

India-UNDP Project on
“Strengthening of Institutional Structures to Implement the Biological diversity Act”

Highlights of the Report of the Consultant (Base line Study)

National Biodiversity Authority (NBA) under a GOI-UNDP project appointed a Consultant to make a baseline study of the present status/capacity of the institutions identified in the Biological Diversity Act (BDA) namely NBA, State Biodiversity Boards (SBB) and the Biodiversity Management Committees (BMC) of Madhya Pradesh and Jharkhand states, the two states covered under the project. The academic and research institutes in the project area related to biodiversity were to be identified. The models of biodiversity conservation practiced were to be documented as well as the legal biodiversity rules of the two states.

The Consultant made two visits each to Madhya Pradesh and Jharkhand and had extensive consultations with the staff of the SBBs. Field visits were made to see the situation in the field. Visits were made to most of the important biodiversity related academic, research and planning institutes in Bhopal and Ranchi and in the districts of Hazaribagh (Jharkhand) and Hoshangabad (M P). In the institutions, contacts were made with concerned professors/scientists/staff so as to know their programs and activities and how they can be helpful in implementing the BDA. Documents were seen to know the mandate and activities of NBA and discussions were held with NBA officials. Based on these observations the report has been prepared, highlights of which are as under.

National Biodiversity Authority- status and needs

1. NBA as a regulatory authority, constituted in October 2003 at Chennai, as per act, has been doing its task with the limited resources it has. It has formed a number of committees to assist it in clearing the requests for bioresources and related results. It has actively participated along with the representatives of the Ministry of Environment and Forests (MoEF) in biodiversity related issues at international level. It is maintaining linkages with SBBs and has assisted them in awareness generation and capacity building in a limited way. It has organized national consultation on biodiversity related issues.
2. Keeping in view its international and national obligations and required support to SBBs and BMCs, the resources of NBA are very limited in terms of available funds, staff, office space and equipment. Thus there is need to strengthen NBA to a great extent in terms of funds to have more staff, space and support that they would need. There is need of Technical Officers trained in various disciplines of life sciences to support and monitor the BD activities going on in States. One Technical Officer may be designated for a group of 3-4 states and so also a Technical officer for the union territories. These additional Technical Officers, around eight, would need support staff, equipment and space.
3. To implement the BDA more effectively, NBA could take responsibility of linking data base on biodiversity available with various institutions/organizations so that the information on biodiversity/bioresources is available in a portal/at one point. This would avoid duplication of efforts as biodiversity documentation is being done by many and varied agencies throughout the country and information are fragmented. This will also help better utilization of bioresources.

4. NBA is supposed to help SBBs and BMCs in their activities. The mechanisms need to be worked out and clear guidelines provided.
5. To facilitate BD activities and utilize the resources in efficient manner, NBA, in addition to its regulatory functions, may be designated to act as a **clearing house** for all BD related activities where funds of MoEF are involved. NBA may charge a modest fee for it, which will help it generate its own resources/fund.
6. The NBA may function in a Mission mode with much more resources to provide administrative and technical guidance to SBBs and BMC.

Madhya Pradesh

Profile

Located in the central part of India, Madhya Pradesh is the second largest state of the country with an area of 30.82 million ha constituting 9.38% of the geographical area of the country. It lies between latitude 21⁰17' and 26⁰52' N and longitude 74⁰08' and 82⁰49' E. The State can be divided into four physiographic regions; the low lying areas in the north and north-west of Gwalior, Malwa plateau, Satpura, and Vindhyan ranges. The important rivers of the State are Chambal, Betwa, Sone and Narmada. The rainfall decreases from south east and east to north-west and west. The average annual rainfall varies from 800 mm to about 1,800 mm. The annual temperature ranges from 22.5⁰ C to 25⁰C.

The state covers an area of 308250 sq. km. out of which the net cultivated area is 149450 sq. km. The total population of the State is 60.35 million (*Census 2001*) which constitutes 5.87% of the country's population. Of this, rural population is 73.54% and urban 26.46%. The Scheduled Tribes account for 22.3% of the total population of the State. The population density is 196 persons per km². The total livestock population of the State is 35.6 million (*Livestock Census 2003*).

Forest Resources

The State has the largest forest area in the country. The recorded forest area is 94,689 km² constituting 30.72% of the geographical area. Legally, this area has been classified into Reserved Forest, Protected Forest and Unclassified Forest, which constitute 65.36%, 32.84% and 1.80% of the forest area respectively.

The Central, Eastern and Southern parts of the State are rich in forest resources, whereas Northern and Western parts are deficient. Major forest types occurring in the State are Dry Thorn, Dry and Moist Deciduous, Sub-Tropical Semi-Evergreen and Tropical Moist Evergreen forests. Based on species composition, there are three important forest formations: teak forest, Sal forest and miscellaneous forests. Bamboo bearing areas are also widely distributed in the State.

The important Non Wood Forest Products (NWFP) of the state are Tendu leave (*Diospyros melanozylon*), Sal seed (*Shorea robusta*), Harra (*Terminalia chebula*), gums, Chironji (*Buchnanian lanzan*), flowers and seeds of Mahua (*Madhuca indica*).

Protected Areas

There are 9 National parks and 25 Wildlife Sanctuaries spread over an area of 1.1 million ha constituting 11.40% of the total forest area and 3.52% of the geographical area of the State. There are five Tiger Reserves in the State namely, Kanha, Panna, Bandhavgarh, Pench, and Satpura. The Pachmarhi Biosphere Reserve covers parts of Hoshangabad, Betul and Chhindwara districts with a total area of about 0.5 million ha and includes Bori Sanctuary, Satpura National Park and Pachmarhi Sanctuary.

Balaghat District

District Balaghat occupies the south eastern region of the Satpura and Upper Wainganga Valley. The district spans over a degree from 21.19' to 22.24' North and 79.31 to 81.3' East. The total area of the district is 9245 Sq. Km. Wainganga is the most important river of the district. The total population of the district is 14, 97,968. The population density of the district is 148 persons per sq. km. The District is very rich in forest wealth. About 52% of the area is covered with forest. Teak, Sal, Bamboo and Saja are the main trees species. District is still proud of its varied fauna consisting of Tigers, Leopard, Bear, Neel-Gai, Deer & Bison on one side and birds like Peacock, Red Bulbul and Koyal on the other. Agriculture is an important component of the economy of the district having 291785 ha net area sown. Double cropped area is 179557 ha.

Hoshangabad District

Hoshangabad district lies in the central Narmada Valley and on the northern fringe of the Satpura Plateau. It lies between the parallels of 22 degree 15 minute and 22 degree 44 minute east. In shape, it is an irregular strip elongated along the southern banks of Narmda river. The total area of the district is 5408.23 sq. km, out of which 2229.74 sq. km. is forest land. There are two main rivers namely the Narmada and the Tawa. Other small rivers are the Dudhi and the Denwa. A very big lake is also at Pachmarhi. Average rainfall is 134 cms. The average maximum and minimum temperatures are 32 deg.C and 19 deg.C respectively. The population of the district is 886449 (2001 census) and there are 923 villages.

Rewa District

Rewa lies between 24'18 and 25'12 north latitudes and 81'2 and 82'18 east longitudes. The district can be divided into the four natural parts- Kymore Pahar, Binjh Pahar, Rewa Plateau and Lower-Northern Plain. Rewa is basically a plateau and from the south to the north its height decreases. In the south the height of Kymore range is more than 450 meters, whereas the height of alluvial plain of Teonthor is just 100 meters. In the district, dissected hills, ravines, plain plateau, scarp, water-fall and alluvial plains can be seen. The rain-water of the district is flown out by the two assisting rivers of the Ganga, Tons or Tamas and Son. The area of the district is 6240.06 sq. km. with population of 1554987.

State Biodiversity Board- status and needs

1. SBB Madhya Pradesh was established in the year 2005. Its board, on completion of its five year term, has been renewed for next five years. The state has made provision of six managers/officers for the board out of which three are in place. UNDP has provided three staff in its project, which is all in place. The board has its own rented office with adequate space. During last five years of its existence, the board has undertaken good number of activities at state level. The vacant positions in the Board needs to be filled for effective implementation of the programme.
2. The activities of the Board include awareness generation activities also involving school and college students. It has got done a number of documentation studies related to the biodiversity of the state mostly through faculty of colleges/universities.. It has developed good linkages with many academic institutes in the state, which are many. It has brought out good number of publications and a documentary film on state biodiversity. It has initiated action to identify the Biodiversity Heritage Sites (BHS) and sacred groves. It is collecting information on the industries utilizing the bioresources in the state. This is being done through IIFM, Bhopal. It is documenting the traditional knowledge (TK) of three tribes of M P through State Forest Research Institute. A study on utilization pattern of ethno-botanical uses is being done through Tropical Forest Research Institute, Jabalpur. It has taken many other initiatives such as establishment of biological parks at district level.
3. In the state, 23743 BMCs have been notified, but these have remained practically non-functional throughout five years of their term. Now these are to be renewed or new BMCs are to be formed throughout the state. In Hoshangabad, one of the UNDP project district, the BMCs have been renewed for next five years. So far little has been done at BMC level. The BMCs need to be formed in other districts.
4. The board needs additional resources in terms of funds and staff. M P is a big state with fifty districts and will have more that 20000 BMCs at Panchayat level and many in urban areas at municipal level. To provide technical and administrative support to BMCs, in addition to its responsibilities of state level activities, SBB needs strengthening with higher budget allocation. The present level of state support of Rs. 134 lakhs a year is grossly inadequate.
5. The present system of forming the TSGs notifying district officials is redundant and needs change. Fortunately the State has number of well established academic and research institutes and faculty/scientists from these institutes can be drawn to form TSGs and they be provided logistic support to help the BMCs to document and evaluate the bioresources and then to find market for the same. TSG on these lines has been formed in Hoshangabad district. There is need to form such TSGs in other districts.
6. BMCs as per act are to promote conservation, sustainable use and documentation of biological diversity including preservation of habitats, conservation of land races folk varieties and cultivars, domesticated stocks and breeds of animals and microorganisms and chronicling of knowledge relating to biodiversity. But they have no administrative, technical and financial resources to meet these responsibilities. There is need to address this issue in holistic manner and provide resources/incentives to make the BMCs effective.

7. All the important research and development institutes/organizations in/around Bhopal and in the district of Hoshangabad have been enlisted along with the contact persons in the report. These may be used as resource for capacity building and documentation.
8. The models/mechanisms of biodiversity conservation and utilization being followed by five departments/institutes have been documented in the report. These can be used for biodiversity conservation in BMC areas.
9. The State Biodiversity Act, its rules are on SBB website (www.mpsbb.org). One gazette notification related to biodiversity is included in the report.

JHARKHAND

Profile

Jharkhand, one of the most important mineral producing States, came into existence on November 15, 2000 by carving out from the erstwhile State of Bihar. It has a geographic area of 7.97 million ha which is 2.42% of the land area of India. It lies between latitude 22°00' and 24°37' N and longitude 83°15' and 87°01' E. Geography of the State is marked by the plateau of Chhotanagpur, three major rivers – the Sone, the Koel, and the Damodar – and a tropical climate. The geographical area of the state is 79720 sq. km. The net area sown in the state is 1804000 ha, out of which only 157000 ha is irrigated. The state has 24 districts, 3744 Panchayats and 32260 villages.

The total population of the State is 26.91 million (Census 2001) of which 77.8% is rural and rest is urban. Scheduled Tribes constitute 22.5% of the total population. Population density of the State is 338 people per km². The State supports a livestock population of 15.83 million (Livestock Census 2003).

Forest Resources and Protected Areas

The recorded forest area is 23,605 km² which is 29.61% of the geographic area of the State. By legal status, Reserved Forests constitute 18.83%, Protected Forests 81.14% and Unclassed Forests 0.03%. The Chhotanagpur plateau is rich in forest resources. The three major forest types in the State are Tropical Moist Deciduous, Tropical Dry Deciduous, and Subtropical Broadleaved Hill Forests. Sal (*Shorea robusta*), the State tree, is the major forest species. Jharkhand has 1 National Park and 10 Wildlife Sanctuaries covering an area of 0.21 million ha which constitutes 2.62% of the total geographic area of the State. Palamu Tiger Reserve is also located in the State covering an area 1,026 km².

Forest Products

1. Large scale Production-Timber (Sal, Piar, Toon, Karam, Gamhar, Asan, Kend, Mahua, Kusum)
2. Minor Products-Bamboo, Kendu leaf for Bidi making, gum, lac, Padan, Thauta, Siddhadela trees used for agriculture, Castor, Karanj, Kusum, Mahua used for oil extraction, Mahua flowers used for local brew, Tasar and castor silk, Jharkhand is first in Tasar silk production. Of the total silk production in state 40% is in Singhbhum, 25% in Dumka and 13% in Hazaribagh district

Latehar District

Latehar district has been created on 4th April 2001. Previously, it was a subdivision of old Palamau district of Jharkhand State. Latehar district is situated between 84deg. 31 min. East longitude and 23 deg. 44.4 sec north latitude. The geographical area of the district is 3651.59 square kilometers. The economy of the people revolves round the forest, agriculture and minerals. Cultivation of paddy, maize, cereals, wheat, oil seeds etc. are common. The district has 173 villages, and 115 Panchayats. Total population is 107066.

Hazaribagh District

The geographical area of the district is 4313 sq. km. According to 2001 census the total population of this district was 2277108. Hazaribagh city is 16 km away from a national park which is one of best national park of India. Now it is renamed as Hazaribagh Sanctuary. Hazaribagh, meaning a thousand gardens, is a famous health hill resort situated at a height of 2,019 ft. above sea level. It has an excellent climate and beautiful scenery all around it in the midst of dense forest. It is rich in flora and fauna. It is a part of Chotanagpur plateau. The main mountains of Hazaribagh are Chandwara and Jillinja and their heights are about 2816 and 3057 ft, respectively. The main rivers of this district are Damodar and Barakar.

About 45% area of this district is forest area. The forest area of this district is full of medicinal plants and trees. Due to negligence and lack of awareness these are on the verge of extinction. Leopards, bears, jackals and foxes etc. freely move in these forests. In the winter season several foreign birds visit these forests areas.

The cultivable land can be divided into two parts namely - Upper land and Lower land. The lands situated on the banks of rivers are fertile. One can get good crop even after using lesser amount of fertilizers in these lands. But the upper land is barren. A huge amount of fertilizers and irrigation is required for cultivation in these lands. Irrigation facility is not adequate in this district due to hilly area. There are small natural rivulets, which are generally used for irrigation. There is no other natural source of irrigation. Damodar Valley Project is also meant for irrigation in this area but these measures are not sufficient. Generally the farmers depend on rain for their cultivation.

State Biodiversity Board- status and needs

1. In Jharkhand SBB was formed in 2007. Its Chairman and Member Secretary are senior officers of forest department and have additional responsibility of SBB. Their time for board activities is a constraint. Appointment of full time Chairman and Member Secretary will help planning and implementing biodiversity activities.
2. So far the state has not provided any staff for SBB. There is no separate office. UNDP staff is located in a temporary forest department building. Birsa Agricultural University at Kanke, Ranchi provided office space for the SPU, but this is not being utilized for logistic reasons. SPU needs a properly furnished office. The state must provide core staff for the SBB from different related departments to undertake biodiversity activities.

3. The state has number of academic and research institutes that can be involved in biodiversity activities. These have been enlisted in the report along with the contact persons. Resource persons can be drawn from these institutes for Technical Support Groups (TSG) which are to help the BMCs in documenting PBRs. These institutes can also be used to organize trainings for the Trainers and BMC members.
4. Biodiversity conservation practices followed by nine departments/institutions/authorities/NGOs have been included in the report. BMCs can benefit by these technologies relevant to their location.
5. The activities of the SBB started with the launching of the UNDP project. During January and February, 2010, workshops were held in the two districts- Hazaribagh and Latehar under UNDP project, covering mainly the awareness activities. Other activities as envisaged in the AWP needs to be undertaken by the SBB/UNDP project.
6. In these two districts, TSGs have been formed drawing personnel from academic institutions, retired professors and NGOs. Since the BMCs cannot be formed, as Panchayats have not been elected in the state, members of the existing Eco-Development Committees (EDCs) have been trained to prepare PBRs. Four such committees in Hoshangabad and one in Latehar district are presently preparing the PBRs with the help of TSGs. This needs to be continued.
7. To implement the BDA act in the state, SBB and local bodies need strengthening. Adequate budget provisions are urgently required so that the board can catch up and undertake much desired activities.
8. In Jharkhand, a poor state with immense potential through soil and water conservation methods, most of the cultivated area is rainfed and remains fallow during Rabi season. By adopting suitable water conservation measures, some area can be brought to double or multiple cropping. This will generate employment and economic well being of the people and reducing pressure on natural bioresources including forests.

General

1. At national, state and local levels, the awareness activities need priority. The policy makers, administrators and the people at large must understand the importance the biodiversity and traditional knowledge, then only resources will be spared and put to use in conserving, regeneration and raising the productivity of bioresources.
2. For capacity building in youth, courses on biodiversity, covering its various aspects, can be introduced in school and college curriculum.
3. The villagers and forest dwellers need capacity building for alternate livelihood generation so that the pressure on existing resources they utilize for living is reduced.
4. The academic, research, extension institutions in the country related directly or indirectly to biodiversity, which fortunately are many, must be involved in biodiversity conservation, promotion and use. They have the faculty, willing to be a stakeholder, and some

infrastructure which needs strengthening. A system needs to be developed to bring them in the loop.

5. Synergy needs to be developed between multiple agencies/institutions working at local level such as BMCs, Eco-Development Committees, Forest Management Committees, Forest Protection Committees, Van Samitis, Jangal Bachao Samitis, NGOs, SHGs, Gram Sabhas, Panchayats etc. to put in place an integrated biodiversity management program on area basis.
6. In the 5th meeting of the State Biodiversity Boards held at NBA Chennai, on April 24, 2010, following common constraints to majority of SBBs were identified and these need to be addressed.
 - Financial constraints to run SBB
 - Lack of infrastructure facilities
 - Shortage of administrative and technical human resources
 - Constraints in forming BMCs at different levels
 - Non drafting of rules by most of the states