#### **Preface**

Having the largest geographical area in the country, forest cover and natural resources in abundance, Madhya Pradesh has often been called a rich State with poor people. In order to alleviate poverty and backwardness of the State, development activities are being pursued with vigor. Therefore, over the years, there has been considerable pressure on the environment, the alarming consequences of which are beco9ming evident in increasing proportions in certain areas of the State.

Since the adoption of Madhya Pradesh State Environment Policy in 1982, dimensions of environmental concerns have widened significantly and now it is imperative that a comprehensive State Environment Policy be evolved to facilitate development efforts in a liberalized economic environment, yet in a manner which is not detrimental to the environment.

Hopefully, the policy will pave the way for sustainable development by laying down guidelines which will help in weaving environmental considerations into the common man's life style and process of development.

> (Digvijay Singh) Chief Minister Madhya Pradesh

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#### **Preamble**

- Life obtains its sustenance from the environment. The quality of life 1.1 is linked with the quality of environment. Therefore, it is necessary to ensure that the demand on the environment does not exceed its present and future carrying capacity. Such a concept of environmental conservation has been an integral part of Indian culture since time immemorial.
- Provision for environmental protection -has been laid down in the 1.2 Directive Principles of State Policy in the Constitution of India by assigning the duties for the State and all citizens through Article 48A and Article 51A (g) which state that the `State shall endeavour to protect and improve the environment and to safeguard the forests and wildlife in the country' and 'to protect and improve the natural environment including forests, lakes and rivers and wildlife, and to have compassion for the living creatures'.
- The progressive pressure on the environment witnessed in the 1.3 recent past has worsened the standard of living of the vast multitude of people who are directly dependent on natural resources. In this context, it is imperative to give a new dimension to the environmental conservation programme incorporating action plans in compliance of national and international commitments.
- The State Environment Policy seeks to lay down guidelines that will 1.4 facilitate development while ensuring environmental conservation yet without hampering the present and future development imperatives.
- It shall be the endeavour of the State and its subordinate State 1.5 agencies to implement the policy document being, enunciated.

## **Challenges & Threats**

Accelerated pace of development in developing economies is largely 2.1 dependent on rapid consumption of natural resources. Thus, the development process itself is often responsible for most of the visible environmental problems. Such a process is catalyzed by those sections of society who are economically more advanced. However, the problems arising from conditions of poverty and development are probably more critical for a country like India, as these relate to a large section of the country's population. The challenge is that of adapting to modes of sustainable development.

- 2.2 Population is an important resource for development, yet it is a major source of environmental degradation when it exceeds the threshold limits of the support systems, i.e. its carrying capacity. Madhya Pradesh has 66.14 million population, which is 7.8% of the total population of India. During 1981-91, the growth rates of urban and rural areas in the State were higher than the all India average. Growth rate for urban and rural population were 44.98 and 22.11% respectively as against all India figures of 36.19 and 19.71%. Though the present population density of M P is still lower than the national average, the alarming growth rate calls for immediate action on environmental issues driven by increasing human number.
- 2.3 Though the recorded forest area of the State is 34.84% of its total geographical area, as against 19.5% for the country, the forest area has decreased at the rate of 473 sq.km. per year from 1956 to 1994. Besides rapid degradation, the uneven distribution of forests in the State (Northern and Western parts have very poor forest cover) also calls for a rational forest management strategy.
- It has been forecast that bio-diversity based industrial activities 2.4 such as pharmaceuticals, cosmetics, seeds, food processing, waste treatment etc. would come to account for a third or more of the world economy in the 21st Century. India, being one of the world's top 12 mega-diversity countries, is likely to experience growth of such industries led by multinational corporations, who might patent, exploit and may even cause extinction of endemic species. Though there is no designated hot spot of bio-diversity in Madhya Pradesh, there are a number of potential Biosphere Reserves fit for in situ conservation of its biological wealth -i.e. flora and fauna. Therefore; the region too is likely to experience bio-diversity based industrial growth in future. Such growth may not only affect biological wealth but also the local people, whose sustenance largely depend on the availability of such resources. Since the forests are the main store-house of gene pool, there is greater need for both intensive and extensive efforts for bio-diversity conservation in consonance with National commitment under Bio-diversity Convention (1992), National Forest Policy (1988 and DNCED -1992 Agreement on Principles of Sustainable Development of Forests.
- 2.5 Nearly 44.33% of-the land of the entire State is utilized for agriculture with a few variations every year which to a large extent depends upon the onset of monsoon and rainfall variability. Agriculture dominates the State's economy as it provides more than 40.0% of the net domestic product of the State, and employment to 76.2°/a of the working population. However, migration of rural population for gainful employment is. causing the expansion of

cities requiring diversion of agricultural land. In addition, the development projects also require diversion of productive agricultural land thus reducing gross agricultural production. To increase food production, intensive agriculture based on high yielding varieties, chemical fertilizers and pesticides is being increasingly practiced. However, these practices have brought in various problems, which include salinity of land, pesticide resistance in insect pests and pollution of water resources. Therefore, there is need for ecological agriculture based on environment-friendly frontier technologies, i.e., agriculture based bio-fertilizer, bio-pesticides which specific are and biodegradable, proper water management practices etc.

- 2.6 The State has about 3.45% of cultivable wasteland and another 9.96% of the total area is not available for cultivation. These include degraded forests, ravines, mined-out and water-logged areas. A significant portion of this land could be put to productive purposes through reclamation and integrated land management practices, i.e. through soil and water conservation techniques and afforestation, possibly through joint forest management.
- 2.7 Madhya Pradesh has 48.2 million domesticated animal population, which constitute about 9.24 % of the total domesticated animal population of the country. But only 6.1% of the geographical area of the State is under pasture, which is not enough to sustain this animal population. Moreover, while the animal population is increasing, the grazing land has reduced to 27.09 lakh ha in 1992-93 on account of diversion for agriculture, industries, townships, roads and railways. Consequently about 22 million cattle is reported to graze in the forest areas also. Influx of cattles from neighbouring states during the scarcity period aggravates the problem. These problems have to be tackled through regulated entry of cattles from neighbouring states in drought prone areas as well as through a carrying capacity based animal husbandry programme.
- 2.8 Madhya Pradesh is the second richest state in mineral resources. The exploitation of mineral resources is the economic backbone of the State as well as a major cause of environmental degradation like loss of forest cover and cropland, accelerated erosion, silting of water bodies, air and water pollution etc.

The mineral exploitation in the State has induced a steady environmental degradation over the last 100 years. As on 01-01-94 there were 1273 mineral concessions spread over an area of 1.92 lakh ha of leasehold. Over the years, the value of minerals produced increased manifold, i.e. from Rs.13.06 crores in 1956 to 3312.32

crores in 1993-94. The major players in the exploitation of mineral resources in the State, for coal, iron-ore, copper, bauxite, etc are Govt.of India under takings. The open cat mining by them in places like Korba, Bailadila and Malanjkhand has caused large scale destruction of some of the best forests of the country. Such adverse impact of mineral exploitation needs to be compensated for on polluter pays principle, wherein State should have a major say in determining such compensations.

- 2.9 The State Housing Policy has provided for sustainable development of urban centres with proper civic facilities. However, relative poverty, unemployment, a rapid growth of population, high cost of land and buildings and restrictive controls on development which led to a mismatch between affordability for housing and supply of housing have compelled a large number of urban people to live in substandard housing and slums with unhealthy living conditions. These settlements are devoid of adequate and safe water supply, sewage and drainage and waste disposal facilities.
- The State with 5 major river systems, viz Narmada, Tapti, 2.10 Mahanadi, Chambal and Indravati, has one of the best watersheds of the country. Its wetlands have traditionally been the life line of agrarian societies, specially in Chhattisgarh areas. Unfortunately, our unique wetlands are facing tremendous ecological stress primarily because they are visualized only as a source of water, ignoring their vitality as a holistic biotic system. Incidentally, some of the pockets of major mineral resources are located in the highly fragile origin points of our rivers. Bauxite mining has led to the rapid denudation of the Maikal ranges, the most important watershed in the country, from where rise the Narmada, the Sone(which contributes the largest volume of water to the Ganges) and the Hasdeo, a tributary of the Mahanadi. Extensive deforestation in the hilly regions of the State with consequent erosion of valuable top soil, is not only threatening the livelihood and security of inhabitants of these areas, but is also causing serious damage down stream. Chambal and Tawa Command Areas area facing water logging because of an inadequately planned irrigation system, while the water table is receding because of over exploitation of ground water in several areas of Malwa and Nimar. Urban water bodies which have been climatizers, are degenerating due to anthropogenic pressures. By virtue of its central location, the State is bound to face the issues of exploitation and degradation of inter-state river systems also.
- 2.11 Industrialization in Madhya Pradesh has mainly been driven by its mineral resource. Mining and processing activities have caused severe environmental problems. Besides, Agro-based industries,

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like distilleries, paper and pulp, etc are the main source of pollution of water bodies. The foot-loose industries are also endemically located in areas like Indore, Raipur, Gwalior, Bhopal and Jabalpur. Industrialization is also the driving force behind urbanization, over congestion and excessive pollution, and diversion of population and economic resources from the rural areas on the other hand. Madhya Pradesh has witnessed the worst chemical disaster in the form of Bhopal has tragedy which has been instrumental in creating tremendous environmental awareness all over the world. The problem of common man is compounded in this whole scenario of energy, environment and development imbalance, calling for integration of environmental consideration with industrial development.

- 2.12 The decennial growth rate (44.98%) of the urban population of the state during 1981-91 was more than the national figure of 37.19%, which is more than double the rate of rural population growth (22.11%). The growth rate in industrialized districts like Indore has been almost 300% higher, i.e., 470 person per sq.km than the average density of the State (i.e. 149 per sq.km). The growth of population in urban areas is driven mainly by the influx of migratory population from villages for gainful employment. Such a rapid growth of town leads to slum expansion, congestion, loss of greenery and urban water bodies, unsanitary conditions, solid waste generation, inadequency of basic amenities, etc. The problem needs to be addressed at the recipient point through well planned urban infrastructural development and at the source of influx through rural employment generation.
- 2.13 The State being the highest producer of coal in the country, has a major role to play in fossil fuel based energy production and mitigation of consequent contribution to global warming.
- 2.14 Though the state policy for rehabilitation of oustees has addressed the issue on economic and anthropogenic basis, there can not be one to one relationship between the ecology and economy of one habitat to another. Hence, the issue of rehabilitation must be considered with relation to over all environmental and social impact analysis.
- 2.15 The current trend of over exploitation and ecological degradation calls for curb on population growth, both human and livestock to contain the debilitating impact of demographic pressure on ecosystems. The environmental problems induced by poverty call for accelerated pace of development; however, the sustainability of the development process can hardly be ignored. The causes and effects of environmental degradation are often interwoven in

complex webs of social, technological and environmental factors. And as such it is difficult to clearly delineate the causes and consequences of environmental degradation in terms of a simple one to one relationship.

#### 3.0 Action Taken

Consequent upon the enhanced awareness after Stockholm Conference on Human Environment in 1972, various regulatory and promotional measures have been taken for environmental protection and sustainable development in the country and in the State, the major ones of which are listed below. The responsibility of implementing most of the Central Acts lies on the State Government.

#### 3.1 Policies

- i. The National Forest Policy, 1988
- ii. The National Water Policy, 1990
- iii. Indian National Policy Statement for Abatement of Pollution, 1992
- iv. National Conservation Strategy and Statement on Environment and Development, 1992
- v. Madhya Pradesh Industrial Policy and Action Plan, 1994
- vi. Madhya Pradesh Housing Policy, 1995
- vii. Madhya Pradesh Mineral Policy, 1995
- viii. Madhya Pradesh Tourism Policy, 1995
- ix. Madhya Pradesh Rehabilitation Policy (Guiding Principles of State Policy for Equitable and Sustainable Development), 1996.

#### 3.2 Legal

- i. The Indian Forest Act, 1927
- ii. The Motor Vehicles Act, 1939, amended in 1988
- iii. Factories Act, 1948, amended in 1987
- iv. The M P Public Health Act, 1949
- v. The M P Control of Music & Noise Act, 1951

- vi. The M P Municipal Corporation Act, 1956; The Municipalities Act, 1961; and the M P Nagar Palik Vidhi (Sansodhan) Adhiniyam, 1995
- vii. Mines and Minerals (Regulation and Development) Act 1957, amended in 1986
- viii. The Wild-life (Protection)Act, 1972, amended in 1983, 1986 and 1991
- ix. The M P Nagar Tatha Gram Nivesh Adhiniyam, 1973 amended in 1994
- x. The Water (Prevention and Control of Pollution) Act, 1974, amended in 1988
- xi. The M P Slum Area (Improvement & Clearance) Act, 1976
- xii. The Water (Prevention and Control of Pollution) Cess Act, 1977, amended in 1991
- xiii. The Forest (Conservation) Act, 1980, amended in 1988
- xiv. The Air (Conservation) Act, 1980, amended in 1988
- xv. The Air (Prevention and Control of Pollution) Act, 1981, amended in 1987
- xvi. The Environment (Protection) Act, 1986
- xvii. The Public Liability Insurance Act, 1991, amended in 1992
- xviii. National Environmental Tribunal Act, 1995.

#### 3.3 Institutions

- i. State Environmental Council
- ii. Department of Housing & Environment
- iii. Environmental Planning & Coordination Organisation
- iv. Directorate of Town & Country Planning
- v. M P Pollution Control Board
- vi. Disaster Management Institute
- vii. Department of Forest

- viii. Department of Agriculture
- ix. M P Council of Science & Technology
- x. State Wildlife Advisory Board
- xi. Urja Vikas Nigam
- xii. Rajeev Gandhi Sanitation Mission
- xiii. Rural Development Department-Development of Watershed Area & Wasteland
- xiv. Regional Museum of Natural History
- xv. Water and Land Management Institute
- xvi. State Forest Research Institute
- xvii. Department of Water Resources Development
- xviii. Department of Public Health Engineering

#### 3.4 Natural Resource Conservation

- I. Participation in National Wetland Conservation programme by formulation and implementation of Wetland Conservation scheme for urban water bodies through out the State, including implementation of Bhoj Wetland Project, funded through OECF loan.
- II. Watershed and Wasteland development through public participation under Employment Assurance Scheme (EAS) & under Drought Prone Area Programme of Rural Development Department.
- III. Restriction of diversion of forest land for non-forest purposes under the Forest (Conservation) Act, 1980.
- IV. Implementation of Joint Forest Management and Bio-diversity conservation programme in the State as per commitment under New Forest Policy, 1988.
- V. Establishment of network of 11 National Parks and 34 Sanctuaries including 5 Tiger Reserves and formulation of project documents for potential Biosphere Reserves.
- VI. Implementation scheme for Urban forestry and degraded forests

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- VII. Environmental Impact Analysis and rehabilitation of oustees of River Valley Projects.
- VIII. Identification and development of wastelands
- IX. Eco-development of ravines
- X. Implementation of the provisions of Mines & Minerals (Regulation & Development) Act, 1957 (amended in 1986) related to environmental protection including Environmental Management Plan (EMP).
- XI. Flood and Drought prone area programmes
- XII. Preparation of comprehensive document on Environmental Status of the State.

## 3.5 Measures for Impact Reduction of Development of Projects & Pollution Control

- I. Publication of Environmental Guidelines for siting of polluting industries
- II. Establishment of procedure for Environmental Impact
- III. Enforcement of standards and system for environmental audit for polluting and hazardous industries
- IV. On-site and off-site emergency plans for hazardous industries
- V. Implementation of National River Action Plan to prevent pollution of the major rivers and to restore their water quality.
- VI. Identification of environmental pressure areas and points
- VII. Fiscal incentives for adoption of low waste and no-waste technologies
- VIII. Declaration of whole of the State as pollution control area
- IX. Establishment of water and air quality monitoring stations in selected areas.
- X. Documentation of status of pollution and impact there of.

#### 3.6 Training, Awareness & Other Activities

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- i. Implementation of National Environmental Awareness Campaign in the State as Regional Resource agency of Govt. of India
- ii. Training programmes, workshops and seminars for building up professional competence and for creation of awareness
- iii. Constitution of District Paryavaran Vahinis and Environmental Conservation Corps as voluntary action groups
- iv. Surveys and Research
- v. Preparation of Environmental Status Report of the State periodically
- vi. Conservation of sensitive areas around historical monuments
- vii. Promotion of Non-conventional energy

#### 4.0 Goal

Integrated conservation and improvement of environment to ensure sustainable development.

## 5.0 Agenda

- i Each sectoral policy will promote the cause of environmental conservation and no sectoral policy will be in conflict with the State Environment Policy.
- ii Development projects will ensure environmental conservation.
- iii Promote positive intervention through public awareness and participation.
- iv Encourage Research and Development in eco-technology and environmental conservation.
- v Develop man-power and appropriate organizational structure for integrated environmental management.
- vi Integrated management of ecosystem to ensure conservation of biological diversity, gene-pool and other resources, viz., land, air and water.

## 6.0 Strategies for Action

#### 6.1 Check on Demographic Growth

Promote family welfare and female literacy programmes with emphasis on environmental sanitation, health, hygiene and social status of women.

#### 6.2 Natural Resources Conservation (Life Support System)

#### 6.2.1 Water

- i. Encourage recycling of waste water and optimise conjunctive use of ground and surface water.
- ii. Water budgeting for rational allocation for domestic, agricultural, industrial and other uses; and for rural and urban populations.
- iii. Measures against over exploitation of surface and ground water.
- iv. Building of a network for assessment and monitoring of surface and ground water quality.
- v. Conservation of wetlands for ensuring sustainable ecological and economic benefits.
- vi. Ensure a system for integrated management of water resources.
- vii. Measures against disposal of dead bodies and inflow of chemical fertilizers and pesticides into the water bodies.
- viii. Encourage and improve traditional methods of rain-water harvesting and storage
- ix. Maintenance of green buffer zone at the fringe of water bodies
- x. Ensure minimum required flow in the down-stream of dams

#### 6.2.2 Land

- i. Adoption of a rational land use policy.
- ii. Diversion of agricultural land for non-agricultural purposes only when it is absolutely necessary.
- iii. Improvement of water-logged and salt-affected lands and command area.

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- iv. Regulate over-grazing and ensure stall feeding in critical areas for minimizing the impact of over-grazing and consequent land degradation.
- v. Conservation of pasture lands.
- vi. Ensure public participation in landuse planning, wasteland regeneration, afforestation, soil conservation programmes etc.
- vii. Measures to ensure sustainable use of community land.
- viii. Restoration and reclamation of degraded areas including ravines, weed infested areas, mined areas, over-grazed lands and degraded forests

#### 6.2.3 Biomass & Biodiversity

- i Inventorisation of eco-sensitive zones, biological resources and ethnobiological systems.
- ii Creation of protected area network, maintenance of forest corridors between them, and proper rehabilitation of affected rural/tribal population.
- iii Regulatory protection of genetic resources with emphasis on indigenous, threatened and endangered species, to be supported by the establishment of a Regional Genetic Resource Centre.
- iv Discourage monoculture practices and restrict introduction of exotic species without adequate investigation.
- v Encourage biological regeneration of non-forest waste land areas by private sector and Panchayat institutions especially for fuel wood, fodder and timber for rural masses.
- vi Incentive for development of alternatives to reduce dependence on fuel wood and for raising bamboo and other species providing small timber for local home construction and agricultural implements
- vii Encourage only those wood based industries which can develop their raw material through waste land regeneration.
- viii Research and Development for improvement of biological productivity, both terrestrial and aquatic and for development of alternatives to reduce dependence on wood.

- ix Encourage research on conservation, propagation and use of **Neem.**
- x Participation in biological conservation programme under Convention on Biological Diversity.
- xi Encourage **eco-tourism** in protected areas.

#### 6.2.4Atmosphere

- i Active participation in national programmes under Convention on Global Climate Change.
- ii Rigorous regulatory control on the emissions from industrial and transportation sectors.
- iii Extensive plantation in urban and industrial air-polluted zones.

# **7.0** Environmental Perspectives in Development Activities

- **7.1 Agrarian Systems** (Agriculture, Irrigation and Animal husbandry)
  - i Promotion of sustainable farming, including organic farming, crop rotation, use of bio-fertilizer and bio-pesticides, etc.
  - ii Adoption of a system of land capability classification for different use.
  - iii Strengthening Panchayat Raj Institution for optimal resource management and for contingency planning for drought and flood.
  - iv Develop a system of microlevel integrated watershed management
  - v Priority to decentralized network of small irrigation projects through the involvement of Panchayat Raj Institutions.
  - vi Environmental Impact Assessment (EIA) and continuous monitoring of major and medium irrigation projects
  - vii Prior public hearing for major dams.
  - viii Encourage use of non-conventional energy in agricultural sector

Encourage qualitative improvement of domestic cattle and planning animal husbandry programmes on the basis of carrying capacity of the area.

#### 7.2 Forestry

The National Forest Policy (1988) outlines the broad guidelines for conservation based management of forests. However, Madhya Pradesh being one of the richest States with respect to forest resources, the State shall endeavour to join hands with the country to address the issues pointed out in the UN Agreement on Principles of Sustainable Management of Forests and National Forest Policy. The action points are as follows:-

- i Ensure participation of local people in forest management through Panchayat Raj institution/Village Forest Protection Committees constituted under Joint Forest Management programme and provide legal mechanism for protection of their traditional rights and concessions.
- ii Local communities will be given more secure and meaningful rights over public lands and waters in their own localities following the lead of joint forest management programme.
- iii Restriction on diversion of forest land with mandatory provision for compensatory afforestation whenever necessary, and creation of land banks for afforestation.
- iv Establishment of fodder banks at the fringe of forests to promote stall feeding of cattles
- v Develop time bound programme for bridging the gap between demand and supply of fuel wood.
- vi Interpretation Centres at the forests of topical interest, including specially protected areas.
- vii Take up massive wasteland afforestation programme through Panchayat Raj Institutions and NGOs on benefit sharing basis under the Waste Land Management Board.
- viii In-situ and ex-situ conservation of medicinal and aromatic plants.
- ix Eco-cost benefit analysis (Socio-economic and environmental)of all forestry projects.

x Encourage afforestation in private sector under agroforestry, social forestry and sectoral forestry.

#### 7.3 Energy

- i Encourage fuel efficient devices, environmentally benign technology and environement friendly substitutes to reduce atmospheric pollutants.
- ii Decentralised small projects for rural sectors and promotion of non-conventional renewable energy generation systems.
- iii Incentives for conservation and punitive measures for abuse of energy.
- iv Introduction of energy audit systems in industrial and commercial establishments and public buildings.

#### 7.4 Industry

- i Promotion of no-waste/low waste/recycling based environmentally clean technologies for industries
- ii Operationalisation of "polluter pays" principle.
- iii Environmentally compatible siting of industries.
- iv Identification of areas for establishment of polluting industries.
- v Establish common effluent treatment and common incineration systems in cluster of small scale industries, while major and medium industries should be required to install adequate pollution control systems on their own.
- vi Enforcement of pollution control norms and introduction of environmental audit, on site emergency planning and public liability insurance
- vii Integrate public awareness programmes for environmental safety and hazards from industries with mandatory environmental clearance.
- viii Prior public hearing for siting of major hazardous and polluting industries.
- ix Setting up of Environmental Cells in industries and ensure their close liaison with regulatory agencies.

- x Introduce a system of Environmental Impact Assessment (EIA) through an Impact Assessment Agency for medium and environmentally sensitive small scale industries, on the lines of EIA notification of Govt. of India (for major polluting nits).
- xi Mandatory provisions for EIA of major and polluting industrial projects and ensure the use of such EIA reports as a resource for regional and micro-level planning.
- xii Incentives and punitive measures to ensure fly-ash utilization.

#### 7.5 Transportation

- i Improvement in mass transportation system to reduce increasing use of fuel, traffic congestion and pollution.
- ii Regulation of environmental safety in transportation of hazardous substances.
- iii Encourage R&D in private sector for replacement of conventional fossil fuel in transportation.
- iv Enforcement of smoke standards for containing vehicular exhaust.
- v Proper maintenance of roads.

### 7.6 Mining

- i Ensure time bound rehabilitation of mined out areas for productive use and implementation of Environmental Management Plans (EMP) with public participation
- ii Ensure effective implementation of EMP through a system of periodical monitoring by the nodal agency.
- iii Integration of EIA in mining projects of more than 50 ha and all projects in environmentally sensitive areas.
- iv Imposition of environmental conditions to ensure systematic extraction of minerals alongwith environmental conservation.
- v Discourage selective mining of high grade ores and encourage recovery of associated low grade ores also.
- vi Encourage on-site mineral beneficiation to reduce impact of transportation, processing and utilization.

- vii Adoption of environmentally compatible technology and strengthening of enforcement machinery.
- viii Regular monitoring of major mining areas.
- ix Compensatory afforestation in sites nearest to the site of mining.
- x Utilization of suitable abandoned pits for recharge of ground water.
- xi Identification and notification of ecologically sensitive/fragile areas and places of cultural heritage to regulate mining activities.
- xii Economic evaluation of environmental damage caused by major mining operations for enforcing the "Polluter pays" Principle .

#### 7.7 Human Settlements

- i Ensure sustainable development of urban centres as envisaged in the State Housing Policy through environmental/social impact analysis based development planning.
- ii Ensure proper management of domestic, commercial and bio-medical solid wastes.
- iii Encourage participation of private sector in the collection, treatment and disposal of liquid and solid wastes to support the essential services being provided by the Government sector.
- iv Create and strengthen health care facilities and environmental sanitation to contain spread of communicable diseases.
- v Time-bound formulation and publication of comprehensive perspective plans for all ten delineated resource regions under the Town & Country Planning Act, 1973. Remote sensing and other advanced technologies will be used for this purpose.
- vi Conservation and restoration of natural, the built and the material heritage of the State.
- vii Conservation of urban water bodies.
- viii Incentives for industrial and job locations in areas other than urban centres and creation of gainful employment opportunities and infrastructure in rural areas, to discourage migration from rural areas.

- ix Establish satellite towns for decentralization of urbanization and to ensure the limit of designed population.
- x Improve infrastructure facilities and adopt decentralised modular service networks for water supply and sewerage rather than mega systems.
- xi Promote use of indigenous building materials and appropriate construction technologies.
- xii Assessment of impact of growth of human settlement subsequent to industrial growth.
- xiii Measures to contain the misuse of drinking water.
- xiv Establish norms for provision for adequate green and open spaces in urban areas.

## 8.0 Public Participation

- i Suitable measures to ensure conservation and management of Common Property Resources for their sustainable use through community control or through Panchayat Raj Institutions.
- ii Documentation of traditional knowledge systems and rights with a view to protect them.
- iii Introduce a system of natural resource accounting and participatory EIA of all development projects through mandatory public hearings, debates, joint planning and management.
- iv Popularise solid waste management technologies such as recycling, reuse, composting, energy generation etc. through public participation.
- v Ensure women's participation in all the participatory programmes.
- vi Ensure right to information.

## 9.0 Man Power Planning & Organizational Back-up

- i Create a cadre of trained environmental managers.
- ii Ensure creation of an Environmental Cell in every Government Department associated with resource utilization and development planning, and an Environmental Awareness Cell

- in every major development project which affects a large number of people.
- iii Create a Consortium of Voluntary Environmental Action Groups (CVEAG).
- iv Strengthen M P Pollution Control Board & Environmental Planning & Coordination Organization (EPCO) with a view to ensuring enforcement of legal provisions for the monitoring and control of pollution.
- v For strengthening the system of environmental awareness, research and training, **Environmental Planning and coordination Organisation (EPCO)** will be designated as '**State Eco-Centre**' with the responsibility to coordinate among various State Government Departments, CVEAG, and Field Level people's groups for effective implementation of environmental management programmes through planning, supervision, guidance, funding and feed back..
- vi The Environmental Planning & Coordination Organization (EPCO) will prepare at least two Environmental Status Reports of the State during a Five year plan period and shall act as nodal agency for monitoring the implementation of the State Environment Policy.
- vii Ensure effective input of State Environmental Council in environmental conservation through frequent interaction with the members and create District Environmental Councils as an advisory body for assistance and guidance in planning.

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