
UNIT 1 ELEMENTARY EDUCATION AND TOTAL LITERACY CAMPAIGN

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1.0 OBJECTIVES

After studying this unit, you should be able to:

- outline the landmarks in educational development;
- explain some of the major policy initiative undertaken by the government in order to achieve UEE; and
- describe the special features of Sarva Shiksha Abhiyan.

1.1 INTRODUCTION

“The educational life of any country is like a continuum which gathers its past history into a living stream flowing through the present into the future.” One of the highest priorities in educational policy since independence has been the achievement of universal elementary education and the removal of adult illiteracy.

Universalisation of Elementary Education (UEE) has been accepted as a national goal since 1950. The Directive Principles of the Constitution of India envisage a

provision of free and compulsory education to all children upto the age of 14 years. The Constitution was amended in December 2002 to include free and compulsory education for all children in the age group 6-14 years as a fundamental right while expanding the provision for children upto the age of six, to include early childhood care and education within the Directive Principles. The overall goal in this regard is to provide free and compulsory education of satisfactory quality to all children. It is significant to note that the National Policy on Education (NPE) defines universal elementary education in a broad framework, changing the emphasis from enrolment and retention to enrolment, retention, and achievement.

The purpose of this unit is to build your understanding of elementary education as it obtains in the India and its implementation through major programmes.

1.2 ELEMENTARY EDUCATION: CONCEPTUAL CONTOURS

Elementary education in India is defined as the education provided from classes I to VIII. Roughly, it covers children from the age of 6 to 14 years. Elementary education is further divided into two stages: the primary and the upper primary education. Primary education lasts upto class V and covers children in the 6 – 11 age group. Upper primary covers class VI to VIII and so the children in the age group of 11 to 14 years. While this is the national picture, however, there are minor variations here and there. Some states have primary schooling upto class IV only, while a few have upper primary upto class VII only. Universalisation of Elementary Education has been a national priority since independence. The recent amendment to the Constitution, which has made elementary education a fundamental right of every citizen, guides the formulation of policies and programmes in this area. Concerted efforts towards the goal of UEE during the last five decades have resulted in a substantial increase in the number of institutions, teachers and students. During the period 1950-51 to 2001, the number of primary schools increased by more than three times, while the number of upper primary schools increased by fifteen times. Special projects and programmes at the national level launched during the 1990s gave a further impetus to this process. The following table highlights the progress in education since 1950.

Table 1: Progress in Education since 1950

Indicators	1950-51	2000-01
Primary schools	2,10,000	6,38,738
Upper primary schools	13,600	2,06,269
Teachers in primary schools	5,38,000	18,96,791
Teachers in upper primary schools	86,000	13,26,652
Enrolment in primary schools	19.2 million	113.83 million
Enrolment in upper primary schools	3 million	42.81 million

Source: Education for All, National Plan of Action, Department of Elementary Education and Literacy, Ministry of Human Resource Development, Government of India.

1.3 IMPORTANT COMMISSIONS ON EDUCATION

Several Commissions on Indian education have reviewed and suggested important recommendations for the primary, the elementary and the secondary levels of education. The Education Commission (1964-1966) was the sixth Commission appointed by the Government of India. The first was the Indian Education Commission (1882), which

dealt mainly with school education. The second was the Indian Universities Commission (1902), which reviewed the development of higher education since the establishment of the first three universities in Bombay, Calcutta and Madras in 1957 and made recommendations for the reorganisation of Indian Universities. The third was the Calcutta University Commission (1917-1919), which reviewed the development of secondary and higher education in Bengal and made recommendations for the reorganisation of Calcutta University and the establishment of a new university in Dhaka. The fourth Commission, and the first to be appointed in the post independence period was the University Education Commission (1948-49), which reviewed the development of higher education in the country and made proposals for its future expansion and improvement. A similar function for secondary education was performed by the Secondary Education Commission, which was the fifth in the series. It may be noticed that the policy, whether in the pre-independence period or later, was looking at education as a compartmentalized institution, and no commission had been appointed to review the primary and the adult education. It was in response to this need that the Central Government appointed the Education Commission (1964-66) at the initiative Mr. M.C. Changla, the then Minister of Education at the Center and entrusted them with the task of looking at the entire spectrum of education except medical and legal education. This is therefore, the first commission in our educational history that looked at almost all aspects of education comprehensively.

1.4 LANDMARKS IN EDUCATION POLICY

1.4.1 The National Policy on Education 1968

The National Policy on Education 1968 marked a significant step in the history of education in independent India. It aimed at promoting national progress, a sense of common citizenship and culture, and at strengthening national integration. It stressed the need for a radical reconstruction of the education system and improvements in its quality at all stages, and gave much greater attention to science and technology and the cultivation of moral values. Since the adoption of 1968 policy, there has been considerable expansion in educational facilities all over the country at all levels. More than 90% of the country's rural population has schooling facilities within a radius of 1 km now. Perhaps the most notable development has been the acceptance of the common structure of education throughout the country, and the introduction of 10+2+3 system by most states. Also, a beginning was made in restructuring courses at the undergraduate level. And Centres of Advanced Studies were set up for quality Post-graduate Education and Research.

While these achievements are impressive by themselves, the general formulations incorporated in the 1968 policy did not get translated into detailed strategies of implementation to accompany them. As a result, problems of access, quality, quantity, utility and financial outlay accumulated over the years.

1.4.2 National Policy on Education (NPE) 1986

The process of policy formulation in 1986 was unique in many respects. It was perhaps for the first time that a process was initiated through the preparation of a document entitled 'Challenge of Education' which gave a detailed baseline or diagnosis of the problems faced by different sectors of education. This document was widely circulated and communications in response to this document were received methodically and their contents were analysed properly. These contents, therefore, began to assume importance and found a place in the National Policy on Education 1986.

The Parliament discussed and adopted "The National Policy on Education 1986" during the budget session in 1986. A promise was made by the Minister of Human

Resource Development that he would present a Programme of Action for the implementation of the policy.

1.4.3 Major Thrusts of NPE 1986

National System of Education

The concept of a National System of Education implies that, up to a given level, all students, irrespective of caste, creed, location or sex, have access to education of a comparable quality. To achieve this, the Government would initiate appropriately funded developmental programmes.

The National System of Education envisages a common educational structure. The 10+2+3 structure has now been accepted in all parts of the country. Regarding the further break-up of the first 10 years, efforts would be made to move towards an elementary system comprising 5 years of primary education and 3 years of upper primary education, followed by 2 years of High School.

Education for Equality

The new Policy laid special emphasis on the removal of disparities and to equalize educational opportunities by attending to the specific needs of those who have been denied equality so far. Education would be used as an agent of basic change in the status of woman. The National Education System would play a positive, interventionist role in the empowerment of women.

The central focus in the educational development of SCs is their equalization with the non-SC population at all the stages and levels of education, in all areas and in all the four cases— rural male, rural female, urban male and urban female.

Suitable incentives would be provided to all educationally backward sections of society, particularly in the rural areas. Hill and desert districts, remote and inaccessible areas and islands would be provided adequate institutional infrastructure.

Some minority groups are educationally deprived or backward. Greater attention would be paid to the education of these groups to bring about equality and social justice. This will naturally include the Constitutional guarantees given to them to establish and administer their own educational institutions, and protection to their languages and culture. Simultaneously, in conformity with the core curriculum, objectivity would be reflected in the preparation of textbooks and in all school activities, and all possible steps would be taken to promote integration based on the appreciation of common national goals and ideals.

Elementary Education

The new thrust in elementary education would emphasize two factors: (i) universal enrolment and retention of children up to 14 years of age and (ii) a substantial improvement in the quality of education.

The New Education Policy gave the highest priority to the problem of children dropping out of school and adopted an array of meticulously formulated strategies based on micro-planning, and applied them at the grass-roots level all over the country, to ensure children's retention at school. This effort was to be fully coordinated with the network of non-formal education. It aimed at ensuring that all children who attain the age of about 11 years by 1990 would have had five years of schooling, or its equivalent, through the non-formal stream. Likewise, by 1995 all children were to be provided free and compulsory education up to 14 years of age.

The country has placed boundless trust in the educational system and the people have a right to expect concrete results. The first task is to make it work. All teachers should teach and all students study. The strategy to materialize this line of thought comprises the following steps:

- a better deal for teachers with greater accountability on their part;
- the provision of improved student services and insistence on the observance of acceptable norms of behaviour;
- the provision of better facilities to institutions; and
- the creation of a system of performance appraisals for institutions according to the standards and norms set at the National or State levels.

Management of Education

The National Policy on Education 1986 provides for an overhaul of the system of planning and management:

- evolving a long-term planning and management perspective for education and its integration with the country's developmental and manpower needs;
- decentralisation of authority and the creation of a spirit of autonomy for educational institutions;
- giving pre-eminence to people's involvement, including association of non-governmental agencies and voluntary effort;
- inducting more women in the planning and management of education; and
- establishing the principle of accountability in relation to the set objectives and norms.

At the National level the Central Advisory Board of Education (CABE) is to play a pivotal role in reviewing educational development and determine the changes required to improve the system from time to time. At the state level, State Governments are to establish State Advisory Boards of Education on the lines of CABE. At the district level District Boards of Education are to be created to manage education upto the higher secondary level. A very important role has been assigned to the Head of the institution. The National Policy on Education 1986 for the first time assigned local communities a role in improving the schools in their respective areas by saying that "local communities through appropriate bodies will be assigned a major role in the programmes of school improvement". (10.8 NPE)

Check Your Progress I

Note: a) Use the space provided for your answers.

b) Check your answers with the possible answers provided at the end of this unit.

1) Describe some of the major thrusts of the National Policy on Education 1986, which are relevant to Elementary Education.

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1.5 NATIONAL PROGRAMME OF ACTION

As said earlier, the 'National Policy on Education 1986' was discussed and adopted by the Parliament during the Budget Session in 1986. At that time the Minister of Human Resource Development (HRD) promised that in the Monsoon Session he would present a *Programme of Action* for the implementation of the policy. Immediately after the Budget Session, the Ministry undertook an intensive exercise to prepare the promised Programme of Action.

Task Forces

In the first place, 23 Task Forces were constituted and each was assigned a specific subject covered by the National Policy on Education (NPE). Eminent educationists, experts and senior representatives of the Central and the State Governments were associated with these Task Forces. The subjects assigned to the Task Forces were as follows:

- Making the System Work
- Content and Processes of School Education
- Education for Women's Equality
- Education of the Scheduled Castes, Scheduled Tribes, and other backward sections
- Minorities' Education
- Education of the Handicapped
- Adult & Continuing Education
- Early Childhood Care and Education
- Elementary Education (including NFE and 'Operation Blackboard')
- Secondary Education and Navodaya Vidyalayas
- Vocationalisation
- Higher Education
- Open University and Distance Learning
- Technical and Management Education
- Research and Development
- Media and Educational Technology (including use of Computers in Education)
- De-linking degrees from jobs and Manpower Planning
- The Cultural Perspective and Implementation of Language Policy
- Sports, Physical Education & Youth
- Evaluation Process and Examination Reform
- Teachers and their Training
- Management of Education
- Rural Universities/Institutes

The Task Forces were requested to examine the present situation with respect to the subjects assigned to them and to elaborate the implications of the specific statements contained in the NPE. The Task Forces were also expected to project the actions that would be necessary and indicate the broad targets and the phasing schemes of the programmes. Further, they were requested to indicate the broad financial implications with reference to each phase of activities.

In spite of time constraints, the Task Forces accomplished their work with great care. They submitted their reports in July 1986. These reports were discussed in a series

of meetings held by the Minister of Human Resource Development. After these discussions were completed, a conference of Education Secretaries of the State Governments and U. T. Administrators was convened on the 20th July 1986. Suggestions received during this meeting were carefully considered and the Programme of Action was prepared with reference to the main areas covered in NPE. The Central Advisory Board of Education met at New Delhi on the 1st and 2nd August, 1986. The document on the Programme of Action was discussed at this meeting, and the Education Ministers of State Governments and U.T. Administrations and educationists who participated in the discussion made several valuable suggestions. All these suggestions were incorporated in the Programme of Action, which was then presented to the Parliament.

This Programme of Action was meant to provide an indication of the nature of activities needed to implement the Policy directives. It provided a broad strategy within which detailed schemes were to be subsequently drawn up; it also aimed at facilitating the preparatory work required to fully work out the operational schemes and to make them operational. Detailed projects were taken up for formulation by the various departments and agencies, in consultation with all the concerned, once the strategy outlined in the Programme of Action was examined and endorsed by the Parliament. It is necessary to emphasize that what was presented there was not an inflexible design/structure, but a projection of directions with varying degrees of detail. A certain amount of flexibility was assumed, as it was expected to help the implementing agencies in tailoring the Programme of Action to suit their contexts and to make necessary modifications on the basis of experiences and emerging scenarios. Implementation of the programmes was envisaged to be a cooperative effort involving the Center and the States with full involvement of the community and the teachers and a constant process of consultations.

Check Your Progress II

Note: a) Use the space provided for your answers.

b) Check your answers with the possible answers provided at the end of this unit.

- 1) How many task forces were set up under the National Policy on Education? Why was it necessary to formulate a Programme of Action.

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1.6 EDUCATION FOR ALL

Since the *World Conference on Education for All* held in Jomtien in 1990, a number of new programmes and projects have been initiated to achieve the major goals of EFA. The Sarva Shiksha Abhiyan (SSA), the latest of all such programmes, subsumes the strategies and programmes, aimed at achieving universal elementary education of eight years. Besides, in the 1990s, several policies were formulated to create an enabling condition for the effective implementation of EFA interventions. Attempts have also been made to reform the mainstream educational administration and implement the strategy of decentralised planning and management in the education

sector. During this period, the Government of India implemented the largest number of externally funded basic education projects. Also, efforts have been made to use all the means including the mass media for the advocacy and promotion of EFA activities. The implementation of these basic education projects and programmes is best characterised by the campaign approach and the mission mode of work.

Here, an attempt is made to provide a brief account of the new initiatives that have emerged since the World Education Forum met at Dakar, Senegal, in April 2000. Some of the earlier initiatives, which were further strengthened during this period, also have been included in the discussion.

1.6.1 National Literacy Mission

The National Literacy Mission (NLM) established in May 1988, with the objective of achieving 75 per cent literacy by 2005, seeks to achieve this goal by imparting functional literacy to the illiterate in the age group of 15-35 years. Functional literacy level encompasses imbibing values of national integration, conservation of environment, women's equality, etc. The operations of the Mission were extended in 1999, with emphasis on lifelong learning and decentralisation, with devolution of authority to the state and the district level institutions. The basic objective of NLM is to make literacy a fundamental attribute for everyone in the country, especially women. As of today, more than 559 districts have been covered under literacy campaigns; 95 districts under the continuing education programme; 292 districts under the post-literacy programmes; and 172 districts under the total literacy campaigns. There is a special focus on the promotion of literacy among women, scheduled castes/tribes and other backward classes. All along, it has been a daunting challenge for literacy programmes to counter the effects of growing population in the country. As has been indicated earlier, however, the growth in literacy has now overtaken the rise in population, as the number of illiterates is now on the decline.

1.6.2 National Programme of Nutritional Support

The National Programme of Nutritional Support to Primary Education, commonly known as the Mid-day Meals Scheme, was launched in August 1995. In view of its impact on enrolment, retention and attainment levels of children, it has been decided to extend the programme to the entire country. The Supreme Court has ruled that every child covered under the programme should receive cooked meals comprising the prescribed calories. This ruling obliges the government to make necessary arrangements for cooking and serving meals to the children concerned.

1.6.3 District Primary Education Programme

The District Primary Education Programme (DPEP), launched in 1994, is a major initiative to achieve universalisation of primary education. The DPEP adopts a holistic approach to universalize access, improve retention and learning achievements and to reduce gender and regional disparities and disparities among socially disadvantaged groups. The strategies, central to the programme, are: decentralization of planning and management (i.e. focus on local level planning); mobilization of the community for effective participation in planning, management and supervision; local level capacity building; strengthening of the existing database (i.e. EMIS, PMIS, etc.); interventions for school improvement; and sustainability.

The programme components include: construction of classrooms and establishment of new schools; creation of alternative schooling facilities; appointment of new teachers; setting up of early childhood care and education centers; strengthening key resource institutions; imparting in-service teacher training; developing teaching-learning materials; special interventions for the education of the disadvantaged groups, girls, SCs/STs; integrated education of the disabled; and distance education for teacher training.

By November 2000, more than 11,000 new formal schools and over 53,000 alternative schools had been established under the DPEP, besides setting up of about 16,000 summer schools. In addition, over 10,000 ECE centers have been opened and more than 50,000 pre-primary education centers (i.e. Anganwadis) strengthened under the programme. It has provided training to over three million community members and about one million teachers. Presently, the programme covers 271 districts in 18 states, namely Assam, Andhra Pradesh, Bihar, Jharkhand, Haryana, Kerala, Karnataka, Maharashtra, Madhya Pradesh, Chhattisgarh, Tamil Nadu, Gujarat, Himachal Pradesh, Orissa, Rajasthan, Uttar Pradesh, Uttaranchal and West Bengal. So far, the programme has covered more than 50 million children in the age group of 6-10 years.

1.7 NATIONAL MISSION FOR ELEMENTARY EDUCATION (SSA)

The Conference of the State Education Ministers held in 1998 resolved to pursue a holistic and convergent approach for achieving the goal of universal elementary education following a mission-mode operation, within a defined timeframe. As an outcome of the Conference, a Committee of State Education Ministers under the Chairmanship of the Minister for Human Resource Development was set up to work out the modalities of pursuing the goal of UEE using a mission-mode operation. The SSA, the first national programme for universal elementary education, has been formulated on the basis of the recommendations of this Committee. Through the SSA, India for the first time, is attempting to translate its commitments into a programme of UEE, which provides for greater democratic participation and community involvement; decentralised planning and management with a view to the specific requirements and needs of the disadvantaged regions, social groups, girls and the children in difficult circumstances. The SSA, launched in the year 2000, covers all the districts of the country now.

The Sarva Shiksha Abhiyan (SSA), the flagship programme for achieving the goals of EFA, envisages the use of mainstream management structures for implementing the programme. At the national level, however, a separate Department of Elementary Education and Literacy has been created in order to focus efforts on EFA activities and provide the framework for achieving UEE and attaining 75 % sustainable literacy. In order to facilitate convergence and build a holistic perspective, a National Mission for Elementary Education (NMEE) has been constituted. The Prime Minister, with the Minister for Human Resource Development as its Vice-Chairperson, heads the General Council of the Mission. At the sub-national levels, the State Mission Authorities for UEE and District Implementation Societies have been established for implementing the EFA programmes.

The National Mission is expected to play a critical role in developing capacities, and will, therefore, improve capacity building activities at the state level in consultation with the State Missions. Similarly, State Missions will meet the capacity development needs in planning and management of elementary education in districts in relation to their requirements. The State Implementation Societies also act as effective monitoring and operational support units.

1.7.1 Major Objectives

The SSA is a major intervention towards achieving the long cherished goal of universalisation of elementary education (UEE) through a time bound integrated approach in partnership with the states. It aims at providing useful and quality elementary education to all children of the 6-14 age group by 2010. The specific objectives of the SSA include:

- to have all children in school, EGS Center/alternate school/back-to-school camp by 2003;
- to have all children complete five years of primary schooling by 2007;
- to have all children complete eight years of schooling by 2010;
- to provide elementary education of satisfactory quality with emphasis on education for life;
- to bridging all gender and social gaps at the primary stage by 2007, and at the elementary education level by 2010; and
- to effect universal retention by 2010.

1.7.2 Strategies Central to SSA

The SSA is conceived as an “umbrella programme” which subsumes all the on-going projects, programmes and schemes aimed at developing basic education. A convergent approach will, it is expected, help overcome the problems of coordination between intra- and inter-sectoral programme initiatives and at the same time facilitate effective planning, implementation, monitoring and evaluation of EFA programmes. Convergence between education and development programmes, aimed at poverty alleviation, employment generation, food for work, promotion of household industries and enhancing the quality of life (health, family welfare, availability of drinking water, rural housing, etc.) is being effected currently. In turn, these programmes increase the capacity of households to seek and support the education of children.

1.7.3 Institutional Reform

As part of the SSA, institutional reforms are being carried out in all the states. The states have to make an objective assessment of their existing education systems, including educational administration, achievement levels in schools, financial issues, decentralisation and community ownership, review of the State Education Acts, rationalisation of teacher deployment and recruitment of teachers, monitoring and evaluation, education of girls, SCs/STs and disadvantaged groups, policy regarding private schools and ECCE. Many states have already effected institutional reforms to improve the delivery system for elementary education

1.7.4 Community Empowerment

The programme calls for community ownership of schools and interventions through effective decentralisation. This is facilitated by the involvement of women’s groups, Village Education Committee (VEC) members and members of the Panchayati Raj Institutions. Local level institutions are expected to undertake training if community leaders and community representatives to enable them to undertake planning, programming and monitoring tasks.

1.7.5 Institutional Capacity Building

National and state level institutions like the National Institute of Educational Planning and Administration (NIEPA), National Council of Educational Research and Training (NCERT), National Council for Teacher Education (NCTE), State Councils of Educational Research and Training (SCERTs) and State Institutes of Educational Management and Training (SIEMATs) have been given capacity building responsibilities, as it is realized that improvements in quality requires a sustainable support system for educational planning and management at the national, the state, the district and the sub-district levels . Of particular importance is the capacity building of local level institutions for decentralising the process of preparing curricula and teaching-learning materials relevant to local contexts.

1.7.6 Community Based Monitoring

It is envisaged in the SSA that the educational management information system (EMIS) would correlate school level data with community-based information from micro-planning exercises and field surveys. For example, every school will have a notice board showing all the grants received by the school and other details. The SSA envisages cooperation between teachers, parents and PRIs, as well as accountability and transparency on the part of every individual and agency involved.

1.7.7 Focus on the Education of Girls and Special Groups

Education of girls, especially those belonging to the scheduled castes and scheduled tribes, is one of the principal concerns in SSA. It follows *a mainstreamed gender* approach. Efforts provide for mobilisation at the habitation/ village/urban slum level; recruitment of female teachers; nutritional support; provision of free textbooks and uniforms; back-to-school camps for adolescent girls and organisation and constitution of Mahila Samooths. Focused attention is given to activities that enhance participation of children from SCs/STs, religious and linguistic minorities, disadvantaged groups and the disabled children.

Check Your Progress III

Note: a) Use the space provided for your answers.

b) Check your answers with the possible answers provided at the end of this unit.

1) What is the major objective of Sarva Shiksha Abhiyan?

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2) Describe any two strategies central to SSA.

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1.8 MANAGEMENT STRUCTURE

The Central and the State governments are implementing the SSA together in partnership with local governments and the community. To signify the national priority for elementary education, as already said, a 'National Sarva Shiksha Abhiyan Mission' has been established with the Prime Minister as the Chairperson and the Union Minister of Human Resource Development as its Vice-Chairperson. States have established State level Implementation Societies for UEE under the Chairmanship of respective Chief Ministers/ Education Ministers. The SSA does not attempt to disturb

the existing structures in the states/districts, it only tries to help convergence of efforts. The emphasis is on functional decentralisation down to the school level in order to improve community participation. Besides recognising the Panchayati Raj Institutions (PRIs), Tribal Councils in Scheduled Areas, including the Gram Sabhas, the states are being encouraged to enlarge the accountability framework by involving women's organisations, NGOs, teachers, activists, etc. in the implementation of SSA.

1.9 PROGRESS IN SARVA SHIKSHA ABHIYAN

As a fully operational mission, SSA completed its 3^d year of operation in the year 2002-03. For its operations during 2001-2003, a total outlay of 1,52,875 million was approved under the programme with the component of SSA targeting primary education in selected districts. SSA also addresses the issue of general parity and that of eliminating the gender gaps through special components aimed exclusively at the girl child. The special incentives and provisions to ensure enrolment and retention of the girl child include free textbooks, community mobilization and gender sensitizations of teachers.

The accelerated efforts towards EFA, which are already showing results, have firmly set the country on a path that ensures a better quality of life for all the citizens. The Sarva Shiksha Abhiyan and the National Literacy Mission targeted at the child and adult populations respectively are together rapidly changing the educational scenario in India. SSA is bringing more and more children to and retaining them in schools, especially girls, while the NLM is enabling more and more adults to become literate. The special programmes being implemented by the NLM are sharply focused on the requirements of equitable access to learning, life skills programmes and rapid reduction in the gender gap in literacy.

1.10 LET US SUM UP

In this unit an attempt has been made to discuss the various commissions and also two major policies that have shaped the development of education in Indian. The National Programme of Action was prepared to spell out in greater detail the strategies with respect to the formulations contained in the National Policy of 1986.

A special section has been devoted to discuss the programme called Sarva Shiksha Abhiyan and its special features. Since this programme is currently under operation, you will have opportunities to know more about its different phases of implementation from all your readings.

1.11 KEY WORDS

Policy	:	A policy consists of directions, intentions, goals and objectives which a nation sets for herself for implementation over a time frame. Policies operate within the overall political and social ethos of the country.
National Mission for Elementary Education (NMEE)	:	This Mission has been created in order to focus on EFA activities and also provide the framework for achieving Universalisation of Elementary Education in a particular time frame.

1.12 REFERENCES AND SUGGESTED READINGS

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1.13 CHECK YOUR PROGRESS – POSSIBLE ANSWERS

Check Your Progress I

- 1) The major thrusts of the National policy on Education pertain to and focus on three major reforms:
 - a) Equal opportunities of access to all the levels of education;
 - b) Equal opportunities for completing education;
 - c) Equal opportunities for specific categories, such as scheduled castes, scheduled tribes, women, minorities, handicapped learners, etc.

The major thrust in elementary education is therefore on enrolment, retention and quality of education.

Check Your Progress II

- 1) Twenty-two Task Forces were set up under the National Policy on Education 1986 to examine the situation in terms of the themes/subjects assigned to them. The Task Forces were expected to project the action that would be necessary with reference to each of the subjects and also indicate the broad targets and the phasing scheme of the programme. It was followed by a Programme of Action so that the strategy of implementation could be spelt out clearly in relation to each of the subjects. In each area or sector of education, the broad parameters, thrusts, targets and implementation strategies have been spelt out. The Programme of Action was essential to guide the implementers at the State and the District levels with respect to each of the areas.

Check Your Progress III

- 1) The major thrust of SSA is to achieve quality universal elementary education with community ownership of the school system.
- 2) One of the major strategies of SSA is to prepare district elementary education plans through a process of participatory planning. The programme also calls for community ownership of school and interventions with effective decentralisation. In addition to this, local level institutions are also expected to undertake training of community leaders to enable them to undertake planning, programming and monitoring tasks.

UNIT 2 RURAL HOUSING

Structure

2.0 Objectives

2.1 Introduction

2.2 Indira Awaas Yojana (IAY)

- 2.2.1 Objectives of IAY
- 2.2.2 IAY: The Target Groups
- 2.2.3 Identification of Beneficiaries
- 2.2.4 Selection of Beneficiaries: The Priorities
- 2.2.5 Protection of Women's Interest
- 2.2.6 Functioning of IAY
- 2.2.7 Implementation of IAY
- 2.2.8 Funding of IAY
- 2.2.9 New Initiatives and Future Strategy

2.3 Pradhan Mantri Gramodaya Yojana: Gramin Awaas

- 2.3.1 Objective of PMGY
- 2.3.2 PMGY: The Target Groups
- 2.3.3 Identification of Beneficiaries
- 2.3.4 Protection of Women's Interest
- 2.3.5 Functioning of the Gramin Awaas Component of PMGY
- 2.3.6 Implementation of the Gramin Awaas Component of PMGY

2.4 Let Us Sum Up

2.5 Key Words

2.6 References and Suggested Readings

2.7 Check Your Progress – Possible Answers

2.0 OBJECTIVES

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

- describe the problem of rural housing in India;
- comment critically on the importance and the guidelines of the Indira Awaas Yojana (IAY) and the Pradhan Mantri Gramodaya Yojana: Gramin Awaas;
- describe the process of implementing each of these schemes; and
- explain the role of Panchayats in the implementation of these schemes.

2.1 INTRODUCTION

Housing in general, and rural housing in particular, is a problem our country has been faced with since her independence. For a common person, owning a house not only provides economic security but also helps in bringing about a social change through which a person can integrate with the immediate social environment. Although a number of initiatives were taken from time to time to provide adequate housing to the rural poor, it was only during 1980s that special attention was given to the construction of houses in rural areas particularly for those belonging Scheduled Castes/Scheduled Tribes and freed bonded labourers. A scheme called Indira Awaas Yojana (IAY) for providing housing facilities to the rural poor was launched during 1985-86 as a sub-scheme of Rural Landless Employment Guarantee Programme (RLEGP), which became a part of Jawahar Rozgar Yojana (JRY) in April 1989.

It was made an independent scheme beginning January 1996. Besides IAY, which made some positive impact, the Central Government announced a National Housing & Habitat Policy in 1998. It aims at providing 'Housing for All' and facilitates construction of 20 lakh additional houses (13 lakhs in rural areas and 7 lakhs in urban areas) annually for the benefit of the poor and the deprived. In keeping with this policy, an Action Plan for Rural Housing was prepared to provide 'Shelter for All', including conversion of all unserviceable *kutcha* houses to *pucca*/ semi-*pucca* houses. To achieve this objective, a number of schemes for rural housing were initiated which included Indira Awaas Yojana (IAY); Pradhan Mantri Gramodaya Yojana: Gramin Awaas; Credit-cum-Subsidy Scheme for Rural Housing; Innovative Scheme for Rural Housing and Habitat Development; Rural Building Centres (RBC); Samagra Awaas Yojana (SAY) and National Mission for Rural Housing and Habitat. A number of them, such as Innovative Scheme for Rural Housing and Habitat Development, Rural Building Centres (RBC), Samagra Awaas Yojana (SAY) and National Mission for Rural Housing and Habitat, have been discontinued.

In this unit, we will discuss two of them, which are in operation now, namely the Indira Awaas Yojana (IAY) and the Pradhan Mantri Gramodaya Yojana: Gramin Awaas.

2.2 INDIRA AWAAS YOJANA (IAY)

The history of IAY may be traced back to the programmes of rural employment, which were initiated in early 1980s. Construction of houses was one of the activities taken up under the National Rural Employment Programme (NREP), which was launched in 1980 and the Rural Landless Employment Guarantee Programme (RLEGP), which began in 1983. There was, however, no uniform policy for rural housing at the state level. It was only in June 1985 that rural housing received special emphasis when a part of the RLEGP funds was set aside for the construction of houses for Scheduled Castes/Tribes and the freed bonded labourers. This is how IAY came into operation as a part of RLEGP. Later on, in April 1989 when RLEGP and NREP were merged into Jawahar Rozgar Yojana, the IAY became a part of JRY. Beginning on January 1, 1996, however, it was separated from the JRY and made an independent scheme to be implemented and monitored separately. Now it is a part of Rural Housing Schemes.

2.2.1 Objectives of IAY

The main objective of the Indira Awaas Yojana is to help construction/up-gradation of dwelling units for the members of Scheduled Castes/Tribes, to freed bonded labourers in rural areas and also for the non-Scheduled Caste/Tribe rural poor living below the poverty line by providing them a lump sum grant for the purpose.

2.2.2 IAY: The Target Groups

The main target groups of Indira Awaas Yojana (IAY) till 1992-93 were the members of the Scheduled Castes/Tribes and the freed bonded labourers living below the poverty line in rural areas. Its scope was extended in 1993-94 to cover other groups of the rural poor, subject to the condition that the benefits to non-SCs/STs do not exceed 40% of the total allocation. From 1995-96 its scope was further extended to cover the families of servicemen of the armed and paramilitary forces killed in action irrespective of income criteria subject to the condition that they should:

- be residing in rural areas;
- be houseless or in need of shelter up-gradation and
- not be covered by any other scheme of housing.

Benefits have also been extended to ex-servicemen and the retired members of the paramilitary forces, subject to the condition that they fulfill the normal eligibility conditions of Indira Awaas Yojana. Three per cent (3%) of the funds are reserved for the benefit of physically and mentally challenged (disabled) persons living below the poverty line in rural areas.

2.2.3 Identification of Beneficiaries

The process of identifying beneficiaries involves the following considerations/steps:

- District Rural Development Agencies (DRDAs)/Zilla Parishads (ZPs) to decide the number of houses to be constructed/upgraded under IAY scheme panchayat-wise during a particular year.
- This decision has to be based on the allocation made and the target fixed.
- The above decision of DRDA/ZP is conveyed to the Gram Panchayats.
- Gram Panchayats hold Gram Sabha meetings and select beneficiaries for IAY according to the guidelines and the target fixed for them.
- The Gram Panchayat keeps the Panchayat Samiti informed by sending a list of the selected beneficiaries to them. No approval of the Panchayat Samiti is required.

2.2.4 Selection of Beneficiaries: The Priorities

The process of selecting beneficiaries under the scheme involves prioritization as detailed below:

- i) The first priority in the selection of beneficiaries goes to freed bonded labourers, it means that they receive the highest priority.
- ii) The second priority goes to SC/ST households. Among them the sub-priorities involve those SC/ST households which are the victims of atrocities; SC/ST households which are headed by widows or unmarried women; SC/ST households affected by floods, fires, earthquakes, cyclones or similar natural calamities; and the other SC/ST households.
- iii) The third priority is given to the families/widows of the personnel from defense services/paramilitary forces killed in action.
- iv) The next priority in the selection of beneficiaries goes to non-SC/ST households living below the poverty line. However, benefits to this category of household should not exceed 40% of the total number of household helped under the scheme.
- v) The next in the priority list come the physically and mentally challenged persons living below the poverty line. Three per cent (3%) of the total funds allocated have been earmarked for this purpose.
- vi) The sixth priority goes to ex-servicemen and retired persons of the paramilitary forces.
- vii) The last priority involves those who have been displaced on account of developmental projects, nomadic, semi-nomadic and de-notified tribals. This category also includes families with physically and mentally challenged persons provided all such families are living below the poverty line.

The selection of the beneficiaries is subject to the condition that the households of all the above categories except the one listed under item (iii) above are Below the Poverty Line (BPL).

The allotment of houses is in the name of the female member of the beneficiary household. Alternatively, the house is to be allotted jointly in the names of the husband and the wife.

Check Your Progress I

Note: a) Use the space provided for your answers.

b) Check your answers with the possible answers provided at the end of this unit.

- 1) In which year did the Indira Awaas Yojana (IAY) become an independent Scheme? What is its main objective?

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- 2) In 1995-96 the scope of IAY was further extended to cover the families of the servicemen of the armed and paramilitary forces killed in action irrespective of the income criteria. What were the conditions attached?

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2.2.6 Functioning of IAY

In order to make IAY effective, it is important that the necessary information regarding the location of houses, cost norms, type of material/technology to be used, fuel efficient *chulhas*, water supply and sanitation and the involvement of beneficiaries/voluntary organisations is made available to all the concerned. We shall now discuss each one of these concerns in some detail.

Location and design of IAY houses

Houses under the scheme are to be built on individual plots in the main habitation of the village concerned. They can also be built in clusters within a habitation so as to facilitate the development of infrastructure and other common facilities. Care is to be taken to build IAY houses close to the village. Besides safety and security, it would also ensure nearness to work place and social communication. No specific design is prescribed except that the plinth area of the house should be around 20 sq. meters. It is necessary to remember that the main responsibility of constructing the house is that of the beneficiary.

It is also necessary to remember that the houses meant for physically challenged people should incorporate the concept of *barrier-independence*, so that they don't face any problems in moving around the house. In areas where there is frequent

occurrence of floods, cyclones and earthquakes, the houses to be built have to be disaster resistant.

Cost norms and distribution of funds

You know that price levels increase from time to time. This phenomenon has its impact on cost norms to be fixed for the construction of houses under IAY. Taking this into account, the cost norms under IAY have undergone changes from time to time. The expenditure allowed for a house under IAY at present is as under:

Table 1: Unit costs for Construction and Upgrading old Structures

Items	Plain Areas	Hilly/Difficult Areas
Construction of houses including a sanitary latrine and a smokeless <i>chulha</i> .	Rs. 25,000/-	Rs. 27,500/-
Upgrading of an un-serviceable household.	Rs. 12,500/-	Rs. 12,500/-

Source: Guidelines for IAY (Effective from 1-4-2004), Ministry of Rural Development, GOI.

A sanitary latrine and a smokeless *chulha* are to be provided with each IAY house. Latrines could be constructed away IAY houses on the sites of the beneficiaries. Wherever possible, efforts are to be made to dovetail funds from Total Sanitation Campaign (TSC) for providing sanitary latrines, so that more money may be made available for the construction of IAY houses. In case, the beneficiary is unable to construct a sanitary latrine, whatever the reasons, an amount of Rs.600/- is to be deducted from the assistance provided for the construction of a new IAY house or for upgrading an unserviceable *kutcha* house. Similarly, where smokeless a *chulha* is not possible, a deduction of Rs.100/- is to be made from the assistance provided.

Credit-cum-subsidy for construction/upgrading of unserviceable kutcha houses

Up to 20% of the total funds may be utilized for upgrading the existing *kutcha* houses and towards subsidy for the construction of houses with credit from Banks/Financial Institutions. Credit-cum-subsidy is to be provided subject to the following conditions:

- i) Rural households having an annual income of up to Rs. 32,000/- only.
- ii) Ceiling of subsidy under the Scheme is Rs. 2,500 per household.
- iii) The upper limit of the construction loan under this scheme is Rs. 50,000. It is the responsibility of the State Governments/DRDAs concerned to coordinate with the financial institutions to make the credit facility available to interested beneficiaries.

If the amount earmarked for credit-cum-subsidy for upgrading the *kutcha* houses is not spent in full, the balance can be spent on the construction of new IAY houses.

Use of local materials and low cost technology

In order to reduce the cost of construction, efforts are to be made to encourage the use of local material and low cost technology. Technologies that use bricks, cement and steel on a large scale are to be discouraged. It is considered desirable to substitute burnt bricks by sun-dried bricks of earth/soil. Similarly, as far as possible, cement is expected to be substituted by locally manufactured lime and *surkhi*. However, bricks manufactured by beneficiaries themselves may be used for house construction. This helps in reducing the cost of construction.

You know that shortage of fuel is a problem that the country is faced with. It is because of this that fuel-efficient *chulhas* have been developed and are manufactured at a number of places. In addition, these *chulhas* are smoke free, which is good for health. It is, therefore, necessary that every house constructed under the Yojana be provided with fuel-efficient *chulha*.

Drinking water and sanitation

The agency responsible for implementing IAY has to ensure the availability and supply of drinking water. Wherever other sources of drinking water are not available, a hand pump has to be installed even before the work starts. Funds for such activities are available under the Rural Water Supply and other similar programmes.

Sanitation is an equally important requirement. It is necessary that sanitary latrines be constructed along with the houses. It is also necessary that people are made aware of the use of such latrines. Similarly, an efficient drainage system and other common facilities need to be developed using the funds for the infrastructure development component of the programme. This will help to keep the environment clean.

Involvement of beneficiaries

The Yojana provides complete freedom to the beneficiaries as to the manner of the construction of the house. In this regard, beneficiaries are allowed to make their own arrangements for construction materials, engage skilled workmen and also contribute family labour. A committee of the beneficiaries could be formed, if need be, to coordinate the work. All this is expected to:

- reduce costs;
- ensure quality of construction;
- provide satisfaction to and ensure acceptance of the houses by the beneficiaries and
- incorporate hazard-resistant features in the design of the houses.

Ban on contractors or departmental construction

It is very important to remember that no contractor is now allowed for the construction of the IAY houses. If any cases of construction through contractors come to the notice of the authorities, the Government of India reserves the right to recover the releases made to the State for those constructions. These houses should not be constructed by any Government department either. Government departments or organisations can, however, give technical assistance or arrange for coordinated supply of raw material. The spirit of the IAY is that the houses are not to be constructed and delivered by any external agency. On the other hand, the houses are to be constructed by the beneficiaries themselves for themselves.

Involvement of voluntary organisations

Beneficiaries need to be motivated to use sanitary latrines and smoke-free *chulhas*. For this, the local voluntary agencies that have a good record of work may be associated with the construction of IAY houses. Even supervision, guidance and the monitoring of construction may be entrusted to such non-governmental organizations. In particular, their help may be taken in promoting and popularizing the use of sanitary latrines and smokeless *chulhas*.

Improvement of environment

You perhaps know that under IAY due attention has to be paid to the improvement of environment. IAY places a lot of emphasis on plantation of trees in the entire habitat and around the individual house. Such plantations are expected to help the beneficiaries get fuel/fodder/small timber in due course of time and may be taken up under the social forestry programme. Keeping in view the agro-climatic conditions of the region concerned, plantation of some popular indigenous species like Neem, Mohuva, Pipal, Chandan, Oak, Amla, Coconut, Mango, Deodar, Rose Wood, etc. is advised. This list is merely illustrative, and not exhaustive. Cultivation of fruits and vegetables at the household level also needs to be encouraged for improving nutritional intake of the beneficiaries.

Inventory of houses

In order to have a proper record, the implementing agency is supposed to have a complete list/inventory of houses constructed under IAY. It should give the following details:

- Date of the start and the completion of the construction of the house;
- Name of the village and block in which the house is located and
- Name, address, occupation and the category of the beneficiary concerned and other relevant information.

Display of IAY board and logo

After the construction of houses is completed, the concerned DRDA is expected to ensure that each house displays:

- Government of India Rural Housing logo;
- Year of construction and
- The name of the beneficiary.

2.2.7 Implementation of IAY

It is of utmost importance that such a scheme is properly implemented and misutilization of funds and other irregularities are kept to the minimum. Indira Awaas Yojana is implemented through District Rural Development Agencies (DRDAs) or through Zilla Parishads at the district level and Block Samitis at the intermediate level. Gram Panchayats have been assigned the role of identifying the beneficiaries of this scheme.

Transparency in the implementation of IAY

You will agree that transparency plays an important role to check misutilization and other irregularities. People have a right to have access to the information, which affects their lives. Keeping this view, IAY provides disclosure of necessary information at various levels viz. village, block and district levels. The type of information expected to be available for the public at all these levels may among others include the following:

Village Level

- list of people below the poverty line;
- list of disaster resistant construction features suitable for the region/locality;
- lists of beneficiaries during the preceding year and the current year;
- funds allocated for IAY for the village;
- IAY Guidelines/Criteria for selecting beneficiaries and
- IAY/GOI sign boards displayed on the allotted houses.

Block Level

- information about costs, source of funding and the implementing agencies involved in the construction of houses at block level;
- information about the availability and distribution of funds under IAY— village wise and
- the progress made in the implementation of IAY.

District Level

- information about the distribution of funds under IAY, Block/Village-wise;
- criteria for the distribution of funds, Block/Village-wise, including the norms for the selection of beneficiaries under the Indira Awaas Yojana.

Monitoring of IAY

The monitoring of IAY is done at different levels. At the national level, the Ministry of Rural Development, Government of India, is responsible for:

- release of funds;
- overall guidance;
- policy making and
- monitoring and evaluation of the programme at the national level.

It is the responsibility of the State Governments to ensure that the programme is being implemented satisfactorily and that the construction of houses is in accordance with the prescribed procedures. As an apex body at the State level, there is a State Level Vigilance and Monitoring Committee for Rural Development Programmes, which monitors this programme at the State level. A nominee of the Union Ministry of Rural Development represents the Central Government in the Committee meetings. Monitoring at the District, Sub-District and Block levels is done by the concerned IAY officers. This involves:

- field inspection for physical monitoring;
- regular District visits by IAY officers to ensure proper execution of the programme and
- a fixed minimum number of field visits to be allotted to each supervisor level functionary at the District and Block levels.

In addition to the above, separate monthly and annual progress reports are also submitted to the Central Government by the respective State Governments/Union Territories in respect of IAY. These include:

- monthly progress reports to be submitted on or before the 10th of every succeeding month in a prescribed format through telex/fax/e-mail/nic.net; [The availability of this communication technology, provided at the State and District levels, is expected to speed up monitoring process.]
- a detailed annual progress report to be submitted by the 25th of April of the succeeding financial year in a prescribed format.

2.2.8 Funding of IAY

Indira Awaas Yojana is a Centrally sponsored scheme. It is funded on a cost-sharing basis by the Government of India and the States in the ratio of 75:25. It means that the Central Government provides 75 percent of the funds while the State Government concerned provides 25 per cent of the funds. In the case of Union Territories, the Government of India provides 100 percent funding for the scheme.

Criteria for the allocation of resources

The criteria for the allocation of resources have two aspects. The first one pertains to allocations to the States/Union Territories and the second to those for inter-district allocation. As far as allocation to the States/Union Territories is concerned, it is done on the basis of the following two criteria:

Poverty Ratio: The poverty ratio as prepared by the Planning Commission is used for this purpose.

Housing Shortage: It is determined on the basis of the previous census conducted. It means that *housing shortage* is determined from the 2001 census. As far as the inter-district allocation is concerned, the following criteria are applied:

- The proportion of rural SC/ST population in a district to the total rural SC/ST population in the State,
- Housing shortage in a district in proportion to the total housing shortage in the State/UT.

Both these variables are given equal weight for purposes of the inter-district allocations. It may be noted that under IAY, shifting of funds/resources from one district to another is not permitted. Within the total allocation, 80 per cent is to be spent for new constructions and up to 20 per cent for upgrading the existing *kutcha* houses.

Procedure for the release of funds

The allocation of funds under IAY is released to Zilla Parishads/DRDAs in two instalments. The procedure for release is as follows:

First Instalment: The first instalment amounting to 50% of the total funds allocated is released to DRDAs/ZPs at the beginning of the financial year, subject to the fulfillment of following conditions.

- Those districts that have claimed and obtained the second instalment of the funds in the preceding financial year receive the first instalment for the current year. However, if any specific condition had been imposed at the time of the release of the last instalment of the previous year, its compliance is ensured before the release of the current first instalment.

Second Instalment: The second instalment of the Central assistance is released on a request, in the prescribed format, from the DRDA concerned and on the fulfillment of following conditions.

- The districts concerned should have utilized 60% of the total available funds at the time of applying for the second instalment.
- The opening balance of the district, i.e. the aggregate of the balance with DRDA should not be more than 15 per cent of the total funds allocated to the district during the previous year. If the opening balance is more than this limit, the Central share of the excess amount is deducted proportionately at the time of the release of the second instalment.
- DRDA has to indicate the state's proposed share to the IAY scheme for the current year. Taking into account the state's share, the Centre releases its matching contribution.
- The State Government should have released all its contribution (including that of the previous year) due up to the date of the application. If there is a shortfall in the state's contribution, a corresponding amount of the Central share (*3 times the shortfall of state share*) is deducted from the amount of the Central share of the second instalment of the current year.
- The DRDA should have submitted the Audit Report of the previous year.

- The DRDA should have submitted the utilization certificate for the previous year in the prescribed format.
- The Governing Body of the DRDA should have approved the Annual Plan.
- The DRDA should have submitted the progress/Monitoring Report.
- DRDA should also have submitted various certificates mentioning that:
 - there has been no embezzlement of funds;
 - there has been no diversion of funds from one district to another;
 - interest earned on the deposit of IAY in the preceding year has been taken into account while calculating the opening balance of the current year.

Cuts imposed on the late receipt of proposals

The release of the second instalment depends on the time when utilization is reported. Under the system, proposal(s) received in the months of January and February attract progressive deductions from the total Central allocation for the year @10% and 20% respectively.

Release Calendar: On the basis of the receipt of a complete proposal for the second instalment, the amount released will be adjusted as follows:

Proposal received in	Funds allocated
December	: 50% of the allocated funds
January	: 40% of the allocated funds
February	: 30% of the allocated funds
March	: 20% of the allocated funds.

The proposals received after the 15th of March are not to be accepted. Zilla Parishads/ DRDAs are required to complete all the incomplete houses sanctioned/taken up in the previous year first (with the funds available during the current year), even if there is a deduction while releasing the second instalment in the previous year due to unavoidable circumstances.

Release of state share to DRDAs: The State/UT share has to be released to DRDAs/ZPs within one month after the release of the Central assistance.

Special Provision for the Release of Assistance to Inaccessible Areas

In a country like India, which is spread over such a large geographical area, there are certain areas, which have a limited working season for various reasons. Taking these peculiarities into consideration, it has been decided that the entire Central assistance to such areas/districts would be released in just one instalment. It is expected that the States concerned would also release their share to such districts in one instalment. The funds, however, are released only on the fulfillment of the conditions stated above. At present the areas identified to qualify for such relaxation include Kinnaur, Lahaul and Spiti, Leh, Kargil, Andaman and Nicobar Islands and Lakshadweep and, if decided, any other areas which have a limited working season.

Separate bank account for IAY

It is necessary that a separate Bank Account be opened for IAY funds. While doing so, it is necessary to remember that:

- IAY funds (both the Central and the State share) are kept in an exclusive savings account of a nationalized/scheduled/cooperative bank or in a Post Office by the DRDAs;

- funds are withdrawn from the accounts only for incurring expenditure under IAY and
- the interest earned on IAY funds so deposited becomes a part of IAY funds.

Maintenance of accounts

IAY accounts are maintained according to a set procedure. The DRDAs are expected to follow the accounting procedures prescribed by the Ministry of Rural Development. It is also important to remember that the General Body of the DRDA concerned has to approve the final account of the preceding **year by 30th June** and get its account audited **before 31st August** of the same year. Thereafter, the DRDAs are expected to send the audited report as approved by its General Body, both to the Central as well as the State Government **before 30th September** of the same year.

Evaluation studies

Evaluation is a tool that helps us to know as to whether the objectives of a particular programme have been achieved or not. Concurrent evaluation facilitates mid-term correction while the implementation is in progress. It is, therefore, important that the States/Union Territories conduct periodic evaluation studies. They are also expected to encourage conducting evaluation studies by reputed organisations/institutions. It is also necessary that remedial follow up action be taken on the basis of the outcome of concurrent evaluation. Copies of the reports of these evaluation studies are also to be sent to the Ministry of Rural Development for their information and use.

Check Your Progress II

Note: a) Use the space provided for your answers.

b) Check your answers with the possible answers provided at the end of this unit.

1) What was the new dimension added to IAY in 1999-2000?

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2) Who is responsible for the implementation of IAY? What inbuilt mechanism is available to ensure transparency in its implementation?

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2.2.9 New Initiative and Future Strategy

The Government is attaching a lot of importance to IAY. The Ministry of Rural Development has conducted a number of workshops on rural housing, which were attended by people's representatives, Panchayati Raj functionaries, NGOs and the

technical and the administrative personnel of the State Governments. There is a felt need for standardizing, popularizing and replicating cost-effective, disaster resistant and environment-friendly construction technologies, designs and materials and also developing ideal, sustainable rural human settlements consistent with the geo-climatic variations and natural disaster proneness of the places/regions concerned. It has been decided to improve the quality of houses constructed under the IAY by disseminating the information developed by various agencies on all these aspects. Also, DRDAs are expected to take full advantage of the findings and recommendations of these workshops and seminars.

2.3 PRADHAN MANTRI GRAMODAYA YOJANA: GRAMIN AWAAS

The Government of India introduced a comprehensive scheme called Pradhan Mantri Gramodaya Yojana (PMGY) with the objective of achieving sustainable human development at the village level. Since *shelter* is a part of the sustainable human development, a special component of PMGY, namely Gramin Awaas (GA) addresses the problem of rural shelter specifically. Although there are other schemes of rural housing like Indira Awaas Yojana (IAY) in operation, it was thought desirable to supplement them through this component of the comprehensive PMGY scheme. We will now discuss the objectives and the implementation strategy of this component (Gramin Awaas) of the PMGY.

2.3.1 Objective of PMGY (GA)

The main objective of the Gramin Awaas component of the PMGY is to reduce the shortage of houses for families living below the poverty line in the rural areas and also to assist in the healthy development of the habitat in these areas.

2.3.2 PMGY: The Target Groups

The main target groups of the Gramin Awaas component of the PMGY are the members of the Scheduled Castes/Tribes, the freed bonded labourers and the non-Scheduled Caste/Tribe poor people living below the poverty line in the rural areas. As in IAY, in this scheme also three per cent (3%) of the funds is reserved for the benefit of physically/mentally challenged persons living below the poverty line in rural areas. It is to be noted that not more than 40% of the total allocation during a financial year can be utilized for the construction of houses for non-SC/ST families living below the poverty line.

2.3.3 Identification of Beneficiaries

The process of identifying beneficiaries involves the following considerations/steps:

- District Rural Development Agencies (DRDAs)/Zilla Parishads (ZPs) are to decide the number of houses to be constructed under the Gramin Awaas component of PMGY panchayat-wise.
- The above decision of DRDA/Zilla Parishad is conveyed to the Gram Panchayats.
- The Gram Sabha selects the beneficiaries for the Gramin Awaas component of PMGY from the list of eligible households keeping in mind the target allotted.
- The Gram Panchayat sends a list of the selected beneficiaries to the Panchayat Samiti for their information, as there approval is not required.

2.3.4 Protection of Women's Interest

The allotment of houses is made in the name of the female member of the beneficiary household. Alternatively, the house is allotted in the names of both the husband and the wife.

Check Your Progress III

Note: a) Use the space provided for your answers.

b) Check your answers with the possible answers provided at the end of this unit.

- 1) What is the main objective of PMGY? How are women's interests protected under its Gramin Awaas component?

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2.3.5 Functioning of the Gramin Awaas Component of PMGY

In order to make the Gramin Awaas component of PMGY effective, it is necessary that relevant information pertaining to the location of houses, cost norms, types of material/technology to be used, fuel efficient chulhas, sanitation and the involvement of beneficiaries is provided as and when needed. We shall now discuss each one of them in some detail below.

Location and design of houses under Gramin Awaas component of PMGY

Houses under this scheme are to be built on individual plots in the main habitation of the village. They can also be built in a cluster within a habitation so as to facilitate the development of infrastructure, such as internal roads, drainage, drinking water supply and other common facilities. Care has to be taken to ensure that the houses are located close to the villages and not too far away, so as to ensure closeness to the place of work, social communication, safety and security. It is necessary to remember that the main responsibility of constructing houses is that of the beneficiaries. No specific design is prescribed except that the plinth area of each house should not be less than 20 sq. metres.

As discussed in under IAY, it is important to remember that the houses meant for the physically challenged people incorporate the concept of barrier-independence so that they do not face any inconvenience in moving around in the house(s).

Cost norms and distribution of funds

The permissible expenditure for a house under the Gramin Awaas component of PMGY is as follows:

Construction assistance per Unit	For Plain Areas	For Hilly/Difficult Areas
	Rs. 20,000.00	Rs. 22,000.00

Upgrading the *kutcha* houses

For conversion of unserviceable *kutcha* houses into *pucca*/semi *pucca* houses, a maximum assistance of Rs. 10,000/- is provided under the Gramin Awaas component of PMGY. Twenty percent of the total Gramin Awaas component of PMGY funds is allocated under this head.

Use of local materials and low cost technology

In order to reduce the cost of construction, every effort is made to encourage the use of local material and low cost technology (developed by various institutions) to the maximum extent. In areas susceptible to natural calamities (such as fires, floods, cyclones and earthquakes), the incorporation of disaster resistant structural design are encouraged.

Provision of smoke free *chulhas* and sanitary latrines

Houses built under the Gramin Awaas component of PMGY scheme are to ensure that every house constructed has a smoke-free, fuel-efficient *chulha* and a sanitary latrine. Further, there is a provision for planting trees around the newly built houses. All these measures are expected to keep the environment clean.

Involvement of beneficiaries

The Gramin Awaas component of PMGY provides complete freedom to the beneficiaries as to the manner of the construction of the houses. They have full freedom to contribute family labour or engage skilled workmen and to make their own arrangements for construction materials. All this is expected to:

- reduce costs;
- ensure quality of construction and
- provide satisfaction to and ensure acceptance of the houses by the beneficiaries.

It should be noted that no contractor or government department/organization is allowed undertake or get involved in the construction of houses under this scheme.

2.3.6 Implementation of the Gramin Awaas Component of PMGY

The Gramin Awaas component of PMGY is implemented through the District Rural Development Agencies (DRDAs) or through Zilla Parishads (ZPs) at the District level. Gram Panchayats have been assigned the role of identifying the beneficiaries of the scheme.

How Gramin Awaas component of PMGY is implemented?

The State Government forwards proposals for the construction of houses under the Gramin Awaas component of PMGY to the Government of India. In addition to the proposals for the houses for the poor, the proposal may also include some provision for internal roads, drainage, drinking water, plantation, improvement of habitation and for making the houses cyclone and earthquake resistant. The proposals are scrutinized and sanctioned by a competent committee, which comprises the following members:

- Secretary (Rural Development);
- Additional Secretary and Financial Advisor (Rural Development);
- Advisor (RD), Planning Commission;
- Joint Secretary (Rural Housing);
- Director In-charge PMGY (Gramin Awaas).

The Secretary (Rural Development) acts as the Chairman and Director In-charge of Gramin Awaas component of PMGY as the convener of the committee.

Procedure for the release of funds

On the recommendation of the Ministry of Rural Development, the Ministry of Finance releases funds for the scheme to the States/Union Territories in two instalments. The second instalment of funds is released on fulfilling the following conditions:

- Concerned State/UT Government should have submitted utilization certificate; and
- Concerned State/UT Government should have submitted the Audit Reports.

Monitoring and evaluation

The monitoring and evaluation of the Gramin Awaas component of PMGY is basically the responsibility of the State Governments. The DRDAs/ZPs submit periodic reports regarding the performance of the scheme to the State Government concerned in a prescribed format. The State Governments/Union Territories, in turn, submit separate reports and returns on the performance of the scheme to the Union Government in a prescribed format.

State Governments/Union Territory Administrations conduct periodic evaluation studies on the implementation of Gramin Awaas component of PMGY. Studies on issues arising out of concurrent evaluation may be got conducted by reputed institutions/organisations. On its own, the Central Government, may also conduct evaluation studies. Copies of the reports of evaluation studies conducted by States/UTs are to be submitted to the Government -of India also. These studies help in taking corrective/remedial action.

Check Your Progress IV

Note: a) Use the space provided for your answers.

b) Check your answers with the possible answers provided at the end of this unit.

- 1) The Gramin Awaas component of PMGY provides complete freedom to the beneficiaries. Why?

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2.4 LET US SUM UP

This unit gave us detailed information about two major schemes for Rural Housing, namely Indira Awaas Yojana (IAY) and Gramin Awaas component of PMGY. The main points discussed in this unit are the importance and objectives of these schemes, the procedures used for identifying the beneficiaries and the various aspects of their functioning and implementation.

The Indira Awaas Yojana and Gramin Awaas as a component of PMGY are designed primarily to provide free housing to the members of the Scheduled Castes/Tribes, the freed bonded labourers and other categories of the rural poor. It is expected that a thorough understanding of these schemes would help a development functionary or

a student of rural development play an effective role in solving the basic problems of housing in rural India.

2.5 KEY WORDS

Beneficiaries	:	Persons who are supposed to benefit from a particular programme/scheme.
Inaccessible Areas	:	The areas that are impossible to reach.
Monitoring	:	Is the process through which information flow takes place to enable the management to assess the progress of implementation and take timely corrective action, if needed.
Evaluation	:	Is the process to determine whether the objectives set for a particular programme/scheme have been achieved or not.

2.6 REFERENCES AND SUGGESTED READINGS

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Rural Housing Schemes-Guidelines, 2000: National Mission for Rural Housing and Habitat, The Ministry of Rural Development, The Government of India, New Delhi.

2.7 CHECK YOUR PROGRESS – POSSIBLE ANSWERS

Check Your Progress I

- 1) It was on 1st January 1996 that Indira Awaas Yojana became an independent scheme after it was separated from JRY. The main objective of IAY is to help construction of houses free of cost for the members of Scheduled Castes/Tribes, freed bonded labourers in rural areas and also for the non-Scheduled Castes/Tribes rural poor living below the poverty line.
- 2) The conditions attached included that they should be residing in rural areas; be houseless or in need of upgrading their shelters provided they are not covered by any other scheme of housing.

Check Your Progress II

- 1) It included upgrading of unserviceable *kutcha* houses to semi-*pucca* or *pucca* houses having sanitary latrines and smokeless *chulhas*. It was basically aimed to help a large number of people living in unserviceable *kutcha* houses in bad conditions to improve their housing conditions. Twenty per cent (20%) of the IAY funds have been allocated for this purpose.

- 2) It is being implemented through District Rural Development Agencies (DRDAs) or through Zilla Parishads at the district level and by Block Samitis at the intermediate level. Gram panchayats have been assigned the role of identifying the beneficiaries of this scheme. In order to bring about transparency, IAY provides disclosure of all the necessary information at various levels, viz. village, block and district levels. The type of information expected to be available for the public at all these levels among others include, list of beneficiaries, funds allocated for IAY for the village, implementing agencies that take up houses at block level, muster roll details, etc.

Check Your Progress III

- 1) The main objective of PMGY is to achieve sustainable human development at the village level. In order to protect the interests of women, the allotment of houses is made in the name of the female member of the beneficiary household. Alternatively, the house is allotted in the names of both the husband and the wife.

Check Your Progress IV

- 1) Under Gramin Awaas component of PMGY, the beneficiaries have full freedom to contribute family labour or engage skilled workmen and to make their own arrangements for construction work. It is felt that all these measures help reduce costs, ensure quality of construction, provide satisfaction to and ensure acceptance of the new construction by the beneficiaries, which is necessary for the success of the scheme.

UNIT 3 RURAL HEALTH CARE

Structure

- 3.0 Objectives
- 3.1 Introduction
- 3.2 Poverty and Health
- 3.3 Health Situation in Rural India
- 3.4 Health Care Services
- 3.5 Organisational Structure
- 3.6 Health Care Programmes
 - 3.6.1 National TB Control Programme
 - 3.6.2 National Programme for the Control of Blindness
 - 3.6.3 National Leprosy Control Programme
 - 3.6.4 National Malaria Eradication Programme
 - 3.6.5 National Filaria Control Programme
 - 3.6.6 National Iodine Deficiency Disorders Control Programme
 - 3.6.7 Medical Care for Remote and Marginalized Tribal and Nomadic Communities
 - 3.6.8 National Mental Health Programme
- 3.7 Family Welfare Services
- 3.8 Present Status and Its Review
- 3.9 Let Us Sum Up
- 3.10 Key Words
- 3.11 References and Suggested Readings
- 3.12 Check Your Progress – Possible Answers

3.0 OBJECTIVES

After studying this unit, you should be able to:

- appreciate that *health* is an important parameter of development;
- outline the health care services available in our country and their evolution;
- identify the relationship between socio-economic factors and health;
- describe the organisational structure for the delivery of health care services;
- critically analyze the various health programmes and schemes; and
- explain the impact of various programmes and health care services on morbidity and mortality.

3.1 INTRODUCTION

After studying the relationship between health and socio-economic development for decades, economists and social scientists have now come to a consensus that *health* forms an important index of human development and in turn that of the development of any society. ***Health, defined as the state of complete physical, mental, social and spiritual well-being and not merely absence of disease and infirmity,*** proves to be a major contributor to the level of quality of life. We all agree that the basic objective of human development is to improve the quality of life. Healthy population plays a key role in achieving the developmental activities as health helps to improve the productivity of mankind both directly and indirectly.

The health picture of our country is far from satisfactory. The vision of “Health for all by 2000” has not materialized. The situation in rural areas of India, where over two thirds of our population lives, is worse, with only rudimentary health care services being available to the masses. All the recent advances in medical science and technology have not reached the majority of the disadvantaged people living in rural India. Poor socio-economic status (poverty) and poor health status together make a vicious cycle wherein poverty brings in inadequate nutrition, unhealthy environment, sickness causing low productivity and hence poverty. India with a wide range of topographic and climatic conditions has witnessed various types of natural disasters. During 2001 eleven states were affected by heavy rains and floods, one with a cyclone and three with landslides. In most of these calamities, the worst affected is the population of rural areas.

In this unit we shall detail the present scenario of health care services and the different health programs under the revised National Health Policy relevant to rural areas of India.

3.2 POVERTY AND HEALTH

Health does not exist in isolation. It is influenced by a host of genetic, environmental, social and economical factors, related to each other. The health of a community is intimately related to its economic status and its social and political organization. There is little doubt that in most of the developed countries it is the economic progress that has been the major factor in reducing morbidity, increasing life expectancy and improving the quality of health.

Poverty though difficult to define, is much more than just *the lack of money*. It is a state that involves the total life of a person, his/her food, clothing, housing, education, health, family life, and aspirations.

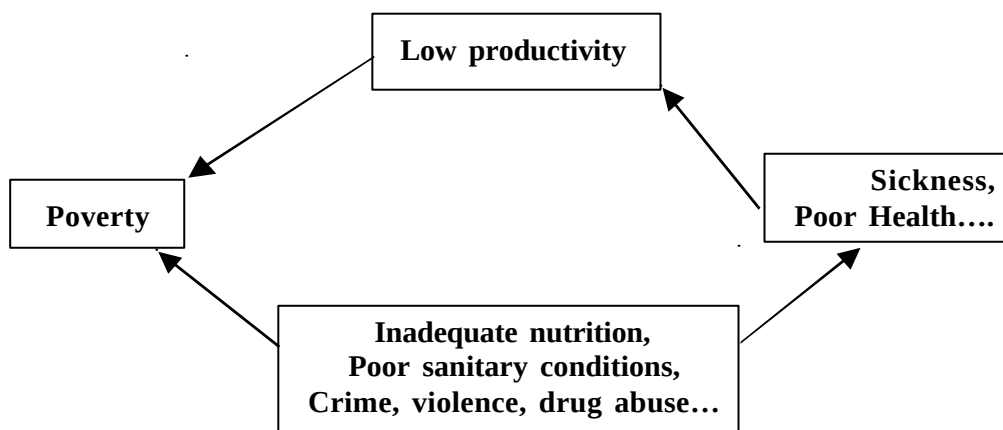


Fig. 1

Poverty leads to sickness by depriving individuals of their needs of adequate nutrition and shelter and by exposing them to hazards of poor sanitary conditions. It is an established epidemiological fact that the prevalence and distribution of disease is strongly influenced by socio-economic factors. Poverty also predisposes one to crime, violence, drug abuse and many other forms of deviant behavior. All these are responsible for low productivity, which in turn leads to poverty. (See Fig. 1 above.)

It is estimated that 70-75 % of all the deaths of children below 5 years of age in the developing countries is because of three categories of diseases— infections spread through human excreta, airborne infections and malnutrition— and all of these can very easily be associated with poor socio-economic status of the poor.

Check Your Progress I

Note: a) Use the space provided for your answers.

b) Check your answers with the possible answers provided at the end of this unit.

1) Why do we need to focus on rural areas for the provision of health care services?

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2) Why do you think “health” is important for overall development?

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3) How is poverty related to health?

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3.3 HEALTH SITUATION IN RURAL INDIA

To know about the health standard of a society, we need to understand some of the indicators of health. The commonly used health indicators are: Crude Death Rate, Infant Mortality Rate, Birth Rate, Sex Ratio, Life Expectancy at Birth and Access to Health Care Services. (*See the keywords for the meanings of these terms.*)

Looking at the following data on a few of the health indicators, it is clear that the rural areas have far poorer health standards in comparison to the urban areas.

Table 3.1: Birth Rate, Death Rate and Infant Mortality Rate – Rural Urban Break-up

Year	Birth Rate			Death Rate			Infant Mortality Rate		
	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban
1987	32.2	33.7	22.7	10.9	12.0	7.4	102	104	61
1995	28.3	30.0	22.7	9.0	9.8	6.6	74	80	49
1996	27.5	29.3	21.6	9.0	9.7	6.5	72	77	46
1997	27.2	28.9	21.5	8.9	9.6	6.5	71	77	45
2001	27.5	27.1	20.2	8.4	9.0	6.3	66	72	42

Source: Office of the Registrar General of India & SRS Bulletin, 2001, and Sample Registration System Vol. 36, No.1, April 2002.

Though the overall picture is far from satisfactory, we notice improvement over the years, but this improvement is more marked in the urban areas. The rural IMR in 1987 was as high as 104; it has fallen to 72 by the year 2001, though the overall IMR has fallen from 102 to 66. The urban IMR for the same year is only 42. The life expectancy at birth also shows a rural urban differentiation. It has gone up from 50.5 years in 1971-81 to 63 for 1996-2001. There is significant difference of about 8 years being less in rural areas than that in urban areas. Similarly, incidence of low birth rate, a major cause of high infant mortality, is quite high in rural areas. The prevalence of communicable diseases is also relatively high in rural areas.

Table 3.2: Birth Rate, Death Rate and Infant Mortality Rate, 2001

India/State/ Union Territory	Birth Rate			Death Rate			Infant Mortality Rate		
	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban
INDIA	27.5	27.1	20.2	8.4	9.0	6.3	66	72	42
Andhra Pradesh	20.8	21.3	19.6	8.1	8.9	5.6	66	74	39
Assam	26.8	27.8	18.5	9.5	9.8	6.6	73	76	33
Bihar	31.2	32.3	23.4	8.2	8.5	6.3	62	63	52
Gujarat	24.9	26.6	21.5	7.8	8.8	5.6	60	67	42
Haryana	26.7	27.8	22.8	7.6	7.6	7.4	65	68	54
Karnataka	22.2	23.6	19.0	7.6	8.2	6.4	58	69	27
Kerala	17.2	17.4	16.6	6.6	6.8	6.1	11	12	9
Madhya Pradesh	30.8	32.8	23.0	10.0	10.8	7.2	86	92	53
Maharashtra	20.6	21.0	20.1	7.5	8.5	5.9	45	55	27
Orissa	23.4	23.9	19.6	10.2	10.7	6.8	90	94	60
Punjab	21.2	22.1	18.7	7.0	7.2	6.4	51	55	37
Rajasthan	31.0	32.3	24.7	7.9	8.3	6.2	79	83	57
Tamil Nadu	19.0	19.6	17.8	7.6	8.4	6.0	49	54	35
Uttar Pradesh	32.1	33.2	27.0	10.1	10.6	7.8	82	86	62
West Bengal	20.5	22.8	13.8	6.8	7.0	6.4	51	53	38
Arunachal Pradesh	22.0	22.9	12.8	5.5	5.9	2.3	39	41	11
Chhattisgarh	26.3	29.0	22.4	8.8	10.1	7.0	76	88	56
Goa	13.9	14.0	13.9	7.5	8.1	6.5	19	21	16
Jharkhand	26.3	28.3	19.5	8.8	9.7	6.0	62	67	40
Himachal Pradesh	21.0	21.3	16.8	7.0	7.1	5.3	54	55	32
J & K	20.1	21.1	16.3	6.1	6.1	6.0	48	50	39
Manipur	18.2	19.0	15.9	5.1	4.8	6.1	20	19	23
Meghalaya	28.3	30.7	15.0	9.0	9.9	3.9	56	57	41
Mizoram	15.7	17.7	13.2	4.4	5.2	3.4	19	23	12
Nagaland	NA	NA	12.4	NA	NA	2.6	NA	NA	13
Sikkim	21.6	21.8	16.7	5.1	5.2	3.2	42	43	31
Tripura	16.1	16.6	13.5	5.6	5.6	5.2	39	40	30
Uttaranchal	18.5	21.1	16.6	7.8	10.0	6.1	48	69	26
Andaman & Nicobar islands	16.8	17.8	14.2	4.7	5.0	4.1	18	21	8
Chandigarh	16.1	20.6	15.6	3.5	2.2	3.7	24	28	23
Dadra & Nagar Haveli	29.3	30.1	20.0	6.5	6.8	2.9	58	62	9
Daman & Diu	22.3	22.6	22.0	6.7	7.6	5.9	40	42	35
Delhi	18.7	23.2	18.1	5.0	5.4	5.0	29	34	28
Lakshadweep	20.4	22.1	18.7	5.0	4.7	5.2	33	34	33
Pondicherry	17.9	18.7	17.3	7.0	7.7	6.6	22	31	15

Source: Sample Registration System Vol. 36, No. 1, April 2002.

There is considerable interstate variation in the health indicators as may be seen in Table 3.2. These differences are mainly due to the interstate variations in topographic conditions, literacy and socio-economic factors. Notice that the death rate in rural Kerala is 6.8 while in rural Madhya Pradesh it is 10.8. The death rate in rural Uttar Pradesh is 10.6 in comparison with 7.8 in urban Uttar Pradesh. Even the infant mortality rate shows a considerable interstate variation, being the lowest at 11 in the state of Kerala, while it is the highest at 90 in Orissa. It may be noted that the overall infant mortality rate for our country is 66.

About 73% of our population lives in rural areas of the country, where the basic amenities and health care services are dismal. India has a dubious distinction of being self-sufficient in food production while having the largest number (75 million) of 'under five' malnourished children in the world.

Despite all the developmental programmes we have some shocking facts to consider:

Table 3.3: Safe drinking water and adequate excreta disposal facilities

	Urban	Rural	Total
Population with safe drinking water available in the house or within reasonable access.	92.6%	72.3%	77.9%
Population with adequate excreta disposal facilities available (Toilet/latrines).	80.7%	18.9%	36.0%

Source: National Family Health Survey – 2, Oct. 2000

It is important to note that in rural areas:

- Infectious diseases continue to be a major cause of death and disease.
- Many of such infectious diseases are preventable.
- Malnutrition still continues to be a major cause of disease and death.
- Deaths from famines, floods and other natural calamities have decreased.
- Small pox has been eradicated.
- The incidence of diseases like cholera and malaria have shown decline.
- Vaccination programmes have provided some protection bringing down the prevalence of certain vaccine preventable diseases.
- Morbidity and mortality among women continues to be higher than among men.
- Neglect of the girl child, its poor health and poor nutritional status are prevalent.
- Adverse sex ratio, 933 females per 1000 males (2001 census), is alarming.
- Prevalence of under-weight children below the age of 3 years is 24% in rural areas against 21% in urban areas is equally alarming.
- Only 33.5% of deliveries are attended by trained personnel in rural areas in comparison to 73.5% in urban areas.

It is more than evident that the health situation in rural areas continues to be far from satisfactory, and it results in major drawback in developmental work. In the revised National Health Policy of the Government of India there is a lot of emphasis given to comprehensive rural health care services.

Check Your Progress II

Note: i) Use the space provided for your answers.

ii) Check your answers with the possible answers provided at the end of this unit.

1) Fill in the blanks with suitable words/figures:

- a) Death Rate in rural India was and in urban India in the year 2001.
- b) The lowest IMR was recorded by the state of and it was per 1000 live births (2001).
- c) The highest overall IMR was recorded by the state of (2001).
- d) In 2001, there were about *below five* malnourished children in India.
- e) As per the 2001 census, the sex ratio is females per thousand males.
- f) The population having adequate excreta disposal facilities in rural India was % in 2001.

3.4 HEALTH CARE SERVICES

Having understood the health situation of rural India, let us study the present health care services available and their evolution from the time India became independent in 1947. The health status of the people at that time was one of the poorest in the world. Expectation of life at birth was 26.9 years for males and 26.5 for females; 50% of the deaths were among children under the age of ten and in this group half of the mortality took place during the first year of life.

The important report on public health, which had appeared around 1947, was that of Health Survey and Development Committee (**Bhore Committee**). Set up in 1943, it gave its report in 1946, which is supposed to be the blueprint for the system of health services in India. The basic principles of the report are that no individual should be denied adequate medical care on grounds of inability to pay, special emphasis should be given to preventive work, focus on rural population and active co-operation of people must be secured in the development of health programmes. The committee recommended that a living wage for all workers, improvement in agriculture and industrial production, elimination of unemployment; suitable housing and clean environment are essential for healthy living.

The smallest health unit was designated a Primary Health Unit serving a population of 10,000-30,000 people. Each PHU was to have 70 beds and 6 medical officers in addition to other staff. 15-25 PHUs would constitute a Secondary Health Unit and three to five of the latter were to form the District Health Organisation (having a bed strength of 2,500) to serve a population of about 30,00,000. In view of the paucity of funds and manpower the planning was phased into short- and long-term planning. In the short-term a PHU was to cover a population of 40,000 instead of 10,000-30,000 and emphasis was placed on 30-bedded hospitals, one for every two PHUs.

Rest of the activities including setting up of District Health Care Centres were to be taken up only after the short-term targets were achieved. It also recommended that medical practice must be socially oriented to meet the needs of the people and must involve free participation of the community in the development of health care services. Bhore Committee recommendations continue to shape the health care services in India even today.

The **First Five Year Plan** accepted the suggestions of Health Survey Committee and First Primary Health Centre was established in October '52 as a part of the Community Development Programme based on the objective of bringing about multi-faceted development of rural areas. The major function of PHC under the integrated—curative, preventative and promotional—approach to the development of health services was:

- i) Medical Care
- ii) Control of Communicable Diseases
- iii) Maternal and Child Health
- iv) Collection of Vital Statistics
- v) Protection of Water Supply and Environmental Sanitation
- vi) Conduct of School Health Programme
- vii) Family Planning Services which were added on later.

A PHC was envisaged as a nucleus for all health activities in the area. Soon a network of PHCs was set up throughout the country, but with only a skeleton staff comprising one medical officer, one sanitary inspector, a health visitor, one compounder and four auxiliary nurse midwives covering a population of 60,000 people.

Infectious and communicable diseases were the major killers at that time. So, in the First Plan period, the Government started several National Programmes (such as the National Malaria Control Programme, the National Leprosy Control Programme, etc.) for controlling communicable diseases. These were called vertical programmes as each of them was implemented through a single purpose nation wide organization. Even the Family Planning Programme was a vertical programme launched during the First Plan period. In the Second Five Year Plan (1956-61), the thrust was to expand the then existing health services and to bring them within the reach of all the people. Soon it was realized that there was shortage of skilled manpower. Accordingly, it was planned to have training programmes to develop technical manpower; develop institutions to control communicable diseases and establish institutional facilities for delivering health care throughout the country.

The Health Survey and Planning Committee (**The Mudaliar Committee**) was appointed to assist and review the development of health care services in independent India. Its report submitted in 1961 observed that the primary health care as developed bore no resemblance to the one visualized by the Bhore Committee. Mudaliar Committee recommended:

- consolidation of the then existing services before taking up any expansion.
- strengthening staffing in the then existing PHCs.
- that each PHC should serve a population of 40,000 instead of 60,000.
- not to open any new PHC without ensuring the full staff component.
- strengthening of the district hospitals with mobile clinics to cover non-PHC populations.

Despite the recommendations of the committee, there was considerable expansion of PHC network in the 1960s, mainly because of the burden of vertical programmes.

In the early 1970s, several multi-disciplinary epidemiological and sociological studies were conducted before launching the various specific programmes. In 1973, a Government of India's Committee recommended the provision of integrated health and family planning services through multi-purpose workers. The committee on multi-purpose workers (**Kartar Singh Committee, 1973**) reviewed the functions of PHCs and observed that there was little co-ordination among the various health workers. It recommended:

- one male multi-purpose worker for a population of six to seven thousand initially;
- one female health worker (ANM) for a population of ten to twelve thousand;
- integrated training for all workers and
- co-ordination of programmes and personnel.

The new Government at the centre launched a Community Health Worker Scheme in 1977. The objective was to provide health services to rural population through village level Community Workers, who were to act as links between the health services and the people. This programme also collapsed because of several reasons.

The Fifth Five Year Plan (1974-79) acknowledged that the health care services in the urban areas had expanded at the cost of the rural services. It intended to provide integrated health services, family-planning services and nutritional packages through the Minimum Needs Programme (MNP).

Primary Health Care

It was felt more and more that an integrated approach to health care had to be developed. This led to the emergence of the concept of Primary Health Care wherein basic health needs of rural India could be taken care of. In 1978, India signed the Alma-Ata Declaration on 'HEALTH FOR ALL BY 2000 A.D.'. Here also primary health care was visualized as the nucleus of the health care system. According to the declaration, *primary health care is the essential health care based on practical, scientifically sound and socially acceptable methods made available to one and all the members of the community with their full participation and at a cost that the community and the country can afford*. This view forms an integral part of the country's health system, which is understood to contribute to the overall socio-economic development.

Primary health care covers:

- promotive, preventive, curative and rehabilitative services;
- prevention and control of endemic diseases;
- adequate supply of safe water and basic sanitation;
- promotion of food supply and nutritional services;
- maternal and child health care;
- family planning services;
- provision of essential drugs;
- immunization against vaccine preventable diseases and
- health education regarding prevailing health problems and their solutions.

National Health Policy

Adopted during the Sixth Plan (1980-85) by the Parliament in 1983, the National Health Policy underlined the need to provide universal, comprehensive primary health care relevant to the actual needs of the community at a cost that people can afford. The policy emphasized the need to re-structure the health services with the following broad aims:

- Provision of a network of primary health care services with organized support of volunteers, auxiliaries, paramedics and adequately trained multi-purpose workers.
- Location of curative centres according to the size of the population they serve.
- Large-scale transfer of knowledge, skills and techniques to health volunteers selected by community.
- Efforts to build up individual self-reliance and community participation.
- A well functioning referral system to provide support to family health care.
- Establishing a nationwide chain of sanitary-cum-epidemiological stations to provide integrated service to eradicate/control diseases.
- Support of voluntary agencies in health services.
- Establishing centres for specialized treatment wherever required.
- Make special efforts in the areas of mental health and rehabilitation work.
- Priority to the provision of services to people living in tribal, hills, backward and disease prone areas.

Special emphasis was given to Rural Health Care in the Seventh Plan (1985-90). It stipulated the establishment of the following:

- One sub-centre for a population of 5,000 in plains and 3,000 in tribal and hilly areas.
- One primary health centre for a population of 30,000 in plains and 20,000 in tribal and hilly areas.
- One community health centre for a population of 1,00,000 (one block).

It was envisaged to cover the entire population by setting up 54,883 sub-centres and 12,390 PHCs. But the targeted 1,553 Community Health Centres were not sufficient to cover even 50% of the population. The policy also contained an analysis of the poor state of health status and health services. It admitted that such an approach had been at the cost of comprehensive primary health care. In view of the significant epidemiological and demographic changes in the country, an exercise was undertaken by the Ministry of Health and Family Welfare to revise the National Health Policy. The revised draft National Health Policy has since been formulated. The main objective of this policy is to achieve an acceptable standard of good health amongst the general population of the country. Overriding importance has been given to ensuring a more equitable access to health services across the social and geographical expanse of the country to tackle the dual menace of communicable and non-communicable diseases. The Department of Health is implementing disease control programmes for controlling communicable diseases, such as malaria, TB, leprosy and AIDS, as well as non-communicable diseases like blindness, cancer, mental disorders, etc. Disease surveillance programme is also under implementation in 100 districts with a proposal to be extended to cover the entire country during the Tenth Plan Period. The plan outlay for the central health sector scheme during the year 2001-02 was Rs. 1,450 crores, which is an increase of 11.5 % over the outlay of the then previous year.

3.5 ORGANISATIONAL STRUCTURE

Starting from the periphery at every village or a population of 1,000 there is one community health worker/health guide who acts as a link between health services and the people.

For a population of 3000-5000 there is one sub-centre, which is staffed with one male and one female multipurpose worker (MPW). These grass roots level workers provide comprehensive promotive, preventive and basic curative services. They also help in

implementing programmes for controlling communicable diseases, family welfare services and maternal and child health services.

For 3-4 sub-centres there are two (one male and one female) health assistants, who provide supervisory support and act as links between the sub-centres and PHCs.

For a population of 20,000-30,000, a Primary Health Centres (PHC), which is the main centre of health services, provides composite health services. It is staffed with one male and one female medical officer, one male and one female health assistant, a block extension educator, a lab technician, a pharmacist, a statistical assistant, two persons for secretarial work and a few multi-purpose workers.

A Community Health Centre (CHC) is there for a population of 1,00,000. It is a thirty-bedded hospital, with X-ray and laboratory services, specialized services and surgical services. As for its staff, it normally has four specialists (surgery, medicine, obstetrics & gynecology and pediatrics), three medical officers, eight nurses, two pharmacists, one X-ray technician, ophthalmic assistant and other ward and support staff. The CHC is responsible for providing specialized services including surgical services and referral services to all the PHCs.

There is a proposal to have a sub-divisional health centre for a population of approximately 5,00,000 people. It is also proposed that every district with a population of over 10,00,000 people would have an apex medical organization from where all health services pertaining to that district would radiate. It will also support, co-ordinate, supervise and control the entire network of health care services for that district.

At the Centre, the Department of Health in the Ministry of Health and Family Welfare is responsible for formulating different plans and policies pertaining to health care of the country. They are also responsible for launching and implementing various programmes of health care nation wide. The organisational structure of the rural health care mentioned above is broadly as per the plan spelt out by the Ministry, though there may be some variations in the states depending upon various factors.

Check Your Progress III

Note: a) Use the space provided for your answers.

b) Check your answers with the possible answers provided at the end of this unit.

1) Describe the Primary Health Centre (PHCs) network in brief.

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2) What is the concept of Primary Health Care and what does it cover?

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3) List the five main features of the National Health Policy 1983.

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3.6 HEALTH CARE PROGRAMMES

The Government takes concerted measures to combat communicable and non-communicable diseases at the national level. For this purpose, the Centre organises various National Health Programmes, which have a bearing on morbidity and mortality and hence improve the quality of common man's life. These programmes also reinforce the delivery of primary health care throughout the country. We shall dwell upon a few of the major ones relevant to rural health.

3.6.1 National TB Control Programme

TB is an infectious disease caused by a bacterium. It is spread through air originating from a person suffering from TB. A single patient can infect ten or more people in a year. Generally, it affects people in their most productive years of life and is commonly associated with poverty, over-crowding and malnutrition. National Tuberculosis Control Programme (NTCP) has been under implementation since 1962 with the objective of detecting as many cases as possible and effectively treating them. Since its inception, the programme has been integrated with the primary health care infrastructure in the states. In 1992, an expert committee evolved a Revised National Tuberculosis Control Programme (RNTCP) based on the Directly Observed Treatment Shortcourse (DOTS) strategy, under which the patients swallow the drugs under the direct observation of a health worker (DOT provider). RNTCP has been expanding rapidly and the present coverage is over 252 million. It is anticipated that the entire country would be covered by 2005.

3.6.2 National Programme for the Control of Blindness

The National Programme for the Control of Blindness was launched in 1976 with the goal to reduce the prevalence of blindness from 1.4% to 0.3% by the year 2000. The programme objectives were to develop eye-care infrastructure throughout the country, expand coverage to under served areas, secure participation of the non-government and the private sectors. Since the major cause of visual impairment and blindness in more than half the cases is cataract, a target-oriented cataract operation programme was also initiated. There was a shift from eye-camp approach to a fixed facility surgical approach, and also from conventional surgery to lens implant surgery for a better quality of post-operative vision. There is a provision for financial assistance to Non-Government Organisations for performing free cataract operations and also for grants in aid to NGOs for organising eye-camps. There is also non-recurring grant-in-aid to NGOs for expansion/upgrading of eye-care units in backward rural areas.

3.6.3 National Leprosy Control Programme

The National Leprosy Control Programme has been in operation since 1955. With the availability of highly effective treatment of leprosy, the programme was re-designated as *National Leprosy Eradication Programme* in 1983. Free multi-dose therapy services are now available in all the districts of the country. Any person having

suspected signs of leprosy can consult the nearest health worker or PHC or leprosy clinic for free advice and treatment.

3.6.4 National Malaria Eradication Programme

The National Malaria Eradication Programme is the world's biggest programme against a single communicable disease. An organized programme for controlling malaria in the country has been in operation since 1953. In 1979, it was renamed the National Anti-Malaria Programme (NAMP). Implementation of this programme recorded dramatic successes, but an era of resurgence followed with a peak in 1976. The challenge was met with a change in the malaria control strategy in 1995, with emphasis on (i) early case detection and prompt treatment, (ii) selective vector control, (iii) promotion of personal protection methods, (iv) early detection and containment of epidemics, (v) information, education and communication and (vi) management capacity building.

3.6.5 National Filaria Control Programme

The National Filaria Control Programme comprises anti-larval measures, environmental methods of controlling mosquito breeding, biological control through larvivorous fish and anti-parasite measures. Since 1997, 13 districts in 7 states have been brought under the ambit of single-dose mass administration of DEC(an anti Filaria drug).

3.6.6 National Iodine Deficiency Disorders Control Programme

The National Iodine Deficiency Disorders Control Programme launched in 1962 aims at bringing down the prevalence of Iodine Deficiency Disorders (IDD) to below 10% in all districts of the country. Sample surveys conducted in 25 states and 5 union territories have revealed that IDD is a major health problem in 241 districts where the prevalence is more than 10%. The aim of the programme is to identify areas suffering from this problem and supply iodized salt in place of common salt in order to reduce the deficiency of iodine content in the food taken at those places.

3.6.7 Medical Care for Remote and Marginalized Tribal and Nomadic Communities

Medical Care for Remote and Marginalized Tribal and Nomadic Communities is a new scheme that was launched during the Ninth Five Year Plan with an outlay of rupees ten crores. Under this scheme, various projects have been taken up by ICMR, viz the prevention and control of hepatitis B among the primitive tribes of Andaman and Nicobar Islands; the programme for cholera, gastroenteritis and vitamin A deficiency among the tribes of Orissa and the intervention programmes for nutritional anaemia among the primitive tribal population of India.

3.6.8 National Mental Health Programme

National Mental Health Programme: This programme envisages a community based approach to the problem which includes training of mental health teams at the identified nodal institutes, increase awareness about mental health problems and provide services for early detection and treatment of mental illnesses. The Government of India provides funds to the State Governments and the nodal institutes to meet the expenditure on staff, equipment, medicines, training activities, etc. This programme is under implementation in 22 districts in 20 states with a budgetary allocation of rupees 28 crores in the Ninth Five Year Plan.

3.7 FAMILY WELFARE SERVICES

Population explosion has been the most crucial problem our country is facing. We were 361 million in 1951; the number doubled by 1981 and rose to 837 million in 1991 (an increase of about 15 million every year) and in 2001 our population reached 1027 million.

India has been the first country to officially adopt a National Family Planning Programme. The objectives laid down in the First Five Year Plan (1951-56) were to obtain an accurate picture of the factors contributing to the rapid growth of our population, to discover suitable techniques of family planning and make advice on family planning an integral part of the health services. Since then, policies have been revised from time to time and their implementation has shown significant increase in expenditure on family welfare services over the years. More than two-thirds of the plan outlay of the family welfare programmes is allocated to services and supplies and maternal and child care facilities. Family welfare is a Centrally sponsored programme. Although the schemes are implemented through the State Governments, the cost is borne entirely by the Centre.

Reproductive and Child Health Programme

On the recommendations of the International Conference on Population and Development, held in 1994 at Cairo, Egypt, the Government of India launched the Reproductive and Child Health (RCH) Programme on 15th August 1997. The concept of RCH Programme is to provide need based, client centered, demand driven, high quality and integrated RCH services to the beneficiaries.

The main highlights of the RCH programme are as follows:

- a) The programme integrates all interventions of fertility regulations, maternal and child health with reproductive health of both men and women.
- b) The services provided are client centered, demand driven, high quality and need based.
- c) The programme envisages upgrading the level of facilities for providing various interventions.
- d) Attempts are on for improving the facilities for obstetric care, MTP and IUD insertion in PHCs and sub-centres.
- e) The programme aims at improving the outreach of services primarily for the vulnerable sections of the population.
- f) Involvement of NGOs and voluntary organisations encouraged and welcome.

Maternal Health

The major causes of high maternal mortality have been identified as anaemia, hemorrhage, toxemia, obstructed labour, and infections after delivery and unsafe abortions. To tackle these problems, the new initiatives taken are as follows:

- a) Contractual appointment of staff.
- b) 24-hour delivery services at PHCs/CHCs.
- c) Referral transport to indigent (very poor) families.
- d) Safe motherhood consultants (doctors trained in MTP).
- e) Training of *dais*.

Child Health

Improvement in child health and survival are important aspects of family welfare programmes. Low birth weight, diarrhoeal diseases, respiratory infections, vaccine preventable diseases, inadequate maternal care and that for the new born have been identified as the major causes of high infant and child mortality in our country. Under the RCH programme, interventions like anti-natal care, increasing safe deliveries, essential care for the new born, immunization against six vaccine preventable diseases and control of diarrhoea deaths are being implemented. As a result of these interventions deaths due to vaccine preventable diseases have come down significantly. Similarly with the implementation of the Oral Re-Hydration Programme, the deaths due to diarrhoea have come down from an estimated 10-15 lakhs in 1985 to 6 lakhs in 1997.

Involvement of NGOs in the Family Welfare Programmes

the NGO division of the Department of Family Welfare is looking after the Mother NGO proposals (received from all over the country) and the innovative projects undertaken by the National NGOs.

3.8 PRESENT STATUS AND ITS REVIEW

The Government of India, through the Ministry of Health and Family Welfare, has been providing infrastructure for delivering health care services to rural masses over the years. We have studied the evolution of such services, the organisational structure and various vertical programmes involved in the delivery of such services. As per the population norms, the existing infrastructure of PHCs is inadequate in many states. The Department of Family Welfare does not provide funds for setting up new ones. The State Government is responsible for opening and maintaining these centres under the MNP/Basic Minimum Service programmes. **Pradhan Mantri Gramodaya Yojana for Primary Health Sector** is an initiative to strengthen and revitalize the primary health infrastructure for improved provisioning of the basic minimum services in rural areas, so as to improve the quality of life. The Planning Commission of India allocated an additional Central Assistance of Rs. 2800 crores in 2001-2002 for six sectors viz. Rural Electrification, Primary Health, Primary Education, Shelter, Drinking Water and Nutrition. Further improvements are being planned and implemented in the current plan period.

The present status of health services may be visualized in Table-4 below.

Table 3.4: Health Status at a Glance

Item	Year	Status
The Number of PHCs functioning in rural India:		
— Sub-centres		1,37,292
— PHCs	2001 – 02	22,807
— CHCs		3,027
The number of hospital beds		
— For the whole of India	Jan. 1988	5,85,889
— Urban		4,92,820
— Rural		93,069
The number of hospital beds		
— For whole the of India	Jan. 1998	6,65,639
Population per hospital bed	1998	1,451
Hospital beds per 10,000 population	1998	6.9

Life Expectancy	2000	64.6 yrs
Crude Birth Rate	2001	27.5
Crude Death Rate	2001	8.4
Infant Mortality Rate	2001	66
Maternal Mortality Ratio	1998	407
Deliveries attended by trained personnel		
—Total	1995-96	42.3%
—Urban		73.5%
—Rural		33.5%
Women of childbearing age using family planning services	1998-99	48.2%
Eligible infants up to 1 year who have been fully immunized according to National Immunization Policy	1998-99 2001	34.5% 49.0%
Prevalence of low-weight birth rate		
(Weight < 2500 gms at birth)	1995-96	
—Total		23.0%
—Urban		21.0%
—Rural		24.0%

Source: National Family Health Survey, 1998-99, Oct. 2000, Health Information of India, 1997,98, July 2000, SRS Bulletin 2001, SRS Vol. 36 No.1, April 2002

Looking at the above figures, it is apparent that the health situation in India, especially in the rural areas, is far from satisfactory, though there has been an improvement in the health status of the rural population since independence. The ICSSR and ICMR study group in its report '*Health for All: An Alternative Strategy (1981)*' commented that the overall picture was a mixture of light and shade. There are some areas of outstanding achievements, like the eradication of smallpox, but there are many areas of grave failures. The report also observed that there was not much change in the overall picture of mortality. The diseases like malaria, leprosy, cholera, filaria, measles, TB, gastroenteritis, whooping cough, bronchitis, pneumonia, etc. are still the commonest causes of morbidity and mortality. They all can be attributed to poverty, ignorance, bad nutrition, bad sanitation and lack of safe potable water and low levels of immunity. The report also observes that though there is reasonable growth in the health care services, they are unrelated to the needs of the poor and rural people. The delivery system appears to be based more on western models having no roots in the culture and traditions of our people. The major drawbacks are that it is more of a curative approach and comprises more of urban secondary and tertiary care through hospitals. Despite setting up a huge PHC network, there are difficulties because of its urban bias.

There is also a mention of services being highly centralized and bureaucratized rendering it unable to cope with the problems of distance and those of referral services for PHCs.

Too much dependence on doctors has also been a shortcoming, as they do not have the right kind of training in preventive and community health. There is no system to motivate qualified doctors to go to rural areas.

The National Health Policy too attributed the unsatisfactory health situation in the country to the adoption of hospital based curative approach to health services at the cost of comprehensive health care to all. Some experts feel that the preventive programmes were not designed on the basis of proper field surveys.

Various expert committees have been reviewing the status of health services from time to time. According to some, the health care delivery system in the rural areas of our country is said to fail at the periphery, i.e. the services do not reach the poor or the bulk of the rural people. Lately the policy has been concentrating on curative institutions in cities equipping them at par with international standards of medical care, while the peripheral institutions are deprived of the most basic facilities.

The report of an Indian Council of Medical Research Study (1989) on PHCs reflects the unsatisfactory picture of health services at the grass roots level with reasons as follows:

- 1) Most of the PHCs were not equipped with proper staff.
- 2) Most of the PHCs did not have adequate supply of medicines.
- 3) Labour room and operation room facilities were inadequate.
- 4) Majority of sub-centres had no facilities for the routine check-up of pregnant women.
- 5) The pre-natal, anti-natal and family planning services were found to be unsatisfactory.
- 6) The neo-natal, child-care and immunization facilities were found to be unsatisfactory.

A national review of the Immunization Programme in India (1989) covering 35 districts and 8 urban units states that despite the extensive efforts under the universal immunization programme, morbidity and mortality due to vaccine preventable diseases continue to be high. During the survey it was found that often there was a short supply of vaccine or the equipment required for cold chain. Poor monitoring of the quality of vaccines, no power supply and poor supervision were the other areas responsible for unsatisfactory results. The universal immunization programme was given the status of National Technology Mission in 1986 and became operational in all districts of the country during 1989-90. It became a part of Reproductive and Child Health Programme (RCH) in 1997. The results in the last thirteen years (1987-2000) have been encouraging as shown by the significant decline in the reported incidents of these diseases as compared to the incidents in 1987. By the end of March 2001, coverage levels had improved significantly.

Table 3.5: Immunization

Immunization Status (% coverage)	(2000 – 2001)
TT for pregnant mothers	83.4
B.C.G.	102.7
Measles	92.1
D.P.T.	100.3
Polio	98.2

Source: Office of Registrar General India & Ministry of Health and Family Welfare

Table 3.6: Decline in the Incidence of Diseases

Diseases	1987	2000	% decline
Polio	28,257	265	99.06 %
Diphtheria	12,952	4,352	66.40 %
Whooping Cough	1,63,786	26,752	83.70 %
NNT	31,844	2,197	93.10 %
Measles	2,47,519	25,259	89.80 %

Source: Annual Report Ministry of Health and Family Welfare, 2001–02

Pulse polio immunization for polio eradication was launched in the country in 1995, as a result of which the number of polio cases has shown a rapid decline from 1,934 in 1998 to 161 in 2001.

The success story of the National Health Programmes also is a mixed one. Malaria showed resurgence (peak incidence 6.47 million cases in 1976), but has been controlled with modified plans of operation. There is decline every year, e.g. 12.37 % of the total malaria cases during 2000 and 3.42 % during 2001. In the case of Tuberculosis, the programme has been expanded with considerable increase in budget allocation, but the incidence of the disease is not showing any let up. The Government of India and WHO joint review of the programme was undertaken in February 2000, and it was found that the implementation of RNTCP was successful and there has been a striking increase in the proportion of patients cured. The prevalence rate of Leprosy is 3.74 cases per 10,000 persons, reduced from 57 per 10,000 in 1981. Thirteen states have reached elimination level (prevalence rate of less than 1 per 10,000). Thanks to the widespread availability of MDT, almost every “leprosy beggar” at traffic lights in fact is a fully treated and non-infectious leprosy patient.

Check Your Progress IV

Note: a) Use the space provided for your answers.

b) Check your answers with the possible answers provided at the end of this unit.

1) Fill in the blanks:

- a) As per 2001-02 data, the number of PHCs functioning in rural India is
- b) National Tuberculosis Control Programme was launched in
- c) The objective of the National Programme for Control of Blindness was to reduce the prevalence of blindness from to%.
- d) Present (2001 data), Crude Death Rate is
- e) Resurgence of malaria was seen in (year)
- f) The % decline in the case of measles is % from 1987 to 2000.
- g) In the administrative structure of rural health care in India, the community health centre caters to a population of persons.

2) List four reasons given in the report of ICMR study (1989) for unsatisfactory rural health care.

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- 3) Mention the main reasons due to which the health care services have not been significantly satisfactory in rural India.

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3.9 LET US SUM UP

In this unit we have emphasized that health is an important parameter of development. The Government is committed to the objective of providing health for all. At present the health scenario as depicted by the various health indicators is unsatisfactory, more so in the rural areas. The health situation of the country has undergone significant changes during the past few years but the communicable diseases continue to be the leading cause of morbidity in rural areas. There is a definite need for improving the system for an adequate and comprehensive health care services in rural India.

We also presented an overview of the health care services available in our country. There is an extensive infrastructure for providing primary health care services at the grass root level and this is being continuously monitored, upgraded and reviewed by the Ministry of Health and Family Welfare. We learnt that the health status of the rural masses continues to be far from satisfactory, mainly because of the urban *hospital bias*, thrust on curative approach, non-involvement of communities in policy making, low priority to public health programmes and lack of medical human resource for rural areas.

We also analyzed the impact of various programmes and health care services. There has been a marked improvement in certain segments of health status spelling the success of certain National Programmes like Pulse Polio Programme, RCH Programme, etc. There is still a vast scope for improvements.

3.10 KEY WORDS

Birth Rate	:	Number of births in a year per thousand mid-year population.
Cold Chain	:	A process required to maintain, store and transport the vaccines at required cold temperature.
Crude Death Rate	:	Number of deaths in a year per thousand persons.
0-4 Age Specific Mortality	:	Number of deaths in the age group 0-4 years per thousand children in the same age group in a given year.
Infant Mortality Rate	:	Number of the deaths of infants (within one year of birth) per thousand live births in a year.
Life Expectancy at Birth	:	The number of years a new born child is expected to live subject to the mortality risks prevailing for the population at the time of its birth.

Low Birth Weight	:	Less than 2,500 Gms.
Per capita Income	:	The national income divided by the population of the country or the average income per head.
Sex Ratio	:	The number of females per thousand males in the population.
Epidemiology	:	The study of the distribution and the determinants of disease prevalence in a population.

3.11 REFERENCES AND SUGGESTED READINGS

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3.12 CHECK YOUR PROGRESS – POSSIBLE ANSWERS

Check Your Progress I

- 1) Two thirds of our population lives in rural areas where health services are far from satisfactory. The ill effects of natural disasters like heavy rains, floods and cyclones are maximum on rural population. Poverty plays an important role in non-availability of quality health care. Infections (which are preventable) are still a major cause of mortality and morbidity leading to poor health and development in rural areas.
- 2) Health of a community is directly related to productivity as sickness and poor health leads to poor quality of life and low productivity.
- 3) Poverty exposes a person to inadequate nutrition, clothing, shelter and poor sanitary condition leading to high incidence and prevalence of disease. Poverty also predisposes to crime, violence and drug abuse responsible for low productivity. Inability to pay for promotive and curative medical services also leads to poor health.

Check Your Progress II

- 1)
 - a) 9.0, 6.3
 - b) Kerala, 11
 - c) Orissa
 - d) 75 million
 - e) 933
 - f) 18.9

Check Your Progress III

- 1) One community health worker for every village or a population of 1000
A sub-centre for a population of 3000-5000 for comprehensive primary care
A male and a female health assistant for 3-4 sub-centres
A primary health centre for a population of 20000-30000
A community health centre (30 bedded hospital) for a population of 1,00,000
- 2) Primary health care is a nucleus of health care system based on practical and socially accepted methods being made available to all the members of the community with their participation at a cost that community can bear.

It covers promotive and preventive like immunizations and sanitary services, curative medical services, maternal and child health, family planning services. It also covers rehabilitative services and health education.
- 3) Providing a network of primary health services

Developing individual self reliance and community participation
Efficient referral system to provide support to family health care
Priority of people living in tribal and backward areas
Support of voluntary agencies in health

Check Your Progress IV

- 1)
 - a) 22,807
 - b) 1962
 - c) 1.4, 0.3
 - d) 8.4
 - e) 1976
 - f) 89.8
 - g) 1,00,000
- 2) Inadequate staffing and inadequate supply of medicines at PHCs in the rural area has been the major reason for unsatisfactory rural health care. At sub-center's level there were no facilities for anti-natal check ups of pregnant woman and family planning services. The child care and immunization facilities were also found to be unsatisfactory.
- 3) Though overall picture of mortality and morbidity shows an improvement since independence, diseases like small pox, polio, whooping cough show a definite decline but malaria, measles, TB and some other infectious diseases are still the common cause of mortality and morbidity in rural areas. The major cause appears to be poverty, ignorance, bad nutrition, insanitation and lack of potable water. The health care services seem to be unrelated to the needs of the poor and rural people having no roots in the culture and tradition of the village people. The urban bias in secondary and tertiary care is also responsible for unsatisfactory rural health care.

UNIT 4 DRINKING WATER AND RURAL SANITATION

Structure

- 4.0 Objectives
- 4.1 Introduction
- 4.2 Importance of Water and Sanitation in Rural Health, Economy and Development
 - 4.2.1 Health
 - 4.2.2 Economy
 - 4.2.3 Development
- 4.3 Strategies and Programmes for Safe Rural Water Supply
- 4.4 Accelerated Rural Water Supply Programme (ARWSP)
- 4.5 Rajiv Gandhi National Drinking Water Mission
- 4.6 Swajal Project: Policy and Strategy
- 4.7 Sanitation in Rural India
 - 4.7.1 How do the Diseases Spread?
 - 4.7.2 How can Diseases be Prevented?
 - 4.7.3 Status of Sanitation in Rural Areas
 - 4.7.4 Strategies and Programmes to Improve Sanitation
- 4.8 Let Us Sum Up
- 4.9 Key Words
- 4.10 References and Suggested Readings
- 4.11 Check Your Progress – Possible Answers

4.0 OBJECTIVES

After studying this unit, you should be able to:

- describe clearly the relationship between safe drinking water and improved sanitation and health, economy and development in rural India;
- explain the status of safe drinking water and sanitation in rural India; and
- analyse and describe the policies and programmes being carried out by the Government of India and the Non-Government Organisations (NGOs) for Drinking Water and Sanitation (WATSAN).

4.1 INTRODUCTION

Drinking Water and Sanitation (WATSAN) are not only the basic necessities of life, but they are also crucial for achieving the goal of “Health for all”. Do you know that nearly 80% of the common diseases are caused by unsafe drinking water? Every individual has the right to adequate and clean drinking water facilities. Equally important are the proper sanitation and human waste disposal facilities in every village in India. Denial of both has far reaching damaging effect on the health and the economy of the nation.

Not only this, drinking water is perceived as a social right to be provided free of cost by the government rather than a scarce resource that needs to be managed locally. Such a perception has grown out of the fact that the rural supply systems are largely designed and executed by the state departments/boards by adopting a supply driven approach.

The Government of India has also undertaken integrated approach to improve sanitary conditions in the villages, as the rural sanitary conditions remain pathetic even today. Only 20% of the estimated rural households have sanitary facilities. The Government, therefore, plans to cover all the villages in the country through a reformatory programme called the Total Sanitation Campaign.

In this unit you will learn about the various programmes and initiatives taken by the Government and Non-government Organisations to improve the water and sanitation situation in rural India.

4.2 IMPORTANCE OF WATER AND SANITATION IN RURAL HEALTH, ECONOMY AND DEVELOPMENT

As you know water is one of the basic necessities of life. It is also the key to health, economy and development of the country. Let us discuss in detail as to how drinking unsafe water and poor sanitary conditions affect *Health, Economy and Development*.

4.2.1 Health

In the absence of safe drinking water, most people living in rural areas have to depend on other sources of water such as rain, surface and ground water. The water from these sources is generally impure and considered unfit for drinking purposes. The problem is that people are ignorant about the diseases and deaths that are caused by drinking unclean water from these sources. They are also unaware of the fact that defecation in open air pollutes the environment; throwing waste near their houses is a health hazard and that unhealthy practices of personal hygiene make them ill and weak. As a result 80 per cent of the diseases occur due to poor sanitary conditions and lack of safe drinking water. For example, water born diseases such as diarrhea, trachoma, scabies, filaria, malaria, dengue, etc. and exposed human excreta related diseases such as cholera, typhoid, jaundice, etc. can be easily prevented if people in rural areas have the knowledge and means to handle the problem and lead healthy lives.

4.2.2 Economy

The economy of any nation is depended on healthy and strong people. Economy grows if we are able to develop human capital for its effective investment. In an agriculture-based economy such as ours, we need to provide the basic amenities of life to rural people such as clean drinking water and good sanitation. Then only can they be strong enough to actively and efficiently participate in the process of development. Therefore, the key formula to develop human capital, which helps in the economic growth of the country, is '*grow more, eat more and maintain a healthy and balanced life*'.

4.2.3 Development

Improved health and agricultural production are directly linked to the development processes. Development here means to do "maximum good to the largest number possible." But has this goal been achieved in the water and the sanitation sectors? The answer is no. In a country like India, where most people live in rural areas, provision of safe drinking water and sanitation system for all has been one of the major concerns of the policy makers and development administration. Different schemes/programmes, revised plans and new approaches to the rural water and sanitation sectors have been made throughout the Five Year Plans. Five and a half decades of planned development, however, has failed to fulfill the water and the sanitation needs of all; nor have we been able to educate and motivate people about

the perils of drinking unsafe water and the hazards of defecating in the open air. As a result, they have not participated in the development process actively; nor have they been able to derive any significant benefits from such programmes. Therefore, the promise to provide clean drinking water and good sanitation remains unfulfilled. Consequently, our development agenda too remains unfulfilled.

Check Your Progress I

Note: a) Use the space provided for your answers.

b) Check your answers with the possible answers provided at the end of this unit.

1) How do drinking unsafe water and poor sanitary conditions affect Health, Economy and Development?

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4.3 STRATEGIES AND PROGRAMMES FOR SAFE RURAL WATER SUPPLY

Both the Government of India and the State Governments have been trying to provide safe drinking water to rural population since the implementation of the First Five Year Plan began. In spite of huge allocation of funds provided by the Center throughout the plans, water supply remains a distant dream for the millions of rural people.

The earliest strategy to provide water for 90 per cent of the rural population within a period of 40 years failed, as a majority of the villages under the schemes remained uncovered. It was during 1972-73 (the Fourth Five Year Plan), however, that a serious thought was given to the problem of Rural Water Supply. Successive plans and shifts in the strategies proposed and implemented in the water sector can be appreciated better as we look into the policies and programmes launched by the Governments under the following programmes:

- Accelerated Rural Water Supply Programme
- Rajiv Gandhi National Drinking Water Mission
- Swajal Programme: Policy Reform and Operational Strategy

As each one of these programmes is of significant importance, we devote a section each to all of them.

4.4 ACCELERATED RURAL WATER SUPPLY PROGRAMME (ARWSP)

Based on the observations of earlier failures in providing safe drinking water to all the villages, the Government of India introduced the Accelerated Rural Water Supply Programme (ARWSP) in 1972-73. The focus was physical coverage of all rural habitations with the facility of drinking water as per certain norms fixed for the purpose. The strategy adopted was two pronged:

- 1) To identify problem villages and,
- 2) To accelerate the coverage of problem villages.

The Central Government assisted the States and Union Territories with 100 per cent grant-in-aid to implement the schemes in problem villages. The ARWSP, however, was withdrawn with the introduction of Minimum Needs Programme (MNP) during the Fifth Five Year Plan (1974-75). Despite the huge investment, the progress under the scheme was found to be unsatisfactory. As a result ARWSP was reintroduced in 1977-78.

The ARWSP is implemented by the State Governments. Now, they have the powers to plan, sanction and implement programmes.

Strategy

The strategy to achieve the objective of providing drinking water to all rural habitations revolves around the following three distinct but inter-related thrusts:

- To accelerate the coverage of ‘Not Covered and Partially Covered’ habitations with safe drinking water systems.
- To tackle the problems of water quality in affected habitations and to institutionalize water quality monitoring and surveillance systems.
- To promote sustainability, both of systems and sources, to ensure continued supply of safe drinking water in the covered habitations.

Norms

The norms for safe drinking water supply for rural areas are:

- 40 liters of safe drinking water per capita per day (lpcd) for human beings.
- 30 lpcd additional for cattle in the Desert Development Programme areas.
- One hand-pump or stand post for every 250 persons.
- The water source should exist within the habitation/within 1.6 km. in the plains and within 100 meters elevation in the hilly areas.

Quality

As for the problems pertaining to quality—they have been given the highest priority. So much so, the habitations with no safe sources of water came to be treated as ‘not covered habitations’ for all the practical purposes.

Sustainability

Even if the safe drinking water supply is made available, it has to be kept sustained for years to come. Often programmes become unsustainable after a few years of their implementation; and this has been a major cause of the underperformance of the rural water supply sector. This, in turn, has led to a shift in the role of the Government—from a service provider to a facilitator. The importance of empowering and motivating local communities to consider drinking water as a means of their economic well-being and making themselves responsible for the implementation, maintenance and operation of water and sanitation programmes in their communities has been emphasized and institutionalized by incorporating the following three basic principles for ensuring peoples’ participation:

- Adopting a demand responsive and adaptable approach based on the empowerment of villagers to ensure their full participation in the project through their decision making role in the choice of schemes, their design, control of finances and the management of systems.

- Shifting the role of Government from direct service delivery to facilitating the services.
- Partial cost sharing either in cash or kind or both and taking full responsibility for the operations and maintenance by end-users.

Role of Women in RWS Schemes

Women are considered to be the principle beneficiaries of ARWSP programme. Also, they are more effective in deciding on the location of stand post/spot sources, as they manage drinking water for the family everyday. Based on these experiences, the Government has laid down the following guidelines for women's involvement in the process:

- At least 30% of hand pumps under the schemes should be in the hands of the women of the local areas/habitations, as they can take better care of the operations and maintenance of hand pump schemes than others.
- There should be women caretakers for hand pumps in the habitation.
- Certificates of satisfactory completion of the schemes may be obtained from women groups in the habitation.
- Prominent women from the habitation should be represented on the village monitoring committees.

Role of Panchayati Raj Institutions in RWS Schemes

For the effective implementation of RWS schemes, efforts have been made to involve PRIs at the functional/operational level. In order to ensure equitable and accessible water sources at the village level, the capability of the PRIs has been tapped by:

- sensitizing PRIs through effective Information, Education and Communication (IEC) strategies,
- granting them the optimum level of autonomy for effective implementation of individual schemes,
- training PRI functionaries to play the role of team managers to promote well-directed team work for effective coordination,
- assisting PRIs for maintaining a data base of the availability of water, and
- emphasizing the role of Gram Panchayats and the village water supply and sanitation committee(s) in the operation and maintenance of water supply assets created at the village level.

The strategy, therefore, has been to handover the responsibility of the ownership, the operation and the management of RWS schemes to the Panchayats. Funds earmarked for O & M are made available to PRIs along with the staff, equipment, etc., so that PRIs effectively ensure proper management, operation, and maintenance of the assets transferred to them.

4.5 RAJIV GANDHI NATIONAL DRINKING WATER MISSION

Recognizing the enormity and urgency of providing safe drinking water to rural areas, the ARWSP was given the shape of the National Drinking Water Mission (NDWM) 1986, which was renamed as Rajiv Gandhi National Drinking Water Mission (RGNDWM) in 1991. Under RGNDWM some major reforms have been introduced to bring about *sustainability* in the water sector in rural India. The programmes of RGNDWM may be classified into two categories, namely:

A) Main Programmes

B) Supportive Activities

A) **The Main Programmes comprised**

- i) Accelerated Rural Water Supply Programme (ARWSP) and
- ii) Sector Reform Programmes.
- i) **ARWSP:** As it is clear from earlier discussions, ARWSP continues with the aim of providing drinking water to all the habitations in the country. Also, the norms for providing potable drinking water to the population remain the same. Some changes, however, were introduced in terms of the criteria for allocating funds to the state under ARWSP in the 10th Plan.
- ii) **Sector Reform Programmes:** Despite the massive investment and considerable coverage, as per the national norms, of providing safe drinking water, the sustainability of the systems and the sources has remained a major problem. To tackle it, the Government introduced reforms that are demand driven, i.e. the community has not only to pay for drinking water but also take the responsibility of operating and maintaining the water supply system. To achieve this, most states have taken steps to institutionalize community participation through various pilot projects.

The policy, therefore, signifies a paradigm shift from a centralized, government oriented and supply-driven programme to decentralized, people oriented and demand driven programme. The reform envisaged encompasses the following element:

- Adopting a demand-driven approach based on the empowerment of villagers to ensure their full participation in the project through a decision making role in the choice of schemes, their design and management.
- Focusing on capacity building at the village level (through village water and sanitation committees).
- Ensuring an integrated service delivery mechanism by streamlining the functions of the agencies involved in project implementation.
- Sharing at least 10% of the capital cost and 100% of O&M cost by the users. [The rate of the capital cost shared is to increase proportionately with the increase in the demand for services. This contribution may be in the form of cash or kind—labour, land or material.]
- Taking up of conservation measures for sustained supply of water through rainwater harvesting and ground water recharge structures.

B) **Supportive Activities**

The success of any project depends, to a great extent, on the available support system. Under RGNDWM, the following supportive activities are provided:

a) **Human Resource Development (HRDP)**

HRD cells have been set up at the state level for planning, designing, implementing, monitoring and evaluating appropriate and need based HRD programmes. The aim is: i) to empower Panchayati Raj Institutions/local bodies to enable them to take up operations and maintenance activities related to rural water supply systems, and ii) to build the capacity of local communities by giving the requisite training to mechanics/health motivators/masons, etc., especially women to operate and maintain hand pumps and to generate demand for adequate sanitation facilities.

b) **Information, Education & Communication (IEC)**

IEC programmes aim at publicizing the Rural Water Supply programme through the mass media: i) to disseminate information about the programme, and ii) to emphasize

the need for using safe water to overcome water borne diseases. Such publicity may be provided through appropriate methods of communication like folk songs, folk dramas, discussions, demonstrations, documentary films, posters, newspapers, radio, TV, etc.

c) **Management Information System (MIS)**

Information Technology (IT) based MISs have been set up for effective planning, monitoring and implementation of the various schemes under different programmes, which include: maintenance of micro level status of water supply and assistance for conducting training programmes and development of customized software for enabling States/UTs to fully utilize the strengths of IT.

For the above three activities 100% funding is being provided by the Central Government

d) **Monitoring and Investigation Units (M&I)**

M&I Units have been set up at the state headquarters to carryout investigations and feasibility studies of the planned schemes. Their activities involve: i) monitoring and surveillance regarding the quality of water at the field level, ii) maintaining quality related data in coordination with the department concerned, iii) working with the Research & Development cell for Monitoring and Evaluation activities, iv) controlling and regulating the quality of construction work related to the water supply schemes and v) applying the latest technology in the field. The related expenditure is borne by the Central Government and the State Government on a 50:50 basis.

e) **Monitoring and Evaluation (M&E)**

Provision has been made for taking up monitoring and evaluation studies in relation to the implementation of rural water supply programmes through reputed organisations/institutions both by the Central Government and the State Government. Based on the study reports, corrective measures are taken up by the Mission to improve the quality of programme implementation. Such studies, taken up by the states with the prior approval of the Mission, are fully funded by the Central Government.

f) **Research and Development (R&D)**

For the effective implementation of the rural water supply programmes, State Governments have established R&D cells by networking with premier technical institutions within the state and M&I units. And the M&I study reports are used for initiating appropriate follow up action. For back up data, R&D cells are in constant touch with the documentation and information center of the Mission and its Web site. For all this, the Mission provides the necessary assistance to the States concerned.

g) **Provision of Drinking Water in Rural Schools**

Provision has been made for: i) providing drinking water facilities to all the schools/Anganwadies in the country, ii) compiling district-wise data regarding the rural schools *having or not having* drinking water facilities and iii) using this data to take the necessary corrective action. The provision of funds has been provided by Tenth Finance Commission for rural water supply programme in addition to the assistance provided by the Central and State Governments on 50:50 basis from the funds allocated for ARWSP. States' responsibility is to fix an annual target of rural schools to be covered and intimate their achievements to the Mission on monthly basis along with the progress reports submitted to intimate coverage of NC and PC habitations.

4.6 SWAJAL PROJECT: POLICY AND STRATEGY

By now it must be clear to you that *rural water supply* is basically a Government funded operation. You also know that in spite of massive investments and considerable

coverage as per the national norms of providing drinking water supply, the situation continues to be dismal in rural areas. To redress the situation, the Government has brought in the concept of institutional funding to this sector for purposes of mobilizing additional resources and bringing about changes in its approach— from being supply-driven to become demand-driven. The implication is that the rural people are made aware of the fact that drinking water is not provided free of cost by the Government and that they should be willing to pay for it. Towards this end, the Swajal Project was launched on experimental basis in three states: Uttar Pradesh, Gujarat and Karnataka. Here, we will discuss Uttar Pradesh as a case study of Swajal Project.

In Uttar Pradesh, it is estimated that 63 per cent of the rural habitations get less than the prescribed 40 lpcd of water. And only 2.5 per cent of the rural population is using latrines, which is far below the national average. The Uttar Pradesh Jal Nigam, funded mainly by government grants, constructs and maintains water supply schemes in most parts of the state. It follows mainly the top down approach to delivery of services, rarely taking into account the preferences of consumers. There is no capital cost recovery, and the operation and maintenance costs are seldom collected. The poor sustainability of investments in the rural water supply sector encouraged the Uttar Pradesh Government to undertake major policy reforms under the World Bank assisted Swajal Project. ‘Swajal’ was a paradigm shift in terms of the delivery of sustainable water supply and environmental sanitation facilities. It has been designed to support a package of investments and a process of policy reform to deliver sustainable health and hygiene benefits to the rural population in the project area.

The Swajal was a 71 million dollar, seven years (1996-2003), community and demand-driven, water and sanitation project that was taken up in 1000 villages of 19 districts in Uttarakhand and Bundelkhand regions of the erstwhile state of Uttar Pradesh in 4 batches in order to demonstrate its sustainability and superiority over other traditional supply-driven service delivery models.

Objectives

The main objectives of the projects were to:

- deliver sustainable health and hygiene benefits to the target rural population through improvements in water supply and environmental sanitation services;
- test an alternative to the current supply-driven service delivery mechanism;
- increase rural incomes through *time savings* and income opportunities for women;
- promote sanitary awareness in relation to gender and
- promote long term sustainability of the rural water supply and the sanitation sectors by assisting the State Government in identifying and implementing an appropriate policy framework and the related strategic plan.

Strategy

The strategy adopted was as follows:

Decentralized Management: All project activities at the village level to be managed by a representative and democratically elected Village Water and Sanitation Committee, which is a subcommittee of the Gram-Panchayat.

Demand-driven operation: Committees to be selected on the basis of demand and then given the lead role in decision-making, i.e. they choose the appropriate technology and are responsible for planning and implementation. These Committees are to contribute about 10% of the capital cost and assume full responsibility, including that of funding, for operations and maintenance.

Rural water supply and sanitation to be delivered in one package, which is dovetailed with the overall village environmental plan.

Role of Support Organisations

NGOs, Firms and Companies, Public Sector Undertakings functioning as Support Organisations to provide single window assistance to village communities for all aspects of project planning and implementation. They act as catalysts to facilitate the project process at the village level.

Social Marketing

Apart from the project villages, a major statewide media campaign has been launched on gender, core sanitation behavior and related issues.

Activities

Based on the strategies, the project activities were carried systematically. They included the capacity building of VWSC and community as well as the training of SO personnel for effectively developing skills of the community. The IEC material was systematically used to ensure larger community participation in decision-making. Another unique feature of the project was the empowerment of women, for which activities were organised: i) to have compulsory 30% representation of women, ii) to enhance their skills, iii) to realize the benefits of improved water and environmental services, iv) to form female tap stand groups for collecting monthly O&M fees and to maintain tap stand and v) to promote functional literacy among women. In addition, Hygiene and Environmental Sanitation Awareness (HESA) campaign was built around the themes like improving personal/domestic hygiene and environmental sanitation using real life situations and experiences.

Operational Strategy

Demand-Responsive Model: The new institutional model was specially designed to serve as a vehicle for the community-based, demand-responsive approach envisaged in the project. It consists of a partnership of three organisations: the village communities (represented by their water and sanitation committees), the Non-Government Organisations (NGO) and the Project Management Unit (PMU).

The department of Rural Development, Government of Uttar Pradesh (GOUP), through the “Project Management Unit”(PMU), an autonomous registered society at the state level, was engaged in the management of the Swajal Project. The PMU operated through DPMU at the district level under the leadership of the Project Manager and the Deputy Manager and was supported by engineering, community development, environmental and MIS consultants on the one hand and by NGOs as Support Organisation (SO), having their own staff of engineering and community development workers, on the other. The portfolio Manager provided the crucial link between PMU/DPMU and SO.

As a model project, it was implemented with the help of PMU at the State and that of DPMU at the district levels, local NGOs as Support Organisations (SO) at the cluster level and VWSCs at the village level. Ernest and sincere efforts were to be made by socio-technical teams and user groups as primary and active partners at the preplanning stage of 7 months, planning stage of 12 months and implementation stage of 12-14 months. A comprehensive IEC campaign was launched, which comprised a series of coordinated operations jointly performed by PMU/DPMU, SO and VWSC as partners to educate, motivate, enable and empower communities to choose, co-finance, create, own, operate, maintain and manage WS and ES systems which were installed during the life of the project in such a way that they optimize health and hygiene benefits in the long run.

In fact, there existed a three-way agreement called the Implementation Phase Tripartite Agreement (IPTA), among VWSC from a given Village, SO from cluster villages and the PMU or DPMU from a given district or region. While DPMU provided financial and technical inputs through SOs, SOs provided financial and technical inputs that were expected to empower the communities. In its organisational setup, interaction and communication among the three players may be seen as the most crucial component responsible for the success of the project.

Model

The above description outlines what we have termed the Demand-Responsive Model. In this model, all the three stakeholders were crucial for the successful implementation of the Swajal Project. The way they interacted with each other and assured inputs to come in and required feedback to go out simultaneously and systematically during all the phases, namely preplanning, planning and implementation, within the given time cycle, paved the way to make the Swajal a successful experiment, ready for replication in the entire state of Uttar Pradesh.

Swajal – The Best Practice

The World Bank assisted Uttar Pradesh Rural Water Supply and Environmental Sanitation has been recognized as a model for community based initiatives and sustainability. Swajal's initiative to institutionalize the reform process through demand-response schemes, community ownership and participation, is an outstanding success story in water and sanitation sector. The Swajal project has been successfully completed in 357 villages in seven districts of Hamirpur, Jhansi, Banda, Mhoba, Jalaun and Chitrakoot in the Bundelkhand region of present Uttar Pradesh. Once a water scarce arid region, can now boast of having adequate drinking water and better environment through Swajal's innovative approach.

The term *Swajal*, indicating water as an owned resource, valued and paid for, has developed tremendous sense of pride, self-confidence and joy among villagers, especially women. They are visibly happy and relaxed, as they no longer need to cover long distances on foot in search of water. The time thus saved is used by women in income-generating activities through the self-help groups. Now, there are fewer epidemic instances of cholera and diarrhea. This way, Swajal has ushered in an era of sustainability in the drinking water and sanitation sector.

Check Your Progress II

Note: a) Use the space provided for your answers.

b) Check your answers with the possible answers provided at the end of this unit.

1) Write in brief the main features of ARWSP.

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2) Describe briefly the Rajiv Gandhi National Drinking Water Mission.

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3) Outline in brief the operational strategy of the Swajal Project.

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4.7 SANITATION IN RURAL INDIA

The concept of *sanitation* broadly includes liquid and solid waste disposal, personal and food related hygiene and domestic as well as environmental hygiene. Looking at this broad definition, it would not be wrong to say that it hardly describes the sanitary conditions as they obtain in the villages of India. Most of the people still defecate in the open space, most of the villages lack waste disposal and drainage systems and many in the villages are ignorant about the consequences of poor sanitation and unhygienic conditions. As a result, many people suffer and even die of diseases caused by unhealthy practices of personal and environmental hygiene.

In villages, most of the diseases can be prevented easily, if people have proper sanitary facilities and follow good practices of hygiene— use proper latrines, build drainage and garbage disposal systems, wash hands after defecation and before eating food, use safe drinking water and clean food, take care of personal hygiene, use appropriate place and fuel for cooking, arrange proper ventilation in their houses, provide proper and clean sheds for the cattle, etc.

4.7.1 How do the Diseases Spread?

One of the major causes of human misery in the villages is the lack of latrines. People defecate in the open spaces in and around their habitation, making it not only dirty but also responsible for many infectious diseases. In fact open human excreta (faeces and urine), stagnant water and garbage are the ideal breeding ground for flies, mosquitoes and microbes, which act as carriers of dangerous diseases.

4.7.2 How can Diseases be Prevented?

By now you know that the major cause of common diseases and sickness among village communities is the lack of safe drinking water supply and good sanitary facilities for the disposal of human wastes. If by some means people are prevented from drinking unsafe water or coming into contact with faecal matter, transmission of diseases can be controlled. Most diseases can be prevented, if people (in their day-to-day living) get used to:

- using safe water for drinking, washing raw vegetables and fruits and cleaning utensils,
- washing hands after defecation and before handling or eating food,
- using clean latrines,
- covering food items to ward off flies,
- disposing waste water and garbage properly,
- avoiding barefoot walks on soiled excreta and
- treating stagnant water with chlorine to destroy the larvae.

4.7.3 Status of Sanitation in Rural Areas

The *sanitation facilities* in rural India have been very poor for ages now. The Indian population still lives below the minimum level of sanitation. According to Government estimates only 16 to 20 per cent of the rural households have been covered under the rural sanitation programme during the Eight Plan. National Sample Survey, 54th Round Report (Drinking Water, Sanitation and Hygiene in India, July 1999) indicates that only 17.5% of the rural population was using the latrine. By the end of the 9th Plan, i.e. 2002, it is estimated that 20% of the Rural Households may have sanitary facilities through the Central Rural Sanitation Programme (CRSP).

The reasons for the ineffective implementation of the programme, despite huge expenditure (Rs. 921 crores), as given by the Government are as follows:

- very low priority given to sanitation by the State Governments and the people at large;
- low emphasis on Information, Education and Communication (IEC);
- promotion of a single model, i.e. twin-pit pour-flush latrines;
- heavy reliance on subsidy and lack of motivation for sanitation,
- poor disposal of waste water from water points, thereby creating un-hygienic conditions and habits,
- unwillingness to pay for the cost of sewerage,
- scarcity of water and lack of community participation and
- no involvement of NGOs/Private Sector in improving the sanitary conditions in villages.

Although Indira Awaas Yojana has a component of household latrines, the facility provided by it is often used for purposes of storage, like that of hay, fuel-wood, farm implements, etc.

4.7.4 Strategies and Programmes to Improve Sanitation

As only 20% of the rural habitations have sanitary facilities, the Government felt the need to formulate new strategies and programmes to increase the spread of rural sanitation facilities. Consequently, the Central Rural Sanitation Programme (CRSP) was restructured and launched in 1999 to link sanitation, health, hygiene awareness as well as larger environmental issues in a **Total Sanitation Campaign** to address the needs of households in particular and the community in general.

Objectives

The main objective of the Total Sanitation Campaign is to bring about the desired improvements in the general quality of life in rural areas. To achieve this objective, the following operational objectives have been outlined for action:

- a) Accelerating coverage of the rural population,
- b) Generating the felt need through the creation of awareness and the promotion of health and hygiene,
- c) Covering all the schools in rural areas with sanitary facilities and
- d) Encouraging suitable cost effective and appropriate technologies for purposes of improving sanitation.

This approach to the sanitation is not only people-centered but also community-led in order to ensure its sustainability. It is concerned with equity, the protection of the environment and the health of both the general public and the target group it is specifically aimed at.

With these objectives in view, efforts are being made for accelerating sanitation coverage of the rural population by creating a demand for and awareness of improved physical quality of life in rural areas, improving sanitation at schools and by providing suitable, cost-effective and locally designed toilets for individual households.

As we notice, the restructured programme has moved from a high subsidy to a low subsidy regime, which focuses on creating a demand for latrines by means of promoting awareness of hygiene and motivating the users to manage and fund their own sanitation facilities. Obviously, a change in the general behaviour of the rural populations is the key to the success of this approach.

Strategy

The Total Sanitation Campaign (TSC) is being initiated under the Sector Reform Programme. As a step towards decentralization, the campaign proposes to move from the state-wise allocation of funds to demand-based projects, where beneficiaries are not only empowered to choose their own schemes, but also made to bear the part-cost of the latrines. The components of TSC are household latrines, construction of sanitary complexes for women, toilets for schools, educational institutions and balwadies/anganwadies. Besides, funds are being provided for start-up activities, Information, Education and Communication and administrative expenses.

The following are the main features of the TSC:

- shift from high- to low-subsidy regime— from Rs.2000/- to Rs.500/-;
- greater household involvement and participation in sanitation related activities;
- technology options as per the choice of beneficiary households;
- stress on Information, Education and Communication (IEC) as part of the campaign;
- emphasis on the sanitation of school;
- tie-up with various Rural Development Programmes;
- involvement of NGOs/CBOs and local groups and
- promotion of access to the institutional finance.

4.8 LET US SUM UP

As safe drinking water is essential for human survival, so is good sanitation for healthy living. The Government of India and State Governments have the responsibility of providing clean drinking water to all the people living in rural India, but a large size of the rural population do not have access to safe drinking water even today. Although significant efforts have been made by the Government to provide drinking water to all, it is clear from what we have presented so far that we have a long way to go for achieving the objectives we have set for ourselves.

Throughout the successive Five Year Plans, the Government has enunciated various policies, implemented various programmes and spent enormous funds to achieve the target of providing drinking water to the entire rural population, but the target remains unmet so far. The reasons for this situation are: i) water supply services become unsustainable after some time and do not adequately serve the needs of user communities and ii) huge investment is required to strengthen the water management sector. To meet this challenge, the Governments has implemented various programmes and schemes to tackle the specific issues of coverage, introduction of reforms, water quality sustainability and the role of women and Panchayati Raj Institutions in water and sanitation management, etc.

Over the plan periods, approaches have been modified from time to time with the sole objective of providing safe drinking water to all the people living in rural areas. These modifications have been effected by means of bringing about sector reforms by adopting demand-responsive approaches through participatory processes, shifting the role of the government from being a provider to that of being a facilitator, establishing financial viability and sustainability of RWS system, introducing water conservation processes, recharging of and taking rehabilitation measures for water sources and introducing the water quality monitoring system throughout the country.

Thus the *sector reform programmes* offer an opportunity to build the capacity of the local governments and empower the community, which would certainly lead to sustainable solutions for problems pertaining to not only water but also rural development as a whole.

The sanitary facilities in rural India have been very poor for long now. Only 20% of the rural households may have sanitary facilities provided through the Central Rural Sanitation Programme. Due to the failure of the Government to provide sanitary facilities to all and partly because of the ignorance and inability of the rural people, their life is full of health hazards and misery and even death. .

Recognizing the urgent need to increase the coverage of rural sanitation facilities, the Government has restructured the Central Rural Sanitation Programme. It links sanitation, health and hygiene awareness and environmental issues and attaches great importance to the needs of the households and the participation of the community in promoting the sustainability of the schemes. In the 10th Plan, which envisages covering all the districts (574) under the Total Sanitation Campaign, the sanitary conditions in rural habitations would certainly improve, thereby, making rural life better and healthy.

Check Your Progress III

Note: a) Use the space provided for your answers.

b) Check your answers with the possible answers provided at the end of this unit.

1) What is the status of Rural Sanitation in India? What steps should be taken to prevent diseases?

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4.9 KEY WORDS

WATSAN	: Water and Sanitation.
ARWSP	: Accelerated Rural Water Supply Programme.
RGNDWM	: Rajiv Gandhi National Drinking Water Mission.
O & M	: Operation and Maintenance.
IEC	: Information, Education and Communication.
Sanitation	: Keeping places clean and healthy.
Habitation	: Home or the environment of people.
Hygiene	: Practice of keeping surroundings clean in order to prevent illness and disease.
Beneficiaries	: Persons who benefit from the programme.
Campaign	: An organized course of action to achieve a goal.
Promote	: To help something to happen.
Awareness	: To make people know about a situation or facts.
Empowerment	: To make people strong and confident and give them power to take their own decisions and implement them.
Appropriate	: Suitable application of scientific knowledge
Technologies	: for practical purposes.

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4.11 CHECK YOUR PROGRESS – POSSIBLE ANSWERS

Check Your Progress I

- 1) In the absence of safe drinking water, most people in rural areas have to depend on various sources of water, such as rain, surface and ground water. The water from these sources is generally impure and is unfit for drinking purposes and thus is a health hazard. As a result 80 per cent of the diseases occur due to the lack of safe drinking water and poor sanitary conditions.

The economy of any nation depends on healthy and strong people. It grows if we are able to develop human capital and invest it purposefully. In an agriculture-based economy, such as ours, we need to provide the basic amenities of life to rural people, such as clean drinking water and good sanitation. Then only can they be strong enough to actively and efficiently participate and contribute to economic activities, which in turn help economic growth in the country. The improved health and agricultural production are directly linked to the development processes.

Check Your Progress II

- 1) Accelerated Rural Water Supply Programme: The Government of India introduced the Accelerated Rural Water Supply Programme (ARWSP) in 1972–73. The focus was to provide all the rural habitations with the facility of drinking water as per certain norms fixed for the purpose. The strategy adopted was two pronged:

- i) To identify problem villages and
- ii) To accelerate the coverage of these villages.

The strategy to achieve the objective of providing drinking water to all rural habitations revolves around the following three distinct but inter-related activities:

- Accelerating the coverage of the remaining *not covered* and *partially covered* habitations, i.e. arrange safe drinking water systems for them.
 - To tackle the problems pertaining to the quality of water in the affected habitations and to institutionalize water quality monitoring and surveillance systems everywhere.
 - To promote sustainability, both of systems and sources, to ensure continued supply of safe drinking water in the *covered habitations*.
- 2) Rajiv Gandhi National Drinking Water Mission: In 1986 ARWSP was given the shape of the National Drinking Water Mission (NDWM), which was renamed Rajiv Gandhi National Drinking Water Mission (RGNDWM) in 1991. With an annual layout of Rs.2000 crores, RGNDWM has been successfully steering the rural water supply and sanitation in the country. Through this, major reforms have been introduced to bring about sustainability in the water sector in rural India. Its main purpose is to plant the principles of sector reforms into state policy by means of successful pilot projects.
 - 3) Under Swajal Project, the Government brought in the system of institutional funding to this sector (for purposes of mobilizing additional resources) and also a change in its operational approach—a shift from supply-driven strategies to demand-based strategies. Now, the rural people are made aware of the fact that drinking water is not provided free of cost by the Government; instead they should be willing to pay for it, as safe drinking water has a cost to be met by those who use it. ‘Swajal’ has been a paradigm shift in terms of the delivery of sustainable water supply and environmental sanitation facilities. It has been designed to support a package of investments and a process of policy reformation to deliver sustainable health and hygiene benefits to the rural population in the project area. The strategy adopted has been to make the programme demand driven and integrated and use social marketing approach to effect participatory ownership of the scheme and its benefits.

Check Your Progress III

- 1) The sanitation facilities in rural India have been very poor for a long time now. The Indian population still lives below the required minimum level of sanitation. By the end of the 9th Plan, i.e. 2002, it was estimated that 20% of the Rural Households had procured sanitary facilities through the Central Rural Sanitation Programme (CRSP).

Most of the diseases can be prevented if people incorporate the following practices in their daily routines:

- Use safe water for drinking, wash raw vegetables and fruits and clean utensils properly,
- Wash hands after defecation and before handling or eating food,
- Use clean latrines,
- Cover food items to ward off flies,
- Dispose of waste water and garbage properly,
- Avoid walking barefoot on soiled excreta and
- Treat stagnant water with chlorine to destroy the larvae.

UNIT 5 RURAL ELECTRIFICATION AND ENERGY

Structure

- 5.0 Objectives
- 5.1 Introduction
- 5.2 Rural Electrification: Programmes, Coverage and Present Status
- 5.3 Non-Conventional Energy for Rural Areas
- 5.4 Integrated Rural Energy Management
- 5.5 Funding Pattern
 - 5.5.1 Funding for the Basic Minimum Services in Rural Areas
 - 5.5.2 Funding for the Programmes Implemented by MNES
- 5.6 Let Us Sum Up
- 5.7 Key Words
- 5.8 References and Suggested Readings
- 5.9 Check Your Progress – Possible Answers

5.0 OBJECTIVES

After reading this unit, you should be able to:

- outline the energy needs of the rural people;
- explain: i) the initiatives taken by the Government for implementing country-wide rural electrification programme(s), ii) the issues related to rural energy planning and the implementation of energy programmes and iii) the efforts put in by the Government to ensure access to energy by all the people for their basic needs;
- analyze critically the importance of integrating rural energy plans for purposes of sustaining the energy programmes in the long run; and
- describe the role of energy in the all round development of the rural areas.

5.1 INTRODUCTION

Rural Electrification was taken up in India as a planned programme as early as 1951, in the First Five Year Plan itself. Since then, a large section of the rural population has received the benefit of electricity both for domestic and farming activities. A large number of villages and households in the country, however, are yet to be electrified. This unit aims at giving you a broad overview of the energy plans and the different energy related programmes using both the conventional and the non-conventional energy resources with special emphasis on meeting the energy needs of the vast majority of the population living in rural areas. The first section following the *introduction* presents details about the growth and progress of the Rural Electrification Programme in India and the issues facing the programme in meeting the objective of providing “**Electricity for All**” in the country. The next section gives you the details of the role of non-conventional energy programmes, especially in rural areas. The subsequent section, presents an analysis of the people’s participation in the programme through the involvement of village level local bodies like panchayats, rural co-operatives etc. and that of the integration of different rural energy programmes. With the beginning of the Tenth Plan, the rural electrification programme was taken up under the Pradhan Mantri Gramodaya Yojana (PMGY) along with the other basic minimum services like drinking water, shelter, health, nutrition, elementary education, etc. The unit also discusses details of the funding available for and the other aspects concerning the rural energy programme.

5.2 RURAL ELECTRIFICATION: PROGRAMMES, COVERAGE AND PRESENT STATUS

Energy is the basic input both for subsistence and productive activities in rural areas. Basic activities like cooking, lighting and heating require efficient and eco-friendly energy supply sources in rural households so as to ensure the availability of a clean and convenient form of energy. The energy supply programmes should be sustainable in the long run as well as affordable by the poorest of the poor. Electricity is one such major source, the availability of which can bring tremendous changes in the quality of life in rural areas. That is why the programme of Rural Electrification assumes significant importance all over the world, both in the developed and developing countries. Electricity in rural areas covers both household and “productive” uses. Minor irrigation through the exploitation of ground water using electric pump-sets is one such productive application of electricity in rural areas. To meet the basic needs like cooking, lighting, etc. it is important to harness energy from the locally available energy sources like biomass, crop residue, firewood, etc. by employing suitable energy conversion techniques in the most efficient and environment friendly manner. The abundant solar energy available in the country can be suitably converted to heat and electricity to meet the end-use applications such as cooking, heating and lighting. The small hydro potential available in rivers, canal drops and hilly terrains is highly suitable for conversion to electrical and mechanical energy.

The rural electrification programme is viewed as a prime mover for rural development. Electricity is not only the basic pre-requisite for industrialization, but it also contributes significantly to increasing the agricultural productivity and other job and income generation activities, besides enhancing the quality of life in rural areas and controlling migration from rural to urban areas. Electricity, therefore, is classified as a basic amenity along with housing, drinking water, health and education. All the rural infrastructure programmes, which pertain to these basic amenities, have been brought together under one umbrella called Pradhan Mantri Gramodaya Yojana (PMGY). The time-span in which the objective of “Electricity to All” can be achieved will depend on the priority assigned to this objective, the resource allocation, political will, the administrative skill and active interest of all the agencies concerned and the people associated with the economic development of the nation.

As per the 2001 census, there are 587258 villages in the country, of which 514545 villages (about 86%) were electrified by the end of March 2003. As many as 11 states in the country have completed 100% village electrification and another 6 to 8 states are on the verge of achieving complete electrification. These achievements, however, are to be viewed in the light of the earlier definition of village electrification—‘a village was declared electrified if electricity was used for any purpose *within the revenue boundary* of that village’. This definition was modified subsequently, and now a village is deemed to be electrified if electricity is used in the inhabited locality, within the *revenue boundary* of the village, for any purpose whatsoever. The above two definitions have been further modified to bring in clarity. According to the latest definition, *unless 10% of the households in a village are electrified*, the village can not be declared as electrified. In the context of overall economic development of the country, the above definition too needs modification. Efforts are on to include some other criteria, like a certain minimum percentage of the households being electrified, generation of gainful economic activities in the area, etc., as the necessary conditions on the fulfillment of which a village would be considered electrified. As per 2001 Census, the all India average of rural households electrified is only 43.5%. A significant proportion of the rural households depend on the use of kerosene as the source for lighting in their homes. The Table below gives the details about the distribution of households by the source of lighting.

Table 5.1: Distribution of households by the source of lighting

Source of Lighting	Total Households	%	Rural Households	%	Urban Households	%
Electricity	107,209,054	55.8	60,180,685	43.5	47,028,369	87.6
Kerosene	83,127,739	43.3	76,896,701	55.6	6,231,038	11.6
Solar energy	522,561	0.3	394,425	0.3	128,136	0.2
Other oils	184,424	0.1	146,165	0.1	38,259	0.1
Any other	305,308	0.2	227,210	0.2	78,098	0.1
No lighting	614,849	0.3	426,373	0.3	188,476	0.4
Total	191,963,935	100.0	138,271,559	100.0	53,692,376	100.0

Source: Table H-9: Census of India 2001.

Earlier, the Government of India initiated a programme called Kutir Jyoti to extend electricity to the poor (Below Poverty Line) rural households and launched it in 1988-89. The programme continues till date and has covered nearly 51 lakh households so far. It envisages single point light connections to the BPL households, including the *harijan* and the *adivasi* households. The pattern of funding for Kutir Jyoti is given in section 5.5.

Widespread crop failures during the two consecutive years (1965-67) of drought, focused attention on the urgency of providing institutional credit to farmers and to achieve self-sufficiency and security with regard to food by increasing production through assured irrigation using agricultural pump-sets. This led to the establishment of the Rural Electrification Corporation (REC) as a fully Government owned Company in 1969 to finance rural electrification schemes of State Electricity Boards (SEBs). Further, its role is to promote and finance Rural Electric Cooperatives and to administer the money received periodically from the Government of India and other sources for financing rural electrification projects. The main activity of REC has been to energize pump-sets to support agricultural production. The latest estimate of pump-sets in use in the country is about 19.5 million of which around 13.8 million were energized up to the end of March 2003. There are about 4.5 million diesel pump-sets also in operation. In addition, REC finances technically sound System Improvement projects with the twin objectives of reducing energy losses and improving the quality of supply and consumer satisfaction.

The current status of village electrification indicates that even as per the prevailing definition, there are around 80,000 villages yet to be electrified and of these roughly around 18,000 are located in remote, difficult and hilly terrains including those in deserts and islands. Such remote villages cannot be electrified by extending the reach of the conventional electricity grids, because of the high cost involved as well as the difficult terrain of such remote places. Even in the case of villages electrified by conventional grids, extension of long low tension (LT) electricity distribution lines results in increasing transmission and distribution (T&D) losses leading to low voltage supply at the tail-end of the line, where the consumers' loads are connected. There are many cases of irrigation pump-set motors getting burnt due to low voltage conditions at the load end. Efforts are being made to identify and electrify those remote villages through non-conventional and locally available decentralized energy sources like solar energy, small hydro projects, biomass, etc.

Check Your Progress I

Note: a) Use the space provided for your answers.

b) Check your answers with the possible answers provided at the end of this unit.

- 1) State whether the following statements are true or false and correct the false ones:
 - i) Although 86% of the villages in the country are electrified the rural households electrified are less than 50%.
 - ii) More than 55% of the rural households in the country depend on kerosene for lighting.
 - iii) Extending long distribution low tension lines would reduce the transmission and distribution losses.
- 2) List the main reasons for the limited use of electricity in rural areas in spite of the fact that we have already electrified 86% of our villages.

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5.3 NON-CONVENTIONAL ENERGY FOR RURAL AREAS

Non-conventional energy does not necessarily mean energy for rural purposes, as these energy sources find applications in a host of other activities including electronics, telecommunication, space science, defense, transport, industries and other urban uses. It is not wrong, however, to think that these energy sources, in view of their inherent merits to suit such needs, are more suitable to meet the local energy needs in remote rural areas far away from cities and towns. Large quantities of animal dung and crop residue available in villages would enable us to generate biogas mainly to meet cooking needs. Conversion of the available abundant sunshine into electricity would serve the purpose of lighting the rural households. Solar cookers and solar water heaters could be effectively deployed to provide energy for cooking and heating. Agricultural and municipal wastes could be scientifically processed to tap their energy content to be utilized in a variety of activities. These energy conversion and utilization devices could be manufactured not only of smaller sizes to meet the individual households, but also of larger sizes so as to meet the energy needs of the community as a whole. Further, with a proper educational and training component built into these programmes, there is enough scope to create employment opportunities, such as installation, maintenance and repair works, for the rural youth. Last, but not the least, these programmes would prevent environmental degradation, arrest deforestation, stop migration of rural people to urban areas in search of employment and also empower the local institutions like village panchayats, cooperatives, NGOs, etc. to achieve self-reliance in the rural energy sector.

Rural Energy Scene

More than 60 per cent of the Indian households depend on traditional sources of energy like fuel wood, dung and crop residues for meeting their cooking and heating needs. Of the total rural energy consumption, about 65 percent is met from fuel wood. Fuel wood consumption during 2001-02 was estimated at 223 million tones, 180 million tones of which was for household consumption and the balance for cottage industry, big hotels, etc. The consumption of animal dung and agro-waste was estimated

at 130 million tones, which does not include the wet dung used for biogas plants. It is assumed that the wet dung used as manure is being diverted to biogas plants as these plants, in addition to providing cleaner fuel, also supply enriched manure. The Table given below shows the pattern of the consumption of different fuels for cooking in the households in India.

Table 5.2: Pattern of fuel used for cooking in India

	Fuel	Urban Population	Rural Population	Total Population
1.	Fire-wood	22.7%	64.1%	52.5%
2.	Crop residue	2.1%	13.1%	10.0%
3.	Cow dung cakes	2.0%	12.8%	9.8%
4.	Coal, lignite, charcoal	4.6%	1.1%	2.0%
5.	Kerosene	19.2%	1.6%	6.5%
6.	LPG	48.0%	5.7%	17.5%
7.	Electricity	0.3%	0.1%	0.2%
8.	Biogas	0.4%	0.5%	0.4%
9.	Any other	0.2%	0.8%	0.6%

Source: Census of India 2001.

In 1980, the Government of India embarked on an initiative to identify and promote the use of non-conventional and renewable energy sources in a planned manner. In order to meet the initial higher costs and to ensure that the rural people can afford to obtain the benefits of the programme, fiscal/financial incentives and capital/ interest subsidies are being provided. India is the only country in the world to have an exclusive central Ministry called the Ministry of Non-Conventional Energy Sources (MNES) to implement such programmes.

Institutional Finance by Indian Renewable Energy Development Agency (IREDA)

The Indian Renewable Energy Development Agency (IREDA), a public sector financial institution under MNES, was established in 1987. IREDA plays the role of a developmental financial institution in the renewable energy sector reaching out to individual users with micro credit provided through financial intermediaries.

Table 5.3 below gives the available potential and the actual exploited potential of the major renewable energy sources till 31.03.2003.

Table 5.3: Renewable Energy Sources Potential and Achievements

Source/Technology	Units	Potential/Availability	Potential exploited (as on 31.3.2003)
Biogas Plants	Million	12	3.52
Biomass-based power	MW	19500	537.30
Efficient wood stoves	Million	120	35.20
Solar Energy	MW/Sq.m	20	2.50
Small Hydro	MW	15,000	1519.28
Wind Energy	MW	45,000	1870
Energy Recovery from Wastes	MW	1,700	25.80

Source: Annual Report 2002-03, MNES, The Government of India.

As seen from the details above, the achievements are only marginal in comparison with the potential available. There are various issues and constraints facing these programmes ranging from the higher initial cost of the renewable energy installations to the institutional setup required to implement the programmes at the grass roots level. Unless the programmes are suitably linked to the different components of rural development like housing, water supply, health, education, employment, environment, etc., energy programmes in isolation would not succeed in mobilizing the needed financial resources and improving the quality of life in rural areas. In addition, the programmes should be demand-driven, instead of being supply-driven as at present, when individuals are targeted and given different energy devices/gadgets involving significant amounts of cash subsidy. A village, a block or a district has to be treated as a single unit and based on the present energy consumption pattern, determined through energy surveys conducted for this purpose, the energy requirements for different end-uses need to be assessed. The locally available energy sources, including both the conventional and the non-conventional ones, are to be identified and micro level energy plans are to be prepared. These plans are to be appropriately dovetailed with the overall energy plan of the area concerned and that of the country as a whole. In implementing the micro level plans/programmes people's participation is to be ensured by engaging village level institutions like panchayats, cooperatives, NGOs, private entrepreneurs, etc. In other words, an integrated approach for the preparation and implementation of the rural energy plans is necessary for the success of rural energy programme.

The following section gives details about the Integrated Rural Energy Programme (IREP) and its management.

5.4 INTEGRATED RURAL ENERGY MANAGEMENT

As discussed earlier, a provision for efficient, clean and environment friendly energy supply systems to meet the energy needs of the rural people is essential in every village, so that various programmes taken up under rural development become meaningful. Energy is one of the most important ingredients of successful rural development. It not only meets the basic needs of cooking, lighting and heating, but is also instrumental in triggering economic activities, creating employment opportunities and increasing income levels of the people. Indirectly, it will help in achieving better standards in health, education, communal harmony, law and order, etc. in rural areas. To achieve this objective, the different energy programmes under implementation have to be integrated and managed at the grass roots level. If these programmes are taken up in isolation without any coordination among the agencies concerned, their implementation cannot result in any economical and sustainable solutions for the rural energy problems. Awareness should be created among the rural people about the harmful effects of indiscriminate use of the biomass available in rural areas. They should be educated about the unfavourable results of environmental degradation and health problems they face due to cooking in smoky kitchens. Women self-help groups have to be organized to discuss and find solutions for their energy problems. Village Panchayats and NGOs should play the role of grass roots level institutions to implement the government sponsored energy programmes. Rural Energy Cooperatives are to be formed to ensure people's participation in the energy programmes. Some initiatives have already been taken in certain regions of the country. For example, West Bengal Renewable Energy Development Agency (WBREDA) has set up a local cooperative model for remote villages and hamlets in the Sunderban Islands of West Bengal. This model demonstrates a matrix of relationship between a village committee, a local enterprise that is responsible for operations and maintenance and the owners of assets.

It has to be noted that the rural energy plans and programmes have to be formulated with the total involvement of the rural people. Centralized planning at the State or the

National level and implementation of programmes without the involvement of people, as it is done now, are not going to achieve the set objectives.

Integrated Rural Energy Programme (IREP) experience

With what has been said above in view, a pilot exercise was started in the Planning Commission, the Government of India, during the Sixth Plan in some selected states. The objective of this exercise envisaged development of area based rural energy plans on the basis of the studies on energy consumption pattern in these areas. Energy surveys were undertaken at the block level, since a block is smaller in size than a district, but larger than a village as it comprises a number of villages put together. Based on these surveys, rural energy plans were formulated and implemented by the State Governments concerned. Subsequently, the Integrated Rural Energy Programme (IREP) was expanded during the Seventh Plan to cover all the States and Union Territories (UTs). The Government of India provided the required financial assistance to the states for capacity building by establishing IREP cells. Support was also given to train the required staff under this programme through Regional Training Centres set up for this purpose. In 1994, during the middle of the Eighth Plan, this programme was transferred to the Ministry of Non-conventional Energy Sources (MNES) to be implemented along with the other programmes of the Ministry in all the States and UTs. Evaluation studies were carried out to assess the effectiveness of the IREP in solving the rural energy problems. What these studies have revealed is as follows:

- a) Assessing the local energy need and integrating the same with locally available energy resources to meet the local energy demand is the basic objective of any integrated rural energy initiative. IREP is a comprehensive demand-driven programme aimed at meeting the rural energy needs with an optimal mix of local and external energy resources on least cost basis. However, the program is operating in isolation with a limited budget that is spread over 860 blocks. The impact has been far less than originally envisaged. A significant part of the financial support is utilized in meeting the establishment costs.
- b) IREP should become the nucleus of all the non-conventional energy programmes of MNES, like those related with biogas, solar PV lighting, solar PV pumping, solar heating, solar cookers, biomass plants, etc. The states should be advised to allocate a specified percentage of the funds provided to them under the various programmes of the Ministry to IREP blocks to create a visible impact of what integrated rural energy programmes can deliver under distributed models. In order to encourage even greater integration, IREP should aim to leverage its scope and funding with the help of other funding schemes of State Governments under Rural Development programmes and the Central funding provided for the Rural Electrification Programme.
- c) With the primary objective of creating replicable success stories, IREP should be implemented in fewer blocks than the 860 blocks currently in its scope. It would be much easier to create success stories in a manageable number of blocks. These successes can then be replicated in other blocks to help mainstream renewable energy.

Based on the findings of the evaluation studies on IREP, this programme is being modified for implementation during the ongoing Tenth Plan. The main features of the modified IREP are going to be as follows:

District Rural Energy Plans

These plans would be based on surveys of the existing pattern of energy consumption and the assessment of various rural energy supply options with particular reference to renewable energy. These District Rural Energy Plans will be made available to all the concerned within the Ministry as well as the other Ministries concerned, such as Rural Development, etc. and also the State and District agencies.

These projects will be taken up at the micro level in 2-3 clusters of villages in each district. The model projects will attempt to integrate all the ongoing rural energy programmes of the MNES along with other rural energy programmes of other departments and agencies (e.g. Fuel-wood programme, rural electrification, various rural development programmes, etc.) and would subsequently serve as a model which can be replicated by other agencies, NGOs, private sector, etc.

5.5 FUNDING PATTERN

5.5.1 Funding for the Basic Minimum Services in Rural Areas

The Basic Minimum Services Programme (BMS) was launched in 1996 on the recommendations of the Conference of Chief Ministers held in July 1996. The strategy adopted for BMS was to concentrate efforts and resources on the BMS programmes to secure a better quality of life for people. The Government of India introduced a new budget head for providing additional funds (along with the funds provided by the States) to the BMS in the form of Additional Central Assistance (ACA). ACA for BMS was given as 70% loan and 30% grant to non-Special Category States and as 90% grant and 10% loan to Special Category States (numbering 11—7 North Eastern States, Sikkim, J&K, Himachal Pradesh and Uttaranchal). The Special Category States were given this special consideration because of the state of their present development as well as to overcome certain difficulties that are unique to hilly regions.

Rural Electrification Programme under PMGY

In order to achieve the objective of sustainable human development, a new initiative called Pradhan Mantri Gramodaya Yojana (PMGY) was introduced in 2000-01 bringing all the programmes covered under BMS under this initiative. Rural Electrification Programme has been included to be implemented as one of the components under PMGY with the beginning of the Tenth Plan, i.e. 2002-03. This shows the importance of Rural Electrification Programme, now seen as an essential component of the rural infrastructure. This initiative has enabled the Rural Electrification Programme to obtain concessionary funding as per the PMGY norms mentioned above, and the expectation is that the left out villages could be electrified before the completion of the Tenth Plan.

Liberalized funding to electrify remote villages

It has been roughly estimated that around 18,000 of the villages, not electrified so far, are located in remote locations like hilly terrains, deserts and islands, where it is not economically feasible to extend grid-based electricity because of the high cost of investment and the low density of user population. Accordingly, in order to meet the basic energy needs of the people for lighting, cooking and heating in these villages, alternative standalone systems using the locally available decentralized energy sources (like solar, biomass, small hydro and wind) are to be provided. Further, all these renewable energy systems are environment friendly. The technology needed and the manufacturing capacity for this purpose are already available in the country. However, the initial cost of these systems is quite high in spite of the absence of fuel costs and low costs of operations and maintenance. The Government of India, while getting the present status of rural electrification in the country reviewed by a Group of Ministers (GoM), has come out with a recommendation that the programme of installing renewable energy systems to electrify the remote villages could be supported by the Government of India by providing 90% of the cost of such installations as grants. This recommendation when implemented would go a long way in achieving the electrification of all the remote villages through decentralized energy sources by 2012. The necessary

budget provision has been made in the budget of MNES to electrify 5000 remote villages by the end of the Tenth Plan and complete all the remaining remote villages by the end of 2012.

Minimum Need Programme (MNP) component funds

The Government of India has continued with the MNP component of the Rural Electrification Programme since the Seventh Five Year Plan in order to electrify the left-out villages. Funds are provided by the Government directly to the States at concessionary rate of interest to be disbursed to the implementing agency of the programme.

Role of Rural Electrification Corporation (REC) in funding the RE programme

REC has recently started a scheme for funding concessionary loans to electrify the remaining villages or hamlets. The period of this loan is 13 years carrying a 3 years moratorium period. The annual rate of interest is 3% payable quarterly. However, if the scheme is successfully implemented within the stipulated time, then, even this interest would be waived and refunded to the borrower making this scheme an interest free one. There is yet another scheme for the electrification of *Dalit Bastis*. The objective of the scheme is to accelerate the process of electrifying these *Bastis* inhabited predominantly by Scheduled Caste/Tribe populations as identified by the respective State Governments. For funding this scheme, the loans carry an interest rate of only 1.00% with the same period of loan and moratorium as the main scheme. Here also, if the scheme is implemented within the stipulated time, the interest will be waived and refunded to the borrower.

In addition to the above soft loan schemes, REC continues to provide loans for the load intensification programme in electrified villages, system improvement to ensure quality and reliable electric supply and energizing of pump-set.

Funding pattern for Kutir Jyoti Programme

Under this programme, one time cost of internal wiring and service charges are provided by way of a 100% grant to the States through REC. The respective State Governments/SEBs are responsible for executing the target connections against which they receive grants from REC. After clearance by REC, 50% of the cost is released by REC to the State Governments/SEBs in advance and the balance amount is reimbursed on actual release of connections and submission of the list of beneficiaries. The size of funds under the programme has been increased, though with the proviso that all connections under the programme should be metered.

Accelerated Rural Electrification Programme

The Government of India has announced a new Interest Subsidy Scheme in the budget of 2002-03 and has approved the grant of interest subsidy of over Rs 560 crores under the Accelerated Rural Electrification Programme (AREP) during the Tenth Plan period. The AREP covers the electrification of un-electrified villages, hamlets/*dalit bastis*/tribal villages, and the poor households in villages. The interest subsidy will be provided to the State Government/Power Utilities on loans availed by it from financial institutions like REC, Power Finance Corporation (PFC), National Bank for Agriculture and Rural Development (NABARD), etc. for carrying out rural electrification programmes. Claims of interest subsidy for disbursements made during a year are submitted by the financial institutions to the Ministry of Power, which in turn reimburses the interest subsidy on the Net Present Value basis to the financial institutions.

Rural Infrastructure Development Fund

Funds for investment in rural electrification are also available under the Rural Infrastructure Development Fund (RIDF) operated by NABARD. Projects that can

be funded under the scheme include systems improvement including new transmission and distribution projects, as well as generation projects. Under this scheme, loan is provided by NABARD to the State Governments, who in turn may provide the same to the implementing body, which could be any agency including a State Government/Public Sector entity, Private sector agencies including an Independent Power Producer (IPP), Captive Power Producer (CPP), etc. The projects must be submitted to NABARD through the State Government Finance Department. Three fourths of the outlay of the eligible items of the project can be financed by the loan under the scheme, while the balance one-fourth is to be borne by the respective State Governments. Loans are also provided by NABARD to entrepreneurs in the form of *refinance* through banks.

Funding pattern for IREP

In the budget of MNES, separate allocations are made to fund IREP. Central financial assistance of Rs. 5.00 lakh per State/UT level IREP Cell per year and Rs.10 lakhs per district level IREP Cell per year are provided regularly. For the implementation of the programmes, funds are provided in the budget of the State Plans.

5.5.2 Funding for the Programmes Implemented by MNES

MNES implements various renewable energy programmes including biogas, improved *chulhas*, solar lighting, solar cookers, solar water heaters, Solar PV water pumps, wind power, small hydro power, biomass power and cogeneration of energy from industrial and urban wastes, etc. These programmes are implemented through the state nodal agencies for energy development. The necessary budget provision is made in the Annual Plan of MNES to meet the expenditure on subsidizing the cost of the systems such that these devices are made available at affordable costs to the end users. Power generation from wind, small hydro projects, cogeneration, etc. are reaching the commercial stage, and for them the necessary promotional incentives like interest subsidy on the loans raised by the entrepreneurs are provided by MNES.

The Indian Renewable Energy Development Agency (IREDA) is a public sector financial institution under the administrative control of MNES. IREDA promotes the spread of renewable energy use in the country by providing market development outlets and soft loans on easy terms. IREDA has evolved into a unique developmental financing agency. It has sanctioned loans of more than Rs. 5,625 crores and disbursed Rs.2,964 crores so far. IREDA's track record has helped it get lines of credit from the World Bank, the Asian Development Bank, and KfW of Germany (a German funding agency) for onward lending to the target groups to promote the deployment of renewable energy systems in India.

Check Your Progress II

Note: a) Use the space provided for your answers.

b) Check your answers with the possible answers provided at the end of this unit.

1) What benefits can be derived from the rural energy programmes?

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- 2) Name the innovative initiatives taken by the non-governmental sector under the rural energy programmes.

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5.6 LET US SUM UP

While going through this unit you have seen that for all-round development in the rural areas, availability of energy plays a vital role. Both subsistence and productive activities in the rural areas will not be possible without an integrated energy supply programme that can be sustained in the long run. Among various energy sources, electricity plays an important role, as it is the most versatile and convenient forms of energy to achieve different end use applications. Availability of electricity in rural areas will be instrumental in triggering economic and income generating activities leading to sustainable rural development. The per capita income level of the rural people will go up enabling them thereby to pay user charges for the different services rendered to them by the Government. Acknowledging the need for electrifying all the villages in the country, the Government of India has been supporting the implementation of the Rural Electrification Programmes since the First Five Year Plan (i.e.1951), with the ultimate objective of providing “Electricity for All”. The Government has set the goal of achieving this vision target by 2012. We have also observed that there are several issues facing the programme, ranging from financial constraints to institutional, developmental, geographical and social impediments. Concerted efforts are being made through the Rural Electricity Supply Technology (REST) Mission to identify suitable low cost generation and delivery systems for electrifying the rural areas. Also, the necessary linkages with other rural development programmes, like health, shelter, literacy, nutrition, drinking water, connectivity, etc. have been provided through the Pradhan Mantri Gramodaya Yojana (PMGY). State Governments are given the necessary authority for deciding on the allocation of funds among these programmes depending upon their priorities. Institutional loans on soft terms are also made available to the programmes. Promotional measures, to develop the locally available non-conventional and renewable energy sources like solar, wind, biomass, small hydro projects, etc. in rural areas to meet the basic energy needs, are taken by the Government in collaboration with the village level institutions like panchayats, cooperatives, NGOs, private entrepreneurs, etc. An Integrated Rural Energy initiative experimented at the Planning Commission as a pilot exercise during the Sixth Plan, and presently implemented as a plan programme by the Ministry of Non-Conventional Energy Sources is being revamped to meet the rural energy needs through the most cost effective mix of different energy sources.

You might have realized that all these measures will be successful only if the people at the grass roots level including women are involved right from the planning stage up to the stage of implementation. In other words, the energy supply programmes should follow a demand-driven approach, instead of following the present supply-driven one. For their success, the Rural Energy Programmes should be “of the people, for the people and by the people” of the rural areas.

5.7 KEY WORDS

PMGY	:	Pradhan Mantri Gramodaya Yojana
Kutir Jyoti	:	to provide single point connections for lighting in the households of people below the poverty line
IREP	:	Integrated Rural Energy Programme
REC	:	Rural Electrification Corporation
MNES	:	Ministry of Non-conventional Energy Sources
IREDA	:	Indian Renewable Energy Development Agency, a financial Institution under MNES

5.8 REFERENCES AND SUGGESTED READINGS

Census of India, 2001: Office of the Registrar General, India, New Delhi.

Annual Report 2002-03: The Ministry of Non-Conventional Energy Sources, The Government of India, New Delhi.

Tenth Plan Document, The Planning Commission (Yojana Bhawan), The Government of India, New Delhi.

5.9 CHECK YOUR PROGRESS – POSSIBLE ANSWERS

Check Your Progress I

- 1)
 - i) True
 - ii) True
 - iii) False. Extending distribution with the help of low-tension wires/lines needs us to have longer lines and more elaborate infrastructure for carrying electricity from one place to another. Longer lines will increase rather than decrease losses.
- 2)
 - i) The definition of village electrification followed in the initial stages did not take into account the number of households electrified in a village. A village was declared electrified if electricity was used for any single application in that village.
 - ii) Absence of a proper funding pattern to ensure that households are electrified in a village that is declared electrified.
 - iii) Absence of suitable village level institutions (like panchayats, cooperatives or NGOs at the village level) to participate in the village electrification programme.

Check Your Progress II

- 1) The programmes would prevent environmental degradation, arrest deforestation, stop migration of rural people to urban areas in search of employment and also empower local institutions like panchayats, cooperatives and NGO's to achieve self-reliance in the rural energy sector.
- 2) The main effort made by NGO's under the rural energy programme include i) the market development approach of the Solar Electric Lying Company (SELCO) in South India, ii) the NGO approach of the Rama Krishna Mission in Bengal and iii) the CBO (Community Base Organisation) approach of the Social Work and Research Centre (SWRC), Tilonia.

UNIT 6 RURAL CONNECTIVITY

Structure

- 6.0 Objectives
- 6.1 Introduction
- 6.2 Rural Roads
- 6.3 Pradhan Mantri Gram Sadak Yojana (PMGSY)
- 6.4 Planning for PMGSY
 - 6.4.1 Planning and Selection of Road Works
 - 6.4.2 State Level Agencies
- 6.5 Preparation of Proposals and their Clearance
 - 6.5.1 Detailed Proposals
 - 6.5.2 Scrutiny of Project Proposals
 - 6.5.3 Empowered Committee
- 6.6 Types of Roads
 - 6.6.1 Construction of Cement-concrete Roads
 - 6.6.2 Use of Modified Bitumen
 - 6.6.3 Use of Fly-ash and Soil Stabilisation Measures
- 6.7 Execution of Works
- 6.8 Quality Assurance
- 6.9 Maintenance
- 6.10 Financing
 - 6.10.1 Requirement of Funds
 - 6.10.2 Allocation of Funds
 - 6.10.3 Resource Mobilization
- 6.11 On-line Management and Monitoring System
- 6.12 Training and Capacity Building
- 6.13 Let Us Sum Up
- 6.14 Key Words
- 6.15 References and Suggested Readings
- 6.16 Check Your Progress- Possible Answers

6.0 OBJECTIVES

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

- describe the genesis of PMGSY and its scope;
- explain various terms contained in the rural road literature;
- describe the planning of road works for PMGSY;
- explain the process of executing PMGSY works;
- list out the training needs and describe the arrangements made for training;
- describe the Quality Assurance mechanism for PMGSY roads;
- describe the arrangement for maintaining PMGSY roads; and
- describe the financial resources needed for PMGSY and how these resources are mobilized.

6.1 INTRODUCTION

The availability and the quality of rural infrastructure constitute an excellent measure of the development of a nation. Connectivity is considered the most important prerequisite for human sustenance. Connectivity includes communication networks through telephony, Internet and postal services, electric connections, health infrastructure, educational infrastructure and transport facilities through road networks. Road connectivity is the most fundamental and sought-after connectivity, particularly in rural areas, due to its flexibility and its affordability within the community. In this unit we will outline the scope of rural connectivity, the importance of rural roads in social, economic and cultural life and the features of the Pradhan Mantri Gram Sadak Yojana (PMGSY)

6.2 RURAL ROADS

A nation's socio-economic and cultural growth rate depends on its speedy, safe, economic and efficient transport system in general and road transport system in particular. Road transport offers a high range of flexibility catering to different types of traffic, both for long and short distances with a variety of travel modes. This is the major sub-system in the over all transportation which is affordable even for the rural population for accessing the facilities of education, health, banking, recreation, employment and in-and-out flow of agricultural goods. Due to the lack of Rural Roads Connectivity, lakhs of Indian villages and crores of rural masses are suffering isolation and prolonged deprivation from the opportunities of sustainability and development. A reliable system of transportation, therefore, is a basic requirement for the socio-economic transformation, for breaking the isolation of village communities, the elimination of disparity between rural and urban populations for realizing urban/rural integration, which can contribute to national integration.

Construction of rural roads brings multifaceted benefits to the rural areas and is an effective poverty reduction strategy. Increase in agricultural production, changes in crop patterns, better prices for the agricultural produce, reduction in transport costs, creation of new employment opportunities in non-agricultural sectors, increase in land prices, better climate for setting up cottage and agro-industries and increase in the production of dairy products are only some of the economic benefits of rural roads. The impact of new road links on the social life of the rural population is reflected in the form of better medical care, increased attendance in schools, better availability of public services, higher levels of social interaction, etc. The rural roads also change the life patterns by bringing awareness about the modern means of living like cooking, dressing, recreation, etc. through better communication. Road connectivity stimulates rural economy and its effects get transmitted to the entire economic structure of the rural society and, consequently, they reduce pressure on the urban areas. Rural connectivity triggering a reverse migration from urban to rural areas is a distinct possibility.

Notwithstanding the efforts made over the years at the State and the Central levels through different Programmes, about 40% of the habitations in the country are still not connected by all-weather roads. Even where connectivity has been provided, the roads constructed are of such a quality (due to poor construction or maintenance) that they cannot be categorised as all-weather roads.

6.3 PRADHAN MANTRI GRAM SADAK YOJANA (PMGSY)

Construction of Rural Roads is not a new phenomenon in India. Earlier, Rural Roads were seen as the means for revenue officials to reach the people for collecting land revenue, rather than as a means for the benefit of the community. However, the construction of village roads was included under the Minimum Needs Programme (MNP) for the first time in the 5th Five Year Plan (1974-79), which envisaged providing connectivity to population groups of 1500 persons or more with All-Weather Roads. A definite outlay for this programme was made in each year of the Fifth Plan, though it decreased in the subsequent Five Year Plans. Further, the Government of India initiated a number of programmes such as the National Rural Employment Programme (NREP), the Rural Landless Employment Guarantee Programme (RLEGP), the Jawahar Rozgar Yojana (JRY), the Innovative Jawahar Rozgar Yojana (IJRY), the Basic Minimum Services (BMS), the Employment Assurance Scheme (EAS) and other similar schemes under which Rural Roads were constructed year after year and plan after plan. Notable work has also been done under the Rural Infrastructure Development Fund (RIDF) Scheme by the National Bank for Agriculture and Rural Development (NABARD) in the recent years.

The Government of India's resolve to provide total rural connectivity eventually culminated in the Pradhan Mantri Gram Sadak Yojana (PMGSY) with the *target of connecting every rural habitation that has a population of more than 1000 by the year 2003 and every rural habitation with a population of more than 500 by the year 2007*. As for the Hill States (North-East, Sikkim, Himachal Pradesh, Jammu & Kashmir, Uttaranchal), the Desert Areas and the Tribal Areas, the objective is to connect habitations with a population of 250 persons and above by the year 2007.

The spirit and the objective of the Pradhan Mantri Gram Sadak Yojana is to provide good all-weather road connectivity to the unconnected habitations. The population, as recorded in the Census 2001, is the basis for determining the population size of habitations.

The PMGSY was formally launched on the 25th of December in 2000 and commenced with the Financial Year 2000-01 with a budget of Rs. 2500 crores provided to the Ministry of Rural Development for that year.

The unit for this Programme is a Habitation and not a Revenue village or a Panchayat. About 1,70,000 unconnected habitations need to be covered under the PMGSY, which is a formidable task. This includes approximately 60,000 unconnected habitations with populations of over 1000; 81,000 with populations between 500-999; and 29,000 habitations with populations of 250-499 persons. Although there are many hilly areas in different non- hilly states, such areas do not receive any special treatment and the present target is to cover only the habitations with populations of over 500 persons by the year 2007.

Check Your Progress I

Note: a) Use the space provided for your answers.

b) Check your answers with the possible answers provided at the end of this unit.

1) List the importance of rural roads in transforming the life of the rural people.

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- 2) Describe briefly the scope and coverage of PMGSY.

6.4 PLANNING FOR PMGSY

Any programme needs to have a well defined plan of action. All the concerned should know the requirements and the action to be taken to meet the requirements. Construction of Rural Roads is no exception to this and, therefore, *in order to have a well defined assessment of the requirement of Rural Roads for connecting the unconnected habitations, a Master Plan was prepared giving the details of the existing roads and those proposed to be constructed for connecting the unconnected habitations.* However, it should be kept in mind that there are many surveys through which the necessary data are collected, analyzed and used in developing the Master Plans at different levels. The Master Plans for the National Level, the Regional Level and the Local Levels are prepared in the Highway Sector.

6.4.1 Planning and Selection of Road Works

Master Plans prepared at the district level are referred as **District Rural Roads Plans (DRRP)**. The District Rural Roads Plan would indicate the existing road network system in the district and also clearly identify the proposed roads for providing connectivity to unconnected habitations, in an economic and efficient manner, in terms of cost and utility.

In preparing the District Rural Roads Plan, it is necessary first to indicate the weights for various services. The District Panchayat is the competent authority to select the set of socio-economic/infrastructure parameters best suited for the district, categorise them and accord relative weights to them. This is communicated to all the concerned before commencing the preparation of the District Rural Roads Plan.

The Plan is first prepared at the Block level, indicating the existing road network, unconnected habitations and the roads required to connect them.

Once this exercise is completed, the Core Network for the Block is identified by making the best use of the existing and proposed road facilities in such a manner that all the eligible habitations are assured of the basic access. Every habitation is to be brought within 500 metres (1.5 km of path length in the Hills) of a connected habitation or an all-weather road. A **Core Network** is that minimal network of roads (routes) that is essential to provide the basic access to essential social and economic services to all eligible habitations in the selected areas through at least one all-weather road connectivity. Accordingly, the Core Network would consist of some of

the existing roads as well as all the roads proposed for New Connectivity under the PMGSY.

The list of road works to be taken up under the PMGSY is finalised each year by the District Panchayat (Local Self Government at the district level) in accordance with the allocation of funds communicated to the district by the State Government. District Panchayats finalise the list through a consultative process involving lower level Panchayat institutions and elected representatives.

It is the responsibility of the State Government/District Panchayat to oversee that land is available for taking up the proposed road works. The PMGSY does not provide funds for land acquisition. However, the State Governments draw up policies in order to make the needed land (including forest land if necessary) available. Care is taken that the process of acquiring land for road works serves the common good and is also just and equitable.

In selecting road works, only the rural roads forming part of the Core Network are to be considered and the following order of priority has to be followed:

- 1) Precedence is given to New Connectivity, with priority to connecting habitations of higher population.
- 2) Upgrading Through Routes.
- 3) Upgrading Link Routes

Upgrading activities are proposed in a district, only if no New Connectivity remains to be taken up in that district.

The only exception to the above order of priority is in respect of those routes that include the Village Panchayat Headquarters, market centres, educational or medical (essential) services or those places which are notified as places of tourist interest. In such cases, provision of New Connectivity may be made irrespective of the population size.

6.4.2 State Level Agencies

The Nodal Department of the State Government for PMGSY identifies a **State-level Autonomous Agency** (Society, etc), with a distinct legal status, under its control for receiving the funds from the Ministry of Rural Development. Each State Government has to set up a **State-level Standing Committee** (preferably headed by the Chief Secretary) to vet the Core Networks and the related Project proposals to ensure that they have been formulated in accordance with the official guidelines. The State Level Standing Committee is responsible for close and effective monitoring of the programme and overseeing the timely and proper execution of road works.

Each State Government/UT Administration has identified one or two **Executing Agencies**. These Executing Agencies are the Public Works Department, Rural Engineering Service/Organisation, Rural Works Department, Zilla Parishad, Panchayati Raj Engineering Department, etc. The Executing Agencies have a **Programme Implementation Unit (PIU)** in the district for the purpose of road works.

6.5 PREPARATION OF PROPOSALS AND THEIR CLEARANCE

The preparation of detailed proposals for Road Works and their clearance involves the following stages:

6.5.1 Detailed Proposals

After the District Panchayat approves the list of Road works, the proposals are forwarded through the District Programme Implementation Unit (PIU) to the State Level Autonomous Agency. The State Level Autonomous Agency vets the proposals to ensure that they are in accordance with the guidelines and places them before the State Level Standing Committee. After scrutiny by the State Level Standing Committee, the PIUs prepare the Detailed Project Report (DPR) for each proposed road works. The preparation of DPR requires collection and analysis of data (such as Inventory and Engineering surveys, Soil investigations, Hydraulic data, etc.) required for the design of pavements and cross-drainage works.

The broad guidelines for preparing the Detailed Project Reports are as follows:

- i) The Rural Roads constructed under the Pradhan Mantri Gram Sadak Yojana must meet the technical specifications and geometric design standards given in the Rural Roads Manual of the Indian Road Congress (IRC) (IRC:SP20:2002). The Rural Roads Manual allows for a carriageway of 3.0 metres where traffic intensity is less than 100 motorised vehicles per day and where the traffic is not likely to increase due to situations like, dead end, low habitation and difficult terrain conditions. If the traffic is likely to be more than this level, the carriageway should be of 3.75 metres.
- ii) The Rural Roads under the Pradhan Mantri Gram Sadak Yojana have to be surfaced roads, and, by and large, sealed surfaced roads.
- iii) Wherever locally available material, including products like *fly ash* are available, they should be prescribed, subject to adherence to the technical norms.
- iv) The Rural Roads constructed under PMGSY must have proper drainage facilities.

6.5.2 Scrutiny of Project Proposals

The Ministry of Rural Development has identified reputed Technical Institutions to scrutinize the project proposals. These **State Technical Agencies (STA)** provide the requisite technical support to the State Governments and undertake Quality Control tests on specific requests.

The selected State-level Agency consolidates the proposals from each PIU, after verifying that they have been duly scrutinised by the respective STAs. They then prepare the State Abstract and send all the project proposals to the NRRDA.

The NRRDA scrutinises the proposals received from the State Level Agency to ensure that the proposals have been duly made keeping in view the Programme Guidelines and that they have been duly verified by the STAs. The proposals for each state are then put up to the Empowered Committee for consideration.

6.5.3 Empowered Committee

At the Central level, the project proposals received from the State Governments are considered by an Empowered Committee, chaired by the Secretary, Department of Rural Development. The Recommendations of the Empowered Committee are, thereafter, submitted to the Minister of Rural Development for final clearance for action.

6.6 TYPES OF ROADS

Roads can be constructed with a variety of materials depending on the local conditions of soil, rainfall, expected traffic and the environment. Some of the materials that can be effectively used for durable roads are discussed below.

6.6.1 Construction of Cement-concrete Roads

In order to establish the techno-economic feasibility and appropriateness of cement-concrete roads in the rural road construction programme, the National Council for Cement and Building Materials (NCCBM), an Agency of the Ministry of Commerce & Industry, is executing a programme for construction of cement-concrete roads on a pilot basis in selected States.

6.6.2 Use of Modified Bitumen

Modified Bitumen of various kinds including polymer-modified bitumen and rubber-modified bitumen have been found suitable for improving the quality of roads and to have techno-economic advantages in certain traffic, terrain and climatic conditions. The details are specified in the Rural Roads Manual (IRC:SP20:2002).

6.6.3 Use of Fly-ash and Soil Stabilisation Measures

In order to facilitate the use of fly-ash in the construction of rural roads as well as soil stabilisation measures/techniques, the NRRDA is in touch with premier research institutes such as the Central Road Research Institute (CRRI) to develop appropriate specifications in this regard.

6.7 EXECUTION OF ROAD WORKS

The programme is being implemented in all states with their active participation. The starting point for the development of rural roads is the preparation of a District Rural Roads Plan and the Core Network. The road works approved by the Ministry of Rural Development are executed by the Executing Agency at the State level through the Programme Implementation Unit (PIU) in each district. The works are executed through reputed and capable contractors. The contractors are selected through the process of Open Competitive Bidding using a Standard Bidding Document (SBD) that guides the evaluation of the tenders and the execution of works.

The Road works are to be completed within a period of 9 months from the date when the Work Order is issued. Delayed execution of projects could adversely affect clearance of the proposals in subsequent years. PMGSY does not provide for any cost over-runs. Any cost over-run, either due to time over-run or for any other reason whatsoever, is to be borne by the State Government.

Except for Hill States, the Road works under the PMGSY are not to be taken up in stages. Once road works are taken up, they should be completed to the requisite technical specifications in the prescribed timeframe.

In the case of the Hill States and Andaman & Nicobar Islands, a period equivalent to two working seasons, about 18 months, is allowed to the Executing Agency to complete the projects cleared by the Ministry of Rural Development under the Programme. This is to enable the formation to stabilise during one season, followed by metalling and surfacing in the subsequent working season.

6.8 QUALITY ASSURANCE

The roads constructed under this programme are expected to be of very high standard, requiring no major repairs for at least five years after the completion of construction. Accordingly, very high technical specifications as laid down by the Indian Roads Congress (IRC) given in the Rural Roads Manual (IRC:SP20:2002) have been prescribed for these roads.

Ensuring the quality of the road works is the responsibility of the State Governments/ Union territory Administrations, which are implementing the programme. *The Quality Assurance is effected through a three-tier mechanism.* The State Governments are responsible for the first two-tiers of the Quality Control Structure. The first tier comprises the Programme Implementation Unit or the Executive Engineer, whose prime responsibility is to ensure that all the materials utilised and the workmanship conform to the prescribed specifications. Also, they are to ensure that all the tests prescribed by the National Rural Roads Development Agency are carried out at the specified time and place by the specified person/authority. As the second-tier of the Quality Control Structure, periodic inspections of works are carried out by Quality Control Units set up/engaged by the State Government, independent of the Executive Engineers/PIUs. These officers/ Agencies are expected to carry out random tests and also get samples of materials tested in well equipped laboratories. Each State Government/ Union Territory Administration is expected to appoint a senior Engineer (not below the rank of a Superintending Engineer) to function as the State Quality Coordinator at the State level, who would oversee the satisfactory functioning of Quality Control mechanism within the State/Union Territory. As the third-tier of the Quality Control Structure, the *NRRDA engages senior retired engineers with life long experience in road construction, designated as National Quality Monitors (NQM), for the inspection of the road works at random.*

The National Quality Monitors inspect the road works with particular reference to Quality. They take samples from the site and get them examined by any competent technical agency/institution. They also report on the functioning of the Quality Control mechanism in the districts. If any work-in-progress is found to be 'poor' or 'average' by the NQMs, the State Government has to ensure that the contractor replaces the material or rectifies the workmanship within the time period stipulated. All works rated 'poor' and 'average' during the inspection of work-in-progress shall be re-inspected by an NQM after a rectification report has been received from the State Government. The State Governments/Union Territory Administrations are expected to put in place systems to identify and take appropriate action (including *blacklisting* in serious cases) against the contractors and the field engineers who are found negligent in ensuring the quality of road works. Where the completed work of a contractor is found to be 'poor' or 'average', the contractor concerned shall be blacklisted by the State and no PMGSY works are to be given to such a contractor in future. *The State Governments/Union Territory Administrations are to ensure that all the PMGSY road works qualify to be rated at least 'good' during implementation and 'very good' on completion.*

6.9 MAINTENANCE

Maintenance of rural roads is an issue to be seriously addressed. *The State Governments are responsible for the maintenance of these roads for the first five years and Performance Guarantee for 5 years is invariably obtained from the contractors before placing Work Order for the PMGSY roads. Thereafter, the responsibility of maintenance is to be shouldered by the Panchayati Raj Institution concerned.* The finances of these institutions need to be suitably augmented for ensuring proper maintenance. They also need to build their capacity (within their organisations) to be able to provide maintenance on a regular basis.

In carrying out the maintenance of Rural Roads, the concept of Asset Management needs to be properly understood. The principle behind it is that the assets created should not be left to their fate, but ought to be managed with appropriate management systems that contemplate the assessment of the requirements, the prioritization to suit the budget and the development of a systematic plan of action for the maintenance, repairs or rehabilitation of the roads constructed.

Check Your Progress II

Note: a) Use the space provided for your answers.

b) Check your answers with the possible answers provided at the end of this unit.

1) What is the mechanism of Quality Assurance under PMGSY?

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2) What is the arrangement for the maintenance of PMGSY roads.

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6.10 FINANCING

Some of the relevant details pertaining to the financing of PMGSY are given as follows:

6.10.1 Requirement of Funds

In order to achieve the objectives of the programme, the requirement of funds was initially estimated to be Rs. 60,000 crores. This includes about Rs. 50,000 crores for New Connectivity and about Rs. 10,000 crores for upgrading the existing roads at prices prevailing in the year 2000. After assessing the extent of connectivity required to be provided on the basis of the Core Networks, *the requirement of funds has been revised to Rs. 1,32,000 crores, out of which Rs. 66,000 crores will be for the New Connectivity and the balance of Rs. 56,000 crores for purposes of upgrading.*

6.10.2 Allocation of Funds

Allocation of funds to the States/Union Territories is based on weights of 75% for **Need** (share of unconnected habitations in the total number of unconnected habitations of the country) and 25% for **Coverage** (share of connected habitations in the total number of connected habitations of the country). A more realistic criterion for the allocation of funds to the States and Union Territories would be the estimated cost of the PMGSY works in the States and Union Territories, based on the Core Network. Once the Core Network is prepared, it is possible to estimate the length of roads for New Connectivity as well as upgrading for every district. States have the freedom to distribute the State's allocation among the districts, giving 80% weight to the road length required for providing connectivity to unconnected habitations and 20% weight to the road length in need of upgrading under the programme.

With effect from the Financial Year 2003-04, the funds for the states are released in favour of the Autonomous Agency created in a state for the purpose. The funds are credited directly into the designated Bank Account of the Autonomous Agency.

In making district-wise allocations, the number of habitations taken up under the PMGSY or any other programme is excluded from the total number of unconnected habitations (even if the road works are still under execution). The figures of connected as well as unconnected habitations in any district would keep on changing every year till such time as all the unconnected habitations (of the stipulated population size) have been covered in the district.

6.10.3 Resource Mobilization

According to the Central Road Fund Act, 50% of the Diesel Cess is for rural roads, and 50% of the Diesel Cess and the Petrol Cess constitutes one pool, of which 57.50% goes to the National Highway Authority of India (NHAI) for the development and maintenance of the National Highways; 12.50% to Railways for the development of under-ways, over-bridges and the erection of safety works at unmanned rail-road crossings; and the balance of 30% to the State Governments for developing other roads including those of inter-state and economic importance.

The funds available are clearly inadequate to finance a programme of this magnitude within the given timeframe. Efforts are being made to tap internal resources to achieve this aim. The Ministry of Rural Development has advised the State Governments to explore the possibility of leveraging the necessary resources for accelerated implementation of the PMGSY on the basis of their annual revenue stream equal roughly to the present PMGSY allocation. The Ministry of Rural Development will provide a guarantee for such leveraged funds. External Funding Agencies like the World Bank, the Asian Development Bank, the Japanese Bank for International Cooperation (JBIC) and the DFID have evinced interest in funding the programme. The domestic capital market also is to be tapped for the purpose.

The strategy being followed for financing the projects is as follows:

- Stage 1 Use Diesel Cess directly
- Stage 2 Use the World Bank/the Asian Development Bank (ADB)
- Stage 3 Get the better off States to leverage their allocation under PMGSY at the State level.
- Stage 4 Raise resources from the domestic capital market.

6.11 ON-LINE MANAGEMENT AND MONITORING SYSTEM

A web-based on-line management and monitoring system exists for monitoring the implementation of works under PMGSY. The details of each construction activity (road works) in every district, including the details of contractors, are required to be fed into the on-line system on a regular basis. In places where on-line system is not functional, the details are to be fed in using an off-line module developed for the purpose. These details are available on the website www.pmgys.org and are accessible publicly.

6.12 TRAINING AND CAPACITY BUILDING

Since PMGSY roads are expected to be of high quality, special training programmes are being organized for the project implementing staff in the DPIUs, contractors and

engineers in various aspects of designing, construction and quality control in the execution of road works.

Primary responsibility for the organisation of training programmes is with the State Technical Agencies. The training requirements are assessed by the Principal Technical Agencies and they help the State Technical Agencies in building up their capacity for imparting training to the field staff.

Check Your Progress III

Note: a) Use the space provided for your answers.

b) Check your answers with the possible answers provided at the end of this unit.

- 1) Write a paragraph, explaining the financial resources needed for achieving the objectives of PMGSY.

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- 2) Briefly explain the strategy for mobilizing financial resources for PMGSY.

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6.13 LET US SUM UP

This unit on Pradhan Mantri Gram Sadak Yojana (PMGSY) has provided us a detailed insight into an important programme being sponsored by the Central Government since December, 2000. The programme aims to provide road connectivity to hitherto unconnected rural habitations with population of 500 and above. The funds required for the programme are provided by the Central Government as grants-in-aid to States and Union Territories. The main features of the programme may be summarized as follows:

- Rural Connectivity includes not only road connectivity, but access to other services also.
- PMGSY is the major programme for providing rural road connectivity to unconnected habitations.
- It also provides new connectivity and upgrading of the existing roads.
- Elected representatives are being associated with the selection of road works. Clear guidelines exist for prioritizing the road works in every district. Only the roads in the Core Network can be taken up under this programme and New Connectivity gets precedence over upgrading.

- The road works in every State for each financial year are to be approved by the Union Ministry of Rural Development.
- Various Agencies consider and scrutinize the proposals at the State level and then in the Ministry of Rural Development before clearance for action is issued.
- NRRDA, the technical arm of the Ministry of Rural Development, oversees the implementation of the programme and provides technical support to it.
- No cost over-run is allowed in PMGSY works. The works are to be completed within a given timeframe.
- Programme Implementation Units for the purpose exist in every district.
- Quality of PMGSY roads is governed by specifications laid down by the Indian Road Congress.
- Quality Assurance is effected through a three-tier mechanism. Independent National Quality Monitors play a very important role in the process.
- The programme is funded primarily from the Central Road Fund with 50% of Diesel Cess earmarked for it exclusively.
- External Funding Agencies also provide funding support.
- A Web-based monitoring system is in place for the effective management of the programme.

6.14 KEY WORDS

An unconnected habitation	:	A cluster of population living in an area, the location of which does not change over time and the area itself is not connected by any all-weather road.
Core Network	:	A minimal network of rural roads that is essential to provide basic access to social and economic services to all the eligible habitations.
Link Route	:	A road connecting a single habitation or a group of habitations to Through Routes or District Roads.
NRRDA	:	An Agency of the Ministry of Rural Development that provides technical support for the PMGSY.
Standard Bidding Document (SBD)	:	A document used by State Governments as a guide to evaluate the tenders and to execute PMGSY works.
Performance Guarantee	:	A guarantee obtained from a contractor for the good performance of the road constructed by him.
Diesel Cess	:	A cess levied by the Central Government on the sale of diesel, under the Central Road Fund Act.
Leveraged funds	:	Funds borrowed from Financial Institutions by scrutinising the future allocations.
A Habitation	:	Is a cluster of population, living in an area, the location of which does not change over time. Desam, Dhanis, Tolas, Majras, hamlets, etc. are the commonly used terms to describe

Habitations. A Revenue village/Gram Panchayat may comprise one or several Habitations. The population of all Habitations (cluster) within a radius of 500 metres (1.5 km. of path distance in the case of Hills) may be clubbed together for the purpose of determining the population size.

- A Gravel Road** : Is a road constructed using well compacted crushed rock or gravel material, which is fairly resilient and does not become slippery when wet.
- An all-weather road** : Is one that is negotiable in all weathers. This implies that the roadbed is drained effectively by adequate cross-drainage (CD) structures such as culverts, minor bridges and causeways. Interruptions to traffic as per permitted frequency and duration are, however, allowed. Though its pavements should be negotiable in all-weathers, the implication is not that they are necessarily paved or surfaced or black-topped.
- Cluster approach** : An approach that would enable a provision of connectivity for a larger number of Habitations, particularly in the Hill/mountainous areas.
- Fair-weather roads** : These are roads that are fordable only during the dry season, because of the lack of cross drainage (CD) works. Conversion of such roads into all-weather roads is treated as *upgrading*. The provision of necessary CD works is considered an essential element of all the good road works.
- Link Routes** : Are the roads connecting a single habitation or a group of habitations to Through Routes or District Roads leading to market centres. Link routes generally have dead ends terminating on a habitation, while Through Routes arise from the confluence of two or more Link Routes and emerge on to a major road or to a market centre.
- New Connectivity** : The provision of connectivity to unconnected habitations would be termed as New Connectivity. New Connectivity implies the construction of roads from the *earth-work* stage to the desired specifications, and would, therefore, invariably involve some *earth-work*. In case of Hills, it would involve *formation* and *cutting*. However, the existing Gravel or Water Bound Macadam roads do not qualify to be treated as New Connectivity works even where they involve some *earth-work* by way of widening the carriageway or road formation. Work on an earthen road, which is not a Gravel Road, is treated as a case of New Connectivity.
- Sealed and Unsealed Roads** : A surfaced road that is provided with a *wearing course* with any type of Bituminous Surfaces is called a Sealed Road. Such sealing offers

dust proofing and prevents water from entering into the *Pavement Crust* and *Sub-grade*.

A *surfaced road* is said to be *unsealed*, if it is not treated with Bituminous or other types of sealing.

Surfaced and Unsurfaced Roads: A road is said to be surfaced, if the Pavement Crust is provided over the formation with materials like Gravel, Macadam Roads with Aggregate, Brick on Edge, etc. If only an *Earthen Road* is formed, it is called an unsurfaced road.

Through routes : Are the ones, which collect traffic from several link roads or a long chain of habitations and lead it to market centres either directly or through the higher category roads, i.e. the District Roads or the State or National Highways.

Upgrading : Would typically involve conversion from Gravel or Water Bound Macadam stage to the desired technical specifications or widening of the roads, subject to traffic studies. Provision of Cross Drainage (CD) works alone would also be treated as Upgrading under PMGSY.

Water Bound Macadam (WBM): is the road layer made of crushed or broken aggregate mechanically interlocked by rolling and the voids filled with screening and binding material with the assistance of water.

6.15 REFERENCES AND SUGGESTED READINGS

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Rural Roads Manual, Indian Roads Congress (IRC:SP:20:2002), NRRDA, New Delhi (www.pmgysy.nic.in)

PMGSY Guidelines, 2004 The Ministry of Rural Development, The Government of India, New Delhi. (www.pmgysy.nic.in/pmg31.asp)

Operations Manual for PMGSY, 2004 National Rural Road Development Agency (NRRDA), The Ministry of Rural Development, The Government of India, New Delhi. (www.pmgysy.nic.in)

6.16 CHECK YOUR PROGRESS –POSSIBLE ANSWERS

Check Your Progress I

- 1) Construction of rural roads is an effective poverty reduction strategy. Increase in agricultural production, changes in crop pattern, better prices for the agricultural produce, reduction in transport costs, creation of new employment opportunities in non-agricultural sectors, increase in land prices, better climate for setting up cottage and agro-industries and increase in the production of dairy products are only some of the economic benefits of rural roads. Their existence also results

in better medical care, increased attendance in schools, better availability of public services, higher levels of social interaction, etc. They also change the life patterns by bringing awareness of the modern means of living. Road connectivity stimulates the economy and its effects get transmitted to the entire economic structure of the rural society.

- 2) The Pradhan Mantri Gram Sadak Yojana (PMGSY) has been launched for connecting every rural habitation that has a population of more than 1000 by the year 2003 and every rural habitation with a population of more than 500 by the year 2007, through good all-weather roads. As for the Hill States (North-East, Sikkim, Himachal Pradesh, Jammu & Kashmir and Uttaranchal), the Desert Areas and the Tribal Areas, the objective is to connect habitations with a population of 250 persons and above by the year 2007. About 60,000 habitations are to be covered under the programme.

Check Your Progress II

- 1) The Quality Assurance is ensured through a three-tier mechanism. The State Governments are responsible for the first two-tiers of the Quality Control Structure. The first tier comprises the Programme Implementation Unit or the Executive Engineer, whose prime responsibility is to ensure that all the materials utilised and the workmanship conform to the prescribed specifications. They are also to ensure that all the tests prescribed by the National Rural Roads Development Agency are carried out at the specified time and place by the specified person/authority. As the second-tier of the Quality Control Structure, periodic inspections of works are carried out by Quality Control Units set up or engaged by the State Government, independent of the Executive Engineers/PIUs. These officers/Agencies are expected to carry out random tests and also get samples of materials tested in well equipped laboratories. Each State Government/Union Territory Administration is expected to appoint a senior Engineer (not below the rank of a Superintending Engineer) to function as the State Quality Coordinator at the State level, who is to oversee the satisfactory functioning of Quality Control mechanism within the State/Union Territory. As the third-tier of the Quality Control Structure, the NRRDA engages senior retired engineers with life long experience in road construction, designated as National Quality Monitors (NQM), for inspecting the road works at random.
- 2) The State Governments are responsible for the maintenance of PMGSY roads for the first five years after construction.

Performance Guarantee for 5 years is invariably obtained from the contractors before placing the Work Order for the PMGSY roads. Thereafter, the responsibility of maintenance is to be shouldered by the Panchayati Raj Institution concerned.

Check Your Progress III

- 1) In order to achieve the objectives of the programme, the funding required was initially estimated to be Rs. 60,000 crores. This included about Rs. 50,000 crores for New Connectivity and about Rs.10,000 crores for Upgrading the existing roads, at prices prevailing in the year 2000. The costs were revised to Rs. 1,32,000 crores after assessing the extent of the connectivity required as per the Core Networks of the States and Union Territories. The funds required for providing New Connectivity would be about Rs. 66,000 crores and the balance is for upgrading the existing roads to the required standards.

- 2) Under the Central Road Fund Act, 50% of the Diesel Cess collected by the Central Government has been earmarked for rural roads. This is grossly insufficient to meet the requirements and, therefore, efforts are being made to tap internal resources. The Ministry of Rural Development has advised the State Governments to explore the possibility of leveraging the necessary resources for accelerated implementation of the PMGSY, on the basis of their annual revenue stream equal roughly to the present PMGSY allocation. The Central Government will provide guarantee for such leveraged funds. External Funding Agencies like the World Bank, the Asian Development Bank are also extending financial support for the programme. In addition, the domestic capital market is also being tapped.