



# **ANNUAL REPORT 2006-2007**



## **NATIONAL BIODIVERSITY AUTHORITY**

**#475, 9<sup>th</sup> SOUTH CROSS STREET,**

**KAPALEESWARAR NAGAR, NEELANKARAI,**

**CHENNAI 600 041**

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# 1. INTRODUCTION

Biogeographically, India is situated at the tri-junction of the Afro-tropical, the Indo-Malayan and the Paleo-Arctic realms. Because of its proximity to all the three realms, India possesses a unique assemblage of characteristic elements of biodiversity of each of them. Based on the available data, India ranks tenth in the world and fourth in Asia in plant diversity. According to surveys conducted so far, 47,000 species of plants and 89,000 species of animals found in India. India is an acknowledged centre of rich crop diversity. It is considered to be the home of 167 important cultivated plant species and 320 species of their wild relatives. India is considered to be the centre of the origin of 30,000 to 50,000 varieties of rice, pigeon pea, mango, turmeric, ginger, pepper, banana, bitter gourd, okra, coconut, cardamom, jack fruit, sugarcane, bamboo, taro, indigo, sunhemp, amaranths, goose berries etc. There are several hundred species of wild crop relatives distributed all over the country. India's domesticated animals consist of diverse livestock including poultry and other animal breeds.

Presently there are many pressures exerted on the Biodiversity of Indian forests, grasslands, wetlands, mountains, deserts and Marine ecosystems. One of the major causes for the loss of biological diversity in India has been the extensive depletion of vegetative cover to make way for expanding agriculture. Since most of the forests rich in biodiversity also contain the maximum amount of mineral wealth and are also the best sites for water impoundment and mining; development projects in these areas have often led to destruction of habitats. Poaching and illegal trade of wild life products have also threatened biological diversity. The major threats to species and genetic diversity in India are similar to those found elsewhere in the world.

India is one of the first few countries to have enacted an comprehensive legislation to achieve the objective of the Convention on Biological diversity, 1992. In response to its obligations under the convention especially Article 8(j), India has enacted the Biological diversity Act (BDA), 2002 with the National Biodiversity Authority as the key institutional mechanism at National level for implementing the provisions of the Biological Diversity Act, 2002. In 1994, the Government of India started the preliminary work on the Biological Diversity Act, 2002, and the act was finally passed by the Lok Sabha on 2<sup>nd</sup> December, 2002 and by the Rajya Sabha on 11<sup>th</sup> December 2002. According to this Act, NBA may advise the government on matters relating to the conservation of biodiversity, sustainable use of its components and equitable sharing of benefits arising out of the utilization of biological resources, select and notify the areas of biodiversity importance as biodiversity heritage sites under this act and perform other functions as may be necessary to carry out the provisions of the act. The National Biodiversity Authority on behalf of the Central Government may take measures necessary to protect the biological diversity of the country as well as oppose the grant of intellectual property rights to any country outside India on any biological resource obtained from India or knowledge associated with such biological resource which is derived from India.

NBA also perform functions such as laying down the procedure and guidelines to govern the activities such as access and benefit sharing on mutually agreed terms, Prior Informed Consent, MAT and Intellectual Property Rights, and is also in accordance with the Article 8 (j) of the United Nations Convention on Biological Diversity (CBD). Some of the key mandates of the Biological Diversity Act 2002 include an undertaking to respect, protect and register at local, state or national levels, the knowledge of local people relating to

biological diversity, regulate access to biodiversity, associated knowledge and benefit sharing and ensure equitable sharing of benefits arising out of the use of accessed biological resources, their byproducts, innovative practices associated with their use and applications and knowledge relating thereto in accordance with mutually agreed terms and conditions between the persons applying for such approval, local bodies concerned and benefit claimers. The authority will also coordinate the activities of the State Biodiversity Boards and Biodiversity Management Committees by providing them with technical assistance and guidance, as well as commission studies and sponsor investigations and research.

The National Biodiversity Authority is the key structure at the national level established for implementing the provisions of the Biodiversity Act, 2002. The NBA has following functions:

- a) Lay down procedures and guidelines to govern the activities provided under the Act, such as ;
  - i) For obtaining any biological resource;
  - ii) For transferring the results of any research (Certain collaborative research projects exempted)
  
- b) To advice the Government of India on specific areas such as:
  - i) Notifications of threatened species
  - ii) Designation of institutions as repositories for different categories of biological resources; and
  - iii) Exempt certain biological resources, normally traded as commodities.
  - iv) To build up database and documentation system
  - v) Create awareness through mass media
  - vi) Training of personnel, and
  - vii) Necessary measures in the areas of Intellectual Property Rights

**Procedures for approval of applications:**

1. A fee of Rs. 10,000 will be charged by NBA with each application requesting for access of genetic resources and associated TK.
2. The Authority after consulting local bodies and after collecting any required information, may grant conditional approval as defined in the Rules. The Authority may reject application if it considers that the request cannot be acceded to.
3. The Authority has also powers for the revocation of the access approvals.
4. The Rules prescribe procedures for transferring research results relating to Biological resources obtained from India for monitory consideration to any foreign agency. Any such application requesting for approval will be accompanied by fee of Rs. 5000. The Authority may agree to the request or reject the application.

**Other Powers/responsibilities of NBA:**

1. The Rules prescribes procedure for applying for Intellectual Property Rights (IPR). Such applications shall also be accompanied by fee of Rs. 500/- each. The Authority

shall decide preferably within period of 3 months, with such terms and conditions as it may deem fit to impose in each case.

2. The rules have also prescribed restrictions on activities related to access to biological resources.
3. Regulates 3<sup>rd</sup> party transfer of Biological Resources and associated TK.
4. To develop criteria for equitable benefit sharing. For this the Authority has been empowered to formulate guidelines and describe the benefit sharing formula which will include monetary and other benefits such as royalty, joint ventures, technology transfer etc. The quantum of benefit will be on mutually agreed terms.

### **State Biodiversity Boards**

Each State (except UT) is required under Section.22 of the Biological diversity Act, 2002 to establish a State Biodiversity Board which shall be a body corporate. The Board shall advise the State Government on matters relating to conservation and equitable sharing of benefits and regulate commercial utilization of any biological resource by Indians.

### **Biodiversity Management Committee**

As prescribed under Section. 41 of the Act, every local body shall constitute a Biodiversity Management Committee. The main function of the Committee is to prepare Peoples Biodiversity Register and advise State Biodiversity Boards or Authority on related matters.

## **2. CONSTITUTION OF THE AUTHORITY INCLUDING CHANGES THEREIN**

**The Notification was published in the Gazette of India vide No. S.O.262(E) dated 22<sup>nd</sup> February, 2007.**

In exercise of the powers conferred by Sub-sections(1) and (4) of Section 8 of the Biological Diversity Act, 2002 (18 of 2003), the Central Government has established a body called the National Biodiversity Authority, on and from the 1<sup>st</sup> day of October, 2003 for the purpose of said Act. After expiry of terms of the Members, the Authority shall consist of the following members, namely:-

### **Members appointed as Chairperson under clause(a) of Sub-section (4) of Section 8:**

Prof S. Kannaiyan, Chairperson, National Biodiversity Authority, Chennai - 600 041

### **Ex-officio members appointed under clause(b) of Sub-section (4) of Section 8:**

Three ex-officio members are appointed (Notification No 262(E) on 22<sup>nd</sup> February, 2007) by the Central Government for representing the Ministry dealing with Tribal affairs whom is Joint Secretary or an Officer of an equivalent rank and two representing the Ministry dealing with Environment and Forests of whom one is the Additional Director General of Forests and another one is Joint Secretary to the GoI.

### **Ex-officio members appointed under clause(c) of Sub-section (4) of Section 8:**

Seven ex-officio members are appointed (Notification No 262 (E) on 22<sup>nd</sup> February, 2007) by the Central Government to represent (Joint Secretary or an Officer of an equivalent rank) respectively the Ministries of the Central Government dealing with-

- (i) Agricultural Research and Education;
- (ii) Biotechnology;
- (iii) Ocean Development;
- (iv) Agriculture and Cooperations;
- (v) Indian Systems and Medicine and Homoeopathy;
- (vi) Science and Technology;
- (vii) Scientific and Industrial Research;

**Non-official members appointed under clause(d) of Sub-section (4) of Section 8:**

Five non-official members are appointed (Notification No 262 (E) on 22<sup>nd</sup> February, 2007) upto 21<sup>st</sup> February, 2010 from amongst specialists and scientists having special knowledge of or in experience in, matters relating to conservation of biological diversity, sustainable use of biological resources and equitable sharing of benefit arising out of the use of biological resources, representatives of industry, conservers, creators and knowledge-holders of biological resources. The following are the names and address of the non official members notified under Sec. 8 of the Biological Diversity Act, 2002.

**1. Prof. Raghavendra Gadagkar**

Centre for Ecological Sciences, Indian Institute of Science, Bangalore 560 012

**2. Dr. S. Subramaniyan**

54, VGP-Golden Sea View, Part II, 2<sup>nd</sup> Main Road, 5<sup>th</sup> Cross Street, Palavakkam, Chennai – 600 041.

**3. Prof. K. Kathiresan**

Centre for Advanced Study in Marine Biology, Annamalai University, Parangipettai.

**4. Dr A. K. Ghosh**

Director, Centre for Environment and Development, 329, Jodhpur Park, Kolkata -68

**5. Prof Anil Gupta**

Indian Institute of Management, Ahmedabad 380 015

**The terms of office of the non-official members of the National Biodiversity Authority shall be for a period of three years with effect from 22<sup>nd</sup> Feb, 2007.**

**The terms of office of Prof.S.Kannaiyan as Chairperson of the National Biodiversity Authority shall be upto 19<sup>th</sup> May, 2008**

[F.No.J-22018/46/2003-CSC(BC)]

### 3. MEETINGS OF THE AUTHORITY WITH MAJOR DECISIONS TAKEN THEREIN

#### 6<sup>th</sup> Meeting of the Authority

The sixth meeting of the National Biodiversity Authority was conducted on 20<sup>th</sup> April, 2006 at National Bureau of Animal Genetic Resources, Karnal.

#### Meetings conducted by National Biodiversity Authority

- Second Meeting of the “**Expert Committee on Collaborative Research Projects**” organized by National Biodiversity Authority on 7.4.2006 at Conference Hall, National Biodiversity Authority, Chennai – 600 041.



A view of Members present in the meeting

- Subcommittee meeting of the “**Expert Committee on Endangered and Endemic Species**” organized by National Biodiversity Authority on 17 – 18<sup>th</sup> April, 2006 at conference Hall, National Biodiversity Authority, Chennai – 600 041

### **Important decisions taken in the 6<sup>th</sup> authority meeting:**

- Approval of Proposals for Funding by NBA such as
  - National Conference on Forest Biodiversity Resources: Exploitation, Conservation and Management
  - National Conference on Agro biodiversity
- Approval of Terms of Reference on the Preparation of Guidelines by Expert Committees such as
  - Committee on Repositories
  - Committee on Publications of Research Results
  - Committee on Agro Biodiversity
- Approval of Microbial Cultures Import
- Approval of Sanction Power to Chairman, NBA for Rs. 1, 00,000/- towards Purchase of office Equipments.
- Approval of Appointment of Expert Consultant on Expert Committee on Access and Benefit Sharing by TERI, New Delhi.
- Approval of Honorarium for NBA Bulletin
- Ethical guidelines to be incorporated in the Guidelines on Collaborative Research Projects
- Approval of Budget proposal for the year 2006-2007.
- Approval of the period of extension for the Expert consultants till June 2006 or completion of the guidelines which ever is earlier

### **7<sup>th</sup> meeting of Authority**

The seventh meeting of the National Biodiversity Authority was conducted on 20<sup>th</sup> July, 2006 at Conference Hall, National Biodiversity Authority, Chennai.



A view of Members present in the meeting

### **Meetings conducted by National Biodiversity Authority**

1. **“Interactive Workshop on State Biodiversity Board and Review Meeting”** organized by National Biodiversity Authority held on 27<sup>th</sup> & 28<sup>th</sup> April, 2006 at Gokul Hall, Hotel Krishna Residency, Chennai.



A view of Members from various SBBs present in the meeting

2. **Third Meeting of the “Expert Committee on Threatened, Endangered and Endemic Species”** organized by National Biodiversity Authority held on 29<sup>th</sup> April, 2006 at Conference Hall of National Biodiversity Authority, Chennai.



A view of Members present in the meeting



Prof S. Kannaiyan, Chairman, NBA and Dr T.N.Ananthakrishnana. Chairman of the EC

3. **“Expert Committee Meeting on Access and Benefit Sharing and Material Transfer”** organized by National Biodiversity Authority held on 12<sup>th</sup> June, 2006 at Conference Hall of National Biodiversity Authority, Chennai.



Prof S. Kannaiyan, Chairman, NBA on discussion with Chairman and other members of the EC

4. **“Expert Committee Meeting to Evaluate the Access, Patent, Transfer of Research Results and Material Transfer Application”** held on 20<sup>th</sup> June, 2006 at Conference Hall of National Biodiversity Authority, Chennai.

5. **“National Workshop on People’s Biodiversity Register”** organized by National Biodiversity Authority held on 22<sup>nd</sup> & 23<sup>rd</sup> June, 2006 at Conference Hall, Institute of Ocean Management, Anna University, Chennai.



A view of Members present in the meeting

6. Third Meeting on **“Expert Group on Database on Biodiversity and Traditional Knowledge”** held on 23<sup>rd</sup> June, 2006 at Conference Hall, Institute of Ocean Management, Anna University, Chennai.
7. **Meeting for the “Review of functions of National Biodiversity Authority”**  
Review meeting conducted by the Secretary, Ministry of Environment and Forests, New Delhi on 28.06.2006, NBA Conference Hall, Chennai.

### **Important decisions taken in the 7<sup>th</sup> Authority Meeting**

- Approval of applications received by the Authority
- Approval of Methodology for PBR
- Approval of the outcome Expert committee on access and benefit sharing meeting.
- Formation of EC on Heritage site
- Approval of annual accounts for the year 2005 – 06
- Approval of Annual Report for the year 2005 – 06
- Formation of EC on Database (IBIS)
- Approval of Expenditure Statement for the year 2005-06
- Approval of Minutes of Review Meeting with Secretary, MoEF, New Delhi
- Approval of Expenditure Finance Committee Proposal for the 11<sup>th</sup> Plan
- Proposals to NBA for approval on exchange of Agricultural Bioresources (DARE)
- Approval of final recommendation on National Workshop on PBR
- Approval of final recommendation of Guidelines for Rare, Endangered and Endemic species.
- Approval of application for access
- Proposal for Aurovilli’s Greenwork
- Approval of recruitment of Peon on Direct and remaining post on deputation basis
- Approval of replacement of Chairman for EC on Normally Traded Commodities

### **8<sup>th</sup> Meeting of the Authority**

The eighth meeting of the National Biodiversity Authority was conducted on 7<sup>th</sup> March, 2007 at Conference Hall, National Biodiversity Authority, Chennai



A view of Members present in the meeting

## MEETINGS CONDUCTED BY NATIONAL BIODIVERSITY AUTHORITY

1. Second Meeting on **Expert Committee on Access, Benefit Sharing & Material Transfer** on **29.08.2006** and **30.08.2006** at Conference Hall, National Biodiversity Authority, Chennai – 600 041.
2. **“Expert Committee Meeting to Evaluate the Access, Patent, Transfer of Research Results and Material Transfer Application”** held on **03.10.2006** at Conference Hall of National Biodiversity Authority, Chennai.
3. First Meeting on **Expert Committee on Normally Traded Commodities** on **04.10.2006** at Conference Hall, National Biodiversity Authority, Chennai.
4. Approval of agreement by the MoEF: **Discussion on 1<sup>st</sup> September 2006 on the draft agreements for access to Biological Resources including IPR, Third Party transfer and Transfer of Research Results etc. drafted by National Biodiversity Authority**
5. **First Meeting on Expert Committee on Repositories** held on **28.11.2006** at conference Hall, National Biodiversity Authority, Chennai.
6. Workshop on **“Facilitating Formation of State Biodiversity Boards & Biodiversity Management Committees in Northern India”** on **19 - 20<sup>th</sup> December, 2006** at Hotel Mount View, Sector 10, Chandigarh organized by Punjab Biodiversity Board.
7. Workshop on **Biogeographic Information System for Indian Ocean, NIOT, Kochi on 25.09-2006 – Presidential Address by Prof. S. Kannaiyan, Chairman, NBA.**
8. National Workshop on **Biodiversity and Integrated Development of Spices, 12-14<sup>th</sup>, October, 2006** at CARI, Port Blair – Key Note Address by Prof. S. Kannaiyan, Chairman, NBA.
9. National Seminar **Wildlife Biodiversity Conservation between October 13 -15, 2006** at Pondicherry University, Pondicherry - Presided by Prof. S. Kannaiyan, Chairman, NBA.
10. National Symposium on **"Biodiversity and Biotechnology: Research and Development needs in Edible Mushrooms and Crop Disease Management and 28<sup>th</sup> Annual Meeting"** November 9 - 11, 2006 at G.B.Pant University of Agriculture and Technology, Pantnagar - Inaugural Address by Prof S.Kannaiyan, Chairman, NBA.



A view of Guest present in the meeting



Prof S.Kannaiyan, Chairman, NBA delivering lecture in this meeting

11. Expert Committee meeting on **“Determination of Benefit sharing Application”** held on **24<sup>th</sup> March, 2007** at NBA conference hall, Chennai.



A view of Members present in the meeting

12. **“Second Meeting on Expert Committee on Repositories”** held on **28<sup>th</sup> March, 2007** at NBA conference hall, Chennai.



A view of Members present in the meeting

**Important decisions taken in the 8<sup>th</sup> Authority Meeting**

- Approval Access application forms received by NBA

- Approval Annual Accounts comprising of receipt and payment account, income and expenditure accounts and balance sheet for the year 2005 – 06.
- Approval of draft agreements for access to biological resources including IPR, third party transfer and Transfer of Research results.
- Approval of Appointment of Administrative Officer and extension of deputation for further one year.
- Approval of outcome of the EC on Access and Benefit sharing meeting
- Approval of TOR for the EC to prepare guidelines on Establishment of Heritage sites.
- Approval of benefit sharing for IPR application
- Approval of Application for Access of D1 oil Company
- Approval of National Biodiversity Authority Data Infrastructure
- Approval of Establishment of a Trust for Contributory Provident Fund for NBA staff
- Approval of Appointment of Different posts recruited by NBA such as Accounts Officer, PS to Secretary, Technical Assistant (One post, Zoology), Stenographer 'C' on deputation basis and Group 'D' (Two posts) Peon/Daftry on regular.
- Approval of recruitment of different posts through Re-Advertisement
- Approval of Establishment of a Committee to discuss the implement the recommendations of PBR
- Approval of Proceedings and Recommendations of the Workshop on 'Facilitating Formation of SBB & BMC in Northern India
- Approval of EC to visit the Auroville Foundation
- Approval of Proposed budget for the year 2007 – 08
- Approval of revised Income Expenditure Statement for the year 2006 - 07

## **4. EXPERT COMMITTEES CONSTITUTED BY THE AUTHORITY AND THEIR**

### **EXPERT COMMITTEE AND THE ROASTER OF EXPERT COMMITTEE MEMBERS**

As per decision taken in the second meeting of the Authority (Minutes of the meeting No. 4. appointment of Expert Committees.) The following nine were decided to be setup by the Authority Expert Committees to deal with

- 1. Collaborative Research Projects.**
- 2. Material Transfer Agreement, Patents, and Benefit Sharing.**
- 3. Normally Traded Commodities.**
- 4. Rare Threatened Endangered and Endemic Species.**
- 5. Biodiversity Resources Centre Database.**
- 6. Designation of Repositories**

- 7. Research Results (Section 4 of BD Act)**
- 8. Agro biodiversity (Section 13 (1) of BD Act)**
- 9. Heritage sites (Section 37)**

. The terms of Reference (TOR) for the above ECs were formed and given below for approval. Also the roster of Experts drawn from various fields to enable the constitution of multi disciplinary ECs were also made available to the Authority for approval.

## **b) TERMS OF REFERENCE (TOR) FOR EXPERT COMMITTEES**

### **1. Expert Committee on Collaborative Research**

- a) Develop guidelines to address collaborative research viz. bilateral or multilateral research approved by the Government of India (Note: Whether there is Policy Guideline by the Government of India? Whether the Biodiversity Act has been incorporated into the already existing guidelines? Whether there is a need to prepare a new set of guidelines? If there is need for developing new guidelines then how should it be framed?)
- b) Develop guidelines for collaborative research amongst organisations, universities, and departments etc involving foreign institutions. (In view of increased focus by outside agencies on certain groups of organisms such as salt tolerant varieties and insects, the committee may consider tightening of norms for collaborative research)
- c) Develop guidelines for accredited or approved bodies and industry; between industries and research organizations supported by the Government; industries and research organizations; between academic institutions within India and abroad etc.
- d) Develop Guidelines for non-collaborative research (collections) under the following three categories viz. flora, fauna and microorganisms of soils, sediments and dead genetic material.
- e) Develop guidelines for sharing of data and ongoing research, in accordance to the Act.

### **2. Expert Committee on Access, Benefit sharing and Material transfer**

- a) Inventory of Material Transfer Agreements (MTA) in various government departments and organisations (Note: Whether the Biodiversity Act has been incorporated into the already existing MTA? Whether there is a need to prepare a new set of MTA incorporating provisions of the BD Act 2002? If there is need for developing new MTA, how should it be framed taking into consideration of relevant international accords and guidelines)
- b) Develop guidelines for patents in the light of benefit sharing arising out of biological diversity as per sub-section 2 of Section 6 of the Biological Diversity Act 2002
- c) Develop guidelines, procedures and protocols for access to parts /whole of Flora, Fauna, Microorganisms and Genetic Material for new collections for research and/or commercial utilization.
- d) The above guidelines should include provisions for monetary and other benefits such as royalty, joint ventures; technology transfer; product development, education and awareness raising activities; institutional capacity building and

venture capital fund. These guidelines should also provide ways and means for determining equitable benefit sharing on a case-by-case basis.

- e) Develop guidelines for imposing terms and conditions for ensuring equitable sharing of benefits arising out of the use of accessed biological material and associated knowledge in mutual agreement between the person applying for approval and the Authority in consultation with the Biodiversity Management Committee (BMC) taking into consideration of defined parameters of access, the extent of use, the sustainability aspect, impact and expected outcome levels including measures ensuring conservation and sustainable use of biological diversity. The above guideline should also include time frame for assessing benefit sharing on short, medium and long-term benefits.
- f) Develop guidelines for Prior Informed Consent (PIC) for researchers (universities, government organizations, non-governmental organisations, etc.), industries (public sector and private sector), foreigners, State Biodiversity Boards, Biodiversity Management Committee (BMC) incorporating benefit-sharing clause.
- g) The output of this EC would be applicable to other relevant Expert Committees.

### **3. Expert Committee on Normally Traded Commodities (NTC)**

- a) Define Normally Traded Commodities (NTC)
- b) Prepare an inventory of Normally Traded Commodities (NTC) such as plants, animals and microorganisms or parts thereof, their genetic material and byproducts (excluding value added products) with actual or potential use or value but does not include human genetic material in addition to derivatives and extracts. The guidelines should have scope for addition and deletion of NTC in National Interest.
- c) This committee will also take into account those normally traded commodities that constitute foods and those that are used for the purpose of regeneration.
- d) The guidelines should also consider incorporating retaliatory measures to protect the interest of our country.

### **4. Expert Committee on Threatened, Endangered and Endemic Species**

- a) Develop guidelines for identifying the list of Rare, Threatened, Endangered and Endemic species to the Government of India, taking into consideration already existing list of species from agencies such as the Botanical Survey of India (BSI), Zoological Survey of India (ZSI), Wildlife Institute of India (WII), IUCN, CITES, FRLHT, and other agencies.
- b) The obtained, collected and reviewed information may be used to identify the gap areas, consolidate and recommend the final list to the Government of India.
- c) Prepare guidelines to notify any species which is on the verge on extinction or likely to become extinct in the near future as a threatened species and prohibit or regulate collection thereof for any purpose and take appropriate steps to rehabilitate and preserve those species.

### **5. Expert Committee on Databases on Bio-resources and Traditional Knowledge (TK)**

- a) Develop guidelines for integrating Peoples' Biodiversity Register (PBR) into the database at national, state and local level.
- b) Develop a proposal for documenting current ongoing biodiversity related research projects by various Ministries (Ministry of Environment & Forests, MST), Funding Agencies (National and International) and PhD thesis from various research organisations and universities so far conducted in India.
- c) Identification of prerequisites for the establishment of a Biodiversity Resource Centre (BRC) that would function as a) a documentation centre, b) a source centre for publications, unpublished reports and other relevant documents, c) Identify organisations and departments (such as NBRI, Honey Bee, CES-IISc, FRLHT, MSSRF, NCL, Anthropological Survey India, Tribal Welfare, AYUSH, CSIR, MST, GB Pant Institute for Himalayan Ecology and Development, ICAR) which have authentic and valid databases, seek access for providing linkages through the web.

## **6. Expert Committee on Designation of Repositories**

- a) To discuss and address the issue of voucher specimens located in India's vast network of Universities, colleges and Research Institute and are not a part of the national repositories.
- b) As per Section 39 Sub section (1) an inventory with relevant information, of repositories available in the country to be prepared for recommendation to the Government of India as designated repositories.
- c) To prepare guidelines for safe keeping of the voucher specimen with adequate infrastructure and facilities.
- d) To prepare guidelines to deposit the specimen in the designated repositories of India.
- e) To prepare guidelines for monitoring the repositories regularly by a monitoring committees set up by the NBA.
- f) Total period of completion of the guidelines is 90 days unless extended by the Authority.

## **7. Expert Committee on Transfer of Research Results**

- a) As per section 4 Subsection (1) to verify if any guidelines are presently available on technology transfer from various institutes and departments of Government of India.
- b) To prepare guidelines for publication of research results (technology transfer) in accordance with the BD Act (2002).
- c) A guideline to be prepared for benefit sharing mechanism for transfer of research results.
- d) Total period of completion of the guidelines is 90 days unless extended by the Authority

## **8. Expert Committee on Agrobiodiversity**

- a) To define clearly the area of overlap and explicit differences in the BD Act, Seed Act and the Plant Variety Protection and Farmers Rights Act. To prepare

guidelines on how BD Act can be interpreted in relation to the above mentioned and other similar acts.

- b) To define clearly where BD Act stands with reference to the Patents Act and the Geographical Indications Act.
- c) To prepare a list of issues that needs immediate attention such as Crop/livestock/Fisheries/land races/ wild relatives.
- d) To prepare guidelines for origin of domesticated diversity as biological heritage sites.
- e) To prepare guidelines for presenting land races for protecting the farmers interests.
- f) To prepare documentation of on Agro biodiversity issues.
- g) Total period of completion of the guidelines is 90 days unless extended by the Authority.

## **9. Expert Committee on Heritage Sites**

**1. Defining Biodiversity Heritage Sites (BHS):** The expert committee will define BHSs keeping in mind that biodiversity heritage includes both wild and domesticated biodiversity, and the human cultural relations with such biodiversity. In particular, how BHSs are different from the concept of 'protected areas' that is embodied in the Wild Life Act should be spelt out.

**2. Deciding on the kind of sites to be considered as BHSs:** The expert committee will decide on type of ecosystems, landscapes, waterscapes, and land/water uses to be considered as possible BHSs.

**3. Chalking out a process to identify, declare, and manage BHSs:** The committee will identify a process for identifying, declaring and managing BHSs. This should focus on:

- ways and means by which local communities would be central to such a process, including in identifying, nominating, and deciding on potential BHSs;
- ways and means by which both modern and traditional knowledge can be used for the process;
- ways and means by which the involvement of disprivileged & marginalized sections of the community, including women, is ensured;
- the role of government institutions, civil society organizations, and others, in this process, in particular in facilitating local communities, helping build their capacity, and helping them to resolve conflicts and also to tackle threats;
- the institutional linkages between and among the existing institutions like panchayats, gram sabhas, village/tribal councils, urban wards, and institutions for the management of the BHSs (if different from the existing institutions);
- the process of decision- making for the management of BHSs, with a focus on the central role of relevant local communities, and facilitating/supportive role of government agencies and NGOs;
- guidelines to formulate the management plan for BHSs, with the flexibility of allowing local communities to decide on whether such a plan is needed or not;
- the ways and means of discourse between the community institutions and the district or state level institutions;
- a participatory monitoring and evaluation protocol.

### **Mode of functioning**

The expert committee will invite inputs from civil society and community organizations on the guidelines for establishing BHSs before finalizing them, including by:

- circulating early drafts in relevant languages to relevant networks of community based organizations, panchayat raj institutions, NGOs, and state/central government institutions;
- placing drafts on the NBA and other relevant websites for public comments;
- holding regional and one national workshop on BHSs, for face to face consultations with interested organizations and individuals.

The committee may also co-opt other members who are familiar with the issues relating to BHSs.

### **Advisory and monitoring function**

The committee will also be available for advice to communities, state biodiversity boards, and others, and be responsible for national level tracking of the declaration and management of BHSs.

## **STATUS OF EXPERT COMMITTEES**

In exercise of the powers conferred under Sub-section (2) of Section 13 of the Biological Diversity Act, 2002 and Biological Diversity Rules, 2004 the following Expert Committee have been formed in the fourth National Biodiversity Authority Meeting held on 6<sup>th</sup> October, 2005 at Port Blair. The following are the names of Chairman and Committee Members and the activities of the Expert committees established by National Biodiversity Authority:

### **1. Expert Committee on Collaborative Research Projects**

<b>CHAIRMAN</b>	
<b>Dr. B. S. Dhillon</b> , Director - Research, Punjab Agri. Univ., Ludhiana, Punjab – 141001.	
<b>MEMBERS</b>	
SL.NO.	NAME
1.	<b>Prof. P. S. Ramakrishnan</b> , Jawaharlal Nehru University, New Mahrauli Road, New Delhi.

2.	<b>Prof. T. C. Narendran</b> , Systematic Entomology Laboratory, Department of Zoology, University of Calicut, Calicut-673 635.
3.	<b>The Director General</b> , ICFRE, P. O. New Forests, Dehradun – 248 006, Uttarakhand.
4.	<b>Dr. Yogesh S. Shouche</b> , National center for Cell Science, Pune University Campus, Ganeshkhind, Pune-411 007.
5.	<b>Dr. J. Nagaraju</b> , Staff Scientist & Chief, Laboratory of Molecular Genetics, Centre for DNA Fingerprinting and Diagnostics, 4-87/1, ECIL road, Nacharam, Hyderabad-76.
6.	<b>Dr. G. S. Lavekar</b> , Director, Central Council for Research in Ayurveda and Siddha, 61-62, Institutional Area, D Block, Janakpuri, New Delhi.
7.	<b>Dr. J. P. Mishra</b> , Asst. Dir. Gen., Room No.212, Krishi Bhavan, New Delhi – 110001.
8.	<b>Dr. S. Natesh</b> , Advisor, Department of Biotechnology, CGO Complex, Block No.2, Lodhi Road, New Delhi – 110001.
9.	<b>Dr. T. J. Kurian</b> , Director, Dept. of Science and Technology, Technology Bhavan, New Mehrauli Road, New Delhi.
10.	<b>The Director</b> , National Institute of Oceanography, Dona Paula - 403 004. Goa.

## ACTIVITIES

These guidelines have been prepared to facilitate the implementation of section 5 of the Biological Diversity Act, 2002 relating to Collaborative research projects involving transfer or exchange of biological resources or information relating thereto between institutions including government sponsored institution and such institutions in other countries.

In the Fourth Authority Meeting of NBA, (held on 06-10-2005) approved the formation of Expert Committee with **Dr. Dhillon** Director (Research), Punjab Agricultural University, Ludhiana as it's Chairperson and Nine others as Members. It was also approved to appoint **Dr. Hemal Kanvinde** as the Expert Consultant on Collaborative Research who had applied for the post of "Expert Consultant" through the NBA web advertisement for the post of "Expert Consultant"

**First Meeting:** The first meeting of the Expert Committee on collaborative Research was held on 07-01-2006 at the Office of NBA, Chennai. In the meeting Section 5 of the Biological Diversity Act, 2002 was discussed at length.

**Second Meeting:** The Second meeting Expert Committee on collaborative Research was held on 07-04-2006 at the Office of NBA, Chennai.

The MoEF, New Delhi in their letter requested the NBA to circulate the DARE Guidelines to the Secretaries of all different Ministries involved in biodiversity research to receive their comments. The DARE guidelines were sent to all Secretaries vide Lr. No. 8/2/213/2003-NBA(S) dated 22.03.2006 and NBA did not receive any reply. Hence a reminder was also sent mentioning about the urgency of the information required vide Lr. No. 8/2/213/2003-NBA(S) dated 04.05.2006. It was also felt by the Ministry of Environment and Forests that at times it creates confusion if different departments like ICAR, DBT, DST, DOD, ICMR etc come forward with their own set of guidelines to deal with same issue which may or may not be in complete harmony with each other. Hence NBA was requested to prepare amalgamated guidelines for all the ministries involved in biodiversity.

On 4th July MoEF, New Delhi conducted a meeting to discuss the finalization of the Collaborative Research Guidelines. In the meeting it was agreed that the Expert Committee constituted by NBA did a thorough job of the Guidelines and felt it is enough for notification. Before notification the Secretary, Ministry of Environment and Forests will send the guidelines to other Secretaries of various Ministries for their comments and consent.

**The Regulation on Collaborative Research is notified by the Administrative Ministry: S.O.1911(E) – In exercise of the power conferred by clause (a) of sub-section(3) of section 5 of the Biological Diversity Act, 2008 (18 of 2003) the Central Government hereby makes the guidelines on 8<sup>th</sup> November, 2006.**

## **2. Expert Committee on Material Transfer Agreement, Patents and Benefit Sharing**

<b>CHAIRMAN</b>	
<b>Dr. Pushpangadan</b> National Botanical Research Institute; Rana Pratap Marg; Lucknow – 226001	
<b>MEMBERS</b>	
1.	<b>Prof.R.Kumar</b> Jawaharlal Nehru Centre for Advanced Scientific Research, Jakkur, Bangalore-560 064
2.	<b>Dr.R.K.Gupta</b> Head, Intellectual Property Management Division, 14, Sastang Vihar Marg, Special Institutional Area, NISCAIR Building, New Delhi-110067
3.	<b>Dr.Suman Sahai,</b> Gene Campaign, J-235/Asainix Farms, Khanpur, New Delhi – 110 062.
4.	<b>Dr. K. Balaraman,</b> Dy. Director, Sr. Grade, Vector Control Research Centre, ICM Marg, Indira Nagar, Pondicherry.
5.	<b>A representative from CPR Foundation, CHENNAI.</b>
6.	<b>Dr.S.K.Sharma</b> Advisor(Ayurveda), Red Cross Society Building, 1-Red Cross Road, New Delhi-110001
7.	<b>Dr.Chandra Mohan</b> Former Head, NIOT, GOA.
8.	<b>Prof. Samir Brahmachari</b> Director, Institute of Genomics and Integrative Biology, Delhi University Campus, Mall Road, Delhi-100 007
9.	<b>Dr.C.K.Katiyar</b> Director, Herbal Drug Research, R&D-II, 20, Sector 18, Udyog Vihar Industrial Area, Gurgaon, Haryana
10.	<b>Dr.J.P.Mishra,</b> Room No.212, Krishi Bhavan, New Delhi – 110001.

### **ACTIVITIES**

First meeting of the Expert committee on Access and Benefit sharing was held on 12<sup>th</sup> June 2006 under the chairmanship of **Dr P. Pushpanghadan** and 12 members at NBA conference hall. The process of preparation of the guidelines on the Access of bioresources,

material transfer and benefit sharing was discussed at length and the following recommendations were submitted to NBA.

### **Minutes of First Meeting of Expert Committee on Access and Benefit Sharing**

Date – 12<sup>th</sup> June 2006; Venue – NBA, Conference Hall

The meeting was initiated by **Dr. Kannaiyan**, Chairman, NBA. He explained the task in front of the Expert Committee on Access and Benefit Sharing (ABS) of Biological Diversity. It was followed by the briefing of **Dr. P. Pushpangadan**, Chairman on the Expert Committee on ABS. He elaborated the chronological evolution of issues with respect to various international conventions and agreements in connection to the ABS of biological resources such as Convention on Biological Diversity, World Intellectual Property Organization, World Trade Organization and Trade related Intellectual Property Rights. Along with this he mentioned about the international transaction of genetic resources through the processes such as International Treaty on Plant Genetic Resources (ITPGR) and Botanic Garden Conservation International where 1900 botanical gardens world over are part of the mechanism.

#### **Important decisions**

- 1) **First draft of the guidelines will be circulated to the members of the committee by 20<sup>th</sup> July 2006.**
- 2) **Members will be meeting in Chennai on 3<sup>rd</sup> and 4<sup>th</sup> August to work on the first draft.**
- 3) **The Expert consultant will circulate some of the important literature prepared in connection to the ABS such as guidelines of the collaborative research committee, various agreements prepared.**
- 4) **The academic literature produced by the eminent scholars and the organizations also will be circulated. In this connection reference was mainly made to chapters 6,8,9,21 and 22 of the publication – Perspectives on Biodiversity – A Vision for Mega diverse Countries published by MoEF.**

### **Minutes of Second Meeting of Expert Committee on Access and Benefit Sharing**

Date – 29<sup>th</sup> and 30<sup>th</sup> August 2006; Venue – NBA, Conference Hall

The meeting was initiated by **Dr. Kannaiyan**, Chairman, NBA. He explained the task in front of the Expert Committee on Access and Benefit Sharing (ABS) of Biological Diversity.

It was followed by the briefing of **Dr. P. Pushpangadan**, Chairman on the Expert Committee on ABS. He elaborated the chronological evolution of issues with respect to various international conventions and agreements in connection to the ABS of biological resources such as Convention on Biological Diversity, World Intellectual Property Organization, World Trade Organization and Trade related Intellectual Property Rights. Along with this he mentioned about the international transaction of genetic resources through the processes such as International Treaty on Plant Genetic Resources (ITPGR) and Botanic Garden Conservation International where 1900 botanical gardens world over are part of the mechanism.

He also mentioned that the guidelines for ABS should not halt the research as has happened in case of Philippines. He referred to the Prior Informed Consent form prepared by Tropical Botanical Research Garden (TBGRI) for the documentation of food and medicine.

### 3. Expert Committee on Normally Traded Commodities

<b>CHAIRMAN</b>	
<b>Dr. J.P.Mishra</b> , Assistant Director General (Co-ord.&ESM), Indian Council of Agriculture Research, Room No.212, Krishi Bhavan, Dr.Rajendra Prasad Road, New Delhi – 110 001.	
<b>MEMBERS</b>	
1.	<b>Dr.James Jacob</b> , Deputy Director (Plant Physiology), Rubber Research Institute of India, Kottayam – 686 009, Kerala.
2.	<b>Dr.M.Anandaraj</b> , Principal Scientist & Member Secretary (RAC), Indian Institute of Spice Research, Indian Council of Spice Research, P.B.No.1701, Marikkunnu post, Calicut – 673 012.
3.	<b>The Director</b> (or his nominee), Central Marine Fisheries Research Institute, Tatapuram (P.O), Cochin – 14, Kerala, Ph: 2394867 / 2391407
4.	<b>The Director</b> , Marine Product Export Development Authority, MPEDA House, Panampilly Avenue, P.B.No.4272, Cochin – 682 036
5.	<b>The Director</b> , AYUSH, Red Cross Building, Parliament Street, New Delhi 110 001
6.	<b>Dr.S.S. Handa</b> , 522 A, Block C, Executive Villa, Sushant Lok – 1, Gurgaon – 122001
7.	<b>Shri.Rajiv Kumar</b> , Under Secretary(Trade), Department of Agriculture and Cooperation, Ministry of Agriculture, Krishi Bhavan, Dr.Rajendra Prasad Road, New Delhi – 110 001
8.	<b>Shri. Sanjay Rastogi</b> , Export Commissioner, Ministry of Commerce and Industry, Director General of Foreign Trade, Udyog Bhavan, New Delhi – 110 001
9.	<b>Shri.Linu Mathew Philip</b> , Research Officer, Centre for Trade and Development , 405, Bhikaiji Cama Bhavan, Bhikaiji Cama Place, New Delhi – 110 066
10	<b>Dr.Anishetty N.Murthy</b> , National Bureau of Plant Genetic Resources, Regional Station, Rajendra Nagar, Hyderabad – 500 030
11	<b>Shri.D.P.Naidu</b> , Joint Director, National Academy of Customs, Excise & Narcotics, Southern Regional Centre, Sire Mansion, 5 <sup>th</sup> Floor, 621, Anna Salai, Chennai – 600 006

#### ACTIVITIES

The first meeting on Expert Committee on Normally Traded Commodities held on 4<sup>th</sup> October, 2006 at O/o National Biodiversity Authority, Chennai. The committee decided the minutes of the meeting is prepared by Dr.Anandaraj, Member and the same be circulated among other committee members.

### 4. Expert Committee on Rare Threatened Endangered and Endemic Species.

<b>CHAIRMAN</b>	
<b>Prof. T. N. Ananthakrishnan</b> Emeritus Scientist, Dwaraga, Nungambakkam, Chennai	
<b>MEMBERS</b>	
1.	<b>Dr. R. Uma Shanker</b> , Department of Crop Physiology, Univ. of Agricultural Sciences, Bangalore-560065

2.	<b>Dr. M. K. Janarthanam</b> , Botany Department, Goa University, Taleigao Plateau, Taleigao, Goa – 403 206.
3.	<b>Shri. R. P. S. Katwal</b> , Additional Director General (Forests), Ministry of Environment and Forests, Paryavaran Bhavan, CGO Complex, Lodhi Road, New Delhi 110003
4.	<b>Prof. Dr. T. Balasubramaniam</b> , Director, CAS in Marine Biology, Parangipettai, Tamil Nadu.
5.	<b>The Director</b> , SACON, Anaikatty (PO), Kalayampalayam, Coimbatore – 641 108.
6.	<b>The Director</b> , Zoological Survey of India, M block, New Alipore, Kolkatta-700053
7.	<b>Dr. M. Swamiappan</b> , Professor of Entomology, Agricultural College and Research Institute, Madurai.
8.	<b>The Director</b> , Bombay National History Society, Horn Bill House, SB Singh Road, Bombay-400 023
9.	<b>Dr. K. Narayanan Nair</b> , Sr. Scientist, NBRI, Rana Pratap Marg, P. B. No.436, Lucknow-226001.
10.	<b>Dr. M. Subramanian</b> , Former Director (Research), Madurai.
11.	<b>The Director</b> , Botanical Survey of India, 3 MSO Building, 5 Floor, CGO Complex, Salt Lake, Kolkata 70 064.

## ACTIVITIES

**First Meeting:** The first meeting of the National Biodiversity Authority Expert Committee on Threatened, Endangered and Endemic Species was held on January 18, 2006 at Chennai at the NBA Office in Neelankarai.

**Second Meeting:** The second meeting of the National Biodiversity Authority Expert Committee on Threatened, Endangered and Endemic Species was held on February 28, 2006 at Chennai at the NBA Office in Neelankarai.

### Final Meeting of EC on Endangered, Endemic and Threatened Species

The final meeting of the National Biodiversity Authority Expert Committee on Threatened, Endangered and Endemic Species was held on April 29, 2006 at Chennai at the NBA Office in Neelankarai. The guidelines prepared by **Dr. Kartik Shanker**, Expert Consultant were discussed in detail, and final inputs were provided.

The final out of this Expert Committee was sent to Wildlife Division of Ministry of Environment Forest. The same out put is being finalized and sent for notification to Ministry of Environment and Forests.

## 5. Expert Committee on Database

<b>CHAIRMAN</b>	
<b>Prof. Madhav Gadgil</b> , Centre for Ecological Sciences, Indian Institute of Science, Bangalore - 560012.	
<b>MEMBERS</b>	
1.	<b>Dr. A. K. Ghosh</b> , Director, Centre for Environment and Development, 329, Jodhpur Park, Kolkata – 700 068.

2.	<b>Dr. K. N. Ganeshiah</b> , Dept., of Genetics & Plant Breeding, University of Agricultural Sciences, GKVK Campus, Bangalore – 560 065.
3.	<b>Shri. V.K. Gupta</b> , Director, Planning and Management, National Institute of Science Communication and Information Resources, Dr. K.S. Krishnan Marg, New Delhi-110 012.
4.	<b>Shri. Darshan Shankar</b> , Director, Foundation for Revitalisation of Local Health Traditions, 74/2, Jarakbande Kaval, Yalahanka BG, Bangalore – 560 064.
5.	<b>Shri. V. N. Sanjaran</b> , Dept. of Ocean Development, CMLRE, Salim Ali Road, Kochi – 682 014.
6.	<b>The Director</b> , National Bureau of Plant Genetic Research, ICAR, Pusa Campus, New Delhi – 110 012.
7.	<b>The Director</b> , Central Marine Fisheries Research Institute, Kochi.
8.	<b>The Director</b> , National Bureau of Fish Genetic Resources, Canal Ring Road, P.O. Dilkusha, Lucknow.
9.	<b>The Director</b> , National Bureau of Animal Genetic Resources, P.B.No.129, Makrampur Campus, Karnal, Haryana – 132 001.

## ACTIVITIES

**First Meeting:** The First Meeting of the Expert Committee on Database on Biodiversity and Traditional Knowledge was held at NISCAIR, Pusa, New Delhi on 9.12.2005 between 10.00 am - 4.30 pm. The meeting was attended by eight members and two special invitees. There were four expert presentations.

**Second Meeting:** Following this the Second Meeting of the Expert Committee on Database was held at the Digital Informatics Resource Centre, National Chemical Laboratory, Pune on 3. 02. 2006 between 10.00 am and 4.30 pm. The meeting was attended by eight members and one special invitee. There were six expert presentations following which these recommendations were made by the committee:

**Third Meeting:** The Third meeting of the committee was held at the Institute of Ocean Management, Anna University, Chennai on 23.06.2006 between 2 pm and 5 pm to conclude the work of the committee and propose the Indian Biodiversity Information System based on the deliberations of the previous meetings. The meeting was attended by ten members and one special invitee. An expert presentation was made by Dr. Vishwas Chavan, NCL, Pune on the '*Scope, Modalities, and Implementation Framework*' of the IBIS.

IBIS will:

- Be a distributed facility, while encouraging co-operation and coherence;
- Be national in scale, though implemented by various national, state, district, village level, and thematic players (agencies, institutions, individuals, communities);
- Be open to participation by individuals, communities, agencies, institutions, from all walks of life, and offering potential benefits to entire nation and its constituents;
- Help bridge human language barriers by promoting standards and software tools designed to facilitate their adoption into multiple languages, character sets, and computer encoding;
- Serve to disseminate technological capacity by drawing on and making available scientific, technical, and social information; and

- While aiming to make biodiversity information openly, and freely available, will facilitate credit to its contributors, respect and fulfill national aspirations such as intellectual property rights, economic wealth, bio-security, and social wellbeing.

The final outcome of the committee that was unanimously decided was for a pilot project proposal for the Indian Biodiversity Information System (IBIS) to be put up to the Ministry of Environment and Forests, Government of India for approval through EFC for the 11<sup>th</sup> Five Year Plan.

## 6. Expert Committee on Designation of Repositories

<b>CHAIRMAN</b>	
<b>Dr. A.K.Ghosh</b> , Director, Centre for environment and development, 329, Jodhpur Park, Kolkatta – 700 068.	
<b>MEMBERS</b>	
1.	<b>The Director</b> or his nominee, Zoological Survey of India, M-Block, New Alipore, Kolkata – 700 053.
2.	<b>Dr.M.Sanjappa</b> , Director, Botanical Survey of India, 3-MSO Building, 5 <sup>th</sup> Floor, CGO Complex, Salt Lake, Kolkata – 700 064.
3.	<b>Dr.K.Natarajan</b> , CAS in Botany, University of Madras, Guindy Campus, Guindy, Chennai – 600 025.
4.	<b>The Director</b> or his nominee, National Bureau of Plant Genetic Resources, Pusa, New Delhi – 110 012.
5.	<b>The Director</b> or his nominee, Central Manine Fisheries Research Institute, P.Box.No. 1603, Ernakulam North P.O, Kochin – 682 018
6.	<b>The Director</b> or his nominee, National Bureau of Fish Genetic Resources, Canal Ring Road, P.O.Dilkusha, Lucknow – 226 002, UP.
7.	<b>Dr.M.Subramanian</b> , Former Director of Research, TNAU, 9, VOC Street, Krishnapuram colony, 7 <sup>th</sup> Cross Street, Chokkananthapuram, Madurai – 625 104
8.	<b>Dr.M.Swamiappan</b> , Professor of Entomology, G-2 Flats “Balu Gardens” Apartments, Vasuki Nagar, 1 <sup>st</sup> Street, Valluvar Colony, P and T Nagar main Road, Madurai – 625 017.
9.	<b>The Director</b> or his nominee, National Bureau of Animal Genetic Resources, Makrampur Campus, G.T.Road, Bladi Bye Pass, P.O.Box – 129, Karnal – 132 001, Haryana
10	<b>The Director</b> or his nominee, Central Institute of Brackish Water Aquaculture, 75, Santhome High Road, Raja Annamalaipuram, Chennai – 600 028.
11	<b>The Director</b> or his nominee, National Bureau of Agriculturally important Microorganisms, Kusmaur, Mau Nath Bhanjan, Uttar Pradesh – 275 101
12	<b>The Director</b> or his nominee, National Botanical Research Institute, Rana Pratap Marg, Post Box No.436, Lucknow – 226 001, U.P

### ACTIVITIES

**First Meeting:** First Meeting of the Expert Committee on Designation of Repositories was held at the NBA Conference Hall on 28<sup>th</sup> November, 2006.

The Chairman mentioned that all the previous National Repositories will have to be listed and redesignated under the Biodiversity Act, 2002 and Rules, 2004 (for e.g., ZSI for fauna, BSI for flora, ICAR for agri-horticultural plants, IMTECH for microbial collections, IARI for mycological collections etc, National Institute for Virology for Viruse collections). All these will have to be given support in terms of man power and finance as part of the 11<sup>th</sup> plan document. A monitoring mechanism will also have to be put into place.

It was suggested that in the next meeting institutions like ICFRE and some NGO's like FRLHT and BHNS should be invited to attend.

**Second Meeting:** Second meeting of this committee was held on 28<sup>th</sup> March, 2007 at O/o. National Biodiversity Authority, Chennai.

**The third and final meeting** is proposed to be held on 24.04.2007 to finalize the guidelines for notification.

### **7. Expert Committee on Research Results (Section 4 of BD Act)**

Expert Committee has been set up by the National Biodiversity Authority by Office Order. This committee will start its function in the current financial year

### **8. Expert Committee on Agro biodiversity (Section 13 (1)of BD Act)**

Expert Committee has been set up by the National Biodiversity Authority by Office Order. This committee will start its function in the current financial year

### **9. Expert Committee on Heritage sites (Section 37)**

Terms of Reference was finalized in the 8<sup>th</sup> Authority meeting. Reconstituted committee will function in the current financial year

## **5. ACTIVITIES TO REGULATE ACCESS TO BIOLOGICAL RESOURCES AND FAIR AND EQUITABLE BENEFIT SHARING**

### **A. GUIDELINES**

#### **A) Expert Committees**

As per the decision taken by the Authority the following **Expert Committees** were formed to prepare guidelines on the subjects mentioned below:

- 1. Collaborative Research Projects (Section 5 of BD Act)**
- 2. Access, Benefit Sharing and Material Transfer (Section 3 of BD Act)**
- 3. Normally Traded Commodities ((Section 40 of BD Act)**
- 4. Rare Threatened Endangered and Endemic Species (Section 38 of BD Act)**

- 5. Biodiversity Resources Centre Database (Section 12 (vii and xiii) of Biodiversity Rules, 2004).**
- 6. Designation of Repositories (Section 39 of BD Act)**
- 7. Research Results (Section 4 of BD Act)**
- 8. Agro biodiversity (Section 13 (1) of BD Act)**
- 9. Heritage sites**

Based on the terms of Reference (TOR) approved by the authority these Expert Committees shall prepare guidelines on their chosen topic. Experts drawn from various fields constitute this multi disciplinary Expert Committees. The following are the achievements made by these committees.

## **Achievements**

### **1. Expert Committee on Collaborative Research**

**The Regulation on Collaborative Research is notified by the Administrative Ministry:**

***S.O.1911(E) – In exercise of the power conferred by clause (a) of sub-section(3) of section 5 of the Biological Diversity Act, 2008 (18 of 2003) the Central Government hereby makes the guidelines on 8<sup>th</sup> November, 2006.***

### **2. Expert Committee on Access, Benefit Sharing and Material Transfer**

First meeting of the Expert committee on Access and Benefit sharing was held on 12<sup>th</sup> June 2006 under the chairmanship of Dr P. Pushpanghadan and 12 members at NBA conference hall. The process of preparation of the guidelines on the Access of bioresources, material transfer and benefit sharing was discussed at length and the following recommendations were submitted to NBA. The Second Meeting of this Committee held on 29<sup>th</sup> and 30<sup>th</sup> June 2006 at NBA, Conference Hall

### **3. Expert Committee on Normally Traded Commodities**

The first meeting on Expert Committee on Normally Traded Commodities held on 4<sup>th</sup> October, 2006 at O/o National Biodiversity Authority, Chennai. The committee decided the minutes of the meeting is prepared by Dr. Anandaraj, Member and the same be circulated among other committee members.

### **4. Expert Committee on Threatened, Endangered and Endemic Species**

**First Meeting:** The first meeting of the National Biodiversity Authority Expert Committee on Threatened, Endangered and Endemic Species was held on January 18, 2006 at Chennai at the NBA Office in Neelankarai.

**Second Meeting:** The second meeting of the National Biodiversity Authority Expert Committee on Threatened, Endangered and Endemic Species was held on February 28, 2006 at Chennai at the NBA Office in Neelankarai.

**Final Meeting :** The final meeting of the National Biodiversity Authority Expert Committee on Threatened, Endangered and Endemic Species was held on April 29, 2006 at Chennai at the NBA Office in Neelankarai. The guidelines prepared by Dr. Kartik Shanker, Expert Consultant were discussed in detail, and final inputs were provided.

The final output of this Expert Committee was sent to Wildlife Division of Ministry of Environment Forest. The same out put is being finalized and sent for notification to Ministry of Environment and Forests.

### **5. Expert Committee on Databases on Bio-Resources and Traditional Knowledge**

The Expert Committee on Database under the Chairmanship of Prof Dr. Madhav Gadgil, Indian Institute of Sciences, Bangalore met thrice and finalized the general guidelines for the establishment of database on “Indian Biodiversity Information System” (IBIS).

### **6. Expert Committee on Designation of Repositories**

**First Meeting:** First Meeting of the Expert Committee on Designation of Repositories was held at the NBA Conference Hall on 28<sup>th</sup> November, 2006. **Second Meeting:** Second meeting of this committee was held on 28<sup>th</sup> March, 2007 at O/o. National Biodiversity Authority, Chennai.

### **7. Expert Committee on Research Results**

The Expert Committee on Research Results was formed under the Chairmanship of Dr. S. S. Kadam, Vice Chancellor, Marathwada Agricultural University, Parthani. The committee’s Terms of Reference was approved in the Fifth Authority meeting held on 20<sup>th</sup> January 2006. Once the Expert consultant is appointed the committee will start preparing the guidelines.

### **8. Expert Committee on Agrobiodiversity**

The Expert Committee on Agrobiodiversity was formed under the Chairmanship of Dr. B. S. Dhillon, Punjab Agricultural University. The committee’s Terms of Reference was approved in the Fifth Authority meeting held on 20<sup>th</sup> January 2006. Once the Expert consultant is appointed the committee will start preparing the guidelines.

### **9. Expert Committee on Heritage site**

Terms of Reference was finalized in the 8<sup>th</sup> Authority meeting. Reconstituted committee will function in the current financial year

## **B. AGREEMENTS**

### **Applications for Access of Bioresource received by National Biodiversity Authority**

Since inception, NBA has received applications for Access, Application for Transfer of Bioresources and application for Patent.

1. NBA has received applications from various sources from India and abroad.
2. After the approval, the applicants have to enter into an agreement as per the requirement of the Act. The following agreements are prepared by National Biodiversity Authority
  1. Access of bio-resources for commercial purposes
  2. Access of bio-resources for research and bio-survey
  3. Transfer of Research Results (Technology)
  4. IPR (Patent)
  5. Material Transfer

Draft agreements were discussed thoroughly by NBA in an interactive meeting with 12 experts from various parts of the country on 23rd July 2005 and the agreements were again placed before a NBA approved committee for scrutiny and approval. A committee headed by Mr Vishwanath Anand, Vice Chairman, Environment. App. Authority scrutinized and approved the agreements. This was placed in the 5th Authority meeting held on 20th January 2006 for approval and the Authority approved the same. These approved draft agreements were scrutinized by the Secretary MoEF and the same was sent to the Government of India (Administrative Ministry) for notification.

## **6. DETAILS OF APPROVAL GRANTED FOR UNDERTAKING ACTIVITIES AS REFERRED IN SECTION 3,4 AND 6 OF THE BIOLOGICAL DIVERSITY ACT, 2002**

### **1. APPROVAL OF APPLICATIONS RECEIVED BY THE AUTHORITY**

There are 12 applications received from various applicants by NBA. One applicant has not paid the fee before the date of the meeting and hence 11 applications were taken for evaluation by the expert Committee.

**App. No.1: Ms. Rikako Kimura Ph. D:** To analyze karyo types and Satellite DNA of Indian Wild Asses and also compare to Hybrids.

Comments: A letter has to be written to the Director, CCMB, and Hyderabad to verify whether any MOU/Agreement has been made with the applicant to do research on Wild Asses.

**The Chairman is authorized to approve the application as soon as the letter of clarification is received from the Director, CCMB as mentioned above.**

**ACTION TAKEN:** Approval Letter No.NBA/9/5/03/TECH APPL/06-07/7586 - 7588 DT. 03-08-2006 was sent to Dr. Rikako Kimura, Director, Research Institute on Human – Equids Relationships, New Delhi, The Director CCMB, Hyderabad and Dr. S. Shivaji, Sci. F., CCMB, Hyderabad after receiving clarification letter dt.02-08-2006 from Dr. Lalji Singh, Director, CCMB, Hyderabad.

**App. No. 2: Dr. Faujdar Singh:** Transfer of imported *vip3A gene* from *Bacillus thuringiensis* to cotton and these were multiplied and utilized for making various crosses. *vip3A gene* is resistant to Lepidopteron insect pests

Comments: The application is recommended for approval. Also a verification letter has to be sent to Syngenta whether any Indian seed material of public variety is present in the Syngenta proprietary line. In which case, benefit sharing with India will be mandatory according to the guidelines which are being developed by the NBA and the comments received from Syngenta is to be sent to GEAC, MoEF, New Delhi.

**Approved by NBA as per the comments given by the Expert Committee**

**ACTION TAKEN:** Approval Letter No.NBA/9/71/06/TECH APPL/06-07/7599 & 7602 DT. 08-08-2006 sent to Dr. Faujdar Singh, Adviser, Syngenta Seeds India Pvt. Ltd., Pune and Dr. Ranjini Warriar, Member Secretary, GEAC, New Delhi and **it is not necessary to sign an agreement in this case.**

**App. No. 3: Prof. Masaru Nonaka:** To collect and analyse two Indian *Oryzias* species, *O. carnaticus* and *O. dancena* for the possible presence of Major Histocompatibility complex (MHC) lineages to elucidate evolution and polymorphism of the vertebrate MHC – Mammalian MHC

Comments: The following points are to be clarified from the applicant: 1. whether the biological resource will be experimented in India or abroad, 2. the exact geographical location of the genetic material to be collected.

Also a concurrence letter of the Director ICMR is necessary in this case as to whether MoU has been signed with the applicant or not as well as IPR concerns if any.

**Not Approved by NBA. As per the letter written by the applicant on 12.7.2006 mentioning that a joint project for funding from INSA-JSPS is**

**being proposed on the above subject. The applicant may apply once again to NBA for approval only after the joint project is materialized**

**ACTION TAKEN:** Non - Approval Letter No.NBA/9/72/06/TECH APPL/06-07/7565 DT. 02-08-2006 sent to Dr. Masaru Nonaka, Department of Biological Sciences University of Tokyo and has been suggested that the studies be undertaken with the Indian Collaborator under INSA – JSPS funding.

**App. No. 4: D1 Oils India Ltd:** Providing the technology, plants, machinery and expertise in growing the feedstock and converting the vegetable oil into bio-diesel to the standard stipulated by the European Union

Comments: The application is recommended for approval by the expert committee. The samples of collection to be deposited at NBPGR by the D1 oil Company and IC numbers (Indigenous Collection) to be given. Specific data regarding the seeds collection such as 1) The oil content 2) The fatty acid composition and 3) The geographical location of occurrence of the seeds need to be shared with NBPGR. Benefit sharing must be done as per the guidelines given by the NBA. An agreement is to be signed by the applicant.

**The NBA Members of the opinion that the controversy on misappropriation of Jatropha germplasm at Indira Gandhi Agricultural University, Raipur is not yet over. The application is not approved.**

**ACTION TAKEN:** Not Approved. Letter (No.NBA/9/73/06/TECH APPL/06-07/7568 DT. 02-08-2006) sent to Shri. Sarju Singh, Chairman, D1 Oils India Ltd., New Delhi.

**App. No. 5: Ms. Emily Rebecca Ladlow:** Internship study on MSSRF's methods to preserve India's Biodiversity, traditional knowledge and also studying sustainable agriculture and their community based biodiversity projects at MSSRF Project centre, Wayanad, Kerala

Comments: The application is recommended for approval. The applicant must submit regular reports both to MSSRF and NBA. Since the application is treated as biosurvey, a tripartite agreement must be made between the applicant, MSSRF and NBA.

**Approved by NBA as per the comments given by the Expert Committee**

**ACTION TAKEN:** Approval Letter No.NBA/9/77/06/TECH APPL/06-07/7543 & 7544 DT. 01-08-2006 sent to Ms. Emily Ladlow, USA and M/S. The Executive Director, MSSRF. Taramani, Chennai.

**App. No. 6: Mr. Farshid Ahresrani:** Study and Research on Gaur

Comments: The application is recommended for approval. The Tamil Nadu Chief Wildlife Warden of Forest must be informed about the approval of NBA.

**Approved by NBA as per the comments given by the Expert Committee**

**ACTION TAKEN:** Approval Letter No.NBA/9/78/06/TECH APPL/06-07/7539 & 7540 DT. 01-08-2006 sent to Mr. Farshid Ahrestani, Mysore and The Chief Wildlife Warden, Tamil Nadu Forest Department, Chennai.

**App. No. 7, 8, 9: Vasundhara:** Water detoxification by using Coconut coir, Water detoxification by using Bacha (*Acorus calamus*) rhizomes Extract, Water detoxification by using *Syzygium cumini* seed Extract.

Comments: The applications are recommended for approval. Benefit sharing arrangement has to be made according to the guidelines given by the NBA.

**Approved by NBA subject to clarification from the applicant that any traditional/associated/oral traditional knowledge is involved.**

**ACTION TAKEN:** Approval Letter No.NBA/9/79-80-81/06/TECH APPL/06-07/7596 - 7598 DT. 08-08-2006 sent to Mr. Bikas Rath, Programme Officer, Vasundhara, Bhunaneswar, Orissa subject to the condition that the applicant has to sign an agreement with NBA after the finalisation of agreement.

**App. No.10: National Botanical Research Institute:** Export of plants for setting up of India Herbal Garden at WHO HQ, Geneva

Comments: The application is not recommended for approval. The prior art of the 18 plants which are to be exported is to be registered first with the NBPGR then the application may be resubmitted to NBA giving details such as characterization and genetic variability, and after registration with IC No. It should be deposited in Gene Bank .

**Not Approved by NBA as per the comments given by the Expert Committee**

**ACTION TAKEN:** Non - Approval Letter No.NBA/9/82/06/TECH APPL/06-07/7569 DT. 02-08-2006 sent to Dr. Rakesh Tuli, Director, NBRI, Lucknow, Uttar Pradesh.

**App. No 11: Dr. H. Thorsten Lumbsch:** Diversity of *Thelotrema* in the Indian Sub - Continents to understand the evolution of the family.

Comments: Application fee not received hence not taken for discussion. A letter has to be written to the applicant to remind for application fee.

**This application is dealt separately in the additional agenda due to the delay in the payment of application fee.**

**App. No 12: ICAR: Indian Wheat Genotypes**

Comments: In view of the exigency emerging out of UG 99 against new virulence of Stem Rust and also the International commitment to the Global Rust Initiative and in view of the National and International Public goods Nature of the material the above application is recommended for approval.

In view of the collaborative research between the Government of India and other nations and in view of getting some valuable germ plasm, the genetic exchange such as that of mango, sunflower and coconut from India may be approved. The committee recommends that the ICAR will take care of the IPR and benefit sharing arrangement.

**Approved by NBA as per the comments given by the Expert Committee**

**Action Taken:** Approval Letter No.9-1a/03/TECH/7506 & 7508 DT. 31-07-2006 sent to 1. Shri. Rajiv Kumar Jain, Deputy Secretary(IC), DARE, New Delhi and 2. Shri. D.K. Chhatwal, Under Secretary, DARE, Ministry of Agriculture, New Delhi. DARE has been requested to take care of the IPR and Benefit Sharing.

**Application No 13: Application form of Dr N. Fadnavis Indian Institute of Chemical Technology, Hyderabad pertaining to Hydroxylation of alkanes and alkenes with Cytochrome p-40 and preparation of Chiral intermediates by Pheromones synthesis.**

COMMENTS: The Committee recommended the proposal in principle. However, the authority be ensured and check with DST that the transfer is under robust MTA and IPRs are properly ensured with the counter part.

This application was evaluated 29.12.2006 by the approved Committee headed by Dr S.P. Tiwari, and the same was put up to the 5<sup>th</sup> authority meeting held at Port Blair for approval. Due to want of some information a letter was written to DST and the DST (CSIR) confirmed that the project meets the CSIR guidelines and has CSIR's approval.

**Approved by NBA as per the comments given by the Expert Committee**

**ACTION TAKEN:** Approval Letter No.NBA/9/66/05/TECH APPL/06-07/6927 DT. 09-05-2006 sent to Dr. Fadnavis, Sci. E - II, Biotransformation Laboratory, Indian Institute of Chemical Technology, Hyderabad

## **7. MEASURES TAKEN IN RESPECT OF INTELLECTUAL PROPERTY RIGHTS RELATED TO GENETIC RESOURCES AND ASSOCIATED KNOWLEDGE**

### **A. FORMATION OF BIODIVERSITY MANAGEMENT COMMITTEES AT VILLAGE LEVEL:**

## **1. KARNATAKA BIODIVERSITY BOARD**

For establishment of Biodiversity Management Committees, the Karnataka Biodiversity Board has submitted a proposal for funding (one time grant) to initiate the BMC at Gram Panchayat, Zilla Panchayat and Municipalities and Municipal Corporation level to the tune of Rs 60 lakhs. The State Government has also supported the KBB by funding the activities to the tune of Rs 20 lakhs (Rs Twenty Lakhs) for the current year.

## **2. MADHYA PRADESH BIODIVERSITY BOARD:**

For establishment of Biodiversity Management Committees the Madhya Pradesh Biodiversity Board has submitted a proposal for funding (one time grant) to initiate the BMC at Gram Panchayat, Zilla Panchayat and Municipalities and Municipal Corporation level to the tune of Rs 1.5 crores for 200 BMCs and other thematic areas. The MPBB has divided the state in to six clusters which includes many Gram Panchayats, Zilla Panchayat and Municipalities and Municipal Corporations. The state Government has also agreed in principle to support financially to this above programme.

## **3. OTHER INITIATIVES MADE BY NATIONAL BIODIVERSITY AUTHORITY**

- Proposal received from Punjab Biodiversity Board for conducting Workshop on “Facilitating formation of State Biodiversity Boards & Biodiversity Management Committees in Northern India” for Rs.1,63,000/- and the project had been approved by the authority.
- Proposal received from Karnataka Biodiversity Board for Formation of BMC’s and preparation of PBR’s in Karnataka and the proposal had been approved by the authority.
- Proposal received from Kerala Biodiversity Board on Documentary film on Biodiversity in Kerala for Rs.2,50,000/- and the project had been approved by the authority.
- Proposal Received from Madhya Pradesh State Biodiversity Board, Madhya Pradesh State Biodiversity Information System to the tune of Rs. 50,00,000/- for financial support from NBA
- Proposal Received from Kerala Biodiversity Boards on the Establishment of Five Model BMC’s in different Grama Panchayats representing Five Districts of Kerala State to the tune of Rs 24,97,400/-lakhs for financial support from NBA.
- Proposal Received from West Bengal Biodiversity Board on the “Biodiversity Festival” to the tune of Rs.22,42,000/- for financial support from NBA.
- Proposal Received from Himachal Pradesh Biodiversity Board on the Preparation of People’s Biodiversity Register at Panchayat Level in the state of Himachal Pradesh to the tune of Rs.15,00,000/- for financial support from NBA.

## **B. IMPLEMENTATION OF PEOPLES BIODIVERSITY REGISTER AT VILLAGE LEVEL.**

To implement the recommendation of the National Workshop on Peoples Biodiversity Register held on 22<sup>nd</sup> -23<sup>rd</sup> June, 2006 a three member committee with the approval of the Authority has been constituted.

'Ecology is for the People: A methodology manual for People's Biodiversity Register' including the detailed methodology and for developing the PBR and also preparation of simple methods to reach village people has been published by Prof. Madhav Gadgil.

A 2-day workshop was organized by Punjab Biodiversity Board on 19<sup>th</sup> & 20<sup>th</sup> December, 2006 at Chandigarh on 'Facilitating formation of State Biodiversity Boards & Biodiversity Management Committees in Northern India' sponsored by National Biodiversity Authority. Twenty eight participants from nine states/UTs (Chandigarh, Delhi, Punjab, Haryana, Himachal Pradesh, Jammu & Kashmir, Rajasthan, Uttarakhand & Uttar Pradesh) participated including representatives from Punjab, Haryana, Himachal Pradesh, Uttarakhand & Uttar Pradesh Biodiversity Boards, as well as, from the departments of Environment, Forests & Wildlife, Agriculture, Animal Husbandry & Fisheries and from Punjab Agriculture University, Ludhiana and CCS Haryana Agriculture University, Hisar.

**The following are the recommendations emerged out of the discussions held during the workshop:**

- ◆ Based on the experience of SBBs, it was decided that NBA and MoEF-GoI should write to all state governments, especially to Chief Minister; Chief Secretary; Secretary, Environment; Secretary, Finance & Secretary Planning of respective state governments to financially support SBBs as these were statutory bodies required to be set up under the Act.
- ◆ The states which had not notified SBBs yet should hasten the process.
- ◆ Each SBB is required to notify the State Biodiversity Rules at the earliest. Care should be taken to ensure provision of 4 meetings of the Board per year as all cases pertaining to access and benefit sharing are required to be cleared within 90 days as per the Act.
- ◆ As per the provision of the Biological Diversity Act, 2002, the Rules may also provide for appointing only eminent experts as chairpersons of the SBB as experience with existing boards has indicated that in all SBBs where CM/CS/Minister is the Chairperson, meetings of SBBs could not be held regularly.
- ◆ All SBBs should facilitate a multi tier provision for constitution of BMCs at district level, block level & village/town level by the local bodies. Since the Panchayats had a Panchayat Secretary and the Municipal Committees had Executive Officers, they could either themselves act as BMCs or form BMC as per Act.
- ◆ All SBBs should facilitate setting up of Technical Support Group at state, region, district & village level in consultation with NBA.
- ◆ Initially the states may facilitate only model BMCs and once the procedures and guidelines are defined by the NBA and funds are provided by the state government, should full-fledged activities to constitute BMCs be taken up.
- ◆ The NBA may notify the enforcement agency for the Act at the earliest. Although the Forest Department was being considered as a probable candidate for acting as an Enforcement Agency, however, it was recommended that a consortium of departments could be identified which could take action through the SBB. This would include Departments of Agriculture, Fisheries, Animal Husbandry, etc.
- ◆ NBA should also identify the agency/officers who would take cognizance of offences with respect to the Act. A system of checking of violations at the field level also needed to be put in place (besides the existing system of BMCs).

- ◆ The NBA may finalize guidelines on benefit sharing at the earliest and send the same to the states. Since the NBA-benefit sharing guidelines is not applicable to SBBs, the SBBs shall prepare their own guidelines and agreements in consultation with NBA
- ◆ The NBA could involve DST (NCSTC Network) for capacity building of BMCs.
- ◆ NBA may provide funds to states for supporting SBBs & BMCs out of GEF funding.

The above recommendations were placed before the Authority in its eighth meeting. The Authority approved the recommendations for implementation and suggested to review the activities of the SBB of different states periodically every year and suggested to create awareness programmes at different levels in State and UTs and initiate awareness programmes in Schools and Colleges.

## **8. APPROVAL GRANTED BY THE AUTHORITY FOR ACCESS OF BIOLOGICAL RESOURCES**

**Name and address of applicant: Dr. H. Thorsten Lumbsch**, Associate Curator & Head of Cryptograms, Department of Botany, The Field Museum, 1400 S. Lake Shore Drive, Chicago, IL 60605 USA

**Approval is subject to specific clearance from the Director General, Council of Scientific and Industrial Research, New Delhi and from the Director, National Botanical Research Institute, Lucknow.**

**Action Taken: A letter was written to the applicants, collaborator and the Director NBRI vide Lr no NBA/Tech APPL/9/84/06/06-07/7558-7560 dated 02.08.2006 and no reply was received till today.**

**Appl. No.1. Mr. B. Jayakumar:** Preparation of aqueous and non-aqueous extract of Safed musli (*Chlorophytum borivaillianum*) and standardization of the same.

**Comments: Recommended for approval.** However before issuing the approval letter details of invention, any personal intervention, taxon as such existed or TK existed/used to be clarified. Also organizational affiliation/registered with DST or any other organization.

**Benefit sharing mechanism to be worked out by the Authority for agreement.**

**Appl. No.2. Dr. Pawan Pankaj Lalsing:** Medical formulation for the treatment of Tuberculosis.

**Comments: Recommended for approval.** However, information such as the source for *Tinospora cordifolia* (Gulvel) from where it is collected, personal intervention, endemic variability and organizational affiliation/registered with DST or any other organization is to be obtained from the applicant.

**Benefit sharing mechanism to be worked out by the Authority for agreement.**

**Appl. No.3. Dr. Janet Seeley:** Insect and Bee pollinators of Forest Ecosystems and selected agricultural crops. Honey Bees (*Apis cerana*, *Apis florae*, *Apis dorsata*, *Trigona sp.*)

**Comments: Recommended for approval** with the conditions

1. The objective of the above proposal is highly complex, diffused and non focused rather vague.
2. It encompasses the genetic species, ecosystem variability.
3. The following information is necessary to accord approval:
  - A) Endemic variability is there or not?
  - B) Any Traditional Knowledge is available with the Bioresource?
  - C) Any species collected and put in the National Repository or not?

**The application is recommended for approval with:**

1. All the collected material to be deposited in the National Repository
2. IC No to be obtained
3. All endemic variability to be registered
4. No patent should be obtained by the applicant
5. Any Traditional Knowledge is available to be informed
6. Endorsement of the collaborator

**Appl. No.4. Dr. Peter Casper & Dr. Lothar Kreinitz, Leibniz:** Collection of Blue – Green Algae and Coccoid Green Algae (Cyanobacteria and Chlorococcales) in 50 different lakes, ponds and national parks in Rajasthan and Gujarat.

**Comments: Recommended for approval** with the conditions

1. The continuity of persons holding the Bioresource should be spelt out.
2. IC numbers for the collected material to be obtained from the repository
3. All the primary studies should be done in India and further movement of this species to other country should be informed to NBA.
4. Permission from Govt. of Rajasthan and Gujarat is mandatory.

**Appl. No.5. Dr. Bruno M. Moerschbacher:** Identification and characterization of Chitin/Chitosan modifying enzymes to elucidate their role in endosymbiosis, potential biotechnological use of the enzymes to generate defined Chitin /Chitosan derivatives with known biological activities.

**Comments: Recommended for approval** with the conditions

1. The continuity of persons holding the Bioresource should be spelt out.
2. IC numbers for the collected material both fifteen dicot trees and the fungi to be obtained from the repository
3. All the primary studies should be done in India and further movement of this species to other country should be informed to NBA.
4. Permission from Govt. of Tamilnadu is mandatory for collection from Mudumalai Wildlife Sanctuary.

**Appl. No.6. Intellectual Property Management Division, M/s Council of Scientific and Industrial Research:** Preparation of an Alkali stable cellulose from a novel *Thermomonospora* sp. Processing a 16SrDNA sequence showing 97% homology to *Thermomonospora mesouviformi*. The organism secretes stable cellulose. Separation of the Solid Bioamss from the extracellular culture filtrate by conventional methods, optionally stabilizing the extra cellular culture filtrate having endoglucanase as well as xylanase activity using conventional preservatives. The culture filtrate may have possible application in textile industry due to the complement of characters it possesses.

**Comments: Recommended for approval** with the conditions

1. Any endemic variety to be informed to NBA
2. After obtaining patent the samples to be deposited in National Repository and inform NBA.
3. **Benefit sharing mechanism to be worked out by the Authority for agreement.**

**Appl. No.7. Intellectual Property Management Division, M/s Council of Scientific and Industrial Research:** Development of an early, short duration, dwarf, high eugenol and linalool yielding variety of Indian Basil through open pollination in the germplasm followed by half-sib progeny selection and evaluation for the yield characters of selected population for 3 years in field conditions. This invention relates to the seeds, plants and plant parts of CIM – SAUMYA and its components to a method of producing CIM – SAUMYA, and to a method for producing and early, short duration, high methyl chavicol and linalool using CIM – SAUMYA as a pollinator or parent.

**Comments: Recommended for approval** with the conditions

1. Any endemic variety to be informed to NBA
2. After obtaining patent the samples to be deposited in National Repository and inform NBA.
3. **Benefit sharing mechanism to be worked out by the Authority for agreement.**

**Appl. No.8. Intellectual Property Management Division, M/s Council of Scientific and Industrial Research:** Production of ecofriendly feed enzyme phytase under solid-state fermentation by a filamentous fungus using Jackfruit seed powder as the substrate. A cost effective invention for the efficient production of phytase enzyme under solid state fermentation using dried jackfruit seed particles moistened with salt solution and supplemented with a nitrogen source and inoculated with *Aspergillus ficcum*.

**Comments: Recommended for approval** with the conditions

1. Any endemic variety to be informed to NBA
2. After obtaining patent the samples to be deposited in National Repository and inform NBA.
3. Benefit sharing mechanism to be worked out.

**Appl. No.9. Intellectual Property Management Division, M/s Council of Scientific and Industrial Research:** Preparation of spray formulation useful for improvement of pungency levels of *Capsicum* at field level is disclosed. The spray when applied to the *Capsicum* plants provides an enhanced pungency levels with respect to the levels of Capsaicinoids. Spray formulation involves extractions of selected microbial cultures.

**Comments: Recommended for approval** with the conditions

1. Any endemic variety to be informed to NBA
2. After obtaining patent the samples to be deposited in National Repository and inform NBA.
3. **Benefit sharing mechanism to be worked out by the Authority for agreement.**

**Appl. No.10. Intellectual Property Management Division, M/s Council of Scientific and Industrial Research:** Production of steviosides from *Stevia rebaudiana* Bertoni. Recovering steviosides from dried plant material of *Stevia rebaudiana* using ecofriendly extraction and purification procedures. Water for extraction of the plant material and the ion exchange resins used in the present invention are eco-friendly, non-toxic in nature and are reusable which will ultimately have tremendous impact on process economic yield of product is high and sweetness is superior.

**Comments: Recommended for approval** with the conditions

1. Any endemic variety to be informed to NBA
2. After obtaining patent the samples to be deposited in National Repository and inform NBA.
3. **Benefit sharing mechanism to be worked out by the Authority for agreement.**

**Appl. No.11. Intellectual Property Management Division, M/s Council of Scientific and Industrial Research:** Cardiac development activity in a subject comprising administering to the subject an appropriate amount of perivitelline fluid obtained from fertilized eggs of Horse shoe crab.

**Comments: Recommended for approval** with the conditions

1. Any endemic variety to be informed to NBA
2. After obtaining patent the samples to be deposited in National Repository and inform NBA.
3. Exact location of collection is necessary for approval
4. **Benefit sharing mechanism to be worked out by the Authority for agreement..**

**Appl. No.12. Intellectual Property Management Division, M/s Council of Scientific and Industrial Research:** Preparation of Biodiesel from triglyceride oils through transesterification. Preparation of fatty acid methyl ester of oil expelled from whole seeds of *Jatropha curcas*.

**Comments: Recommended for approval** with the conditions

1. Any endemic variety to be informed to NBA
2. After obtaining patent the samples to be deposited in National Repository and inform NBA.
3. The Govt of Rajasthan and Gujarat to be informed about the collection of Bioresource.
4. **Benefit sharing mechanism to be worked out by the Authority for agreement.**

**Appl. No.13. Intellectual Property Management Division, M/s Council of Scientific and Industrial Research:** Herbal formulation used in the treatment of herbal dosage form used as an immunomodulatory. The herbal formulation comprising of *Tinospora cardifolia*, *Piper longum*, *Albizia lebbek* and *Curcuma amada*.

**Comments: Recommended for approval** with the conditions

1. After obtaining patent the samples to be deposited in National Repository and inform NBA.
2. The Govt of Rajasthan and Gujarat to be informed about the collection of Bioresource.
3. **Benefit sharing mechanism to be worked out by the Authority for agreement.**

**Appl. No.14. Intellectual Property Management Division, M/s Council of Scientific and Industrial Research:** Neutralizing textile industrial wastewater by a bacterial strain isolated in India. The isolated bacterial strain is capable to bring down the pH of wastewater from 12.00 to 7.00 units within two hours. The neutralization of alkaline textile industrial wastewater by biotechnological process is highly effective and economical and can be used in textile industries emanating alkaline wastewater.

**Comments: Recommended for approval** with the conditions

1. After obtaining patent the samples to be deposited in National Repository and inform NBA.
2. The Govt of Rajasthan and Gujarat to be informed about the collection of Bioresource.
3. **Benefit sharing mechanism to be worked out by the Authority for agreement.**

**Appl. No.15. Shri Prashant Pradeep Sharma:** Collection of *Cyphophthalmi* (Arachnida, Opiliones) in Arunachal Pradesh and Meghalaya by means of sifting leaf litter. All leaf litter will be replaced as found subsequent to collection. Some specimens collected will be used for morphological (Methods: light microscopy and scanning electron microscopy) and molecular (Methods: DNA extraction, amplification and sequencing) studies as part of broader phylogeny research.

**Comments: Recommended for approval** with the conditions

1. Identity of Indian Collaborating Institution necessary
2. Deposit the biorecourse in the repository and IC number obtained and to be informed NBA
3. To be followed the conditions of access.

**Appl. No.16. Dr. Nutan Kaushik:** Bio-prospecting of Metabolites of Endophytic Fungi of Family Poaceae for pesticidal activity. Isolation of endophytic fungi, extraction of metabolite from the fungi, bioassay of crude extract, fractionation of extract, followed by bioassay of the fractions and then characterization of active compound.

**Comments: Recommended for approval** with the conditions

1. Specify the plant species in which fungi etc associated should be informed to NBA.
2. IPR if any should be shared between Indian and German collaborator.

### 3. Benefit sharing mechanism to be worked out by the Authority for agreement..

**Appl. No.17. Shri D.K. Chhatwal:** Supply of 13 varieties of Finger Millet for multi location variety trials to be conducted in India, Sri Lanka, Bangladesh, Bhutan and Nepal under South Asia Network on Plant Genetic Resources (SANPGR) Programme. Six countries namely India, Sri Lanka, Maldives, Bangladesh, Bhutan and Nepal are the member of this network. The Secretariat is located at IPGRI South Asia Office, New Delhi. The objectives of SANPGR are to improve conservation and use of plant genetic resources through collaborative efforts of member countries. The present Programme is a joint evaluation of Finger Millet varieties under adaptive trials and each country would be contributing 3 – 5 varieties. India is contributing Finger Millet varieties namely HR 911, PR 202, VL 149, GPU 28 and GPU 48.

**Comments: Recommended for approval**

**Appl. No.18. Shri D.K. Chhatwal:** Supply of seeds of released variety of Jute namely KOM – 62 to USA and import of *Corchorus siliquosus* (Jute), *Agave teuilana* (Siisal) and *Linum usitatissimum* (Flax) to India for research by NBPGR.

**Comments: Recommended for approval based on Quit-pro-Quo subject to IPR and benefit sharing.**

**Appl. No.19. Dr. William:** Clearance for the export of groundnut transgenic seeds to South Africa for testing.

**Comments: Recommended for approval.** The product that is transgenic being International public goods subject to the provisions, terms and conditions of EPA laid down by DBT/MoEF as per transgenic events.

**Appl. No.20. Shri D.K. Chhatwal:** Export of Vegetable Seeds viz., Cauliflower, Cabbage – Golden Acre, Drumhead and Copenhagen, Carrots – Nantees and Pusa Kesar and Chilli – Birds eye N-46 and NP-41 to Lesotho (Africa) for trial purposes through NSC Agriculture Assistance Programme.

**Comments: Recommended for approval**

NBA has approved three IPR applications in the 7<sup>th</sup> NBA meeting held on July 20<sup>th</sup> 2006 after the scrutiny by the EC on access application. The approval letter has been sent to the applicant with the condition that the applicant has to sign an agreement. The agreement is ready to be sent to the applicant for signature; however, the Benefit sharing by the applicant has to be decided in the 8<sup>th</sup> Authority meeting.

The following applications had been approved in 8<sup>th</sup> Authority meeting held on 7<sup>th</sup> March, 2007.

**Appl. No.21. Dr. Vibhu Prakash** Twenty samples of Bat Serum for disease investigation to U.K. for investigation. To examine the blood for presence of Nipah virus, handra virus and other Nipah like viruses

**Comments: Recommended for approval.** No Material transfer Agreement signed between the applicant and their British collaborator. Intended purely for research purpose.

**Approved with conditions:** The application is for transfer of fruit bat blood / serum for investigation for the presence of viruses. The purpose is generation of scientific information on fruit bats as carriers of viruses. Publications will be made in Indian and Foreign Journals with no biotechnological, scientific or other benefits to the third party. The transfer of blood/serum samples may be recommended only when such investigations cannot be carried out in India and with Indian Partners, and that too under MTA.

**Appl. No.22. Shri. Prakash Deshmukh** Invention relates to composition and a process for preparation of a composition for manufacturing textured soluble container using herbal texturing agent

**Comments: Recommended for approval. Company owned IPR Benefit sharing is to be worked out**

**Approved after the additional information received by NBA.**

**Appl. No.23. Dr.I.P. Singh,** Supply of seeds a variety of Ramie, namely R - 67 – 34 to Canada and import of *Agave sisalana* (Sisal), and *Linum usitatissimum*(Flax) to India for research by NBPGR

**Comments: Recommended for approval. Collaborative Research Project as per Section 5 of BD Act**

**Approved after proper procedure is followed.**

**Appl. No.24. Shri.D.K. Chhatwal,** Export of Vegetable Seeds viz., Cauliflower, Cabbage – Golden Acre, Drumhead and Copenhagen, Carrots – Nantes and Pusa Kesar and Chilli – Birds eye N-46 and NP-41 to Lesotho(Africa) for trial purposes through NSC Agriculture Assistance Programme

**Comments: Recommended for approval. Collaborative Research Project as per Section 5 of BD Act**

**Approved as suggested**

**The following are the four IPR applications where Benefit sharing has to be decided by the 8<sup>th</sup> Authority:**

**1. F. No.: 9/55/2005/Tecl. Appl/ (Ref. Appendix Pg. No107)**

Applicant Name & Address: International Flavors and Fragrances, 1-5 Seven Wells Street, St. Thomas Mount, Chennai – 600 016.

Type of From: Form III

Type of Bioresource: Dried roots of *Decalepis hamiltoni*

2. F. No.: 9/79/2006/Tecl. Appl/ (Ref. Appendix Pg. No107)

Applicant Name: Mr. Bikash Rath, Vasundhara

Type of From: Form III

Type of Bioresource: Coconut Coir

3. F. No.: 9/80/2006/Tecl. Appl/ (Ref. Appendix Pg. no.108)

Applicant Name: Mr. Bikash Rath, Vasundhara

Type of From: Form III

Type of Bioresource: Bacha (*Acorus calamus*) rhizomes

4. F. No.: 9/81/2006/Tecl. Appl/ (Ref. Appendix Pg. no. 109)

Applicant Name: Mr. Bikash Rath, Vasundhara

Type of From: Form III

Type of Bioresource: Jamun seed (*Syzygium cumini* (L.) Skeels)

### **Benefit Sharing Mechanism as per the provisions of the Biological Diversity Act, 2002 (Pg. no. 12)**

#### **The Chapter V of Section 21 (2) & (3) of Biological Diversity Act, 2002 says**

(2) The National Biodiversity Authority shall, subject to any regulations made in this behalf, determine the benefit sharing which shall be given effect in all or any of the following manner, namely:-

- a) grant of joint ownership of intellectual property rights to the National Biodiversity Authority, or where benefit claimers are identified, to such benefit claimers;
- b) transfer of technology;
- c) location of production, research and development units in such areas which will facilitate better living standards to the benefit claimers;
- d) association of Indian scientists, benefit claimers and the local people with research and development in biological resources and bio survey and bio utilization;
- e) setting up of venture capital fund for aiding the cause of benefit claimers;
- f) payment of monetary compensation and non monetary benefits to the benefit claimers as the National Biodiversity Authority may deem fit.

(3) Where any amount of money is ordered by way of benefit sharing, the National Biodiversity Authority may direct the amount to be deposited in the National Biodiversity Fund: Provided that where biological resource or knowledge was a result of access from specific individual or group of individuals or organizations, the National Biodiversity Authority may direct that the amount shall be paid directly to such individual or group of individuals or organizations in accordance with the terms of any agreement and in such manner as it deems fit.

## **9. AWARENESS RELATING TO THE INTELLECTUAL PROPERTY RIGHTS AND PUBLIC PARTICIPATION**

1. “Interactive Workshop on State Biodiversity Board and Review Meeting” organized by National Biodiversity Authority held on 27<sup>th</sup> & 28<sup>th</sup> April, 2006 at Gokul Hall, Hotel Krishna Residency, Chennai.
2. “National Workshop on PBR” organized by National Biodiversity Authority held on 22<sup>nd</sup> & 23<sup>rd</sup> June, 2006 at Conference Hall, Institute of Ocean Management, Anna University, Chennai
3. Workshop on “Facilitating Formation of State Biodiversity Boards & Biodiversity Management Committees in Northern India” on 19 - 20<sup>th</sup> December, 2006 at Hotel Mount View, Sector 10, Chandigarh organized by Punjab Biodiversity Board and funded by NBA.
4. “National Seminar on Mosquito Biodiversity and challenges in the control of Mosquito – Borne deceases” held on 19<sup>th</sup> Feb, 2007 at Bertram Hall, Loyola College, Chennai.
5. “Oneday training programme to create awareness on Biodiversity among School / College teachers, Government Staffs, NGOs in Nagapattinam district held on 2<sup>nd</sup> March, 07 at Edayathangudy G.S.Pillay Engineering College, Nagapattinam.
6. “Biodiversity of Snakes and other reptiles and snakes and Environment – Report on Awareness and Training programme for Teachers and students of Chennai Corporation Schools during Nov, 06 to Mar, 07 sponsored by NBA and conducted by Chennai Snake Park Trust, Raj Bhavan, Chennai – 22.

## **10. REGULATION ISSUED UNDER SECTION 64 OF THE BIOLOGICAL DIVERSITY ACT, 2002**

### **Recruitment Regulation**

**G.S.R.156-** In exercise of the powers conferred by sub-section(2) of Section 14 and Section 64 of the Biological Diversity Act, 2002 (18 of 2003), the National Biodiversity Authority with the previous approval of the Central Government hereby makes the regulations the method of recruitment and conditions of service of its officers and other employees.

**30<sup>th</sup> June, 2006**  
**[F.No.J-22018/19/2003-CSC(BC)]**  
**DESH DEEPAK VERMA, Jt.Secy.**

### **The Regulation on Collaborative Research**

**S.O.1911(E) – In exercise of the power conferred by clause (a) of sub-section(3) of section 5 of the Biological Diversity Act, 2008 (18 of 2003) the Central Government hereby makes the following guidelines namely:-**

1. (1) These guidelines may be called the Guidelines for International Collaborative Research Projects Involving Transfer or Exchange of Biological Resources or Informational relating thereto between institutions including government sponsored institutions and such institutions in other countries.
2. They shall come in to force on the date of their publication in the Official Gazette
3. In view of the fact that collaborative research projects have been exempted from obtaining approval of the national Biodiversity Authority established under section 8 of Biological Diversity Act, 2002, (hereinafter referred to as the Act) and that the need for transfer and exchange of biological resources cannot be ruled out in such projects, sponsored under the bilateral and multi-lateral agreement, Memorandum of Understanding and work plan etc. under the International Collaborative Research Projects, these guidelines are hereby notified by the Ministry of Environment and Forests in compliance with the said provisions of the Act and for such research projects.
4. (1) The collaborative research project shall clearly state in the proposal –
  - a. the key investigator(s) in each of the collaborating institution, who shall be responsible for all compliance and in case of any contravention, this person will be held responsible. Changes in the identity of the key investigator should be intimated to the concerned Department / Ministry of the Central Government;
  - b. details of biological resources occurring in India and knowledge associated thereto, intended to be exchanged or transferred under the project, such as biological name, quantity, purpose, source, place of collection and such other activities;
  - c. value addition, if nay, to the biological resource and associated knowledge;

- d. in case the biological resource referred to in (b) above has any special status under any law in force in India or any international agreement, the details of the same may be provided, including necessary clearances from competent authority.
- (2) The collaborators shall abide by the provisions of existing national laws, regulatory mechanisms and international agreements or treaties.
- (3) The biological resource(s) and associated knowledge intended to be exchanged or transferred under such projects shall be used only for the research purpose specified in clause (b) of sub-paragraph (1) above.
- (4) The quantity of biological resource(s) intended to be transferred or exchanged shall be limited to the quantity necessary for experimental purpose, as specified in the proposal and as per the access and material transfer guidelines developed by National Biodiversity Authority.
- (5) In case the results of research from this project subsequently prove likely to lead to any Intellectual Property Rights, the collaborating partners shall enter into a fresh agreement with National Biodiversity Authority (established under section 8 of the Act) to ensure sharing of benefit in accordance with provisions of section 6 of the Act, prior to filling of the application for Intellectual Property Right(s).
- (6) The voucher specimen of the biological resource occurring in India transferred or exchanged under the project shall be sent to the designated repository in accordance with section 39 of the Act.
- (7) In case the collaborative research projects involve exchange and transfer of dead or preserved specimen(s) and/or herbarium(s) of India on loan or on any other terms, for taxonomic studies as required by bona-fide scientists/professors or recognized universities and Government Institutions of India who are engaged in pure classical taxonomic studies, this shall be done with the approval of concerned Departments / Ministries of the Government of India.
- (8) Collaborators shall not communicate or transfer research results of the collaborative project to any third party in any manner without entering into an agreement with the National Biodiversity Authority for this purpose.
- (9) Publication of Research paper(s), book(s), bulletin(s), registered accession(s) and output(s) based on the results of the research of such projects, shall not be done without the prior approval of the Indian collaborator.
- (10) During the course of the implementation of the project, any knowledge associated with exchanged or transferred biological resource from India shall be reported to National Biodiversity Authority for facilitating documentation of such knowledge.
- (11) Any publication(s) relating to knowledge associated with biological resource exchanged and/or transferred from India under the collaborative project shall acknowledge the knowledge holders from whom this knowledge was obtained.

- (12) Any new taxon, breed(s), genetic stock(s), culture(s), strain(s) or line(s) discovered or developed through the project shall be reported to the National Biodiversity Authority and a voucher specimen shall be deposited with the designated repository in accordance with Act.
- (13) The collaborative research project shall have to be approved by the concerned Ministry/Department of the State or the Central Government.
- (14) A copy of the approval along with all relevant details shall be sent to the National Biodiversity Authority.
- (15) For more details about Biological Diversity Act, 2002, National Biodiversity Authority and related issue log on [www.nbaindia.org](http://www.nbaindia.org)

8<sup>th</sup> November, 2006  
[F.No26/4/2006-CSC]  
DESH DEEPAK VERMA, Jt.Secy

**Notification of Agreements to be signed by the applicants for Access, Transfer of Bioresources, Technology Transfer and Patents.**

- a. **Agreement on Access to Biological Resources for Research Purposes**
- b. **Agreement on Access to Biological Resources for Commercial Purposes**
- c. **Agreement on access to biological resources for research/bio-survey and bioutilisation**
- d. **Agreement on transfer of research results**
- e. **Agreement for Seeking Intellectual Property Rights**

Draft agreements were discussed thoroughly by NBA in an interactive meeting with 12 experts from various parts of the country on 23rd July 2005 and the agreements were again placed before a NBA approved committee for scrutiny and approval. A committee headed by Mr Vishwanath Anand, Vice Chairman, Environment. App. Authority scrutinized and approved the agreements. This was placed in the 5th Authority meeting held on 20th January 2006 for approval and the Authority approved the same. These approved draft agreements were scrutinized by the Secretary MoEF and the same was sent to the Government of India (Administrative Ministry) for notification.

**The agreements approved by the National Biodiversity Authority by the Authority were put up to Secretary Ministry of Environment and Forests, Government of India for scrutiny. This has been sent to Ministry of Environment and Forests for notification/vetting by the Law Ministry before it is being notified in the official Gazette of India.**

## **11. FINANCE AND ACCOUNTS OF THE AUTHORITY**

**Grants in Aid sanctioned from Ministry of Environment and Forests for the year 2006 – 2007**

<b>S. No</b>	<b>Grants in Aid</b>	<b>Amount (Rs. in Lakhs)</b>
1.	Salary and Wages	30.00
2.	Equipment & Furniture	5.37
3.	Office Expenses/Contingency	14.20
4.	Website and Computers	6.00
5.	Authority/Expert Meeting Expenses	21.00
6.	Rent and Taxes	12.18
7.	Travel	11.15
8.	Books	4.00
9.	State Biodiversity Board	84.60
10.	Project / Awareness on Biodiversity	18.10
	<b>Total</b>	<b>208.60</b>

**Expenditure Statement for the year 2006 – 2007**

<b>Grants in aid</b>	<b>Revalidated from 2005 - 2006</b>	<b>Funds received 2006 – 2007</b>	<b>Expenditure up to March 2007</b>
Office Expenses /Contingent Expenses	1588	15,45,000	16,24,546
Wages	.....	25,00,000	23,01,018
Websites & Computers	.....	5,00,000	1,15,650
Rent/Rates/Taxes	.....	9,28,000	9,21,749
Office Equipments and Furniture	.....	5,37,000	74,351
Travelling Expenses	.....	9,15,000	7,34,451
Awareness Projects	.....	25,00,000	24,75,935
Authority / Expert Committee Meeting	.....	19,25,000	19,22,336
State Biodiversity Board	.....	25,00,000	35,00,000
Library	.....	3,50,000	3,31,849
<b>Total</b>	<b>1588</b>	<b>142,00,000</b>	<b>140,01,885</b>

**RECEIPTS:**

Receipts of application fees

: Rs. 2,25,835/-

**12. ANNUAL PLAN OF THE FOLLOWING YEAR**

## **Authority meetings:**

National Biodiversity Authority is established under section 8 of the Biological Diversity Act, 2002. The major objectives of the National Biodiversity Authority is to regulate access to biological resources of the country and conserve and sustainable use of biological diversity; to respect and protect the knowledge of local communities related to biodiversity; to secure sharing of benefits with local people as conserves of biological resources and holders of knowledge and information relating to the use of biological resources; protection and rehabilitation of threatened species; involvement of institutions of state government in the broad scheme of implementation of the Biological Diversity Act, 2002 through constitution of expert committees. As per Section 12 of the Biodiversity Act, 2002 and Rule 10 of the Biological Diversity Rule 2004, the authority shall meet at least four times a year normally after a period of three months at the head quarters of the authority or at such place as may be decided by the Chairperson.

Four authority meetings are proposed for the year 2007-2008:

- 9<sup>th</sup> authority meeting July 29<sup>th</sup>, 2007
- 10<sup>th</sup> authority meeting 13<sup>th</sup> Nov, 2007
- 11<sup>th</sup> authority meeting
- 12<sup>th</sup> authority meeting

## **Technical:**

### **1. Peoples Biodiversity Register:**

As per sub rule 8 of Rule 22 of the National biodiversity Authority shall take steps to specify the form of the People's Biodiversity Register and the particulars it should contain and the format for electronic database.

For the above purpose a uniform methodology is to be developed by NBA and support the BMC's to follow the same. The people's knowledge such as knowledge of uses that might find commercial application and that might need to be guarded with respect to IPR and the knowledge pertinent to prudent management of natural resources that might be widely shared with benefit to all concerned without any unfair commercial profits accruing to any party are to be registered by the locals. NBA will take efforts to finalise the methodology manual to be followed by the BMCs of different states.

### **2. Agreements for access for research, agreements for commercial purpose, Transfer of Research Results, Intellectual Property Rights and Material transfer:**

As per Rule 14, 17, 18 and 19 of the Biological Diversity Rules 2004, NBA shall receive applications for Access, Application for Transfer of Bioresource and application for Patent. The received applications shall be scrutinized by a committee of experts and the recommendations of this committee will be put up to the authority for approval. After the approval, the applicants have to enter into an agreement as per the requirement of the Act.

The following are the agreements to be prepared by National Biodiversity Authority.

1. Access of bio-resources for commercial purposes
2. Access of bio-resources for research and bio-survey
3. Transfer of Research Results (Technology)
4. IPR (Patent)
5. Material Transfer

The draft agreements will be discussed thoroughly by NBA in an interactive meeting with experts drawn from various parts of the country and the agreements will be placed before a NBA approved committee for scrutiny and approval. These approved agreements will be sent to the Government of India (Administrative Ministry) for notification by Law Ministry.

## 13. ANY OTHER IMPORTANT MATTER DEALT BY THE AUTHORITY

### 1. STATE BIODIVERSITY BOARDS NOTIFIED:

The following states have formed the **SBB**, the details are furnished below:

No.	Name of the State	Notification No. and Date
1.	Karnataka	No. FEE 125 ENV 2003, Bangalore dated 21 <sup>st</sup> November, 2003
2.	Goa	No. 7/17/92/STE/PART/858 dated 2 <sup>nd</sup> December, 2004
3.	Madhya Pradesh	No. F. 1-2/2003/LVII-Bhopal dated 17 <sup>th</sup> December, 2004
4.	West Bengal	No. EN/100/T-II-7/003-i/2003 dated 17 <sup>th</sup> January, 2005
5.	Punjab	No. 2/41/2000-STE (1)/3942 dated 23-1-2004
6.	Kerala	G.O.(MS) No.01/2005/STED dated 28 <sup>th</sup> February 2005
7.	Arunachal Pradesh	No.For.262/D-4/04/6421-80 dated 15 March 2005
8.	Nagaland	No.For-Works-11/04 dated Kohima, 14 <sup>th</sup> March 2005
9.	Himachal Pradesh	No. STE-A(3)-1/2004 dated Shimla - 14.02.2005
10.	Mizoram	No.A.36016/96-FST dt.17-01-2006
11.	Chattisgarh	No.8-29/2006/102 dt.16-02-2006
12.	Manipur	No.----- dt. 03-04-2006
13.	Sikkim	No. 20/HOME/2006 dt.07-03-2006
14.	Gujarat	No.GVN/2006/8/WLP/2003/1777/G1 dt. 11 - 05 - 2006
15.	Uttaranchal	No.1773/X-2-2006-8(83)/2001 dt.01-04-2006
16.	Andhra Pradesh	G.O. Ms. No. 68 Environment, Forests, Science & Technology (For II), 11th May, 2006
17.	Uttar Pradesh	No.1498 / 14-5-2006-57/2006 dt.20-09-2006
18.	Haryana	S.O.108/c. A. 18/2002/S. 2/2006 dt.14-11-2006

### 2. FINANCIAL ASSISTANCE RENDERED BY NATIONAL BIODIVERSITY AUTHORITY TO SBB:

Based on the decision taken in the first meeting of NBA, the authority has to give a one time grant- in- aid of Rs. 10, 00, 000/- (in two installments of Rs. 5, 00, 000/- each) for the establishment and infrastructure of the State Biodiversity Boards that has been formed.

**STATES WHICH HAVE BEEN PAID THE FIRST INSTALLMENT OF ONE TIME GRANT OF RS.5 LAKHS**

1. Himachal Pradesh
2. Chattisgarh
3. Mizoram
4. Gujarat
5. Uttaranchal

**STATES WHICH HAVE BEEN PAID ONE TIME GRANT OF 10 LAKHS**

1. Goa
2. Punjab
3. West Bengal
4. Karnataka
5. Nagaland
6. Madhya Pradesh
7. Kerala

**STATES WHICH HAVE OPENED BANK ACCOUNT BUT NOT YET RELEASED ONE TIME GRANT OF RS.10 LAKHS**

1. Uttar Pradesh
2. Andhra Pradesh

**STATES WHICH HAVE FORMED SBB BUT NOT YET OPENED BANK ACCOUNT**

1. Arunachal Pradesh
2. Manipur
3. Sikkim
4. Haryana

**4. LETTER OF RESPONSE FOR THE FORMATION SBB RECEIVED FROM PCCF OF DIFFERENT STATES:**

For the formation of State Biodiversity Boards in accordance with the Biological Diversity Act, 2002, the letter of response was received from the Principal Chief Conservator of Forests of each state. The details are given below:

1. **Tamil Nadu** (Vide Lr. No. WL4/8702/2004 dated 13-12-2004)
2. **Assam** (Vide. Lr. No. FG.27/Biodiversity Act/2002 dated 29<sup>th</sup> December, 2004.
3. **Jharkhand** Ranchi (Vide Lr. No. 5513 dated 10.12.2004).
4. **Orissa** (Vide Lr. No. 273/3/7F(Pltn.) 240/04 dated 20<sup>th</sup> December, 2004)

**1. GOA BIODIVERSITY BOARD**

**Chairman:**

- 1. Dr. Herman Y. Karaputkar**

**Members:**

1. Representative of the Department of Forests
2. Representative of the Department of Agriculture
3. Representative of the Department of Fisheries
4. Representative of the Department of Higher Education
5. Dr. M. K. Janarthanam, Reader, Department of Botany, Goa University
6. Dr. Nandkumar Kamat, Lecturer, Department of Botany, Goa University
7. Dr. (Mrs.) Kasturi R. Dessai, Reader, RSN (PES) College, Ponda.
8. Dr. Bernard F. Rodrigues, Reader, Department of Botany, Goa University
9. Dr. Manoj Borkar, Reader, Carmel College, Nuvem
10. Director/Jt. Secretary, Department of Science, Technology and Environment  
(Member Convenor)

**Contact Address:**

**Dr. Joseph S.R. de Souza,**  
Member Secretary  
Goa State Biodiversity Board,  
Office of the Director, Department of Science, Technology & Environment,  
Saligao, Bardez, Goa-403 511.  
Office Phone: 0832-2407186; 187; 189; 580.  
Chairman: (Res.) 0832 – 2225549; Dr. N.P.S. Varde (Res) 0832-2412041.

**ACTIVITIES:**

**1. BIODIVERSITY AWARENESS PROGRAMMES**

**1. “Tree Planting Program”:**

On 05th June 2006, to commemorate World Environment Day, a Tree planting programme was held at DST&E, premises, Saligao -Goa. The GSBB members expressed satisfaction on the said program and proposed that aggressive tree planting schemes/drives could be undertaken during the ensuing monsoon season, which was agreed.

## **2. Environmental Teachers Training Workshop:**

Three Environmental Teachers Training collaborative programmes, initiated by the GSBB were organized in association with the C. P. R. Environment Education Centre, Chennai, in the month of Feb/Mar 2007. About 100 teachers were participated in the one days workshop held at Saligao, Panaji and Nagao (Verna).

## **B) Biodiversity Conservation Programmes organized by the GSBB:**

1. **"Million Seed Ball Campaign":** In collaborative with BITS, Pilani- Vasco, and Biodiversity Conservation India Limited (BCIL) Bangalore, and Goa State Biodiversity Board, the innovative concept of Seed Ball Campaign, was launched by the GSBB, wherein a seed wrapped up in a ball of soil mixed with the manure is planted in the field. Approximately 10,000 seed balls were propagated in the State of Goa, at different places. Schools, colleges and the mining industries were identified for the Seed Ball Campaign. The GSBB envisages that this concept should be propagated in the ensuing season.
2. **"Coastal Afforestation Program":** The Program was officially launched on 24th August 2006, at Kerim Beach (pernem block), in association with the Forest Department. About 500 saplings were planted with adequate fencing and with sustainable water at Kerim beach. Further, the GSBB, also proposes to undertake rigorous tree planting drives on the entire coastal belt of Goa in a phased manner, in collaboration with the Forest and Environment Department, Govt of Goa.

## **3. Establishment of People's Biodiversity Register (PBR) in selected Villages:**

The following five villages have been identified for the establishment of PBR, in Goa State.

Saligao -(Bardez- Taluka)  
Virnoda -(Pernem -Taluka)  
Merces -Ribandar (Tiswadi -Taluka)  
Mulgao -(Bicholim- Taluka)  
Velha Canca.- (Bardez- Taluka)

## **4. Establishment of Biodiversity Management Committee (BMC) for 05 Municipalities:**

The GSBB established Biodiversity Management Committee's (BMC) for the five Municipal areas in the State of Goa, as enlisted below.

Mapusa -(Bardez- Taluka)  
Bicholim -(Bicholim- Taluka)  
Ponda -(Ponda- Taluka)  
Valpoi -(Sattari -Taluka)  
Pernem -(pernem -Taluka)

## **5. Beach Cleaning Drives:**

The GSBB desires to undertake beach-cleaning drives in selected beaches in Goa as a collaborative programme of NGC & Goa State Biodiversity Board. This program will be motivated through school students. In response to this event the board members opined that the school children should be involved/motivated & sensitized to boost environmental awareness at school, community & village level. The NGC network established in the State of Goa will be utilized for the mobilization of environmental based programs.

## **6. Establishment of a "Medicinal & Herb Park" at DST&E:**

The foundation stone for the "Medicinal & Herb Park" of the GSBB was laid by the Hon'ble Dy. Chief Minister/ Chairman of GSBB Dr. Wilfred D'Souza on 13/04/07.

This park will show case various species of herbs and traditional medicinal plants of Goa and adjoining states. This park when established will be also utilized as an educational hub wherein various academic institutions will partake in field to lab activities. The financial assistance is being sought from the Ministry of Environment & Forests and the State Government.

## **D) DECISIONS TAKEN IN THE GSBB MEETING**

### **1. Strengthening of the GSBB**

To facilitate the Goa State Biodiversity Board to function effectively, efficiently and attain the objectives envisaged under the Biodiversity Act and Rules, therein, the following positions are proposed for strengthening the GSBB.

<b>Sr.No</b>	<b>Name of Posts</b>	<b>Nos. of Posts</b>	<b>Proposed Scale</b>
1	Sr.Scientific Assistant	01	Rs.6,500 – 200 – 10,000
2	Jr.Scientific Assistant	01	Rs.5,500- 175- 9000
3	Jr.Scientific Assistant	01	Rs.5,500 – 175 - 9000
4	Computer Operator	01	Rs.4,500-125-7000
5	LDC/Cashier	01	Rs.3050-75-3950
6	Driver	01	Rs.3050-75-3950
7	Peon	01	Rs.2550-55-2660-60-3200

### **Constitution of Sub-Committee's:**

The following four sub-committee's, are proposed for effective implementation and monitoring of the respective core areas.

1. Bio-diversity Inventory Committee
2. Wetland & agriculture Bio-Diversity Committee
3. Awareness Committee
4. Heritage site & Sacred Grove Committee

#### **i. Administrative & Financial Powers to the Member Secretary**

The Chairman & Members of the GSBB conveyed approval administrative and financial powers to the Member Secretary, (GSBB) for smooth functioning of the Board activities.

#### **ii. Sitting fees for GSBB members**

Sitting fees of Rs.500/- per meeting for all members of the Board is being considered.

#### **iii. Release of Grant-in-Aid to GSBB.**

A proposal for approval of the pattern of assistance & release of grant-in-aid of Rs.19.00 lakhs has been submitted to the State Government.

#### **iv. Development of the GSBB Website:**

A website of Goa State Biodiversity Board is proposed to be developed for effective documentation of GSBB database, activities, rules, Acts, etc..

#### **v. Database on Marine Life:**

A database on Marine life is proposed to be developed.

#### **vi. Documentation of Micro-organisms:**

Documentation of the "Microbes" of Goa., is also envisaged by the GSBB.

#### **vii. Framing of GSBB rules:**

The GSBB has framed the draft Goa State Biodiversity Rules & submitted the same to the State Law Department for vetting.



Chairman, GSBB lunching Prog.by  
palting the tree 1



Member Secretary, GSBB gathering  
during world Environment day1

## 2. KARNATAKA BIODIVERSITY BOARD

### Chairman:

1. Hon'ble Minister for Information, Environment and Ecology,

### Members:

1. Principal Secretary to Government, Forest, Ecology and Environment Department.
2. Principal Secretary to Government, Agriculture and Horticulture Department.
3. Secretary to Government, Forest, Ecology and Environment.
4. Director, Indian System of Medicine and Homeopathi.
5. Prof. Madhava Gadgil, Indian Institute of Science, Bangalore.
6. Dr. Dwarakanath, Ex. Vice Chancellor, Agricultural University
7. Prof. H. Sharath Chandra, Indian Institute of Science, Bangalore.
8. Dr. M. S. Mahalingappa, Siddarama Krupa, Tumkur District.
9. Dr. Darshan Shankar, Foundation for Revitalisation of Local Health Tradition

### Contact Address:

**Sri. Ramesh C. Prajapathi, I.F.S.,**  
Member Secretary,  
Karnataka Biodiversity Board,  
Ground Floor, Vanavikasa, 18<sup>th</sup> Cross, Malleswaram, Bangalore-560003.  
**Ph:** 080-23448783; **Fax:** 080-23440535

## ACTIVITIES

The Board was instrumental in getting the Karnataka Biodiversity Rules, 2005 published by Government of Karnataka.

- In view of achieving the 2010 Biodiversity target, the Board has organized International Biological Diversity Day on 22<sup>nd</sup> May 2006 at Three District Headquarters (Mangalore, Hubli Dharwad and Haveri) and three grama panchayaths (Davangere District – Nerlige, Shimoga District –Basavani and Chickmaglore District - Kesave) empowering people about Biodiversity and its importance. The theme for the year 2006 was “Protection of Dry Land Biodiversity and Prevention of Desertification”.
- Out of the total 623 Biodiversity Management Committees formed so far in the 14 districts of the State 151 have been constituted in the current year. The Board has conducted 20 taluka level and 17 grama panchayath level training programmes on various issues related to Biodiversity.
- The first ever BMC of a Corporation in was constituted at Bangalore Mahanagara Palike. It was launched on ‘World Ozone Day-2006’. The event was significant with

free distribution of 6000 medicinal plants to the public for cultivation in Kitchen Gardens.

- The Board has taken initiative in getting notification on declaration of an age old Tamarind grove at Nallur (Devanahalli taluk-Bangalore Rural District) as a Biological Heritage Site by Department of Ecology and Environment, Government of Karnataka.
- Participated and presented views on “Biodiversity and Environmental Governance “ in a National level seminar held at New Delhi during December-2006.
- The Board has procured five kilo seeds of Makhana from National Makhana Research Institute, Darbhanga, North Bihar and introduced to South India for the first time. Seeds were broadcasted in the tanks and lakes of 9 districts (Mandya, Mysore, Bangalore Urban and Rural, Shimoga, Chickamagalore, Dharwad, Udupi and South Canara) in on experimental basis and the growth and yield and being monitored.
- The Board has conducted one day workshop on various issues of progressive farming in association with S.K.D.M Grameenabhivridhi Yojane, Dharmasthala and local Biodiversity Management Committee. The workshop addressed issues like innovative Floriculture and Orchid culture, Buffalo breeding, Nutritive vegetable cultivation and Value addition to local wild fruits. The Board also honoured a rare progressive farmer Sri. Devaraya who is rearing over 50 local land races of Paddy during the occasion.
- Karnataka Biodiversity Board has organized a two days National Seminar on “Plant Resources of Western Ghats” sponsored by National Biodiversity Authority on Participants from diverse quarters joined this event to make it a grand success, sharing their research work and experiences. This included Professors, Research Scholars, Students and Experts representing 8 states, 8 universities from Karnataka and 20 universities from States along with 15 NGO’s 10 National Research Institutes, 4 State Biodiversity Boards and 15 BMCS of Karnataka who are preparing PBR process in the State. On 7<sup>th</sup>, 8<sup>th</sup> December, 2006. The Abstracts of the papers printed was published as Sasyasahyadri.
- The Board drafted one of the Executive Officers to train and capacity building of BMC and study team members of Orissa and Andra Pradesh on creation of awareness on Biodiversity and preparation of PBR.
- The Board in association with IISC had organized two workshops at Sirsi on preparation of School Biodiversity Registers during the year.
- The Board has conducted 14 Ayurveda Melas in the remote villages of Uttara Kannada, Dakshina Kannada, Chikkamagalor, Tumkur and Bangalore Districts of the State. The Melas were intended to popularize the Indian System of Medicine and use and Conservation of Medicinal plants (over 7200 persons were benefited).
- The Board facilitated declaration of 5 fish congregating centers as Fish Sanctuaries viz. Harihara pura, Sringeri (Chikkamagalor District) Chibbala gudda (Shimoga) and Tingale (Udupi District) by Government of Karnataka during the year .

- Karnataka Biodiversity Board launched its official website (kbbindia.org) on 8-12-2006 by renowned environmentalist Prof. Madhava Gadgil of IISC.
- The Board has initiated formation of Biodiversity Management Committees and preparation of PBRs at selected five BMCs each in 8 districts (Tumkur, Mandya, Haveri, Davangere, Chitradurga, Bellary, Hassan and Chikkamagalor) of the State through NGOs. The Board conducted a one day State level training programme for these NGO's on 23-03-2007.



- A project on “Conservation, maintenance and consolidation of Kuvempu Memorial Biopark” at a cost of Rs.100 lakhs around the birth place of Rashtrakavi Kuvempu was sanctioned by Government of Karnataka during the year 2003-04 and the following activities have been proposed:
  - a. Survey and boundary consolidation of the Bio park
  - b. Conservation of Biodiversity in Kuvempu Memorial Bio Park.
  - c. Assessment, inventorisation and documentation of Biodiversity
  - d. Awareness and training for the stake holders on Biodiversity related issues.

During the year 2006-07 all these activities were continued and an amount of Rs.21.58 lakhs was spent. The work of demarcation and fixing of stone pillars was held up for some reasons in Shimoga District and the matter has been taken up with implementing agency.

- The Board got financial assistance of Rs.94.50 lakhs from KUIDFC for a project on SBI & MS for coastal districts of Karnataka. The schedule continued during the current year also.
- The Components included work as follows:
  - i) Survey of Flora and livestock biodiversity
  - ii) Survey of Marine Fauna, Flora, Odonates, Birds and Butterfly diversity.
  - iii) Preparation of Karnataka Coastal Biodiversity Information System.
  - iv) Preparation of PBR in 22 BMCs

- v) Training and Capacity Building of Stakeholders on Biodiversity related issues.

All the above works except preparation of Peoples Biodiversity Register (PBR) have been completed and the final reports are under preparation by various implementing agencies.

A Sum of Rs. 19.82 lakhs has been spent for the project during the current year.

## II. Projects Proposal sent for financial assistance by Board during the year 2006-07:

The Board has sent following project proposals for financial assistance to various funding agencies:-

Sl. No.	Projects proposed to	No of Projects	Cost (Rs in lakhs)
1.	National Biodiversity Authority	06	118.97
2.	Bamboo Society of India	01	100.00
3.	MoEF - New Delhi	04	84.96
4.	World Bank	06	1790.00
5.	DBT- New Delhi	02	144.00

## III. Publicity and Publications:-

The Board has published following during the year 2006-07.

1. Peoples Biodiversity Registers Guidelines (in Kannada)
2. Samruddhi (A book on Biodiversity related articles on Uttara Kannada District)
3. Model Peoples Biodiversity Register
4. Suvarna Sahyadri (Abstract on Papers Presented during on National Seminar on Plants Resources of Western Ghats)
5. Publicity activities 15 popular articles on Biodiversity, Agro biodiversity orchid and Makhana culture.
6. Two AIR programs on Medicinal Plant Conservation and Utilization.
7. Two Doordarshan programs on Biodiversity related issues
8. Two Workshops at Christ and Mount Carmel College on Urban Environmental issues in association with Bangalore Mahanagar Palike.

## IV. Financial Achievement

The funds received during 2006-07 from various sources are as follows:

Sl. No.	Funding Agency & Scheme	Amount Sanctioned	Releases for 2006-07
1.	State Government (Kuvempu Memorial Biopak)	Rs.100 lakhs (2003-04 )	NIL
2.	Bank	Interest earned on term deposits of Boards funds	10.5 lakhs
3.	KUIDFC, Bangalore (Biodiversity Information and Management System for Coastal Karnataka)	94.5 lakhs out of which an amount of Rs.45.00 has been released during 2005-06	NIL
4.	State Government (Budget)	Regular Budget	57.39 lakhs
5.	Opening balance	Savings from the 2005-06 Budget	5.93 lakhs

## V. Expenditure

During the year 2006-07 following expenditure was made for various activities

1	Kuvempu Memorial Biopark a) Survey and Demarcation b) Sandeshavana c)PBR- BMC and capacitybuilding, training	- 20.74 0.84
2.	KUIDFC a) EMPRI b) KBB c) INCERT d) CMFRI e) ASEEMA	10.00 9.41 - - 0.41
3.	Board's Establishment and Administrative Cost  <u>Schemes</u> BMC & PBRs	44.5 lakhs  2.4 lakhs

## VI. Board Meetings

During 2006-07, One Meeting of the Board was held on 06-09-2006.

### 3.PUNJAB BIODIVERSITY BOARD

#### Chairman:

Chief Minister, Punjab

#### Vice- Chairman:

1. Parliamentary Secretary, Agriculture

#### Members:

1. Chief Secretary, Government of Punjab (Ex-officio Member)

2. Principal Secretary, Department of Science, Technology and Environment, Government of Punjab (Ex-officio Member)
3. Financial Commissioner, Development, Government of Punjab (Ex-officio Member)
4. Director (Environment), Punjab State Council for Science and Technology (Member Convener)
5. Officer-in-charge, Zoological Survey of India, Dehradun (Expert)
6. Officer-in-charge, Botanical Survey of India, Dehradun (Expert)
7. Brig. Sukhjit Singh (Expert)
8. Director, Extension Education, Punjab Agricultural University, Ludhiana (Expert)
9. Dr. G. S. Kalkat, Former Vice Chancellor, Punjab Agricultural University, Ludhiana (Expert).

**Contact Address:**

**Dr. Neelima Jerath**

Joint Director (Environment)  
Punjab State Council for Science and Technology  
Adj. Sacred Heart School, Sector 26, Post Box No. 727  
Chandigarh – 160 019.  
Ph: 0172-2795001, 2792787, 2792325 Fax: 0172-2793143

**ACTIVITIES:**

The Punjab Biodiversity Board (PBB) was notified on 23.12.04. During 2006-07, the Board carried out the following activities.

1. **Workshop on ‘Facilitating formation of State Biodiversity Board (SBBs) & Biodiversity Management Committees (BMCs) in Northern India’** : A 2-day workshop was organized on 19<sup>th</sup> & 20<sup>th</sup> December, 2006 at Chandigarh on ‘Facilitating formation of State Biodiversity Board (SBBs) & Biodiversity Management Committees (BMCs) in Northern India’. Twenty eight participants from nine states/ UTs (Chandigarh, Delhi, Punjab, Haryana, Himachal Pradesh, Jammu & Kashmir, Rajasthan, Uttaranchal & Uttar Pradesh) deliberated on issues regarding implementation of Biological Diversity Act, 2002 at State level and functioning of State Biodiversity Board. Dr. K. Venkataraman, Member Secretary represented NBA, Chennai and Dr. R.K. Rai, Additional Director represented Ministry of Environment & Forests, Govt. of India. Sh. R. Saha, Senior Advisor, Deptt. of Science & Technology, Dr. Madhav Gadgil (Retd.), Indian Institute of Sciences, Bangalore and Dr. B.M.S. Rathore, Conservator of Forests, Madhya Pradesh delivered lectures on traditional knowledge & related IPR issues, preparation of PBRs and procedures for implementation of Biodiversity Act, respectively. The workshop was sponsored by National Biodiversity Authority (NBA), Govt. of India. It was recommended that each state government may set up State Biodiversity Boards as statutory bodies and financially support them to enable implementation of the Biological Diversity Act throughout the country. The SBBs may in turn, facilitate setting up of Biodiversity Management Committees at field level. It was also recommended that NBA may identify agencies, which would implement the Act in the field and take cognizance of

offences under the Act. A system for monitoring and checking violations at field level was also required to be put in place.

## 2. **Celebration of International Biodiversity Day, 2006 :**

The following activities were carried out.

### **State level activities:**

- Five camps for fifty villages in Shivaliks were organized with the help of NGOs at Durang Khad in District Gurdaspur on 20<sup>th</sup> May , Dholbaha & Chohal in District Hoshiarpur on 20<sup>th</sup> & 21<sup>st</sup> May and at Dher & Lodhi Majra in Ropar District on 24<sup>th</sup> May, 2006. More than 500 villagers participated. These included panchayat members, local teachers, vaidas & other eminent persons.
- Orientation workshop on Biodiversity was conducted on 21.04.2006 for selected NGOs of Punjab especially those working in the Shivalik area, to motivate them for dissemination as well as collection of field level information on local agrobiodiversity, traditional crops & traditional knowledge and medicinal plants.
- A Teacher Training program on 'Biodiversity' under on the theme "Biodiversity – Nurture Nature for our Future" on 22<sup>nd</sup> of May, 2006, was organized at Chandigarh. A total of 50 participants from all over Punjab attended the workshop.
- A special lecture on Biodiversity was organized for School Teachers by World Wide Fund (WWF) for Nature – India at Chandigarh
- 17 District and one State Level Essay Writing Competition for school students( eco club members) was organized on following topics:
  - Agriculture Biodiversity of the respective district
  - Threat to Biodiversity
  - Medicinal Biodiversity of the respective district
  - Importance of Biodiversity to Man

Five best entries from each district qualified for state level competition. One best district level entry and three best state level entries were awarded on Independence Day at the district Independence Day Function.

### **District Level Activities:** The following activities were organized

- Exhibitions on Biodiversity by:
    - Acharya Atma Ram Jain School, Khanna
    - Institute of Ecology & Environment, Pathankot
  - Awareness Meet at Guru Nanak Dev University (GNDU), Amritsar
  - Seminar on Biodiversity by District Institute for Education & Training (DIET), Ajjowal, District Hoshiarpur.
3. **Training Programs for Master Trainers:** The Punjab Biodiversity Board organized four (1 day) Training Programs for Master Trainers on 'Conservation of Biodiversity in Punjab and Implementation of the Biological Diversity Act, 2002 from 19<sup>th</sup> to 22<sup>nd</sup> February, 2007. Two Science Teachers from each block of the state were identified as Master Trainers by District Science Supervisors. The training program was attended by 274 master trainers from 20 districts. The participants were informed about the provisions of the Biological Diversity Act, 2002. The role of teachers in constitution of Biodiversity Management Committees and preparation of Peoples' Biodiversity Registers was highlighted. The trainers were informed that they would be required to conduct training programs at local level subsequently. They were provided a biodiversity kit including a book on biodiversity, bilingual pamphlet and a copy of the Biological Diversity Act.
4. Meeting of "Expert Committee to Identify Biodiversity Rich Areas and Heritage sites in Wild, outside Protected Area Network (PAN) and Cultivated Areas": The meeting was held under the chairmanship of Dr. G.S. Kalkat, Member, Punjab

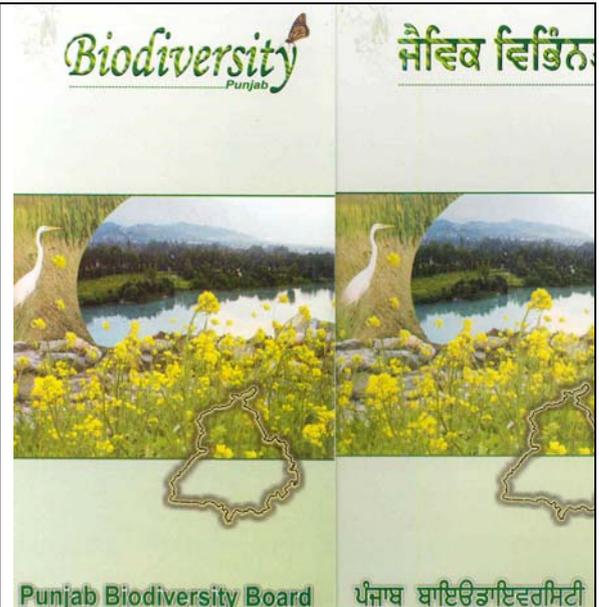
Biodiversity Board on 11-12-2006. It was suggested that areas which are biologically rich but not included under Protected Area Network be identified and considered for Heritage sites. Other biologically rich agricultural and horticultural areas should also be identified. The need for setting up a Gene bank at PAU was also discussed. Chairman also suggested identification of a few villages for setting up of Biodiversity Management Committees and initiation of People's Biodiversity Registers.

5. **Meeting of "Expert Committee to Identify Commercially Important Flora and Fauna"**: The meeting was held on 11-12-2006 under the chairmanship of Sh. B.C. Bala, IFS, Principal Chief Conservator of Forests. The main functions of the committee are to assess economic potential of important flora and fauna of Punjab to facilitate framing of guidelines by PBB for regulating its access, promoting its conservation and working out a benefit sharing mechanism as per guidelines to be issued by National Biodiversity Authority. It was suggested that the Forest Deptt. could take up a survey jointly with representatives of Punjab Biodiversity Board and experts to assess area wise availability, harvesting potential, harvesting practices and commercial value of medicinal plants in Shivaliks. The survey could be taken up in a phased manner starting from Dhar area in Gurdaspur district. Also, Biodiversity based industries in the state should be identified with the help of Department of Industries.
6. **Publications by PBB**: The following educational material was published during 2006-07:
  - A bilingual pamphlet (in English & Punjabi): The pamphlet was distributed in training programs and village camps
  - A poster (in Punjabi) on "Biological Diversity": 150 posters per district were sent to District Education Officers for further dissemination to the eco-clubs. It was also distributed at village camps during the celebration of International Biodiversity Day.
  - A bilingual book on Biodiversity(English & Punjabi): The book in English was distributed to Master Trainers during the training program. The book in Punjabi is being sent to District Education Officers (100 copies per district)
  - The copies of awareness materials were also provided to NGOs for wider dissemination.
7. **Punjab Biodiversity Rules**: The draft rules proposed by Punjab Biodiversity Board were circulated to key departments, Board members, Institutes, NBA, Ministry of Environment & Forests & experts for comments. The same have been revised as per inputs received.
8. **Translation of Biodiversity Act**: The act is under translation by the Legal Remembrancer, Govt. of Punjab.
9. **Proposal**: Proposals were invited from Research Organizations for biodiversity studies. Two proposals were received from Punjab Agricultural University on
  - Survey of Punjab state to identify traditional crops, their varieties, land, races & ecotypes.
  - Application for the grant of adhoc research schemes "Conservation of Biodiversity in Punjab".
  - Financial assistance is being sought.
10. **Infrastructure**: Infrastructure of the Board has been strengthened,

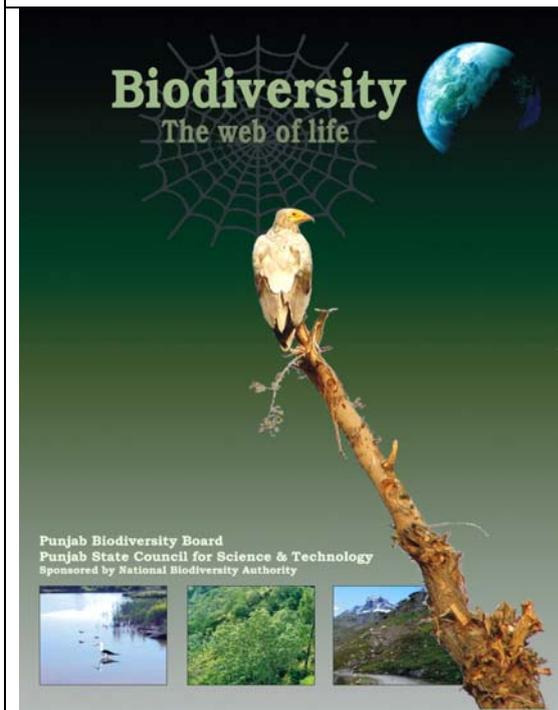
**Publications of Punjab Biodiversity Board**



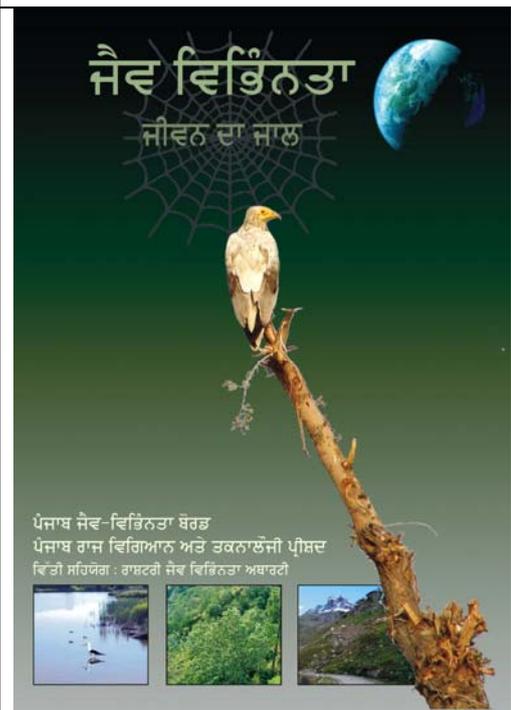
**Poster In Punjabi**



**Bilingual Pamphlet**



**Book in English**



**Book in English**

## Two days Workshop on Facilitating formation of State Biodiversity Board (SBBs) & Biodiversity Management Committees (BMCs) in Northern India’.



Inaugural Session (L-R): Dr. Neelima Jerath, JD (Env); Dr. N.S. Tiwana, ED (PSCST); Dr. K. Venkataraman, Secretary, NBA; Dr. R.K. Rai, Addl. Dir., MoEF; Mr. J.K. Dadoo, Secretary, Environment & Forests, Govt. of Delhi

### **4. MADHYA PRADESH BIODIVERSITY BOARD**

**Chairman: Not yet notified**

**Ex officio Members:**

1. Agricultural Production Commissioner.
2. Principal Secretary/ Secretary, Department of Biodiversity and Biotechnology.
3. Principal Chief Conservator of the Forest.
4. Vice Chancellor, JNKVV, Jabalpur
5. Member Secretary of the State Biodiversity Board.

**Contact Address:**

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Member Secretary,  
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**Ph:** 0755-2554539; 2554549; **Fax:** 0755-2554539  
**E-mail:** [mp\\_biodiversityboard@yahoo.co.in](mailto:mp_biodiversityboard@yahoo.co.in)

### **ACTIVITIES:**

Mapping Biodiversity and disseminating biodiversity related information on the state is one of the key mandates of the board. Activities of the board has been carried out under the following thematic areas:-

1. **Research and documentation**
2. **Education awareness and training**
3. **In situ / ex situ conservation**
4. **Sustainable use and equitable benefit sharing**
5. **Governance**
6. **policy and law**

## **I - Research and documentation**

Various projects were undertaken by the board for collating existing information and generating new information on floral- faunal diversity, aquatic biodiversity, traditional and indigenous knowledge of tribes and local people,

### **1. Documentation of plant Biodiversity:-**

In Madhya Pradesh 06 eco regions have been identified -

- |                |            |
|----------------|------------|
| 1- Satpuda     | 2- Vindhya |
| 3- Chambal     | 4- Malwas  |
| 5- Bundelkhand | 6- Central |

The Board has made efforts to document plant biodiversity by sanctioning projects to different academic/research institutions in different Eco-regions of the state as under.

#### **Central Eco-region**

- A survey of plant diversity conducted by Sarojini Naidu Govt.Girls College, in the Central eco-region has shown 113 species of plants in Raisen dist, 97 species in Vidisha dist, 85 species in Sehore dist and 788 species in Bhopal dist.29 species have been identified as RET (rare,endangered or threatened species) species.

#### **Chambal Eco-region**

- A survey of plant diversity of Chambal region undertaken by Institute of Ethnobotany, Jiwaji university has revealed species of 126 of trees, 67 shrubs, 144 herbs, 42 climbers, 15 grasses.

#### **Vindhya Eco-region**

- A survey study conducted by Govt. Science College Rewa, on medicinal plants in Vindhya region , has revealed 320 species of medicinal plants. In the study medicinal uses of these plants also have been recorded. Out of these medicinal plants 71 species belong to Rare Endangered or Threatened (RET) category.

#### **Malwa Eco-region**

- Documentation of plant diversity of Malwa eco-region has revealed a total of 947 species of plants, of which 118 are species of medicinal plants and 28 species belong to RET category.

#### **Satpura-Mahakoshal Eco-region**

- Documentation of Biodiversity status in Mandla & Dindori districts is being carried out by SFRI, Jabalpur (MP). Floral, faunal, agricultural, aquatic and livestock diversity of the two districts will be covered. In addition 2 PBRs(Peoples Biodiversity Registers) will be prepared for each block.

- The board has initiated the concept of Bio-Park which will serve multiple purposes ranging from creating public awareness about Biodiversity, education,eco-tourism etc. Inventorisation of flora & fauna of Bargi hills Jabalpur, which is the proposed site for Biodiversity Park, has revealed 281 species of plants, 50 species of birds and 13 species of animals and reptiles. Some rare plants have also been identified at the site. The survey was done in collaboration with State Forest Research Institute.

### **Potential Biosphere Reserve**

- A project on preparation of project document for Panna as a Potential Biosphere Reserve has been sanctioned to EPCO. In the report various aspects on geology, flora, fauna, socio-economic and cultural aspects would be highlighted as per guideline for selection of site for Biosphere Reserve.



### **Sacred Groves of MP**

A survey of "**Sacred Groves**" in MP has been undertaken in collaboration with SFRI Jabalpur. "Sacred groves" are patches of natural vegetation dedicated to local deities protected by religious beliefs. In the first phase survey of Mandla and Dindori districts has been completed. Survey has revealed 30 sacred groves in Mandla and 19 in Dindori. List of species present in these sacred groves has been documented.

#### **2. Documentation of Aquatic Biodiversity**

- To fill in the gap in information on aquatic biodiversity in the state, the board has initiated a documentation of aquatic flora and fauna of economic and ecological significance in the major water bodies of the state. In the study a digital aquatic biodiversity atlas will be prepared. Limnology Dept of Barkatullah University is executing the study.
- In a study on status of fish biodiversity in some protected aquatic areas of Narmada basin assigned to Barkatullah University documentation of fish diversity and endangered species has been carried out. 47 species of fishes have been recorded in various locations.
- In a study on biodiversity of fish species in different water bodies of Rewa district conducted by Govt. Science College, 54 species were identified and distribution and abundance of these species in different resources was recorded.6 species of exotic species were also recorded.



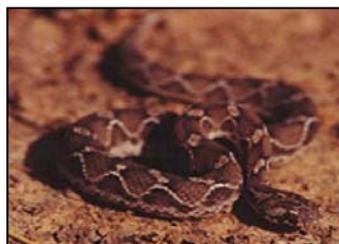
### 3. Conservation of Avifauna

- A survey of *Lesser floricans*, commonly known as "**Kharmore**" a globally threatened bird species was conducted in Ratlam and Dhar districts to gather baseline data to develop a conservation programme. A film has also been prepared on *Lesser floricans*. The survey was conducted by CEE.
- A survey of *Heteroglaux blewitti* commonly known as "Forest owlet" a critically endangered bird was carried out by Envirosearch, a pune based NGO. The survey was carried in the teak bearing forests of MP. A total of 21 forest owlet individuals were located in Burhanpur and Khandwa districts. A CD has been prepared giving information on its appearance and main identification features .
- Bird vocalizations are important part of documenting biodiversity. The Board in collaboration with IIFM, Bhopal has prepared a repository of 140 bird calls, of birds found in MP. This has been recorded in a CD, and named "**Piyu**". Along with calls. "**Piyu**" also provides basic information, a photo, IUCN threat status and call spectrogram for each bird. It has been designed for use by an individual user for personal reference and also for interactive and automated group presentations.



It can also be used at wildlife interpretation centers or to train field staff and tour guides in birding.

- Documentation of different species of snakes found in Madhya Pradesh is being carried out by Snake Research Organization , an NGO based at Ujjain.



#### 4. Documentation of Traditional knowledge

- Documentation of the traditional knowledge on ethno-medicinal uses of plants from tribal community and utilization pattern of medicinal plants and their parts in different formulations by traditional healers of Satpura plateau is being carried out through Tropical Forest research Institute, (TFRI), Jabalpur. The study will also provide the channels involved in procurement of herbal plants as raw material for preparation of finished products and their marketing. In the first year four districts of MP i.e. Mandla, Chhindwara, Katni and Jabalpur are being covered.
- Documentation of indigenous knowledge of primitive tribes of MP viz Baiga, Saharia and Bharia has been undertaken by SFRI, Jabalpur.



#### 5. Wildlife Conservation

- Kuno Wildlife Sanctuary has been selected as a site to establish a second population of the Asiatic lions, which are at present only found in Gir National Park. In a study supported by the Board baseline ecological data in the Kuno Sanctuary is being collected which will help develop and formulate strategies for successful establishment of new Asiatic lion population in the country.
- A study has been undertaken by Jiwaji University in the National Chambal Sanctuary to assess the impact of sand mining activities on the habitats of wildlife species of Gharial, Turtle, Muggers, Otters and Dolphins.



#### 6. Faunal diversity of Ujjain division

A survey on the animal biodiversity of Ujjain division conducted by Vikram University has recorded 236 species of invertebrates and 280 species of vertebrates. 12 species of Rare and Endangered animals have been recorded in the region.

#### 7. Preparation of People's Biodiversity Register (PBR)

Preparation of people's biodiversity register mapped up throughs the preparation of people's biodiversity register (PBR) format of the PBR was developed by the board with the help of consultants and subject specialists. It has all the

information about local bioresearches, their availability, medicinal or other related use and traditional knowledge of the local people. By using the format PBRs are being prepared at village level in different eco regions. In the year 2006-07 board has received 32 PBRs from Chambal eco region, 11 from Satpuda and 22 from Vindhya eco region. Additionally preparation of 63 PBRs in satpuda eco region is in process.

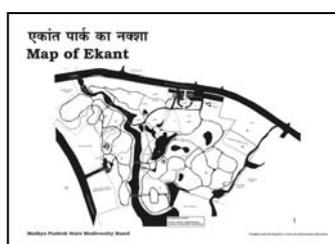
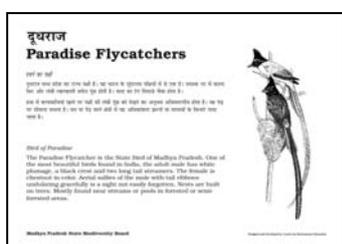
## II- Education / Awareness and Training :-

Biodiversity Education and awareness to trigger off actions by a range of stake holders is high on board's agenda. Under this thematic area following activities were undertaken.

- **Mowgli Bal Utsav.**

Board has been organizing 3 day Mowgli Bal Utsav for last two years. In this state level event various activities like visit to national park, tracking, games, Quiz, Visit to the village near the park area etc. are being carried out to inculcate conservation ethics in younger mind. Continuing the trend, this year the event was organized at Bandhavgarh National park, Umariya MP from 2nd to 4th Nov. 06. Around 22 lac students of the state were participated in school level completion of which two winner girls and two winner boys were selected for camping / Mowgli Bal utsav.

- **International biodiversity day** 22nd may was observed at all divisional head quarters of the state.
- **Posters**, conveying the message for biodiversity conservation were sent to all the govt. offices of all the districts of the state, for display.
- For creating awareness in general public **hoardings** were installed at all divisional headquarters.
- Board started publication of quarterly **News Letter "Javvividhta"**. In which various activities of the board are being showcased.
- Various activities of the board have also been displayed on its website [www.mpsbb.org](http://www.mpsbb.org) which is updated time to time.
- With the view of creating awareness in the public. Board provided support funding to Forest department for organizing **Gwalior Van Mela**.
- A project has been initiated on development of information panels and other relevant material related to biodiversity of Guru Govind Singh Park (**Ekant Park**). Signages on specific trees and common birds, biodiversity value of the park, health value eco-remediation have been developed and installed in the ekant park in March 2007.



### III- In situ / Ex situ conservation :-

For sensitizing urban people for biodiversity, projects were sanctioned to develop biodiversity park in Panna and Mandsoor districts of the state.

1. Board started best biodiversity garden competitions at divisional level with a view to spread message of biodiversity conservation in urban areas.

### IV- Sustainable use and equitable benefit sharing:- Bio-resource based livelihood

- In a project sanctioned to "PRAYAS" a NGO working on Women Empowerment, 30 women craft persons engaged in sisal craft in Seoni dist were provided exposure and knowledge of latest technology and imparted training for 4 months. Market linkage was established with handicraft dept. for selling the new. Now these women are earning more, of these 15 women are working as master trainers and 02 women have started their own enterprise.



### V- Policy and Law :-

- Efforts have been made to incorporate bio conservation issues in action / work plan of Forest department of the state .
- Instructions have been issued by the honorable chief minister to all the ministers of the concerned departments for incorporating biodiversity conservation issues in their policy matters.
- Dialogues are on with National law academy for holding a workshop for intellectual property rights (IPR) over biodiversity and traditional knowledge.

### VI- Governance

For Biodiversity governance at local level biodiversity management committees have been constituted at Zila Panchayat, Janpad Panchayat, Nagar Nigam, Nagar Palika Pareshad, and Gram Panchayat level. Number of BMC's constituted and grant given to them by the board is as follows.

BMC's	Total Number	Number of BMC's Constituted	Grant given to per BMC	Total Grant
Zila Panchayat	40	48	25,000	12.00
Janpad Panchayat	313	313	15,000	46.95
Nagar Nigam	14	14	15,000	2.10
Nagar Palika Pareshad	86	86	10,000	8.60
Nagar Panchayat	237	236	5,000	11.20
Gram Panchayat	23051	18000	-	-

## 5. WEST BENGAL BIODIVERSITY BOARD

### Chairman:

1. **Professor Arun Kumar Sharma**, Department of Botany, Calcutta University, 35, Ballygunge Circular Road, Kolkata- 19.

### Members:

1. Principal Secretary to the Government of West Bengal, Department of Environment
2. Pr. Chief Conservator of Forests, Wild Life and Bio- Diversity & Chief Wild Life Warden, Directorate of Forests, Government of West Bengal.
3. Principal Secretary to the Government of West Bengal, Department of Agriculture.
4. Principal Secretary to the Government of West Bengal, Department of Panchayat & Rural Development.
5. Member Secretary, West Bengal Pollution Control Board.
6. Dr. Ajit Bannerjee, Ex- Senior Forestry Expert, World Bank, 9, Greek Church Row Extension, Kolkata -26.
7. Dr. B. S. Joardar, Joint Co-ordinator, Post Graduate Department of environmental Science, Ashutosh College, Kolkata.
8. Dr. Biswanath Chakraborty, Professor, North Bengal University.
9. Shri. Tapan Saha, Scientist, IWMED, Salt Lake, Kolkata.
10. Prof. Sudip Banerjee, Chairman, WBPCB.

### Contact Address:

#### Mr. Debal Ray

Ex- Officio Member,

West Bengal Biodiversity Board, O/o. Dept. of Environ.,

“Paribesh Bhavan”, 3<sup>rd</sup> Floor, 10 A, Block - LA,

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Ph: 22141356; 22141357; Fax: 22141356; E-mail: [enviswb@vsnl.net](mailto:enviswb@vsnl.net)

### ACTIVITIES:

The West Bengal Biodiversity Board started working in the arena of biodiversity conservation and documentation since September, 2004 and has since been striving to achieve the objectives of the Biological Diversity Act, 2002. In exercise of the power conferred by section 63 of the Biological Diversity Act, 2002, the West Bengal Biological Diversity Rules, 2005 came into effect during this period under report *vide* Notification of Government of West Bengal No. - EN/136/T-H-7/C05/2004, Dated, 27th January, 2006. Accordingly, the restrictions on usage of biological resources of the State of West Bengal by Indian citizens have come under legal purview.

The Board celebrated the International Biological Diversity Day on 22<sup>nd</sup> May, 2006 by arranging a day long Seminar entitled '*Biodiversity of West Bengal – Conservation and Documentation*' in the State capital Kolkata with participants from all over the State identified as potential PBR documentation groups in future. The important issues highlighted during the Seminar included optimization of efforts towards conservation, documentation & sustainable use of biodiversity for economic development.



The Board initiated the formation of three Biodiversity Management Committees during 2006-2007 at Bankura II Panchayat Samiti (P.S.) (District – Bankura), Dantan II P.S. (District - Paschim Medinipur) and Rishra Municipality (District - Hooghly).



The Board has initiated the project of preparing PBRs for all the 14 Gram Panchayats (G.P.) under Goghat-II Panchayat Samiti (P.S.). PBR Workshops for this aforesaid project have been held at six G.P.s under Goghat-II P. S. and also at Odlabari G.P. under Mal II P.S. The PBR work is in progress in all the mouzas of the above mentioned P. S. and also in the P. S. of previously established BMCs, the work is being regularly monitored by the Board officials.

A two day “Workshop on PBR activities” was organized at Budge Budge College on 18<sup>th</sup> and 19<sup>th</sup> September, 2006 as an effort on the part of the Board towards creation of a pool of resource persons with Prof. Madhav Gadgil and Dr. A. K. Ghosh, Member NBA as Key Speakers on the occasion.



The Board has initiated Sensitization Programmes regarding Biodiversity documentation, conservation and sustenance, in Colleges, Universities and other local bodies of West Bengal. Six such workshops were held during 2006-2007. The Board also organized a Training programme at State Institute for Panchayat and Rural Development (SIPRD), Kalyani on request from the Panchayat and Rural Development Department, Government of West Bengal.

One day programme on ‘Awareness cum discussion on the Biological Diversity Act, 2002’ was organized by the Board with representatives of different Departments/Institutions and policy makers as participants on 6<sup>th</sup> March, 2007.

Publications of the West Bengal Biodiversity Board during the period under report includes:

- i. A booklet on Biodiversity (in Bengali)
- ii. People’s Biodiversity Register of Gurulia Bhatshala G.P. under Goghat II P.S.

- iii. Field Identification Manuals on ‘Common Freshwater Fishes’ & ‘Common Wetland Plants’ in Bengali
- iv. ‘Rice Diversity of West Bengal’ prepared by the Directorate of Agriculture, Govt. of W.B.
- v. Brochures, Leaflets, Banners & Posters both in English and Bengali
- vi. An audio-visual CD on Biodiversity in Bengali

All these will be formally released on 22nd May, 2007 during celebration of International Biological Diversity Day.



The Board officials participated in a number of Nature Study Camps organized by various Institutes & Organizations as Resource Persons during the period 2006-2007, viz., coordinated the Nature Study Camp organized by WBPCB at Mungpoo, Darjeeling District involving ecoclub student members belonging to the National Green Corps. The Board Officials also made a number of visits on request & prepared reports on (a) cause of turtle mortality at Baneswar Temple pond, Coochbehar (b) problems related to Indian Peafowl at Budulia village of Burdwan district; and (c) ponds inside Indian Statistical Institute campus, Kolkata.

Three Board Meetings have been held during the period under report (7<sup>th</sup>, 8<sup>th</sup> and 9<sup>th</sup> on 12<sup>th</sup> May, 2006, 29<sup>th</sup> August, 2006 and 27<sup>th</sup> December, 2006 respectively). The major decisions taken during these meetings include –

- Emphasis on awareness generation & sensitization programmes through workshops, seminars, awareness programmes, publication of brochures, leaflets, banners, posters & popular books.
- Logo of West Bengal Biodiversity Board was approved.
- The Budget for year 2006-2007 & Budgetary Estimate for the 11<sup>th</sup> Five Yr. Plan were approved to submit.
- It was decided to constitute BMCs in the districts where BMCs have not been constituted and to utilize the new BMCs on constitution for PBR activities. Formation of non functioning BMCs was discouraged. The members felt the need to formulate the plans for post PBR activities of every BMC on an urgent basis.
- The Board decided to increase the manpower of the WBBB for project oriented technical work on regular basis immediately for smooth functioning.
- The Report of West Bengal Biodiversity Board for the period 2004 – 2006 was approved by the Board and was published during this period.



## 6. ANDHARA PRADESH BIODIVERSITY BOARD

### Chairman:

1. **Sri Hampaiiah Ralladoddi, M,Sc, Ph.D**, 011, Kanchanjunga ‘D’ Block Aditya Enclave, Ameerpet, Hyderabad

### Members:

2. Principal Secretary to the Government, Environment, Forests, Science & Technology Department, A.P.Secretariat, Hyderabad
3. Principal Secretary to the Government, Animal Husbandary & Fisheries Department, A.P.Secretariat, Hyderabad.
4. Principal Secretary to the Government, Agriculture and Co-operation Department, A.P.Secretariat, Hyderabad
5. Director, Inegrated Coastal Marine Area Management
6. Principal Chief Conservator of Forests (WL) & Chief Wildlife Warden, Andharapadesh, Hyderabad.
7. Chief Executive Officer, Medicinal Plants & Aromatics Board, Hyderabad.
8. Principal Scientist, National Bureau of Plant Genetic Resources, Regional Station, Rajendranagar, Hyderabad.
9. Dr. Lalji Singh, Director, Centre for Cellular and Molecular Biology, Habsiguda (Uppal), Hyderabad
10. President, Deccan Development Society, Hyderabad.

### Contact Address:

**Dr. Bhaskara Ramana Murthy,**  
Member Secretary,  
Andhra Pradesh Biodiversity Board,  
Room No.209, Aranya Bhavan, Tuljaguda Complex,  
M.J. Road, Hyderabad – 500 001.

### ACTIVITIES:

Andhra Pradesh Biodiversity Board has celebrated “International Biodiversity day” by organizing “Stake holder meet” at Indira Priyadarshini Auditorium, Public garden, Hyderabad.

The celebrations were initiated with painting competition with theme of “Pancha Bhutalu” and “Save our forests”. There was enthusiastic participation by more than 200 students of sub-junior, junior and senior categories. All the participants were awarded participatory certification and certificates of appreciation in all three categories.

The Chairman A.P Biodiversity Board has inaugurated the “stall and exhibition” of governmental and Non governmental organizations.

The stalls put up by NGO’s such as Deccan Development Society, World Wildlife fund for nature (WWF), Salim Ali center for Conservation of Ornithology and Natural history (Sacon) Wild Andhra Pradesh, BRACON, Butterfly conservation Society, Bird watchers club of A.P, Center for Environmental Education (CEE) and Nature Quest to educate students, farmers and other dignitaries. The Governmental agencies such as A.P Forest Academy, Wild life education wing, National green corps have educated the visitors. The Deccan Development Society stall has reflected craft men ship and collective initiatives in agri biodiversity conservation.

The inaugural function was initiated by lighting of lamp by all the stake holders. The Member Secretary welcomed the guests and explained the details of the events in store for the day. Dr. M.V.Rao, Member of Legislative council has highlighted the rich biodiversity conservation initiatives in traditional living and has concluded his key note address by reminding the A.P Biodiversity Board role and responsibilities in bringing about the needed change in society.

The Chief guest Smt R. Janaki Kondap. I.A.S. Spl Chief Secretary has released “A.P. Biodiversity” Quarterly news letter and felicitated “Honorary Biodiversity conservators” from rural NGO and artiste initiatives. The Chief guest has noticed the active participation by “citizens of further generations” and the Chief guest has emphasized the role of farmers, industries, Non Governmental organization and individuals and responsibly in biodiversity conservation.



Dr.K.S.Rao IFS Chief Wild life warden of A.P has enlisted the rich biodiversity of Andhra Pradesh and informed the audience that Red Sanders is available only in these parts of world.

The AP Biodiversity Board Chairman while giving presidential addresses has highlighted the commercial exploration of genetic and indigenous traditional knowledge systems of AP with Specific emphasis on conservation initiatives.

The Director Forest Academy Dr. Suvarna IFS has presented vote of thanks.

In technical sessions, Sri.K. Tulasi Rao has described the biodiversity richness of Nallamalai. The intellectual property Rights and Geographical indication initiatives in AP was described by Dr.Soam of NAARM.

The program concluded with ethnic lunch consisting of minor millets and other traditional food items.

## **7. UTTAR PRADESH BIODIVERSITY BOARD**

### **Chairman:**

1. **Principal Secretary**, Forest Department, Government of Uttar Pradesh

### **Members:**

2. Nominee of Principal Secretary / Secretary, Environment Department, Government of Uttar Pradesh.
3. Nominee of Principal Secretary / Secretary, Horticulture Department, Government of Uttar Pradesh.
4. Nominee of Principal Secretary / Secretary, Agriculture / Agriculture Education Department, Government of Uttar Pradesh.
5. Nominee of Principal Secretary / Secretary, Animal Husbandary Department, Government of Uttar Pradesh
6. Principal Chief Conservator of Forests, Uttar Pradesh
7. Five Specialist Members

#### **Contact Address:**

##### **The Chairman**

Uttar Pradesh Biodiversity Board,  
O/O. The Principal Conservator of Forests,  
17, Rana Pratap Marg, Lucknow – 226 001

## **8. NAGALAND BIODIVERSITY BOARD**

### **Chairman:**

1. Ministers in-charge Forests & Environment

### **Members:**

2. Agriculture Production Commissioner
3. Principal Secretary (Forest & Environment)
4. Principal Secretary (Agriculture)
5. Principal Chief Conservator of Forests
6. Chief Wildlife Warden

#### **Contact Address:**

##### **Mr. A. Rongsenwati Ao**

The Chief Conservator of Forests,  
Environment Research & Biodiversity,  
Member Secretary, Nagaland Biodiversity Board,  
Kohima, Nagaland

## 9. SIKKIM BIODIVERSITY BOARD

### Chairman:

1. Hon'ble Chief Minister

### Members

2. Hon'ble Minister, Forest, Environment & Wildlife Management Department
3. Principal Chief Conservator of Forests (PCCF) cum – Secretary, Forest
4. Secretary, Horticulture & Cash crops Development Department
5. Secretary, Rural Management Development Department
6. Secretary, Tourism Department
7. Mr. D.N.Thakarpa, Yangthang, Gyalsing, West Sikkim
8. In-charge, WWF-Sikkim Unit, Deorali, Gangtok, Sikkim
9. Mr. Sandeep Tambe, IFS, Development Area Gangtok, Sikkim
10. Mr. Gokul Rai, Sikkim Paryavaran Samrakshan Sangh Bikmat, South Sikkim
11. Mr. Nima Tashi Bhutia, Sindrabung Khangchendzonga Eco-friendly Society & Yambong Eco-tourism committee, Nambu, West Sikkim.

### Contact Address:

**Shri. M.L. Arrawatia,**  
The Additional Principal Conservator of Forests,  
Forest Secretariat, Deorali,  
Gangtok, Sikkim – 737 102

### ACTIVITIES:

**Establishment of State Biodiversity Board:** The Sikkim State Biodiversity Board was constituted and the working streamlined with the notification of the Sikkim Biological Diversity Rules.

**Pro-people enabling conservation policy initiatives:** Empowered the local community in access and benefit sharing of biological resources with a number of pro-people policy initiatives; Sikkim Trekking policy to ensure ecofriendly alpine tourism with maximum benefits for the local community, Mountain Guardians Policy 2006 (*Himal Rakshak*) for the participatory conservation of the high altitudes and Participatory Lake Conservation guidelines 2006.

**Conservation Zonation of high altitude areas:** Habitat Survey and implementation of conservation zonation in 1000 km<sup>2</sup> of the Khangchendzonga National Park to identify and conserve critical wildlife habitats and also multiple use zones to meet the livelihood requirements of the local community. Community endorsement and government

notification has been completed for three Medicinal Plant Conservation Areas, two for musk deer, two for Himalayan tahr, one for blue sheep and one for alpine birds.

**Promoted community based tourism** along 4 valleys within the Khangchendzonga National Park. A total of four new trekking trails namely Yambong-Singalila, Areylungchok-Dzongri, Narsing-Himal and Tholung-Kishong were notified by the government on a request from the local community. This will result in additional incomes for the local community and build a stake for conservation of this biodiversity. In Yambong-Singalila trek a total of 10 lakhs income was generated for the local community during last year.

**Dissemination of programme:** The various outputs of the programme including policy documents, notifications and others have been uploaded in the ENVIS website of the forest department at [www.sikenvis.nic.in](http://www.sikenvis.nic.in) and can be accessed from there.

## 10. MANIPUR BIODIVERSITY BOARD

### Chairman:

1. Chief Secretary, Government of Manipur

### Members

2. Addl. Chief Secretary/Pr.Secretary (Forests & Env't), Government of Manipur (Ex-Officio)
3. Commissioner / Secretary, Agriculture (Ex-Officio)
4. Pr. Chief Conservator of Forests, Manipur (Ex-Officio)
5. Chief Conservator of Forests / Planning & Admn
6. Director, Institute of Bioresources, Imphal
7. Shri T.Priyobor Singh, IFS (rtd), Imphal
8. Prof N. Tombi Singh, Former VC, MU, Imphal
9. Shri T.Misao, IPS (rtd), Kangpokpi
10. Dr. K. Paochumbou, Secy/ORDA, All Manipur NGOs forum, Tangkhul Avenue, Imphal

### Contact Address:

**Dr. D.C. Karnatak**  
Member Secretary, Manipur Biodiversity Board,  
O/O. The Principal Chief Conservator of Forests,  
Sanjinthong, Imphal – 795 001, Manipur

## 11. HIMACHAL PRADESH BIODIVERSITY BOARD

### Chairman:

1. Chief Secretary, Government of Himachal Pradesh

## Members

2. The Pr. Secretary(Forests) to the Government of HP
3. The Pr. Secretary(Horticulture) to the Government of HP
4. The Pr. Secretary(Ayurveda) to the Government of HP
5. The Secretary(Agriculture) to the Government of HP
6. The Secretary(ST, IT & BT) to the Government of HP
7. The Vice- Chancellor, Dr.Y.S.Parmar University of Horticulture & Forestry, Nauni Distt, Solan, HP
8. Dr. J.M. Julka, Emeritus Scientist, Ex-Joint Director, ZSI, Altitude Zoology Field Station, Saproon District, Solan, H.P
9. Prof T.N.Lakhanpal, Director, Integrated Himalayan Environment Studies Centre, II.P, University, Summer I Hill, Shimla – 5, H.P
10. Director, Institute of Himalayan Bio-resource Technology, CSIR Complex, Palampur – 176 061.
11. Dr.B.D.Sharma, Ex-Charge, National Bureau of Plant Genetic Resources, Regional Station, Phagli, Simla – 4, HP.
12. Member Secretary, State Council for Science, Technology and Environment, 34-SDA-Complex, Kasumpti, Shimla – 9.

### Contact Address:

**The Member Secretary,**  
Himachal Biodiversity Board,  
O/O. Himachal Pradesh Council for Science, Technology and  
Environment, 34, SDA Complex,  
Kasumpti, Shimla –171 009

## ACTIVITIES:

### 1. Action on the 1st meeting of the Biodiversity Board

- Rules for the day to day functioning of the Biodiversity Board framed and submitted to the Administrative Department for approval from the Law Department
- Policy guidelines *for* conservation of biodiversity in the state finalized after obtaining comments / suggestions from the stakeholder Departments / institutions / NGOs
- Information on Biodiversity procured from stakeholder Departments/ Institutions/ Organizations for preparation of a Database on Biodiversity of the state.

- Literature on Biodiversity for the general information and awareness of the stakeholders in the state prepared and published.
- Biological Diversity Act, 2002 examined for exempting Universities and research institutions regarding access to biological resources for research purpose in the state.

## **2. Awareness campaign for implementation of Biological Diversity Act, 2002 organized**

- The H.P State Biodiversity Board organized awareness campaign to the stakeholders of biodiversity from different walks of life for implementation of Biological Diversity Act, 2002 in the state (Photographs-4). The awareness campaign was carried out as follows:
  - One day Meeting of Science Supervisors and coordinators of all the Districts of the Education Department convened on the theme "Biodiversity' 'under Children Science Congress-2006 amongst the Teachers and students in the state.
  - Two days workshop on June 13-14, 2006 organized for the District Science Supervisors and other coordinators at SCERT, Solan, H.P for preparation of biodiversity related project Reports by the students at all Sub- Divisions and Districts in the state for organization of Children Science Congress.
  - Competitions of Students both of rural and urban areas under junior and senior categories organized for preparation of Biodiversity projects at Sub- division and District levels.
  - Biodiversity Act, 2002 and its importance to the stakeholders from different walks of life engaged in both development and conservation work at district / Block / Panchayat level.
  - The provisions of the Biological Diversity Act, 2002 and its linkage to people at village resource level highlighted to the stakeholders.
  - Initiated the discussions for formulation of local level Biodiversity Management Committees
  - Awareness campaign was organized at the different agro-climatic zones of the state.
  - General introduction about biodiversity, threats to Biodiversity in general and state in particular were explained verbally as well as through' It, presentations to the stakeholders.
  - Highlights of the sections of the Biological Diversity Act, 2002 to the stakeholders.
  - The stakeholders were from PRIs namely Panchayat presidents, Zila Parishad and Block Samiti members, Block Development Officers, officers/ officials from the line

Departments, Farmers/ farmwomen, Mahila Mandal representatives, other NGOs and from print media and Doordarshan.

- General literature regarding biodiversity and literature prepared in the form of booklets and brochures etc alongwith the copies of the Biological Diversity Act, 2002 were distributed to the participating stakeholders in the camps.
- Resource person for the awareness camps were Dr. H. S. Mehta, ZSI, Solan, H.P, Dr. S.S. Samant, Dr. Kuniyal, Dr. S.K. Joshi, G. B. Pant Institute of Himalayan Environment and Development, Mohall (Kullu), RP, Dr. Archana Godbole, AERF, Pune, Maharastra and Shri K.Kaisth, Principal Scientific Officer, State Council for Science Technology and Environment, H.P.

The awareness campaign proved useful and initiated the enthusiasm about the biodiversity and the Biological Diversity Act, 2002 introduced in the country by the Govt. of India.

The detail of the awareness camps organized is given below:

<b>SR. No</b>	<b>Name of the Place</b>	<b>Date</b>	<b>District</b>	<b>No. of Participants</b>
<b>1</b>	<b>Mann Gram Panchayat</b>	<b>22.2.2007</b>	<b>Solan</b>	<b>Approximate 300</b>
<b>2</b>	<b>Sarahan</b>	<b>17.3.2007</b>	<b>Sirmour</b>	<b>111</b>
<b>3</b>	<b>Nurpur</b>	<b>23.3.2007</b>	<b>Kangra</b>	<b>Approximate 550</b>
<b>4</b>	<b>Saho</b>	<b>24.3.2007</b>	<b>Chamba</b>	<b>102</b>
<b>5</b>	<b>Gola</b>	<b>25.3.2007</b>	<b>Chamba</b>	<b>196</b>
<b>6</b>	<b>Mohall</b>	<b>26.3.2007</b>	<b>Kullu</b>	<b>65</b>
<b>7</b>	<b>Jalog (Basantpur)</b>	<b>28.3.2007</b>	<b>Shimla</b>	<b>201</b>
<b>8</b>	<b>Bhawanagar</b>	<b>29.12.2007</b>	<b>Kinnaur</b>	<b>122</b>

### **3. Popularizing Conversion of Pine needles Biomass into Briquettes**

The State Biodiversity Board organized demonstration cum training camps for popularizing conversion of Pine needles biomass into briquettes to the farmers, farmwomen of Gram Panchayats of Mann, Manlog Kalan and Chandi Panchayats of Solan District. Demonstration regarding conversion of Pine needles biomass was given to the representatives of the PRI's and line Departments at Sarahan in Pachad Development Block of Sirmour District and farmers j farmwomen of Gola Gram Panchayat at Gola in Bhatiyat Development Block of Chamba District ( Photographs -5 & 6).

### **4. Consultant Hired**

The Board has hired the services of Dr Archana Godbole, Director, AERF, Pune, Maharashtra, for a period of six months for the implementation of Biological Diversity Act, 2002 in H. P. work plan has been formulated by the Board and action initiated for execution of the work plan.

## 5. Strengthening of the infrastructure of the Board

For effective functioning of the State Biodiversity Board equipments namely Computer, Laptop, Power Point Projector etc were purchased.



Sh.K.Kaisth, Principal Scientific Officer, SBB delivering lecture to the Participating stakeholders at the one day awareness camp at Bhawanagar in Kinnaur Distt.



Participants listening to the lecture being delivered at Bhawanagar in Kinnaur District



Dr.Archana Godbole, Consultant Biodiversity, delivering lecture to the stakeholders in the awareness camp at Bachat Bhawan, Nurpur in Kangra District



Dr. J.C.Kuniyal delivering lecture to the stakeholders at Mohali in Kullu Distt. in HP

## 12. HARYANA BIODIVERSITY BOARD

### Chairperson:

1. **Environment Minister**, Government of Haryana

### Members:

2. Commissioner and Secretary to Government, Haryana, Environment Department (Ex-Officio Member)
3. Financial Commissioner and Principal Secretary to Government, Haryana, Forest / Wild Life Department (Ex-Officio Member)

4. Financial Commissioner and Principal Secretary to Government, Haryana, Agriculture Department (Ex-Officio Member)
5. Financial Commissioner and Principal Secretary to Government, Haryana, Animal Husbandry and Dairying Department (Ex-Officio Member)

**Non Official Members:**

6. Dr. J.L. Dalal, C/o Dr. R.S. Dalal, Technical Advisor to Vice Chancellor, Choudhary Charan Singh Haryana Agriculture University, Hissar.
7. Dr. D.S. Balaine, C/o Dharam Pal, Deputy Director, Integrated Child Development Project, Karnal.
8. Shri Gurnam Singh, Indian Forest Service, H.No.484-485, Sector – 6 , Panchkula.
9. Shri R.C. Trigotra, Indian Forest Service, H.No.973, Sector -9, Panchkula.
10. Dr.Mrs. Usha Moza, Principal Scientist, Central Inland Capture Fisheries Research Institute, Behind Session Court, Mal Road, Karnal.

**Contact Address:**

**Shri. R.R. Fuliya**

Secretary, Environment Department,  
Govt. of Haryana Secretariat,  
Chandigarh,

**13. MIZORAM BIODIVERSITY BOARD**

**Chairperson:**

1. **Minister in-charge, Environment and Forests**

**Members:**

2. Secretary (Environment and Forests )
3. Commissioner / Secretary of Agriculture
4. Commissioner / Secretary of AH & Vety
5. Principal Chief Conservator of Forests
6. Chief Wildlife Warden

**Contact Address:**

**The Chief Life Warden,**  
Department of Environment & Forests,  
Government of Mizoram,  
Aizawal – 796 001, Mizoram.

## **ACTIVITIES:**

The Mizoram Biodiversity Board was constituted on 17<sup>th</sup> January 2006 by the Government of Mizoram as mandated under the Biological Diversity Act 2002 (No 18 of 2003) with its headquarters at Aizawl. The composition is as follows:-

### **Chairman**

Dr R Lalthangliana, Minister, Environment & Forests

### **Members**

*Ex-officio members:*

Secretary, Environment & Forests  
Commissioner/Secretary Agriculture  
Commissioner/Secretary, AH & Vety  
Principal Chief Conservator of Forests

### **Expert Members:**

Shri C.Thangliana, Chief Conservator of Forests (Rtd)  
Prof (Dr) Thangchungnunga, Deptt of Economics, Mizoram University  
Dr. H.Lalramnghinglova, Prof & Head, Deptt of FEBES, Mizoram University  
Dr.B.Gopichand, Reader & Head, Deptt of Forestry, Mizoram University.  
Shri Lallungmuana, Head of Deptt, Sociology, Pachhunga University College, Aizawl.

### **Member Secretary**

Chief Wildlife Warden

Meanwhile the State Govt. has also formally allocated the subject of Biodiversity and related activities to Environment & Forests Department in addition to the subject already allocated as per provision of the Govt. of Mizoram (Allocation of Business) Rules, 1987 vide Notification dated 31.3.2006.

The initial step taken since the issue of the order constituting the Board is as follows:

- Opening of an Account No. 15188 dated 18.7.2006 in the Vijaya Bank, Aizawl Branch to facilitate budget of fund and the National Biodiversity Authority, the State Govt. and others.
- Member Secretary presented a paper on STATUS OF ACCESS AND BENEFIT SHARING (ABS) -POLICY & LAW IN MIZORAM at the ABS Workshop Jointly organized by ICIMOD and Department of Forest Ecology, Biodiversity and Environmental Sciences (FEBES), Mizoram University on 22.5.2006 (World Biodiversity Day).

The activities carried out by the Board and its first meeting is as below:-

The power point presentation titled **Understanding Biodiversity – why it matters?** He talked about the India's Mega-diversity which comprises of 167 crops, 320 species of wild crop varieties the different breeds of livestock etc. He also mentioned about India being party to the Convention of Biological Diversity and what it is. Further he mentioned about the salient feature of the Biological Diversity Act 2002 and the Rules therein including function of the National Biodiversity Authority, State Biodiversity Board and Biodiversity Management Committees.

## **I. INVENTORIZATION OF MIZORAM'S BIODIVERSITY**

### **ANIMALS**

#### **Vertebrates**

- i) Mammals
- ii) Birds
- iii) Fish
- iv) Reptiles
- v) Amphibians
- vi) Fish

#### **Invertebrates**

Insects – Bugs, Beetles, Moths and Butterflies

### **PLANTS**

Phanerogams/Cryptogams  
Angiosperms/Gymnosperms

### **MICRO-ORGANISMS**

Algae, Bacteria, Fungi

Member Secretary informed the Board that the information so far is sketchy. With the emergence of great awareness in recent years about the need for sustainable use of biodiversity and its conservation – availability of proper information on the identity of the elements of biodiversity, places of occurrence, distribution, habitat, ecology and utility for the local communities are required. Hence the need for biodiversity studies in addition to BSI & ZSI. Mizoram University can do a lot of work in this regard.

## **II. Constitution of Biodiversity Management Committees - People's Biodiversity Registers**

Initiating the discussion, Member Secretary informed that as per Biodiversity Act & Rules (section 22) every local body shall constitute a Biodiversity Management Committee (BMC) whose main function is to prepare People's Biodiversity Register in consultation with local people. The register shall contain comprehensive information on availability & knowledge of local biological resources, their medicinal or any other use or any other traditional knowledge associated with them. He mentioned that NBA is working on the format and the same may be awaited.

**III. Agro-biodiversity - Field crops (Varieties of Turmeric, Manipuri Rice/Mizo variety, etc** – Indigenous cultivars often harbor many unique genes governing important agro-botanical characters. Likewise, in case of horticultural crops also - Mizo's Wild Mangoes - Haidai, Haifavang, Haivahmim, Hailungmawl, etc

Chairman remarked that since the same was already covered under Agenda I, it would suffice as the same was noted by representatives of both Agriculture and Veterinary Departments. Besides, the State Agriculture & Horticulture Departments must also undertake the work of compilation for documentation.

#### **IV. Animal (domestic) diversity – Zo bawng (Mizo cattle), Zo vawk (Mizo swine)**

Member Secretary informed that the Department of AH & Vety has done some work on protection and propagation of indigenous livestock and cattle breed. Documentation is needed. The Board decided that the latest status may be obtained from the concerned Department.

#### **V. Threats to Biodiversity- Wild fires – jhum/forest fires- Bio-piracy – Intellectual property Rights (IPRs): Loss of traditional knowledge- Hunting – for the pot and commercial - Degradation of Village Forests**

The Board observed that the entire State experiences annual forest/jhum fires which is a matter of great concern from biodiversity point of view. Local Administration Department has a law for regulation of jhum fires. Strict enforcement is required.

Although Bio-piracy may not be very well known amongst the Mizos, India has faced lots of problems in Turmeric and Basmati patenting cases. We have to be very careful in so far as Bio-piracy is concerned. Like every other tribal communities, everything used to be passed on from one generation to the next through word of mouth. Codification and documentation of traditional knowledge is very important. Art & Culture Department has and is doing everything it can. More needs to be done.

Hunting still continues to be rampant in spite of laws in this regard. Law enforcement is one area where we need to be more strict – the Police and Magistrates have to be convinced that Wildlife Crime is no less than human crime!

Village Forests (Chaklakna Reserve and Khaw venhimna Reserve) are still existing in many villages of Mizoram. The communities should be provided incentive for management and maintenance of such forests.

**AoB:** The following were also discussed:-

Budget for Mizoram Biodiversity Board- Now National Biodiversity Board has sanctioned a one-time grant of Rs 10.00 lakhs for the establishment of the State Board and first instalment of Rs 5.00 lakhs has been received and kept in a Current Account of Vijaya Bank. Office furnishing items (Computer with accessories, 3 tables and chairs) will be procured.

Grants of money by State Government to State Biodiversity Board -  
State Biodiversity Fund - all sums by way of grants and loans received. [Section 31, 32 of the Act].

Annual report & Audited Statements [Section 34]

Biodiversity Heritage Sites – [Section 37]

Member Secretary requested all the Members to identify biodiversity heritage sites outside already designated PAs during their travels to the interior parts of the State. He also informed the meeting that Audited Accounts will be submitted soon to NBA during April 2007 along with Annual Report.

PCCF Mizoram is of the view that necessary Rules and Guidelines be formulated for the Board including the terms of office of the Members.

1. That a discussion/symposium/seminar on awareness of Biodiversity inviting BSI, ZSI, Mizoram University be held at the earliest. Associate NGOs with wide publicity to start with.
2. Mizoram University be requested that JRF be given 6 months/1 year employment for doing research/biodiversity inventorisation.
3. One-day consultative workshop on biodiversity with papers from MZU and Deptt be held during April or May/2007.
4. To protect the rich Biodiversity of the State from fire, PCCF may write to State Fire Protection Committee for co-ordination with line Deptts.



#### **14. KERALA BIODIVERSITY BOARD**

##### **Chairperson:**

1. **Dr. A.M. Michael**, Former Director, Indian Agricultural Research Institute, New Delhi and former Vice Chancellor of Kerala Agricultural University.

##### **Members:**

2. Principal Secretary, Science, Technology & Environment Department (ex-officio)
3. Principal Secretary, Agriculture Department (ex-officio)
4. Principal Secretary, Fisheries Department (ex-officio)
5. Principal Secretary, Forest & Wildlife Department (ex-officio)
6. Secretary, Agriculture (Animal Husbandry) Department (ex-officio)
7. Dr.A.D. Damodaran, Former Chairman, Science, Technology & Environ. Committee
8. Dr. K.V. Ahmed Bavappa, Former Director, CPCRI

9. Dr. A.K.K. Unni, Former Director, Poultry Development Board
10. Dr.L. Lakshmanan, T-44/A, 7th Avenue, Besant Nagar, Chennai -90
11. Dr.J.K. Sharma, Director, Kerala Forest Research Institute

**Contact Address:**

**Dr.J.K. Sharma**

Member Secretary

Kerala State Biodiversity Board, Sasthra Bhavan,  
Pattom P.O., Thiruvananthapuram – 695 004, Kerala.

**ACTIVITIES:**

As per the provisions of the Biological Diversity Act 2002 and the subsequent Biological Diversity Rules 2004, the Kerala State Biodiversity Board (KSBB) was constituted in February 2005 with the primary objective of conservation and sustainable utilization of biodiversity. The Board now functions in an independent office at Thiruvananthapuram under the Environment Department of Government of Kerala. Dr. V.S. Vijayan former Director of Salim Ali Centre for Ornithology and Natural History (SACON) joined as Chairman of Kerala State Biodiversity Board on 8 February 2007.

**Board's Meetings and Actions**

Three meetings of KSBB were held during the year 2006-'07 and following decisions were made.

- (i) Since the Board functions under Environment Department, it has been decided to include Secretary, Environment Department in the Board and to approach Government for this purpose.
- (ii) The Board decided to constitute Biodiversity Management Committee (BMC) in all the local bodies and to consider five of them as model BMCs. The model BMCs will be fully supported by the Board for PBR preparation. The Board will facilitate and give technical guidance for the constitution of BMCs in Grama Panchayats, Municipalities and Corporations. It was decided to request Local Self Government Department to issue necessary instructions to local bodies to constitute BMCs as per the Biological Diversity Act and Rules and Kerala Biological Diversity Rules (2006) (Draft).
- (iii) It has been decided to constitute an expert committee under the Chairmanship of Prof. M.K. Prasad to examine the format of People's Biodiversity Register (PBR) issued by NBA and to suggest suitable modifications to suit the situations in Kerala. Twelve expert scientists from various disciplines were nominated as members and Dr. A. Biju Kumar, Principal Scientific Officer, KSBB as the Convener of the committee.
- (iv) The Board decided to produce a film on Kerala's Biodiversity through M/s Visile TV Professionals, Thiruvananthapuram, an expert professional group that produced documentaries for various government departments and R & D centers in Kerala. It was also decided to approach various funding agencies, including NBA for the production of the film.
- (v) It has been decided to rent an independent building for the Board at Thiruvananthapuram.

- (vi) It has been decided to invite entries for the emblem of the Board through competition and the entry by Shri A. Aravind was selected with modifications suggested by the members.
- (vii) The Board decided to set up district technical support group in each district for assisting PBR preparation and validation of data.
- (viii) Permission was granted for the proposal to conduct a meet of all the leading taxonomists in Kerala during March and to organize a one-day seminar in connection with the International Biological Diversity Day on 22 May 2007. It was also decided to invite the honourable Chief Minister to inaugurate the seminar and Chairman, NBA to deliver the key-note address.

### **State Biological Diversity Rules**

The State Biological Diversity Rules is under the final consideration of the Government, after incorporating the suggestions received from the public, Board members, and various government departments.

### **Biodiversity Documentation for Thrissur District**

The Biodiversity Technical Programme Coordination Committee (BTPCC) of the Board at Kerala Forest Research Institute (KFRI) has completed the biodiversity documentation for Thrissur District. Information based on secondary data was collected on topics such as animal diversity (wild and domesticated), forest plant diversity, domesticated plant diversity, and traditional knowledge. The data was integrated using the software Bio-Geographical Information System (BGIS) developed by Centre for Earth Science Studies. The documentation for Thrissur District has resulted in the recording of a total of 3003 taxa of plants and 2672 taxa of faunal elements in the district; this includes 391 cultivars of plants and 71 breeds of domesticated animals. The biogeographic details of all these species are also available in the report as map outputs.

### **(iii) Biodiversity Awareness Workshops for Panchayath Presidents**

An awareness programme for Panchayath Presidents of all local bodies was carried out by the BTPCC in collaboration with Kerala Institute of Local Administration. In total, 753 Grama Panchayath presidents attended the 29 arranged for this purpose. The programme started in March 2006 and concluded in November 2006.

### **Documentary Film on Biodiversity of Kerala**

The Board has decided to produce a 30 minute documentary film on the biodiversity of Kerala in Malayalam and English for a total budget of Rs. 5 lakhs. NBA has sanctioned Rs. 1.5 lakhs for the production of the film. The film will be ready for screening by June 2007.

### **Taxonomists' Meet**

KSBB organised a state level workshop of Taxonomists of Kerala at Thiruvananthapuram during 22-23 March, 2007. The workshop was a prelude to the documentation of biodiversity in each local body of our state, through PBRs. Over 100 leading taxonomists working in various aspects of floral, faunal and aquatic taxonomy attended the workshop. The workshop was inaugurated by Shri C.K. Viswanathan IAS, Secretary, Environment and Labour Department. Dr. T.N. Ananthkrishnan, former Director, Zoological Survey of India Dr. J.C. Daniel, Honorary Secretary, Bombay Natural History, Prof. M.K. Prasad, Executive Chairman and Executive Director, Information Kerala Mission, Dr. E.P. Yasodharan, Executive Vice President, Kerala State Council for Science,

Technology and Environment, Dr. G.V.S. Moorthy of Botanical Survey of India, and Dr. G. Thirumalai and Dr. C. Radhakrishnan of Zoological Survey of India delivered special lectures on the occasion. The participants were grouped into three categories – flora (Lichens, Fungi and Microbes were also included in this category), fauna and coastal/marine biodiversity. Each group then formed subgroups and finalized the following: (i) provided inputs and suggestions to the data base of taxonomists in the State, (ii) suggested expert committees for the validation of data in each district in each group, wherever possible (iii) identified gap areas of taxonomic research in the State, (iv) prioritized research activities in taxonomy, and (v) identified topics and experts for the preparation of field guides for selected taxa. The panel discussion on the second day of the workshop discussed the key features to be included in the Biodiversity Strategy and Action Plan to be prepared by KSBB.

### **Publications**

A hand book on biodiversity titled “*Jaiva Vaividhyam*” published by KSBB was translated into English for distribution to NBA and other State Biodiversity Boards.

### **New Programmes Proposed to be Taken up During 2007-'08**

1. Preparation of a Kerala Biodiversity Strategy and Action Plan
2. Setting up of technical support groups at State and District Levels.
3. Establishment of five model BMCs in selected Panchayaths.
4. Preparation of People’s Biodiversity Register by selected BMCs.
5. Printing of Kerala Biological Diversity Rules in English and Malayalam.
6. Designing and hosting of the website of Kerala State Biodiversity Board.
7. Preparation of a directory of wetlands and wetland biodiversity in Kerala.
8. Identification of biodiversity rich areas outside the protected areas for conservation and sustainable utilization.
9. Implementation of various programmes prioritized in the Kerala Biodiversity Strategic Action Plan.



## **15. GUJARAT BIODIVERSITY BOARD**

### **Chairman:**

1. Chief Secretary, Gujarat State

### **Members:**

2. Principal Secretary, Forests & Environment Department

3. Principal Chief Conservator of Forests, Gujarat State, Gandhinagar
4. Additional Principal Chief Conservator of Forests (Wildlife), Gujarat State, Gandhinagar
5. Dr. Minu Purabia, Professor, Department of Bio Science, South Gujarat University, Surat.
6. Dr. A.Y. Desai, Fisheries College, Veraval
7. Shri M.K. Ranjitsimhji (Retd. IAS)
8. Smt. Urvashi Devi, Prominent Naturalist & Ex. MLA, The Palace, At. & Po. Devgadhi Baria, Dist. Panchmahals.
9. Prof. V.C. Soni, Bio Science Department, Saurashtra University, Race Course Road, Rajkot.
10. Shri Rasik Bhatt, Retd. Professor of Agriculture
11. Dr. Bonny Pilo, Retd. Professor, Zoology.

**Contact Address:**

**The Member Secretary**

Gujarat Biodiversity Board  
 O/O. The Additional Principal Chief Conservator of Forests  
 (Wildlife), Dr. Jivraj Mehta Bhavan,  
 Old Secretariat, Block No.14, First Floor, Sector 10,  
 Gandhi Nagar, Gujarat – 380 010.

**ACTIVITIES:**

- Draft rules of GBB finalised

**16. ARUNACHAL PRADESH BIODIVERSITY BOARD**

**Chairman:**

1. **Chief Secretary,**

**Members:**

2. Principal Chief Conservator of Forests & Principal Secretary (Env & Forests)  
 Secretary (Env. & Forests) (Ex-Officio Member)
3. Add. Principal Chief Conservator of Forests (Wildlife & Biodiversity) (Ex-Officio Member)
4. Secretary of Agriculture / Horticulture / Animal Husbandary & Veterinary / Finance  
 (Ex-Officio Member)
5. Professor & Head, Department of Botany, Arunachal University.

6. Professor & Head, Department of Zoology, Arunachal University
7. Principal, Horticulture College, Pasighat
8. Dean, Faculty of Forestry, NERIST,
9. Director, State Forest Research Institute, Itanagar, Member Secretary

**Contact address:**  
**Shri. G.N. Sinha,**  
 Member Secretary  
 Arunachal Pradesh Biodiversity Board,  
 O/o. The Director, State Forest Research Institute,  
 Department of Environment and Forests, Van Vihar, Chimpu,  
 P.B. No. 159, Itanagar – 791 111.

## ACTIVITIES:

### A. FLORISTIC EXPLORATIONS:

During the year, survey tours have been conducted in Tawang, West Kameng, East Kameng, Lower Subansiri, Papum Pare, East Siang and Changlang districts of Arunachal Pradesh to gather additional data about the known flora of the state. These explorations have yielded a new species of orchid viz. *Biermannia arunachalensis* A.N. Rao and 2 new distributional records of orchids to Indian Flora viz. *Dendrobium vexabile* Rchb.f. and *Liparis nigra scident*. The former was reported from Burma in 1884 and now, after an elapse of 123 years, it is rediscovered in India from Arunachal Pradesh as second locality of the species. The later species was recorded earlier from Thailand and Taiwan and now recorded from Arunachal Pradesh as a new addition to India. During the tours, 78 specimens were collected for herbarium from the above districts. A field survey of biodiversity in Namchik Caol Mine area was carried out and Biodiversity Management plan was prepared for the coal mine area.

In addition to these, survey on bamboo flowering in different districts, including high altitude areas was carried out and management plan was prepared for the species like *Arundinaria maling*, *Dendrocalamus giganteus*, *D. hamiltonii*, *Schizostachyum capitatum*, *S. polymorphum*, *Thamnocalamus falcornei*, and *T. spathes*.

### B. AWARENESS PROGRAMMES:

#### 1. Exhibition Stalls:

Participated in Independence Day, Republic Day and Statehood Day exhibition celebrated at Indira Gandhi Park, Itanagar by exhibiting the floristic and faunistic diversity of Arunachal Pradesh. The exhibits included indigenous medicinal plants, rare, endangered and ornamental plants including orchids, canes, bamboos etc., their propagation, cultivation methods with economic earnings. Specimens of snakes, butterflies, charts showing the native birds, mammals, fishes etc. are also exhibited.

Other two exhibition stalls were erected, one at Pasighat during Siang River Festival another at Agartala, Tripura during International Bamfest - 2006 on Bamboo diversity and products.

Thousands of visitors including VIPs, officers, common people, student who visited the stall have been made aware of natural rich wealth of flora and fauna, importance of its conservation and sustainable use without causing any disturbance to the natural habitat.

## 2. Work Shops/Training Camps for local tribal farmers:

Three Awareness-cum-Training workshop on bamboo were organized at Namsai, Lohit District; Pasighat, East Siang District and at Itanagar, Papumpare District for officers, farmers and NGOs with proper demonstration on bamboo diversity, propagation, cultivation, management and applications. Two Farmers Training on orchid, their propagation, cultivation and commercial applications at Tipi and Singchuing (Tenga) in West Kameng district were conducted involving various tribal farmers including SHGs and Women Society of Arunachal Pradesh.



Trainees at Orchid Research & Development Center, Tipi



Bamboo flowering in Tawang district



Participants in the Bamboo Workshop at Itanagar



Biodiversity Study in Namchik –  
Namphuk Coal Mine Area



Field experts at the Coal Mound area  
for preparation of Biodiversity Management Plan



Some butterfly diversity of Arunachal Pradesh

## **17. CHATTISGARH BIODIVERSITY BOARD**

### **Chairman:**

**Hon'ble Forest Minister**

### **Members:**

- 1. Principle Secretary / Secretary Forest Deptt.**
- 2. Principle Secretary / Secretary, Agriculture Deptt.**
- 3. Director, Veterinary**
- 4. Director, Council of Science & Technology**
- 5. Dr.G.S.Badesha, Director Indian Medical System and Homeopathy, Raipur**
- 6. Pro.D.K.Marothiya, Proff. And Head of Deptt. natural Resource & Economics Deptt. Indira Gandhi Agriculture University Raipur.**
- 7. Dr.V.K.Shukla Scientist, Botanical Survey of India, Allahabad**
- 8. Dr.Kailash Chandra, In-charge officer, Zoological Survey of India, Jabalpur**
- 9. Dr.AK.Pati, Professor Bio-science, Deptt. Ravishankar Shukla University, Raipur**
- 10. Principle Chief Conservator of Forests (Wildlife) / A.P.C.C.F (Wild life)**

#### **Contact address:**

**Shri. Ram Prakash,**  
Member Secretary,  
Chhattisgarh Biodiversity Board,  
O/O. Addl. Principal Chief Conservator of Forests (Wildlife),  
Aranya Bhavan, Medical College Road (Wild life), Raipur – 492 009.  
Chattisgarh

### **ACTIVITIES:**

The first meeting of SBB was held on 24.05.06 under the Chairmanship of Hon'ble Forest Minister decisions were taken in the meeting:

- To create C.G.Biodiversity fund
- To create Biodiversity committee on various areas of Biodiversity. They are:
  - Committee on Agriculture Biodiversity
  - Committee on Fishes and Aquatic Biodiversity
  - Committee on Animal Biodiversity
  - Committee on Plants and Medicinal Plants

- Committee on Heritage
- Committee on Micro organisms
- To frame Rules u/s 63 of Biodiversity Act
- To send Proposal of staff of SBB for sanction to the Government
- State Biodiversity fund has been created. A bank account is opened with Vijay Bank. So far the NBA's contribution to this fund is Rs.5.00 lacs and that of State is Rs.16.00 lacs.
- Proposal for formation of committees have been received from respective departments.

Meeting of the SBB will be organized soon to finalize the members of various committees and their T.O.R

The updated information from time to time shall be given to the authority.

## 18. UTTARANCHAL BIODIVERSITY BOARD

**Contact address:**

**Shri. A.R. Sinha**

Member Secretary,

Uttaranchal Biodiversity Board

O/O. The Chief Conservator of Forests, Biodiversity, Development & Research, Forest Training Academy, Haldwani – 263 139, Uttaranchal.

### ACTIVITIES:

Uttaranchal Biodiversity Board was constituted on 01.04.2006 under the Chairmanship of Hon'ble Forest and Environment Minister, Uttaranchal. First meeting was held on 12<sup>th</sup> may 2006 under the Chairmanship of Hon'ble Forest Minister. The following decisions were taken.

1. It was decided that since Uttaranchal is rich in Biodiversity and for development many activities are going on, which affect the biodiversity of the state, hence representatives from irrigation, drinking water, industrial development, tourism department should be called as special invitees from the next meeting.
2. Under the World Bank aided forestry project, a biodiversity plan for the state was prepared in 2001-03. It was decided that the recommendations given should be analyzed and work should be started according to the recommendations as given.
3. It was decided that demand in the budget should be proposed so that further works can be started.

The next meeting of the board was held on 23<sup>rd</sup> March 2007.

The main issues decided were:

1. Work has been started on natural regeneration of oak and proposals have been submitted to state government for budgetary support from next financial year.
2. From the money given by National Biodiversity authority the following works have been started.
  - a. Preparation of Peoples Biodiversity Register at least one each in each district of Uttarakhand.
  - b. Computers, laptops and other accessories required for running the board office had been purchased.

In the last week of the financial year the state government has also provided a grant of Rs.20 Lac mainly for preparation of biodiversity Registers, which will be done in the financial year 2007-08.

Rs. 5 lakh was given to the state board from the National Biodiversity Authority.

Four workshops were organized in the month of October 06 for different levels of forest department officials for issues concerning biodiversity protection and preparation of biodiversity registers.

2000 copies of the act has been reprinted and distributed to different stake holders.

Biodiversity act has been included in different training programmes.

## **ANNEXURE i**

### **1. MEMBERS OF THE AUTHORITY**

#### **A. Official Members**

**The Joint Secretary,**  
Ministry of Tribal Affairs,  
Shastri Bhavan,  
Dr.Rajendra Prasad Road,  
New Delhi-110001.

**The Additional Director General (Wildlife),**  
Ministry of Environment & Forests,  
Paryavaran Bhavan,  
CGO Complex, Lodhi Road,  
New Delhi-110003.

**Joint Secretary (CS),**  
Ministry of Environment and Forests,  
Paryavaran Bhavan,  
CGO Complex, Lodhi Road,  
New Delhi-110003.

**The Joint Secretary,**  
Ministry of Agriculture,  
Department of Agricultural Research and Education,  
Krishi Bhavan, Dr. Rajendra Prasad Road,  
New Delhi – 110001.

**The Joint Secretary,**  
Department of Biotechnology,  
CGO Complex,  
Block No.2, Lodhi Road,  
New Delhi – 110003.

**The Joint Secretary,**  
Department of Ocean Development,  
Mahasagar Bhavan,  
Block No.12, CGO Complex,  
Lodhi Road, New Delhi – 110003.

**The Joint Secretary,**  
Department of Agriculture and Co-operation,  
212, Krishi Bhavan,  
Dr. Rajendra Prasad Road,  
New Delhi - 110001.

**The Joint Secretary,**  
Dept of Indian Systems of Medicine and Homoeopathy,  
Room No.201, Red Cross Building,  
Parliament Street,  
New Delhi -110001.

**The Joint Secretary,**  
Department of Science and Technology,  
Technology Bhavan, New Mehrauli Road,  
New Delhi - 110 001.

**The Joint Secretary,**  
Department of Scientific and Industrial Research,  
Ministry of Science and Technology,  
Technology Bhavan, New Mehrauli Road,  
New Delhi – 110001.

**B. Non-Official Members**

**Prof. Raghvender Gadekar,**  
Center for Biological Science,  
Indian Institute of Science,  
Bangalore 560 012.

**Prof. Anil Gupta,**  
Indian Institute of Management,  
Vastrapur,  
Ahmedabad - 380 001.

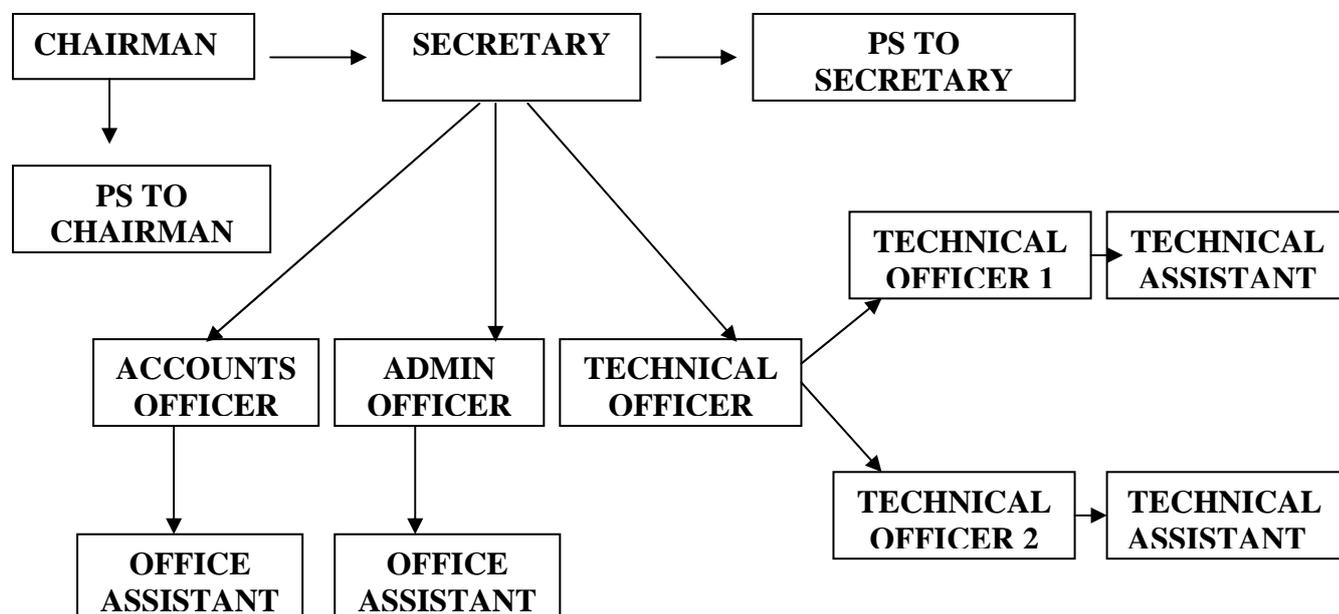
**Dr A. K. Ghosh,**  
Director,  
Centre for Environment and Development,  
329, Jodhpur Park,  
Kolkata 700 068.

**Dr. S. Subramaniyan**  
54, VGP-Golden Sea View,  
Part II, 2<sup>nd</sup> Main Road, 5<sup>th</sup> Cross Street,  
Palavakkam, Chennai – 600 041.

**Prof. K. Kathiresan**  
Centre for Advanced Study in Marine Biology,  
Annamalai University, Parangipettai.

## ANNEXURE: ii

### ORGANIZATIONAL CHART



## ANNEXURE: iii

### STAFF STRENGTH INCLUDING RECRUITMENT

#### **Recruitment:**

With reference to the minutes of the Review meeting held under the Chairmanship of Shri. Suresh Chadhra Spl Sec., Ministry of Environment and Forests, New Delhi on 26<sup>th</sup> September, 2005 to review the progress of National Biodiversity Authority, it is submitted that in Item No 2 Recruitment of Staff, Spl. Secretary desired that NBA should immediately initiate action for appointment in respect those positions for which there is provision to fill the post on deputation. It was further suggested that all the isolated posts for which immediately there is no promotional avenue, should have provisions for being filled on deputation. As per letter No J 22018/19/2003-CSC (BC) dated 29<sup>th</sup> March 2004 and 9<sup>th</sup> March 2006 from Dr. R.K. Rai, Addl. Director, MoEF, New Delhi, 19 posts have been sanctioned for NBA.

Out of 18 (except Chairman), one post of Admin officer has already been filled on deputation for a period of one Year. Four posts for peon/daftry have been sanctioned (2 by outsourcing and two in scale of pay) of which 2 posts on outsourcing has been filled up. As per the File No.J-22018/19/2003-CSC(BC) and Notification No GSR 156 dated 30<sup>th</sup> June, 2006 and the Office Memorandum F.No.2/1/2004/Admin.NBA dated 31<sup>st</sup> July,2006, the following posts are advertised in the NBA Website and recruited by the Authority.

## APPOINTMENT OF DIFFERENT POST RECRUITED BY NBA

With the approval of the Authority in its eighth meeting held on 7<sup>th</sup> March, 2007, the Offer of Appointment letters for deputation / absorption for various posts have been sent.

11. Accounts Officer
12. Private Secretary to Secretary
13. Technical Assistant – Zoology
14. Stenographer – Grade ‘C’

With the approval of the Authority, the Offer of Appointment for the two posts for Peon/Daftry by direct recruitment have been sent and one person has joined in this office on 12<sup>th</sup> March, 2007 on regular basis.

The following posts have been re-advertised for filling up by deputation / absorption & direct recruitment:

1. Two post of Office/Computer Assistant
2. Technical Assistant (Botany)
3. Private Secretary to Chairman
4. Stenographer ‘D’
5. Two Posts of Technical Officer
6. Advisor (Law)

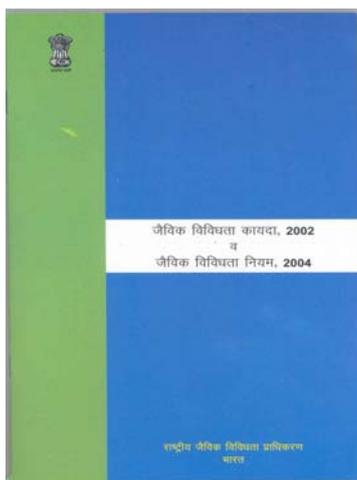
## ANNEXURE: iv

### ❖ PUBLICATIONS

- **Biological Diversity Act 2002 and Biological Diversity Rules 2004:** Act Books in English, Hindi, and Tamil had been printed and distributed to all relevant agencies by National Biodiversity Authority on previous year. During this year the Act Books in Marathi, Oriya, Bengali and Malayalam had been printed.



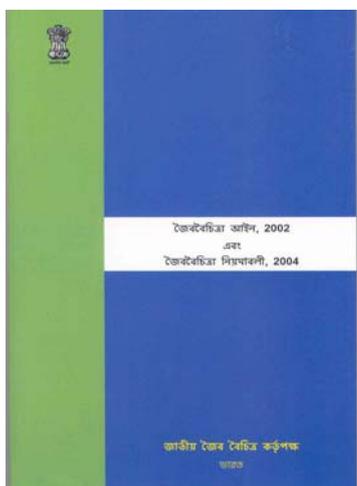
**Biological Diversity Act, 2002 and Biological Diversity Rules, 2004 (in Malayalam) published by National Biodiversity Authority, Chennai**



**Biological Diversity Act, 2002 and Biological Diversity Rules, 2004 (in Marathi) published by National Biodiversity Authority, Chennai**

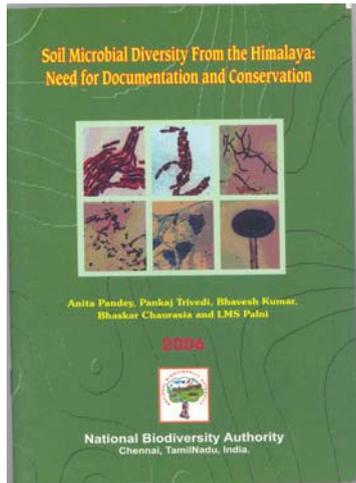


**Biological Diversity Act, 2002 and Biological Diversity Rules, 2004 (in Orissa) published by National Biodiversity Authority, Chennai**

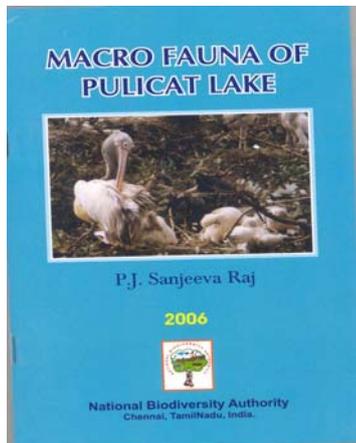


**Biological Diversity Act, 2002 and Biological Diversity Rules, 2004 (in Bengali) published by National Biodiversity Authority, Chennai**

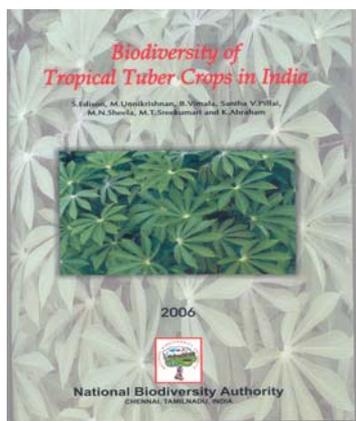
- **Scientific bulletins:** Totally Eight bulletins had been published by National Biodiversity Authority. During this year four bulletins had been published as follows:
  1. Soil Microbial Diversity from The Himalaya : Need for Documentation and Conservation
  2. Macro fauna of Pulicat Lake
  3. Biodiversity of Tropical Tuber Crops in India
  4. Management of Spiny Lobster Fishery Resources.



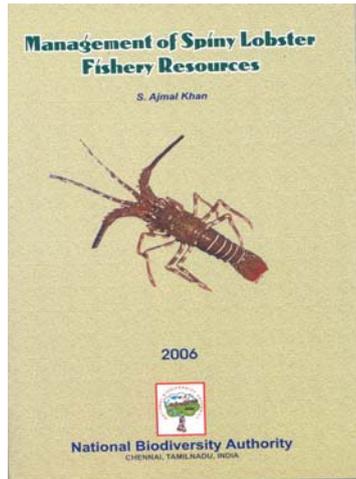
**Soil Microbial Diversity from The Himalaya :  
Need for Documentation and Conservation  
(Bulletin) published by National Biodiversity  
Authority, Chennai**



**Macro fauna of Pulicat Lake (Bulletin)  
published by National Biodiversity Authority,  
Chennai**

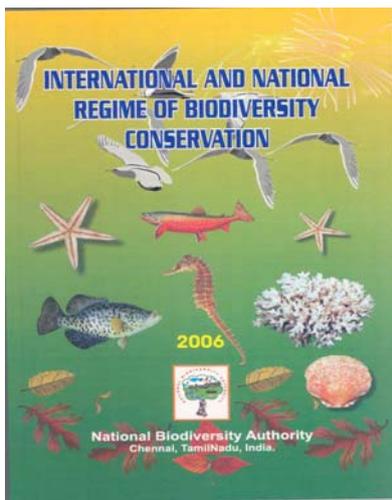


**Biodiversity of Tropical Tuber Crops in India  
(Bulletin) published by National Biodiversity  
Authority, Chennai**



**Management of Spiny Lobster Fishery Resources (Bullet in) published by National Biodiversity Authority, Chennai**

- **International and National Regime of Biodiversity Conservation** compiled by Prof S. Kannaiyan and Dr. K. Venkataraman had been published by National Biodiversity Authority



**International and National Regime of Biodiversity Conservation published by National Biodiversity Authority, Chennai**

## **ANNEXURE: v**

### **❖ TRAINING COURSES / SEMINARS / WORKSHOP ORGANISED BY NATIONAL BIODIVERSITY AUTHORITY**

1. “Interactive Workshop on State Biodiversity Board and Review Meeting” organized by National Biodiversity Authority held on 27<sup>th</sup> & 28<sup>th</sup> April, 2006 at Gokul Hall, Hotel Krishna Residency, Chennai.
2. “National Workshop on PBR” organized by National Biodiversity Authority held on 22<sup>nd</sup> & 23<sup>rd</sup> June, 2006 at Conference Hall, Institute of Ocean Management, Anna University, Chennai
3. Workshop on “Facilitating Formation of State Biodiversity Boards & Biodiversity Management Committees in Northern India” on 19 - 20<sup>th</sup> December, 2006 at Hotel Mount View, Sector 10, Chandigarh organized by Punjab Biodiversity Board and funded by NBA.
4. “National Seminar on Mosquito Biodiversity and challenges in the control of Mosquito – Borne deceases” held on 19<sup>th</sup> Feb, 2007 at Bertram Hall, Loyola College, Chennai.
5. “Oneday training programme to create awareness on Biodiversity among School / College teachers, Government Staffs, NGOs in Nagapattinam district held on 2<sup>nd</sup> March, 07 at Edayathangudy, G.S.Pillay Engineering College, Nagapattinam.
6. “Biodiversity of Snakes and other reptiles and snakes and Environment – Report on Awareness and Training programme for Teachers and students of Chennai Corporation Schools during Nov, 06 to Mar, 07 sponsored by NBA and conducted by Chennai Snake Park Trust, Raj Bhavan, Chennai – 22.

**ANNEXURE: vi****STATEMENT OF ACCOUNTS****Receipts and Payments for the year ended 31<sup>st</sup> March, 2007**

Opening Balance	Rs.57,088/-	1. Capital Expenditure	
Cash in Hand	Rs. 3,000/-	(i) Works.....	Nil
I. Grants received		(ii) Fixed Assets.....	Nil
a. from Government ...	Rs.1,42,00,000/-	(iii) Other Assets .....	Nil
b. from other agencies .....	Nil		
II Fees	Rs. 2,25,835/-	a. Laboratory Equipment	Nil
		b. Vehicles	Nil
		c. Furnitures and Fixtures	Rs.74,351/-
		d. Scientific Instruments and Office Appliances and repairs	Rs.1,15,650/-
		e. Tools and Plant	Nil
III. Fines and Forfeitures	Nil	2. Revenue Expenditure.....	
IV. Interest of investments	Nil	(A) Administrative .....	
V. Miscellaneous Receipts	Nil	(i) Pay of Officers	Rs.4,81,691/-
VI. Miscellaneous Advances	Nil	(ii) Pay of Establishment	Nil
		(ii) Allowances and Honoraria	Rs.4,83,273/-
		(iii) Leave Salary and Pension Contribution	Rs. 2,832/-
		(iv) Authorities contribution to CPF	Rs. 81,900/-
		(iii) Contingent Expenditure	Rs.74,79,789/-
VII. Deposits (Short Term Deposit)	Nil	Deduct Recoveries.....	
		(B) (i) Board Laboratory	Nil
		(ii) Charges to be plaid to the National Biodiversity Authority	Nil
		(C) Running and Maintenance of Vehicles.....	Nil
		(D) Maintenance and Repairs	Nil
		(i) Building and land Drainage including rents, if any .....	Rs.9,21,749/-
		(ii) Works .....	Nil
		(iii) Furnitures and Fixtures .....	Nil
		(iv) Scientific Instruments and Office Appliance and repairs .....	Nil
		(v) Tools and Plants .....	Nil
		(vi) Temporary Works (including maintenance and repairs) .....	Nil
		(E) Fees to Consultants and Specialists	Rs.6,04,890/-
		(F) Law charges .....	Nil
		(G) Miscellaneous (Grant-in-aid to State Biodiversity Boards)	Rs.35,00,000/-
		(H) Fees for Audit	Rs. 26,745/-
		3. Purchases .....	Nil
		4. Miscellaneous	Rs. 78,985/-
		5. Advances	Nil
		6. Deposits	Nil
		<i>Closing Balance</i>	<i>Rs. 6,34,038/-</i>
<b>Total</b>	<b>Rs. 1,44,85,923/-</b>	<b>Total</b>	<b>Rs. 1,44,85,923/-</b>



