# 6. Biodiversity, Forests and Wildlife

Biodiversity is defined as variability and variety in life forms including genes, species and ecosystems. Biodiversity conservation seeks to maintain life support systems provided by nature. Adding to the impact of natural processes, human intervention has had an adverse effect on these life support systems and thereby on biodiversity. Much attention therefore has been focused internationally on formulating policies towards the conservation of biodiversity over the past decade.

While the Convention on Biological Diversity (CBD) was signed in December 1992 with 177 signatories to date, there are major issues relating to the translation of its tenets into national governance systems. As widely acknowledged since Rio, multisectoral implications need to be a part of planning development at the local, regional and national level. Each signatory has started working on, and some countries have already completed their National Biodiversity Strategy and Action Plans which attempt to address the main tenets of the CBD which are: conservation, sustainable use and equitable sharing of benefits. However the ground reality is that the concerns of the CBD have not yet been mainstreamed because biodiversity is affected by market valuation as well as by the fact that there are concerns related to its conservation, sustainable use and equitable sharing of benefits with regard to subsistence, livelihoods, development, governance and other issues.

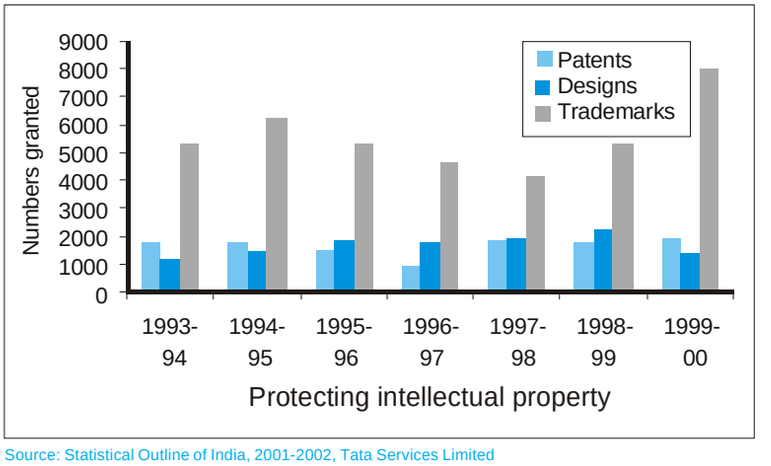
## Learnings and Perspectives

### 6.1 Conservation and Management

- All policy and legal instruments must stem from an authoritative and accurate data base on biodiversity. The data base needs to be scientifically compiled, standardized and continuously updated at the local level and compiled at the regional and national level.
- Critical trends such as degradation/fragmentation of habitats, extinction of species and destruction of unique habitats need to be monitored on an ongoing basis.
- Indicators of environmental quality of all ecosystems need to be identified and monitored with the help of research/scientific institutions.
- Conservation and management measures must involve full stakeholder

participation, be ecologically appropriate, and yield sustainable benefits to people.

- Conservation management must move towards more participatory egalitarian processes and must ensure the provision of tenurial and livelihood security to those most dependent on biodiversity, particularly the landless, tribal societies and women and children.
- Ecosystem specific approaches and the use of select indicator species can help focus conservation strategies.
- Policies supportive of programmes for captive breeding and reintroduction into the wild for critically endangered species are needed.
- The impact of human activities on natural habitats including use of pesticides and chemicals, need to be monitored and documented.
- New national guidelines need to be developed for tourism, particularly in Protected Areas, in a manner compatible with objectives of wildlife conservation and management of protected areas.
- Natural disaster management needs special attention as wildlife and forests are often destroyed by floods and other natural disasters.
- Rural energy planning, renewable energy and development of technology for increasing the efficiency of energy use are crucial to conservation.
- To protect resources and the environment, environment-friendly technology needs to be promoted through well managed schemes.
- International cooperation needs to be promoted and policies/ agreements formulated for transboundary conservation across Bioregions.




Source: Statistical Outline of India, 2001-2002, Tata Services Limited

## 6.2 Trade and Biodiversity, and Related Issues

- International trade has conventionally been destructive of biodiversity and people's livelihoods, by encouraging over-exploitation of natural resources, creating pollution through increasing transportation as well as habitat loss by infrastructure development.
- The World Trade Organization needs to focus on trade matters without linking trade with social issues. India is opposed to multilateral rules on investment and competition in the WTO, as well as in linking trade with social issues.
- There should be international recognition of effective and credible *sui*

*generis* systems of protection of biodiversity and the associated traditional knowledge, including by way of prior informed consent and benefit sharing for traditional knowledge used by patent applicants and others.

- International Property Right (IPR) protection should not displace the developing countries as competitors, and transform them into mere suppliers of raw materials. Patenting of biological resources must not deny or restrict developing countries' access to their own biological resources.

- International cooperation and initiatives are required to strengthen the monitoring of bio-piracy and to establish international mechanisms to ensure equitable sharing of benefits from the use of biological and genetic resources.

## 6.3 Capacity Building

- Existing mechanisms for recruitment, training and career development of Protected Area personnel need to be reviewed and strengthened. A professional wildlife cadre capable of helping to achieve the above objectives needs to be strengthened and sustained.

Parth Shah
*WSSD School Competition*

- The study of traditional knowledge must be coordinated with anthropological/social science institutions, with a view to apply such knowledge to wildlife management and to obtain IPRs to benefit local communities and the nation.

- People from all sectors especially women, the landless, and socially and economically backward groups need to be empowered through capacity building to conserve and use biodiversity sustainably.

- Capacity building for local communities, forest personnel at all levels, elected representatives, decision makers, and bureaucrats needs to include the provision of technical skills.

- Livelihood issues remain at the apex of biodiversity conservation strategies in a populated and resource challenged country like India. Livelihood generation through skill creation and creation of opportunities in all sectors is a critical priority.

## 6.4 Governance

- All decision-making and implementation authorities concerned with biodiversity conservation, such as the Forest Department, must provide internal skill building and human resources to enable accurate identification and scientific documentation of the areas under their jurisdictions.

- All specialized research organizations, NGOs academic institutions, etc. must pool efforts and information to build a biodiversity database. This database and information must be available for scrutiny, which will also ensure that the information is updated regularly.

- The role of commonly found as well as rare species in improving productivity of soil and in controlling pests must be specifically documented and this knowledge widely disseminated to ensure conservation and its integration into agriculture and health strategies.
- A coordinated approach to the identification and assessment of the ecological impact of alien invasive species must precede the development of strategies to control and eradicate those that have become pests or a menace.
- Transparency and easy access is necessary to protect the indigenous knowledge of people against bio-piracy as well as the development of a system for use of this knowledge (intellectual property protection).
- Policies related to management of environment, wildlife and natural resources need to be reviewed and amended, taking into account India's traditional practices, to stimulate community involvement in management.
- Sacred groves, religious landscapes and ponds which have been an integral part of traditional Indian ethos of conservation are currently eroding. There needs to be a strong policy that reinforces these traditions.
- Communities must be allowed to use Non-Timber Forest produce for employment and income generation, so long as there are safeguards to ensure that this is done sustainably .
- A separate policy needs to be formulated on fuel and fodder to prevent deforestation. This needs to consider energy needs and alternatives.
- Encroachment of forests, parks/sanctuaries/fringe areas abetted by political support is a major concern despite Forest/Wildlife Laws. Strict enforcement of existing laws is needed.
- A zoning atlas for industrial development is needed for every district. Conservation priorities need to be integrated into these zoning maps. Often chemical industries are shifted to sensitive coastal areas. Integrated and coordinated planning is needed to protect conservation goals.
- Monitoring and evaluation of Government-enacted forest laws and policies need to be entrusted to independent institutions/NGOs working to conserve biodiversity.
- Institutional conditions need to be created for developing new methods and mechanisms for planning and conflict resolution. Government must adopt a holistic integrated approach and facilitate NGOs and other institutions and their conservation efforts.
- All development projects, dams, mining, road building, railways etc. must be evaluated from a biodiversity and environment point of view.
- National planning has not adequately taken into account the ecological and economic consequences of extracting short-term commercial gains from wildlife habitats. It is therefore necessary that the Ministry of Environment and Forests should approach various ministries to integrate their activities in such a manner that effective wildlife conservation takes place.

**"Biodiversity is the basis for nutritional adequacy and food security and hence it should be preserved and managed for a sustainable future."**

S. Bisaliah
Multi-stakeholder Consultation

## 6.5 Education and Public Awareness

- Education and awareness promotion measures for different target groups need to be reviewed and strengthened with the help of ministries of Human Resource Development, Environment and Forests, University Grants Commission, Universities, scientific institutions, NGOs, etc.

- Greater role of mainstream media in highlighting successful conservation case studies and initiatives by the NGOs and the general community is required.
- Bioregional information centres must be established to heighten public awareness and to support biodiversity.
- Education has to be recognized as a tool for change, and adequate resources allocated in the annual budget and in five-year plans.
- All the national and state administrative training academies must incorporate induction and in-service modules on biodiversity related issues, including environmental economics.

## 6.6 Mobilizing Financial Resources for Conservation

- Collaborative biodiversity conservation projects need to be developed to draw international funding and state-of-the-art techniques and expertise.
- Mechanisms to fund grassroot organizations and initiatives need to be developed.
- Governments, multilateral development agencies and NGOs need to jointly work on establishing biodiversity conservation funding resources and mechanisms for disbursing them.
- Funding agencies such as GEF etc. should expand their area of work to include those programmes which meet regional priorities.

***We share the earth not only with our fellow human beings, but with all other creatures.***

The Dalai Lama