local self governments.

v) Welfare Funds for Unorganized Sector Workers

Kerala has a unique experience in providing protective social security arrangements for its workers in the informal sector. Successive Governments in Kerala perceived the problems of workers in the informal sector as due largely to lack of definite employee-employer relationships and insecurities arising out of fluctuations in their income. The welfare funds and boards were an attempt to solve this through institutional innovations, including the tripartite fund, with the employer, worker and Governments as its constituents. At present, there are 23 welfare fund boards for unorganized/informal workers in Kerala (in addition,

to the Centrally-administered fund board for beedi and cigar workers). They cover a wide range of occupations and have come to be seen as an important institutional arrangement for providing a measure of social security to informal workers. The benefits vary across funds. However, they seem to cover a number of aspects. Some of the major benefits provided are: Provident fund, gratuity, monthly pension (old age), disability and accident cover, health cover, unemployment relief, educational allowance, housing assistance, marriage assistance and funeral expense.

vi) *Kudumbashree - Poverty Reduction Programme*

The poverty reduction programme in Kerala is known as '*Kudumbashree*'. In Malayalam (the vernacular language in Kerala), '*Kudumbashree*' means prosperity for family. It is a participatory poverty eradication programme (such programmes are legion in India) of Kerala. What makes a difference in this programme is that it is a community initiative using women's agency with legal backing, implemented as part of Panchayati Raj System (both rural and urban). Since it is structurally and functionally related to local bodies leakages are minimized. Basically it is an women empowerment programme; but equal importance is given to delivery mechanism. *Kudumbashree* has an economic base of its own which guarantees autonomy and sustainability. The project is implemented through neighbourhood groups of poor women. It is through a survey, based on nine risk factors, the poor families are identified. It is envisaged that the service of different government and semi-government agencies are to be converged in the programme.

The mission of *Kudumbashree* is "*to eradicate absolute poverty through concerted community action under the leadership of local governments, by facilitating organization for the poor combining self-help with demand-led convergence of available services and resource to tackle the multiple dimensions and manifestations of poverty holistically*".

A major departure from conventional poverty alleviation programmes is the process of identification of poor by means of survey based on nine indicators of risk factors. The risk factors are: (1) poor quality of house (2) lack of access to drinking water (3) lack of access to sanitary latrines (4) number of illiterate adults in the family (5) single income households (6) number of individuals getting barely two meals a day or less (7) number of children below the age of five in the family (8) number of cases of alcoholism or drug addiction in the family and (9) Scheduled Caste and Scheduled Tribe family (socially disadvantaged groups). The households with four out of nine factors are considered as poor.

The organizational structure of *Kudumbashree* has a three-tier system. At the lowest level there are Neighbourhood Groups (NHGs) of 15-40 adult women, one each from the identified risk families. Area Development Societies (ADS) are formed at the middle level by federating the NHGs within a ward of a local body. At the local body level, there are Community Development Societies (CDS), federating the ADS in the local body.

Government of India, National Bank for Agricultural and Rural Development (NABARD), and UNICEF support this programme. Two bank-linked self employment programmes of Swarna Jayanti Shahari Rozgar Yojana (SJSRY), viz., Development of Women and Children in Urban Areas (DWCUA) and Urban

Self Employment Programme (USEP), provide Kudumbashree financial resources to encourage beneficiaries of the project to set up micro-enterprises.

A major function of the organization is to act as an informal bank for the poor. Women pool their savings at the weekly NHG meetings. The ADS is authorized to open bank accounts in banks to deposit the savings.

In the decentralised planning process *Kudumbashree* plays an important role. The NHGs prepare a micro plan based on the surveys and discussions. The ADS puts together the micro plans and prepare a mini plan for the ward of Panchayat/Municipality. A Monitoring and Advisory Committee is formed under the chairmanship of the elected member of the village Panchayat or municipality representing that ward. The CDS is co-terminus with the village Panchayat or Municipality and prepares development plans at the local level by consolidating the plans prepared by the ADS.

vii) Ashraya – Programme for Destitutes

This programme is for providing all types of support for the destitute identified by the *Kudumbashree*. Destitute families are the ones which fulfill seven of the following nine criteria: 1) Kucha houses, 2) No access to safe drinking water, 3) No access to sanitary latrine, 4) Illiterate adult in the family, 5) Having not more than one earning member, 6) Getting barely two meals a day, 7) Presence of children below five years, 8) Alcoholic or drug addict in the family, and 9) Scheduled Caste or Scheduled Tribe Family. Ashraya is the first integrated programme for addressing issues affecting the poorest of the poor who generally are not covered by any of the designated poverty alleviation programmes and who live in the margins of economy and society and polity. An estimated 2 per cent of the population are reckoned to be under this category. The Kudumbashree Mission, through community-based organisations of the poor, had been entrusted with the task of destitute identification, rehabilitation and monitoring under its poverty eradication mission.

The Grama Panchayats, Municipal Councils and Municipal Corporations are providing a package of care services for destitute families under the Ashraya. This will cover food, health, education, water, etc. The care services are designed in such a manner as to dovetail part of the poverty eradication programmes, both centrally and State-sponsored, to meet the specific requirements of the hapless segments of society.

Now that you have studied the factors behind the development of rural-urban continuum in Kerala, answer the questions given in *Check Your Progress-3*.

Check your Progress-3

Note: a) Write your answer in about 50 words

b) Check your answer with possible answers given at the end of the unit

- 1) Give a brief account of one social security programme.

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- 2) Give a brief account of Public Distribution System.

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- 3) What is *Kudumbashree*?

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- 4) How the Free Noon Meal Programme for Children is organised?

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4.6 LET US SUM UP

Understanding the process of development with special emphasis on spatial dimension is very important for policy making. It is generally believed that urbanisation and economic growth go hand-in-hand – one reinforcing the other. Indeed, cities are considered to be the ‘engines of growth’. However, unfettered growth of cities will usually end up with growing slums and poverty

Public policies, aiming to providing social infrastructure and social security schemes are having an impact on the trends in urbanisation, particularly migration to rural people to the urban areas. Kerala is a model in this respect. The State of Kerala is an urban village having spatially dispersed settlement pattern with social infrastructure equitably distributed. Despite significant development in the area of human development there is no tendency towards the development of mega cities. But what is important to underline the fact that the entire area is having an urban nature, having around fifty per cent people living in urban areas. People are not migrating to cities; with the connectivity, they go to the city and come back and stay at the villages. The balanced growth approach has resulted in development of infrastructure both in rural and urban areas. As a result, the entire area of Kerala is having potential for further development without the evils related to urbanisation like slums. Kerala does not have any slums.

The pattern of development of Kerala may be described as a rural-urban continuum wherein one may not be able to distinguish between rural areas and urban areas. It may be described as *Rurban* (neither rural nor urban).

Looking at the factors behind the development of such a *Rurban* pattern, one can observe very targeted public policy towards the development of social infrastructure and social security measures. Social infrastructures like schools, anaganawadis, health centres, etc. are developed with government investments. Social security measures like pensions, free noon meals, housing schemes, etc. are introduced for reducing insecurity.

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4.8 CHECK YOUR PROGRESS – POSSIBLE ANSWERS

Check Your Progress 1

1) Describe the Trends in Urbanisation in the State of Kerala?

The urbanization process in Kerala acquired a faster pace during the latter half of the last century. Now about 47.72 per cent of the population in Kerala live in urban areas as against the all India level of 31.16 per cent. Barring a few Panchayats in the hilly tracts and a few isolated areas, the entire state depicts the picture of an urban rural continuum.

2) Give a Brief Account of Rural-Urban Continuum of Kerala Model.?

An idiosyncratic feature of the development trends in Kerala is the absence of rural-urban polarisation. The public policy has been so targeted that the disparity between the rural and urban area is reduced to the minimum. These developments in Kerala – ‘rural-urban continuum’ – have resulted in the coinage of a new term ‘rurban’.

3) Describe rural-urban continuum?

Thus, the rural-urban continuum may be defined as a dynamic equilibrium wherein the development process involves the people in both rural and urban areas and the returns of development are also distributed to the people whose settlement pattern is distributed spatially. The diffusion of the fruits of development of the economy to all sections of the people may be seen as a change from the industrial urban centres to the rural countryside resulting in rural-urban continuum.

Check Your Progress 2

1) Define Human Development Index.

The Human Development Index (HDI) is a summary measure of human development. It measures the average achievements in three basic dimensions of human development. They are 1) a long and healthy life, as measured by life expectancy at birth 2) knowledge, as measured by the adult literacy rate and 3) a decent standard of living, as measured by Gross Domestic Product (GDP).

2) Describe the role of social institutions and social capital in development.

Social development of a society depends, to a greater extent, on the development of social institutions and social capital. Social capital is the networking that helps create linkages which in turn forge rules, conventions and norms governing the development process. When a society undergoes change certain institutional factors, which has a spiralling effect on deepening democracy, may gain ground, if the unleashed energy of people deliberately consolidated by the intelligentsia.

Check Your Progress 3

1) Give a brief account of one social security programme.

Free Noon Meal Scheme is an important Social Security Programme. Under this scheme food is distributed free to the targeted groups. This can be organised with people's participation. In Kerala a supplementary nutrition programme is implemented with the help of a large number of women's welfare organisations called *Mahila Samajams* and other organisations in the State. *Anganwadis* and *Balawadis* have been set up with the help of these organisations. Young educated women in rural and urban areas are recruited as volunteers and receive only a monthly honorarium for their service.

2) Give a brief account of Public Distribution System.?

Public distribution system is for providing food-grains, sugar, and other essential materials to the people, particularly poor. It is very popular in Kerala which began even before independence under the rule of maharajas. By 1965, the system was expanded to cover the entire households. In addition to PDS, the State Government intervenes in the market through procurement and distribution of essential commodities with a view to controlling prices.

3) What is *Kudumbashree*?

The poverty reduction programme in Kerala is known as '*Kudumbashree*'. It is a participatory poverty eradication programme based on community initiative using women's agency with legal backing, implemented as part of Panchayati Raj System (both rural and urban). Since it is structurally and functionally related to local bodies leakages are minimized. Basically it is a women empowerment programme; but equal importance is given to delivery mechanism. *Kudumbashree* has an economic base of its own which guarantees autonomy and sustainability. The project is implemented through neighbourhood groups of poor women. It is through a survey, based on nine risk factors, the poor families are identified. It is envisaged that the service of different government and semi-government agencies are to be converged in the programme.

MEDS-043: Dynamics of Urban Planning and Development

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	Unit 3	Natural Resource Management and Environment
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II		URBAN DEVELOPMENT PLANS, POLICIES AND PROGRAMMES
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MUNICIPAL FINANCE

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BLOCK 4 MUNICIPAL FINANCE

Municipal finance is an important gadget of municipal development. Thinking of municipal development bereft municipal finance is an utopia. A number of initiatives taken by the governments at different points of time have led to the process of decentralization, which finally led to the development of financial responsibility as a core component of decentralisation. This has led to a sort of financial autonomy with an adequate level of revenues –either raised locally or transferred from the Central Government– as well as the authority to make decisions about expenditures. This block discusses the issues relating to the fiscal decentralization at global level and as in India. It also describes the role and significance of municipal finances in India.

Unit 1, **Fiscal Decentralisation: A Global Overview** discusses the world wide fiscal decentralisation situation, their differences and similarities and its significance in todays context. It also brings out the broad policy framework which has been adopted by different countries. It also analyses the structural adjustments, and the world wide open economy, which is the basis for policy similarities all over the world. Due to the opening of market economy, the sub-national governments (municipalities) cannot restrict the movements of goods and services as well as it cannot control the labour and capital, and so this situation changes the fiscal policy of sub national government is well depicted here.

Unit 2, **Fiscal Decentralisation in India: An Overview** describes the devolution of functions, functionaries and funds from the Central Government to the provincial and local government in India, as a step for the effectiveness of decentralisation. It also analyses, how the customarily decentralisation is termed as delegation of decision making power to the lower levels of governments. It is an established fact now that the decentralisation improves accessibility, promotes responsibility and accountability and effectiveness of the government. Dispersal of financial responsibility is an important component of decentralisation, how the devolution of funds to the local governments closer to the people believed to promote faster development both in rural as well urban areas in India.

Unit 3, **Municipal Finance in India** contributes towards the country's national income and exchequer. Therefore, urban policy needs to enable cities to contribute to national development through the effective provision of infrastructure and a service has been described in this unit. It also deals with the policies that lead to unintended spatial consequences, which may sometimes be far more profound than those intended or envisaged originally.

UNIT 1 FISCAL DECENTRALISATION- A GLOBAL OVERVIEW

Structure

- 1.1 Introduction
 - 1.2 Fiscal Decentralisation: Exigencies and Dimensions
 - 1.3 Municipal Finance
 - 1.4 Fiscal Decentralisation in Developed Countries
 - 1.5 Fiscal Decentralisation in Developing Countries
 - 1.6 Let Us Sum Up
 - 1.7 References and Selected Readings
 - 1.8 Check Your Progress – Possible Answers
-

1.1 INTRODUCTION

Financial responsibility is a core component of decentralisation. If local governments and private organisations are to carry out decentralised functions effectively, they must have an adequate level of revenues –either raised locally or transferred from the Central Government– as well as the authority to make decisions about expenditures. Fiscal decentralisation can take many forms, including:

- a) Self-financing or cost recovery through user charges;
- b) Co-financing or co-production arrangements through which the users participate in providing services and infrastructure through monetary or labour contributions;
- c) Expansion of local revenues through property or sales taxes, or indirect charges;
- d) Intergovernmental transfers that shift general revenues from taxes collected by the central government to local governments for general or specific uses; and
- e) Authorisation of municipal borrowing and the mobilisation of either national or local government resources through loan guarantees.

In many developing countries, local governments or administrative units possess the legal authority to impose taxes, but the tax base is so weak and the dependence on central government subsidies so ingrained that no attempt is made to exercise that authority.

Developing and transition countries with population over five millions have adopted some form of transfer of fiscal level from Central to Sub-national government (local government). Even highly centralised countries like Kingdoms of Jordan and Morocco have also inherited fiscal decentralisation. As Robert D Ebel opined, the issues that each decentralising country faces are at the same time very different and very similar. The differences arise from the diversity in national economic and demographic structure, institutions, traditions, geography and access to new technologies. As for instance, while designing local property tax systems, Middle Eastern policymakers often take into consideration a complex

combination of national, colonial and local tribal law. But the concept of markets as a basis for land valuation is relatively straightforward. In contrast, in (some) countries property rights are well organised, however, the market concept is yet to be sufficiently accepted so that it can serve as a guide for wide spread adoption of *ad valorem* taxation. When we look into the world wide fiscal decentralisation, differences and similarities are there. But similarities provide broad policy framework and also it will address the policy options of different countries which will help us to learn from each others experiences. The structural adjustments and the world wide open economy is the basis for policy similarities all over the world. Due to the opening of market economy, the sub national governments (municipalities) cannot restrict the movements of goods and services as well as it cannot control the labour and capital. So, this situation changes the fiscal policy of sub national government.

In this Unit, we will learn about different countries (both developing and developed countries) experience of fiscal decentralisation as case analysis.

After studying this Unit you should be able to:

- Describe the need for fiscal decentralisation;
- Explain the different models of decentralisation with suitable examples; and
- Analyse the cases of fiscal decentralisation in developed, developing and transition countries

1.2 FISCAL DECENTRALISATION: EXIGENCIES AND DIMENSIONS

1.2.1 Exigencies of Fiscal Decentralisation

In the entire world, fiscal decentralisation is associated with issues ranging from the broad issues of achieving a desired degree of both vertical and horizontal balance, to more narrow (but not less important) concerns of expenditure impacts of unfunded mandates imposed by “higher levels of government” and economic and political restrictions, and on the choice of local revenue sources. In this regard, it should be noted that western countries that have relatively long traditions of fiscal decentralisation have much to gain from fiscal decentralisation debate-and research – that is newly emerging in the transition economy (Hegebus and Tosics, Peteric). Apart from this reason the following reasons have also likely to be contributed:

- The reactions from the below to long years of extensive central control.
- The fiscal expediency, where the central governments to ease their own strained finances by reducing transfers and shifting responsibilities down often with little or more regard to the ability of sub national government to pay for their new responsibilities.

With the following assumption the fiscal decentralization has emerged:

- The establishment of performing inter governmental system will execute the economic reforms adopted by the national government.
- To strengthen the economic reforms at the local level, developing and strengthening autonomous local governments is essential and rationalizing the inter-governmental fiscal relationship is also essential.

- The fiscal reform will bring comprehensive changes thus bringing reforms is not difficult politically.

1.2.2 Dimensions of Fiscal Decentralisation

There are three basic dimensions for fiscal decentralization.

- Devolution
- De-concentration
- Delegation

i) Devolution

Independently established sub national governments are given the responsibility for delivery of public services. The authority will impose fees and taxes for those services. The sub national governments have flexibility to select the services to provide to their citizens. The sub national governments will get some types of financial support from the national government. The example of this model is given in Box 1.1.

Box 1.1: Water Supply in Hungary

In Hungary, the law on Local Municipalities Act No.33 of 1990 made the drinking water supply as the obligatory duty of the municipalities. The law authorised municipalities to establish municipality institutions or companies to operate public utility services. The managers of these companies were also assigned by the municipalities. Furthermore, the law declares that the public utilities belong to the basic property of the municipalities. The municipalities had to create a new structure of public utility water service in accordance with the changed conditions. The most visible change in the Hungarian public utility water service was the fragmentation of the service provider companies and their numbers increased from 28-350. The mechanism of the specification of water and sewage fees also changed fundamentally. The representative body of the municipalities became the price authority of the municipality owned water works companies.

Reference: MRI, Budapest, 1999 and Inter Governmental Fiscal Relations and Local financial Management, Distance learning module, Central European University, Summer University Programme.

ii) De-concentration

De-concentration is the establishment of Central Government offices at the regional level with some autonomy in decision making, but the centre should approve all deviations from normal practice. You will learn the above definition by applying the following country example from Poland as given in Box 1.2.

Box 1.2: Polish Decentralisation in the 1980s

In the 1980s Poland was divided into 49 Voivodships, and, at the local level 2365 Gminy. The imposition of Martial Law in December 1981 (in effect until July 1983) shifted the balance of power between central and local administrative branches. By the end of 1980s Voivodships had achieved a considerable independence from the central government, with central intervention circumscribed by constraints on information to access political

activities. Voivodships were responsible for numerous public services, including health, welfare and transportation, while Gminy were mainly responsible for local services, including garbage collection and public housing maintenance. Although the Gminy had some autonomy, it was not clearly delineated or guaranteed. De-concentration reforms, though accompanied by some devolution of power, essentially transferred authority within an integrated administrative system. Lower administrative levels remained subject to central control.

Bird-Ebel-Wallich: Decentralisation of the Socialist State, World Bank 1995

iii) Delegation

Delegation is an intermediary between devolution and de-concentration. In this, sub national governments are given responsibility to deliver certain services but the Central Government will supervise and provide some forms of finance. All these types may fit in between centralisation and decentralisation. But federalism is different in which public sector decisions can be taken at various levels of government. But in unitary system sub national government act as an administrative unit of national government. You can understand this concept by reading the case study given in Box 1.3.

Box 1.3: Social Services in Estonia

In Estonia the health care regulation law leaves only special medical services to be handled at state level, which means that providing health care should basically be the task of local authorities, and most of the hospitals should be placed under state government administration. Considering the small size of Estonia's local authorities, the individual authorities should form hospital alliances (in most cases one for each county) for the administration of hospitals, through which the communal, construction and remodelling expenses could be financed. Treatment expenses will be covered through the system of health insurance. In practice, the Ministry of Social Welfare has financed the communal and remodelling expenses for all hospitals, up until now.

A similar problem exists with nursing homes, which are financed primarily by the Ministry of Social Welfare, even though, according to law, nursing homes, as a rule, should be in the possession of local governments and financed out of local budgets.

Source: <http://www.ceec-logon.net>

1.3 MUNICIPAL FINANCE

To strengthen the fiscal domain of municipalities there are different ways. Municipal development funds and intermediaries is one such. The municipal development fund is defined as a pool of money operated at a level above the individual local government primarily for investment in infrastructure. Municipal development intermediaries are the institutions which manages the municipal development fund such as banks or government agencies.

At the global level, municipal finance is broadly categorized into three types:

- i) Institutional Borrowing
- ii) Municipal Development Fund
- iii) Municipal Bonds

In the fiscal decentralisation the municipal governments are augmenting the resources from different sources like borrowing from financial institutions, user charges, transfers, issuing of bonds, loans from financial institutions etc. The banks which finances the municipalities was first started in the United States (US) and later European countries adopted. The case study given in Box 1.4 will explain you further:

1.3.1 Borrowing from Financial Institutions

Box 1.4: The Municipal Bank in Slovakia

The First Communal Bank in Slovakia was established by several municipalities as a specialized bank for the municipal sector in 1993. In 1996 the bank obtained a universal banking license allowing it to operate as a regular commercial bank. Currently, 367 municipalities have 19.62% share in the bank. The majority stakeholder in the bank is Dexia Kommunalkredit holding with a 78.4% stake. This group took over the bank in 2000 as part of its strategy to become the key bank for the municipal sector in Central and Eastern Europe.

During its ten year history the bank focused on the municipal financing sector, as well as the retail and corporate sectors. After the entry of the Dexia group, the bank decreased its activities in the corporate sector and focused primarily on the municipal sector and utilities. According to the bank, the municipal sector is less risky to do business than with corporations. The overall volume of credit funds provided to municipalities is around 3.5 billion Sk. Of this total, about one percent of the loans have repayment problems. Starting in 2000, the bank decreased the volume of credits provided to the private sector and increased its credit involvement in the municipal sector. In the course of the last five years over 75% of all credit funds provided to municipalities has come from the bank. Further areas of service to the municipal sector are deposits and consultancy in municipal and project financing. The bank accounts for 40 to 50% of total municipal deposits in the Slovak banking sector.

The bank also engages in the financing of environmental and investment projects supported by special state funds. The bank is an administrator for the financial funds of the State Environmental Fund and the State Fund for Housing Development. Additional activities of the bank include: mobilisation of sources and funds of municipalities; municipal bond issues; funding activities directed to renewal of municipalities; separate care of the municipal financial funds; depository activity for the first-owners' associations; leasing and consultancy.

**Source: Local Government Borrowing, Open Society Institute (OSI),
Budapest, Hungary, 2004**

1.3.2 Municipal Development Fund

A “Municipal Development Fund” (MDF) is defined as a pool of money operated at a level above the individual local government, primarily for investment in infrastructure. The MDFs are managed by different institutions such as banks or government agencies. These are the “Municipal Development Intermediaries” (MDIs).

With very few exceptions, Western European countries as well as Japan have had for decades a well established MDI channelling investment credit to local governments. In many European countries, these institutions were established also to provide a reliable outlet for private savings. Over the past several decades MDFs have spread rapidly through Asia, Latin America, and Africa. In many of these countries the financing of capital infrastructure has been combined with objectives for longer term institutional development.

The main objective of development funds is to mobilise resources from private lenders, central government, donor agencies, and local governments themselves, and make them available for investment in urban infrastructure. A second objective is to strengthen the operation capacity and efficiency of local governments by assisting them in the design, appraisal, and execution of investment programmes, rationalisation of programmes moving away from *ad hoc* investment practices, and injecting rational criteria in the geographical and sectoral distribution of funds. Development funds are best suited to address the needs of smaller cities which tend to lack skilled administrators and lack access to capital markets. Development funds also provide a way to adopt larger projects.

The most common approach in Western Europe has been to introduce an autonomous institution with a legal and financial identity separate from the Central Government. However, there is great variance in the real degree of autonomy and the precise nature of the institution. The examples are as follows:

Municipal development banks which are primarily concerned with financing municipal investment include Belgium and Danish Municipal Credit Associations, Bank for The Netherlands Municipalities, and the Municipal Bank of Norway. In all these cases municipal government representatives control the management board.

Municipal or local government windows within institutions established to manage state controlled pensions and insurance funds. This is the case in France, Italy, and Spain. In these cases, management is appointed by the central government but municipal governments are represented in the decisions. The British Public Works Loan Board is 100 percent controlled by the Central Government, but half of the board draws membership from local governments.

Direct administration by the central government is the mode adopted by many developing countries. The central agency is the Ministry of Local Development or the Interior, or, in some cases, the Ministry of Finance. Problems with some of these new funds included lack of capacity for sustained assistance, under-capitalisation, poor loan repayment discipline.

In Western Europe and Japan most of the activities of MDFs are funded by direct access to financial markets. However, the initial subscription of shared capital by either central or local governments, though not representing any significant

resources for lending, has been important in establishing credibility and control. Additional resources are tapped by competing for private savings deposits. Other financial institutions (banks, insurance companies and pension funds) have been major sources of funds either through the purchase of bond issues or through directly negotiated deposits. In contrast, developing country MDIs have been largely financed with public funds. Even though most of these institutions have the power to issue bonds, most of them do not.

MDFs lend money to local governments for long-term investment at preferential rates which cover interest and administration costs. In some cases, there are elements of grant or subsidised interest. These take different forms, such as matching grants attached to loans that vary with the repayment capacity of the local government or with the type of the project. Most often, eligibility is unrestricted in which the allocation of funds depends on the bids of individual authorities. In some cases, local governments, especially large units, are given a maximum quota.

Assessing debt service capacity of local governments is one of the most difficult aspects of managing a MDF. In most cases, the policy is to rely on the statutory limitations established in the law, stating a maximum ratio of debt or debt service for local government revenues. However, in the case of self-liquidating investment, as for public utilities, the limitation depends on the internal financing viability of the enterprise and not the local government *per se*. There are exceptions to this rule. For example, the *French Caisse de Dépôts* bases its lending to local governments on financial forecasts, not on debt service ratios.

(Adapted from “Latvia: Local Government Expenditures and Resource Transfers” The World Bank, Report No. 14470-LV, July 20, 1995 and based on “Municipal Development Funds and Intermediaries,” by Kenneth Davey, Background Paper for the 1988 World Development Report, The World Bank, July 1988.)

1.3.3 Municipal Bonds

The USAID and the World Bank introduced municipal bonds in transition and European countries based on American experience. Unlike other borrowing there are two reasons which restrict the development of bonds in transition and developing countries.

- i) There is no tax exemption for the citizens purchasing bonds in transition and developing countries which restricts the interest of the citizens. But tax exemption is given in US and Central and Eastern European countries.
- ii) Reforms in bond market will encourage the citizens to invest.

The example given in Box-1.5 is the best practice in US with regard to bond market.

Box 1.5: Diversification in the US local bond market

In most transition countries, local bond markets are still largely dominated by general obligation bonds, issued against the full faith and credit of the issuer. As markets develop, however, local governments will tend to diversify their borrowing instruments and rely more on structured bond instruments.

The US bond market provides a vivid illustration of the wide diversification of instruments. Beyond the general obligation bonds, the US local bond market offers a wide range of revenue bonds that are issued for project or enterprise

financings, in which the security for the bond is the revenue generated from the financed projects. For example water revenue bonds are issued to finance the development of water treatment plans, pumping stations, distribution systems etc., with revenues from connection fees and water charges paid by users. The so called tax allocation bonds are used in the construction sector, secured by additional property taxes collected from new or improved property.

In addition to these various bond structures and instruments, the US market has been characterized by the emergence of a wide array of internal and external credit enhancement structures for municipal bonds, such as refunded bonds, insured bonds, bonds backed by letters of credit, etc.

Source: *Building Sub-national Debt Markets in Developing and Transition Economies. A Framework for Analysis, Policy Reform and Assistance Strategy*, Michel Noel, World Bank Policy Research Working Paper 2339, May 2000

In this session you read about the importance of financial decentralisation and now answer the questions given in Check Your Progress-1

Check Your Progress 1

Note: a) Write your answer in about 50 words

b) Check your answer with possible answers given at the end of the unit

- 1) Differentiate between Devolution, De-concentration and Delegation.

.....

- 2) Define Municipal borrowing and what are the different types of Municipal borrowing?

.....

1.4 FISCAL DECENTRALISATION IN DEVELOPED COUNTRIES

The fiscal decentralisation of a few developed and transition countries are narrated below.

1.4.1 United States

The United States has a loose and flexible structure of fiscal federalism. The key point of the US local government finance system is the absence of too many specifications. State governments assign local governments taxes and their maximum rates. Rules are clear on whether local governments may seek voter referenda on fiscal decisions such as tax rates, new borrowings and so on. They can formulate their own user charges. On the whole, local government revenues finance about 40 to 70 percent of the expenditure.

Some of the important sources of fiscal earnings of the local governments are:

i) Property tax

Property tax amounts to 70-75 percent of all local tax revenues in USA. The tax is based on capital value of property (often at a rate exceeding 1 percent). It gives a stable source of local funds to local government. It provides a degree of independence to the local bodies from the state and federal governments.

ii) Local option Income tax

State like Alabama, Arkansas, Delaware, Georgia, Kentucky, Indiana, Maryland, Michigan, Missouri, New York and Pennsylvania authorise their municipal authorities to levy local income tax. Some states like Georgia mandate a local choice of either an income tax or a general sales tax. While local jurisdictions usually collect the local option income tax themselves, some states like Indiana and Maryland collect it on behalf of their local governments by piggy-backing onto state income taxes.

iii) General Sales tax

This tax is generally popular among taxpayers, because it is collected in small amounts with many transactions. Local rates of this tax ranged from 0.25% to 6% in the United States in 1993.

iv) Excise Taxes

Excise taxes are sales taxes imposed on specific goods and services and are most commonly assessed on lodging, alcoholic beverages and tobacco products, utilities and motor fuel (local option gasoline tax). Some local jurisdictions levy an excise tax on new construction.

v) User Charges and Fees

User charges and fees pay for the cost of operating and maintaining public facilities and services, as well as repay outstanding debts. Road tolls, park admission fees and water and sewer charges are representative user fees in the United States.

vi) Revenue Bonds

Revenue Bonds are designed to finance revenue-generating facilities, backed by a stream of revenues pledged from user charges for services like water supply, sewerage, drainage, toll roads etc.

1.4.2 Canada

The main sources of municipal finance in Canada include: property tax, business tax, special taxes to raise revenue to pay for a specific service or purpose and local improvement taxes. Some of the services taxes imposed by the local governments are waterworks tax, sewer tax, boulevard tax, dust treatment tax, paving tax, ambulance service tax, fire protection area tax, drainage ditch tax, tax to provide water supply for the residence of a hamlet and recreational service tax.

Local improvement taxes in Canada are generally in the form of betterment levies linked to benefits accruing to specific local areas due to the provision of infrastructure as a result of implementation of local improvement plans.

1.4.3 United Kingdom

The fiscal decentralisation in UK is more systematic and well decentralization. The finance regimes of local authorities in England includes, as follows:

- i) A system of non-domestic rates, being a property tax levied on industrial and commercial property- set by the Secretary of State for Environment for England and Wales, collected into the national pool and then distributed among the local jurisdictions based on adult population,
- ii) A system of exchequer grants to local authorities, principally the Revenue Support Grant (RSG) designed to compensate local authorities are also able to participate in partnerships with the private sector under the Private finance Initiative, and
- iii) A system of local domestic taxation, known as the Council tax.

1.4.4 Hungary

Hungary is the most decentralised country in the central and eastern European. In the year 1990, the local government act of Hungary brought fundamental changes in financing Hungarian local governments. The act regulates the scope of mandatory services that local governments can supplement with other services according to their needs. The act regulates the structure, service financing, assets and revenues of local governments. The act also gives more local autonomy. In this process, actors like businesses, banks, investors are considered to be important partners in the budget process. The act also considers local citizens are important in decision making process and this will strengthen the democracy. This act also delegated broad economic and political authority to local government making region.

The four year programme “Modernising Municipal Financial Management” in Hungary was launched in 1996 with the following objectives:

- Include revenue and expenditure breakdowns of municipal activities that provides a clear picture of how much the municipality spend on various items.
- Documents should be suited in identifying and pursuing the strategic sectoral and programme goals of the municipality.
- Monitoring should be ongoing, focused on issues and outcomes.

- Format and content should be comprehensible and informative to specialist citizens and other participants in municipal financial management.

The notion of programme budgeting was applied during the project period. The programme budgeting approach transform the local budget from a simple accounting, control oriented into a tool for promoting effective and accountable management of city resources. The programme budgeting relates revenues and expenditures to municipal goals, objectives, strategies and anticipated outcomes.

1.5 FISCAL DECENTRALISATION IN DEVELOPING COUNTRIES

The fiscal decentralisation in a few developing countries narrated below are

- i) China
- ii) Brazil
- iii) South Africa

1.5.1 China

China's fiscal system is highly decentralized among the 31 provincial, 331 prefecture, 2,109 county and 44,741 township-level units. Nearly 70 percent of total public expenditure in China takes place at the sub-national (that is provincial, prefecture, county and township) level of which more than 55 percent takes place at sub-provincial levels. Key sub-national expenditure responsibilities in China include sub-national administration, local capital construction, basic local services, maintenance, repair and operation of urban infrastructure, primary and secondary schooling, health and hospitals, support for agricultural production, price subsidies, poverty alleviation, cultural and heritage protection, environmental conservation, local and regional development and physical planning.

The revenue assignment between Central and Sub-national Governments after 1994 reforms stands as follows.

- Central revenues in China comprise import tariffs, consumption taxes, income taxes, import-related consumption taxes and VATs, taxes imposed on banks, non-bank financial institutions and insurance companies (including business taxes, income taxes and the urban maintenance and development tax) and taxes on railroads.
- Sub-national revenues consist of business taxes(excepting taxes imposed on banks ,non-bank financial institutions, insurance companies and railroads), company income tax(excluding local banks, foreign banks and non-bank financial companies), personal income tax, urban land use tax, urban maintenance and development tax (excluding banks, non-bank financial institutions, insurance companies and rail roads), fixed asset capital gains tax, house property taxes, stamp taxes, agriculture and related taxes, tax on contracts and land-value increment taxes.
- Shared revenues include VATs (75 percent central and 25 percent, sub-national governments), stamp taxes on security exchange (50:50 sharing) and resource taxes.

1.5.2 Brazil

In Brazil, municipalities are granted full autonomy. The consumption and production taxes are assigned to all three levels of government. The main municipal taxes in Brazil are those on services (ISS) and urban property (IPTU). ISS rates are set by the municipalities, subject to ceilings introduced by the federal government. IPTU is levied on the capital value of land and buildings.

Based on Constitutionally mandated revenue sharing, the municipalities are entitled to:

- a) 25 percent of the revenue from state Value Added tax (ICMS),
- b) 50 percent of revenue from the state tax on motor vehicles registration (IPVA)
- c) 22.5 percent from the federal Value Added Tax (IPI) and income Tax (IR),
- d) All revenue from the income tax held at source (IRPF) and paid by the municipalities or by their decentralized agencies,
- e) 70 percent of revenue from the federal financial-transactions tax levied on transactions with gold (IOF-Quro)
- f) 50 percent of revenue from the federal rural-property tax (ITR). Municipalities also receive compensatory transfers and transfers related to healthcare and investment programmes.

1.5.3 South Africa

The using of application called measuring expenditure needs approach in South Africa transfer fiscal resources equitably to the provinces (South Africa 2006). The equitable share formula applicable for 2006–08 focuses almost entirely on need factors, with only a 1 percent weight given to negative needs (per capita GDP). The formula uses the following shares:

- A basic share (14 percent weight) is derived from each province's share of the national population.
- An education share (51 percent) is based on the size of the school-age population (5–17) and the average number of learners (grades R–12) enrolled in public ordinary schools over the past three years.
- A health share (26 percent) is based on the proportion of the population with and without access to medical aid.
- An institutional component (5 percent) is divided equally among the provinces.
- A poverty component (3 percent) is based on incidence of poverty.
- An economic output component (1 percent) is based on data on GDP by region.

1.5.4 Commonwealth Countries

There are two models that are typical for local government revenues in developing countries of the Commonwealth:

- i) Local government rely very much on their own sources of revenues especially taxes user charges/ fees (i.e. Zambia & Swaziland);

- ii) Local governments are heavily depended on transfers from central government &/ or donor contribution (i.e. Ghana).

The source of revenue of local self governments of different Common Wealth Countries are given in table below:

Country	Source of local government revenue
Australia	Grants and general or special purpose payments of federal and state governments comprise 23 per cent of local government revenues. Other sources included tax on immovable property, fees and fines, net operating surplus of trading enterprises and interest.
Bangladesh	Taxes, rates, fees and charges levied by local bodies, rents and profits accrued from their properties and money received through its services. Government grants, international project funding and loans raised by local bodies are additional sources of income. Taxes are the most important source of income, while loans and voluntary contribution are rare.
Cameroon	Council taxes, business levy and licenses.
Cyprus	Municipal taxes, duties and fees.
Fiji Islands	Revenues from land tax (town tax) and other local incomes such as grants-in-lieu, rental fees, market and bus station fees, business license fees, building fees and parking fees. Most councils also loans from the local capital market. Grants from central government are rare.
Ghana	Taxes, user fees and charges.
India	Tax revenue- properties, <i>octroi</i> , professions and vehicles, non-tax revenue- licenses and service charges, grants-in aid and state/Central Governments loans and borrowings.
Kenya	Fees and charges, water and sewerage fees, local property taxes and business permits.
New Zealand	Property rates, user charges, fees, fuel taxes and returns on investments. Some central governments financial assistance. The rating and charging powers have been provided for in law since 1988 and are important sources of local tax revenue.
Malaysia	Local taxation (assessment rate, rents and fees for services, grants/ subsidies given by state or central government. Some local authorities receive grants-in-lieu of rates. Other sources include miscellaneous forms of charges and fees (licenses, payment for various forms of services, rental penalties and compounds and interest).
Pakistan	Tax and <i>octroi</i> (comprising 60 per cent of local governments' revenues) and non-tax sources. Property related taxes (such as local rates or leases on all land assessable to either rent, land revenue or use). Tax on the transfer of property and <i>octroi</i> are the largest sources of revenue.
Sri Lanka	Rates, taxes duties, fees, fines, penalties and other charges as well as money from sales, leases or other transactions, revenues derived from properties and grants from other governments' spheres.
<i>Source: Kevin Sproasts, Local Government in Asia and the Pacific: A comparative analysis of fifteen countries; and CLGF (2005)</i>	

In this session you read about the financial decentralisation in various countries and now answer the questions given in Check Your Progress-2

Check Your Progress 2

Note: a) Write your answer in about 50 words

b) Check your answer with possible answers given at the end of the unit

- 1) Discuss Fiscal Decentralization in Canada.

.....

- 2) Discuss the Measuring Expenditure needs approach in South Africa to transfer fiscal resources equitably to the provinces.

.....

1.6 LET US SUM UP

In this we have discussed the different experiences of fiscal decentralization in different countries. Decentralisation has to be looked from different perspectives like political, social and economic perspective. In this Unit, fiscal decentralisation was explained from economic perspective. The transition countries are vigorously implementing fiscal decentralization. Developed countries like US and Canada have evolved fiscal decentralized structure. In worldwide fiscal decentralisation is considered as a viable option to address socio economic political issues. But due to lack of political will and untrained man power has restricted developing countries to implement fiscal decentralisation unsuccessfully.

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1.8 CHECK YOUR PROGRESS – POSSIBLE ANSWERS

Check Your Progress 1

1) Differentiate between devolution, de-concentration and delegation.

In devolution, independently established sub national governments are given the responsibility for delivery of public services. The authority will impose fees and taxes for those services. The sub national government have flexibility to select the services to provide to their citizens. Whereas de-concentration is the establishment of central government offices at the regional level with some autonomy in decision making but the centre should approve all deviations from normal practice. Delegation is an intermediary between devolution and de-concentration. In this, sub national governments are given responsibility to deliver certain services but the central government will supervise and provide some forms of finance.

2) Define Municipal Borrowing and what are the different types of Municipal Borrowing?

In the fiscal decentralisation the municipal governments are augmenting the resources from different sources like borrowing from financial institutions, user charges, transfers, issuing of bonds, loans from financial institutions etc. To strengthen the fiscal domain of municipalities there are different kinds of municipal borrowings which are discussed as follows:

- a) Municipal Development Fund: A “Municipal Development Fund” (MDF) is defined as a pool of money operated at a level above the individual local government primarily for investment in infrastructure. The MDFs are managed by different institutions such as banks or government agencies. These are the “Municipal Development Intermediaries” (MDIs).
- b) Municipal Bonds: The USAID and the World Bank introduced municipal bonds in transition and European countries based on American experience.

Check Your Progress 2

1) Discuss Fiscal Decentralization in Canada.

The main sources of municipal finance in Canada include: property tax, business tax, special taxes to raise revenue to pay for a specific service or purpose and local improvement taxes. Some of the services taxes imposed by the local governments are waterworks tax, sewer tax, boulevard tax, dust treatment tax, paving tax, ambulance service tax, fire protection area tax, drainage ditch tax, tax to provide water supply for the residence of a hamlet and recreational service tax.

Local improvement taxes in Canada are generally in the form of betterment levies linked to benefits accruing to specific local areas due to the provision of infrastructure as a result of implementation of local improvement plans.

2) Discuss the Measuring Expenditure needs approach in South Africa to transfer fiscal resources equitably to the provinces?

The using of application called measuring expenditure needs approach in South Africa transfer fiscal resources equitably to the provinces (South Africa 2006). The equitable share formula applicable for 2006–08 focuses almost entirely on need factors, with only a 1 percent weight given to negative needs (per capita GDP). The formula uses the following shares:

- A basic share (14 percent weight) is derived from each province’s share of the national population.
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- A health share (26 percent) is based on the proportion of the population with and without access to medical aid.
- An institutional component (5 percent) is divided equally among the provinces.
- A poverty component (3 percent) is based on incidence of poverty.
- An economic output component (1 percent) is based on data on GDP by region.

UNIT 2 FISCAL DECENTRALISATION IN INDIA: AN OVERVIEW

Structure:

- 2.1 Introduction
 - 2.2 Fiscal Decentralisation: Meaning and Importance
 - 2.3 Fiscal Decentralisation in India
 - 2.4 Sources of Local Government Revenue
 - 2.5 Sources of Revenue of Urban Local Bodies in India
 - 2.6 Sources of Revenues of Panchayati Raj Institutions in India
 - 2.7 Criteria for Fiscal Devolution
 - 2.8 Measures for Strengthening Fiscal Decentralisation
 - 2.9 Let Us Sum Up
 - 2.10 References and Selected Readings
 - 2.11 Check Your Progress-Possible Answer
-

2.1 INTRODUCTION

Decentralisation has become one of the important dimensions of governance of modern democracy. The devolution of functions, functionaries and funds from the Central Government to the provincial and local government is propagated as a step for the effectiveness of decentralisation. Customarily decentralisation is termed as delegation of decision making power to the lower levels of governments. It is studied that decentralisation improves accessibility, promotes responsibility and accountability and effectiveness of the government. Thus decentralisation intends to disperse decision-making governance closer to people. Dispersal of financial responsibility is an important component of decentralisation. Devolution of funds to the local governments closer to the people believed to promote faster development both in rural as well urban areas. After reading this unit you should be able to:

- Explain the meaning and importance of fiscal decentralisation
 - Describe the sources of local government revenue
 - Discuss the fiscal decentralisation in India
 - Analyse the criteria of fiscal decentralisation and measures for strengthening fiscal decentralisation.
-

2.2 FISCAL DECENTRALISATION: MEANING AND IMPORTANCE

2.2.1 Meaning of Fiscal Decentralisation

The Central Government is increasingly finding difficulty to meet all of the numerous competing needs of their various constituencies at the regional and local levels. Its therefore attempting to build local capacity by delegating responsibilities downwards to their regional governments and local governments.

At the same time, the local governments are also demanding more functional and financial autonomy. As a result two things have happened:

- i) Firstly, Central Government is looking towards local and regional government to assist them on devising economic development strategies;
- ii) Secondly, regional and local political leaders are demanding more autonomy and want the taxation powers that commensurate with their expenditure responsibility.

According to Kenneth Davey, fiscal decentralisation comprises the financial aspects of devolution to regional and local government and it covers two interrelated issues:

- a) First is the division of spending; and
- b) The amount of discretion to be given to regional and local governments to determine their expenditures and revenues.

The concept, fiscal decentralisation caught attention of the various countries only after 1990. However, there are evidences that show that countries like Brazil, Peru and Mexico introduced a system of fiscal decentralisation in their economy in the 1990s. Fiscal decentralisation has become worldwide reform agenda supported by the World Bank, USAID, Asian Development Bank and many other bilateral and international agencies. World Bank perceives fiscal decentralisation and the devolution of power as an important engine for shaping governance and development. James Edwin Kee opines that 'Fiscal decentralisation' is the devolution by the Central Government to local governments such as states, region and municipalities of specific functions with the administrative authority and fiscal revenues to perform those functions. Chio states that, fiscal decentralisation means that the authority of tax collection or expenditure is transferred from superior to subordinate offices. He advocates that fiscal decentralisation has two aspects that is qualitative and quantitative. The qualitative aspect of fiscal decentralisation analyses finance held by a local government, where as the quantitative aspect estimates the presence of autonomy authority in finance. According to N. Feruglio, fiscal decentralisation is a process of shifting decision making power on the composition of expenditure responsibilities and on the composition and level of revenues from the Central Government to elected sub national governments. M. A. Oommen opined that fiscal decentralisation means fiscal empowerment of local governments. More specifically it means devolution of taxing and spending powers to lower levels of government. According to World Bank, fiscal decentralisation accords substantial revenue and expenditure authority to intermediate and local government.

Thus fiscal decentralisation is not only the allocation of resources by the Centre to the regional and local governments but also generation of resources by the regional and local governments. One of the purposes of the fiscal decentralisation in China is to grant the provinces and localities greater flexibility in collecting revenues and making expenditure decisions. The Government of India also made Constitutional provisions for fiscal decentralisation to state and local government.

2.2.2 Importance of Fiscal Decentralisation

The fiscal decentralisation hold merits for several reasons and some of the reasons are as follows::

- i) Fiscal decentralisation promotes economic value. The fiscal federalism like the political concept of democracy is considered to be an optimal institutional arrangement. It has the provision of public services with cost minimisation and welfare maximisation. It also combines the advantages of decentralisation with the benefits from economies of scale.
- ii) Fiscal decentralisation leads to good governance, by ensuring fiscal responsibility to the lower level of government that is. local self government. Governance values include responsiveness and accountability, diversity and political participation. Decentralisation places allocation decision making close to the people. As a result, this places greater responsiveness to local officials and greater accountability to citizens.
- iii) Fiscal decentralisation would enhance political participation at the local level. This has the potential to enhance democratic value and political stability at the local level. It provides a forum for local debate about local priorities and can be a proving ground for future political leaders. It imparts financial education to the local leaders at the grassroots levels.
- iv) The fiscal decentralisation is supposed to reduce poverty through the need-based and demand-driven approach of utilisation of resources through participation of locals at the grassroots. The countries like China and India are very much in the favour of fiscal decentralisation for poverty reduction.
- v) With fiscal decentralisation, funds are effectively used as
 - a) they are demand-driven and there is high degree of local involvement;
 - b) their operations are transparent and accountable;
 - c) they are carefully targeted to low income group; and
 - d) free from official red tapism.
- vi) According to Stigler, fiscal decentralisation brings government closer to the people. However a representative government functions in better manner, when it is close to the people. The theoretical perceptive of this argument goes like this “each public service should be provided by the jurisdiction having control over the minimum geographical area that would internalise benefits and costs of such provision.”
- vii) In a fiscally decentralised system where citizens’ participation in decision making is encouraged, locally elected governments have the power to pursue the agenda mandated by voters.

After reading this section, you might have gained idea about the meaning and importance of fiscal decentralisation. Now you would be able to answer the questions given in Check Your Progress-1

Check Your Progress 1

- Note:** a) Write your answer in about 50 words.
b) Check your answer with possible answers given at the end of the unit
- 1) What do you mean by fiscal decentralisation?
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- 2) Discuss a few merits of fiscal decentralisation

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2.3 FISCAL DECENTRALISATION IN INDIA

In India, fiscal decentralisation assumed importance after 73rd and 74th Constitutional Amendments, which envisaged the devolution of functions, functionaries and funds to the local self government institutions. Before 1992, that is prior to the passing of the 73rd and 74th Constitutional Amendment, several committees and commission recommended for the fiscal decentralisation. Let us discuss in detail the recommendations of various committees and constitutional measures undertaken for fiscal decentralisation in India.

2.3.1 Committees

Various committees and commissions were constituted for suggesting measures for establishing financial autonomy of the *Panchayats* and municipalities. In the light of these suggestions, the States have made appropriate provisions in their *Panchayat Raj Acts*. Let us now review the recommendations of various committees appointed from time to time about decentralisation of finances to local self government institutions.

i) Finance enquiry committee

In 1951, the Local Finance Enquiry Committee studied this problem and recommended unconditional assignment of 15% of land revenue to be raised in the *panchayat* area and the proceeds of surcharge levied on the transfer of immovable property to the *Panchayats*. *Panchayats* were also to be empowered to raise their own resources by levying certain taxes in their territories.

ii) Taxation enquiry committee

In 1954, the Taxation Enquiry Committee recommended for reserving certain taxes such as tax on land and building, *octroi*, tax on non-mechanical transport, tax on property, tax on profession, tax on advertisement other than newspapers, theatre tax, and duty on transfer of property, etc. for *Panchayats*.

iii) Santhanam Committee

The Santhanam Committee formed in 1963 strongly recommended that it was essential for stability and growth of local institutions to have substantial and growing resources, which were entirely within their power to exploit and to develop.

iv) Ashok Mehta committee

In 1978, the Ashok Mehta Committee recommended that besides government support, *panchayats* should mobilise enough resources of their own, as no democratic institution can continue to maintain its operational viability by depending upon external resources.

v) Singhvi Committee

In 1966, the Singhvi Committee among others, suggested pattern of compulsory and optional levies. The State Governments shall levy and collect taxes and fees on behalf of PRIs and shall disburse to them based on the recommendation of the Finance Commission in each State. In order to ensure and safeguard the financial autonomy of the PRIs, they should be freed from relying on the “Untied Funds”. But encouraged instead to take to innovative resource mobilisation such as generation of income from entrepreneurial activities, projected loans, public contribution, tax-sharing ,tax-assignments and matching grant incentives for tax collection.

2.3.2 Commissions

The 73rd Constitutional Amendment provides for devolution of functions and transfer of functionaries and funds to the three tiers of Panchayati Raj Institutions. The article 243G of the Constitution states, “Subject to the provisions of the Constitution, the legislature of a state, by law, may endow the *panchayats* with such powers and authority as may be necessary to enable them to function as institutions of self-government. Such laws may contain provisions for the devolution of powers and responsibilities upon *panchayats* at the appropriate level, subject to such conditions as may be specified therein, with respect to:

- a) The preparation of plans for economic development and social justice; and
- b) The implementation of schemes for economic development and social justice as may be entrusted to them including those in relation to matters listed in the Eleventh Schedule.

Article 243A of the Constitution of India embodies the spirit of the democratic decentralisation.

While 280 (3) (bb) of the Constitution enjoins the Central Finance Commission to suggest measures needed to augment the consolidated fund of a state to supplement the resources of the *panchayats* and municipalities on the basis of the recommendations made by the Finance Commission of the State.

Article 243-H of the Constitution, empowers the state legislatures to enact laws:

- a) To authorise a *panchayat* to levy, collect and appropriate such taxes, duties, tolls and fees;
- b) To assign to a *panchayat*, certain taxes, duties, tolls levied and collected by the state government;
- c) To provide for making grants-in-aid to the *panchayats* from the consolidated fund of the state; and
- d) To provide for the constitution of such funds for *panchayats* and also the withdrawal of such money there from; as may be specified by law.

Article 243-I of the Constitution envisages for the setting up of the State Finance Commission (SFC) once in every five years to review the financial position of the *panchayats* and to make recommendations to the Governor as to:

- i) The principles which should govern-
 - a) The distribution between the state and the *panchayats* of the net proceeds of the taxes, duties, tolls and fees levied by the state. It may be divided between them under this part and the allocation between the *panchayats* at all levels of their respective shares of such proceeds;
 - b) The determination of the taxes, duties, tolls and fees which may be assigned to, or appropriated by the *panchayats*;
 - c) The grants-in-aid to the *panchayats* from the consolidated fund of the state
- i) The measures needed to improve the financial position of the *panchayats*;
- ii) Any other matter referred to the finance commission by the Governor in the interests of sound finance of the *panchayats*.

The 74th Constitutional Amendment also states that the State Finance Commission to review the financial position of the urban local bodies, their revenue and capital account requirements. It recommended devolution of taxes, charges, fees, tolls, duties, shared revenues, inter-government transfers and grants from the state to the municipalities. It suggested measures for the mobilisation of municipal resources.

2.3.3 The Central Finance Commission

Direct devolution by CFCs to ULBs began with the Xth CFC after insertion of clause 280(c) in the Constitution and entailed an allocation of Rs.1,000 crore for 1995-2000. It was calculated on the basis of:

- i) Slum population;
- ii) Matching contribution by municipalities;
- iii) Funds to be used for the non-establishment segment of O&M.

CFC has also suggested a reform agenda at the state and municipal level to enable full devolution (2.5% of divisible funds) after the first year (2010-11) of the five-year period of 2010-15. This includes a 1% share of divisible pool on taking up the reform agenda of the XIIIth CFC covering:

- Introduction of double entry municipal accounting system based on the Government of India National Municipal Accounting Manual. It will bring transparency in accounts and enhanced efficiency in the mobilization of assets.
- Improved auditing through assignment of technical guidance and supervision (T&GS) to CAG (Comptroller and Auditor General), Government of India, which will induce fiscal discipline.
- Appointment of Independent Local Body Ombudsman to check corruption and malpractices.
- Grants to be transferred electronically to ensure transparency and timely disbursement.

- Laying out qualifications for the members of state finance commission to improve equality and competence of SFC.
- Property tax should be levied on all properties, including central/state government properties.
- States should constitute a Property Tax Board that will lay down norms for the PT system to ensure complete coverage and revenue enhancement.
- States/ULBs should set out service standards (as 31st March) to be accomplished during the next financial year, particularly in relation to core municipal services such as water supply, sewerage, storm water drainage and solid waste management.

All towns with a population above one million should have their own fire fighting service.

2.3.4 The State Finance Commissions

Chapters 243-I and Y of the 73th and 74th Constitutional Amendment Acts, respectively, made it mandatory for state governments to constitute state finance commissions (SFCs) every five years to review the financial position of the *panchayats* and urban local governments, and to make recommendations for the subsequent five-year period on:

- a) the principles to govern the distribution and allocation of the taxes, duties, tolls and fees levied by the state, and the allocation between the *panchayats* /local governments of such proceeds;
- b) the determination of the taxes, duties, tolls and fees which may be assigned to, or appropriated by, the *panchayats* /local governments;
- c) the grants-in-aid to the *panchayats* /local governments from the Consolidated Fund of the state;
- d) the measures needed to improve the financial position of the *panchayats* / municipalities; and
- e) any other matter referred to the SFC by the governor in the interests of sound finance of the *panchayats* /local governments.

2.4 SOURCES OF LOCAL GOVERNMENT REVENUE

The various sources of local government revenue can broadly be categorized into four heads:

- i) Local Taxation
 - ii) User Charges
 - iii) Inter Governmental Transfers
 - iv) Capital Finance
- i) **Local Taxation**:- The local self government in different countries used to impose local taxes as a source of revenue. However, it varies from state to

state and region to region depending on decision of the concerned state government. Local taxes are generally divided into three categories such as taxes on property, income and sale of goods and services. Generally it is observed that highly progressive and mobile tax bases are assigned to the centre. While, user charges and fee are found to be vested with the local governments. Therefore, decentralized (local) levels of government rely mainly on taxes like property tax, user charges and fees.

Box: Delegation of financial powers to urban local bodies: 74th Constitutional Amendment:

The State may, by law:

- Authorise a municipality to levy, collect and appropriate such taxes, duties, tolls and fees in accordance with such procedures and subject to such limits;
- Assign to a municipality such taxes, duties and tolls and fees levied and collected by the State Government for such purposes and subject to such conditions and limits;
- Provide or make such grants-in-aid to the municipalities from the consolidated fund of the State; and
- Provide for constitution of such fund for crediting all moneys received, respectively, by or on behalf of the Municipalities and also for the withdrawal of such moneys therefrom.

- ii) User charges:** The local governments charges user fee for the services which they provide to the citizen of the municipal areas. Now day local governments are under increasing pressure to increase tariffs to meet the full cost of services which they provide.
- iii) Intergovernmental Transfers:** The intergovernmental transfer are of two types:
- i) Share of national taxes distributed either by formula (i.e. per capital) or by origin (i.e. to the local government where they are located).
 - ii) The second is the grants/ subversions which are either targeted to support specific expenditure (i.e. social benefit, education, etc.) or untargeted and used at discretion of local government (often know as block grants).
Targeted grants are usually intended to stimulate a specific type of expenditure which is favoured or mandated by national government. The untagged or untied grants the other hand can be used by the local governments based on local needs.
- iv) Capital Finance:** Capital expenditure is normally financed from one or more of the following sources:
- i) Grant from the state budget or national funds;
 - ii) Operating surplus representing excess of current revenue over current expenditure
 - iii) Sale of assets;
 - iv) Credit (loans and bonds) grants from the state is a common phenomenon.

2.5 SOURCES OF REVENUE OF URBAN LOCAL BODIES IN INDIA

Some of the important sources of revenues of the urban local bodies in India are as follows:

- i) **Tax Revenue:** Urban local bodies levy a few taxes in their area such as *octroi*, property tax, profession tax, entertainment tax, advertisement tax, animal tax, market tax, water tax, pilgrim tax, toll on new bridges, etc. Now-a-days most of the states have abolished *octroi* tax, which was a major source of revenue for the urban local bodies. Besides, the urban local bodies also get a percentage of tax revenue from stamp duty, electricity tax and motor vehicle tax imposed by the state government.
- ii) **Non-Tax Revenue:** It consists of fees, receipts, fines or income from remunerative activities of urban local bodies. The fees are collected through various forms and processing fees. Besides, fees are collected from park and exhibition ground, halting places, public market, etc.
 - a) **Grant-in-Aid:** The State Government gives grants-in-aid to the urban local body. It varies from state to state depending on the recommendations of the concern state finance commission.
 - b) **Loans & Bonds:** Under the respective Municipal Acts, the Urban Local bodies are entitled to raise loans from the state governments. The loans are to be paid back within prescribed time limit along with the interest. Besides, the now a days many municipalities and municipal corporations are sailing bonds to enhance their revenue base.

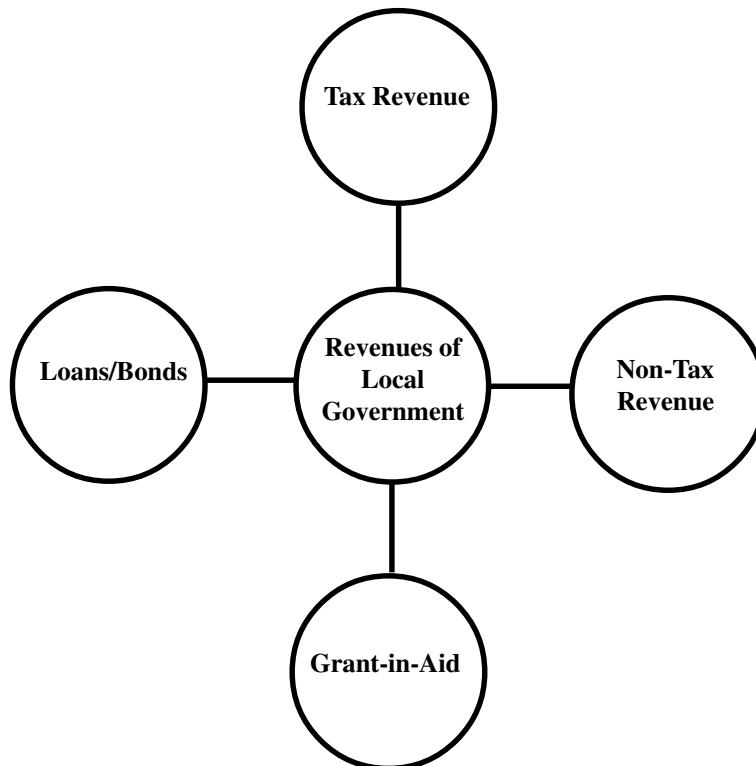


Fig. 2.1: Revenue of ULBs

The progress of implementation of accounting reforms by the ULBs in India is very slow. Only a few states have introduced the measures for raising finance as per the recommendation of the Central Finance Commission.

The Central Finance Commission has suggested several measures to augment the consolidated fund of the state for municipal resource mobilisation. These include land taxes, surcharged cess on state taxes, and property tax. It was also suggested for enhancing of local resources through property tax and fixation of user charges in such a way that the full cost of operation and maintenance is recovered. However, all these suggestions have not been dutifully implemented by various states. Even the state government does not release the funds received on the recommendation of the Central Finance Commission.

The JNNURM (Jawaharlal Nehru National Urban Renewal Mission) has included following mandatory and optional reforms with the objectives to improve pricing and cost recovery of user charges.

i) Mandatory reforms:

- a) Levy of reasonable user charges by ULBs with the objective that full cost of O & M is collected within next five years.
- b) Internal earmarking within local body budget for basic services to the urban poor.
- c) Provision of basic services to urban poor including water supply, sanitation, etc.

ii) Optional reforms:

- a) Revision of by-laws to make rain water harvesting mandatory in all building to come up in future and for adoption of water conservation measures.
- b) By-laws on re-use of reclaimed water.
- c) Encouraging public-private partnership.

In this section, you read about various sources of local government revenue. Now answer the questions given in Check Your Progress-2

Check Your Progress 2

Note: a) Write your answer in about 50 words.

b) Check your answer with possible answers given at the end of the unit

- 1) What are the various sources of local revenue?

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2.6 SOURCES OF REVENUES OF PANCHAYATI RAJ INSTITUTIONS IN INDIA

Panchayati Raj Institutions (PRIs) receives revenues from various sources. The important sources of revenue of the PRIs in India are as follows:

- i) **Revenue from the Central Government:** Every state gets revenue from the Central Government as per the recommendations of the Central Finance Commission. This is based on the criteria fixed by the Central Finance Commission. The PRIs of states also get grant from the National Planning Commission.
- ii) **Revenue from the State Government:** The two main sources of revenue from the state government to the PRIs are:
 - a) Allocation as per the recommendation of the State Finance Commission;
 - b) Scheme specific grant from the State Planning commission.
- iii) **Internal resources of Revenue:** The PRIs in different state applies various mechanisms for internal resources mobilisation. The important sources are
 - a) Taxable income and fees
 - b) Non-taxable income like income from the common property resources, sales of goods and services, borrowings, income from live stocks, etc.

The revenue sources of *Panchayati Raj* Institutions is given in the form of a diagram below

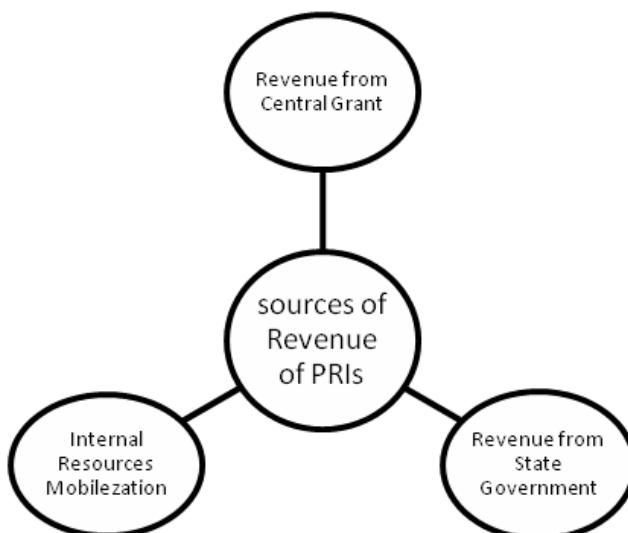


Fig. 2.2: Revenue of PRIs

The PRIs in Kerala, Karnataka and Gujarat enjoy greater financial autonomy. In Kerala, 40 per cent of plan funds go directly to *panchayats*. In Karnataka, each *panchayat* get Rs.3,00,000 annually directly from the state government and in Madhya Pradesh each panchayat gets a grant of rupees Rs.1,00,000 every year from the state government. These are untied funds to be spent according to the need and requirement of each *panchayat*.

For example, the sources of income of village *panchayats* in Karnataka include:

- i) Statutory grant (Rs 5 lakhs) from the state government
- ii) Property tax, water tax, professional tax, fair and exhibition tax and professional tax. These taxes constitute nearly 17 per cent of the total revenue and
- iii) Grants from the Central Finance Commission and Central Plan.

In Kerala, a village *panchayat* levies and collects taxes from the local people. Taxes levied by the village *panchayats* are property tax, profession tax, entertainment tax, advertisement tax, service tax, show tax including surcharge, cess on conversion of land use and surcharges. The government devolves 40 per cent of plan budget directly to village *panchayats* in Kerala.

In Madhya Pradesh, in order to make every village self-reliant (*gram swaraj*) a provision has been made that every village needs to have a *gram kosh* (village fund). The fund comprises funds collected in the form of taxes, Central and State Government grants and funds given by the district *panchayat*. Any other income of the village panchayat shall also be deposited in the *gram kosh*. The *gram kosh* shall have four components such as:

- Food *Kosh*
- Commodity *Kosh*
- Labour *Kosh*; and
- Cash *Kosh*.

The sources of income of the village *panchayat* in Madhya Pradesh are:

- Taxes: house tax, sanitation tax, lighting tax, business tax
- Income from minerals
- Income from fishery
- Grant-in-aids from Central and State government
- Income from common property
- Income from livestock

2.7 CRITERIA FOR FISCAL DEVOLUTION

The following criteria may be suggested for the effective transfer of resources to the local self governments by the central government.

- i) **Autonomy:** The essence of decentralisation is self-rule and autonomy. The transfer mechanism in no way should result in a dependency syndrome. Fiscal

discipline and own resource mobilisation are the key to autonomy. Therefore, the local self government institutions creativity in mobilisation of resources must be encouraged.

- ii) **Equity:** The well-known dictum of equity, namely, ‘from each according to one’s ability and to each according to one’s needs’ is relevant in considering resource mobilisation and intergovernmental resource transfers as well. It should be noted that *Panchayats* at all levels are very unequal in size, resources and development attainments. Given the extreme regional disparities, decentralisation in such conditions can produce the desirable results.
- iii) **Predictability:** The PRIs should know the amount and timing of the transfers to make provision for planning, budgeting and implementation of their activities. Irregular payments are not conducive to efficiency. Quite often it happens that allocations may not even be paid, resulting in overdue, which eventually may be permanently lost to them.
- iv) **Efficiency:** The resource transfer should be so designed as to facilitate efficient management and discourage inefficient and uneconomic practices. The transfer mechanism should not turn out to be a “gap-filling” approach.
- v) **Absorptive Capacity:** The resource transfer should be in the tune with the utilisation ability of the receiving Panchayat or municipal ward. In other words, principle should be each according to its need. The allocation of fund to the panchayat and municipal ward must be free from bias.
- vi) **Simplicity:** The formula for transfer the inter-governmental resources should be simple and transparent. Besides formula formulated by the Central Finance Commission, the state government must device its own formula based on its socio-economic, geographical and population composition for allocation of resources to panchayat and municipalities and also among the different levels of panchayat and urban local bodies.
- vii) **Promotion of Incentives:** There should be adequate built-in arrangements for encouraging resource mobilisation and penalising wasteful and uneconomic practices. The panchayat which mobilize and generate their own local resources must be given additional matching grant, which will create competitiveness among the local self government institutions.
- viii) **Poverty Reduction:** Removal of poverty should be the main aim the fiscal decentralization. Panchayats and municipalities taking proactive measures in poverty reduction must be given incentives for their initiatives.
- ix) **Reduction of Disparities:** Socio-economic disparities are one of the main concerns of the governments. The local self government can play a vital role in narrowing disparities at the grassroots. This must be a basis for the allocation of revenue among various local self government institutions.

The formula recommended by the 11th Central Finance Commission for the inter se share of the states in tax devolution is given in Table-1.

Table 1: Criteria and Relative weights for determining inter se shares of states

S.No.	Criterion	Relative weight (percent)
1	Population	10.0
2	Income	62.5
3	Area	7.5
4	Index & Infrastructure	7.5
5	Tax effort	5.0
6	Fiscal discipline	7.5

Source: *Report of Eleventh Finance Commission*

The percent share of different states according to the formula is given in Table-2

Table 2: Inter se share of states

States	Share (percent)
Andhra Pradesh	7.701
Bihar	14.59
Gujarat	2.82
Haryana	0.94
Jammu & Kashmir	1.29
Karnataka	4.93
Kerala	3.05
Madhya Pradesh	8.83
Maharashtra	4.63
Orissa	5.05
Punjab	1.14
Rajasthan	5.4
Tamil Nadu	5.38
Uttar Pradesh	19.79
West Bengal	8.11

Source: *Report of Eleventh Finance Commission*

2.8 MEASURES FOR STRENGTHENING FISCAL DECENTRALISATION

Fiscal decentralisation can be strengthened by various ways:

- i) Deciding institutional system to strengthen inter-governmental economic relations. The economic relation among the centre, state and local governments must be cordial and healthy. Besides, the basis of financial devolution among the different tiers of local self government must be clearly defined, this will lead to fiscal collaboration rather confrontation.

- ii) Planning fiscal transfers to assure regional fiscal equality and to build an effective environment for advanced and competitive service delivery.
- iii) Restructure tax responsibility to allow local revenue autonomy, efficiency and accountability. Delegation of responsibility to the local government to collect and spend their taxes according to the local needs will strengthen the fiscal decentralisation.
- iv) Determining the functionary funds of different levels of government on the criteria of equality and efficiency.
- v) Providing sub-national government an access to responsible credit market. However, with the globalization, the local self government institutions must have access to capital market.
- vi) According to Bahl, a measure of fiscal decentralisation should reflect the key characteristics of a fiscally decentralised system, such as existence of elected local council, approved budget, local government to collect taxes.
- vii) Institutional reforms that minimize adverse incentives and promote transparency, accountability and predictability should be executed to have an effective fiscal decentralization.

In these sections, you read about fiscal decentralisation in India, criteria of fiscal decentralisation and measures to strengthen fiscal decentralisation. Now answer the questions given in Check Your Progress-3

Check Your Progress 3

- Note:** a) Write your answer in about 50 words.
b) Check your answer with possible answers given at the end of the unit

- 1) What are the various sources of revenue of PRIs in India?

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- 2) Explain three criterions for fiscal decentralisation.

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2.9 LET US SUM UP

In this unit you read about the fiscal decentralisation. Fiscal decentralisation is an important component of democratic decentralization. The fiscal decentralization process started since 1990 and in India it was geared up after 1992 with the implementation of 73rd and 74th constitution amendment. In common parlance fiscal decentralization aims at shifting of financial responsibilities from the central to the lower level of governments. As the financial responsibilities become closer to the people, it is believed that it will lead to good governance, transparency and accountability. Besides, meaning and importance of fiscal decentralization, this unit also covers sources of local government revenue in general and of local self government institutions in India in particular. Lastly, this unit also covers criteria for fiscal decentralization and measures to strengthen fiscal decentralization.

2.10 REFERENCES AND SELECTED READINGS

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2.11 CHECK YOUR PROGRESS-POSSIBLE ANSWERS

Check Your Progress 1

1) What do you mean by fiscal decentralisation?

Fiscal decentralisation means decentralisation of financial power to the lower levels of governments. According to N. Feruglio fiscal decentralisation is a process of shifting decision making power on the composition of expenditure responsibilities and on the composition and level of revenues from the central government to elected sub national governments. M. A. Oommen opined that fiscal decentralisation means fiscal empowerment of local governments. More specifically it means devolution of taxing and spending powers to lower levels of government.

2) Discuss a few merits of fiscal decentralisation.

Two important merits of fiscal decentralisation are:

- i) Fiscal decentralisation promotes economic value. The fiscal federalism like the political concept of democracy is considered to be an optimal institutional arrangement for the provision of public services with cost minimisation and welfare maximisation;

- ii) Secondly, fiscal decentralisation leads to good governance, by ensuring fiscal responsibility to the lower level of government i.e. local self government. Governance values include responsiveness and accountability, diversity and political participation.

Check Your Progress 2

1) What are the various sources of local government revenue?

The various sources of local government revenue can broadly be categorized into four heads:

- i) Local Taxation
- ii) User Charges
- iii) Inter governmental Transfers
- iv) Capital Finance

2) How local taxation is an important source of revenue?

The local taxes are important sources revenue for the local self government. Higher the local taxes imposed by the local self government institutions, lower will be their dependence on the central and state governments for grant. However, it is seen that the local self government are reluctant to impose taxes on the people because they are very closer to the people.

Check Your Progress 3

1) What are the various sources of revenues of PRIs in India?

The important sources of revenue of the panchayati raj institutions in India are as follows:

- i) Revenue from the Central Government: Every state gets revenue from the central government as per the recommendations of the Central Finance commission;
- ii) Revenue from the state government: The two main sources of revenue from the state government to the PRIs are:
 - a) Allocation as per the recommendation of the State Finance Commission; and
 - b) Scheme specific grant from the State Planning commission and
- iii) Internal resources of Revenue: The PRIs in different states apply various mechanisms for internal resource mobilization. Two important sources are:
 - i) Taxable income and fees
 - ii) Non-taxable income like income from common property resources, sales of goods and services, borrowings, income from live stocks, etc.

2) Explain three criterions for fiscal decentralisation.

The three important criteria for fiscal decentralization are

- i) Autonomy: The essence of decentralisation is self-rule and autonomy;
- ii) Equity: The well-known dictum of equity, viz. 'from each according to one's ability and to each according to one's needs' is relevant;
- iii) Predictability: The PRIs should know the amount and timing of the transfers to make provision for planning, budgeting and implementation of their activities.

UNIT 3 MUNICIPAL FINANCE IN INDIA

Structure

- 3.1 Introduction
 - 3.2 Importance of Municipal Finance in Urban Development
 - 3.3 Overview of Municipal Finance in India
 - 3.4 Estimated Investment Requirements, Norms and Standards
 - 3.5 Mechanism to Improve Municipal Revenue
 - 3.6 New Areas for Improving Municipal Resources
 - 3.7 Let Us Sum Up
 - 3.8 References and Selected Readings
 - 3.9 Check Your Progress – Possible Answers
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3.1 INTRODUCTION

It should be explicitly recognised that urbanisation is a natural consequence of economic development and cities contribute far more to national economic growth than their share in total population. They contribute significantly to the country's national income and exchequer. Therefore, urban policy needs to enable cities to contribute to national development through the effective provision of infrastructure and services. This, however, cannot be viewed in isolation from broader economic and social policies. These policies lead to unintended spatial consequences, which may sometimes be far more profound than those intended or envisaged originally. In view of the above, the approach to urban development and management needs to take account of the likely impacts of multiple sectoral and spatial policies at Central, State and Local Government levels. Municipal finance reforms will have to be undertaken within the ambit of these policies and the structure of fiscal federalism in India. This unit deals in details the status of municipal finance in India. After reading this unit you would be able to:

- Explain the importance of Municipal Finance in Urban Development.
 - Give an overview of the Municipal Finance in India.
 - Describe the mechanisms to improve Municipal Revenue.
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3.2 IMPORTANCE OF MUNICIPAL FINANCE IN URBAN DEVELOPMENT

Urban Local Bodies directly influence the welfare of the people by providing services and facilities in urban areas. Given their strategic position in delivering services in the hierarchy of Government set up, following the 74th Constitutional Amendment Act, more functions, powers and resources have been provided to them. However, this increase has happened without commensurate enhancement of their resource base.

Any analysis of finances of State and Central Governments in isolation (excluding that of the local bodies) will not provide a holistic picture of the public finances of the country. Recognising the fact that India is increasingly urbanising, and given the estimate that of more than 50 per cent of India's population will live in urban areas in another 3 to 4 decades, one cannot afford to ignore the fiscal situation of ULBs. Civic infrastructure and services in most cities and towns are

in woefully dismal condition. They are grossly inadequate even for the existing population; leave alone the need for planned urbanisation and peripheral development to accommodate migrants and population growth. The floods in Mumbai, Chennai, Hyderabad and Bangalore in the recent past have exposed the vulnerability of cities, their fragile ecology, weak infrastructure systems, faulty planning, long records of under-investment and fiscal imbalances. With rising expectations from the public, the financing of civic infrastructure and services has assumed critical importance socially, economically and politically.

While the Twelfth Schedule of the 74th Constitutional Amendment Act, 1992 demarcates the functional domain of municipal authorities, the Amendment Act has not provided for a corresponding ‘municipal finance list’ in the Constitution of India. The assignment of finances has been completely left to the discretion of the State Governments, excepting in that such assignment shall be ‘by law’. This has resulted in patterns of municipal finances varying widely across States and in a gross mismatch between the functions assigned to the ULBs and the resources made available to them to discharge the mandated functions. The ULBs depend on the respective State Governments for assignment of revenue sources, provision of inter-governmental transfers and allocation for borrowing with or without State guarantees. Constitutionally, built-in imbalances in the functions and finances eventually reflect in the high dependency of urban local bodies on State governments and of the State Governments on the Central Government.

3.3 OVERVIEW OF MUNICIPAL FINANCE IN INDIA

Municipal finance can affect the nature and location of development. An overview of municipal finance includes the structure, composition, functions and finances of Urban Local Bodies (ULBs), examine the status of core municipal services and the financial needs for upgrading core infrastructure and services in India.

12th Finance Commission Report states that India has 3,723 ULBs, of which 109 are MCs, 1432 are municipalities and 2182 are Nagar Panchayats. The total revenue of the municipalities grew from Rs.11, 515crore in 1998-99 to Rs.15, 149 crore in 2001-02. The total expenditure increased from Rs 12,035 crore to Rs 15,914 crore during the same period. But total revenue of the municipal sector accounts for about 0.75 per cent of GDP of the country. Municipal revenue forms a little more than 2 per cent of combined revenue of State and Central Governments. In terms of total expenditure, the municipal sector accounts for about 0.79 per cent of the GDP of the country and a little over 2 per cent of the combined expenditure of State and Central Governments.

3.3.1 Municipal Revenues

Fiscal assessment of any entity is generally based on revenue and fiscal balance. Similarly, to assess qualitative aspects, the ratio of revenue expenditure to total expenditure is considered. Any entity generating surplus in revenue account (and if possible, in capital account) and maintaining low proportion of revenue expenditure to total expenditure, is considered to have sound financial health. However, this “standard approach” for making assessment may not hold for the ULBs. Municipal authorities are constrained by statutory mandates of balanced budgets and they are also not granted liberal permission by State Governments to incur debt. However, revenue expenditure is not undesirable, if a good proportion of this goes for operation and maintenance of civic amenities provided by the ULBs.

i) Structure of Municipal Revenue

The revenue base of MCs can be broadly categorized into:

- a) Tax revenues ,
- b) Non-tax revenues,
- c) Assigned (shared) revenue,
- d) Grants-in-aid,
- e) Loans and
- f) Other receipts.

While, property tax is the major revenue source, in most of the MCs, *octroi* is the major source in the MCs of Maharashtra and Gujarat. *Octroi* has been abolished in all other States excepting Maharashtra and Gujarat. An account of the various sources of revenue of the MCs is given in Table-1.

Table 1: Revenue Sources of Municipal Corporations in India 1998-2002

Revenue Head/ Category	Sources of revenue
Tax revenue	Property Tax, <i>Octroi</i> , Advertisement Tax, Tax on Animals, Vacant Land Tax, Taxes on Carriages and Carts
Non-Tax revenue	User Charges, Municipal Fees, Sale & Hire Charges, Lease amounts
Other receipts	Sundry receipts, Law charges costs recovered, Lapsed deposits, Fees, Fines & Forfeitures, Rent on Tools & Plants, Miscellaneous Sales etc.
Assigned (Shared) revenue	Entertainment Tax, Surcharge on Stamp duty, Profession Tax, Motor Vehicles Tax
Grants-in-aid	<ul style="list-style-type: none"> i) Plan Grants made available through planned transfers from upper tier of Government under various projects, programmes and schemes. ii) Non-Plan Grants made available to compensate against the loss of income and some specific transfers.
Loans	Loans borrowed by the local authorities for capital works etc. – HUDCO, LIC, State and Central Governments, Banks and Municipal Bonds.

Source: Budgets of Municipal Corporations.

Apart from their own revenue sources, i.e., tax and non-tax revenue sources, the MCs depend upon grants from State Governments. These grants are primarily intended to compensate for the mismatch of functions and finance. Most of the MCs receive financial support in the form of revenue grants from State Governments to meet current expenses. In addition to own revenues, shared revenues, user charges and fees and grants-in-aid, loans also constitute an important source of municipal revenues in some ULBs.

ii) Significance of Municipal Revenue

The revenue of the municipal government has significance to development of urban areas. Ironically, the percentage of municipal revenue is astoundingly low only 2.3 percent of total revenue of the centre and state combined during the year 2001-02. Research suggests that the urban local bodies need to have a good number of local taxes so as to become financially sound and match the number of functions assigned to municipalities successfully. The status of MCs revenue and its percentage to the GDP is given in Table-2.

Table 2: Significance of Municipal Revenue

Year	Municipal Revenue (Rs. Crore)	Percentage of GDP at Factor Cost	Relative share of Municipal Revenue (as percent of Total Revenue of)		
			State Govt.	Central Govt.	Combined State & Central Govt.
1998-99	11,515	0.72	4.4	4.1	2.5
1999-00	13,173	0.75	4.2	4.4	2.5
2000-01	14,581	0.77	4.2	4.5	2.4
2001-02	15,149	0.73	4.1	4.2	2.3

iii) Composition of Municipal Revenue and Trends

Between 1999-2000 to 2003-04, while the share of non-tax, assigned revenue, non-plan and plan grants improved, the share of tax revenue in total revenue receipts of MCs declined. Among the various revenue sources, tax revenue assumes greater importance in terms of both size and share. The composition of municipal revenue from various sources is given in Table-3.

Table 3: Composition of Municipal Revenue and Trends

(Rs. in Lakh)

Sl. No	Revenue component	1999-2000	2000-2001	2001-2002	2002-2003	2003-2004	Average %
1	Tax revenue	458509	554597	461895	573952	599387	8.23
2	Non-Tax revenue	238670	297890	296487	421422	434905	17.42
4	Assigned revenue	84557	115909	110146	132588	131076	11.66
5	Non-Plan grants	26667	34145	33341	54876	50161	20.42
6	Other revenue receipts	98600	86769	48024	64177	63271	-6.11
7	Revenue Receipts	910003	1089310	949893	1247015	1278800	10.18
8	Plan grants	16753	15665	31712	30027	49898	39.20
9	Loans	19917	47245	31805	28520	32835	27.33
10	Other capital receipts	11228	18101	18622	25785	33948	33.55
11	Capital Receipts	47898	81011	82139	84332	116681	27.89
12	Total Receipts	957901	1170321	1032032	1331347	1395481	11.04

Source: Based on the Budgets of Municipal Corporations

Table 4: Composition of Municipal Revenue and Trends

Sl. No	Revenue component	(Per Cent to Total)					
		1999- 2000	2000- 2001	2001- 2002	2002- 2003	2003- 2004	Average %
1	Tax revenue	47.87	47.39	44.76	43.11	42.95	45.21
2	Non-Tax revenue	24.92	25.45	28.73	31.65	31.17	28.38
3	Assigned revenue	2.78	2.92	3.23	4.12	3.59	3.33
4	Non-Plan grants	9.14	9.90	10.67	9.96	9.39	9.87
5	Other revenue receipts	10.29	7.41	4.65	4.82	4.53	6.34
6	Revenue Receipts	95.00	93.08	92.04	93.67	91.64	93.08
7	Plan grants	1.75	1.35	3.07	2.26	3.58	2.40
8	Loans	2.08	4.04	3.08	2.14	2.35	2.74
9	Other capital receipts	1.17	1.55	1.80	1.94	2.43	1.78
10	Capital Receipts	5.00	6.92	7.96	6.33	8.36	8.36
11	Total Receipts	100.00	100.00	100.00	100.00	100.00	100.00

Source: Based on the Budgets of Municipal Corporations

3.3.2 Municipal Expenditure

Municipal governments in India are vested with a range of functions through the state legislature and other administrative orders. They are however, constrained in discharging their obligatory functions due to a limited resource base. The low per capita receipts of municipal governments do not enable them to meet the minimum standards of services. On the whole, the status of municipal finance in India suggests that the present revenues are insufficient to meet the growing expenditure needs of urban areas.

i) Expenditure Pattern

Municipal governments are legally required to have a balanced budget. The municipal expenditures are thus conditioned by the level of resources available. In the states, where the municipal receipts are very low, the municipal expenditures are also low. These low expenditures have a crucial impact on the quality and nature of services provided by the municipality. Often, the repairs and maintenance of services is poor and the expenditure on capital works is postponed

The expenditure incurred by the MCs can be broadly categorised into:

- a) Revenue expenditure
- b) Capital expenditure

Revenue expenditure broadly comprises:

- i) establishment expenditure;
- ii) administrative expenditure;
- iii) operations and maintenance expenditure; and
- iv) interest payments on loans.

- i) expenditure on capital formation; and
- ii) principal repayment.

Table 5: Categorization of Municipal Expenditures

Expenditure Category	Expenditure Items
Establishment expenditure	Staff salaries, Allowances, Wages, Pensions & Retirement benefits etc.
Administrative expenditure	Rents, Rates & Taxes, Office maintenance, Communications, Books & periodicals, Printing & Stationary, Travel Expenditure, Law Charges etc.
Operations & Maintenance	Power & Fuel, Bulk Purchases, Stores, Hire Charges, Repairs & Expenditure
	Maintenance and Interest payments made on loans
Capital expenditure	Buildings, Water Supply & Sewerage, Energy/ Lighting, Solid Waste Management, Roads, Bridges, Culverts, Causeways, Health & Sanitation, Parks and Recreation Spaces, Furniture & Fittings, Tools & Plant, Equipment etc., Principal repayments of loans
Other expenditure	Miscellaneous expenses not accounted for in the above

ii) Significance of Municipal Expenditure

Municipal expenditure holds key to municipal development. However, due to abysmally low generation of resources, the municipal expenditure fall short of the required level in order to promote development of urban areas. The municipal expenditure, constitute less than one percent of GDP and less than three percent of total expenditure.

Table 6: Categorisation of Municipal Expenditures

Year	Municipal Expenditure (Rs. Crore)	Percentage of GDP at Factor Cost	Relative share of Municipal Expenditure (as percent of Total Revenue of)		
			State Govt.	Central Govt.	Combined State & Central Govt.
1998-99	12035	0.75	4.52	4.31	2.21
1999-00	14452	0.82	4.60	4.85	2.36
2000-01	15743	0.83	4.53	4.84	2.34
2001-02	15914	0.76	4.22	4.39	2.15

Source: (i) Report of Eleventh and Twelfth Finance Commission (ii) Handbook of Statistics on Indian Economy, RBI, 2005-06.

iii) Composition of Municipal Expenditure and Trends

The expenditure on operations and maintenances of municipal services accounts for only one fifth of the total expenditure. The level of spending on O & M of core services is important for maintaining a minimum standard of services in the urban settlements. Among all the components of municipal expenditure, the expenditures on capital works, establishment & administration, and operations & maintenance assume importance. The establishment & administrative expenditure constituted 36.25 per cent of the aggregate total expenditure, during 2000-2004. Capital expenditure, which is an important component, constituted less than 13 per cent of the total expenditure, during the same period.

Table 7: Composition and Trends of Municipal Expenditure

(Rs. in Lakh)

Sl. No	Expenditure component	1999-2000	2000-2001	2001-2002	2002-2003	2003-2004	Average %
1	Establishment and administration expenditure	279216	330414	329592	411432	402550	10.19
2	Operation and maintenance expenditure	107383	128165	142174	164406	154400	9.96
3	Other revenue expenditure	51830	56120	55954	58190	56265	2.17
4	Revenue Expenditure	438429	514699	527750	634028	613215	9.20
5	Capital Expenditure	96933	105942	119463	124817	150424	11.76
6	Other Expenditure (not classified)	209744	266611	210685	399205	470925	28.40
11	Total Expenditure	745106	887252	857868	1158050	1234564	14.34

Source: Budgets of Municipal Corporations

Table 8: Composition and Trends of Municipal Expenditure

(Rs. in Lakh)

Sl. No	Expenditure component	1999-2000	2000-2001	2001-2002	2002-2003	2003-2004	Average %
1	Establishment and administration expenditure	37.47	37.24	38.42	35.53	32.61	36.25
2	Operation & maintenance expenditure	14.41	14.45	16.57	14.20	12.51	14.43
3	Other revenue expenditure	6.96	6.33	6.52	5.02	4.56	5.88
4	Revenue Expenditure	58.85	58.01	61.52	54.75	49.67	56.56
5	Capital Expenditure	13.01	11.94	13.93	10.78	12.18	12.37
6	Other Expenditure (not classified)	28.15	30.05	24.56	34.47	38.15	31.07
7	Total Expenditure	100.00	100.00	100.00	100.00	100.00	100.00

Source: Budgets of Municipal Corporations

In these sessions you read about the significance and various sources of municipal revenue and now answer the question given in *Check Your Progress-1*.

Check Your Progress 1

Note: a) Write your answer in about 50 words.

b) Check your progress with possible answers given at the end of the unit.

- 1) What is the main revenue base of municipality?

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- 2) Describe main expenditure pattern of municipality.

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3.4 ESTIMATED INVESTMENT REQUIREMENTS, NORMS AND STANDARDS

Accurate estimates of financial resource requirements for urban infrastructure are difficult to arrive at. The costs of desired service levels are dependent on a number of factors including as the technology used, topography and geology of the urban area, past investments in a particular service, the size of population, economic profile of the urban area and the geographical area to be covered. Despite these difficulties, various efforts have been made in India to evolve norms and standards of urban infrastructure and services and compute average per capita costs. For computing the financial needs of urban infrastructure, the physical norms have to be converted into financial norms. The Zakaria Committee on Augmentation of Financial Resources of urban local bodies had attempted to evolve per capita investment norms for various urban services in early sixties; The Task Force on Housing and Urban Development, Planning Commission worked out these norms in 1983.

Table 9: Physical Standards of Services for Human Settlements

Service	Sector	Minimum levels of services required to be obtained		Remarks
		Population/ Area target	Service level target	
I. Water Supply	Urban	100% population to be covered	Piped water supply with sewerage: 150* lpcd Piped water supply without sewerage: 70* lpcd 40 lpcd with spot sources/ standposts (* Including wastage of water – roughly 20%)	Public stand posts in the low income settlements One source for 20 families within a walking distance of 100 metres.
II. sanitation / Sewerage	Urban	100% city area to be covered by sewerage system with treatment facilities in large urban centres Low cost sanitation methods for other urban areas.	Large city: Full coverage by sewerage with treatment. Medium town: Public sewers with partial coverage by septic tanks. Small town: Low cost sanitation methods.	In low income areas of large cities, community latrines may be provided
III. Solid waste collection and disposal	Urban	All the solid waste generated should be collected and disposed.	100% collection of generated waste, with its proper disposal. Hazardous wastes such as hospital wastes must be incinerated in all cases. Whereas mechanized composting and incineration is recommended for large urban centres, sanitary land fill method of disposal may be used in small and medium towns.	Keeping in view the refuse generation level and its composition, each local body should determine the requirements of collection bins/ collection centres, kind of transport vehicle to be used , staff deployment for various activities, type of treatment to be given to the collected wastes, etc.
IV. Primary Education	Urban & Rural Both	Fulfilment of national goal of universalisation of elementary education for children up to 14 years of age.	Provision of primary school in all areas of the country as per the following guidelines: At least three reasonably large all weather rooms with teaching material At least one teacher per class room/section One primary school for every 3000-4000 population, Area: 3 acres; seats/school: 300-400	In order to improve enrolments at the upper primary stage specially for girls, the walking distance of school should normally be 2 kms In case of primary schools, this standard is 1 km.
V. Primary health care	Urban & Rural Both	Fulfilment of national goal of health for all by 2000AD.	One PHC for 20,000 – 30,000 population. One-sub centre for 3000-5000 population. One community health centre for one lakh population.	Primary health care has been accepted as the main instrument for achieving the goal of ‘Health for All’.

Source: NIUA (1995), Working Group report on Norms and Expenditure for Infrastructure, prepared for the Fourth National Seminar of State Finance Commissions, New Delhi, November, 1995.

Table 10: Suggested Financial Norms for Provision of Core Civic Services at 1988-99 prices

Municipal Finance in India

(Rs. /capita)

Core Services	Planning Commission		Zakaria Committee (Wt.Avg.)
	Low	High	
Water Supply	980.00	1470.00	706.69
Sewerage	980.00	1102.50	961.26
Solid Waste Disposal	122.50	196.00	n.a.
Storm Water Drains	367.50	490.00	483.72
Roads	980.00	1470.00	828.02
Street Lighting	294.00	294.00	410.66
All services	3724.00	5022.50	3390.36

n.a. Comparative norms (per capita) are not available/not provided.

Note: Planning Commission have suggested two levels of norms – one at low level and another at high level of service standards.

Source:

- i) *Zakaria Committee, Augmentation of Financial Resources of Urban Local Bodies, Report of Committee of Ministers, Constituted by the Central Council of Local Self Government, 1963 (weight age averages worked out as per class wise norms).*
- ii) *Planning Commission; Task Force on Housing and Urban Development, - Financing Urban Development, 1983.*

Table 11 gives the estimated additional investment needs for provision of core services in the urban areas of the country for the years 2000 to 2020. The range of required investments by 2005 works out to be approximately Rs. 55 thousand cores to 74 thousand crores.

Table 11: Estimated Additional Investment Needs for Provision of Core Urban Services as per Planning Commission Norms and Standards, at 1998-99 prices.

Year	2010		2015		2020	
Projected Population	391,567,855		458,052,907		535,826,583	
Services	Low	High	Low	High	Low	High
Water Supply	19937	29906	26453	39680	34075	51112
Sewerage	19937	22430	26453	29760	34075	38334
Solid Waste Disposal	2492	3987	3307	5291	4259	6815
Storm Water Drains	7477	9969	9920	13227	12778	17037
Roads	19937	29906	26453	39680	34075	51112
Street Lighting	5981	5981	7936	7936	10222	10222
All services	75762	102180	100521	135572	129484	174634

Method to Compute the Requirement:

$$\text{Requirement 2020} = (\text{norm} \times (\text{pop2020} - \text{pop1998}) + ((\text{pop1998} \times .30) * \text{norm})) / 10000000$$

Where: Population 98 = 268,748,694

Table 12: Estimates of Urban Infrastructure Investment Requirements

Agency	Services covered	Period of Recommendation	Resource Requirements (Rs. In crore)
NIUA (Planning Commission Norms updated to 1998-99 prices)	Water Supply, Sewerage, Solid Waste Disposal, Storm Water Drains, Roads, Street Lights	2000-2020	129484-174634
Zakaria Committee Norms (updated to 1998-99 prices)	Water Supply, Sewerage, Drainage, Roads and Street Lights	2000-2020	113754
India Infrastructure Report (Rakesh Mohan Committee)	Water Supply, Sanitation and Roads	1996-2001	41636-43573
Ninth Plan Document	Water Supply and Sanitation	1997-2002	50000

The Indian Infrastructure Report (Rakesh Mohan Committee) estimated a fresh funds required to augment the core services of water supply, sanitation and roads to clear the backlog provision, new investments and operation and maintenance of the services provided. The committee had estimated that a total of Rs. 42 thousand crores to 44 thousand crores for the period 1996-2001 are needed for augmentation of these services. This includes backlog provisions as also the new investment needed for the purpose.

It is significant to note that the Zakaria Committee's financial norms adjusted for inflation are still widely used as benchmarks for assessing infrastructure needs in urban areas, even though they are outdated and cannot match with the changing life style of the people, technological advances and growth in the economy. Considering this, the Ministry of Urban Development, Government of India has prescribed service level benchmarks for a number of urban services, and has published a hand book on service level benchmarking in 2008. The 13th Central Finance Commission has endorsed these benchmarks and has made compliance with them a necessary condition for urban local bodies to obtain performance-linked grants.

3.5 MECHANISMS TO IMPROVE MUNICIPAL REVENUE

Faced with growing demand for urban services, urban local bodies (ULBs) in India are challenged to generate more revenue. The devolved sources of revenue do not match a wide range of functions required to be performed by them. This has led to increasing dependence of ULBs on higher levels of government. Broadly, they can increase revenues from their own internal sources, seek external funding from outside agencies, and reduce expenses. An increasing demand on local services, abolition of *Octroi*, loss of buoyancy and elasticity of annual rental value (ARV) based Property Tax(PT) and the consequent fiscal stress of ULBs

in India have become compelling reasons to innovate new sources of revenue. Some of the mechanisms, the ULBs can develop for enhancing their credit worthiness are follows. To mobilize resources on their own, ULBs can impose new taxes, increase tax or fee rates, or introduce management innovations within the existing revenue structures. Imposing new sources or increasing tax or user fee rates require approval of the elected municipal council and/or state government, a cumbersome and time-consuming process.

i) Refurbishing Major Taxes

Octroi and PT (Property Tax) have traditionally constituted the mainstay of municipal finance in India. In India, it is abolished in all states except in the states of Punjab, Orissa and the municipal corporations in Maharashtra and Gujarat. Analysis of data on revenue from PT reveals that share of PT in the total tax revenue is declining. In the state of Rajasthan, the share of PT in total revenue is only about 2 percent.

Decline in fiscal role of PT in India is due to a host of administrative and legal reasons. Revenue generation from PT depends on an updating of the base according to the prevailing rental values. This is hardly done despite a legal provision for this in municipal laws. Other administrative reasons pertain to lack of transparency in determination of the base and rationalisation of rate structure.

ii) Property Tax Innovations

Property taxes are the major source of revenue of ULBs in India. However, in most cities, not all properties are assessed, records are not updated regularly, and tax collection is far from satisfactory. ULBs can increase revenue by improving property inventories, record management, public awareness and participation, and tax collection. Collections from property tax can be enhanced substantially by maintaining the tax base through indexing and regular valuation, supported by legal safeguards. Some critical observations in the context of property tax administration in the country in the past include the following:

The area-based property tax systems introduced by Andhra Pradesh and Patna in the recent past is simple and innovative. When introduced in Patna, despite a reduction in the rate from 69 per cent to 9 per cent, the revenue increased substantially. These positive attributes of the system have led to its snowballing effect in other states. The system first introduced in Andhra Pradesh, has now travelled to Gujarat, Rajasthan, Uttar Pradesh, Madhya Pradesh, Tamil Nadu and Delhi. Besides, adopting a Unit Value system of Property Tax, the State Government of Uttar Pradesh has also amended Municipal Laws for de-linking the standard rent concept of the Rent Control Law from valuation of Property Tax base.

The agenda for property tax reforms may cover: simplification of tax assessment and collection, introduction of area-based methods that link property tax to location, type of building and type of use parameters based on some rational criteria, bringing government properties and unauthorised constructions into tax net, elimination of discretion on the part of assessors, self-assessment of tax and payment through banks, rationalisation of exemptions, computerisation of accounts and speedy procedures for dispute resolution.

Transparency, objectivity and simplicity of the unit value system notwithstanding the system is unlikely to enjoy buoyancy and elasticity as the unit values are frozen. In order to address this problem the unit values would need to be reviewed periodically and indexed with inflation. In any scheme of refurbishment of PT, what is important is that it has to be conceived within the existing legal framework in each country so that it could be sustainable in law. Also intervention is required on all the four important organs of PT, are as follows:

- a) Nature of base,
- b) Valuation and assessment practices,
- c) Rate structure, and
- d) Collection efficiency.

Isolated intervention on any one of these organs is unlikely to enhance revenue productivity of this tax.

All these organs would need to be addressed at the same time.

iii) Effective Tax Administration

Maladies in tax administration relate to:

- i) Lack of effective and objective valuation of tax base; and
- ii) Deficiencies in assessment of demand, billing and collection.

Widening of tax-net, addressing the question of under assessment, review of exemptions of lands and buildings from Property Tax are required to be objectively addressed. Some of the cities have now gone for tax mapping for widening the tax-net.

Physical surveys of lands and buildings by using GIS base maps tried in the cities of Ludhiana, Indore, Mirzapur, Ghaziabad, Agra, Lucknow, Kanpur and other cities have dramatically widened the local tax-net and enhanced revenue. It has also helped in imparting objectivity and transparency in valuation and assessment of Property Tax.

Tax collection and generation of additional revenue could be ensured through (i) a scheme of incentives and penalties for municipal staff and the taxpayers and (ii) by profitably adopting the ABC Analysis, which is usually applied in management of inventory in an organisation or a project. Some of the tax administration measures taken by various state governments are narrated below.

- a) **Self-Assessment System (SAS):** Several ULBs introduced SAS to make property tax assessments simpler and more transparent. This method helps taxpayers to understand the assessment process and removes the discretion of the assessors to assess the properties in an arbitrary manner. It increases taxpayers' involvement by allowing them to calculate their own assessment within pre-established guidelines.

The Municipal Corporation of Hyderabad (MCH) introduced SAS for property taxes in 1999-2000. MCH computerized all property records and gave each unit a unique identification number. The corporation involved the public in determining the revised tax rates by consulting resident welfare

associations. Tax education and publicity campaigns, including newspaper advertisements, helped the corporation introduce the reforms. Consequently, the city increased its property tax revenue from Rs. 569 million in 1998-99 to Rs. 1008 million in 2000-01.

- b) Improved Information Base:** In 1997-98, the Chennai Corporation introduced a computerized information system that enables better linkages between property taxes and facilitates close monitoring of collections. This helped the corporation to increase its property tax revenue by 50 percent. The Indore Municipal Corporation (IMC) computerised existing property tax records and conducted a physical survey of all wards to identify properties not on record. It increased number of properties identified from 1.55 to 2.67 lakh. Some city governments have put in place friendly payment gateways like collection through banks and web-based tax collection. Indore Municipal Corporation has introduced a system of group health insurance of senior citizens. This enables the senior citizens to avail of free hospitalisation up to Rs. 20,000 provided they have paid Property Tax. A few cities have put in place a tax collection system by involving banks and on-line payment of PT.
- c) Collection Drives:** Ahmedabad conducted a special campaign to increase property tax revenue by forming special collection teams. The corporation gave the teams power to disconnect water supply or drainage lines, attach the property of defaulters, and issue arrest warrants for non-payment of property taxes. The result: in two years, 1993-94 to 1995-96, Ahmedabad nearly doubled its property tax collection, which rose from Rs. 47 crore to Rs. 92 crore.
- d) Outsourcing Bill Distribution:** Tax administration systems are labour intensive and sometimes the cost of collection exceeds the revenue collected. Some ULBs have begun to outsource sub-processes. The Municipal Corporation of Ludhiana (MCL), introduced a courier system for bill distribution. MCL had 28 bill distributors to serve property tax and water charge bills and issue overdue notices at an annual salary expense of Rs. 3.5 million. It reassigned these employees to other positions as they became vacant and gave their work to three private couriers. The couriers completed the task for Rs. 1.1 million, saving nearly Rs. 2.5 million per year.
- e) Tax Collection Centres:** ULBs in Tamil Nadu organised special tax collection camps in a group of wards. The councillors took a keen interest in organising these camps and carried out door-to-door campaigns to inform people about them, urging them to utilise the facilities and pay their taxes. The Tirunelveli Municipal Corporation opened 17 unit offices in the city to improve its property tax collection. They publicized this through all available media and fitted corporation vehicles with audio announcements and banners. Due to this publicity, 65 percent of taxpayers paid their dues before the due date and the collection were Rs. 185 lakh within six months compared to Rs. 200 lakh collected in 12 months during the previous year. In Andhra Pradesh, the Guntur Municipal Corporation also increased the number of collection centres and opened these centres on every second Saturday or Sunday. The Vishakhapatnam Municipal Corporation opened city civic centres so citizens can easily visit them to make payments.

- f) **Tax “Adalats”(Tax courts):** Often property tax is vexatious and disputes end up in courts. Delays in solving such cases result in loss of revenues for ULBs. To avoid delays in settling property tax matters some ULBs have established special tax “*adalats*” to resolve tax disputes quickly.

3.6 NEW AREAS FOR IMPROVING MUNICIPAL RESOURCES

Some of the new suggested areas needed for the improvement of municipal revenue are described below.

1) Municipal Asset Management

Municipal Corporations usually have limited sources of revenue generation, moreover, most of the sources remain unexplored or under explored. Just for instance, not all the properties are assessed for property tax. There is undervaluation of properties and there are many trades which are not assessed for trade tax, license fees and municipal properties encroached etc. At the same time they lack proper mechanisms for expenditure management and linking of budgets and accounting systems. These two together lower creditworthiness of the Corporation as they first limit the Corporation’s capacity for efficient service delivery and second limits its capability to raise funds from capital market, pooled funds, and special schemes like JNNURM etc. ULBs generally hold a significant amount of fixed assets in real estate. But very few local bodies have exploited the commercial potential of these properties to generate non-tax revenues. Most ULBs do not have a proper inventory of assets nor do they update them regularly. Often villages on the periphery are brought into municipal limits as the city expands. *Panchayat* land then comes under municipal ownership.

The Guntur Municipal Corporation regularised all the subleased municipal shops by collecting 30 percent of land and shop construction value. The Vishakhapatnam Municipal Corporation leased out the aquarium and marriage halls by fixing daily rents for them. Through this measure, corporation collected Rs. 80 lakh and was free from the related liability and expense of maintaining these properties.

2) User Fees and Charges

This is an area which needs to be focused for greater resource mobilisation and linkage between tax payment and service delivery. User charges promote efficiency by providing information on demand to the public service providers and ensure that what the public sector supplies are valued (at the margin) by citizens. They have the advantage of tying the mobilised revenues to the costs of services being provided. Institutional financing of projects becomes feasible if loans raised by ULBs are paid back through project revenues. User charges may be designed based on the users pay/beneficiaries pay principle. Services provided by a public organisation are grouped as

- i) Public-goods and
- ii) Merit goods or non-public goods, or private goods.

The latter is fit for application of principle of exclusion. The consumers are identifiable and the quantum of services consumed is possible to be measured. In case the consumers do not pay for the services consumed, the service can be disconnected.

User fees can also increase municipal revenues. User charges levied by ULBs include fees for water, sewerage, solid waste management, parks, parking, birth and death certificates, business licenses, streetlights, ad space, and cable TV.

- a) Sewerage Charges:** Most cities in India do not levy fees for sewerage and also are unable to provide the service. Several small ULBs in Tamil Nadu structured an innovative mechanism to finance construction of underground drainage systems. Beneficiaries contribute connection fees that share in the capital costs, reducing the debt required. The Alandur Municipality built 120 kilometres of underground drainage and a 24 million-litre per day sewage treatment plan using these deposits. The municipality charged a one-time deposit of Rs. 5000 or Rs. 10000 per connection for domestic and non-domestic users respectively. The municipality also fixed monthly sewerage maintenance charges of Rs. 150 per household connection, Rs. 450 per commercial connection and Rs. 750 per industrial connection. The ULBs conducted awareness campaigns to obtain people's support. These programmes were supported by the ULB's elected and administrative officials, as well as by state officials. The Amravati Municipal Corporation in Maharashtra built a sewerage scheme by levying sewerage charges of Rs. 2019 per year per household. They also used the revenue for debt servicing and operation and maintenance of the scheme.
- b) State Guidelines for Setting Water Charges:** Municipal water charges are generally very low and not revised for very long periods. The Government of Karnataka issued a government order for ULBs to set water charges in line with actual costs. It requires them to levy minimum water charges that would cover expenditures for operation and maintenance and debt servicing.
- c) Parking Fees:** The BMP implemented a *pay and park* scheme in the central business district. Parking fees are based on the duration of parking.
- d) Eco Fee:** The BMP council resolved to levy an "eco fee" on the persons using the municipal garden. The city collects this fee at the entrance of the garden but regulars can obtain a monthly pass. Children and senior citizens are exempted.
- e) Charges for Collecting Solid Waste:** Various ULBs levy solid waste charges for the use of public places based on the amount of waste generated. The ULBs decided that organizers of private functions in the city's marriage halls should pay a fee for waste collection. Similarly, some ULBs levy lifting charges to remove debris from construction sites.
- f) Fees for "Tatkal" (Hindi for "Quick") Delivery of Services:** Issuing birth and death certificates and building permits are ULB responsibilities. To simplify the process some ULBs in Tamil Nadu decided to mail birth certificates to applicants. These ULBs levy a service charge of Rs. 5 per certificate for postal expenses. Some municipalities in Tamil Nadu and West Bengal charge extra for the delivery of this certificate on a priority basis.

The Guntur Municipal Corporation streamlined issuance of building plans by providing that any applicant paying a 25 percent additional fee with an affidavit from a licensed surveyor gets approval across the counter. Many appreciate these convenient procedures and choose the quick delivery of service.

- g) Advertisement Tax:** BMP's revenue from the advertisement tax rose from Rs. 2.43 crore in 1999-2000 to Rs. 4.01 crore in 2000-01 due to increased space available from construction of bus shelters and public toilets and other administrative measures. The MCH's advertisement income increased with its aggressive auctioning of space on billboards, bus shelters, road arches, and footpath railings.
- h) Cable Charges:** The Government of Tamil Nadu allowed ULBs to charge cable TV operators for the use of public property. Gobichettipalayam, the first to implement this order, charges cable operators Rs.5.5 per year per kilometre of cable. In addition, the council collects from the cable operators a monthly fee of Rs. 15 per connection. The total revenue generated from these measures was about Rs.4.19 lakh in 2000-01.
- i) Street Tax:** The Pune Municipal Corporation in Maharashtra levies a street tax to help finance a plan to improve traffic and public transportation. The fee is collected with the property tax and is five percent of annual rateable value.

3) Using Land as Resource

The installation of infrastructure (e.g., roads, water, sewer, and electricity) increases the value of the land in the vicinity of the infrastructure investment. Unused land owned by local governments or state government has a market value that can be put to use to accomplish development objectives highlighted in a city development plan (CDP). Converting land values into resources needed to pay for infrastructure is an important alternative to using debt financing and is being used in rapidly growing cities like Bangalore, Mumbai, and Pune.

4) Internal and External Development Charges:

These charges include costs of off-site and on-site infrastructure such as water source development, laying of water, sewer and power lines, development of freeways/roads, parks, etc. The development charges could be collected at the time of giving approvals to layouts and buildings. These charges, which cover costs towards the following range of infrastructure amenities, provide an excellent example of cost recovery:

- 1) Water supply;
- 2) Sewerage;
- 3) Storm water drainage;
- 4) Roads;
- 5) Electrification including 26.5 per cent operation and maintenance and supervision charges;
- 6) Street lighting;

- 7) Community buildings;
- 8) Diversion of high tension (HT) lines;
- 9) Horticulture including first five years maintenance;
- 10) Conservancy;
- 11) Nominal maintenance of roads
- 12) Resurfacing of roads;
- 13) Maintenance of Public Health Services for first five years
- 14) Maintenance of street lights for first five years;
- 15) Maintenance of street lights beyond five years and up to 10 years;
- 16) Horticulture after 5 to 10 years;
- 17) Beautification of entry points, junction improvements and levelling;
- 18) Development of recreational and communication zones; and
- 19) Protection works, etc.

In these sessions you read about various mechanisms to improve the sources of revenue for the municipal government. Now answer the question given in Check Your Progress-2.

Check Your Progress 2

Note: a) Write your answer in about 50 words.

b) Check your progress with possible answers given at the end of the unit.

- 1) Describe one of the mechanisms to enhance the municipal revenue.

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- 2) What are the internal and external charges for raising municipal revenue?

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3.7 LET US SUM UP

Municipal Finance is critical to municipal development. It can affect the nature and location of development. Government of India from time to time has introduced various reforms in order to enhance the revenue base of municipal government.

As a part of municipal tax reforms, it is necessary to broaden the existing tax base of the Municipalities and to improve collection from other important municipal taxes such as Profession Tax, Entertainment Tax, Advertisement Tax, Motor Vehicles Tax and Business Licensing Fees. Many developed countries authorise the levy of local option income, sales and excise taxes by the local authorities. The possibility of levying a local surcharge on sales and excise taxes (on petrol, diesel, etc.) may need to be explored.

Increasing municipal revenue is a major challenge for ULBs. Some have implemented management innovations resulting in significantly increased revenues. Improved information systems simplified billing and collection, better enforcement, and public communication are key elements of success. The most important lesson learned is that the reform process requires the strong commitment and unwavering support of elected leaders as well as of administrators.

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3.9 CHECK YOUR PROGRESS: POSSIBLE ANSWERS

Check Your Progress 1

1) What is the main revenue base of municipality?

The important revenue base of the MCs can be broadly categorized into:

- d) tax revenues ,
- e) non-tax revenues,
- f) assigned (shared) revenue,
- d) grants-in-aid,
- e) loans and
- e) other receipts.

2) Describe main expenditure pattern of municipality?

Revenue expenditure pattern of the MCs can broadly comprise:

- i) establishment expenditure,
- ii) administrative expenditure,
- iii) operations and maintenance expenditure, and
- iv) interest payments on loans;

Capital expenditure comprises

- i) expenditure on capital formation and
- ii) principal repayment.

Check Your Progress 2

1) Describe one of the mechanisms to enhance the municipal revenue.

User charges promote efficiency by providing information on demand to the public service providers and ensure that what the public sector supplies are valued (at the margin) by citizens. They have the advantage of tying the mobilised revenues to the costs of services being provided. Institutional financing of projects becomes feasible if loans raised by ULBs are paid back through project revenues. User charges may be designed based on the users pay/beneficiaries pay principle. Services provided by a public organisation are grouped as

- i) Public-goods and
- ii) Merit goods or non-public goods, or private goods.

2) What are the internal and external charges for raising municipal revenue?

The internal and external charges include costs of off-site and on-site infrastructure such as water source development, laying of water, sewer and power lines, development of freeways/roads, parks, etc. The development charges could be collected at the time of giving approvals to layouts and buildings. These charges, which cover costs towards the following range of infrastructure amenities, provide an excellent example of cost recovery:

- Water supply;
- Sewerage;
- Storm water drainage;
- Roads;
- Electrification including 26.5 per cent operation and maintenance and supervision charges;
- Street lighting;
- Community buildings;
- Diversion of high tension (HT) lines;
- Horticulture including first five years maintenance;
- Conservancy;
- Nominal maintenance of roads
- Resurfacing of roads;
- Maintenance of Public Health Services for first five years
- Maintenance of street lights for first five years;
- Maintenance of street lights beyond five years and up to 10 years;
- Horticulture after 5 to 10 years;
- Beautification of entry points, junction improvements and levelling;
- Development of recreational and communication zones
- Protection works, etc.

MEDS-043: Dynamics of Urban Planning and Development

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	Unit 3	Natural Resource Management and Environment
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IV		MUNICIPAL FINANCE
	Unit 1	Fiscal Decentralisation: A Global Overview
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Block

5

DISASTER MANAGEMENT

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BLOCK 5 DISASTER MANAGEMENT

Enormous amount of writing and literature has been prepared on different components of disaster management by the scholars all over the world. Disasters can result from natural or man-made causes or a combined effect of both. The impact of disasters are felt more strongly when the affected community is more vulnerable, either in terms of physical exposure or vulnerable socio-economic conditions. This block tries to discuss the meaning, trends, community management of disaster and disaster management strategies spread into four units.

Unit 1, Meaning and Classification of Disaster, discusses the meaning of disaster, classification of disasters, global dimensions of disasters, overview of natural disasters in India, overview of man made disasters, vulnerability profile of India and various types of environmental concerns.

Unit 2, Disaster Management: Recent Trends, discusses the recent trends of disasters world wide, and gives an overview of recent trends in disaster management, disaster management in mountainous areas, disaster management in riverine areas, and disaster management in coastal areas.

Unit 3, Community Based Disaster Management, discusses the issues related with the management of disasters at community level with an emphasis on the concept of community based disaster management (CBDM), principles, strategies and challenges, requirements in CBDM, CBDM: Approach and Direction, features of CBDM understanding through various case studies.

Unit 4, Disaster Management Strategies, provides an overview of the disaster management strategies and discusses the changing complexion of disaster management and projects the path ahead for disaster management.

UNIT 1 MEANING AND CLASSIFICATION OF DISASTERS

Structure

- 1.0 Learning Outcome
 - 1.1 Introduction
 - 1.2 Classification of Disasters
 - 1.3 Global Dimensions of Disasters
 - 1.4 Overview of Natural Disasters in India
 - 1.5 Overview of Man Made Disasters
 - 1.6 Vulnerability Profile of India
 - 1.7 Environmental Concerns
 - 1.8 Development vs Environment
 - 1.9 Conclusion
 - 1.10 Key Concepts
 - 1.11 References and Further Reading
 - 1.12 Activities
-

1.0 LEARNING OUTCOME

After studying this Unit, you should be able to:

- Understand the classification of disasters;
 - Highlight global dimensions of disasters; and
 - Understand the relationship between development and environment.
-

1.1 INTRODUCTION

The International Secretariat for Disaster Reduction (ISDR) defines a hazard as “*a potentially damaging physical event, phenomenon or human activity that may cause the loss of life or injury, property damage, social and economic disruption or environmental degradation.*” Hazards could be, natural (geological, hydro-meteorological and biological) or induced by human processes (environmental degradation and technological hazards). Hazards can be *single, sequential* or *combined* in their origin and effects. Accordingly, Hazard Analysis entails the identification, study and monitoring of a hazard to determine its potential, origin and characteristics.

A fine line separates environmental hazards and environmental resources, as between *water out of control* (flood hazard) and *water under control* (reservoir resources). The atmosphere is considered ‘benign’ when it produces holiday sunshine but ‘hostile’ when it produces damaging ‘loo’ (Smith, 1996).

A disaster is a result of natural or man-made causes that leads to sudden disruption of normal life, causing severe damage to life and property, to an extent that available social and economic protection mechanisms are inadequate to cope.

Even at the outset, the conceptual distinction between ‘hazards’ and ‘disasters’ needs to be brought out, clearly. Floods, Cyclones, *et al* are events in nature until a configuration of factors, which could be man made and natural or both, causes the hazard to turn to a disaster. Disaster is the actual occurrence of the apprehended catastrophe.

Disasters proceed by cause-effect due to *endogenous* (inherent) and *exogenous* (external) factors, which combine to *excite* the phenomenon into a large-scale destructive event. Disasters are a result of vulnerabilities, which go on unabated/unchecked over time, which crystallises, finally, in a destructive event of great magnitude, which is a disaster.

Disaster is disturbance of ‘equilibrium,’ which can be restored/ remedied by proactive policy in this regard. Hence, traditional perception of disasters as natural phenomena outside the realm of human intervention is misconstruing the problem; it is giving way to a ‘systems perspective’, which encompasses, ecological and social perspective to disasters, whereby disasters are understood as totalising events in which all dimensions of a social -structural formation, involving organised human action in the environmental context in which it takes place is studied” (Hoffman and Oliver- Smith, 1999). As a society interacts with its environment with its values and perceptions and engages in a series of processes over which it has incomplete control and knowledge of, for example, development and planning processes involving production and distribution of goods, over long periods of time; underlying hazards turn to disasters (Oliver Smith, 1999). By systemic understanding, hazard simply acts as a ‘catalyst’ in that it brings forth underlying tensions that are always present as potential pressures. Systems’ perspective is therefore rightly applied to understanding the phenomenon underlying disasters (Watts, 1983).

With this understanding, Disaster Management is an attempt to inquire into the process of a *hazard turning to disaster*, to identify the causes and rectify the same through public policy. Administrative factors, such as poor building in an earthquake prone zone, poor land use planning in flood prone areas which lead to housing critical facilities in at risk zones; allowing habitation in such zones, poor laws that fail to regulate facilities leading to disasters, such as the Bhopal gas leak, general low risk perception among people, more significantly policy makers that hinders interest articulation for preventive policy for disaster management, creates conditions that lead to low lying /inherent hazards turning to disasters. This leads us to the issue of sustainable development since study and research in the area of disaster management is increasingly revealing human causatives behind disaster phenomena.

Hence, disaster management is a policy issue. Accordingly, the Tenth Plan has included a full chapter on Disaster Management. Hitherto, it had been treated as a subject of ‘calamity relief’, hence, classified under non-plan expenditure. There has been a policy shift, post Yokohama Conference, in that plan allocations would henceforth be made under respective sector *plan heads* for ‘disaster mitigation’. The reasoning is simple; if disasters are inherent in the socio- physical circumstances/environment, their manifestation could be controlled through better management of the environment by reducing the potency of socio- economic and physical variables that contribute to disaster losses over time.

1.2 CLASSIFICATION OF DISASTERS

Disasters are classified as per origin, into *natural* and *man-made* disasters. As per severity, disasters are classified as *minor* or *major* (in impact). However, such classifications are more academic than real as major disasters could simply be events that received relatively more media coverage (Parasuraman & Unnikrishnan, 2005).

The High Powered Committee (HPC) was constituted in August 1999 under the chairmanship of J.C.Pant. The mandate of the HPC is to prepare comprehensive model plans for disaster management at the national, state and district levels. This was the first attempt in India towards a systematic comprehensive and holistic look at all disasters. Thirty odd disasters have been identified by the HPC, which were grouped into the following five categories based on generic considerations:

1) Water and Climate

- Floods
- Cyclones
- Tornadoes and hurricanes
- Hailstorms
- Cloudburst
- Heat wave and cold wave
- Snow avalanches
- Droughts
- Sea erosion
- Thunder lightning

2) Geological

- Landslides and mudflows
- Earthquakes
- Large fire
- Dam failures and dam bursts
- Mine fires

3) Biological

- Epidemics
- Pest attacks
- Cattle epidemics
- Food poisoning

4) Chemical, industrial and nuclear

- Chemical and Industrial disasters
- Nuclear

5) Accidental

- Forest fires
- Urban fires

- Mine flooding
- Oil spill
- Major building collapse
- Serial bomb blasts
- Festival related disasters
- Electrical disasters and fires
- Air, road, and rail accidents
- Bomb capsizing
- Village fire

Depending on the type of disaster, a nodal ministry has been assigned the task of coordinating all activities of the state and district administration and the other support departments/Ministry. The following table below vividly gives the information:

Type of Disaster/Crisis	Nodal Ministry
Air Accidents	Ministry of Civil Aviation
Civil Strife	Ministry of Home Affairs
Major breakdown of any of the Essential Services posing widespread and protected problems	Concerned Ministries
Railway Accidents	Ministry of Railways
Chemical Disasters	Ministry of Environment
Biological Disaster	Ministry of Health
Nuclear Accident inside or outside the country which poses health or other hazards to people in India	Department of Atomic Energy

Source: Manual on Natural Disaster Management in India: NCDM, IIPA.

It is not the classification but the understanding of the term ‘disaster’ itself that is important. As reported in the World Disasters Report, 2004, *heat waves* have been missing from disaster and public health policies, despite mounting death tolls, particularly in Europe. This is probably because sudden high profile disasters, such as earthquakes evoke greater *dread* than road accidents, despite evidence that more people die in road accidents than earthquakes. The higher the dread factor, the more people want action to reduce those risks. During August 2003, between 22,000 and 35,000 people died due to heat waves across Europe. Economic losses totaled over US\$ 13 billion. The challenge for health professionals and disaster specialists is to raise public awareness of the potential harm caused by extreme temperatures and treat the problem as a disaster.

The *problem of refugees* is another example. They are an important development resource for their home countries, remitting about US\$ 80 billion per year to developing nations (compared to US\$ 50 billion in world aid). But while many opt to migrate, tens of millions are forced to flee life-threatening conditions at home. Largely unprotected by international laws and institutions, their plight is

a *forgotten disaster*. As observed in the World Disasters Report, 2003, over 175 million people now live outside their countries of birth, double the figure in 1975. Many are economic migrants, who may be fleeing poverty or severe deprivation.

There is also increasing understanding of man-made causes behind most natural disasters, which calls for, and has, in fact, affected renewed understanding/perception of disasters. For both natural and man-made disasters, there is increasing evidence to suggest that both are in fact “policy disasters” rather than the results of nature’s vagaries or designs of fate. Increasing evidence suggests that human fallacies, such as inadequate legal framework to regulate hazardous units, have resulted in tragedies like the Bhopal tragedy and the more recent, Vizag accident. Unrestricted felling of forests, serious damage to mountain ecology, overuse of groundwater, changing patterns of cultivation, etc., have precipitated recurring floods and droughts. The spate of landslides in the Himalayas in recent years can be directly related to the unchecked exploitation of forests and mountain vegetation and networks of roads that have been indiscriminately laid in the name of development. As articulated in the India Disasters Report (2005), lack of policy restricting tobacco and liquor sale has led to disasters by way of increasing mortality, globally, almost on epidemic proportions. Tobacco related diseases are increasingly incident, such as oral cancer and heart disease in young people under 40. It is apprehended that each year, tobacco causes 3.5 million deaths worldwide, or about 10,000 deaths per day. One million of these deaths occur in developing countries. By 2020, it is predicted that tobacco will become the leading cause of death and disability, killing more than 10 million people annually; thus, causing more deaths worldwide than HIV, tuberculosis, maternal mortality, motor vehicle accidents, suicide, and homicide combined. India has one of the highest rates of oral cancer in the world.

Similarly, experience of floods in Rajasthan (1996) and Mumbai (2005) suggests that more deaths are caused due to epidemic outbreaks following vector proliferation in accumulated waters rather than the natural disaster of the flood itself. This is clearly system failure, rather than nature’s ‘retribution.’

Experience of droughts in some pockets of Orissa suggests that unimaginative policy shifts, such as precocious exposure of farmers to market competition, falling overall standards of health and nutrition owing to reduced investments in education and health and other system weaknesses were the real causes of mortality rather than the natural feature of lack of enough rainfall. Policy makers in third world countries allegedly seem to respond more to exogenous policy influences by way of international pressure to liberalise or ‘open up’ (markets) more than endogenous requirements, which is the real cause behind increasing vulnerability of people to death and disease in relatively impoverished parts of India, such as Orissa and Madhya Pradesh (Alternative Economic Survey, 2004-05).

Disasters, therefore, compel a re-look on developmental planning. It is obvious that the previous developmental policy has given us vulnerabilities in the form of slum creation/proliferation, insufficient jobs, ecological degradation; though, ostensible growth in sectors such as industry, energy *et al* could not be denied. It remains a fact and has to be conceded that the basic needs of a large proportion of India’s population have remained unmet despite schemes to provision the

same. Though the Economic Survey 2004-05 indicates decline in the number of people below the poverty line (BPL), from 51.3% in 1977-78 to 26.1% in 1999-2000, it conceded that there are wide variations across states. Poverty is spatially concentrated in pockets in backward states though there may have been an overall decline in terms of averages. Figures never tell the complete picture. These are gross estimations, at best averages that give only a broad outlook not the real details. There is endemic malnutrition and numerous reported incidences of starvation deaths. As per the results of the 55th round of National Sample Survey Organisations, rate of growth of employment on current daily status (CDS) basis declined from 2.7 % per annum in 1983-94 to 1.07% in 1994-2000. The decline is largely attributed to stagnation in the agriculture sector. Share of agriculture in total employment dropped from 60% in 1993-94 to 57% in 1999-2000. Most growth has been recorded in the services sector.

Balanced regional development has also remained an unmet goal. Several states and regions in the country, such as Bihar, Orissa, Uttar Pradesh, Rajasthan, are relatively backward and suffer higher incidence of poverty compared to the national average. Noticeably, poverty is also widespread in areas more prone to natural disasters, like flood-prone areas such as in north Bihar, east Uttar Pradesh, and north Bengal, and drought-prone areas such as Rajasthan, Marathwada, and north Karnataka.

Poverty has also exacerbated due to excessive resource use/exploitation, which has caused depletion of ecological resources. As per the India Disasters Report, 2005, almost 40 per cent of India's population currently is forced to survive on depleted resources. Driven to desperation, they migrate which have created the problem of unsustainable cities and a conflict ridden city culture, typically pronounced in slums. Increased pressure has encountered a crumbling local government structure, inept to manage change. Consequently, vulnerabilities have got complicated and harder to understand over time. They are increasingly manifest as conflicts along caste, religious, and ethnic lines and have assumed an endemic nature (Alternate Economic Survey, 2004-05).

1.3 GLOBAL DIMENSIONS OF DISASTERS

Disaster losses have shown an increasing trend, globally, due to urbanisation and increasing population. According to the United Nations, in 2001 alone, natural disasters of medium to high range caused at least 25,000 deaths around the world, more than double the previous year and caused economic losses world-wide of over \$36 billion. The data excludes the many small-scale events that have affected local economies adversely, and disturbed the life pattern for perhaps always. Some of the major events were the Earthquakes that ravaged Gujarat, El Salvador and Peru, floods that ravaged countries in Asia, Africa and elsewhere, drought that affected regions in Central Asia; Afghanistan, Asia and Central America, Cyclone in Madagascar and Orissa, and floods in Bolivia. Global disaster statistics for 1996-2000 revealed staggering economic costs estimated at US\$ 235 billion and 425,000 lives lost (CRED International Disaster Database).

Disasters caused by natural hazards alone, reportedly affected an average of 211 million people per year in the past decade. Asia bears much of the brunt. Nearly half of the world's major natural disasters, recorded over more than three decades, occurred in the region. As a result, Asia has become the world's most disaster-

prone region, absorbing 80 percent of the total affected populations, 40 percent of the total deaths, and 46 percent of the total economic losses (CRED statistics for 1997-2001).

Disasters have international ramifications in terms of direct and indirect impact (s). Hence, the need for concerted action on the part of the international community to tackle regional vulnerabilities. Developing countries have suffered more from disaster events since system capacity to cope with events of such large magnitude is considerably lower as compared to developed countries, and the vulnerability quotient on account of physical social and economic vulnerability of the multitudes, significantly higher. Since 1991, two-thirds of the victims have been from developing countries and just 2% from the developed countries.

Asia is particularly vulnerable to disaster strikes. Between 1991-2000, 5,54,439 people died in Asia compared to 1, 1159 casualties worldwide. Within Asia, 24% of the casualties occurred in India owing to its size population and vulnerability. Floods and High Winds account for most deaths in India (Tenth Plan, 2002-07).

Between 1994 and 2003, disasters- both ‘natural’ and ‘technological’ claimed 68,671 Indian lives, affected an average of 68 million people every year, and cost US\$1.9 billion annually in direct economic damage. This toll is worse than for the previous decade, so the task of supporting the resilience of Indian communities to disasters has never been more urgent (World Disasters Report, 2004).

1.4 OVERVIEW OF NATURAL DISASTERS IN INDIA

India’s Key Vulnerabilities as articulated in the Tenth Plan, (2002-07) are as follows:

- Coastal States, particularly on the East Coast and Gujarat are vulnerable to cyclones.
- 4 crore hectare landmass is vulnerable to floods
- 68% of net sown area is vulnerable to droughts
- 55% of total area is in seismic zones III- V, hence vulnerable to earthquakes
- Sub- Himalayan and Western Ghats is vulnerable to landslides.

The succeeding text analyses in brief vulnerabilities to specific natural hazards in India (Menon and Kalmadi).

A) Floods

Seventy five per cent of rainfall is concentrated over four months of monsoon (June - September) as a result of which almost all the rivers carry heavy discharge during this period. The problems of sediment deposition, drainage congestion and synchronisation of river floods compound the flood hazard with sea tides in the coastal plains. Brahmaputra and the Gangetic Basin are the most flood prone areas. The other flood prone areas are the northwest

region of the west flowing rivers like Narmada and Tapti, central India and the Deccan region with major east flowing rivers like Mahanadi, Krishna and Cauvery. While the area liable to floods is 40 million hectares, the average area affected by floods annually is about 8 million hectares.

B) Droughts

India has a largely monsoon dependant irrigation network. An erratic pattern, both low (less than 750 mm) and medium (750 - 1125 mm) makes 68 per cent of the total area vulnerable to periodic droughts. A 100-year analysis reveals that the frequency of occurrence of below normal rainfall in arid, semi-arid, and sub-humid areas is 54-57 per cent. Severe and rare droughts occur in arid and semi-arid zones every 8-9 years. The semi-arid and arid climatic zones are subject to about 50 per cent of severe droughts that cover generally 76 percent of the area. In this region, rare droughts of most severe intensity occurred on an average once in 32 years and almost every third year was a drought year.

C) Cyclones

India has a long coastline. There are two distinct cyclone seasons: pre-monsoon (May-June) and post-monsoon (October-November). The impact of these cyclones is confined to the coastal districts, the maximum destruction being within 100 Km. from the centre of the cyclones and on either side of the storm track. Most casualties are caused by coastal inundation by tidal waves, storm surges and torrential rains.

D) Earthquakes

The Himalayan mountain ranges are considered to be the world's youngest fold mountain ranges. The subterranean Himalayas are geologically very active. In a span of 53 years, four earthquakes exceeding magnitude 8 on the Richter scale have occurred in this region. The peninsular part of India comprises stable continental crust. Although these regions were considered seismically least active, an earthquake that occurred in Latur in Maharashtra on September 30, 1993 of magnitude 6.4 on the Richter scale which caused substantial loss of life and damage to infrastructure.

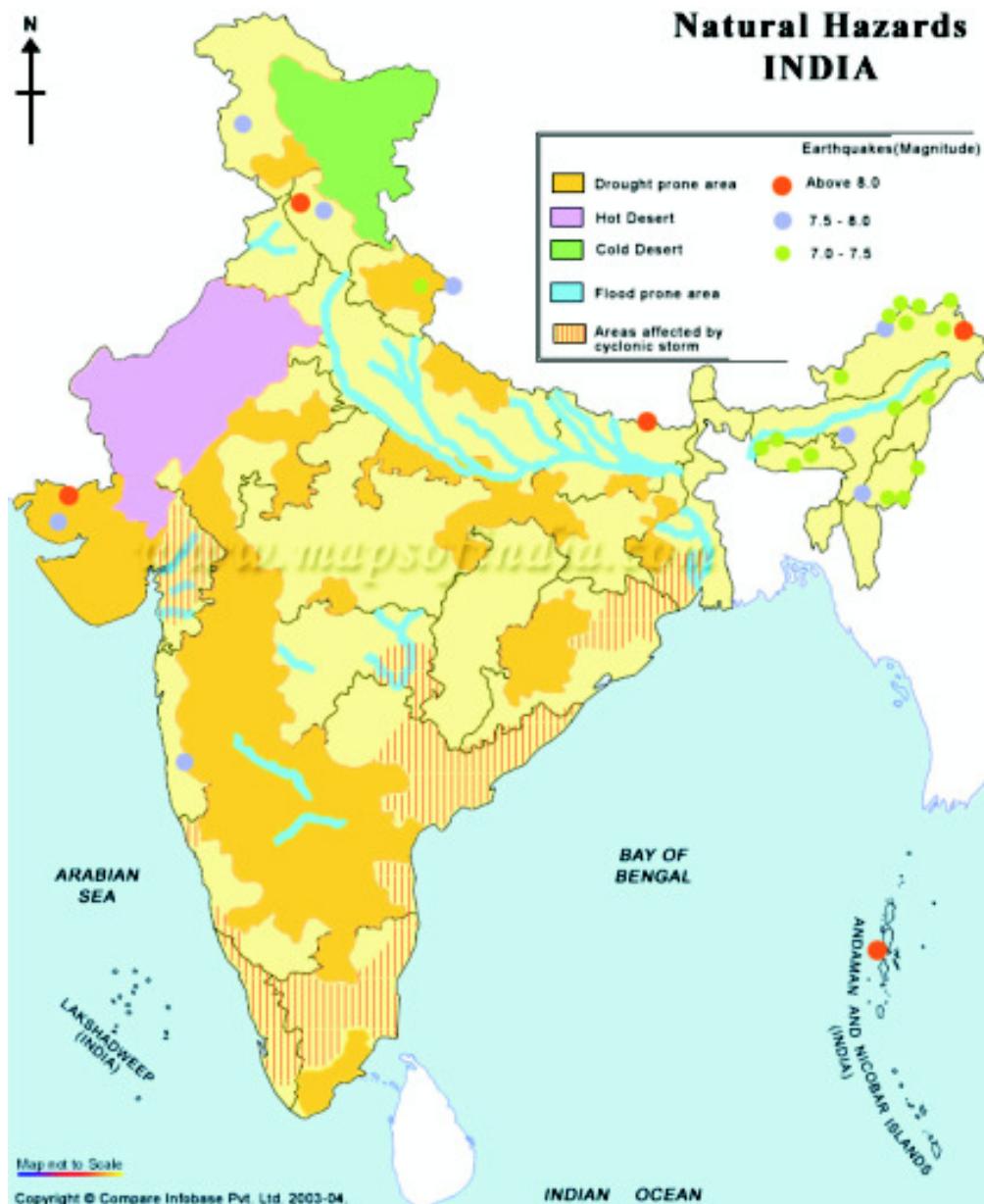
E) Landslides and Avalanches

The Himalayan, the northeast hill ranges and the Western Ghats experience considerable landslide activity of varying intensities. River erosions, seismic movements and heavy rainfalls cause considerable activity. Heavy monsoon rainfall often in association with cyclonic disturbances results in considerable landslide activity on the slopes of the Western Ghats.

Avalanches constitute a major hazard in the higher reaches of the Himalayas. Parts of the Himalayas receive snowfall round the year and adventure sports are in abundance in such locations. Severe snow avalanches occur in Jammu & Kashmir, Himachal Pradesh and the Hills of Western Uttar Pradesh. The population of about 20,000 in Nubra and Shyok valleys and mountaineers and trekkers face avalanche hazard on account of steep fall.

The map below gives the multi-hazard vulnerability of the Indian landmass.

Meaning and Classification
of Disaster



Source: Compare InfoBase Pvt. Ltd.

1.5 OVERVIEW OF MAN MADE DISASTERS

Man-made disasters refer to non-natural disastrous occurrences that can be sudden or longer term. Sudden man-made disasters include structural, building and mine collapse when this occurs independently without any outside force. In addition air disasters, land disasters and sea disasters are all man-made (International Red Cross).

The countries in this region are densely populated and are low-income economies. Recurrent disasters, specifically, road and rail accidents, fire outbreaks, deaths of pavement dwellers due to heat and cold wave conditions etc., cause serious setback to the developmental process; in fact disasters and development have a chicken and egg relationship in that one is in fact the primary cause of the other. For example, disasters exacerbate poverty conditions in affected regions; and poor are the worst sufferers in disasters. The fast pace of growth and expansion

without comprehensive understanding or preparedness in urban planning, for instance, has brought forth a range of issues that seek urgent attention at all levels. Local administrative weaknesses have allowed the situation to get out of hand. Institutional weaknesses have created system vulnerabilities over time. In the absence of mitigation measures, growing numbers in our population are at risk of prospective hazards such as air accidents, boat capsizing, building collapse, electric fires, festival related disasters, forest fires, mine flooding, oil spills, rail accidents, road accidents, serial bomb blasts, and fires. The safeguards within existing systems are limited and the risks involved high. The situation with regard to road accidents is particularly acute.

A comprehensive document prepared by the Transportation Research and Injury Prevention Programme (TRIPP) brings out the magnitude of the problem in India and abroad. It gave the first official data of accidents in 2002, recording 80,118 deaths and 342,200 injuries on Indian roads but conceded at the same time that many cases went unreported and that 1,200,000 required hospitalisation. Of the worldwide annual average of 700,000 road accidents, 10 per cent occur in India. The latest annual statistics indicate that over 80,000 people are killed on Indian roads. These figures do not reflect the human suffering and social problems caused by accidents. Nearly three lakhs per year sustain injuries.

Financial losses are staggering. A decade's worth of saving the Rs 50,000 million estimated loss in traffic accidents every year could finance building 7,000 km-long, six-lane national highway at today's rates. The figures are always on the increase, which corresponds to the tremendous increase in the production and sale of motor vehicles (Murthy and Karnick, 2005).

Nuclear, Chemical and Biological threats are apparent in the present scenario. Deliberate international terrorism or accidental secondary fallouts can be fatal. There has been considerable agitation in India of late, over advanced countries dumping hazardous waste in India. This falls within the realm of international relations. Rapid and effective response as also mitigation policy needs intensive research and laboratory support in this regard to frame convincing legislation, which can ensure internal security without jeopardising external relations with foreign countries. Globalisation would have to be effectively managed, through legislation, regulating Multi-national and Transnational corporation activity especially with regard to safety precautions for hazardous facilities. EIAs or environment impact assessments are already underway in India. There is need for better implementation of the same. A good EIA needs good data support to base arguments on, which is presently lacking. Acknowledging the need, Environmental Information Centre (EIC) has been set up to serve as a professionally managed clearing house of environmental information that can be used by MoEF, project proponents, consultants, NGOs and other stakeholders involved in the process of environmental impact assessment in India. EIC caters to the need of creating and disseminating of organised environmental data for various developmental initiatives all over the country. Regarding oil spills, experts opine, that satellite imagery should be used to mark out vulnerable areas and mitigation measures put in place, as for example, restricting habitation in the areas.

In India, the man-made disaster category also includes communal riots, which affect parts of India, periodically, as in the wake of the Babri Masjid demolition

or unabated violence against Dalits, alleged state excesses in Punjab, the sub-ethnic North-East tangle, and others. Vulnerability studies in this regard would require empirical unearthing of facts with regard to the socio- economic profile of the regions with a view to pinpointing the exact cause of recurrent violence in the area (s). In this regard, generation of awareness among communities, strengthening/generating positive social capital proactively, through measures like mustering opinion in support of measures to ameliorate the situation, lending active state support to social actors involved in movements towards the same would be some of the desirable activities.

Health is a major factor in disaster management efforts. As reported in the World Disasters Report, 2004, across southern Africa, HIV/AIDS is combining with food insecurity, poverty, worsening health care, dirty water and sanitation, uncontrolled urbanisation and common disease to create an unprecedented disaster that conventional intervention can no longer contain. The problem is no less acute in India, where figures of actual and potential victims keep rising. The pace of improvement in health services does not compare favourably with countries in East Asia and Latin America where life expectancy is almost as good as developed countries. This is because inter sector linkages between sanitation, nutrition, poverty alleviation, education, drinking water supply et al have not been duly explored. In states where such linkages obtain for historical reasons, or as a result of deliberate effort in this regard on the part of the government, results in health improvement are significantly better than other states. Hence, emphasis in the tenth plan would be on improved logistics with regard to drug supply and diagnostics and exploring systems of health care financing so that essential health care is available to all at affordable cost (Tenth Plan).

As per Red Cross, long-term man made disasters refer to civil strife, civil war and international war, which are equally pertinent policy concerns. On a national level, this involves warlike encounters between armed groups from the same country, which take place within the boarders. Such outbreaks of war, besides threatening national security, may pose large-scale medical problems such as epidemics, lack of water, accumulation of rubbish, displaced persons, refugees, food shortage, hunger etc. Our country has been plagued by civil strife in Kashmir and North East, particularly besides South and West Bengal, occasionally. Tensions with neighboring states have been persistent. As solution has evaded attempts in this regard, the emphasis in diplomacy has currently shifted to ‘management’ of the problem with a view to normalising relations on other counts such as commerce et al instead of insisting on solving persistent political issues, for instance, the Kashmir issue with Pakistan, first.

Scenario with regard to preparedness, with respect to both internal and external problems, however, need not be too pessimistic, since, theoretically, transport accidents, terrorism *et al* have hitherto not been considered, ‘disasters’ *per se*; on account of increasing losses from such events however, the term ‘Disaster’ today is more inclusive in that the above enumerated, are being counted disasters, leading to mitigation policy in this regard and urgency with which they need to be reviewed. This is significant from the point of view of Risk Perception in the sense of resource allocation and prioritisation in development planning. Considering the seriousness with which they are being studied/perceived, comprehensive mitigation plans expectedly, would now be built -into wider

development planning for the future. The World Health Organisation says India scores high on a number of criteria for disaster-readiness. The country also earned praise from a global study for its immediate response to the tsunami disaster. India is among the five countries in South Asia that meet many of the criteria for disaster-preparedness and have a legal framework in place for the purpose, says the World Health Organisation (WHO).

The other four countries categorised by the WHO as having adequate levels of disaster-readiness are Bangladesh, Indonesia, Sri Lanka and Thailand. India, Myanmar, Sri Lanka and Thailand also have a legal framework in place.

Disaster management is now part of plan commitments, which means it is already a frontline development issue/priority, which improves its position with respect to resource allocation.

Also, awareness generation is already being attempted, with regard to retrofitting and earthquake resistant structures et al, which is a positive development. It also means government strategy towards disaster mitigation envisages active cooperation of people, which has been advocated as an essential requirement by concerned world bodies like the United Nations Development Programme (UNDP) and the International Red Cross.

Items high on agenda for administrative reforms, as articulated in the Tenth Plan, henceforth, for overall/comprehensive disaster management, would be, *development of capacity at local levels* through effective decentralisation, *improvement in law and order administration*, through modernisation and training, *urban development* with a perspective of disaster mitigation planning involving all stakeholders.

1.6 VULNERABILITY PROFILE OF INDIA

Vulnerability is defined as “*the extent to which a community, structure, service, or geographic area is likely to be damaged or disrupted by the impact of particular hazard, on account of their nature, construction and proximity to hazardous terrain or a disaster prone area*”. The concept of vulnerability therefore implies a measure of risk combined with the level of social and economic ability to cope with the resulting event in order to resist major disruption or loss. This susceptibility and vulnerability to each type of threat will depend on their respective differing characteristics. The 1993 Marathwada earthquake in India left over 10,000 dead and destroyed houses and other properties of 200,000 households. However, the technically much more powerful Los Angeles earthquake of 1971 (taken as a benchmark in America in any debate on the much-apprehended seismic vulnerability of California) left over 55 dead.

Physical Vulnerability

Physical vulnerability relates to the physical location of people, their proximity to the hazard zone and standards of safety maintained to counter the effects. For example people are only vulnerable to a flood because they live in a flood prone area. Physical vulnerability also relates to the technical strength of buildings and structures to resist the forces acting upon them during a hazard event. The Indian subcontinent can be primarily divided into three geophysical regions with regard to vulnerability, broadly as, the Himalayas, the Plains and the Coastal areas. The

topographic and climatic characteristics of each region make them susceptible to different type of disasters (study along with map given in the text).

Socio-Economic Vulnerability

The degree to which a population is affected by a calamity will not purely lie in the physical components of vulnerability but in *contextual*, relating to the prevailing social and economic conditions and its consequential effects on human activities within a given society.

Disparate capacities of people are exposed during disasters, which explains differential vulnerability/losses, which are explained in disaster literature as socio-economic vulnerabilities. Disaster effects are seen to be directly proportionate to the poverty gap and poverty intensity in the society/location as it is the poor that normally live in high concentration in marginal areas (unstable slopes, flood plains) with little infrastructure and fewer resources to cope. Research in areas affected by earthquakes indicates that single parent families, women, handicapped people, children and the aged are the particularly vulnerable social groups.

Bad land use planning in seismic and flood prone zones; unplanned and inadequate developmental activity in high-risk areas is a cause for increased losses during disasters. One million houses are damaged annually in India apart from high human, social and other losses. Urban growth and concentration of limited resources are realities of our times, while the rural sector faces lack of access. This compounds the problems of disaster vulnerability, especially during earthquakes. Informal settlements that house most of the urban and rural poor give way easily to physical stress, during earthquakes and floods, causing large scale fatalities during disasters such as earthquakes and floods. Single scale event fast turns into a compound phenomenon as the infrastructure gives way, leading to fire breaks, deaths due to electrocution, besides making response ever more difficult.

Following steps are imperative for the vulnerability assessment and preparedness in high-risk zones:

- Identification of various hazard prone areas. Preparation of detailed vulnerability profiles, mapping food insecurity, aviation hazard, landslide hazard etc.
- Vulnerability and risk assessment of buildings
- Developing disaster damage scenarios
- Developing technical guidelines for hazard resistant constructions
- Upgrading of hazard resistance of existing housing stock by *Retrofitting*, and,
- Crafting techno-legal regime to be adopted for infrastructure development.

1.7 ENVIRONMENTAL CONCERNS

Nature is an abundant resource but indiscriminate and rampant exploitation creates threat of destruction. The balance in nature, between man, animal and resources must be maintained/nurtured. Oil spills; forest fires or nuclear leaks can cause widespread and irreparable damage to the environment. Time cycles to renew

these resources are long and therefore measures for safety, maintenance and containment have to be strengthened.

Some of the environmental concerns are discussed as follows:

I) Global Warming & Extreme Climate

Global warming is going to make other small local environmental issues seemingly insignificant, because it has the capacity to completely change the face of the Earth. Global warming is leading to shrinking glaciers and rising sea levels. Along with floods, India also suffers acute water shortages. Earlier this year, the western state of Rajasthan was struck by drought. The steady shrinking of the Himalayan glaciers means the entire water system is being disrupted; global warming will cause even greater extremes. Impacts of El Nino and La-Nina have increasingly led to disastrous impacts across the globe.

Statistically, it is proven that the Himalayan glaciers are shrinking, and in the next fifty to sixty years they will virtually run out of producing the water levels that we are seeing now. This will cut down drastically the water available downstream, and in agricultural economies like the plains of Uttar Pradesh (UP) and Bihar, which are poor places to begin with. That, as one may realise, would cause tremendous social upheaval.

The changing environmental equilibrium as well as the diverse geographical setting of the region is leading to extreme weather conditions, often emerging as disastrous phenomena. A large number of deaths are periodically reported due to heat or cold waves, mostly from northern and coastal states of the country.

II) Agro-forestry

Sustainable management of the natural resources, of land, water and vegetation is essential to provide livelihood and environmental security. Ever-increasing demographic pressures coupled with developmental activities are causing tremendous pressure in the utilisation of these resources, leading to various kinds of ecological disasters, such as droughts, floods, cyclones, landslides, mine spoils, siltation of reservoirs, deterioration of water bodies, loss of biodiversity etc. In recent times, India has witnessed large-scale disasters such as frequent floods in the Indo-Gangetic and Brahmaputra plains, cyclones of the east coast and Gujarat, earthquakes of Uttarkashi, Latur, Jabalpur, Chamoli and Gujarat; and small-scale hazards, such as landslides in the Himalayan range, forest fires and desertification. These natural disasters have not only affected the economy but also taken a huge toll of human life. The increasing frequency of these disasters is the outcome of excessive biotic and abiotic interferences, which have resulted in considerable degradation of our natural resources.

Large scale deforestation across the globe in general, and under-developed as well as developing countries in particular, coupled with faulty management practices have resulted in various kinds of environmental degradations such as wind and water erosion; physical and chemical degradation of soil, water and biodiversity; and global warming. Deforestation is a slow onset disaster that contributes to other cataclysmic disasters. The rapid rate of deforestation in the tropics is the key factor in increasing the frequency of flood disasters. The greatest and the most immediate danger of deforestation is that gradually diminishing forested areas contribute or worsen other types of disasters such as accelerated

soil erosion, floods, drought and desertification. Deforestation of watersheds, especially around smaller rivers and streams increases the severity of flooding, reduces stream flows and dries up springs during dry seasons and increases the load of sediment entering the waterways. Most hazards in the Himalayan region emanate primarily from the natural processes of geologic, hydrologic and physiographic nature but are greatly affected by human interventions. Ever increasing demand for food and fodder has resulted in conversion of forests and exploitation of fragile and marginal lands into agriculture, migratory grazing and shifting cultivation practices. Mining and other human activities have led to over-exploitation of natural resources and consequently occurrence of ecological disasters. Rapid degradation of the Himalayan ecosystem is posing a potential danger to the greenery of the Indo-Gangetic basin, causing sporadic floods in some areas and drought in others. As a result, more than half of the geographical area of the country is now partially exposed to various forms of land degradation processes, such as water and wind erosion, salinisation, water logging, flooding, ravines, shifting cultivation, mining, quarrying, landslides etc. About two-thirds of the 142 million ha of agricultural land in the country is drought affected and about 40 million ha area is prone to flooding, of which about 8 million ha area gets annually flooded. It is estimated that about 56 percent of the country is susceptible to earthquake damages.

Human population of India has already crossed the 1 billion mark and the livestock population has reached a figure of 445 million. The per capita availability of cultivated land has declined over the years from 0.53 ha in 1950 to 0.15 ha in 2000 and is expected to further reduce to 0.12 ha by 2015 A.D. owing to population pressures. The requirements of food grains, fodder and fuel wood by 2015 A.D. have been estimated at 275 million tonnes, 1083 million tonnes and 235 million m³, respectively to meet the requirements of 1225 million human and 600 million livestock population indicating a shortfall of 73 million tonnes, 570 million tonnes and 195 million m³ of food grains, fodder and fuel wood at the current level of production. Besides, tremendous pressure on limited forest resources (63 million ha) and over-exploitation of land resources, particularly the marginal lands, might further aggravate land degradation and jeopardise sustainability of these resources beyond retrieval. Agriculture is the mainstay of the rural population in the country. There has been a spectacular increase in food production since independence, which has increased four times from 51 million tonnes in 1950-51 to 203 million tonnes in 2000-01 against three-fold increase in population. However, uneven development of agriculture across regions and also among different sections of the farming community has widened the disparity between resource-rich and resource-poor farmers and has resulted in low levels of productivity, especially in rainfed areas and degradation of natural resources. Of the 142 million ha cultivated area in the country, 63 per cent (89 million ha) is rainfed which accounts for only 45 per cent of the total food production while 37 per cent irrigated area (53 million ha) contributes 55 per cent to the national food basket. Moreover, agriculture on marginal and fragile lands in the hilly regions has resulted in enormous soil loss. The government has, therefore, accorded high priority to holistic and sustainable development of rainfed areas.

Diversification of land use systems is a necessary strategy for providing a variety of products for meeting varied requirements of the people, insurance against risks caused by weather aberrations, controlling erosion hazards and ensuring sustainable production of the land on a long-term basis. Agro-forestry is a viable

alternative to prevent and mitigate natural disasters. Besides, agro-forestry may be one of the important tools for disaster management. Agro-forestry may be defined as a technique of growing food crop annuals in association with woody perennials to optimise the use of natural resources, minimise the need for inputs derived from non-renewable resources and reduce the risk of environmental degradation. Agro-forestry, a multiple use concept of land management, is also capable of meeting the present challenges of shortage of fuel wood, fodder, fibre, timber, unemployment, environmental degradation, protection and improvement of wastelands and agriculture land. It has immense potential to ensure stability and sustainability in production and to provide ecological and economic security. In India, agro-forestry practices are dovetailed in the various developmental programmes/schemes in the Five Year Plans of Government of India, either to prevent natural disasters or to overcome the problems of the affected people during and after natural disasters. These programmes include, Flood Control/Management Programmes, Multipurpose River Valley Projects, Agriculture Development Programmes, Integrated Rural Development Programmes (IRDP), and National Watershed Development Programme for Rainfed Areas (NWDPRA), Forestry Development Scheme, Drought Prone Area Development Programme (DPAP) and Desert Development Programme (DDP). In other words, agro-forestry has a wide and diverse potential to protect the environment in varying agro-climatic situations. The major environmental functions of agroforestry may be summarised as:

- Control of soil degradation
- Control of desertification
- Flood control
- Drought moderation
- Reduction in the pollution of groundwater resulting from high inputs of fertilizers
- Increasing biodiversity in the farming system and watershed scale
- Increasing food security and thereby reduce pressure on land resources
- Checking deforestation and its associated impact on environment
- Reducing pressure on forests through on-farm supply of fuel wood, fodder and other forest products
- Reduction in the build-up of atmospheric carbon dioxide and other greenhouse gases
- Disaster prevention, rehabilitation and reconstruction.

III) Urban Risks

India is experiencing massive and rapid urbanisation. The population of cities in India is doubling in a period ranging just two decades studying trends in the recent past. It is estimated that by 2025, the urban component, which was only 25.7% (1991) will be more than 50%. The Ninth Five Year Plan estimates India's population size, by 2011, to be 1178.89 million with an urban population share of 32%. A characteristic feature of the urbanisation process is the increasing 'metropolitanisation.'

The trend indicates the continued urbanisation and metropolitanisation in the decades to come. Some of the urban agglomerations today accommodate more than 10.0 million people. Their number and sizes will continue to grow. Such concentration trends in the Indian demographic scenario would surely subject its cities to greater risk of damage to life and property in the event of disaster.

Urbanisation is increasing risk at unprecedented levels: communities are becoming increasingly vulnerable since high-density areas with poorly built and maintained infrastructure are subjected to natural hazard: environmental degradation, fires, flooding and earthquake. Urbanisation dramatically increases vulnerability, whereby communities are forced to squat on environmentally unstable areas such as steep hillsides prone to landslide, by the side of rivers that regularly flood, or on poor quality ground causing building collapse.

Nature of Risks

Most prominent amongst the disasters striking urban settlements frequently are, floods and fire, with incidences of earthquakes, landslides, droughts and cyclones. Of these, floods are more devastating due to their widespread and periodic impact. Fires have more localised effects but are very frequent in urban areas, leading to heavy losses of life and property.

Studies indicate that the loss of life and property due to floods has been increasing over the past decades. The prime reason for this is unplanned urban growth on the banks of the rivers and in other low-lying areas in the vicinity. The 2005 floods of Maharashtra bear testimony to this. Heavy flooding caused sewage system to overflow, which contaminated water lines. On August 11, the state government declared an epidemic of *leptospirosis* in Mumbai and its outskirts (Wikipaedia, 2005). These kinds of disasters can only be averted with the help of disaster conscious urban planning and development in flood sensitive areas.

Fires have emerged as a critical issue in urban planning due to the rising frequency of fire incidents, leading to huge losses. Fires are very common in slum and squatter settlements in large cities and in high-rise buildings. Fire fighting capabilities are indeed very essential, but these are mostly curative measures. More importantly than these, preventive measures are required to address this critical issue effectively and efficiently. Hence, for efficient control and management of fire disasters, it is essential to have, and implement, proper land use zoning, land subdivision, and building regulations.

1.8 DEVELOPMENT VS ENVIRONMENT

Developmental activities compound the damaging effects of natural calamities. The floods in Rohtak (Haryana) in 1995 are an appropriate example of this. Even months after the floodwaters had receded; large parts of the town were still submerged. Damage had not accrued due to floods, but due to water logging which had resulted due to poor land use planning. Ad-hoc land use decisions are a common practice in our system due to immense demand/ pressures for/on scarce land supply. In Punjab, highly chemicalised canal irrigation has led to large-scale salinisation and water logging as well as groundwater contamination. In other parts of India, mega development projects like dams displace millions

of people from their homes, and submerge tens of thousands of forest acreage and fertile soil. In a parallel development, many of these large dams, with their massive reservoirs, may have induced or enhanced seismicity in quake-rocked areas such as Koyna in Maharashtra 1967.

Disasters have come to stay in the forms of recurring drought in Orissa, the desertification of swathes of Gujarat and Rajasthan where economic depredations continuously impact on already fragile ecologies, and environmental degradation in the upstream areas of Uttar Pradesh and Bihar. Floods in the plains are taking an increasing toll of life, environment, and property, amplified by a huge population pressure.

The unrestricted felling of forests, serious damage to mountain ecology, overuse of groundwater and changing patterns of cultivation precipitate recurring floods and droughts. When forests are destroyed, rainwater runs off, causing floods and diminishing the recharging of groundwater. The spate of landslides in the Himalayas in recent years can be directly traced to the rampant deforestation and network of roads that have been indiscriminately laid in the name of development. It is by now a well-established fact that human-made structures, including canals, dams and embankments, have worsened the flood situation in the country (Menon and Kalmadi).

Destruction of mangroves and coral reefs has increased the vulnerability of coastal areas to hazards such as storm surges and cyclones. Commercialisation of coastal areas, particularly for tourism has increased unplanned development in these areas, which has increased disaster potential, as was demonstrated during the Tsunami in December 2004.

Risk due to Environmental Stresses: Example of Delhi

Every ninth student in Delhi's schools suffers from Asthma. Delhi is the world's fourth most polluted city. Each year, poor environmental conditions in the city's informal areas lead to epidemics. In 1995, 423 lives were lost due to dengue fever. Delhi faces air pollution problems due to three major sources: transport, domestic, and industrial sectors. The maximum contribution is from vehicles (72%), which are growing rapidly. There are many factors associated with urban growth pressures. The current population of Delhi is about 13.8 million and is estimated to rise to 22.42 million by 2021. The major cause anticipated for this rise is the high in-migration rate due to better employment opportunities in Delhi in comparison to neighbouring states. The number of registered vehicles has also increased nine-fold since 1970/71. This rise in registered vehicles is primarily due to the increase in personalised vehicles, which, in turn, has resulted in high pollution loads and large-scale congestion in Delhi. The fast rising trends of industrialisation and trade and commerce has almost increased the per-capita income of Delhi by 60% since 1993-94.

Delhi has one of the highest road accident fatality ratios in the world. In many ways, Delhi reflects the sad state of urban centers within India that are exposed to risks, which are misconstrued and almost never taken into consideration for urban governance.

Pressure on land for housing purposes has increased, Agriculturally productive land is being used up for residential purposes, which is affecting agricultural employment and productivity adversely. There is much cultivable wasteland lying fallow and proposed to be acquired for industrial activity in the future. Water is major worry. The Delhi government is eyeing groundwater resources of surrounding areas in Uttar Pradesh, such as Meerut, which could mean political trouble in coming times. Engineers contend that water in Meerut if left unutilised could go saline and affect good water further. Arguments on the other side would have their own logic.

According to SoE (2001), sustainable development is the most important concern in Delhi's current environmental crisis. As per SoE (state of environment) reporting, Delhi lacks an integrated system and a relevant database to measure the environmental quality, to manage it, and also to evaluate the effectiveness of the management actions. Until such knowledge gaps are plugged, the action plans to ensure a sustainable Delhi cannot be initiated.

Safety Factor for Human Existence

The quality of life of an individual is determined largely by socio - economic and physical environment. From a different perspective, enhancing quality of life necessitates minimising frequency and intensity of disturbances to average human existence. The core issue therefore, is to reduce the vulnerability of the community. It is also obvious that the nature of the vulnerability of the community is largely dependent on the social structures, the physical structures and the economic assets.

The core issue therefore becomes promoting measures that ensure safety of individuals against such vulnerability, which often gets manifested as hazards in form of accidents, illnesses and other factors that could contribute to mortality.

Need for Action

In the contemporary context, a broader approach is required which not just looks into technology, adaptability and the cost aspects but also on how these aspects could be imparted effectively to the community. The users in general need to appreciate the high priority that needs to be given to *safer living*.

The urban planning, development and management processes have traditionally been dealt with in a sectoral manner. The safe city concept, particularly due to its participatory approach, would try to bring about strategic integration of various urban sub-sectors and present an integrated development framework. This is a need that has also been stressed upon by the National Commission on Urbanisation Working Group on Physical Planning in India, in stating that “it also provides for checking costs compared to the benefits of alternative packages of projects aiming at pragmatic goals, and permits a much tighter and more efficient implementation control and evaluation of large scale innovations “.

Risk reduction efforts need to be based as much in urban governance and management as in *urban planning*. Good urban governance includes the state, but transcends it by including the private sector and civil society. All three are critical for sustaining human development. The state creates for the same,

conducive political and legal environment. The private sector generates jobs and income and civil society facilitates political and social interaction, mobilising groups to participate in economic, social and political activities. Because each has its weaknesses and strengths, a major objective of our support for good governance is to promote constructive interaction among all three.

Significantly, post- modernism is impacting urban planning in developed countries. While modernism dictated city design to increase industrial efficiency and tackle housing shortage, the intangibles like isolation, alienation, and stratification of cities *et al* were ill considered. This led to high-density settlements around industrial areas. Modern cities developed globally in the post- war period as part of the construction boom. Not much thought was given to city planning, rather to money minting by the construction sector. Indigenous practices were sidelined, indigenous wisdom ill considered. This went along with developments in mass transportation, which furthered the trend. Post- modern is a converse trend. It seeks to rediscover the city in its historical heterogeneous form so as to revisit the golden age where people had enough space for health and recreation. City is not uniform but variegated; an expression of diverse cultures and traditions that subsist within it. To explain postmodern impact on urban planning in the words of, David McLeod, “In the case of post-modernist planning, “pluralistic” and organic” strategies are sought for dealing with urban development. Under this “new” way of thinking, urban development is a “collage” of highly differentiated spaces and attention is given to “other worlds” and “other voices”. In the context of urban planning post- modernism implies shift to “participatory planning processes and to compact urban forms, appreciation of historic spaces and return to traditional urban forms (as opposed to modernist belief in the supremacy of new forms); a search for urbanity, urban identity and cultural uniqueness (in lieu of modernist functionalism and efficiency); mixing of compatible land uses and flexible zoning (rather than orderly land use segregation, enforced through strict zoning); pursuit of human use pedestrian friendly, higher density, urbane compact forms” (Arbor, 2003). The arguments draw mainly on Ingelhart’s (1997) theory of post-modernism in cultural ‘transition’.

Some key ideas on post-modernism could be summarised as: diversity in the landscape, local context; renewal and regeneration, and coping with conditions. Within the framework of safe urban planning and management, the traditional wisdom of urban planning that was evolved during the historic Vedic period in India needs to be revived and imbibed in the current practices. The concept of the ‘Vastu Purusha Mandala’ that dealt with the habitat space as a living organism was very conscious of the fragile relationship between development and environment, and this consciousness led to design and development parameters that were far safer than those followed today. It is especially pertinent as high-density settlements increase, so does the quantum of likely losses. Housing has not taken the disasters perspective in structural stipulations, adequately. Interestingly/conspicuously, old architecture still manages to withstand earthquakes in old city areas.

Goodchild (1999) has prepared an extensive chart of the differences between *Modernism* and *Post-Modernism*. Parts of it can be selected to highlight differences between these two approaches to planning.

DIFFERENCES BETWEEN MODERNIST AND POST-MODERNIST APPROACHES TO PLANNING		
	MODERNIST	POST-MODERNIST
Concepts of the City	the city as an object; as mass housing	the city as landscape, as an expression of social diversity
Themes in Urban Design	continued emphasis on lower densities and sunlight; functional zoning; mixed flats and housing	more diversity, more emphasis on local context, mixed land uses
Themes in Strategic Planning	redevelopment of slums; controlled expansion through suburbs, new town and greenbelts	renewal and regeneration, containment
Decision Making Style	comprehensive, either blueprint, “unitary” (1940’s-1960’s) or “adaptive”	piecemeal, “coping with conditions

Urban populations are growing rapidly and the situation is most alarming, since it is taking place in the absence of well-planned and structured settlements. The civic services and the general quality of the settlements is of an abysmally low standard, as a result of which the urban communities are being subjected to an ever increasing risk of natural as well as technological disasters. In such a situation, the only viable way to a safer living is through preparedness to face disasters, since hazards cannot be completely controlled. This requires concerted efforts on part of the government agencies, voluntary organisations, and most importantly, the community itself. Risk awareness has to be created, and preparedness plans formulated, so that the urban populace may live a safer life.

It has been realised that with the introduction of relatively simple, effective risk reduction measures (those which ‘reduce vulnerability and increase capacity’) into existing urban improvement practices, and those which involve communities in decision making, degrees of protection can be afforded within the most vulnerable urban settlements, which in the long term contribute to both protecting lives and enhancing livelihoods, thus reducing poverty.

1.9 CONCLUSION

Disaster is an unwelcome guest. It disrupts normal life and puts the developmental targets out of gear. Disasters can result from natural or man-made causes or a combined effect of both. The impact of disasters are felt more strongly when the affected community is more vulnerable, either in terms of physical exposure or vulnerable socio-economic conditions. Therefore disaster management is a *public administration issue* since disaster mitigation has to be achieved in time through public policy. In line with post-modernism, sustainability of progress/development is being accorded primacy currently. It could be termed, coming full circle in some ways. Thus development, as is the perception now, in itself may not be sustainable if it runs counter to environmental concerns. Environmental concerns are therefore gaining importance, since environmental factors are increasingly having the increasing adverse impact of the frequency

and intensity of disastrous events. Sustainable development is being considered largely in terms of sustainable city growth. More than rural development, it is urban development that has to be stabilised/regulated through well-meaning/planned policies. Rural development partakes by way of spin off effects from public good externalities from nearby/surrounding urban areas, as rightly pointed out in the Tenth Plan. Areas of concern are urban risks, since the concentration of populations in urban areas is constantly increasing with inadequate corresponding investment in safety measures. Disaster management needs to be seen in a developmental context and pre-emptive action needs to be taken to reduce the impact of disasters.

1.10 KEY CONCEPTS

Biological Hazards

- : Processes of organic origin or those conveyed by biological vectors, including exposure to pathogenic micro-organisms, toxins and bioactive substances, which may cause the loss of life or injury, property damage, social and economic disruption or environmental degradation. Examples of biological hazards are outbreaks of epidemic diseases, plant or animal contagion, insect plagues and extensive infestations (ISDR).

El Nino

- : As explained in the Discovery Encyclopedia (*Series One*), in a year with normal weather pattern winds blow westward and push the warm surface water towards the western Pacific Ocean. In some years when the winds weaken, warm water spreads almost over almost the entire tropical pacific ocean. This warm water prevents the upwelling of cool, nutrient rich deeper water along the east coast of the pacific. Fish die and severe climate change takes place. Rain follows the warm water eastwards causing drought in Southern Asia and Australia and Floods in North and South America.

Environmental risks

- : Release of industrial effluents in rivers, green house gases in the atmosphere, et al pose environmental risks like release of harmful chemicals in water bodies that harm aquatic life, contaminate drinking water, disturb the PH balance of soil et al. Excess of Green house gases lead to global warming that is manifest and increasingly being talked about now.

Geological hazard

- : Geological hazards include internal earth processes or tectonic origin, such as earthquakes, tsunamis, volcanic activity and emissions as well as external processes such as mass movements: landslides, rockslides, rock falls or avalanches, surface collapse, expansive soils and debris or mud flows. Geological hazards can be single, sequential

or combined in their origin and effects floods, debris and mud floods; tropical cyclones, storm surges, thunder/hailstorms, rain and wind storms, blizzards and other severe storms; drought, desertification, wild land fires, temperature extremes, sand or dust storms; permafrost and snow or ice avalanches (ISDR).

Hazard

- : A precise definition of hazard is difficult. The International Secretariat of Disaster Reduction has defined hazard as a potentially damaging physical event, phenomenon or human activity that may cause the loss of life or injury, property damage, social and economic disruption or environmental degradation. Hazards have both natural and human components. For example, flood problems may be exacerbated by fluctuations in climate, such as increased storm frequency, and also by certain human activities, such as land drainage and deforestation. The loss of life caused by a tropical cyclone will depend to some extent on storm severity but it can be greatly reduced by means of a warning system. Attempt has continually been made to employ science and technology to harness nature and better living conditions.

Hydro meteorological hazards

- : These hazards are of *atmospheric, hydrological or oceanographic nature*. Hydro-meteorological hazards include: floods, debris and mud floods; tropical cyclones, storm surges, thunder/hailstorms, rain and wind storms, blizzards and other severe storms; drought, desertification, wild land fires, temperature extremes, sand or dust storms; permafrost and snow or ice avalanches. Hydro-meteorological hazards can be single, sequential or combined in their origin and effects (ISDR).

La Nina

- : La Nina is the reverse of El Nino. At the end of December, westbound winds get stronger than usual, pushing warm water further west than normal. This action allows hurricanes crossing the Atlantic to move farther west and to become more powerful than usual.

Man-made disasters

- : Accidents, chemical spills nuclear disasters are man made disasters since they are caused by human activity.

Natural disasters

- : Floods, Cyclones, Earthquakes, etc. are natural disasters since they originate in natural phenomenon/ processes.

- Physical vulnerability** : Vulnerability of the landmass to natural hazards such as earthquakes owing to natural factors is explained as physical vulnerability. Vulnerability of the physical landscape as well as the infrastructure is included in physical vulnerability.
- Socio-economic vulnerability** : Poverty predisposes people to disaster losses/ suffering. The poor mostly inhabit flood prone/ multi-hazard prone areas perforce. These areas are cheaper to access and also provide certain advantages like fertile land near volcanoes and flood plains. Poverty also reduces resilience to epidemics that hit an area along with/in the aftermath of a disaster.
- Urban risks** : Risks created due to specific conditions in the urban environment are termed urban risks. For example, threat of fire outbreaks, epidemics due to congestion and poor drainage in slums are urban risks.

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1.12 ACTIVITIES

- 1) List and discuss the natural disasters that your city or village is prone to. Identify the sections of society most likely to be affected in a probable disaster.
- 2) List and discuss man-made disasters that your city or village is likely to experience. Identify disasters that can happen due to failure of man-made structures or technology as a secondary result of natural disasters.

UNIT 2 DISASTER MANAGEMENT – RECENT TRENDS

Structure

- 2.0 Learning Outcome
- 2.1 Introduction
- 2.2 Overview of Recent Trends in Disaster Management
- 2.3 Disaster Management in Mountainous Areas
- 2.4 Disaster Management in Riverine Regions
- 2.5 Disaster Management in Coastal Regions
- 2.6 Strands in Disaster Management
- 2.7 Conclusion
- 2.8 Key Concepts
- 2.9 References and Further Reading
- 2.10 Activities

2.0 LEARNING OUTCOME

After studying this Unit, you should be able to:

- Explain the recent trends in disaster management worldwide;
- Identify requirements in disaster management with respect to specific natural hazards; and
- Highlight the significance of disaster management.

2.1 INTRODUCTION

Disasters have been increasing in frequency and intensity over the past few decades. This has been directly linked to the nature and extent of human activities taking place in erstwhile natural surroundings. Human populations are settling in areas hitherto left untouched due to those being declared hazard prone. This trend of increasing disasters has necessitated changes in the disaster management systems too. The trends in disaster management can be studied with reference to vulnerabilities of specific regions in India and the requirements of disaster management in those areas, viz. the Himalayan regions, the Riverine regions and the Coastal regions. The chief emerging requirement in disaster management is sustainable development practices, factoring vulnerabilities of each specific geographic region in development policy. In this Unit, an attempt is made to apprise the learners with the recent general trends in disaster management, which pertain to all disasters- natural and man made- affecting us today.

2.2 OVERVIEW OF RECENT TRENDS IN DISASTER MANAGEMENT

Development Perspective to Disaster Management

Member States of the United Nations and other States met at the World Conference on Natural Disaster Reduction, in the city of Yokohama, Japan, from 23 May to 27 May 1994, in partnership with non-governmental organisations, international organisations, the scientific community, business, industry and the media to deliberate within the framework of the International Decade for Natural Disaster Reduction, on immense human suffering that has been incident over the past years, globally, owing/due to natural disasters. It acknowledged increasing human vulnerability to disasters, especially of the poor and disadvantaged groups that are least equipped to cope with crises of such serious magnitude. The *correlation* between disaster prevention, mitigation, preparedness and relief with sustainable development policy in general is only too evident to be any longer overlooked. Hence, the three interrelated concerns of disaster management, (encompassing mitigation, prevention and preparedness), environmental protection and sustainable development need to be *simultaneously addressed* through ‘all-encompassing’ policy in this regard, for protection of life and preservation of development in the short run and more importantly, for future generations over the long run. Therefore, nations have to rework development strategy to some extent to incorporate these concerns in mainstream development planning, since these have hitherto been addressed as contingent measures, not mainstream measures, that are treated consistently through adequate policy responses in this regard on the part of governments. There is another significant ramification to disaster management, which needs to be taken cognisance of. The need for international cooperation for integrated action to combat the threat could not be understated. Since natural disasters are not limited by natural boundaries, regional and international cooperation is imperative to build capacity of governments at regional/global scale(s) to combat the threat concordantly. Particularly, technology transfer to developing countries by the developed to build capacity to fight disasters was emphasised as an imperative in the conference. To that end, bilateral and multilateral assistance and financial resources need to be mobilised by developed countries to support the efforts of developing countries towards disaster preparedness and mitigation. Hence, technology transfer to developing countries along with corresponding training should be attempted as a necessary requirement in concerted disaster management.

Experience with natural disasters over the past few years has led to the realisation that disasters are not one off events, rather a result of concretised vulnerabilities, which need to be addressed/treated over time through sustained public policy in this regard. *Positive correlation* has been unearthed through empirical researches between disaster vulnerability and socio-economic disadvantages stemming from adverse social positioning due to poverty, unemployment, lack of access to basic facilities like education, health and hygiene, as has been experienced in recent experiences with disasters.

While disaster response is limited to short-term relief, long-term strategy is imperative to curb disaster losses over time, by way of reducing vulnerabilities of disadvantaged sections; women, children and the disabled in particular. The same is achieved through building community resilience by way of targeted

offensive at particular debilitating factors such as poverty, unemployment and other forms of social and economic deprivation, which create/increase susceptibility to losses. *Prevention* aims at nipping disaster potential in the bud, hence is essential for safeguarding development. Hence, disaster vulnerability can be reduced overtime through planned interventions towards building resilience through public policy. This necessitates *consistent* attempts at vulnerability reduction through plan budget allocations for disaster mitigation with a view to integrating disaster management with mainstream development planning.

In its tenth year of publication, The World Disasters Report, 2003, brought out by the International Red Cross and Red Crescent Societies, called for disaster risk reduction targets to be added to the international development goals for 2015 and beyond. These targets could include reducing by half, the number of people killed and affected by disasters and increasing the number of governments with dedicated plans and resources for risk reduction programs.

The World Disasters Report, 2003 contains criticism of over-reliance on high-profile aid operations, to save lives when long-term investment in disaster mitigation at the local level have proven to be much more effective. No international aid effort was necessary when the worst hurricane since 1944 hit Cuba in 2002, but only five people died. Local mechanisms were in place to evacuate 700,000 people from Havana and other threatened areas. Of the 53,000 people rescued from the floodwaters in Mozambique's two great floods, local people saved 34,000.

Building Community Resilience: Stress on Social Capital

The follow up report, that is, the World Disasters Report, 2004, published by the International Federation of Red Cross and Red Crescent Societies has 'community resilience' as its central theme. Community involvement and active participation in vulnerability reduction efforts are being emphasised as essential strategy for effective policy towards vulnerability reduction. The Report notes that, building community resilience for coping with disasters is the right strategy to adopt, instead of misdirected international aid, most of which does not reach the needy. It has been seen that people have been able to survive most adverse conditions on the strength of their capacities. Therefore, the aid community is advised to concentrate on the *capacities* of the vulnerable communities rather than their *vulnerabilities* and aim at building/reinforcing the same as part of practical strategy to counter- effect vulnerabilities and help people successfully combat disasters. In the same vein, the Report calls for dispelling the myth of *helpless* victims; hence, the requirement of study of the resources and resilience of vulnerable communities to discover ways to augment them to further facilitate/strengthen self- help on the part of *at risk* communities. In Swaziland, HIV/AIDS and drought are endemic. But Chief Masilela informed Red Cross, that his community would prefer irrigation and seeds, not food aid, to grow crops, craft their own recovery and retain their dignity. A woman in Mumbai, to quote another instance, has chosen to reside in a low cost dwelling in a flood prone area because that would leave her money to finance her daughter' education (World Disasters Report, 2004).

This is following realisation of the fact that active cooperation of communities is vital for achieving real gains in both policy formulation and implementation. Synergetic partnership between the government and people is essential to have a

clear understanding, for instance, of the cultural characteristics and organisational requirements in different societies/situations, respectively and accordingly, specific policy requirements, as per assessed particularities/peculiarities, following insights into a society's behaviour and its interactions with the physical and natural environment, for example, shifting cultivation among tribes in North East or burning charcoal for cooking among tribal communities and poorer segments generally, which were recently indicted as major causes of global warming. This is envisaged as a practical strategy to target vulnerabilities through 'relevant' policy, based on articulate concerns by people themselves, in keeping with the particular requirements of that place. The same is crucial for the success of any policy measure, particularly planned strategies for environment protection, where community involvement has proven to be a necessary requirement.

There is need for awareness of the fact that unplanned urbanisation is creating newer risks. It creates a case for general upgrading of administrative services as a long-term mitigation strategy, particularly building capacities at the local level with active participation of the people, since, as borne out by experience, national, or even international interventions are likely to be less effective in tackling persistent problems like poor schools, poor quality housing, sanitation, drainage, etc. The same has been realised in successive experiences with disasters around the world, particularly, during the Bam Earthquake, when 34 search-and-rescue teams from 27 countries flew to the city and saved 22 lives but, meanwhile, local Red Crescent teams pulled 157 people alive from the rubble, using far fewer 'sniffer' dogs. *Investing in local response capacities therefore saves lives and money;* which is the main inference (*Ibid*).

Post- Modern Trends

Post-modern cultural values premised on *democratic pluralism* and *quality of life* is gaining credence in the post-industrial society facing the ills of development. It is a political science conception that marks a sharp breakaway from earlier approaches towards governance and towards life in general, so much so, that it could be termed revolutionary. Precisely, the trend is towards people-centered governance, which is *participatory* and accountable, public policy oriented towards sustainable development, in that *pluralism* and *decentralisation* are especially espoused virtues; in fact, preconditions for democratic governance, as is 'diversity' in all its forms which should be factored in public policy, as a necessary requirement for/in good governance. The chief divergence in post-modernism from earlier approaches is, that aesthetic and spiritual aspects of life are being emphasised against purely material. In the same vein, protection of ecology is the central theme in sustainable development. Apart from secular policy, post- modern influences can be discerned in religious and cultural spheres as well. It is chiefly manifest in the West's changed attitude towards 'indigenous cultures' which is different from the insistence on 'the one right way', which was presumably Western. In disaster management accordingly, the trend is towards respecting indigenous resilience strategies and even construction methodology, which is in line with post modernism. Merit is being recognised in traditional building knowledge such as in Marathwada, India. Malwad (timber under structure) constructions offer several good examples of stone masonry. Many traditional artisans possess skills in traditional building techniques such as good quality stone masonry construction, which withstands earthquakes reasonably well. Common practice is to discard local knowledge as inferior/unscientific.

However, following studies in indigenous practices, there is increasing ‘voice’ for incorporating the same in modern engineering knowledge to find lasting solution to physical vulnerability of infrastructure in disaster prone areas (Jigyasu, 2002).

For organisational theory, post-modernism implies a shift of emphasis towards teamwork rather than strict stipulations of hierarchy with undesirables like status differentiation, monolithic order *et al*; cooperation rather than compliance, participatory management rather than monocentric order, peoples’ participation, especially regarding choice in service provisioning, etc. To reiterate, this applies to both secular and religious organisations. This is partly a result of growing suspicion towards monocentric authority whereby public and private interests are often confused/diffused; former unknowingly acting as a camouflage for the latter and similar suspicions, not wholly unfounded. Post modernism argues for more ‘political space’ for articulation of myriad concerns in/which in practice make up public interest. Post- modernism, in one word, epitomises harmony/balance in the physical, cultural, material and spiritual senses.

Sustainable Development

Akin to the spirit of post- modernism, sustainable development, in simple words, means development that can be sustained over time, implying, benefit to the present as well as future generations. This virtue would obtain only if development has been ‘balanced’ with respect to *other/related* concerns. For example, a dam would lead to power generation, which is its central purpose. But public policy would demand consideration of ancillary/related issues, or ‘other concerns’ such as impact on ecology, displacement of population, socio- economic impact of proposed measure, etc., which would ultimately count in/decide its success. The Brundtland Commission (1987) defines sustainable development as “development, which meets the needs of the present without compromising the ability of future generations to meet their own needs”.

According to H. Ramchandran (1990), sustainable development is the latest ‘end’ in a linear continuum of growth concepts. Understanding of development has progressed from the “simple but nebulous notion of *progress to growth* (of GNP), to *growth with equity* in vertical and horizontal dimensions, to the *physical quality of life* and currently to *sustainable development or eco development*.” The latter concepts have added to the former ones, not replaced them and hence have developed as inclusive ideas adding newer dimensions to the understanding of sustainable development. Thus the concept of sustainable development encompasses all previous ideas, viz. growth, equity, etc., with the added dimension of sustainability for *future use*. Sustainable development has both *ethical* and *utilitarian* value in that preservation of environment is as much a duty of the present generations as a right for future generations, to lead disease free and accidents/disaster free lives and touch higher levels of economic development.

Sustainable development is also a *generic* idea/concept in that development *per se* could be appreciated, applying the premise of sustainability. This broad understanding is credited to social science theorists who are increasingly evaluating policy outcomes on the basis of its *viability* in the cultural, political, socio economic senses. To elucidate, globalisation has cultural impact, besides economic and political, which needs to be studied to understand its potential for apocalyptic change to then question its desirability. The question would be; is a

particular change sustainable? Context could be given here of welfare economics, where gainers and losers from/in each proposed measure, are identified to compute *net social welfare* derived/proposed from the measure. All ramifications of policy viz. political fallouts, economic impact, pertaining to distributional aspects, impact on ecology etc. is considered/possibly measured to judge the sustainability, hence, desirability of a measure.

Science and Technology for Disaster Management

Currently, the *All Hazards Approach* is being emphasised in America as a holistic strategy to combat disasters. The understanding that underlines this approach is that all disasters, irrespective of type can be dealt with on the basis of common knowledge/expertise based on academic researches and preparedness, based on information derived thus and constant updating of such knowledge. Its chief reliance is on science and technology for capacity creation. It relies on creating capacity through R&D in science and technology to deal with any and every kind of disaster(s), ranging from earthquake to terrorism, based on and converting R&D to practice readily to attempt new and innovative ways to deal with crises, whether natural and/or man made. For this purpose collation of science and technology expertise scattered across institutions within the aegis of a single agency is necessary that acts as clearing house as well as a coordinating agency with respect to myriad disciplines/ concerns, even within science involved in disaster management.

This approach lends a fresh perspective to disaster management in that policy in this regard, never at any stage, suffers from redundancy. Disaster management requires a multidisciplinary approach, hence, the need for a single coordinating/ overseeing agency.

The Sub-Committee on Disaster Reduction (SDR) of the National Science and Technological Council (NSTC) in the United States has articulated six important areas that require continued energy and appropriate resources to meet the challenges of hazard risk reduction. The same may be pertinent for all countries facing the threat of terrorism, which is the single most horrifying disaster possibility in recent times.

- 1) Leveraging existing knowledge of natural and technological hazards to address terrorism events
- 2) Improve hazard information data collection and prediction capability
- 3) Ensure the development and widespread use of improved hazard and risk assessment models and their incorporation into decision support tools and systems.
- 4) Speed the transition from hazard research to hazard management application
- 5) Increase mitigation activities and incentives
- 6) Expand risk communication capabilities, especially public warning systems and techniques

Kenneth Bloem of the John Hopkins University Center for Bio-Defense Studies has identified a number of parallel streams where preparation for terrorist incidents can be enhanced by decades of research in traditional disaster areas:

- Wildfires and Arson

- Accidental explosions and bombs
- Floods and dam sabotage
- Chemical spills and chemical attacks
- Epidemics and biological terrorism

Ultimately, effective public policy for disaster management is a result of deliberation/cooperation between scientists, decision makers and informed citizens. It should also be remembered that limiting disaster management to a technocratic perspective would exclude many pertinent issues that fall within the domain of social sciences, for example, greater relative vulnerability of the poor and the socially marginalised.

2.3 DISASTER MANAGEMENT IN MOUNTAINOUS AREAS

The Himalayan range is one of the highest mountain chains in the world. Himalayas, also known as the Extra-Peninsula, are one of the three main geological divisions of India. The other two divisions are the Peninsula and the Indo-Gangetic Plains.

Geographically, the Himalayas extend for about 2400 km, from western Syntactical bend-near Nanga Parbat to eastern Syntactical bend-near Namcha Barwa, and exhibit a curvilinear disposition.

The Himalayas are classified, from west to east, into four regions:

- i) Punjab Himalaya - area between Indus and Sutlej rivers.
- ii) Kumaon Himalaya - area between Sutlej and Kali rivers.
- iii) Nepal Himalaya- area between Kali and Tista rivers.
- iv) Assam Himalaya- area between Tista and Brahmaputra rivers.

Presently, Himalayas are divided into three regions: the Western, Central and Eastern Himalaya. Nepal Himalaya constitutes the Central Himalaya and the mountainous area to its west and east are known as Western and Eastern Himalaya respectively. Thus the Western Himalaya includes Punjab and Kumaon Himalaya of Burrad et.al. covering Himachal Pradesh and parts of Jammu and Kashmir, and Uttarakhand.

The Uttarakhand Himalaya extends from Tons river in the west to Kali river in the east and covers an area of about 46,480 sq.km. Garhwal and Kumaon are the two main regions of Uttarakhand Himalaya.

Major landforms of Uttarakhand Himalaya are arranged in three parallel ranges:

- i) Great Himalaya (GH) lies south of Tibetan Plateau and contains the highest elevations.
- ii) Lesser Himalaya (LH) lies south of GH and has elevations between 10,000 and 15,000 ft.
- iii) Outer Himalaya (OH) lies south of LH and borders Gangetic Plain. Altitude varies between 2000 and 3000 ft. and has geomorphologic depression-the Dun.

Himalaya, in Uttarakhand, can also be divided into four broad geological zones, each having distinct geological history. These are:

- i) **Tethys Himalaya Zone (THZ):** exposes mainly fossiliferous rocks of Phanerozoic and lies north of the central axis (line of highest elevation of CH)
- ii) **Central Himalaya Zone (CHZ):** contains crystalline and metamorphic rocks which are thrust over the sedimentary sequences of lesser Himalaya along the Main Central Thrust (MCT)
- iii) **Lesser Himalaya Zone (LHZ):** exposes largely sedimentary, unfossiliferous sequences of Proterozoic period, which are disposed in distinct tectonic belts between the MCT and Main Boundary Fault.
- iv) **Outer or Sub Himalaya Zone (OHZ):** This is the southern most zone and exposes sedimentary sequence predominantly of Neogene period. The OHZ lies between MBF and Foot Hill Fault (FHF). FHF is the boundary between the outer Himalaya and Gangetic Plain.

Hazards in the Himalayan Eco-System

The Himalayan region, characterised by a wide variation in topography, geology, soil, climate, flora and fauna and various ethnic groups having different socio-cultural traditions, is a unique geographical entity. All major types of disasters, prominently, earthquakes, landslides, avalanches, flash floods and forest fires, and soil erosion hit this region. In high altitude regions (over 3500m), snow avalanches and glacial lake outburst floods (GLOFs) are common threats while flash floods; landslides and mudflows assume disastrous dimensions in the altitude range from 500 to 3500 m. (Bahadur, 1998).

The Himalayan region with soft weathering rocks, covered with a thin layer of soil is becoming increasingly susceptible/ sensitive to landslides. Such landslides cause disruption, create blockades in the road network and river system, which in turn, cause floods. Interference in the environmental system in the form of indiscriminate chopping down of trees has disrupted the ecological balance, thereby resulting in loosening of the soil and consequent soil erosion and frequent landslides. Over a period of time the eroded soil begins to settle down on the riverbed resulting in shifting of the river. This is one of the major reasons for floods.

A very befitting example in support of the above statement is the *slash and burn* cultivation technique called ‘JHUM,’ which is practiced in the hilly areas. Development of the communication system by means of road construction and mining of rich mineral reserves over a period of time has destroyed the dense natural evergreen forest cover.

Report of ‘The Central Team on Landslides in Hill Areas of Uttar Pradesh’ during 1998 indicates the damages caused due to hailstorms, heavy rains and the resulting crop damage in the state during the months of May to September 1998. The report observed that the Himalayan ecology is extremely fragile and falls under

Seismic Zone V. Another problem is the rapidly growing urban centers within the Himalayan belt being important tourist basins, both nationally and internationally. They have grown rapidly, often with very little attention to building by-laws and planning principles, which are almost non-existent at this point!

Other main causes for the landslide have been unplanned and unscientific development activities in the hilly areas, unchecked organised crime that is involved in illegal felling of trees, poaching, construction and urbanisation which have caused ecological imbalances in the Himalayas. Increasing pressure of human and animal needs, rapid denudation, biotic interference etc. have further aggravated the problem of soil erosion, avalanches, flash floods etc.

Every year, landslides in the region kill dozens of people and cause widespread damage to several villages such that they have now become almost unfit for habitation. Landslides have caused havoc and the terraced fields have been destroyed that cannot be easily renovated or made productive again. The road network remains closed for long periods causing indescribable hardship to the villagers who get their basic supplies and provisions from the neighbouring areas. The water source is also disrupted due to landslides as they are breached from several places and are choked by the debris. The sediment load of rivers has also increased considerably, causing problems like irregular courses and frequent breaching of the banks, which create uncertainty regarding the river course and unexpected floods. More so, the water channels are affected from the up hillside due to which the villagers are devoid of water for irrigation purposes. This adversely affects agriculture production in the region.

As explained by Jagdish Bahadur, related problem is that of soil erosion. The large fluctuation in temperature during the annual cycle generates a severe freeze - thaw cycle resulting in greater erosion of soil and rock formations. Another important factor for excessive soil erosion is very intense monsoon rainfall (from a few hundred mm to thousands of mm in 24 hrs.). Measured sediment yields range from less than one ton/ha/year to over 100 tons/ha/yr. It is normally assumed that the sediment yield of Himalayan rivers is about 16.4 ha.m / 100 km²/yr, which is about three to five times higher than the value assumed by the designers of water resource storage projects. These estimates are not totally representative of the sedimentation regime and represent only the *suspended sediments*. No quantitative estimates are available for *bed load sediments*, which play an important role for high mountain turbulent streams. Hence, we have to develop strategies for sediment harvesting (seclude sediments for other uses) for efficient water resources management for harmonious development of the region.

The region's agriculture and power generation are fully dependent on the freshwater supply fed by the discharges of the Himalayan glaciers. In the Ganga river only, the loss of glacier melt water would reduce July-September flows by two thirds, causing water shortage for 500 million people and 37 percent of India's irrigated land. The region's agriculture and power generation are fully dependent on the freshwater supply fed by the discharges of the Himalayan glaciers. In the Ganga river only, the loss of glacier melt water would reduce July-September flows by two thirds, causing water shortage for 500 million people and 37 percent of India's irrigated land. Perennial rivers could be changed into seasonal streams giving rise to freshwater scarcity in the summer months when melt waters contribute the bulk of the water (around 75%) to the Himalayan Rivers.

Several glacial lakes have been formed as a result of glacier retreat due to raised temperatures, which could lead to catastrophic events like glacial lake outburst floods (GLOF) in valley's downstream, resulting in destruction of valuable resources such as forests, farms, costly mountain infrastructures and even human life. GLOFs can have devastating consequences for civil works, like bridges, dams and powerhouses, and communities living at downstream.

In order to manage the impacts of climate change on glaciers, the nature of these impacts with respect to individual glaciers or drainage basins needs to be studied and understood. In the Himalayas, although there has been research at a large scale on glacier retreat there has been no work at the scale of the individual glacier or drainage basin and so current research is too general to drive policy response (WWF, 2005). Adoption of appropriate soil and water conservation practices on a watershed basis is considered to be the only way to control soil erosion and improve the environment in the mountainous regions. The measures are to be adopted in conformity with the concept of integrated land use planning for development and improvement of catchment and command area. Efforts must be directed towards utilising the maximum amount of rain to meet the human, animal and crop needs and at reducing to the minimum, the damage by floods and soil erosion. Excess water should be stored in the catchments areas, which will reduce the fury of flash floods, recharge the ground water and improve the environment. Runoff collection ponds in the catchments, though they might get silted up in a few years, will be more useful than the measures in the lower reaches. To prevent rapid siltation of tanks, the contributing catchments (even if they are not cultivated but used for grazing or forestry purposes) need to be well managed so that soil erosion is prevented. All common lands should be put under fuel/fodder trees. Planting of barren areas, especially on slopes, with grass cover is an important component of integrated watershed management programme. Grazing should be completely restricted. After the area is completely protected from grazing, better grasses can be planted. The grasses of industrial importance should also be planted so that there is some economic return to the farmers as well. The surface vegetative cover will not only protect the land from the beating action of rain drops and bind the soil particles but would also decrease the velocity of flowing water and cause less of soil erosion (Bahadur, 1998).

Availability of fresh drinking water is another problem in the region. Increasing urbanisation in the area is putting added pressure on water resources, and not much is being done to replenish the depleting resource. There is no detailed scientific evaluation available for Himalayan water resources. According to Jagdish Bahadur (1998), this is partly due to *insufficient network of observations* for both *precipitation* and *stream discharge* measurements.

Both saline and freshwater natural lakes exist in high altitude regions. Saline lakes abound in the arid region while those lakes, which are extremely poor in electrolytes, are abundant in the humid region, being nurtured by the monsoon. These lakes are situated at altitudes varying from 600m to 5600m and are exposed to climatic conditions that vary from cold deserts of Ladakh to wet humid of Manipur. Very few studies are undertaken on the Himalayan lake ecosystems and the water management programmes are either completely lacking or grossly inadequate (Zutshi, 1985). The inflow of high silt load from glaciers is gradually filling these lakes and rendering the lake waters turbid and unfit for biological activity. The other impact is from pollution from agricultural, industrial, and

human and cattle wastes. Restoration plans for the lake systems should be undertaken on ecological considerations following their geophysical environment and annual rhythm in chemical and biological compositions.

To achieve these objectives, the following essential elements for action are considered necessary, as per Jagdish Bahadur:

- i) All efforts should be made for proper assessment of water resources.
- ii) A comprehensive framework for water resource management is considered in preference to sectoral approach.
- iii) Interventions in water sector should move from curative to preventive ones.
- iv) A broad range of investments should be made on a continuous basis with ability to operate and maintain investments effectively.
- v) Infrastructural improvements must be complemented with measures to strengthen institutions, develop human resource and promote public awareness.
- vi) Promotion of water user's associations and increasing user participation.
- vii) The participation of the private sector in water management should be deliberately pushed forward.

The Fire Menace

Protection of forests is equally important. According to a Forest Survey of India Report, about 50 percent of forest areas in the country are fire prone (ranging from 50 percent in some states to 90 percent in the others). About 6 percent of the forests are prone to severe fire damage. The coniferous forest in the Himalayan region comprising of fir (*Abies spp.*), spruce (*Picea smithiana*), *Cedrus deodara*, *Pinus roxburgii* and *Pinus wallichiana*, etc., is very prone to fire. Every year there are one or two major incidences of forest fire in this region. Other areas with deciduous varieties have also shown susceptibility to fire.

The ecological and socio-economic consequences of wild land fires in India include loss of timber, loss of bio-diversity, loss of wildlife habitat, global warming, soil erosion, loss of fuel wood and fodder, damage to water and other natural resources, loss of natural regeneration, losses in productivity of the land, impacts on regeneration of species, and deleterious impacts on water shed also result from forest fires. Estimated average tangible annual loss due to forest fires in country is Rs.440 crore (US\$ 100 millions approximately). In India, there are no comprehensive data to indicate the loss to forests in terms of area burned, values, and volume and regeneration damaged by fire. One reason to account for the same is alleged fear of accountability on the part of the forest department, and hence deliberate understatement of the problem.

According to the Constitution of India, the Central and State governments in the country are enabled to legislate on forestry issues. The implementation part of the forest policy/programmes lies with the state government. Thus, fire prevention, detection, and suppression activities are the responsibility of the state governments' forestry departments. The policy, planning, and financing are the primary responsibility of the Central Government. There is generally no separate department for carrying out forest fire management in the states. The regular staff of the forest department in the states carries out various activities of forest

fire management. During forest fire seasons, in some of the divisions, the state governments recruit firewatchers as a special provision. At the central level, the Ministry of Environment and Forests is the ministry responsible for forest conservation and protection. The “Forest Protection Division” of the Ministry, which is headed by a Deputy Inspector General of Forests, administers Forest Fire management. The Ministry is implementing a plan called “*Modern Forest Fire Control Methods*” in India under which state governments are provided financial assistance for fire prevention and control. This assistance is being used by the state governments for procuring hand tools, fire resistant clothes, fire fighting tools, radios, fire watch towers, fire finders, creation of fire lines, research, training, and publicity on fire fighting. This project is carried out in fourteen states and covers more than 70 percent of the forest area of the country.

Community Involvement

In India, Joint Forest Management (JFM) Committees have been established at the village level to involve people in forest protection and conservation. At present, there are 36 165 JFM committees throughout the country, covering an area of more than 10.24 million hectares. These JFM committees also have been given responsibilities to protect the forests from fires. For this purpose, the Modern Forest Fire Control plan is being revised and JFM is being made an integral component of the forest fire prevention strategy.

The incidence of forest fires in the country is on the increase and more area is burned each year. The major cause of this failure is the piecemeal approach to the problem. Both the national focus and the technical resources required for sustaining a systematic forest fire management programme are lacking in the country. Important forest fire management elements like strategic fire centres, coordination among Ministries, funding, human resource development, fire research, fire management, and extension programmes are missing.

Taking into consideration the serious nature of the problem, it is necessary to make some major improvements in the forest fire management strategy for the country. The Ministry of Environment and Forests, Government of India, has prepared a National Master Plan for Forest Fire Control. The thrust areas in the programme would be (Bahuguna & Singh, 2002):

- Prevention of human-caused fires through education and environmental modification. It will include silvicultural activities, engineering works, people participation, and education and enforcement. It is proposed that more emphasis be given to people participation through Joint Forest Fire Management for fire prevention.
- Prompt detection of fires through a well-coordinated network of observation points, efficient ground patrolling, and communication networks. Remote sensing technology is to be given due importance in fire detection. For successful fire management and administration, a National Fire Danger Rating System (NFDRS) and Fire Forecasting System are to be developed in the country.
- Fast initial attack measures.
- Vigorous follow up action.
- Introducing a forest fuel modification system at strategic points.
- Fire fighting resources.

Non-timber forest products such as medicinal plants and herbs, essential oils, fibres and silks, natural dyes and organic products, off-season vegetables, bamboo and bamboo products, bees and bee products, and enterprise-based pollination services can provide the basis for increasing incomes and improving livelihoods. Likewise, mountain tourism, hydroelectricity and other renewable energy sources, and the potential for obtaining reimbursement for environmental services, including carbon sequestration, have demonstrated the capacity to become drivers of local economic growth if structured in ways that empower local communities and poor households (Campbell, ICIMOD).

There is need to adopt a combination of traditional and modern control measures adopting bioengineering techniques for sustainable development. Integrated long-term planning is needed with local participation as an essential development strategy for water resource development of the tallest water tower of the world (Bahadur, 1998).

According to R.B. Singh (2005), some portion of money earmarked for relief should be spent in water management practices like creating storages and water harvesting structures in the upper reaches of the stream. Though floods in the region cannot be controlled for hydro-meteorological and topographical realities, such measures can modify them to a large extent so as to minimise loss of life and property in the region. Drought and flood proofing programmes with satellite data for hazard zoning, survey of past disasters, and damage assessments etc. are important strategy.

2.4 DISASTER MANAGEMENT IN RIVERINE REGIONS

Several countries in the Hindu Kush Himalayan region (HKH) face flood disasters almost regularly. In particular, floods affect the Ganges, Brahmaputra, Meghna, and Indus flood plains every year. This region contains one of the highest concentrations of people in the world, with a high rate of poverty; population growth has increased the vulnerability to flood disasters. Flooding is a part of the growing spiral of poverty. Economically disadvantaged people move to the flood-prone lowlands because of certain advantages like fertile soil, cheap housing and also because they lack other options. At the same time, they lack the resources to respond to and recover from floods. Communities living in the great plains of India that spread across northern, western and central parts of the country, also including inland parts of the larger coastal states, are vulnerable to a host of disasters.

Floods are also a macro concern in that they constrict socio-economic development opportunities by adversely affecting investment in agriculture, infrastructure, and industrial production and also retard development. Hence, flood management is imminent both for survival and for long-term growth (SAF, 2005).

As per the *Expert Group Report on Employment submitted to the Ministry of Urban Affairs in 1998*, losses from floods are exacerbated by poor drainage infrastructure, which are choked during heavy rains due to refuse disposal. This creates a situation referred as, local flooding. The Indian Meteorological Department has worked out the probable maximum precipitation values for

different areas, which are worked out on the basis of observation/computation in 24 hrs. Drainages and embankments, which often breach during heavy rainfall, should be designed keeping in view the probable precipitation values. A Vulnerability Atlas has been prepared which shows hazard vulnerability in different areas. Flood prone areas are marked ‘protected’, where protective measures such as embankments have been provided. The unprotected areas are high-risk areas where no such effort has been undertaken. Even in protected areas, though, engineering attempts are put to the real test only when actual flooding takes place. In Punjab heavy damage was incurred in 1995, when the Sutlej flooded large parts and embankments usually gave way. The crisis gets worse in coastal areas where flooding is coupled with storm surges and heavy wind velocities, which exacerbates the risks manifold. Other vulnerable regions are the depressions or the poorly drained areas, which are subject to back-flow from flooded rivers, catchments of choked drains etc., which have random risks of flooding due to heavy rains. For identification of such areas, contour surveys are required at the micro level.

Regarding flood hazard, there is emerging consensus that structural mitigation measures have limited utility. Hence, the emphasis is now on non-structural mitigation measures, particularly flood monitoring and forecast, besides creating awareness among people regarding their vulnerable status, significance of following warnings, easy modes of information dissemination regarding impending disasters, institutionalisation of social capital for better preparedness and so on.

It is most important to remember that natural disasters are not limited by/to national boundaries. For effective combating the threat, regional cooperation is needed. As yet, however, there is no regional framework for such multilateral exchange, although there are successful examples of agreements for bilateral exchange of data. Particular concern was voiced during the Second Steering Committee Meeting of the hydrological research network HKH-FRIEND (Flow Regime From International Experimental Network Data, part of UNESCO's International Hydrological Programme) held in April 2000 in Kathmandu. A regional flood information system is being set up for the Hindu Kush region. A number of agencies are involved, prime among whom are, the World Meteorological Organisation (WMO), supported by the US Department of State (Regional Environmental Office of South Asia), US Office for Foreign Disaster Assistance, and DANIDA. The scheme will benefit Bangladesh, Bhutan, China, India, Nepal, and Pakistan, who have agreed on an initial Action Plan for Regional Co-operation for Flood Information Exchange (SAF, 2005).

Apart from flooding, the other major problem is availability of fresh water. According to R.B Singh (2005), most people in the region do not have access to safe drinking water. Pollution is major concern and there is great biodiversity loss, both on land and in the inland waterways. Because of erratic rainfall and unequal distribution across regions, many districts in Haryana, Uttar Pradesh, West Bengal and Bihar suffer frequent droughts.

Hence, while on the one hand there are floods, increasingly now, because of global warming induced retreat/melting of glaciers in the Himalayan region, there is a situation of water scarcity in cities like Delhi, to an extent where water riots could ensue! Besides, glacial retreat would reach a point glaciers subside and

run off decreases. Hence flood control and water conservation, along with concrete steps, through legislation for controlling water pollution and good maintenance of drainage are significant requirements in disaster management in riverine regions.

As per data cited by R.B. Singh, the average run off in the river system in the country is assessed at 1,869Km³. Of this the utilisable portion by conventional storage and diversion is estimated as about 690Km³. In addition there is substantial replenishable groundwater resource in the country, estimated at 432km³. Presently, there are two strategies being followed; excess water transfer from surplus to deficit regions through schemes like river linking, and water harvesting, which is, storing water at the place where rainfall occurs. This two-pronged strategy is expected to redeem the flood situation and also replenish aquifers, which have fast receded.

Indian River Systems

The major river systems in the country can be broadly classified into two groups, viz. the rivers of the Himalayan region and rivers of peninsular India. The Himalayan Rivers are fed by the melting snows and glaciers of the great Himalayan range, during spring and summer, as also by rains during monsoons. They are often uncertain and capricious in their behaviour. They carry significant flows during the winter. On the other hand, the peninsular rivers originate at much lower altitude, flow through more stable areas, and are more predictable in their behaviour. Their flows are characterised by heavy discharges during monsoons followed by very low discharges during the rainless months.

Nature of Flood problem in various river systems from the point of view of the flood problem, the rivers can be grouped under the four regions as under:

- a) Brahmaputra region drained by the Brahmaputra Ganga river system
- b) Ganga region drained by the Ganga river system
- c) North West drained by Indus & its tributaries
- d) Central India & Deccan region drained by rivers like Narmada, Tapti

Brahmaputra River System

The region drained by the Brahmaputra and Barak and its tributaries covers the state of Arunanchal Pradesh, Assam, Meghalaya, Manipur, Tripura, Nagaland, Northern regions of West Bengal and Mizoram. The tributaries have very steep slopes and shallow braided channels, coarse sandy beds and carry heavy silt. They bring flash floods because of short distances between their source in the hills and the confluence. The major problems faced by this system are that of overspills, drainage congestion, bank erosion, landslides, and aggravation and changes in river course.

Ganga Region

Ganga has a large number of tributaries. Ganga basin with a drainage area of nearly 8,61,400 sq. Km. in India covers slightly more than $\frac{1}{4}$ of the total geographical area. The tributaries of Ganga are by themselves mighty rivers and most of them are highly flood prone. The northern tributaries of Ganga rise in the hills, some in Nepal, causing most of the flood problems on account of heavy flows and sediment that they bring down from the Himalayas. Flooding takes

place mainly in Uttar Pradesh, Bihar & West Bengal. In Haryana, the marginal areas along the Yamuna get flooded. Even through flood embankments have been constructed on both banks of the Yamuna, in the territory of Delhi, flooding can occur due to breaches as had happened in 1978. The danger of such flooding has increased, with jacketing of river in the upstream reaches, thus denying the benefit of valley storage.

North -West Rivers Region

Compared to the Ganga and the Brahmaputra river basins, the flood problem is relatively less in this region. The major problem is that of inadequate surface drainage, which causes inundation and water logging over vast areas. However floods are sometimes caused by the Ghaggar river, which used to disappear in the sand dunes of Rajasthan after flowing through Punjab and Haryana. In recent years, besides flooding Punjab and Haryana areas, flooding has become active in Rajasthan also. Jhelum, Chenab and their tributaries also cause occasional floods.

Central India and the Deccan Region

The region does not have very serious flooding problem because the rivers mostly have well-defined and stable courses. In Andhra Pradesh it is confined to spilling by the smaller rivers. Tapti and the Narmada are occasionally in high floods affecting areas in the lower reaches in Gujarat. Godavari and Krishna rivers on the East Coast have acute drainage problem and face flood particularly in the wake of cyclonic storms. The small rivers of Kerala when are in spate, cause considerable damage. However, in Orissa, damage due to floods has been extensive, caused by the Mahanadi, the Brahmani and the Baitarni which have a common delta where the floodwaters intermingle, and when in spate simultaneously, cause considerable havoc. The problem is accentuated when the flood synchronises with high tides.

2.5 DISASTER MANAGEMENT IN COASTAL REGIONS

India has a coastal stretch of 5700 km. Out of this the east coast bordering Bay of Bengal has a length of 2700 km and the west coast bordering the Arabian Sea has a length of 3000 km. Though India has a long coastline, stretching across many states, the states most exposed to cyclone related hazards, including strong winds, floods and storm surges, are West-Bengal, Orissa, Andhra Pradesh, Tamil Nadu and Gujarat. Destructive natural system events that impact coastal areas can be either episodic or chronic. Together, these types of events define what is meant by natural coastal hazards. The destructive potential of such events is often made much worse by the increasing amount of development along the coastline. A variety of natural hazards regularly threaten the nation's coastal inhabitants. Severe meteorological events such as *Hurricanes* and *Tropical Cyclones* are particularly harsh on coastal areas, often resulting in damages from high winds, storm surge, flooding, and shoreline erosion. *Tsunamis*, whose destructive force is characterised by potentially devastating flood inundation, are uniquely coastal events resulting from offshore earthquakes, landslides, or volcanic activity. Coastal locations are also subjected to the impacts of long-term hazards such as chronic coastal erosion, potential sea-level rise, and global

climate change. Other hazards impacting coastal areas include biological events such as *Red Tides* and *Harmful Algae Blooms*.

Coastal hazard events can significantly affect or even alter the natural environment, but their impacts are generally not considered “disastrous” unless they involve damages to human populations and infrastructure. Many of the coastal ecosystems that are particularly fragile and sensitive to the cumulative impacts of human development are also naturally fluid and generally capable of adapting to hazard impacts over time. When people and property are not present, hazards are merely natural processes that alter the environment. When people and property are present, however, the impacts of hazards on the developed and natural environments are viewed quite differently. The primary focus is no longer on the natural processes associated with a major hazard event, but instead on the *disastrous results* that can be measured by lives lost, property damages, and economic and environmental impacts. Hazard impacts on the natural environment become more devastating because human development has altered the ability of natural systems to recover from such events. Natural hazard events can also spawn secondary hazards such as sewage releases or hazardous materials spills that are particularly damaging to coastal environments.

Among the main reasons for the continuing increase in the loss levels caused by natural disasters is the continuing growth of the population by unchecked migration of people to coastal areas that are generally more exposed to natural disasters. The development of industry in regions that are subject to natural hazards, without appropriate protective measures, is another reason for the growing increase in the loss levels caused by natural disasters. In Asia, natural hazards cause a high number of lives lost, and relatively small property losses in least developed and developing countries. However, in the relatively developed countries where disaster prevention and mitigation measures are adequately established, the loss of life is relatively small, but the damage to property is high. Losses may vary even within a country itself. The effect of natural hazards on the loss of human lives is directly related to the poverty levels in a country.

Another factor that exacerbates the effects of natural hazards is environmental degradation, which is taking place in many countries of the region. The damage caused by natural hazards is higher in countries where environmental degradation is rampant. Deforestation, erosion, overgrazing, or over-cultivation and incorrect agricultural practices and degradation of natural buffers amplify the effects of natural hazards. Coral reefs and mangroves are natural protection mechanisms against high-speed winds, which are fast eroding. Restoration of the same can restrict damage from disastrous events to a considerable extent (National Institute of Oceanography).

Requirements in Disaster Management

Disaster requirements would differ in case of each specific hazard the coastal areas are subject to, which have been referred briefly earlier. Major hazards are Tsunamis, Storm Surges, Coastal Pollution, Coastal Erosion, hazards related to climate change, besides Harmful Algae Blooms and Submarine Mudslides.

For curbing the hazard of *Tsunamis* and *Storm Surges*, the tide gauge data that has regularly monitored tides in the Indian Ocean would be studied to trace past tsunami events and storm surges. Tsunamis have escaped detection, perhaps

because of their infrequent occurrence, implying, a long gap between two events, or because of their impact having been low, or because the usual practice of digitising these data at one-hour interval is not enough for capturing tsunamis, which have a smaller period. Hence, a closer analysis of tide gauge data would be attempted to track and possibly predict more vigorous events such as storm surges, cyclones and perhaps, Tsunamis.

Mangroves and forests along the coastlines act as natural buffers against strong winds and storms. These are being referred to as bio-shields and their importance has been realised post, recent tsunami. It is, however, necessary to quantify the protection such natural buffer zones, now called bio-shields, provide to coastal habitation. For example, it is necessary to determine the thresholds beyond which they cease to be effective and the extent of protection they provide.

Coastal areas are subject to oil spills. Vulnerability mapping would be needed to identify sensitive ecological zones to plan for emergency and quick evacuation.

To control *coastal pollution*, which has increased with increasing industrialisation of these areas, compliance with EIA would have to be strictly enforced. There is a need to integrate the results of the EIA studies to generate a national database, and to determine the “carrying capacity” of the coastal waters of India. A beginning towards determining the carrying capacity of Indian coastal waters has been made with the ICMAM (Integrated Coastal and Marine Area Management) and COMAPS (Coastal Ocean Monitoring And Prediction System) programmes, but there clearly is much that still needs to be done.

Eutrophication of waters caused by excessive nutrients, especially nitrogen, leads to potentially harmful algal blooms (HAB). They result in rapid growth of an algal species that contains toxins or causes a negative impact on natural resources or human beings. Though these are natural, pollution exacerbates them. Presently, there is no database for systematic study of algae blooms, their causes, ways to curb them, etc.

With exploration for oil gaining momentum, offshore structural engineering is gaining importance. The potential threat to such structures from submarine mudslides necessitates engineering design solutions to mitigate the impact. Since poor quality of construction has been identified as one of the causes of higher fatalities due to natural hazards in India, quantification of these hazards must also lead to better regulations and viable building codes.

Besides these, considerable parts of India are multi-hazard prone, in that they might be visited by more than one natural hazard at a time, which poses significant challenge to disaster mitigation policy/strategy. For example, floods and droughts have also been affecting these communities on a regular basis. Floods are experienced almost every year in some state or the other. Major floods were experienced in 1990, 1991, 1993, and 1994. A large number of deaths also occur during summer months due to heat waves, particularly in states like Orissa, that had a drought during 1995-98, and a severe heat wave in 1999. This documentation however mainly covers cyclone disasters and accompanying floods and storm surges (*Ibid*).

Controlling the Cyclone Hazard

Over the warm water (sea surface temperature greater than 26°C) in the tropical ocean, little away from the equator within the belt of 30°N and 30°S, the occurrence of tropical cyclones is almost a worldwide phenomenon. However, their characteristics such as frequency, intensity and coastal impact vary from region to region. But these have been the deadliest when crossing the coast bordering the North Bay of Bengal (coastal areas of Andhra Pradesh, Orissa, West Bengal and Bangladesh), mainly because of the serious storm surge problem in this area.

On an average, about 5-6 tropical cyclones form in the Bay of Bengal and the Arabian Sea every year, out of which 2 or 3 may be severe. More cyclones form in the Bay of Bengal than in the Arabian Sea. The ratio is 4:1. There are two definite seasons of tropical cyclones in the North Indian Ocean. One is from May to June and the other from mid-September to mid-December. May, June, October and November are known for severe storms. The entire east coast is vulnerable to cyclones with varying frequency and intensity. Along the west coast, the Gujarat and Maharashtra coasts are more vulnerable compared to the southern part.

Indian scientists are seriously studying the El-Nino effect on weather and the outcomes of these studies will help in better communication of early warnings as well as preparedness planning.

In order to control floods, politicians and bureaucrats have been laying stress on the construction of dams and embankments, which has necessitated much greater expenditures. It has been estimated that at the time of Independence about 6000 kms. of embankments were existing on various rivers, providing a reasonable degree of protection to about 3 million ha. of flood prone area. However, the average flood affected population per year increased from about 16 million in the 1950's to 43 million in the 1970's to 53 million in the 1980's. Not only have the flood relief expenditure increased from Rs. 230 crores in 1980-81 to Rs. 537 crores in 1986-87 even the related damages have increased substantially from Rs. 60 crores during the 1950's. This figure increased 38 times to an astounding Rs. 2307 crore per year during the 1980s. The increase in the flood damages and the affected area provides clinching evidence as to the country's proneness to floods on one hand and lack of preparedness on the other.

2.6 STRANDS IN DISASTER MANAGEMENT

Preparedness

One of the many lessons learnt by victims of various natural disasters is that the aftermath of the disaster can be worse than the disaster event itself. Thus, there is a need to acknowledge the need for preparedness towards disaster reduction. However, people are often surprised by the concept of *reducing* disasters. How, is often asked, can a natural disaster such as an earthquake or a cyclone be *reduced* or *prevented*?

Unfortunately, due to rapid population growth and development of human settlements in disaster prone areas, more and more people and their assets are vulnerable to natural hazards. The number of disasters was three times higher

worldwide in the past ten years than in the 1960s, economic losses were eight times higher, exceeding US\$ 60 billion a year!

Natural occurrences such as floods, earthquakes, cyclones, etc. simply cannot be avoided altogether; they are a part of the environment we live in. What can be done, however, is to take preventive measures at various levels of society in order to minimise the impact of such natural hazards as much as possible for the people. The impact of a natural hazard can be *reduced*; its worst effects can be *prevented*.

A natural hazard turns into a disaster when it hits a community and disrupts its normal functioning and causes economic damage. Natural disasters hit all, rich and poor alike. But it is the poor who will be hurt most. Protecting the poor from disasters also contributes towards the alleviation of poverty.

The communities actively involved in working on prevention of natural disasters before they strike belong to all groups of society: international and regional organisations, national governments or private firms, local administrations or specialised associations.

What is important is to introduce a culture of prevention in all communities, at all levels: action to save lives must be taken before the disaster strikes.

Principles of Mitigation and Preparedness

Disaster mitigation and preparedness activities need to be carried out well in advance of any emergency, and are driven by the following principles:

- Risk assessment is a required step for the adoption of adequate and successful disaster reduction policies
- Disaster prevention and preparedness are of primary importance in reducing the need of disaster relief
- Disaster Prevention and preparedness should be considered integral part of the developmental policy and planning at national, regional, bilateral, multilateral and international stage.
- Early warning of impending disasters and their effective dissemination using telecommunication are the key factors to successful prevention and preparedness
- Preventive measures are most effective when they involve participation at all levels, from the local community to national level to the regional and international level.
- Vulnerability can be reduced by the application of proper design and patterns of development focused on target groups through appropriate education and training
- The international community accepts the need to share necessary technology to prevent, reduce and mitigate disasters, which should be made freely available and done in a timely manner as an integral part of technical cooperation.

Each country bears the primary responsibility of protecting its people, infrastructure and other national assets from the impact of natural disasters. The international community should demonstrate strong political determination required to mobilise adequate and make efficient use of existing resources, including financial, scientific and technological means.

Preventive Planning

Long-term planning and preparedness for disaster mitigation is gradually being made part of the process of development planning in India. Science & technology inputs constitute its basic thrust, manifested in development of forecasting and warning systems, disaster resistant construction technologies and appropriate cropping systems.

A number of special programs are in operation over many years for mitigating the impact of natural disasters. As the country has been facing natural hazards over centuries, the local communities have developed their own indigenous coping mechanism. The rich storehouse of this knowledge is our country's proud inheritance. In times of emergencies, spontaneous mobilisation of community action supported by non-government organisations adds strength to national capability towards disaster management.

Accepting the fact that the trend of losses is not indicative of any sign of improvement in spite of initiation of various disaster mitigation measures the country is planning to lay more stress in some vital areas within this field in the coming years. These include linkage of disaster mitigation with development plans, effective communication system/ use of latest information technology, insurance, extensive public awareness and education campaigns particularly in the rural areas, involvement of private sector, and strengthening of institutional mechanism and international co-operation.

In recent years, the role of the community and of the voluntary sector comprising NGOs has gained significance. It is realised that the best and quickest response to disasters comes from the people on the ground, that is the community and the community based organisations. Preparation and mitigation efforts can, for the same reasons, also work best at community levels. It is for this reason that Community Based Disaster Management is emerging as the most appropriate way of responding to disasters and for preparing for and mitigating the same. Mitigation, prevention and preparedness shall be discussed in detail in subsequent Units.

2.7 CONCLUSION

Disasters have been increasing in their frequency and intensity in recent years. The primary reason for this is the fact that human settlements and activities are interfering with natural systems, and populations are being increasingly exposed to hazards. This can be seen clearly in the Himalayan, riverine and coastal regions of the country, where most of the disasters strike. The disaster management system in India is anchored at the Central Government level, with implementation mechanisms at state, district and local levels. Besides the government, the role of non-governmental organisations, community based organisations and the community are increasingly being recognised as very important.

2.8 KEY CONCEPTS

- Eutrophication** : Eutrophication is a process whereby water bodies, such as lakes, estuaries, or slow-moving streams receive excess nutrients that stimulate excessive plant growth (algae, periphyton attached algae, and nuisance plants weeds). This enhanced plant growth, often called an algal bloom, reduces dissolved oxygen in the water when dead plant material decomposes and can cause other organisms to die. Nutrients can come from many sources, such as fertilizers applied to agricultural fields, golf courses, and suburban lawns; deposition of nitrogen from the atmosphere; erosion of soil containing nutrients; and sewage treatment plant discharges. Water with a low concentration of dissolved oxygen is called hypoxic (United States Geological Survey).
- Storm Surges** : Storms form over warm seas (sea surface temperature should exceed ~ 28 °C in the Indian Ocean) (*Gadgil, et al.* 1984). The frequency of storms is highest in the Bay of Bengal (Fig. 3). Though storms are tracked better today owing to satellite remote sensing, there is need for improvement in modeling of storm track and intensity because this is today one of the weakest links in storm-surge prediction. The impact of a storm as it crosses a coast is caused by the surge due to strong winds and low atmospheric pressure, and the high waves riding over the surge.
- Submarine mudslides** : As on land, mudslides can occur on the continental slopes; apart from the obvious risk they pose to offshore platforms, they can also trigger tsunami (National Institute of Oceanography).
- Tsunamis** : A Tsunami is caused by vertical displacement of the water column owing to earthquakes, volcanic eruptions, and submarine mudslides. Though they are almost undetectable in the open sea owing to their low amplitude, the tsunami waves can reach heights exceeding 10 m in the vicinity of a coast. The high impact they have on a coast is due to high water velocity and wave height. Tsunami is not as frequent as storm surges along the Indian coast.

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2.10 ACTIVITIES

- 1) Discuss with elders in your neighbourhood and list disasters or emergencies that have occurred in your vicinity in the past. Elaborate if there is any increase in such events in recent decades or years. If there is no increase, identify those factors that have kept your area safe.
- 2) Identify and list all government agencies and non-governmental organisations that have a role to play in disaster management in your city or village.

UNIT 3 COMMUNITY BASED DISASTER MANAGEMENT

Structure

- 3.0 Learning Outcome
 - 3.1 Introduction
 - 3.2 Concept of Community Based Disaster Management (CBDM)
 - 3.3 Principles, Strategies and Challenges
 - 3.4 Requirements in CBDM
 - 3.5 CBDM: Approach and Direction
 - 3.6 Features of CBDM: Understanding Through Case Studies
 - 3.7 Examples in Resilience
 - 3.8 Conclusion
 - 3.9 Key Concepts
 - 3.10 References and Further Reading
 - 3.11 Activities
-

3.0 LEARNING OUTCOME

After studying this Unit, the learner should be able to:

- Explain the significance of community participation in disaster management, especially disaster planning and disaster response; and
 - Describe the modalities for arranging for CBDM.
-

3.1 INTRODUCTION

The *World Disasters Report 2004* has ‘Building Community Resilience’ as its central theme. It has been realised in experiences with recent disasters that enabling communities to fight disasters is a much better policy choice than ad-hoc ameliorative schemes for tackling short-term vulnerabilities. As per the report, the experience with community based disaster preparedness has been extremely encouraging in the Philippines. Filipinos are prone to frequent typhoons, floods and droughts, which have impacted the livelihoods of small farmers and agricultural labourers and adversely affected the economy of the country. Typhoons bring high winds and heavy rainfall, which destroy crops, livestock and property, eroding soils and littering farmland with silt and stones.

The Red Cross encouraged community based disaster preparedness by encouraging people to prepare *local preparedness plans* and undertake mitigation measures like mangrove and tree planting, seawall and river dyke construction, clearing irrigation channels, sand-bagging sections of rivers, and building evacuation centres. Initiatives were planned with the participation of community members and local government units (LGUs). LGUs help meet the costs or technical requirements. However the shortcomings of the approach were soon evident. *It was realised that not sufficient to invest in preparedness.* It was realised

that shift towards vulnerability reduction with stress on livelihoods is inevitable for lasting impact on peoples' lives. It was necessary to provide for sustainable livelihoods which donor agencies were unwilling to commit for. For example, the donor to a PNRC project in Benguet province prematurely cut back support, after concluding that the project's income-generation elements were not sufficiently focused on disaster mitigation. However, local participants considered these initiatives valid because they addressed wider aspects of vulnerability.

Hence, quoting from the report, "the challenge for humanitarian organisations is to avoid imposing on communities a pre-conceived agenda of physical mitigation measures, to be completed within donor-driven timelines. Only a *careful analysis* of both the hazards and the social, political and economic *reasons underlying resilience and vulnerability* can provide the basis for framing the right interventions. Such an analysis will raise far more problems (and expectations) than any single organisation can solve. So humanitarian organisations must cooperate with other agents, from local to international levels, with expertise in different sectors (IRCRCS, 2004)."

Vulnerability and Capacity Analysis (VCA)

It has been realised through past experience that specialist vulnerability and risk assessments do not provide all needed information. It is necessary to supplement expert analysis, usually undertaken by economists and scientists, by a vulnerability and capacity Analysis (VCA) conducted at the community level, involving community members in analyses and articulation of their own problems. *Vulnerabilities*, that is, factors that create the proneness or predisposition or susceptibilities to risk in the community should be studied in relation (in opposition) to *Capacities* (resilience, strengths) to find clues to augment the capacities and offset the vulnerabilities of communities. Hence "assessment has to be a participatory process undertaken in phases, and involving on- the- spot collection of data, interpreting and analysing the same for information from various sources. It involves analysis of both scientific and empirical data."

Cross- categorisation to identify vulnerable communities besides simple categorisation of 'at risk' communities on the basis of gender, age, ethnicity, religion or caste has to be attempted. For example, women and children are vulnerable groups, cutting across caste and class categories in disaster situations. Hence disaster policy has to be sensitive to such differentiations especially in the matter of involving people in disaster policy and implementation of the same.

Rationale of Synergy

The concept of good governance demands that government must not only be representative but also responsive in that people should have a substantive role to participate in decision-making and implementation. Cohen and Uphoff (1980) regarded participation as "generally devoting the involvement of a significant number of persons in situations or actions which enhance their well being". Paul (1987) defined participation as, "in the context of development, community participation refers to an active process whereby beneficiaries influence the direction and execution of development projects rather than merely receive a share of project benefits". Disaster risk reduction through participation addresses four important questions:

- 1) Who is participating?

- 2) How is participation assured?
- 3) At which stage is participation occurring? And
- 4) How is participation facilitated?

To grasp all dimensions of participation in sufficient measure, one has to understand the concept of community, wherefrom participation emerges.

Concept of Community

A natural event becomes a disaster when it causes loss of lives and / or property. Since disasters affect people as *individuals*, and community as a *collective*, both are important to reduce the impacts of disasters. Community based disaster management, by its very definition, involves communities in identifying, assessing and acting jointly to reduce disaster risks. The impact of disasters is increasing in magnitude much beyond the management capacity of governments and traditional emergency responders. The usefulness of CBDM approach helps in reducing disaster impacts and calls for its greater recognition and institutionalisation within the disaster management framework.

“Community is defined as a feeling that members have of *belonging*, a feeling that members matter to one another and to the group and a *shared* faith that members’ needs will be met through their commitment to be together” (McMillan and Chavis, 1986). Many people define community in different ways; however, the aforesaid definition is preferred because it is inclusive. Thus community includes not only the people who live in a certain location, but also includes the local government, local business sector, local academic bodies and NGOs.

Concept of Participation

There is considerable ambiguity about peoples’ participation in governance. What does it mean? How it is to be secured; in what manner; in which areas? According to Hickey and Mohan (2003), participation should not be understood as *imminent*, that is one off/ad hoc participation in some programmes but conceptualised in broader terms as part of the wider concept of citizenship which looks at participation as an *immanent* socio- historical process which runs as an undercurrent to all social, political and sociological processes. This calls for a review of the concept of citizenship itself. There is increasing talk of the limits of state action for mutual benefit; hence the imminence of responsible citizenship, which implies increasing *involvement* of people in governance related to matters as a matter of *right*. A balanced conception of rights and duties us desired, on the part of each stakeholder, citizen or otherwise, as an imperative for good governance. Accordingly, “Citizenship can be defined as that set of practices, which define a member as a competent member of a society, and which as a consequence shapes the flow of resources to persons and social groups” (Roberts 1992).

Hence, there is need for radical system change as per the theoretical formulation, which is referred as “critical modernism” by Giles and Mohan, where initiatives come more from citizens rather than as one- way traffic from official institutions. To that end, government has to work actively to promote such institutional mechanisms that make real such possibilities. People’ participation has to move a level up from *project* level to *policy* level which can lead to political empowerment of people, rather than ad- hoc involvement in some technical

studies. Example can be given of *participatory rural appraisals* (PRAs) being used currently in disaster mitigation and vulnerability studies, and *participatory poverty assessments, social analysis* which inform policy for poverty reduction, initiated and promoted by the World Bank, following criticism of aid linked to conditionalities and being unrelated to actual needs (Blackburn and Holand, 1998). Hence, participation is not an ancillary but an essential/central concern in good/democratic governance. Civil society needs institutionalisation. Towards the same, catalytic intervention on the part of the government to institutionalise social capital in the form of neighbourhood and resident welfare associations would be necessary for consistent and relevant input for public policy.

As rightly articulated in the World Disasters Report, 2004, sometimes outside intervention helps alleviate social tensions, since it acts as a catalyst in counter-effecting traditional/inherent negative social capital and promoting positive social capital as organising group meetings, catalysing interface between members of different communities, especially those with differences.

3.2 CONCEPT OF COMMUNITY BASED DISASTER MANAGEMENT (CBDM)

The term "Community-Based Disaster Management" received attention in the development field in the 1980's, although community based disaster initiatives were already on-going in different parts of the world in formal or informal ways.

Though CBDM has been a popular term in the last several years, in very few cases it has actually been incorporated into government policy. It has been a common notion that CBDM is the responsibility of grass root organisations and/or NGOs. There are two major aspects in this regard: *first*, the best practices of CBDM initiatives remain local initiatives and are not properly disseminated. It was observed that even though there have been good examples of CBDM in specific locations within a society, those lessons are not transferred to other parts of the country, neither do they reach the adjacent countries of the region. *Second*, due to lack of recognition of CBDM initiatives at the national level, there are often limited resources devoted to these activities. Thus, in most areas, CBDM is considered in isolation from national disaster management activities. It is also not included in the national development policies. Therefore, there is an increasing need to understand the basis of CBDM, and try to formulate a framework for incorporating CBDM into national policy issues with special focus on sustainability.

The Great Hanshin Awaji Earthquake of 1995 hit the city of Kobe and other parts of Hyogo prefecture in Japan causing serious loss of life and property. Immediately after the earthquake, the neighbours and relatives rescued many people from the debris. Statistics show that 85 percent of the people were either self-evacuated or were rescued by neighbours. This indicates the importance of community and neighbourhood immediately after such an event.

The above case study from Japan indicates the importance of social capital inhering in communities and neighbourhoods during a disaster. It starts immediately after the disaster strikes, since the reconstruction programme incorporates both physical and social issues. *Hence, involvement of people in recovery process is the key to success.*

3.3 PRINCIPLES, STRATEGIES AND CHALLENGES

The above discussed cases, and many more from the region, point towards certain key concepts and lessons, which can be used to derive some basic principles of community, based disaster management. The basic principles on which CBDM stands are:

- Planning, implementation and management owned by community, led by local champions.
- Interventions start from locally available resources, capacities and partnerships.
- Community considers choices and takes decisions.
- Programmes focus on developing local coping capacities.
- Disaster preparedness approached from a development perspective.
- Sustainability considered as an underlying factor.
- Attention to special vulnerable groups.

These principles are translated into implementation strategies for creating the desired impact on the ground. Each situation merits a unique solution with a combination of inputs. However, the principles and the process structure remain universally applicable to all situations. Most commonly used strategies and actions are described below:

- *Public Awareness*

Public awareness is the first step towards marketing the concept of CBDM and creating a demand, locally, for disaster reduction efforts. Once the demand has been established, programme interventions create enabling environments and linkages with resources for fulfilling this demand. This could be understood as interest articulation and empowering the communities to voice their concerns for the same. Public awareness is carried out through community meetings, events, mass communication programmes organised by non-government organisations, and activity based awareness interventions on the part of the government. Gabriel Almond has ascribed the task of political communication to the political elite. It implies informing the people about government policies and programmes being pursued/introduced by the government for their benefit and enabling/aiding them access the same since many programmes have been known to fail due to lack of awareness on the part of people and inability to access the right sources/power centers. Right to information is another significant facet of public awareness. Though the bill has been enacted (2000), its successful implementation would depend on activism on the part of civil society in this regard and the vigil exercised by the media.

There are restrictions on information relating to security, foreign policy, defence, law enforcement and public safety are standard. But the Freedom of Information Bill also excludes Cabinet papers, including records of the council of ministers, secretaries and other officials, which effectively shields the whole process of decision-making from mandatory disclosure.

The Bill provides for a fee to access information, but without specifying what the minimum or maximum amounts would be. Most important, there is no

mechanism to punish delay or refusal to grant information. So there is no compelling reason for the official concerned to provide answers. Instead, the law provides for two internal appeals within the government machinery and, in addition, blocks access to civil courts (further read at the Infochange India web site)

- *Research and Documentation*

Learning processes are critical to the *adaptive nature* of CBDM. Every situation demands specific intervention as per sensitivities which need to be periodically studied/monitored; hence, it is important to constantly document and reflect upon social processes such as group cohesion based on caste, and other forms of ethnic identifications, and to draw suitable strategy for intervention for desired social chemistry based on lessons from past experiences in disaster response. For example, it was experienced in the recent tsunami that aid did not reach the backward segments since group cohesion exhibited negative social capital based on caste considerations. Women and children are also generally known to lose out because of social biases. Understanding of social dynamics is crucial to understanding threat in each case. For example, in societies where elders are left alone, people are more at risk from heat waves, which is what is happening presently in Europe. Hence, studies are needed to gain insights regarding these issues in case of each particular society.

Physical vulnerability of existing infrastructure needs to be periodically improved and mapped, which requires constant updating. Baseline surveys, community based monitoring and evaluation processes, and mapping studies have to go on in tandem. Participatory appraisals are most useful and also imperative/indispensable for the purpose. Such studies could give ‘biased’ results if carried out unilaterally by a central authority or an international organisation. It has to be participatory exercise where vulnerable communities articulate their own concerns and also suggest measures, which need be taken to improve their resilience/coping capacity. A key concern would be acceptance of any new measure(s) by the local community. A pilot study of any proposed new project would be the desired suggestion in this regard (Todd and Palakudiyil, 2004-05).

- *Capacity building*

Capacity building implies upgrading the *reserve capacity* of the communities, which gives them more *staying power* during disasters. Local capacity building is a means of ensuring that reliance on external assistance will not perpetuate, and that communities will increasingly be able to take care of their recurrent needs. Capacity building is not only for better emergency response, but also for taking developmental actions that reduce the impact of future disasters. The World Disasters Report, 2004 rightly points out that “there is little analysis of how people survive disasters, and even less programming that builds on their coping strategies... in the field of disasters, most emphasis has remained on assessing needs, hazards and vulnerabilities - at the expense of analysing the strengths, skills and resources available within communities.”

The report recommends a paradigm shift from the traditional risk reduction approach, which starts with hazards and risks, then looks for linkages with development to the sustainable livelihoods approach, where disasters, including the capacity to resist their impact and bounce back are part of a wider development

framework. For example small scale measures like social forestry, fish-farming, drought-resistant crops and rainwater harvesting can reduce the risk of environmental degradation and hence the threat from natural disasters like wildfires, droughts and floods

Micro-finance, cash aid and income generation projects, is being explored as alternate strategy in post disaster relief, instead of simply distributing relief items. Rather than funding and implementing recovery projects themselves, many aid organisations now ensure affected villagers *access government compensation or soft loans* to help them rebuild their homes and lives after disaster. Programmes that improve knowledge of HIV/AIDS can prevent the disease's spread. To endorse the argument, in India, local knowledge of indigenous, hardy seeds has helped farmers recover from the loss of cash crops devastated by drought and pests.

Capacity building is carried out primarily through skill upgrading exercises, both technical and management skill sets. Local warehousing for stockpiling supplies, generating alternate livelihood options for 'at risk' communities, for example, fishermen who venture out despite warnings of cyclones would be other essential resilience measures. Means of sustainability that have been tested and found promising include formation of *local task forces*, adoption of an *entrepreneurial model* for operating community programmes, linking disaster reduction programmes with *livelihoods*, and establishment of *local contingency funds*.

Six conclusions, which could be treated/understood policy prescriptions have been drawn in this regard in the World Disasters Report of 2004:

- Systematic assessment of what enables people to cope with, recover from and adapt to risks and adversities at household and community level is badly needed.
- Strengthening social capital should be the key objective of disaster interventions, whether in relief, recovery or risk reduction; rather than a by-product.
- People-centred approaches to development provide models that can improve humanitarian aid and disaster risk management.
- New institutional strategies and cross-sectoral coalitions are required to boost the resilience of local livelihoods in the face of multi-dimensional risks.
- Good governance is essential to create the environment, in which the more resilient communities can thrive.
- Scaling up strategies based on the aspirations and capacities of people 'at-risk' remains the greatest challenge.
- *Networking*

The central premise of social capital is that *social networks have tangible value*, which cannot be discounted in cost- benefit analyses or policy implementation and evaluation. Networking is the first step towards establishing partnerships. Partnerships enable communities to capitalise on directly and indirectly available resources. Partnerships open new avenues, reduce costs and increase benefits. Partnerships operate at various levels and with different kinds of stakeholders.

Partnerships can be with other communities, local governments, higher governments, NGOs, academia, corporate entities and technical or resource groups. Social capital inheres in all social ties; modalities are different, as, between people, between institutions, government and civil society, between region and countries and so on. The level used to analyse social capital differs widely in the studies selected. Some studies focus on the social capital of a small community (Kreuter, et al., 1998), others compare a country's provinces or regions (Putnam, 2000), while others use countries as a unit of comparative analysis (Knack and Keefer, 1997). In Canada, Buckland and Rahman (1999) compared the reaction of three communities that experienced the Red River flooding in Manitoba in 1997. The research revealed that the two communities with a higher stock of social capital succeeded in organising themselves more rapidly and efficiently than the third, which had a lower stock of social capital. Studies conducted under the aegis of the World Bank indicate the following three indicators of social capital:

Trust: Two elements of this indicator are trust in *others* and trust in *institutions* (government, police, politicians, journalists, etc.). This is the *defining element* of social capital.

Civic Engagement: Civic engagement is a measure of involvement of people in social and political matters. It implies *volunteerism* on the part of people and modalities (provisions) for the same in social and political matters.

Social Networks: Social networks are the third indicator that is frequently found in the research. They are formed by the person's immediate environment and by secondary networks. Networks centered on the individuals include immediate networks (i.e. the close family, friends and neighbours with whom the person has frequent contact and who provide support). The secondary networks include those formed through relationships that individuals establish, especially in the workplace and recreational environments, during community or religious activities.

- *Sustainability*

The final determinant of success in a programme is its sustainability *beyond the period of investment and aid*. Sustainability is viewed in terms of mainstreaming risk reduction, and developing a culture of prevention through public policy. A study indicates how, following the devastating earthquake of 2001, villagers from Patanka in Gujarat state rebuilt their homes stronger than before, with the help of a partnership of local and international aid organisations. Farmers, left unemployed by three years of intense drought, retrained as masons and helped build earthquake-resistant houses for every family in the village. Building on the success of this initiative, villagers were able to access government funds to create a new rainwater-harvesting system to improve both their health and crop yields. Another study conducted in the Samiapalli village in the disaster-prone state of Orissa, reveals how prioritising risk reduction before disaster strikes mitigates its impact considerably. During the 1990s, with the help of a local NGO, villagers embarked on a long process of development, one element of which was to construct disaster-proof homes. When the super cyclone of October 1999 struck the village, these houses saved both lives and livelihoods, while tens of thousands of people in weaker homes perished.

3.4 REQUIREMENTS IN CBDM

The World Health Organisation (WHO) in collaboration with the League of Red Cross and Red Crescent Societies recommends the following activities for disaster preparedness of communities:

- Exercises in first aid: how to extricate, give first aid to, and transport injured persons etc.
- Exercises in providing temporary shelter: organisation of camps for temporary shelter in event of a disaster.
- Sanitation exercises: Installation and management of water supply points and latrines, controlled refuse disposal etc.
- Guided visits to volcanoes, seismological observatories, dykes, civil protection centers (fire stations, forest warden posts etc.) factories, stores of dangerous materials, sites exposed to risks.
- Dummy runs and practice alerts organised by the local authority.
- Strengthening of flimsy structures in avoidance with the programmes of the local administration, groups of dwellings can be strengthened with the help of voluntary workers, school children etc.
- Flood protection (various means of ensuring that a watercourse does not overflow its banks).
- Information (exhibitions of drawings, lectures, photographs, films on disaster preparedness)
- Training of groups of volunteers available to help the community emergency community in activities when a disaster strikes and afterwards

Besides, show of camaraderie by means of persistent efforts towards community preparedness based on:

- Encounters, exchanges, the expression of needs, information and communication
- Community discussion and action to gain an understanding of the causes of disasters and associated problems plan the most appropriate measures and put them jointly into effect.
- A feeling of belonging to the community by making proper use of local cultural values, forms of social life, resources and products,
- Combating the rejection or exclusion of the disabled, mentally ill, the handicapped and other persons in difficulty.
- The development of assistance and mutual aid,
- Meetings with local authorities and collective discussions to resolve community problems.
- Dissemination of warning regarding an impending disaster is vital. The issue in this regard is proper communication of warnings, avoiding technical jargon, which makes it unintelligible for the ordinary masses and the wherewithal of dissemination of such warning. An information management checklist

has been provided in the Source Book on Disaster Management, Ministry of Agriculture, Government of India, and the Lal Bahadur Shastri National Academy of Administration, Mussourie:

- ✓ Are maps prepared and available to the community (topographic, demographic, hazard and vulnerability)?
- ✓ Is a public information center/control room designated official point of contact for the public and the media during an emergency?
- ✓ Are there provisions for releasing information to the public including appropriate protective actions and devised responses?
- ✓ Have agreements been reached with the media for disseminating public information and emergency warnings?
- ✓ Are contact details for all media outlets (radio, television, and newspapers) available?
- ✓ Who is responsible for providing information to the media?
- ✓ Who is responsible for authorising information there?
- ✓ Who is responsible for emergency assessment and to whom do they report? How is the information recorded and who relays the information to those concerned?
- ✓ Who is responsible for issuing public statements about emergencies?
- ✓ Do they have public credibility and adequate liaison with other organisations that may also issue warnings?
- ✓ Who is responsible for providing warnings for each likely type of emergency?
- ✓ To whom is the warning supplied?
- ✓ At which warning level is action initiated?
- ✓ What is the purpose of the warnings and what action is required of the public?
- ✓ Who will inform the public when the danger has passed?
- ✓ Is there a point of contact for members of the public wanting specific information, and is this point of contact public known? (Control room).
- ✓ Is there a referral service for directing people to the appropriate sources of information?
- ✓ Is there a registration and enquiry system for recording the whereabouts of displaced, injured, or dead persons?
- ✓ Is there a system for providing this information to bonafide inquiries?
- ✓ Does the community know how to contact the registration and inquiry system?
- ✓ Are there plans for establishing public information centers?
- ✓ Is the community aware of the existence of these centers?

Preparation of Local Health Personnel

Disease outbreak is a major problem in the immediate aftermath of disasters, as was seen recently during the Mumbai floods. Therefore, the role of local health personnel is crucial in both mitigation and preparedness as is prevention during normal times. Primary Health Care Centers (PHCs) are inadequately equipped and are also too few and far between to handle emergencies adequately. There is also lack of trained manpower. This is a policy issue, which requires concrete measures on the part of the government. Cooperation of non-government organisations could be elicited in this specific aspect of disaster preparedness at the local level (WHO, 1989) in that trained volunteers could be engaged in this task and specialist competence could be provided by non-government organisations which is presently lacking in the non-government sector. Over the long term however, the network of PHCs would have to be improved for capacity building to tackle disaster vulnerability. As per Alpana Sagar in the *Alternate Economic Survey, 2004-05*, Indian data reveals that there is shortfall of infrastructure and personnel in the rural areas. While the shortfall for primary health centers and sub centers is about 7-8 percent; that for community health centers is about 40 percent. The shortfall for specialists at the community health centers is anywhere between 90-95 percent while there is rarely more than one doctor at the primary health center though the ideal number is two. There is acute shortage of grassroots workers, from 20 percent of female workers to 50 percent shortage of male workers. There is also a shortage of more than 50 lab technicians. Subsequent to the eight five- year plan there has been only marginal improvement in manpower and infrastructure for health.

As read in the *Economic Survey 2004-05*, keeping the requirements and the objectives of the National Health Policy, 2002 in view, allocations for AIDS control programme and schemes for control of communicable diseases have been raised during the year by about Rs. 280 crore. State Health System Development Projects are under implementation in the States of Karnataka, West Bengal, Punjab, Orissa, Maharashtra, Uttar Pradesh, and Uttarakhand with World Bank assistance. Up- till now health care administration has suffered for lack of inter-sector integration at the field level. Hence, there is an attempt now at convergence of schemes, which had operated hitherto, in isolation. A National Vector borne disease control programme has been started from 2003-04, through convergence of three ongoing programmes (Malaria, Kala-azar and Filaria) and inclusion of Japanese encephalitis and dengue. The main objective of the programme is prevention and efficient control of vector borne diseases in pursuance of the goals laid out in the National Health Policy, 2002.

Empowerment of local institutions of self- government is also expected to go a long way in strengthening health service delivery, in the sense of bringing them under one umbrella, especially in rural areas, though there is a long way to go since many institutional adaptations would be required, which would depend on the political will and feasibility in different states.

Provision for Food Security and Nutrition

Despite the Green Revolution, deaths due to malnutrition are reported from different parts of India. Problems lie, chiefly, in the distribution mechanisms. The public distribution system (PDS) was set up to make food available at affordable prices to the poor. However, its functioning has been plagued by

corruption. There have been reported mal practices like buying kerosene at subsidised rates from the PDS and selling them at high prices in the open market, etc. Hence the current challenges outlined in the tenth plan are:

- Continue to improve food grain production to meet the needs of the growing population;
- Increase production of coarse grains to meet the energy requirements of BPL families at a lower cost;
- Increase production of pulses and make them affordable to increase consumption;
- Improve the availability of vegetables at an affordable cost throughout the year in urban and rural areas.

Hence, the Tenth Plan (2002-07) announces a paradigm shift from:

- Self-sufficiency in food grains to meet energy needs to *provide food items* needed for meeting *all the nutrition needs*.
- From production alone to *reduction in post harvest losses* and value addition through *appropriate processing*.
- From food security at the state level to nutrition security at the individual level.

3.5 CBDM: APPROACH AND DIRECTION

In order to make CBDM an accepted and recognised process for disaster management, intervention is needed in three broad areas:

1) Cooperation and Capacity Building

Experience shows that disaster management, being multi -disciplinary in nature, requires wide-ranging inputs from government, non-government, international agencies, universities and other specialised agencies. Recent examples of healthy cooperation between India and elsewhere in Asia have led to remarkable results. Cooperation has not just better results for the community but also enabled institutions to build up their capacity based on the expertise and experience of the organisations they have partnered with. Cooperation and capacity building among various stakeholders working at the grass roots would provide the most effective mechanism for any policy that is formulated in this regard.

2) Sustainability and Up scaling

There have now been far too many good practices that have taken place in the disaster vulnerable regions of the world. However, most of these good practices have remained confined to their local communities. Their potential in influencing attempts to reduce vulnerability in other parts of the world is enormous, especially since regions that face similar disasters have similar vulnerabilities and capacities. Lately, various documentation attempts by various international agencies including United Nations International Strategy for Disaster Reduction (UN-ISDR) and brought them onto the global center stage. However, this is not enough. In order to replicate good practices widely, identifying factors that can make such practices sustainable and scalable are necessary. A discussion on sustainability and up scaling of good practices from various communities of Asia and other parts of the world is core of the policy framework.

3) Integration of Policy Issues

In large countries such as India, recent disasters have strengthened the need to define a national policy management of disasters in the country. Existing developmental policies are also being examined to incorporate disaster prevention and preparedness. However, there has been limited debate on the content and thrust of these policy initiatives. Incorporating grassroots experiences within the possible constraints would provide real substance to the national policy.

3.6 FEATURES OF CBDM: UNDERSTANDING THROUGH CASE STUDIES

A review of recent CBDM experiences in Asia reveals that central to each experience has been a well-understood and coordinated partnership aimed at common interests and goals. Stakeholders in these partnerships have included local governments, civil society, corporate sector, universities and communities themselves.

In spite of the successes, possibilities of further enhancing the benefits of such partnerships have rarely been seriously considered. The trade-offs are also seldom deliberated upon. Partners ought to know each other's strengths and weaknesses. The whole intervention should be arranged so that all partners get the most out of the cooperation by filling in each other's voids, and take constructive advantage of the accumulated force that emerges from a good partnership.

The CBDM approach attempts to address certain key questions on disaster management:

- How can communities live with disasters, rather than fighting them?
- What local measures can be taken to effectively mitigate the impact of disasters?
- How can preparedness initiatives be sustained over long time periods?

3.7 EXAMPLES IN RESILIENCE

The following sections discuss how community based disaster management can be:

- Self-driven,
- Led by local champions,
- Based on partnerships.

Besides these three characteristics, there are many that can be discussed if one gets into greater details. These could include, among others, the attributes of being low-tech and easy to understand, affordable, easily replicable and up scalable, developmental and, most importantly, empowering.

I) Self-driven

CBDM has existed from time immemorial. Communities have depended on their coping capacities, have developed these capacities over time, and have survived based on these. The basis of these capacities is that people have observed their

environments, and the changes and reactions taking place therein, and from these they have learnt to adapt and change their actions so as to live better with nature. The following case is one such case from modern times where a community has learnt and acted to protect its environment for reducing disasters (FAO).

Chipko: from tree hugging to satellite images

The Uttarakhand region is constituted of Himalayan districts in North India. During the late sixties, a massive program to develop roads was undertaken in the region. This brought employment opportunities for the local population. More importantly, it opened up gateways between the area and the outside world. Possibilities of flow of technology and materials from outside became real, as did the means for cashing their own asset, timber. Tracts of forestland were given out on contracts for tree felling. Contractors employed local people for these operations. The stretches of the slopes above the road altitude were wiped clean of the trees. The economy looked up. Nobody, not even the locals, bothered that the unscientific clearing of the innumerable trees in a small region was heavily bruising the crust of the forest land and the ramming of rain water mixed with stones and pebbles was getting increased to a tremendous extent.

One monsoon night in 1970, the valley of the Alaknanda, a river traversing the state, was the scene of an unprecedented flood. The entire village of Belakuchi was washed away by the swirling torrent of the Alaknanda, along with several busloads of tourists. The flood affected an area spread over a length of 400 kilometres and washed away five major bridges, hundreds of heads of cattle and several million rupees worth of property. Those who saw the scene, cannot forget the night when the ‘river was on fire’. The banging of huge boulders carried by the strong current created deafening thunderous sounds and huge sparks flew from the river.

Even those in the plains were not spared. The flash flood first washed away what came in its path, and then left the area heavily silted and boulder strewn. Major canal networks were clogged. Subsequent desilting operations took so much time that the farm output of the regions downstream nose-dived that year due to lack of water for irrigation.

It was evident to any local resident that once the forest cover disappeared, the economic hardships and the terror of man-eating tigers would be replaced by an even more awesome terror of floods, landslides, and drying up of previously perennial streams.

The Alaknanda tragedy left a deep impression on the hill folk and soon followed an appreciation of the role that forests play in their lives. They had also watched the slow replacement of broad-leaved forests by economically important species like the pine and had slowly felt the deleterious effects of this shift on their cultivation and water supply.

The reaction was spontaneous and simple. *Chipko – hug the trees!* This was the way chosen by the local community to save their trees from the saws of timber contractors. A major break-through for the movement came on March 26, 1974, when 27 women of Reni village in Chamoli district, under the leadership of Gaura Devi, an illiterate lady of 50, resorted to Chipko to save 2,451 trees of Reni forests. The women folk of village Reni got involved in a dramatic way.

One day when their men folk were away, and the Chipko workers and the students were detained at faraway Gopeshwar town to meet officials of the forest department, the contractor taking this as an opportune moment reached the village with his men to begin the felling. However, undaunted by the number of men, the women of Reni, led by Gaura Devi, barred the way to the forest and resorted to Chipko, singing “this forest is our mother’s home, we will protect it with all our might.” They did not allow a single tree to be felled.

The movement has come a long way since then. It gained much acclaim for being a totally community led initiative, without any involvement of outside agencies, not even NGOs. Tree felling has since been totally controlled, and afforestation drives have yielded some positive results in terms of regeneration of forests on the denuded slopes. However, more important than the achievements of the programme; are its *means*. *There are two highlighting features of this aspect:*

Van Panchayats (forest governing councils) are an innovative institutional instrument that has been very successful in its purpose. Van Panchayats are constituted on the pattern of the Panchayats or the rural local governments. The elected Van Panchayat is responsible for the maintenance of the village forestland. It monitors and controls all activities in the forest, including woodcutting and even grazing of cattle. An interesting fact is that over the years, the Van Panchayats have come to be totally dominated by women. This, they feel is very logical since the hardships of environmental degradation affect women the most since it is they who are responsible for getting firewood for cooking, fetching drinking water from faraway sources, and grazing the animals.

The Dasholi Gram Swarajya Mandal (DGSM) is a community based organisation that came up as a strong local institution after the Chipko movement, and has since been instrumental not only in promoting forest regeneration activities, but also in encouraging local resource based entrepreneurial development. It is interesting to note that the DGSM, comprising totally of local villagers, has been monitoring the success of its afforestation program through satellite imagery based remote sensing carried out by the Indian Space Research Organisation. DGSM propagates disaster prevention through safe development, and organises local campaigns on the theme. It is also the first responder in local disasters such as landslides, earthquakes and forest fires.

II) Led by Local Champions

CBDM cannot be put into effect through a government order, nor can it be implemented as a project by an NGO. It has to rise from the ground, up; it has to have the communities in the driver seat; it has to enshrine processes that will make it locally owned and sustainable. The most appropriate catalysts for this are local champions, who arise from within the communities, motivate the masses, and lead them through the process of change from a state based to a community based development and disaster management approach. The following case is from a sustainable community initiative in the state of Gujarat, India, illustrating the role of local champions (GSDMA, 2005).

Examples from Gujarat, India

With a population of almost 50 million in Gujarat State in western India, a substantial proportion of which is at risk to one disaster or the other, it is huge

task to reach out to each and every individual. How then can we create a scenario where the community as a whole can become resilient to disasters? How does one reach out to every individual? A viable strategy is to develop appropriate mechanisms for targeting communities through champions.

The GSDMA (Gujarat State Disaster Management Authority) supported project on Sustainable Community Initiative for Disaster Recovery and Preparedness in Ranavav Taluka, District Porbandar, made an attempt on this. The challenge of the project was to reach out to every village in the Taluka within a limited budget and time frame. The project implementation agency was SEEDS (Sustainable Environment and Ecological Development Society) in partnership with UNCRD (United Nations Centre for Regional Development) and NGOs Kobe. It adopted an approach that would focus on building the capacity of local champions: *champion-individuals* and *champion-communities*. These individuals/communities were expected to sustain efforts initiated during the project for a longer period beyond the duration of the project. These individuals and groups championed various sectoral causes as described below.

Champions of Safe Construction

The 2001 earthquake had a partial affect on Porbandar, the western district of Gujarat where the project was piloted. Obviously, while wide consciousness prevailed, there was very little that the community knew about specific actions to be taken for reducing the risk from future earthquakes. As part of the strategy to push for safer construction practices, it was decided to build the capacity of existing masons in the region. Enter, Ramesh and Magan bhai Thakore, skilled masons from an earthquake affected area who, having experienced the earthquake and picking valuable skills during rehabilitation, knew exactly what they need to share with their counterparts in Porbandar!

An intensive process of identification, one-on-one meetings, and encouragement of prospects ensued. It generated enthusiasm among a small group of masons from Porbandar, who willingly agreed to enhance their skills. During the process of training, the main purpose was to build skills in disaster resistant technologies and quality construction practices. The training involved a combination of theoretical sessions, group interactions, exercises and demonstrations. The training also was to be a starting platform for a long-term pool of masons who, with help from SEEDS INDIA and the Government of Gujarat, would regularly interact through newsletters and meetings. Recently these masons have registered themselves as a Mason Association for getting necessary certification for their skills under a Government of Gujarat programme.

- *Water Farmers*

Porbandar, like other parts of Saurashtra, has suffered repeated droughts in the recent past, seriously limiting the scope of the farmers to sustain themselves. With the ingress of salinity from the Arabian Sea further threatening their livelihoods, the need for increasing rainwater retention in their fields was felt very strongly.

During the first meeting with the farmers, the SEEDS team offered their ideas on various water harvesting options. The villagers were expected to partially contribute to the scheme. On-site training and awareness programmes were

organised, clearly explaining the process of implementation. A reduced scale model of the village was developed and the water conservation as well as augmentation technique was visually demonstrated. After initial reluctance, a small group of farmers decided to take up the experiment. The catalyst to this process was Govindbhai, Headman of Valotra village. A farmer by profession, he is an excellent leader who takes interest in village development, and his Panchayat (village council) has won two awards.

Within a short span of time, this small group of farmers has become an active advocate of the well recharge system, taking out time to travel to nearby villages to convince fellow farmers about the benefits of the scheme. Govindbhai has been instrumental in the success of the water conservation movement. He now offers to carry out awareness programmes in his village and neighbouring areas for safe construction practices and also for water conservation. A champion in this group, he keeps regular touch with the SEEDS project team that in turn develops and adapt knowledge resources that can help the farmers by bringing in new technologies.

- *Cultural Ambassadors*

Performing arts and theatre have tremendous influence on local citizens. Tired after a hard day's work, the people settle down for cultural activities as a means to unwind and interact. Common cultural activities promote greater understanding and forge unity in the community. When these cultural activities carry with them important social messages, the impact is strong and direct.

Devraj Gadhavi, a folk singer, is the cultural champion of Porbandar. Known for his Dayro styoe of folk music not just in Upleta, the village he hails from, but the entire region, he is a fail-proof crowd puller. When he performs, he often has an important message to convey. When the project team met him and shared its ideas on promoting disaster mitigation, he readily agreed to get involved. During Community Fairs held in the area since then, he performs to a huge crowd and within his performance he urged people to volunteer for the sake of others. He said, "True happiness lies in serving others". A few words of wisdom, when spoken by a person loved and revered, make a lasting impact on the lives of the people.

- *School Teachers: Agents of change*

Mr. Joshi, the principal of Swaminarayan School, is a well-known teacher with many state and national awards to his credit. He is also the head of the Scouts and Guides Wing at Porbandar. He has been instrumental in arranging demonstrations and workshops in schools. The team led by Mr. Joshi includes his colleague Mr. Waghela, the children of scouts and guides, and the members of Junior Red Cross Society.

Mr. Joshi is now ready to share his learning with others. Today, as schools in the region are conducting rescue drills, children now understand what happens in an earthquake, cyclone or drought. They know their village environment and what they need to do to counter disasters.

- *Champion communities*

Champions are not limited to individuals alone, communities too become champions. There are many such champion communities across the regions that

have served as models for others. One such community is the village of Thoyana, where people come together to promote mitigation not just in their own village, but also with others through well thought out yet simple disaster resistant activities. These have included water harvesting, school safety programmes, mason trainings and women's group activities. For the project team, the meetings at Thoyana have always been good. Led by their village headman Vejabhai Odedara, and the teacher Pravinbhai Kasundara, the community at large is most cooperative and proactive. The women in the village have been active too. In Community Fairs, the villagers of Thoyana now participate most actively, making a positive impact on other communities in the vicinity. Everyone, from the village women, the masons, the leaders and the businessmen, has together become a model community for the region.

These are the local champions, prime movers of the community. They are the key to building long- term resilience at the community level. Gujarat needs many more such champions. All vulnerable regions of the world need such champions. With the government and NGOs acting as facilitators, there is an opportunity for a lasting change. A change where people, motivated by their own champions, take wise decisions to bring about development that is sustainable and safe from disasters.

III) Based on Partnerships

The key to the success of community initiatives lies in partnerships. Partnerships between individuals, families, local groups, and communities make things happen and sustain them on the ground. Partnerships of communities with NGOs, corporate entities and governments create engines for development. They also create safety nets that make communities disaster resilient. The following case from Vietnam illustrates the strengths of such multi-sector partnerships (UNDP Vietnam, 2005).

Natural Disaster Mitigation Partnership, Vietnam

The Natural Disaster Mitigation Partnership (NDM-Partnership) is an association of voluntary members of Government, Donors and NGOs who have signed or expressed their commitment to work through the NDM-Partnership Memorandum of Agreement ratified in June 2001 by the Consultant Group (CG) of donors to the Government of Vietnam.

Natural disasters that devastated Central Vietnam in 1999 led to the development of an institutionalised arrangement for coordinated efforts for disaster mitigation in Vietnam. In early 2000, a Fact- Finding -Mission and in the mid 2000, a Multi- Donor- Mission was fielded to the disaster affected Central Vietnam. The data collected during these Missions provided the basis for developing the concept of the NDM-Partnership for Central Vietnam.

A Secretariat of the NDM-Partnership was set-up in May 2002 in Hanoi. A quarterly Newsletter of the Partnership was started in September 2002 for sharing information among Government agencies, Donors and the NGOs. The website provides updated information of the NDM-Partnership activities:

The institutional framework for implementing the NDM-Partnership for Central Vietnam and the partnership cooperation and coordination links to donor and government programs and projects is given in the following figure.

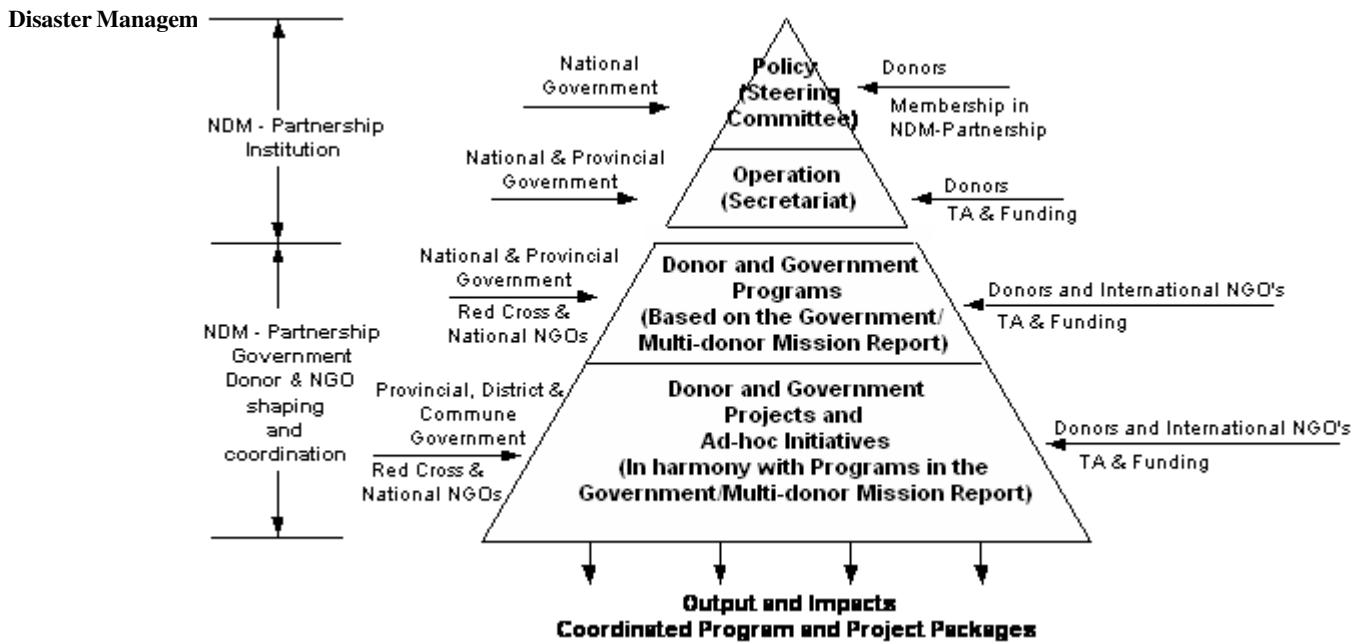


Figure: Institutional Framework of NDM Partnership, Vietnam

3.8 CONCLUSION

CBD finds its roots in traditional community practices, and is based on local coping capacities of communities. Following the principles and strategies of CBD in modern day programming is not without challenges. It requires balancing of stakeholder interests, optimisation of resource allocations, resolution of conflicts, and restraining aspirations within manageable limits. Continuation of a programme for a long term is one of the challenges where many interventions have failed. This has many linked issues, and needs to be addressed right from the stage of intervention conceptualisation. Within this aspect, an area of concern is the dynamics of new institutions that get established and individuals or groups that get empowered. The change in balance of power structures creates potentially threatening situations, and careful handling and balancing is required. This holds true for community institutions and their links with other community groups, local political groups, local politicians and government officials, and even NGOs. Establishing a healthy partnership between government and non-governmental players is a crucial challenge in the CBD process. Finally, it is a challenge to keep interventions from getting carried away into becoming fancy programmes for high-tech emergency management. What works best on the ground is a low-tech, people-friendly developmental approach that would be operational on a day-to-day basis and will build local strengths. Simplicity of approach is a challenge in itself!

3.9 KEY CONCEPTS

Community

: Scholars differentiate between *society* and *community* as, the former is naturally ordered and is heterogeneous in character, whereas the latter is a result of deliberate networking on the part of people on some homogenous ground. Homogeneity could be on grounds of geographic

contiguity, ethnicity, religion or caste etc. It is however, evolving and dynamic in nature, never static in that configurations change.

Participatory Risk Assessment

: The idea behind participatory risk assessment is that all concerned stakeholders including/comprising vulnerable groups; civil society engaged in ameliorative works, corporate sector by way of both *private interest* (builders in case of vulnerable buildings) and *public interest* (corporate social responsibility) and the government to arrive at a consensus in identification of elements at risk and also the most vulnerable area, infrastructures and populace (“Development Planning and Administration”, 2003). Notable among techniques of participatory risk assessment are, Participatory Rural Appraisal (PRA) Participatory Learning and Action (PLA) and Social Analysis (SA).

Participatory Rural Appraisal

: PRA originally stood for Participatory Rural Appraisal, but its applications are in many other contexts besides rural and good practice is far more than just appraisal. It enables others to do their own appraisal, analysis, planning and action, to own the outcome and to share the knowledge. The target group could be local; rural or urban concerning people, women, men or old, or members of an organisation or group. Three common elements found, all over world, in a PRA approach, are:

Three common elements found all over world in a PRA approach, are:

- *Self-Aware Responsibility*: individual responsibility and judgement exercised by facilitators, with self-critical awareness, embracing error.
- *Equity and empowerment*: a commitment to equity, empowering those who are marginalised, excluded, and deprived, often specially women.
- *Diversity*: recognition and celebration of diversity.

Participatory Learning and Action :

- PLA combines:
- A set of diagramming and visual techniques originally developed for livelihoods analysis and now widely used in Natural Resources departments in development agencies. They have since been adapted for use in other sectors including enterprise development; and,

- Underlying principles of grassroots participation from human rights activism, which involve rethinking power relations and partnerships between development agencies, experts and poor people. These are now being developed further to facilitate negotiations between different stakeholders in projects and policy dialogue.

The underlying principles of PLA, include: “embracing complexity; recognition of multiple realities; prioritising the realities of the poor and disadvantaged; grassroots empowerment; from assessment to sustainable learning; and relating learning to action” (Linda).

Social Analysis

- : Social Analysis is an attempt at incorporating participation and social analysis into the risk identification process. It is an attempt at understanding the social matrix and how it contributes to the vulnerability of segments such as women and children. From social analysis emerge guidelines for policy in this respect.

Social Capital

- : Social capital is an economic analogy for bonds of community cohesion, which can translate into tangible gains. “Social capital refers to the collective value of all social networks and the inclinations that arise from these networks to do things for each other; in other words, “norms of reciprocity”. The central premise of social capital is that social networks have tangible value, which cannot be discounted in cost- benefit analyses or policy implementation and evaluation” (Putnam, 2005).

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3.11 ACTIVITIES

- 1) In the above case studies which community-level solutions have been applied for mitigating various disasters? Make a table of disasters and coping measures. For each of the measure, describe how this has been useful in reducing problems relating to disasters in each case. List down the key stakeholders involved in each case and what has been their contribution towards mitigating the disaster.
- 2) Collect one case study on effective mitigation for any risk in your area. Prepare a presentation and discuss possibilities of further improvement.

UNIT 4 DISASTER MANAGEMENT STRATEGIES

Structure

- 4.0 Learning Outcome
 - 4.1 Introduction
 - 4.2 Changing Complexion of Disaster Management
 - 4.3 Disaster Management Strategies: An Overview
 - 4.4 The Path Ahead
 - 4.5 Conclusion
 - 4.6 References and Further Reading
 - 4.7 Activities
-

4.0 LEARNING OUTCOME

After going through this Unit you should be able to:

- Analyse the changing complexion of disaster management
 - Provide an overview of the disaster management strategies; and
 - Project the path ahead for disaster management
-

4.1 INTRODUCTION

Disasters wipe out years of development by destructing economies and causing extensive damage to lives and properties. Tsunami in Asia in 2004, Hurricane Katrina in USA in 2005, Muzzaffarabad Earthquake in 2005, to name a few, have resulted in serious social and economic costs. Though a United Nations Report titled '*Living with Risk*' indicates that there has been a decline in the number of loss of lives from natural disasters, yet the prevalence of disasters is on the rise. The detrimental consequences of disasters on society, economy and environment cannot be overemphasised. The question that arises is whether the devastation and destruction are inevitable? As we have been reiterating in the Units of this Course, a certain amount of it cannot be avoided, but can be minimised through enhancing the national disaster management capacities to address the various aspects of prevention, preparedness, mitigation, response, rehabilitation and recovery. Over the last two decades, globally efforts towards evolving multifaceted disaster management strategies have been taken up, about which you have been acquainted with in the previous Units.

We have reached the Final Unit of this Course. By now you must have acquired a grasp over the various facets of disaster management. In this Unit, we shall orient you about the changing complexion of disaster management and provide an overview of important disaster management strategies. Finally, we shall attempt to project the path ahead for the disaster management.

4.2 CHANGING COMPLEXION OF DISASTER MANAGEMENT

Disasters, pose a threat to the development strategies of nations as they destroy the productive capacity, interrupt economic and social activities and create irreversible changes in the natural resource base. Hence, disaster management traditionally has been viewed as a strategy for preparing and managing the aftermath of the sudden events. It was always felt that disasters overwhelm the capacity of the nations and communities by causing severe hardships and loss. Gradually by 1990s, a change in the perception about disasters was visible. They are no longer considered as sudden occurrences that can be handled by emergency response and rescue services. Disaster prevention, which earlier was not a development priority, added a new dimension to disaster management. A general awareness is beginning to be generated that disaster impact can be minimised through improved development planning and implementation.

Risk reduction as a significant disaster management strategy is gaining importance. Disaster policies, it was perceived, can identify the probable risks the community face and its capacity to withstand these. Hazards, it was realised need to be looked upon as an integral part of development process. The developmental perspective to disasters, as we have already discussed in Unit 16 of this Course, views disasters as not random acts of nature but as an outcome of poor risk management that has occurred over time. Hence risk reduction strategy is being embarked upon for achieving sustainable development and protection of people and livelihoods. Disasters currently are being seen as opportunities to capitalise on the inflow of resources for relief to promote long-term development. In a traditional sense, disaster relief and development were looked at as two distinct entities. Relief was in a way top-down in nature. The affected communities were considered helpless and passive receivers of aid without being involved in the process of relief and rehabilitation.

There is a distinct change in disaster management trends as reflected in the Table below:

Table 19.1

From	To
Helplessness of the victims	Awareness of the ability to cope
International response	National reliance
Outside response	Community self reliance
Emergency agency responsibility	Everyone's responsibility
Individual aid	Restoration of social system
Victims as receivers	Victims as actors
Good dole out	Training and Institution building
Donor focused	Victim focused

Source: Proceedings of Third Disaster Management Practitioners Workshop for Southeast Asia, 2004.

There is a paradigm shift from the traditional relief and disaster preparedness towards a developmental approach that is multidimensional incorporating a combination of strategies aiming at the institutional and community levels. The earlier emergency management approach has given way to disaster risk management. It is increasingly realised that one needs to be aware of the risks involved with disasters and handle them. According to Jerrilos (1999), this strategy focuses on the underlying conditions of risk generated by unsustainable development, which lead to disaster occurrence. Its objective is to increase capacity to manage and reduce risks and hence the occurrence and magnitude of disasters..... A disaster risk is the probability of injury, loss of life, and damage to property, disruption of services and activities and negative environmental effects.

Transformation in the Disaster Management Model

The traditional model to disaster management tends to regard it as a combination of a number of phased sequences of action or a continuum as indicated in the figure below:

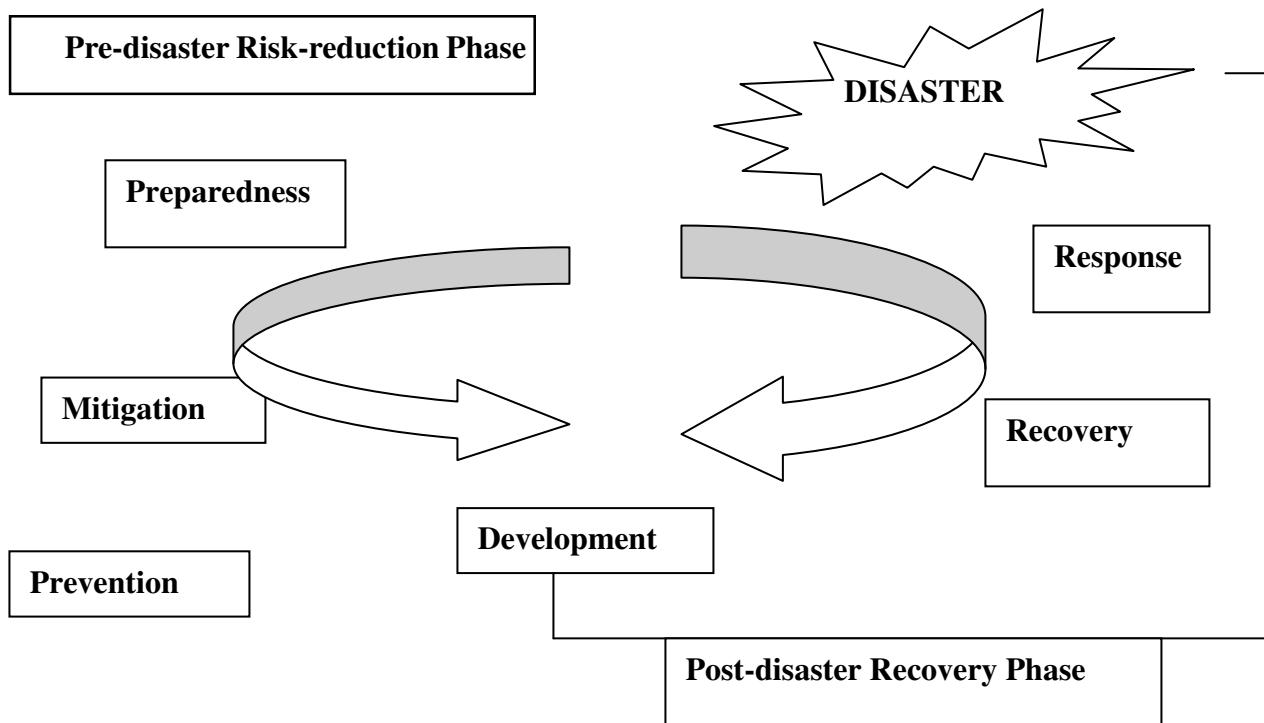


Figure 19.1: Traditional Model –Sequences of Action

Source: Green Paper on Disaster Management, Department of Provincial and Local Government, South Africa.

As you are aware, there are different phases of managing disasters from development to recovery, which have been discussed in this Course. The new model of disaster management namely the –‘expand-contract’ model views disaster management as a continuous process. Disasters, it is felt, are managed in a parallel series of activities rather than in a sequence of action. For example, in case of any disaster such as cyclone, the ‘relief and response’ strand expands to cope with the immediate effects of the disaster. Gradually, the ‘recovery and rehabilitation’ strand – including prevention will expand to address the rehabilitation needs of the affected community. The significance of the different strands depends on the relationship between the hazard event and the vulnerability

of the community that is involved. This approach is based on the premise that disaster management includes a number of interventions and actions that may be occurring simultaneously and not always in a phased manner.

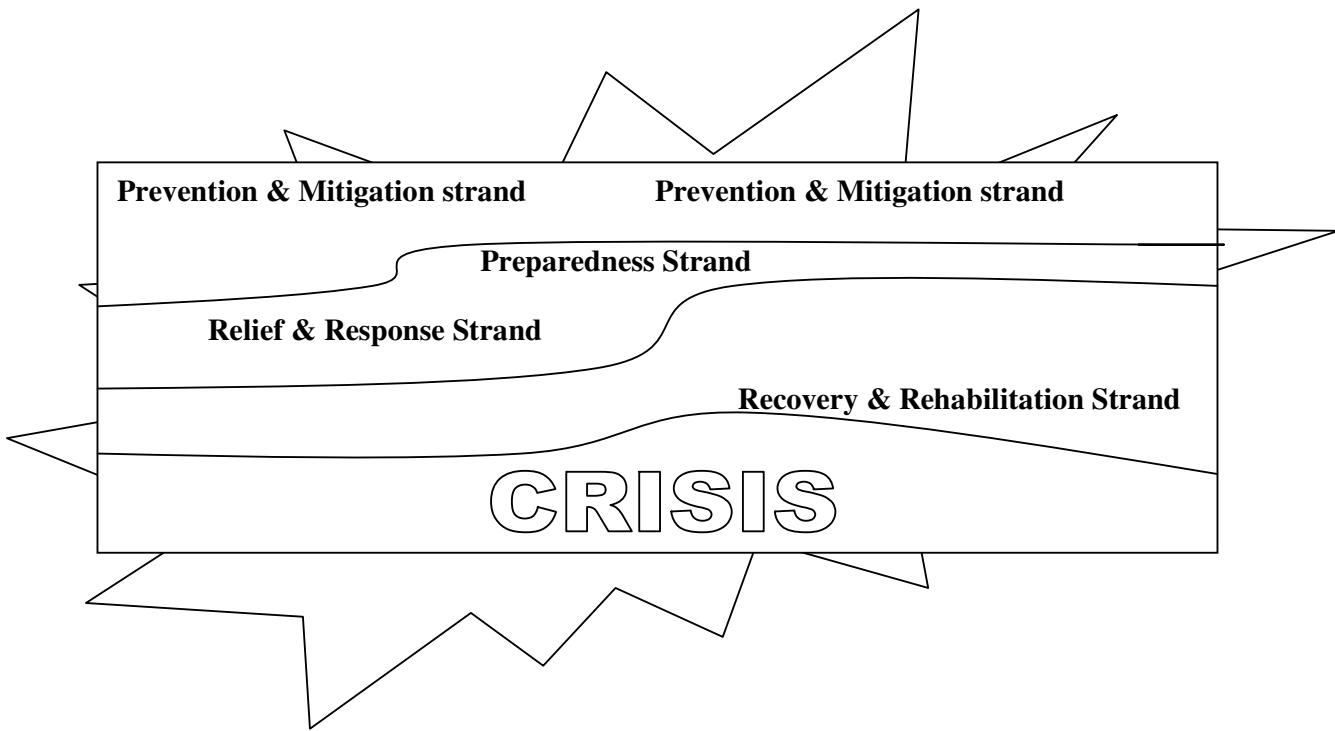


Figure 19.2: Expand-Contract Model

Source: Green Paper on Disaster Management, Department of Provincial and Local Government, South Africa

As you all know, the national government, non-governmental organisations, and the various agencies of United Nations have made significant strides in pursuing strategies for disaster reduction. We can say that the governance approach that is gaining importance in all spheres of activity is permeating the area of disaster management. Governance, which is wider than government, comprises the mechanisms, processes and institutions through which citizens and groups articulate their interests. The social networks and multilevel governance processes that include public, private and community partnerships have proliferated at an accelerated pace.

Norio Okado (2005) terms the involvement of citizens, private sector, other participatory groups in the process of disaster risk management as “Novel Public Management”. This is considered a new trend in the 21st century. Its features are:

- An emerging role of NGOs
- Innovative schemes of public-private partnership
- Increasing importance of citizen initiatives
- Institutional participatory process for multiple stakeholders
- Public information as common goods and its release to society and stakeholders; and
- Growing concerns for public risk and increasing need for integrated risk management.

This new trend is considered to be a turning point in disaster prevention. The emerging role of NGOs in civil society, increasing significance of government private sector partnership and extending spectrum of social services are the characteristics of this perspective which is required to be integrated within the framework of disaster risk management.

The contemporary challenges are to manage the human safety and security. A strategy that provides for identification, assessment and management of risks arising out of disasters is gaining importance. It is a prerequisite for sustainable risk reduction in developing countries. New strategies for crises management in the present day globalised world are emerging. What is required is to bring in appropriate institutional reforms, building the capacities of human resources, enhancing the government's ability to govern and manage effectively in the transformed environment. We need to examine the strategies being evolved at different levels of governance from the national to local level. In the next Section, we shall provide you with an overview of the key strategies.

4.3 DISASTER MANAGEMENT STRATEGIES: AN OVERVIEW

It is being realised that disaster management is to be given a proper policy direction and any strategy needs to adhere to the following principles:

- Fostering a culture of prevention
- Identifying the key issues to be addressed especially in the development process
- Permeating the concern for disaster risk reduction across all levels of government
- Evolving equitable, consistent and fair mechanisms of provision of disaster assistance
- Providing transparency, participation and exchange of information
- Taking cognisance of local conditions and environment
- Devising efficient, effective, flexible, adaptive and sustainable strategies; and
- Introducing a multidisciplinary and integrated approach to manage disasters.

To recapitulate, a beginning in evolving a disaster management strategy was made in May 1994, with the Yokohama Strategy emanating from the International Decade for Natural Disaster Risk Reduction. The Yokohoma strategy emphasised that disaster prevention, mitigation and preparedness are better than disaster response in achieving the goals and objectives of vulnerability reduction. The Yokohama Strategy for Disaster Reduction centered on the objective of saving human lives and protecting property. The strategy focused on:

- Development of a global culture of prevention
- Adoption of a policy of self-reliance in each vulnerable country and community
- Education and training in disaster prevention, preparedness and mitigation

- Development and strengthening of human resources and material capabilities and capacities of research and development institutions
- Involvement and active participation of the people
- Priority to programmes that promote community based approaches to vulnerability reduction
- Effective national legislation and administrative action
- Integration of private sector on disaster reduction efforts
- Involvement of non-governmental organisations; and
- Strengthening the capacity of the United Nations system in disaster reduction

As you all know, the International Strategy of Disaster Reduction (ISDR) pronounced in 2001, intended to enable all societies to become resilient to the effects of natural hazards and related technological and environmental disasters to reduce human, economic and social losses. The ISDR considered that appropriate disaster reduction strategies and initiatives at the national and international level, as well as the implementation of Agenda 21 can strengthen the likelihood of reducing or mitigating the human, economic and social losses caused by disasters and thereby facilitate sustained growth and development. It called for participation of communities as an essential element for successful disaster reduction policy and practice. Vulnerable communities, especially in developing countries demonstrate extraordinary capacities to prevent such losses. The strategy emphasised on the need to create disaster resilient societies and prevent human, economic and social losses through public participation at all levels of implementation of the strategy.

The World Conference on Disaster Reduction held in January 2005 at Hyogo, Japan identified the specific gaps arising out of the Yokohama strategy. These are:

- Governance: organisational, legal and policy frameworks
- Risk identification, assessment, monitoring and early warning
- Knowledge management and education
- Reducing underlying risk factors; and
- Preparedness for effective response and recovery

The Conference adopted the framework for Action for 2005-2015 as *Building the Resilience of Nations and Communities to Disasters*. It promoted a strategic and systematic approach to reducing vulnerabilities and risks to hazards. The Conference identified the following strategies:

- Effective integration of disaster risk considerations into sustainable development policies, planning and programming at all levels, with a special emphasis on disaster prevention, mitigation, preparedness and vulnerability reduction.
- Development and strengthening of institutions, mechanisms and capacities at all levels, in particular at the community level, that can systematically contribute to building resilience to hazards; and
- Systematic incorporation of risk reduction approaches into the design and implementation of emergency preparedness, response and recovery programmes in the reconstruction of affected communities.

The prevailing disaster management approaches and strategies are propagating a comprehensive approach towards handling disasters. Effective, holistic, and proactive disaster management strategies focusing on disaster risks, vulnerability of communities, and multilevel and multidimensional coordination among all stakeholders are emerging. We have already acquainted you with the basic tenets of Total Disaster Risk Management Approach (TDRM) in Unit 2 of this Course. This approach builds on the gains of the International Decade of Natural Disasters, the International Strategy for Disaster Reduction and other existing endeavours. It integrates the existing knowledge and techniques on disaster reduction and response and risk management. Inherent to this approach is effectively communicating their knowledge techniques at all levels and facilitating the appreciation of governments of the relevance of disaster risk management in achieving sustainable development objectives. We have discussed in detail the strategies of the approach in Unit 2 of this Course.

USAID's Disaster Mitigation Strategic Objective emphasises preparing for and responding to natural disasters. This strategy targets the following broad sets of beneficiary groups:

- At-risk population e.g. women, children, scheduled castes and tribes in high-risk disaster prone communities
- Service providers, e.g. first responders
- Public and private partners e.g. banks, insurers, NGOs, business aid
- Government of India, public policy makers, military, police and disaster management officials.

This strategy has the following components:

Increased Community Preparedness to Mitigate and Manage Disasters

This encompasses:

- Community level disaster planning
- Drought Mitigation
- Public awareness and Information campaigns
- First responder training
- Hospital preparedness
- Exposure to “best practices” opportunities (in-country, regional and international)
- Building code enforcement
- Weather and flood forecasting; and
- Early warning systems

Improved Capacity of Public and Private Partners to Meet Critical Needs of Vulnerable Groups in Disaster Situations

This includes:

- Incident command systems training
- Search and rescue operations
- Stockpiling of relief supplies

- Partners training for capacity building; and
- Coordination of international relief resources

Facilitated and Expedited Reconstruction and Rehabilitation in Accordance with Sound and Equitable Standards

This involves:

- Retrofitting of public buildings
- Support for materials stockpiling for reconstruction inputs
- Microfinance support for affected small-scale enterprises or the informal sector
- Training programmes for engineers and reasons on how to build more disaster-resistant structures; and
- Information system support to promote transparency and equity in Government of India and private sector disaster response

It is evident that the major goal is to reduce disaster risk. In tune with this, the major strategies veer around:

- Institutionalising National Systems and Capacities for Disaster Management
- Strengthening Governance Mechanisms at the Local Level
- Building Community Resilience
- Reducing the Vulnerabilities of the Communities at Risk
- Fostering Public Private People Partnership; and

We shall examine these strategies in brief now:

Institutionalising National Systems and Capacities

The Government of India has adopted mitigation and prevention as essential components of the development strategy. The Tenth Five Year Plan document has incorporated a detailed Chapter on Disaster Management. The plan indicated that to move towards safer development, development projects should be sensitive towards disaster mitigation. The design of development projects and the process of development should take the aspect of disaster reduction and mitigation within its ambit; otherwise the development ceases to be sustainable and eventually causes more hardships and loss to the nation.

The terms of reference of the Twelfth Finance Commission have been modified and it has been mandated to look at the requirements for mitigation and prevention apart from its existing mandate of looking at relief and rehabilitation. The Government of India have issued guidelines that where there is a shelf of projects, those addressing mitigation will be given a priority. It has also been mandated that each project in a hazard prone area shall have disaster mitigation / prevention as a term of reference and this needs to be reflected in the project document.

Constitution of Disaster Management Authorities at National, State and District Levels

The National Disaster Management Authority (NDMA) has been constituted in December 2005 consisting of the Prime Minister of India as the Chairperson and other members not exceeding nine to be nominated by the Chairperson. The

National authority subject to the provisions contained in the Act shall have the responsibility for laying down the policies, plans and guidelines for disaster management for ensuring timely and effective response to disaster.

Every state government also is to establish a State Disaster Management Authority consisting of the Chief Minister of the State as the ex-officio Chairperson and other members not exceeding eight to be nominated by the Chairperson of the State Authority. This authority has the responsibility for laying down policies and plans for disaster management in the State.

A District Disaster Management Authority for every district is to be constituted by the state government. This is to consist of the Collector or District Magistrate or Deputy Commissioner as the Chairperson in ex-officio capacity and members not exceeding seven as may be prescribed by the state government.

Strengthening Governance Mechanisms at the Local Level

The modern disaster management practice recognises the strengthening of disaster management capacities at the district level and below, as this is the cutting edge of governance. There are efforts made to reach out to local governments to help them build local capacity, acquire knowledge and resources and provide them with decision-making authority.

The formulation of District Disaster Management Plan (DDMAP) can serve as an effective strategy to address the district's response to disaster situations. It can act as a multi-hazard response plan for the disasters and provide for the institutional framework required for managing such situations. The DDMAP can serve as an effective tool to:

- Improve preparedness at the district level through risk and vulnerability to analysis
- Ascertain the inventory of existing resources and facilities available with the various agencies at the district level
- Use scientific and technological advances in Remote Sensing, Geographical Information System etc., in preparation of the plan; and
- Develop a framework for proper documentation of future disasters in the district.

The 73rd Constitutional Amendment has conferred Constitutional Status on the Panchayati Raj Institutions (PRIs) in India. Sensitisation training and orientation of the PRI members can go a long way in effective disaster management. The Eleventh schedule of the Constitution identifies key areas for developmental schemes for PRIs. These include land improvement, minor irrigation, education, poverty alleviation programmes etc. The PRIs can incorporate mitigation component in every development project in these areas. The primary responsibility for managing any kind of disaster at the local level lies with the local governance institutions apart from the community organisations and NGOs. The local governments are best positioned to provide the necessary leadership and direction and shoulder responsibility for providing the necessary succour to the victims and also contribute in ensuring long-terms risk reduction.

Osborne and Gaebler, who propagated the concept of entrepreneurial government, are of the view that the right kind of government redefines its role to be a catalyst

and facilitator. Such governments will tend to define problems and assemble resources for others, while at the same time improve coordination between NGOs and the community. In the wake of this paradigm shift, one important strategy could be to build the capacities of local governments. This can be through the following ways:

Human Resource Development: This will include equipping the local government officials with an understanding of prevalent hazards, vulnerabilities and capacities in their local area of operation, the necessary risk assessment skills and knowledge of risk management approaches.

Institutional Development: This will entail improving management structures to strengthen capacity to act as a facilitator for coordination between the organisations and communities involved in disaster management and encouraging information dissemination for increased disaster awareness amongst the communities.

Legislative Development: Making legal and regulatory changes to enable local governments to enhance their capacities to allocate financial resources for disaster management, develop disaster plans, integrate mitigation strategies into the development process and involve business community, neighbourhood associations; builders and media in risk reduction planning (Mehta, 1999).

Building Community Resilience

Resilience is the capacity to cope with unanticipated dangers after they have become manifest, and learning to bounce back (Wildavsky, 1991) All individuals have resilience but the degree to which one is able to cope with any adversity varies. Whenever a disaster occurs, the portrayal by media indicates or reflects that the communities are helpless and can be saved only through aid from outside. Though initially some assistance is required, later the way people pull together and rebuild their lives is quite amazing. So the people have the capacity to survive, adapt and bounce back after a crisis. Hence over time strengthening or building the resilience of communities has become a key strategy at the global level.

There is a shift from vulnerabilities to capacity assessment and building, particularly of the community. The approach is more community based about which we have already discussed in Unit 9 of this Course. The following table indicates the features of traditional and community based approaches:

Features	Traditional	Community-based
Locus of concern	Institution	Community
Participation	Token	Dominant to control
Decision making	Top down	Bottom up
Main actors	Programme staff	Community residents
Resources	Programme based	Internal resources
Main method used	Extension services	Community organising
Impact on local capacity	Dependency creating	Empowering

Source: Proceedings of Third Disaster Management Practitioner's Workshop for Southeast Asia, 2004.

The building of disaster resilience at community is only the beginning of the strategy. To ensure a wider impact on managing disasters, the message of risk reduction needs to be broadened. In Andhra Pradesh the efforts made by the rural community in the drought affected village Zaheerabad in Medak District reveals how with the right help, communities can build their resilience. Low rainfall and deforestation have left the soils arid and eroded. Also much of the crops were wheat, rice and cotton are prone to pests and require expensive fertilisers and pesticides.

A Local NGO Deccan Development Society (DDS) employs various strategies to help increase local resilience. These are:

- Forming women's collectives and encouraging collective farming by women
- Initiating programmes to restore arid land back into a productive asset
- Promoting afforestation and mini-watershed management; and
- Creating community gene and grain fund

DDS works with local communities to enable them cultivate idle land and reintroduce customary farming practices. Local food grains, which are drought resistant and less dependent on expensive and external inputs, are grown. The grain, which is grown, is stored in each village land and it is the Community Grain Fund (CGF). Each community identifies poorest households who buy the grain at the subsidised rates. The money earned becomes a revolving fund. Three principles - local production, local storage and local consumption distinguish DDS's strategy from the government managed public distribution system.

To further boost the capacity of farming families to withstand drought, DDS promoted the innovative idea of a seed bank to rescue traditional crop varieties that thrive in arid conditions. Seeds of different varieties were collected from villages and the community gene fund has grown into a movement across the region. As the change brought about in these villages are based on knowledge, skills and resources largely internal to the community, rather than being dependent on large investments of external money or technology, this is a path that other communities in semi-arid regions follow to create a more resilient future (*World Disasters Report*, 2004).

Globally there are several programmes and projects being taken up to strengthen community resilience. What is important to ensure its sustainability is to forge partnerships with local governance institutions, focus on mitigation measures, Information Education and Communication (IEC) activities and integrate the programmes into development plans.

Reducing the Vulnerabilities of the Communities at Risk

Vulnerability in a way implies that there is a deficit of capacities amongst the people who are at risk. What is required is to identify the different types of vulnerabilities at various levels. Efforts are being made by several organisations including the national governments to analyse the capacities and vulnerabilities.

Livelihoods are the most to be affected by disasters. Agriculture being the primary livelihood in many countries, this gets disturbed and there is always lack or under development of secondary or tertiary sectors such as agro-based industries, processing units etc. The traditional and crafts industries also receive a setback.

Strategies to strengthen the livelihoods and provide sustainability are occupying a prominent place in disaster management.

In the development field, the sustainable livelihoods (SL) approach first promoted by Chambers and Conway (1992) has become an important organising framework for the efforts of a wide range of multilateral agencies, donors, NGOs, and government bodies. SL is concerned with the potentials, competence, capacities and strengths-rather than weaknesses and needs of the communities. It recognises a range of strengthens or assets – called ‘capitals’ to sustain a livelihood. These include:

Natural Capital: This includes water, land, rivers, forests and minerals necessary for the survival of both rural and urban population.

Financial Capital: Access to financial capital such as income, savings, remittance, and credit is a critical resilience factor.

Human Capital: Human capital in the form of knowledge, skills, health and physical ability determine an individual’s level of resilience more than any other asset.

Social Capital: In the sustainable livelihoods context it is taken to mean the forms of mutual social assistance upon which people draw. These include networks such as clan or caste; membership of more formalised groups such as women’s associations etc.

Physical Capital: It comprises the basic infrastructure, goods and services needed to support sustainable livelihoods including secure shelter and buildings, clean water supply, sanitation, access to information and communications (*World Disasters Report*, 2004).

In India, there are attempts to reduce the vulnerability of communities through strengthening employment and livelihood strategies. There are several schemes such as Food for Work, Integrated Child Development Scheme, Drought Prone Area Programme, etc. Micro finance is increasingly being used to create safety nets. The Self Employed Women’s Association (SEWA) along with International Fund for Agricultural Development (IFAD), the World Food Programme (WFP), Government of India and Government of Gujarat, has launched a seven-year livelihood security project *Jeevika*. It organises women into Swashrayee Mandals and provides them loans, and also inculcates a culture of savings among the rural poor that helps them during crises.

The Food and Agriculture Organisation (FAO), realising the interdependence amongst poverty alleviation, development and disaster risk reduction, has initiated a programme on ‘*The Role of local level institutions in reducing vulnerability to natural disasters*’. It aims at promoting local capacities and local organisations to participate actively – in the design and implementation of locally adopted disaster risk prevention and management strategies. This is in operation in several developing countries such as Philippines, South Africa, Argentina, Vietnam, Iran, etc. Its key strategies include:

- Inclusion of disaster prevention and mitigation components in rural development plans
- Disaster preparedness and contingency planning at district and community levels

- Integrated land use and watershed management
- Social capital formation and enhancing social safety nets
- Recognition and enhancing the local knowledge specifically on risk identification and monitoring, early warning etc., and
- Improved vulnerability assessments and vulnerability monitoring.

Fostering Public Private People Partnerships

Public private partnerships are presently an important strategy of public policy implementation. This is one of the new governance models, which is being experimented in public service delivery. In crises such as disasters that involve huge resources, this is an effective strategy of mobilising private funding and technology that provide gains to the public. It brings all the concerned stakeholders on one platform to share the resources, assets, and knowledge thereby fostering beneficial relationships.

In Gujarat, the Housing Reconstruction Programme taken up in the aftermath of earthquake is a participatory programme with people undertaking the construction of the houses with the assistance of the government. The Confederation of Indian Industry (CII) is playing an important role in eliciting the support from corporate sector in disaster management activities. The Ministry of Home Affairs is seeking the participation of the Builders Association of India (BAI) and Construction Federation of India (CFI) with a combined membership of forty thousand construction companies in the disaster management ventures.

Public private people partnerships foster horizontal relationships and networks in the governance process. For instance in USA the Federal Management Agency (FEMA) was said to arrive generally after a disaster to provide emergency relief and financial assistance. In 1993, administrator James Lee Witt led a radical turnaround. FEMA officials focus more on preventing the damage from disasters through an inter governmental and public private effort. FEMA developed a “life cycle” mode of disaster management.

Disasters – and their costs were the product of planning and mitigation that needed to begin far in advance of disasters and continue long after to prevent their recurrence. Instead of waiting for a hurricane to hit and dealing with the aftermath, for example, FEMA officials worked closely with the state and local officials to improve evacuation plans. They built partnerships with the construction industry to design and build more houses that are hurricane resistant. FEMA, in short, moved from limited forms of direct service delivery to a complex network-based approach that stretched from federal government into state and local governments and the private sector (Kettl, 2000). Public private people partnerships is an important strategy that brings about devolution of function, sharing of responsibility, extended social networks where there is sharing of administrative responsibilities.

As you would have observed, all the Units dealt with in this Course dealing with various facets of disaster management have identified specific strategies. The objectives or goals the different strategies intend to promote are more or less identical. Disaster risk reduction accompanied by creating community resilience, participation, empowerment, strengthening livelihoods and integrating risk reduction with development are the prime concerns. There are the global

challenges too. Having reached the end of the Course, let us know visualise and chalk out the path ahead for disaster management.

4.4 THE PATH AHEAD

The current perceptions regarding disasters need to undergo a transformation. These are no longer to be considered as occurrences that are to be managed through emergency response services. Disasters natural or human induced can take place any time, and what is required is awareness and shared responsibility for risk reduction. This needs to be integrated with the overall development of any nation. The vital links between development and disasters is increasingly being realised and was infact a main theme at the World Conference on Disaster Reduction held in Kobe, Japan in 2005. Disaster reduction and mitigation efforts must be “woven into the fabric of a community overall development” noted Jan Egeland, the UN Undersecretary General for Humanitarian Affairs.

Globally, all countries presently are working towards the achievement of Millennium Development Goals (MDGS). It was in the year 2000, when the United Nations General Assembly noted with concern the abundant inequalities in human development worldwide and recognised “their collective responsibility to uphold the principle of human dignity, equality and equity at the global level”. The General Assembly has set eight goals for achieving development and poverty eradication by the year 2015. These include:

- Eradicating external poverty and hunger
- Achieving universal primary education
- Promoting gender equality and empower women
- Reducing child mortality
- Improving maternal health
- Combating HIV/AIDS, Malaria and other diseases.
- Ensuring environmental sustainability
- Developing a global partnership for development

The UNDP Report on *Reducing Disaster Risks* (2004), focused on integrating disaster risk reduction and development planning to meet the MDGS. It addresses the MDGs 1,3,6,7 and 8 as being of primary concern to disaster risk reduction on the following grounds:

MDG 1. Eradicating extreme poverty and hunger

There are many opportunities for interventions that could simultaneously reduce disaster risk and poverty and hunger. These Include:

- Strengthening and diversifying livelihoods
- Encouraging responsible foreign investment and job creation
- A flexible and participatory approach to urban planning
- Building social security, including access to health and education
- The provision of risk / loss spreading mechanisms for those excluded from insurance cover.

At levels from the individual to the national, the impact of disaster takes away the means of generating income as well as any savings and assets. It is this aspect of disaster that emphasises on pro-poor development policy, which provides an opportunity for disaster risk reduction.

Many of the tools for delivering poverty-alleviation projects and programmes need simply to be modified to take account of disaster risk reduction. The added value of such work is to enhance the sustainability of poverty and hunger alleviation.

MDG3. Promoting gender equality and empowering women

Gender influences the types of hazard to which an individual is exposed and an individual's access to resources with which to build resilience to hazard and to recover from disaster. Where structural constraints in society result in the exclusion of women from decision-making or economic security, risk will be unevenly spread.

Highlighting gender in development and disaster risk reduction raises a broader issue of inclusiveness in decision-making. To promote resilience, inclusive and consultative processes are needed that engage those most at risk. Often those at risk are the most resourceful members of society, but also the least included in economic and political life. This will include women, but also child-led households, elderly people caring for grandchildren, ethnic and religious minorities, people weakened by chronic illness and social classes and castes with low social status.

MDG4. Reducing child mortality

Children are at greater risk of being affected, injured or killed by disaster impacts than adults. For example, an estimated 114,000 school-aged children were made homeless by the Marmara earthquake in Turkey in 1999.

It is perhaps the indirect impacts of disaster that have the greatest toll on children and affect the national mortality levels. Most important here is the loss of livelihoods that can lead to extreme poverty and homelessness for children left behind.

Appropriate safety nets, such as help for extended families with capacity to absorb orphans or well run orphanages, can support many children. But for those children born into families whose livelihoods and homes have been taken by disaster impacts, the chances of survival in the first years of life will be reduced.

MDG 6. Combating HIV/AIDS, malaria and other diseases

For many people, natural hazards' stress and shock is felt as one of many pressures. HIV/AIDS and other diseases can undermine individual and collective coping capacity, just as disaster impacts can take away development gains and livelihoods, making people more vulnerable to illness.

Interventions to strengthen basic health care provision, family health care and preventive health planning can play central roles in strengthening society and building capacity with which to resist natural hazards.

Innovative development policy is required for those instances where natural hazard coincides with high rates of illness. Ways of providing subsistence, security

and education for the children of families where adults may be dead or made weak from illness are difficult to find. This is even more so when rural livelihoods are under stress from drought conditions or crops and houses and tools have been swept away by floods.

MDG7. Ensuring environmental sustainability

One of the clearest signals of a crisis in environment-human relations in natural disaster. Soil degradation, biodiversity loss, over-fishing, deforestation or drinking water scarcity undermine rural livelihoods and pave the way for vulnerability to environmental hazard.

In cities, pollution of waterways and the air and inadequate provision of drinking water, sanitation or solid waste management systems shape patterns of illness that run down resistance to everyday hazards. In rural and urban contexts, risk accumulation that ends in disaster is often tied to problems of environmental sustainability. Strategies to enhance environmental sustainability will make a contribution to breaking the chain of accumulated risk.

MDG8. Developing a global partnership for development

The most important components of this goal relate to trade, debt relief and aid. Success rests to a large extent on the willingness of developed countries to meet their commitments. The 2001 Ministerial Meeting of the World Trade Organization (WTO) in Doha, Qatar placed the needs and interests of the developing countries at the heart of WTO negotiations. However, in 2003, the subsequent stalemate in the Cancun round of WTO negotiations showed greater political will, collaborative thinking and action is required at the international level to allow developing countries to trade on a level playing field.

Increase in assistance finance may reflect an evolving change in international donor priorities. As likely is a response to increasing disaster losses as the disaster-development relationship becomes ever more tightly connected, and human and economic exposure to disaster risk grows.

ISDR has succeeded in building regional and international partnerships for disaster risk reduction and in disseminating good practice. Similarly, negotiations around the United Nations Framework Convention on Climate Change (UNFCCC), most recently centered on the Kyoto Protocol, also provide a focus for international attention that can directly address the concern of disaster risk reduction.

These goals hence are important in crises management also. The basic components of MDGs – poverty, health, gender equality, education, environment and holistic human development are closely associated with the ability of the population to respond to disasters. Any effort towards meeting these would have to:

- Respond to the local needs
- Understand the dynamics of the local situations
- Reflect a long-term perspective
- Foster development of local capacity instead of perpetuating dependency; and
- Ensure accountability to all concerned stakeholders.

The path ahead for managing disasters is to usher in a people centered development strategy. This has to be supplemented by:

- Systematic assessment of what enables people to cope with, recover from and adapt to various risks and adversities – at household and community level
- Strengthening social capital as the key objective of all disaster interventions, whether in relief, recovery or risk reduction – rather a by-product.
- People-centered approaches to development provide models that can improve humanitarian aid and disaster risk management.
- New institutional strategies and cross-sectoral coalitions to boost the resilience of local livelihoods in the face of multi-dimensional risks
- Good governance to create the environment in which more resilient communities can thrive
- Scaling up strategies based on the aspirations and capacities of people at risk (*World Disasters Report, 2004 op.cit.*).

The tendency till now has been mostly to associate disasters with negativities. We need to broaden our vision and work on the positive aspects associated with disasters as reflected below:

	Negative Aspects	Positive Aspects
D	Damage	Development
I	Interruption	Innovation
S	Severe	Sharing
A	Antagonistic	Awareness
S	Scourge	Self-Sufficiency
T	Traumatic	Transformation
E	Emergency	Education
R	Risk	Resilience

Strategies for disaster management indicate several measures both long-term and short-term. But these can give some results only if accompanied by strong political will, keenness and commitment on the part of all concerned actors involved in the exercise. Any effort needs to be outcome and result oriented with a shared vision of future environment, Institutions, mechanisms and processes are always in place and what is to be associated with it is leadership and good governance. Any policy and practice that focuses on people's strengths instead of just vulnerabilities is proactive and it is a positive paradigm shift to deal with the marginalised sections of society.

The UNDP Report on Reducing Disaster Risks (*op.cit.*) highlighted the need for governance for Disaster Risk Reduction. According to it, governance has economic, political and administrative implications.

- Economic governance includes the decision-making process that affects a country's economic activities and its relationships with other economies.

- Political governance is the process of decision making to formulate policies including national disaster reduction policy and planning.
- Administrative governance is the system of policy implementation and requires the existence of well functioning organisations at the central and local levels. In the case of disaster risk reduction, it requires enforcement of building codes, land-use planning, environmental risk and human vulnerability monitoring and safety standards.

It identified six emerging agendas within Disaster Risk Reduction. These are

- Appropriate governance mechanisms
- Factoring risk into Disaster Recovery and Reconstruction
- Integrated climate risk management
- Managing the multi-faceted nature of the risk
- Compensatory risk management
- Addressing gaps in knowledge for disaster risk assessment

4.5 CONCLUSION

We cannot overemphasise the detrimental consequences of disasters on economies. Many countries globally are becoming increasingly vulnerable to disasters. The situation demands formulation of appropriate strategies for managing disasters. As discussed in the Unit, risk reduction as a significant disaster management strategy is gaining significance. This strategy, due to the emergence of new trends in the arena of disaster management, assumes varying forms. There is a paradigm shift from the traditional relief and disaster preparedness approach to a development approach we have highlighted these trends and approaches in the Unit. The changing complexion of the discipline of disaster management is analysed in the Unit. Several strategies have been pronounced over time, aimed at disaster reduction. Many international organisations also are working towards developing an integrated risk reduction strategy. The Unit discussed few such strategies. The major strategies which have gained prominence such as institutionalising national systems and capacities, strengthening governance mechanisms at local level, building community resilience, reducing the vulnerabilities of the communities at risk and public private people partnerships are highlighted. Disaster Management has to embark upon a strategy aimed at holistic human development integrating the millennium goals, policies and practices that harness people's strengths instead of vulnerabilities. It is a challenging road ahead for disaster management.

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4.7 ACTIVITIES

- 1) Go through the newspapers, magazines or journals and analyse the changing complexion of disaster management. Write a brief note reflecting your views.
- 2) Attempt to highlight a few strategies with reference to any particular disaster.
- 3) Browse some internet websites and collect material on emerging challenges in disaster management. Highlight a few striking trends in the form of a report after discussing it with your Academic Councillor.

MEDS-043: Dynamics of Urban Planning and Development

Block	Unit Nos.	Unit Titles
I		SUSTAINABLE DEVELOPMENT
	Unit 1	Sustainable Development: An Overview
	Unit 2	Public Administration and Sustainable Development
	Unit 3	Natural Resource Management and Environment
	Unit 4	Environment Management System
II		URBAN DEVELOPMENT PLANS, POLICIES AND PROGRAMMES
	Unit 1	Urban Development Policies: A Global Overview
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III		URBAN REFORMS
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IV		MUNICIPAL FINANCE
	Unit 1	Fiscal Decentralisation: A Global Overview
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	Unit 3	Municipal Finance in India
V		DISASTER MANAGEMENT
	Unit 1	Meaning and Classification of Disaster
	Unit 2	Disaster Management – Recent Trends
	Unit 3	Community Based Disaster Management
	Unit 4	Disaster Management Strategies

