

INDIA



National Biodiversity Authority

Annual Report 2008-2009





ANNUAL REPORT 2008-2009



National Biodiversity Authority

TICEL Bio Park
5th Floor, Taramani Road,
Taramani, Chennai – 600 113

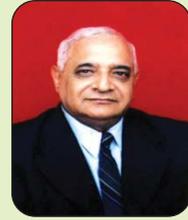
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TICEL Bio Park
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Fax : 91-44-2254 1200
email : secretary@nbaindia.in
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Dr. P. L. Gautam
Chairman,
National Biodiversity Authority
Chennai



Foreword

India is known for its rich heritage of biodiversity which is an outcome of over 3.5 billion years of evolutionary development, shaped by natural processes and ever more by human influence. It sustains the web of life as we fully depend upon it to meet for our food, healthcare and other needs. Conserving biodiversity is basic to our survival and well-being and using it sustainably forms an inherent part of the Indian culture and lifestyle. However, biodiversity is being increasingly threatened globally on account of various factors. Human activities are also placing severe pressure on biological resources, leading to fragmentation and degradation of habitats, and resultant loss of biodiversity. These losses are irreversible and are a threat to our own well-being.

India has a long history of conservation and sustainable use of natural resources. Formal laws, policies and programmes for conservation and sustainable utilization of bio-resources date back to several decades. Over the years, India has developed a stable organizational structure and a strong legal and policy framework for protection of biodiversity in the country.

Taking cognizance of the International Convention on Biodiversity (CBD), and to address the excessive pressure on biodiversity, the Govt. of India has enacted Biological Diversity Act, 2002 and Biological Rules, 2004. Accordingly, national, state and local level mechanisms have been provided for implementation of the Act.

I express my appreciation for the sincere and dedicated efforts and guidance provided by the Hon'ble Members of the Authority for the execution of the various functions, activities and programmes of the NBA. Also, I congratulate the staff of the NBA for their efforts to bring this report in the present form.

I hope that the publication will provide a glimpse of the activities carried out during the year 2008-09. I welcome the comments for further improvement of the report.


P.L.Gautam

C. Achalender Reddy, I.F.S.,
Secretary,
National Biodiversity Authority
Chennai

Acknowledgement

On behalf of National Biodiversity Authority, I would like to thank the Ministry of Environment and Forests for their support and guidance in finalizing this Annual Report. I am grateful to the Members of the Authority for their inputs to this Annual Report.

I am highly thankful to State Biodiversity Boards for their valuable contribution to the Annual Report.

I express my gratitude to the Office of Principal Director of Audit (Scientific Audit) for furnishing the Audit certificate in time. I am also thankful to Dr.K.Venkataraman, who was the Secretary, NBA during the period under report for his useful contribution to the report.

I also express my deep appreciation of the hard work put forth by the Officers and staff of National Biodiversity Authority.

I express my sincere regards and gratitude to our Chairman, Dr.P.L. Gautam for his valuable advice and continued motivation in finalization and submission of the Annual Report 2008-09 within the scheduled time.



C. Achalender Reddy



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Executive Summary

Taking cognizance of the International Convention on Biodiversity (CBD), and to address the excessive pressure on biodiversity, the Government of India has enacted Biological Diversity Act, 2002 and Biological Diversity Rules, 2004. Accordingly, the national, state and local level mechanisms have been provided for implementation of the Act. At the national level, National Biodiversity Authority (NBA) has been established by Government of India in October, 2003 at Chennai (Tamil Nadu) under Section (8) of the Biological Diversity Act. The State Biodiversity Boards (SBB) have been established by the State Governments and Biodiversity Management Committees (BMC) constituted by the local bodies. This document presents the progress report of the NBA for the year 2008 – 09.

The authority has fulltime chairman and secretary and is functional with all ex-officio & non-official members in place. The Authority has been strengthened by the provision of a senior consultant. The action regarding vacant posts has been taken or is in progress. During the period, three authority meetings were held. The important decisions taken at these meetings include notifications on enforcement of provisions of biological diversity act and designation of national repositories; constitution of expert committees on soil, sediment and microbial diversity, normally

traded commodities, evaluation of applications for access and benefit sharing, conservation of medicinal plants and threatened/endangered/endemic species, preparation of guidelines and rules for management and conservation of Biodiversity Heritage Sites (BHS) and use of National Biodiversity Fund (NBF); implementation of 6th pay commission; approval of annual accounts 2007-08 and annual plan 2008-09.

The NBA participated and/or supported 19 workshops/exhibitions/conferences/trainings/awareness programmes. The Government of Karnataka has notified the Tamarind site at Nallur in Devanahalli Taluk, Bangalore district as first BHS in the country. The states of Tamil Nadu and Tripura notified the constitution of SBBs. So far, 1450 BMCs have been constituted in different states and 350 PBRs have been prepared by the respective SBBs /BMCs.

During this period, 104 applications were received for access of bioresources for research / commercial use, transfer of research results, intellectual property rights, third party transfer and collaborative research. Out of these, 71 applications were approved and 35 agreements have been signed. Consequent on establishment of SBBs in 21 states and BMCs in few districts, the NBA has initiated the

consultation process with SBBs and BMCs for facilitating the decision making on access applications. During this period, four applicants have sought hearing with NBA. Two applicants have been given hearing and remaining applicants have requested further dates, which were considered.

NBA has initiated action for establishment of a legal cell, to take necessary steps to oppose the grant of intellectual property rights, in any country outside India on any biological resource obtained from India or knowledge associated with such biological resource which is derived from India. The NBA participated and supported three seminars/consultations relating to protection of traditional knowledge and IPR on bioresources. Five publications have been brought out by NBA during 2008-09.

The Annual Accounts of 2008-09 and Annual Plan of 2009-10 were also elaborated in the report. National Biodiversity Fund (NBF) has been constituted as per the Act and an amount of over Rs.21.50 lakhs has been credited in the NBF account.

The SBBs have organised workshops/exhibitions/conferences/trainings/ awareness programmes, celebration of biodiversity day etc. The NBA has released Rs.94 lakhs to SBBs as financial grant for constituting the BMCs and strengthening of infrastructure in newly created SBBs. The SBBs in collaboration with other agencies have been pursuing/supporting the identification of BHS, preparation of PBRs, constitution of BMCs, in-situ and ex-situ conservation including the protection of the threatened species etc.



Bos gaurus



2

Introduction

India is known for its rich heritage of biodiversity which is the outcome of over 3.5 billion years of evolutionary development, shaped by natural processes and increasingly by human influence. It sustains the web of life and we fully depend upon it to meet for our food, healthcare and other needs. Conserving biodiversity is basic to our survival and well-being and using it sustainably forms, part of the Indian culture and lifestyle. Biodiversity and ecosystem services provided by it contribute to poverty eradication and national development.

Biodiversity is not distributed evenly across the globe. Certain countries, lying mostly in the tropics, are characterized by high species richness and more number of endemic species called mega diverse countries, 17 of them including India, formed a group called the Like Minded Mega diverse Countries (LMMCs). During this period, India coordinated the development of common position of LMMCs, especially for negotiations of an international regime on access and benefit sharing.

Biodiversity encompasses the variety of all life on the earth. It manifests itself at three levels: species diversity which refers to the numbers and kinds of living organisms; genetic diversity which refers to genetic variation within species; and ecosystem diversity which denotes the variety of habitats, biological communities and ecological processes. Notwithstanding the fact that current knowledge of the number of

species inhabiting the earth is still incomplete, estimates vary from 8 to 14 million species. To date, about 1.7 million species have been described while many more await discovery. India, a mega diversity country with only 2.4% of the land area and 4% of water, accounts for 7-8% of the recorded species of the world. So far, 45,968 species of plants and 91,364 species of animals have been documented. At the global level, 2, 78, 900 species of micro organisms have been described so far, out of the estimated 3.75 million extant (living) species. In India, 5,650 microbial species have been described. A wide variety in physical features and climatic situations has resulted in a diversity of habitats and ecosystems such as forests, grasslands, mountains, wetlands, coastal, marine (mangroves and coral reefs) and deserts. India is also one of the eight primary centres of origin of cultivated plants and is an acknowledged centre of crop diversity, including about 375 closely related wild species including rice, pulses, millets, vegetables, fruits and fibre plants. In addition, nearly 255 breeds including regional/internal transboundary domesticated animals (such as cattle, sheep, goat, camel, horse and poultry) are also found in India.

India has participated in all major international events on environment issues, since the Stockholm Conference on Human Environment and Development in 1972. The country has contributed to and ratified several key multilateral agreements on environment issues, including the Convention on Biological

Diversity (CBD). Pursuant to the CBD, following a widespread consultative process, a National Policy and Macro level Action Strategy on Biodiversity was developed in 1999, to consolidate and augment the existing strategies and programmes relating to biodiversity. India has enacted the Biological Diversity Act, 2002, which was developed through an extensive and intensive consultation process initiated in 1994. India is one of the few countries to have enacted such a legislation. This Act primarily aims at giving effect to the provisions of the Convention on Biological Diversity (CBD), including regulating access to biological resources and associated traditional knowledge so as to ensure equitable sharing of benefits arising out of their use.

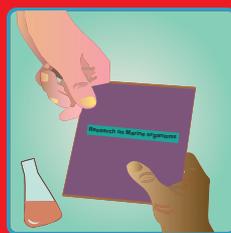
Increasing concerns about the dwindling biological resources has led to the Convention on Biological Diversity in 1992. This international convention, for the first time, recognized sovereign rights of the nations over their biological resources and emphasized that access to genetic resources should be given only for environmentally sound purposes subject to national legislations. India is one of the mega biodiversity countries and is also one of the signatories to the CBD. Taking cognizance of the provisions of the CBD, and to deal with extensive pressure on the biological resources, the Government of India has enacted Biological Diversity Act, 2002 and Biological Diversity Rules, 2004. Accordingly, national, state and local level mechanisms have been provided for implementation of the Act. At the national level, National Biodiversity Authority (NBA) has been established by Government of India in October, 2003 at Chennai (Tamil Nadu) under Section 8 of the Act. The State Biodiversity Boards (SBB) are established by the State Governments while the Biodiversity Management Committees (BMC) are constituted by the Local Bodies.

The functions of NBA are as follows:-

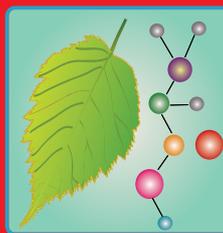
- ▶ Advise the Government of India on matters relating to conservation of biodiversity, sustainable use of its components and equitable sharing of benefits arising out of utilization of biological resources.
- ▶ Regulate activities and issue guidelines for access to biological resources and for fair and equitable benefit sharing in accordance with the sections 3, 4 and 6 of the Biological Diversity Act, 2002. Certain individuals/ nationals/ organizations require prior approval of NBA for obtaining biological resources and/or associated knowledge for use.
- ▶ Take necessary measures to oppose the grant of intellectual property rights in any country outside India on any biological resource obtained from India or knowledge associated with such biological resource derived from India.
- ▶ Advise the State Governments in the selection of areas of biodiversity importance to be notified as heritage sites and suggest measures for their management.
- ▶ NBA and SBB provide guidance and technical support to Biodiversity Management Committees (BMC) for preparing People's Biodiversity Registers (PBR).
- ▶ Perform such other functions as may be necessary to carry out the provisions of this Act.



Access to Bioresources



Transfer of Research Results



Seeking Patent



Third Party Transfer



Collaborative Research Project

The SBBs are established by the State Governments by official gazette notification in accordance with Section 22 of the Act. For the seven union territories, NBA or authorised body exercises the powers and functions of SBB.

The SBBs are established by the State Governments with a Chairperson, five ex-officio members representing the concerned departments and five members appointed from experts in matters relating to conservation of biological diversity, sustainable use of biological resources and equitable sharing of benefits arising out of the use of biological resources. The functions of SBB are as follows:

- ▶ Advise the State Governments, subject to guidelines issued by the Central Government, on matters relating to conservation of biodiversity, sustainable use of its components and equitable sharing of benefits arising out of utilization of biological resources.
- ▶ Regulate by granting approvals or otherwise request for commercial utilization or bio-survey and bio-utilization of any biological resource by Indians;
- ▶ Perform such other functions as necessary to carry out the provisions of this Act or as prescribed by the State Governments.

Local bodies constitute the BMC in accordance with Section 41, within their area of jurisdiction for the purpose of promoting conservation, sustainable use and documentation of biological diversity including preservation of habitats, conservation of land races, folk varieties and cultivars, domesticated stocks and breeds of animals, micro-organisms and chronicling of knowledge relating to biological diversity. BMC is constituted in accordance with Biological Diversity Rule (22.1) of the Act. It consists of a chairperson and six persons nominated by the local body, of whom one third are women and 18% are scheduled castes/scheduled tribes. The functions of BMCs are as follows:

- ▶ Prepare, maintain and validate People's Biodiversity Register (PBR) in consultation with the local people. The BMC is to maintain a Register giving

information about the details of access to biological resources and traditional knowledge granted, details of the collection fee imposed and details of the benefits derived and the mode of their sharing.

- ▶ Advise on any matter referred to it by the State Biodiversity Board or Authority for granting approval, to maintain data about the local vairs and practitioners using the biological resources.

National, State and Local level biodiversity funds, for channeling benefits to benefit claimers, conservation and promotion of biological resources or knowledge associated and socio economic development of these areas, are respectively established under Sections 27, 32 and 43 of the Act.

The important roles of central and state governments are as follows:

- ▶ Establish National Biodiversity Authority, State Biodiversity Board and Biodiversity Management Committee.
- ▶ Develop national strategies, plans, programmes for the conservation and promotion and sustainable use of biological diversity.
- ▶ Issue directives to the concerned State Governments to take immediate ameliorative measures for protection of biodiversity rich habitats, threatened by overuse, abuse or neglect.
- ▶ Integration of the conservation, promotion and sustainable use of biological diversity into relevant sectoral or cross sectoral plans, programmes and policies. Endeavour to respect and protect the knowledge of local people relating to biological diversity, as recommended by the NBA.
- ▶ Assess the impact of projects on environment and biodiversity, and regulate, manage or control the risks or adverse impact of use and release of living modified organisms on conservation; and sustainable use of biological diversity and human health.

- ▶ The Central Government may, in consultation with NBA: a) notify threatened species and prohibit or regulate their collection, rehabilitation and conservation, b) designate institutions as repositories for different categories of biological resources and c) exempt certain biological resources normally traded as commodities.
- ▶ State Governments in consultation with the local bodies, notify biodiversity

heritage sites, frame rules for management and conservation of all the heritage sites (in consultation with Central Government) and launch schemes for compensation/rehabilitation of affected people.

The progress of the implementation of the Biological Diversity Act, 2002 by the National Biodiversity Authority for the year 2008-2009 is described in subsequent chapters.





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Constitution of the Authority

The NBA is headed by a Chairperson, who is an eminent person, having the knowledge and experience in sustainable management of biodiversity and equivalent in rank to the Secretary to Government of India. It consists of ten ex-officio members from related Ministries of Government of India, and five non-official members who are experts in different aspects of biodiversity management.

The Constitution of the Authority as provided in the Biological Diversity Act 2002 since inception of NBA is as under:

Chairperson

S.no.	Name	Period	
		From	To
1	Mr. Viswanath Anand, I.A.S.,*	01.10.2003	14.07.2004
2	Dr. S. Kannaiyan	20.05.2005	19.05.2008
3	Mr.G.K. Prasad, I.F.S.,*	20.05.2008	30.09.2008
4	Mr. P.R. Mohanty, I.F.S.,*	01.10.2008	31.12.2008
5	Dr. P.L. Gautam	31.12.2008	Till date

* Additional charge

Members

Ex-officio members appointed under section 8 (4)(b):

1. Joint Secretary or an officer of an equivalent rank to the Government of India in the Ministry of Tribal Affairs.
2. Additional Director General (Forests), Ministry of Environment and Forests, Govt. of India.
3. Joint Secretary to the Government of India dealing with the subject in the Ministry of Environment and Forests.

Ex-officio members appointed under section 8 (4) I:

1. Joint Secretary or an officer of an equivalent rank to the Government of India dealing with the subject in the Agricultural Research and Education, Ministry of Agriculture
2. Joint Secretary or an officer of an equivalent rank to the Government of India dealing with the subject in the Department of Biotechnology
3. Joint Secretary or an officer of an equivalent rank to the Government of India dealing with the subject in the Department of Ocean Development
4. Joint Secretary or an officer of an equivalent rank to the Government of India dealing with the subject in the Department of Agriculture and Cooperation
5. Joint Secretary or an officer of an equivalent rank to the Government of India dealing with the subject in the Department of Indian Systems of Medicine and Homoeopathy
6. Joint Secretary or an officer of an equivalent rank to the Government of India dealing with the subject in the Department of Science and Technology
7. Joint Secretary or an officer of an equivalent rank to the Government of India dealing with the subject in the Department of Scientific and Industrial Research.

Non-official Members (appointed u/s 8(4) (d)):

The term for office of the non-official members of the NBA is for a period of three years with effect from the notification. The members have been notified vide gazette notification S.O. 497(E) New Delhi dated 15 April, 2004 and subsequent notification S.O. 262 (E) New Delhi dated 22 February, 2007. These positions were vacant from 1.10.2003 to 14.4.2004 and from 1.10.2006 to 21.2.2007. The past and present non-official members are as follows:

S.no.	Name	Period	
		From	To
1	Prof. L. Kannan,* Director, Research, Annamalai University, Tamil Nadu.	15.04.2004	30.09.2006
2	Dr. P. Pushpangadan,* Director, National Botanical Research Institute, Lucknow.	15.04.2004	30.09.2006
3	Prof. Raghavendra Gadagkar, Centre for Ecological Science, Indian Institute of Science, Bangalore	15.04.2004 22.02.2007	30.09.2006 21.02.2010
4	Prof. Anil Gupta, Indian Institute of Management (IIM), Vastrapur, Ahmedabad	15.04.2004 22.02.2007	30.09.2006 21.02.2010
5	Dr. A. K. Ghosh, Director, Centre for Environment and Development, Kolkatta.	15.04.2004 22.02.2007	30.09.2006 21.02.2010
6	Dr. S. Subramaniyan, 54, VGP-Golden sea view, 5 th cross street, Palavakkam, Chennai.	22.02.2007	21.02.2010
7	Prof. K. Kathiresan, CAS in Marine Biology, Annamalai University, Tamil Nadu	22.02.2007	21.02.2010

* Term expired

Secretary

1	Dr. K. Venkataraman*	24.07.2003	11.03.2009
2	Mr. C. Achalender Reddy, IFS.,	12.03.2009	Till date

* Additional charge



4

Meetings of the Authority

During 2008-09, three meetings of the authority were held and the important decisions taken are given below.

11th Authority Meeting

The eleventh meeting of the Authority was conducted on 6th of May 2008 in New Delhi. Approvals were accorded for (i) filling up of the post of secretary, technical officer (IPR) and stenographer on deputation/absorption basis; (ii) addition of two more members in the expert committee on determination of benefit sharing; (iii) draft minutes of the expert committee on normally traded commodities and (iv) expert committee on soil, sediment and microbial diversity. The expert committees on (i) traditional and tribal knowledge, (ii) soil, sediment and microbial diversity, (iii) medicinal plants, (iv) intellectual property rights and (v) biodiversity heritage sites were given extension for another 90 days in view of the work and task involved.

The outcome of the following meetings organized by NBA was discussed for further decision making:

- Expert Committee meeting on Preparation of guidelines on Establishment of Heritage Sites held on 05-04-08 at Centenary Rose Park, Horticultural Research Station, TNAU, Ooty.

- Seventh Expert Committee meeting to evaluate the Access, Patent, Transfer of Research Results and Material Transfer Applications organized by National Biodiversity Authority held on 08.04.08 at Conference Hall of National Biodiversity Authority, Chennai.



- First meeting of the Expert Committee on Soil sediments and microbial diversity is organized by National Biodiversity Authority on 24.04.2008 at Hotel Shelter, Chennai.
- Third Review and Interactive meeting of the State Biodiversity Boards on 28-29th April, 2008.

12th Authority Meeting

The Twelfth meeting of the National Biodiversity Authority was conducted

07.08.2008 at New Delhi. The approval was accorded for the recommendations of expert committee on (i) evaluation of applications on Access to bio-resources, Transfer of research results, IPR and third party transfer, (ii) expert committee on Determination of benefit sharing on Access for commercial use, transfer of research results, IPR and third party transfer applications and (iii) expert committee on soil, sediment and microbial diversity.

The outcome of the following meetings organized by NBA was discussed for further decision making:

- Eighth Expert Committee Meeting on Access, Transfer of Research Results, seeking patent and Material Transfer on 16.07.2008 organized by National Biodiversity Authority at Conference Hall, National Biodiversity Authority, Chennai.



- Second meeting of the Expert Committee on Soil sediments and microbial diversity organized by National Biodiversity Authority on 21-07-08.

13th Authority Meeting

The thirteenth meeting of the Authority was conducted on 28.01.09 at MoEF, New Delhi. Approvals were accorded to the recommendations of the expert committee for (i) framing the Rules for declaring threatened



areas, (ii) delegation of powers to the secretary (iii) constitution of an expert committee for framing the guidelines for application of National Biodiversity Fund, (iv) Chairman NBA was authorised to include any other member depending upon the expertise needed for the different EC meetings and authorized the Chairman NBA to constitute committee to prepare rules for management and conservation of Biodiversity Heritage Sites. In addition, the following items were discussed and decisions taken:

- The proposal of Dr. Kathiresan for conducting “Capacity building on People’s Biodiversity Register in the Marine and Coastal regions of India” was agreed in principle.
- Indian Biodiversity Information System (IBIS) Data base.
- Approval of Implementation of Sixth Pay commission to officers and staff of NBA, revision of allowances or fees to members of committees and Expert Consultants
- Constitution of EC for directives to State Government for threatened areas, habitats and biological resources (Section 36 (2) of the Biological Diversity Act, 2002).
- Approval for inclusion of a representative from the Department of Animal Husbandry, Dairying and Fisheries as a Member in the Expert Committee to evaluate the access, patent, transfer of research results and material transfer applications.
- Approval of Termination of agreements by Novozymes for Access to Bioresources.
- Approvals for taxonomic research: Considering the importance of identification of new taxa/species by our scientists, the proposal of IMTECH/CSIR was approved. It was also decided that the concerned scientist/organization/ Institution should clearly indicate in the MOU that, in case the material deposited in the designated repositories is accessed for commercial purposes, the same will be subject to benefit sharing arrangements as per the Biological Diversity Act.
- Approval of Revised Annual Accounts 2007-08 and Annual Plan for the year 2009-2010
- Amendment in Gazette Notification on Enforcement of Biological Diversity Act.



5

Expert Committees

The following committees were constituted by the authority as per section 13 of the Biological Diversity Act.

1. Expert Committee to prepare rules for management and conservation of Biodiversity Heritage Sites

The Biological Diversity Act, 2002 requires the State Biodiversity Boards (SBB) to frame guidelines/rules to declare and manage the Biodiversity Heritage Sites. Accordingly, an expert committee was constituted and the model guidelines prepared by the expert committee in the meeting held on 19.02.09 were widely circulated and uploaded in the website. The comments received from different experts/agencies/SBBs were considered by the expert committee at the subsequent meeting of the committee and the recommendations are being submitted for consideration by the Authority.

2. Expert Committee on Soil, Sediment and Microbial Diversity

The expert committee had three meetings (24.04.08, 21.07.08 and 20.08.08) under the chairmanship of Dr. D. J. Bhagyaraj. The guidelines have been developed after intensive consultation process including comments received upon uploading the draft in the website. The model guidelines have been

recommended by the committee to be approved by the authority. The purpose of these guidelines is to streamline the third party transfer of soil/sediment/water/plant, animal, microbes and their genetic resources occurring in India for research/bio-survey and bio-utilisation. If the transfer is from private individual(s)/company/organization in India to any individual(s)/ organizations/company outside the country, these guidelines will also be useful for such transfer with prior approval of the NBA.

3. Expert Committee on Normally Traded Commodities

As per Section 40 the Biological Diversity Act, the central Government may, in consultation with NBA, by notification in the official gazette, exempt certain biological resources as normally traded commodities (NTC). On the initiative of the Ministry of Environment and Forests, the NBA initiated the process on the subject. Accordingly, an expert committee on NTC was constituted.

The committee held three meetings (04.10.06, 10.10.07 and 15.03.08). In the second meeting, the committee initially recommended to notify the major bioresources as suggested by the Indian Institute of Spices Research, Spices Board, Spices Trading Corporation Ltd., Commerce Ministry. In the third meeting, the

first list for notification as NTC was recommended and submitted to NBA. These recommendations were submitted to the MoEF by NBA. The MoEF forwarded the list of NTC to the Director, BSI for authentication of the scientific names and the final version of 1040 species was received by NBA. In the mean time, a partial list of marine species was also received by the NBA (107- fishery items) from the Director, Marine Product Export Development Authority.

The Ministry of Environment forwarded the list of NTC sent by NBA (1040 spp.) to Director General of Foreign Trade (DGFT) for comments. The DGFT requested NBA to provide ITC-HS codes for each species listed by NBA, and the same were communicated in respect of the species listed in DGFT website. Subsequently, a National Consultation meeting was organised by NBA on 29.01.09 at MoEF, New Delhi, in which the concerned line departments/ ministries and agencies like Ayurvedic Drug Manufacturers Association (ADMA), Directorate General of Foreign Trade, Foundation for Revitalisation of Local Health and Traditions (FRLHT), ICAR, CSIR etc, participated. After deliberations it was decided to notify a list of plant species (180 spp.) submitted by the FRLHT as NTC. It was agreed that in the first instance, the Government may consider to notify 46 medicinal plants which are cultivated and whose consumption is beyond 100 mt. In addition, it was decided to include the list of cultivated vegetables, fruits, food crops, spices and condiments. Accordingly, NBA collected information from different sources and the first list has been finalised. It was also agreed, that in the event of use of NTCs as bioresources, the provisions of Biological Diversity Act, 2002 and Rules, 2004 would apply. These recommendations will be placed in the Authority for consideration.

4. Expert Committee for evaluation of applications for access, seeking patent, transfer of research results and third party transfer of bioresources

The requests of different applicants were placed in the EC for deliberations and recommendations to the Authority. This expert committee is an ongoing process and it is reconstituted periodically. So far, 11 meetings of the expert committee have been conducted.

5. Expert Committee on Determination of Equitable Benefit Sharing

The applications of different agencies were considered by the expert committee and case-by-case recommendations made for consideration by the authority. This expert committee is also an ongoing process and it is reconstituted periodically. So far, 6 meetings have been conducted.

6. Expert committee on preparation of regulation/notification for the Enforcement of Biological Diversity Act, 2002

The committee finalized the draft notification which was adopted by the authority in its 9th Meeting. After the vetting by Ministry of Law and Justice the same has been notified by the Government vide S.O. 2708 (E) dt.17th November 2008.

7. Expert committee on conservation of medicinal plants

The preliminary discussions on the conservation of the medicinal plants were held in the first meeting. It was decided to develop a status paper by using the services of the consultant.

8. Expert committee on threatened, endangered and endemic species

The fourth authority meeting approved the appointment of Dr. Karthik Shankar, Indian Institute of Science, Bangalore, as Expert Consultant for the EC on threatened, endangered and endemic species. After deliberations in three meetings, the expert committee finalized the recommendation for consideration by the authority. In the 9th Authority meeting, the recommendations of the EC were approved. The NBA communicated these recommendations to the ministry. Considering these recommendations the comments of BSI and ZSI, and other experts, the State-wise list of threatened species of plants and animals, including their distribution were sent to different states. After considering the comments of the above agencies and the state governments, the Govt. of India has notified the list of species of Plants and animals which are on the verge of extinction that prohibits or regulates the collection thereof from Kerala, Himachal Pradesh, Uttar Pradesh and Uttarakhand (Notifications: S.O. 783 (E) dt. 17th March 2009 and S.O. 997(E) dt. 15th April 2009).



6 Conservation and Sustainable use of Biodiversity

The efforts made by the authority relating to different aspects of conservation and sustainable use of biodiversity during the period of report are described below:

1. Participation and support for organization of conferences, workshops, training etc.

- Policy Workshop on ‘Access and Benefits Sharing’ in Gangtok, Sikkim, India, April 10-13, 2008.
- One week training programme on “Conservation and Management of Wetlands” for Western Region organized by GEER Foundation, Gandhinagar, May 2, 2008.
- Biodiversity and Agrobiodiversity Conservation Mela, National Biodiversity Authority, Chennai, May 19-20, 2008
- Consultative meeting conducted by CSIR in collaboration with Global Biodiversity Information Facility (GBIF) C.S.I.R. New Delhi July 25, 2008.
- Japan – India workshop on “Access to and Benefit Sharing of Genetic resources and Trends in Microbial Biotechnology” conducted by Japan Bio-industry Association Tokoyo, Japan August 27, 2008.
- Second Coordination Meeting of the South Asia Coral Reef Task Force (SACRTF) Maldives, 31 August, 2008.
- International Conference on “Climate Change, Biodiversity and Food Security in the South Asian Region” organized by Punjab State Council for Science and Technology, Chandigarh, November 3, 2008.
- Marine and Coastal Protected Area Managers Exchange Programme organized by GEER Foundation and South Asia Coral Reef Task Force and SACEP, Ahmedabad, Gujarat, November 5-7, 2008.
- International Conference on “Recent Trends in Sensor – Development for the Assessment and management of the Environment” at Loyola College, Chennai, January 8, 2009.
- National symposium of society for conservation of domestic animal breeds, NBAGR, Karnal February 12, 2009.

- Special Symposium on “Regional Issues in Science and Technology Sector for the North East Region” organized during 96th Indian Science Congress at NEHY, Shillong January 7, 2009.
- National Seminar on Emerging Issues in Biodiversity Management organized by Bharatidasan University, Dept. of Environmental management, Thiruchirapalli, January 8-9, 2009.
- Meeting of the national forum for Policy Dialogues at Nehru Memorial Museum, Organised by environmental action group Kalpavriksh and the International NGO, GRAIN, New Delhi, February 3, 2009.
- Awareness generation on Biodiversity of India with special reference to Coral Reefs at Vael’s International School, on the eve of National Science Day, Chennai, February 2, 2009.
- Workshop on Implementation of Biological Diversity Act and priorities for biodiversity conservation, sustainable utilization and benefit sharing, IIM, Ahmedabad, February 1, 2009**.
- 4th World Congress on Agriculture, session on “Enhanced opportunities for use of plant genetic resources in conservation agriculture initiatives”, New Delhi. February 4 -7, 2009.
- Second Plant Genome savior community recognition and distribution of Plant Variety Registration Certification, PPVFR Authority, New Delhi February 12, 2009.
- Discussion on Sustainability and Human Well-being: Beyond the 2010 Target, organized by Division of Environmental Law and Conventions, United Nations Environment Programme, Nairobi, February 15, 2009.
- Workshop on “Conservation of biodiversity of Point Calimere in the past, present and future with special reference to migratory birds” and delivered a talk on the role of NBA in biodiversity conservation organised by the Bombay Natural History Society at Velliman Illam, Kodikarai, February 22, 2009.
- Steering Committee meeting of National Conference on Challenges and opportunities of Bio-industrial Watershed Development for the prosperity of the Farming Community (BIOWD- 2009) under the Chairmanship of ISRO, Bengaluru, March 2, 2009.
- National Consultation on registration, evaluation, valuation and in-situ conservation of Aquatic Genetic Resources held at NBFGR, Lucknow, March 20-21, 2009.
- National Workshop on Seri biodiversity Conservation organized by Central Sericultural Germplasm Resource Centre, Central Silk Board at Auditorium, CSGRC, Hosur, March 8, 2009**.
- Borlaug Global Rust Initiative 2009 Workshop on developing strategies for durable rust resistance in wheat, Ciudad Obregon, Mexico, March 17-20, 2009.
- Preparatory inter-ministerial consultation for ABS Working Group – 7 meeting, MoEF, New Delhi March 23, 2009.

2. Expert Committees Constituted by the Authority for preparation of:

- Rules for management and conservation of Biodiversity Heritage Sites.
- Guidelines for access of Soil, Sediment and Microbial Diversity.
- Regulation/notification for the Enforcement of Biological Diversity Act, 2002.
- Guidelines for conservation of medicinal plants.
- Guidelines for conservation of threatened, endangered and endemic species.
- Guidelines for national designated repositories.

3. Awareness generation

- a) Interaction meetings with the State Biodiversity Boards of Gujarat, Goa and Karnataka were held for generating awareness for capacity building regarding implementation of the different provisions of Biological Diversity Act.
- b) National Workshop on Bio-piracy & Intellectual Property Rights, Capacity Building initiative for Biodiversity, Andhra Pradesh Biodiversity Board Hyderabad, 2009.



- c) Summit for students to empower them to take action to create individual plans for protecting the biodiversity, Trust for Environment, Conservation & Community Development (TREE), Chennai, 2009.
- d) National Biodiversity Authority celebrated “International Day for Biological Diversity” on the theme ‘Biodiversity and Agriculture’ at Marina beach on 19th May 2008 and played host to an awareness campaign

focused on this sizzling topic, “Biodiversity Conservation Mela” in view of climate change and National Biodiversity Day, 22.05.08. The campaign held near Kannagi statue opposite to Presidency College, was organized by the National Biodiversity Authority in collaboration with Indian Coast Guard, Loyola College, Presidency College and Queen Mary’s college. Visitors to the beach have witnessed camels and a human chain carrying colourful banners and placards with messages as NBA’s vision, bioresources and human welfare, sustainable biodiversity, climate change and human health etc. Furthermore, a poster exhibition contest was held on the same theme at Presidency college and awareness mela. It was inaugurated by the Hon’ble Minister of State Environment and Forests Thiru S. Regupathy on 19th May. The Madras Christian College had set up their exhibits on the theme ‘Bay watch’. Several facts on marine biodiversity were explained with preserved specimens, sponges of varying types, exhibits of hard corals etc. Attractive posters on marine biodiversity were also put up by the students. And various other colleges highlighted different biodiversity issues through their exhibits. State Biodiversity Boards (SBBs) have also observed the International Biological Diversity Day to create awareness on Biodiversity and its importance to the public, researchers, students and teachers. The Himachal Pradesh SBB conducted quiz competition on the topic ‘Biodiversity’ to +2 students. The West Bengal SBB created awareness programmes for school students by conducting painting competitions, elocution etc.



4. Biodiversity Heritage Site notified by State Government of Karnataka

The Tamarind Biodiversity Heritage Site at Nallur in Devanahalli Taluk, Bangalore district, popularly believed to be a relic of the Chola Dynasty that ruled nearly 800 years ago, is spectacle of awesome wonder and a freakish site. Spread over 54 acres comprising a population of nearly 300 trees, is a picture of dynamic pattern of plant diversity. The significant component of this popular structure is a group of old plants standing like ageless sentinels, firmly rooted to



the ground with their gigantic trunks, along with large picturesque crowns spread very high and aloft like open wings.

5. Identification of Agro-Biodiversity Hot-Spots in collaboration with PPV & FR Authority, New Delhi

Based upon the recommendations of working group and task force, the Protection of Plant Varieties and Farmers Right Authority and National Biodiversity Authority jointly organized workshops at Shillong and at the Annamalai University, Chidambaram to identify agrobiodiversity hotspots. Based on group discussions and convergence of views, the following seventeen agro-biodiversity hot spots existing in India were identified.

Hot spot	Agro-biodiversity Hotspots
1	Travancore /Malabar area
2	Konkan coast
3	Kathiawar
4	Leeward Deccan Plateau
5	North Gujarat / Mewar
6	Arid Jodhpur-Bikaner belt
7	NW Temperate Himalaya and Ladakh
8	Sikkim Hills and Arunachal Himalaya
9	Hills of Meghalaya
10	Nagaland/Manipur/Tripura/Mizoram
11	Brahmaputra part of Assam
12	Lower Ganges system
13	Gangetic Delta (Marshes and Sunderbans)
14	Triveni Allahabad belt
15	Koraput region - Bastar and adjoining area
16	Cauvery system
17	Andaman islands & Lakshadweep



Source: www.plantauthority.gov.in

5. Enforcement of Biological Diversity Act, 2002

Two Czech foreign nationals were involved in collections of insects from Singalila National Park, West Bengal. Among them Mr. Svacha, was penalized with a fine of Rs. 20,000/- for his involvement in the case. Out of that Rs.10,000/- was charged under the provision of Wildlife Protection Act and the rest Rs. 10,000/- was charged under Biological Diversity Act. It was reported that the said person confessed his involvement in the case and was acquitted on payment of the fine. Mr. Emil Krucera, another Czech national involved in the case was convicted by the Session Judge's Court and was ordered for imprisonment for 3 years under the provision of both Wildlife Protection & Biological Diversity Act. A fine of Rs.60,000/- was also imposed on him. Out of that a penalty of Rs.10,000/- was imposed under Wildlife Protection Act and Rs.50,000/- under Biological Diversity Act. Going by the latest report the convicted person has somehow fled the country. The Forest Department has appealed to the appellate authority seeking permission to get international help to nab the culprit. Meanwhile, the case is going on in the Session Judge's Court, Darjeeling where the Forest Department has appealed seeking more stringent punishment for the culprits. The next date of hearing is due on 1st August, 2009.

6. Establishment of State Biodiversity Boards

During the year 2008-2009 two States, Tripura and Tamil Nadu have notified the constitution of State Biodiversity Board since March 2008.

S.No.	Name of the State	Notification No. and Date
1.	Tamil Nadu	G.O.(Ms) No.38 dt.29.04.08
2.	Tripura	F.8(31)/A/For-WL/98/part-11/7309-40 dt.16.06.08

7. Establishment of Biodiversity Management Committee

So far, the following BMCs have been constituted in different states.

S.No.	State	BMCs formed
1.	Andhra Pradesh	5
2.	Goa	5
3.	Himachal Pradesh	2
4.	Karnataka	1354
5.	Kerala	5
6.	Madhya Pradesh	All panchayats, nagar nigam, nagar palika of 48 district
7.	Punjab	31

8. Preparation of People's Biodiversity Registers

S.No.	State	No. of PBRs Documented
1.	Karnataka	69
2.	West Bengal	13
3.	Madhya Pradesh	50
4.	Andhra Pradesh	5
5.	Kerala	74
6.	Uttarakhand	139
	Total	350





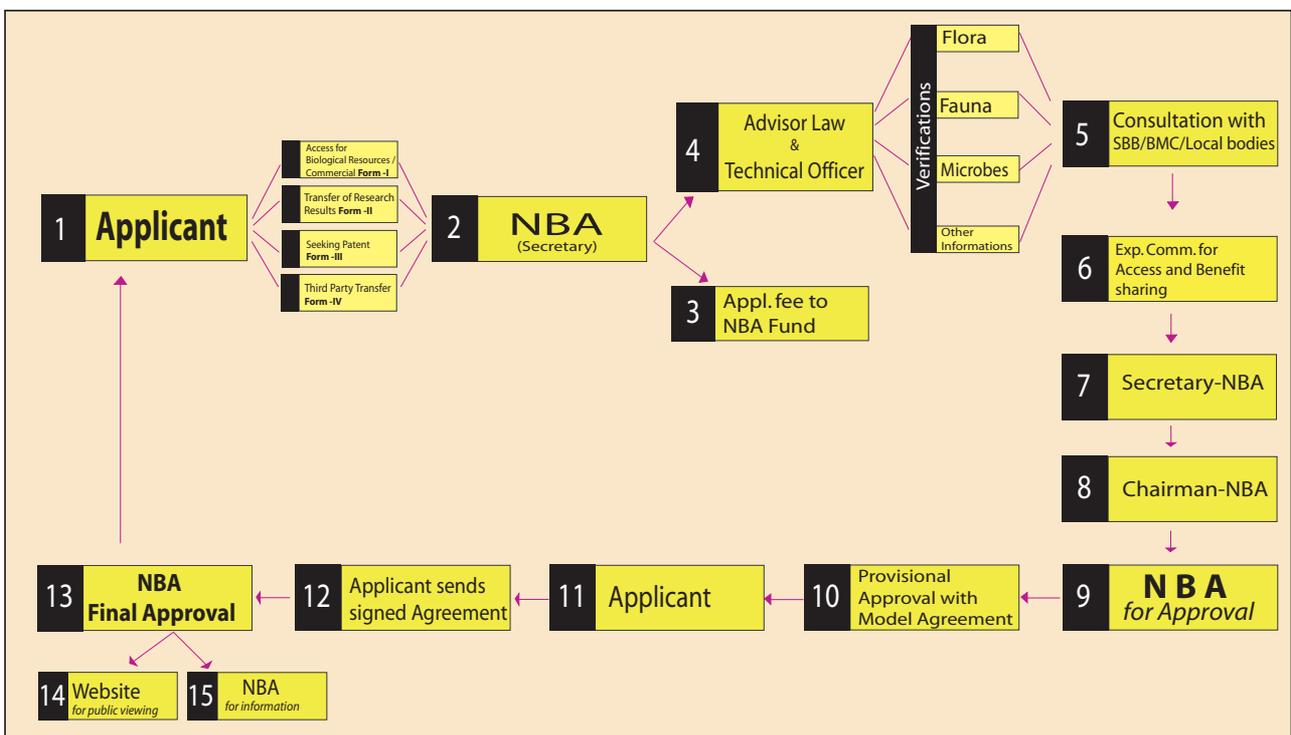
7

Access and Benefit Sharing

1. Approval process

Access to bioresources from India is approved by the authority in accordance with section 3, 4, 6 of Biological Diversity Act and 14 -19 of Biological Diversity Rules. The applications received from public/private sectors and foreign nationals for approval of access to bioresources and associated traditional knowledge are processed as elaborated below.

Schematic Presentation of Processing of Applications under Biological Diversity Act, 2002 and Rules 2004



The requests are considered by the expert committees constituted by the authority and case-by-case recommendations made by the above committee are deliberated in the authority meeting for final decision. The status of the applications received by NBA so far is as under:

Applications received	: 420
Provisional approvals granted	: 311
Approved/ agreements signed	: 72
Pending final approvals	: 239
<i>(Including 205 applications of CSIR)</i>	
Applications withdrawn	: 36

The status for 2008-2009, the following applications have been approved by the authority in its three meetings (11th to 13th Authority). Of the 104 applications received for the year under report, 71 were approved. From the approved applications, 35 were accorded and agreement signed. Thirty one applications are under process for final approval and two applications stand closed as given below.

2. Consultations with SBB and BMC

As per the act and rules of BDA the following provisions exist for grant of approval for access.

The Biological Diversity Act, 2002 *Section 19. (3) On receipt of an application under sub section (1) or sub section (2), the National Biodiversity Authority may, after making such enquiries as it may deem fit and if necessary after consulting an expert committee constituted for this purpose, by order, grant approval subject to any regulations made in this behalf and subject to such terms and conditions as it may deem fit, including the imposition of charges by way of royalty or for reasons to be recorded in writing, reject the application.*

The Biological Diversity Rules 2004: Rule 14, 17, 18, 19: *The Authority shall after consultation with the concerned local bodies and collecting such additional information from the applicant and other sources, as it may deem necessary, dispose of the application, as far as possible, within a period of six months (for Form I and IV,) and three months (for Form II and III), from the date of its receipts. On being satisfied with the merit of the application, the Authority may grant the approval for access to biological resources and associated knowledge subject to such term and conditions as it may deem fit to impose.*

Consequent upon establishment of National Biodiversity Authority the process for implementation of different provisions of Biological Diversity Act were initiated including the catalytic role in establishment of State Biodiversity Boards and constitution of Biodiversity Management Committees by

Status of Applications 2008-09

Details	Received	Approved	Under Process	Closed	Agreement Signed
Form-I (Access for Research/ Commercial)	18	8	9	1	4
Form-II (Transfer of Research Results)	5	5	-	-	4
Form-III (Seeking Patent)	48	29	18	1	21
Form-IV (Third Party Transfer)	8	6	2	-	6
Collaborative Research	25	21	4	-	-
Total	104	71	31	2	35

the States. These efforts have led to establishment of SBBs in 21 states and BMCs in some districts of 8 states. As the process of establishment of SBBs and BMCs were taking time due to official formalities such as approval by the legislative assemblies for notification of SBB and their rules for functioning and hence, simultaneously, as provided in the act and rules the Ecs were constituted to formulate guidelines and model agreements. As the applications have to be disposed of within in stipulated time period as specified in the Biological Diversity Rules, the ECs were constituted by the authority to critically examine the proposals and to make case-by-case recommendations to the Authority. The Authority considered the recommendation of Ecs in full meeting and decided on the matter. Granting of Approval is followed by signing of agreement which guarantees benefit sharing on commercialization of product(s) derived from accessed bioresources. The notification by the Government of India for exemption for collaborative research by government research institutions, national designated repositories, enforcement of biodiversity act were taken up on priority. The notifications such as transfer of research results, normally traded commodities, biological diversity heritage sites, access and benefit sharing, seeking Intellectual Property Rights on bioresources etc are at different level of finalisation

The NBA has now initiated the consultation process with the progress in the establishment of SBBs in most of the states and BMCs in some districts, for facilitating decision making by the Authority.

3. Personal hearing

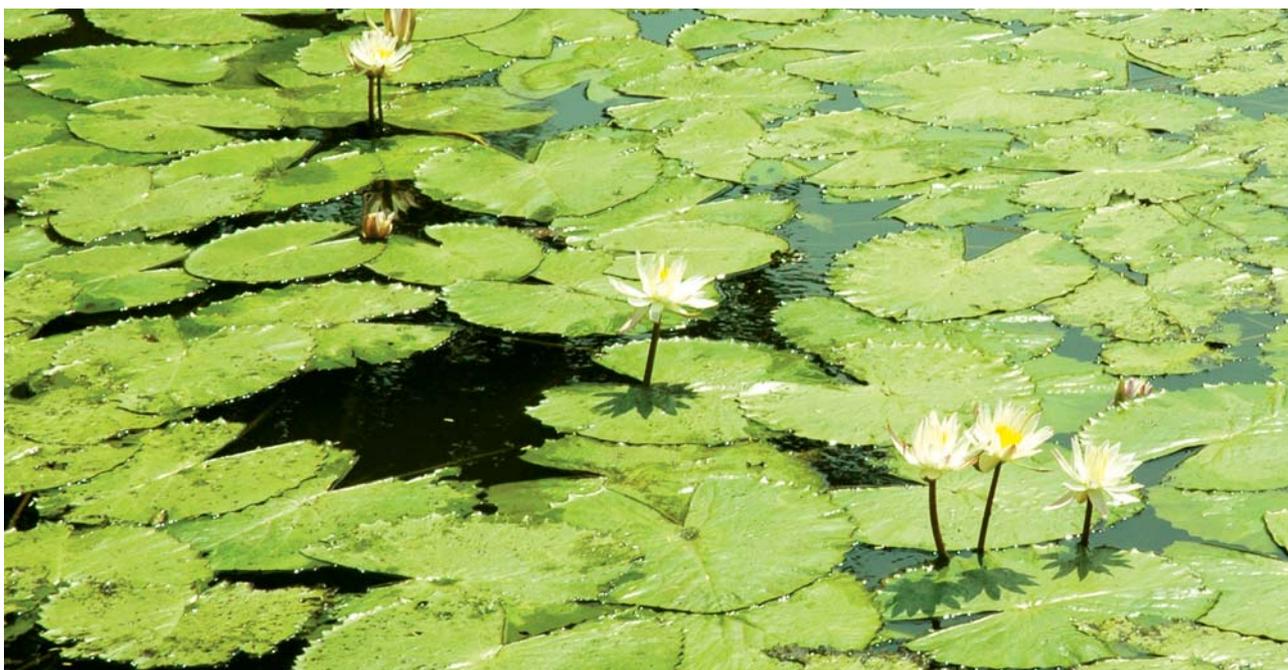
During the period, four applicant parties sought hearing for their concerns as per the Section 19 of the Biological Diversity Act and Rule: 14, 17, 18, and 19. The parties *viz.* Serum Institute of India, Pune and International Flavors and Fragrances India Ltd. (IFF) were heard on April 27th, 2009. The hearing for the other parties *viz.* Hindustan Unilever Ltd., and Ms. R. K. Dewan and Co. could not be held due to their absence.

4. Measures taken in respect of intellectual property rights

As per Section 18.4 of the Biological Diversity Act, 2002 the NBA has initiated action for establishment of a Legal Cell, to take necessary steps to oppose the grant of intellectual property rights in any country outside India on any biological resource obtained from India or knowledge associated with such biological resource which is derived from India. The NBA participated and supported the following events relating to protection of Traditional Knowledge and IPR on bioresources.

- i) Conference at the National Center for Biological Sciences, Bangalore on "Indian Traditional Knowledge – issues, conservation and new directions", 23 Feb. 2009.
- ii) Workshop on Local Traditional Knowledge and Biodiversity organized by Karnataka Biodiversity Board, Bangalore, 26 Feb. 2009.
- iii) First National Consultation on IPR and Traditional Knowledge organized by the Forum for Biotechnology and Food Security, Bangalore, 30-31 January 2009.





8

Regulations and Notifications

1. Members of National Biodiversity Authority

S.O. 1147 (E) – 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 hereby establishes a body to be called the National Biodiversity Authority, on and from the 1st Day of October, 2003 for the purposes of the said Act consisting of the following members: Member appointed as Chairperson under clause (a) of Sub-section (4) of Section 8 w.e.f. 1st October, 2003. [F.No. J-22018/46/2003-CSC (BC)] DESH DEEPAK VERMA, Jt. Secy].

2. Designation of National Repositories

S.O.1911 (E). – In exercise of the powers conferred by sub-section(1) of Section 39 of the Biological Diversity Act, 2002, read with sections 6 and 12 of Notification S.O. 1911(E), dated 8th November, 2006, the Ministry of Environment and Forests, Govt. of India, hereby designates the following institutions to act as repositories under the Act for different categories of biological resources[F.No.26-15/2007-CSC] A. K. Goyal, Jt. Secy].

3. Enforcement officers authorized for Implementation of Biological Diversity Act, 2002

S.O. 2708 (E) – In exercise of the power conferred by clause (a) of Section 61 of the Biological Diversity Act 2002 (18 of 2003), the Central Government hereby authorises the officers specified in column (2) of the Table below, to file complaints with regard to offences punishable under the said Act, within the areas of jurisdiction specified against each in the corresponding entry in column (3) of the Table aforesaid, subject to the condition that the Central Government may revoke such authorisation or may itself exercise the powers under the said section, if in its opinion such a course of action is necessary in the public interest [F.No.28-14/2008-CS-III (NBA)] A.K.GOYAL, Jt. Secy].

4. Enforcement officers authorized for Implementation of Biological Diversity Act, 2002

S.O. 120 (E) – In exercise of the powers conferred by clause (a) of Section 61 of the Biological Diversity Act, 2002 (18 of 2003), the Central Government hereby make the following further amendments in the Notification No.S.O.2708 (E), dated 17th November, 2008. [F.No.28-14/2008-CS-III (NBA)]A.K.GOYAL, Jt. Secy].

5. Members of National Biodiversity Authority

S.O. 262 (E) – 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 hereby establishes a body called the National Biodiversity Authority, on and from the 1st Day of October, 2003 for the purposes of the said Act. [F.No.J-22018/46/2003-CSC(BC)] G. Balachandran, Jt. Secy]

6. Appointment of Chairman, National Biodiversity Authority

No 12, Part I, Sec 2 Gazette of India Weekly, New Delhi, March 21-27, 2009 page 291- The President is pleased to appoint Dr. P. L. Gautam, to the post of Chairman, National Biodiversity Authority, Chennai in the pay scale of Rs.26,000/- (fixed, pre-revised) with effect from the afternoon of 31st December 2008 and upto 31st December 2011 or until further orders, whichever is earlier. [F.No.J-22018/12/2003-CS-III) Sujata Arora, Addl. Director].

7. The following States have notified the SBB rules

S.No.	State	Date	Notification
1.	Karnataka	03.05.06	FEE 151 ENV 2005
2.	Madhya Pradesh	17.12.04	F-1-2-2002-L VII
3.	Manipur	05.03.09	428
4.	Sikkim	14.09.06	504/F
5.	West Bengal	27.01.06	No. EN/136/T-II-7/005/04
6.	Tripura	16.06.08	F.8(31)A/for-WL/98/ Part-II/6919-7308
7.	Maharashtra	10.12.08	No.WLP.1004/ C.R.226/F-1

8. Constitution of State Biodiversity Board

S.No.	State	Notification
1.	Tamil Nadu	G.O. (Ms) No.38 dt.29.04.08
2.	Tripura	F.8(31)A/For-WI/98/part-II/7309-40 dt.16.06.2008



Gulf of Mannar Island



9

Finance and Accounts of the Authority

Receipts and Payments for the period ending 31st March, 2009

Receipts	Current Year 2008-09	Previous Year 2007-08	Payments	Current Year 2008-09	Previous Year 2007-08
I. Opening Balances			I. Expenses		
(a) Cash in hand	3,000	3,000	a) Establishment Expenses	38,36,868	26,80,320
(b) Bank Balances			b) Administrative Expenses	97,65,734	62,64,169
(i) Current A/c	27,84,306	6,31,038			
(ii) In deposit A/c	7,50,000		II. Payment made against funds for various projects	41,76,325	36,71,996
(iii) Savings A/c					
II. Grants Received			III. Investments and deposits made		
a) From Govt. of India	2,86,09,000	2,12,61,000	a) Out of Earmarked / Endowment funds		
b) From State Govt.	-----	-----	b) Out of Own Funds (Deposit to BSNL)	7500	1000
c) From other Sources	19,875	2,80,450			
III. Income and Investments from			IV. Expenditure on Fixed Assets & Capital Work-in-Progress		
a) Earmarked / Endow. Funds	-----	-----	a) Purchase of Fixed Assets	6,45,794	9,61,593
b) Own Funds (Other Investment)			b) Advance paid for purchase of car	4,60,596	-----
IV. Interest Received			a) Expend. on Capital Work-in progress	-----	-----
a) On Bank deposits	65,811	-----	V. Refund of surplus money / Loans		
b) Loans, Advances etc.			a) To the Govt. of India		
V. Other income			b) To the State Govt.	-----	-----
Fees	2,05,252	4,40,896	c) To other providers of funds		
Royalty	7,79,624	-----	VI. Finance Charges (Interest)	9,212	-----
VI. Amount Borrowed	-----	-----	VII. Other Payments		
VII. Any other receipts			(Grants to State Biodiversity Boards)	94,00,000	55,00,000
Sale of newspaper	590	-----	VIII. Closing Balances		
Recovery for books	800	-----	a) Cash in hand	3,000	3,000
Transfer from NBA Authority A/c to NBA Fund A/c	20,00,000	-----	b) Bank Balances		
Encashment fo Fixed Deposit	-----	-----	(i) Current A/c	50,88,229	27,84,306
			(ii) In deposit A/c	18,25,000	7,50,000
			(iii) Savings A/c		
Total	3,52,18,258	2,26,16,384	Total	3,52,18,258	2,26,16,384



10

Annual Plan 2009-2010

(a) Physical targets

- Conduct four authority meetings during the year and implement the decisions of the meeting.
- Promote and support establishment of State Biodiversity Boards in the remaining states and promote and support constitution of Biodiversity Management Committees in union territories under necessary support and guidance of National Biodiversity Authority.
- Promote and support constitution of Biodiversity Management Committees in different States of India.
- Promote and support the State Biodiversity Boards and line departments, research organizations, NGOs etc for conducting workshops, awareness creation etc by providing funds, for achieving the expected results.
- Create awareness through mass media, literature development, compact discs, documentary films etc on issues of biodiversity conservation and management in different ecosystems.

- Organize and support conferences, workshops, trainings, awareness camps, exhibitions etc.
- Formulation of guidelines and implementation of Peoples' Biodiversity Register.
- Establishment of office in Institutional areas in Chennai and liaison office in Delhi.
- Acquisition of land for NBA Campus and initiate action for regional offices.
- Support BMCs and SBBs for effective implementation of the Biological Diversity Act through internal and external funding support.

(b) Activities/Components

- As per Sec.12 of the Biological Diversity Act, 2002 and Rule 10, the authority shall meet at least four times a year normally after a period of three months. It is proposed to conduct four Authority Meetings during the year 2009-10 for discussing and taking decisions on important issues relating to the Act.

- The National Biodiversity Authority has taken constant efforts and also prevailed upon the states in the formation of State Biodiversity Board as laid down under the Act. So far 21 States have notified the formation of State Biodiversity Board. The remaining States will be persuaded to form State Biodiversity Boards. National Biodiversity Authority will be supporting the establishment of State Biodiversity Board by issuing a onetime grant.
- Efforts will be taken to persuade State Biodiversity Boards for establishment of Biodiversity Management Committees at least at the district level.
- Implementation of People's Biodiversity Register by BMCs so formed for documenting the traditional knowledge of individuals with regard to biodiversity.
- The State Governments will be persuaded and guided to notify areas of biodiversity importance as Biodiversity Heritage Sites.
- The guidelines formulated by the Experts on Enforcement Regulation, Transfer of Research Results, Normally Traded Commodity, Microbial Resources and Agreement formats sent to the Administrative Ministry for vetting will be followed up for notification in Official Gazette.
- To create awareness among the people and among different stake holders through literature, posters, compact discs, documentary films, exhibitions etc.
- Expert Committees constituted for the preparation of guidelines on (i) Medicinal Plants (ii) IPR and (iii) Traditional and Tribal knowledge will be finalised by conducting meeting supported by the appointment of Expert Consultants.



Vennar River, Tamil Nadu





11

Programmes and Activities of State Biodiversity Boards

1. State Biodiversity Boards Notified

The following 21 States have formed "State Biodiversity Board" viz., Karnataka, Goa, Madhya Pradesh, West Bengal, Punjab, Kerala, Arunachal Pradesh, Nagaland, Himachal Pradesh, Mizoram, Chattisgarh, Manipur, Sikkim, Gujarat, Uttaranchal, Andhra Pradesh, Uttar Pradesh, Haryana, Tamilnadu, Jharkand and Tripura. National Biodiversity Authority is taking initiatives to implement Biological Diversity Act, 2002 by constituting Biodiversity Councils to monitor and implement the Biodiversity Management Committees in the Union Territories of India.

2. Financial Assistance granted to SBB

Based on the decision taken in the first meeting of NBA, the authority needs to provide a onetime grant-in-aid of Rs.10,00,000/- (consisting of two installments of Rs.5,00,000/- for the establishment and infrastructure of the State Biodiversity Boards formed). The States of Chattisgarh, Gujarat, Haryana, Sikkim, Jharkhand and Tripura have been paid first Installment of onetime Grant of Rs. 5 Lakhs. The States of 1) Karnataka 2) Madhya Pradesh 3) Punjab 4) Goa 5) West Bengal 6) Nagaland 7) Kerala, 8) Himachal Pradesh 9) Uttar Pradesh 10) Arunachal Pradesh 11) Uttaranchal 12) Andhra Pradesh and 13) Mizoram have received the second Installment of the onetime Grant.

3. Activities of the State Biodiversity Boards

3.1. Punjab Biodiversity Board

International Biodiversity Day was celebrated in collaboration with Punjab State Council for Science & Technology (PSCST). International Biodiversity Day was also celebrated on 22nd May, 2008 at Pushpa Gujral Science City, Kapurthala by organizing quiz competitions on Biodiversity, lectures, display of posters & banners and distribution of informative brochures/pamphlets amongst students and general visitors to the Science City to make them aware of importance of biodiversity and its conservation. Punjab Biodiversity Board provided funds for the activities.

Activities with Biodiversity Management Committees (BMCs) and NGOs

Punjab Biodiversity Board, PSCST had set up 31 Biodiversity Management Committees in District Gurdaspur and Hoshiarpur with the help of Department of Forest, Department of Education and Local NGOs under UNESCO sponsored project as "Capacity Building for Promoting Environmental Sustainability through Biodiversity Conservation". The Board took up the following activities:-

- Institute of Ecology and Environment, Pathankot organized a workshop-cum-exhibition on Biodiversity Conservation involving Biodiversity Management Committees from villages Memoon, Durang Khed, Kakruhi, Garl, Chhatwal and Dher Kalan, farmers and teachers of Government Dispensary Chhatwal on May 22, 2008. More than 80 persons including the Members of BMCs, Forest Management Committee, Self help group, farmers & teachers participated in the event. Expert lectures were delivered on the role of biodiversity in human lives. A film on biodiversity conservation titled 'Securing our Future' prepared by Punjab Biodiversity Board and Punjab State Council for Science & Technology was also screened. Department of Forests & Wildlife also actively participated at the occasion. Forest Range Officer, Pathankot delivered a special lecture on 'Importance of Biodiversity Conservation'.
- An exhibition of products prepared from various medicinal and other plants was organized by Members of BMCs and Self Help Group, village Kakroi, Dher Block, Pathankot.
- Youth Service Club, Hoshiarpur celebrated International Biodiversity Day by organizing a district level Programme at village Bhambatoor, District Hoshiarpur. A special lecturer on biodiversity conservation and importance of agricultural biodiversity was delivered by Shri. Devinder Singh, Master Trainer, NGC.
- The BMCs of Bisso Chek, Bhavana, Meer Beh, Swah, Ghagwal, Beh, Rehrupatti and Behlandhar from District Hoshiarpur also celebrated Biodiversity Day in their respective villages by organizing Village Level Awareness Programmes. The Punjabi version of the film "Securing our Future" prepared by Punjab Biodiversity Board & PSCST was screened in all the villages. PBB provide funds for the above activity.
- Peoples Forum, Bargari, District Faridkot organized Biodiversity Awareness Yatra for 40 rural students from socio-

economically backward background and 28 teachers from 11 schools and 4 eco-clubs of district Faridkot to make them aware of biologically important sites in the state and importance of its conservation as under:

- Chhatbir Park Patiala- *Ex-situ* conservation area on 01.06.2008.
- Sukhana lake Chandigarh – *In-situ* conservation site on 1.06.2008.
- Ropar wetland, Ropar – *In-situ* conservation site on 1.06.2008.

The students and teachers were introduced to various elements of biodiversity, including bird watching through special lectures by eminent persons.

School based Programmes:

Punjab State Council for Science and Technology requested all the District Educational Officers and 80 Master Trainers of NGC in the state to celebrate this day by involving schools covered under National Green Corp (NGC) programme. Detailed reports were received from 15 districts.

Study on Economically Important Flora and Fauna of Punjab. A survey by Punjab State Council for Science & Technology (PSCST) in the Shivalik area of Punjab has indicated that several communities depend upon their livelihoods on local biological resources. A study on commercially important flora and fauna in Punjab was taken up with State Government funding to collect data available with Department of Industries on biodiversity based industries in the state and for department of culture to identify livelihoods based on biodiversity and promote their conservation and sustainable use. Preliminary studies have been completed and report is under preparation. Meanwhile National Biodiversity Authority has also sanctioned a project on "Inventorizing Industries involved in Exploitation of Biodiversity in Punjab" under which detailed information is being collected.

International Conference on "Climate Change, Biodiversity and Food Security in the South Asian Region". The board actively participated with Punjab State Council of Science and Technology for organizing International Conference on "Climate Change, Biodiversity



and Food Security in the South Asian Region” in collaboration with United National Educational, Scientific and Cultural Organization on 3rd & 4th November, 2008. More than 150 scientists from Bangladesh, France, Germany, India, Pakistan and Srilanka attended the conferences and deliberated lectures on various issues of biodiversity and food security.

3.2. Manipur Biodiversity Board

Celebration of International day for Biological Diversity

International Day for Biological Diversity (IBD) was celebrated by the Board with the theme “Biodiversity and Agriculture” on 22nd May 2008 by undertaking following activities:

1. Panel discussion over the television on significance of International Bio-diversity Day to sensitize people in the four valley districts;
2. Broadcast through All India Radio, Imphal, on “Biodiversity and Agriculture” in Manipuri language with focus on farmers;
3. An interview with Bala Prasad, Chief conservator of forests, broadcast through All India Radio, Imphal in English on “Biodiversity “ for general awareness;
4. A comprehensive article on “Biodiversity Conservation and sustainable Agriculture in the 21st Century;”- By Dr. Debananda S. Ningthoujam, Head of department, Department of Biochemistry, Manipur University published in all important newspapers in English and local Manipuri Zoological Garden on 22.5.2008 and;
5. Inviting and providing free entry to the school children to Manipur Zoological Garden for sensitizing them about biodiversity, particularly faunal biodiversity of the state.

The celebration of the international Day for Biological Diversity, with the extensive use of electronic mass media and print media has been duly appreciated by the people of Manipur. It has gone a long way in creating awareness about biodiversity among farmers, children, planners, opinion makers etc. Further, it has created awareness about conservation of local varieties of agriculture crops. The importance of conservation and sustainable use of biodiversity on food security, nutrient and human well being, importance of agricultural biodiversity and the creation of awareness about them has been the core message during the celebration of biological diversity day. The publication of comprehensive article “Biological conservation and sustainable Agriculture in 21st Century” in important newspapers, two radio talks and a prime time panel discussion on television, helped to carry the message to most of the people of the state; sensitize them for the need of conservation and sustainable use of the biodiversity in general and agro biodiversity in particular.

- Biological Diversity Rules, 2008. Government of Manipur has approved and notified comprehensive Manipur Biological Diversity Rules, 2008 on 05.03.2009.
- Biodiversity Heritage Sites Manipur Biodiversity Board had constituted a committee under the Chairmanship of Shri S. Singsit, Principal Chief Conservator of Forests, Manipur for identifying Biodiversity Heritage sites in Manipur and formulation of action plan for each site under section 37 of Biological Diversity Act, 2002. A brain storming session was organized on 15.07.2008. In line with the suggestions by the participants of the brain storming session, there are 19 sites have been recommended for declaration as Biodiversity Heritage sites.

In its fourth meeting, the Manipur Biodiversity Board has decided to give preference to these 19 sites for constitution of biodiversity management committee, as they are rich in biodiversity and PBR of these sites can also be used for preparation of action plan for these biodiversity heritage sites. Further, the Board has decided to request the Institute of Bioresources and Sustainable Development to prepare 2-3 PBR in these 19 sites which can be used as reference documents for PBR of other places.

Involving National Level Organisation in documentation of Biodiversity

In due appreciation of the inherent strength of national level organizations, the Manipur Biodiversity Board has adopted a strategy to involve them in authentic documentation of biodiversity of Manipur. Accordingly, BSI and ZSI are being perused to complete the documentation for the remaining flora and fauna of Manipur. FRLHT, Bangalore has already formulated projects on “Training on Baseline Survey, Documentation, Rapid Assessment and promotion of Local Health Tradition in Selected Location of Manipur State” and “Survey & Demarcation of Medicinal plants in Manipur”. The projects have been approved by Department of AYUSH and National Medicinal Plants Board, Government of India.

Awareness generation to students through the visit to Manipur zoological garden



3.3 Mizoram Biodiversity Board

1. The Mizoram Biodiversity Board held one Board Meeting on 04.04.2008.
2. As per the Biological Diversity Act, 2002, action was taken up with all the Territorial

Forest Divisions for the constitution of Biodiversity Management Committees at all Village Councils of the State. Accordingly, in the first phase, 4 Divisions have responded and 101 Biodiversity Management Committees have been constituted at the Village level.

3. The draft Mizoram Biological Diversity Rules, 2008 prepared by this Board has been circulated to all Members for scrutiny and comments. Once this is completed (31.5.2009), the same will be sent to the Government to be placed before the legislature to get the assent as per sec 63 (3) of the Biological Diversity Act, 2002.
5. The Board has received Rs.15,00,000/- assistance from the NBA for establishment of SBB and BMC.
6. The Board has conducted following workshops:
 - Meeting cum Training of Primary Stakeholders (11.4.2008) at Aizawl
 - Training cum Workshop on Wildlife Issues at Aizawl (24.6.2008)
 - Two-day Workshop on understanding Biodiversity through Camera traps (5- 6.3.2009) at Dampa Tiger Reserve
 - Celebration of International Biodiversity Day 2008 at Lunglei
7. The Board has also initiated measures to popularize Biodiversity concervation in Mizoram through, media like AIR, Doordarshan, private local TV channels and print media. Work on preparation of the pictorial booklet “Wild Flowers of Mizoram” (in Mizo) is in progress.

3.4. Himachal Pradesh Biodiversity Board

- Awareness campaign for implementation of Biological Diversity Act organized.

The H.P. State Biodiversity Board organized an awareness campaign for the stakeholders of biodiversity about Biological Diversity Act, 2002 in the panchayats selected for the preparation of Biodiversity Registers on a pilot basis in the state at Gram Panchayat Churag, Tehsil Karsog, District Mandi, H.P. (25.10.2008), Gram Panchayat Khatnol, Tehsil



Sunni, District Shimla, H.P. (29.10.2008), Gram Panchayat Toong, Tehsil Banjar, District Kullu, H.P. (8.11.2008), Gram Panchayat Darlaghat, Tehsil Arki, District Solan, H.P. (25.11.2008), Gram Panchayat, Jukhala, Tehsil Sadar, District Bilaspur, H.P. (1.3.2009), Gram Panchayat Sarahan, Tehsil Chopal, District Shimla, H.P. (25.3.2009) and Gram Panchayat Garli, Tehsil Rakkar, District Kangra, H.P. (29.3.2009).

Dr. V. K. Sharma, Rt. Prof. UHF, Nauni, Solan, H.P. delivered a lecture to the stakeholders of Gram Panchayat, Jukhala in the one-day camp on 1.3.2009.

The participants were apprised on the thought given for Conservation of Biological Diversity (CBD) at the international and national levels and subsequent enactment of the Biological Diversity Act, 2002 and Biological Diversity Rules, 2004 by the Government of India. The stakeholders were briefed about the term *biodiversity*, its importance, threats/problems faced at national and state levels and conservation needs. The linkage and inter-relationships of biodiversity with the common stakeholders was explained to the participants.

Dr. J. C. Rana, Senior Scientist, NBPGR, at Phagli, Shimla. Participating stakeholders raising question during the awareness camp briefing the participants at Gram Panchayat, Churag at Gram Panchayat, Jukhala in Tehsil Sadar of the district of Bilaspur on Karsog Tehsil of Mandi district during the one-day camp on 25 October 2008. The participants were briefed on the Biological Diversity Act, 2002 enacted by MOEF GoI, New Delhi, and provisions of the Biological Diversity Act, 2002 and Rules, 2004 were highlighted to the participants.

Discussions were held with the participants and clarifications given to the participants on the spot.

The State Council constituted Biodiversity Management Committees in seven panchayats for preparation of Biodiversity Register on a pilot basis in the state at the panchayats, namely, Gram Panchayat Churag, Tehsil Karsog, District Mandi, H.P.; Gram Panchayat Khatnol, Tehsil Sunni, District Shimla, H.P.; Gram Panchayat Toong, Tehsil Banjar, District Kullu, H.P.; Gram Panchayat Darlaghat, Tehsil Arki, District Solan, H.P.; Gram Panchayat, Jukhala, Tehsil Sadar, District Bilaspur; Gram Panchayat Sarahan, Tehsil Chopal, District Shimla; Gram Panchayat Garli, Tehsil Rakkar, District Kangra; and Gram Panchayat Kafnu, Tehsil Nichar District, Kinnaur, H.P.

The State Biodiversity Board celebrated International Biodiversity Day on 22 May 2008 in the state by carrying out various activities targeting the stakeholders of biodiversity in the state. The activities included programmes through ecoclubs, radio talks, TV, exhibition, etc.

The State Biodiversity Board prepared a draft proposal for Local Communities Capacity Buildings for People Biodiversity



Register, Documentation of Traditional Recipes of H.P. and Linking to Livelihoods Improvement in the Mountainous Regions, and also a proposal for promoting sacred groves and sacred sites as heritage sites to ensure their participation in conservation and sustainable management and draft of the status of biodiversity of H.P.

The State Council prepared a project proposal for Management of Weeds namely *Lantana*, *Parthenium* and *Ageratum* for getting

funds from the Planning Department, H.P. for management of weeds on a pilot basis in the infested areas of the state.

Information, education and communication material for the awareness of the general stakeholders of biodiversity was compiled and published in Hindi as “Pradesh Mein Panchayat Starr per Jaivividhata Prabandhan Samitiyon Ka Gathan”.

3.5 Tamil Nadu Biodiversity Board

- Tamil Nadu Biodiversity Board was constituted vide G.O.Ms. No. 32/FR-5/2008, Environment & Forests Department dated 29-04-2008.
- The first meeting of the Tamil Nadu State Biodiversity Board was held on 14-10-2008.
- A sub-committee was constituted to frame the norms for identifying areas of biodiversity heritage sites in Tamil Nadu and to prepare rules for State Biodiversity Board. The first Sub-Committee Meeting was held on 28-02-2009 and the above points were discussed. Presently, Tamil Nadu Rules for State Biodiversity Board have been prepared and are under scrutiny by the Sub-Committee.
- It was decided to include the important ‘Sacred Grooves’, which are rich in biodiversity, as heritage sites. The list is in the finalising stage.
- The District Collectors of 31 districts in Tamil Nadu were asked through the Secretary, Government of Tamil Nadu to take steps for the formation of BMCs in their respective districts.

3.6. Karnataka Biodiversity Board

The board has undertaken following activities:

1. Formation of Biodiversity Management Committees (BMCs)
2. Awareness training on biodiversity and related issues to BMCs, villagers,

government servants, colleges, university students and teachers, general public.

3. Preparation of PBR through BMCs with the guidance from NGOs, forest departments and universities and colleges etc.,
4. Preparation of proposal for declaration of some areas as heritage site under Biodiversity Act.
5. Research projects
6. Conducting of workshops
7. Survey of bio industries using bio-resources.

Biodiversity Awareness Training Programme: The Karnataka Biodiversity Board has taken up the training programme on creation of awareness with respect of biodiversity and its related issues including traditional knowledge related to biodiversity.

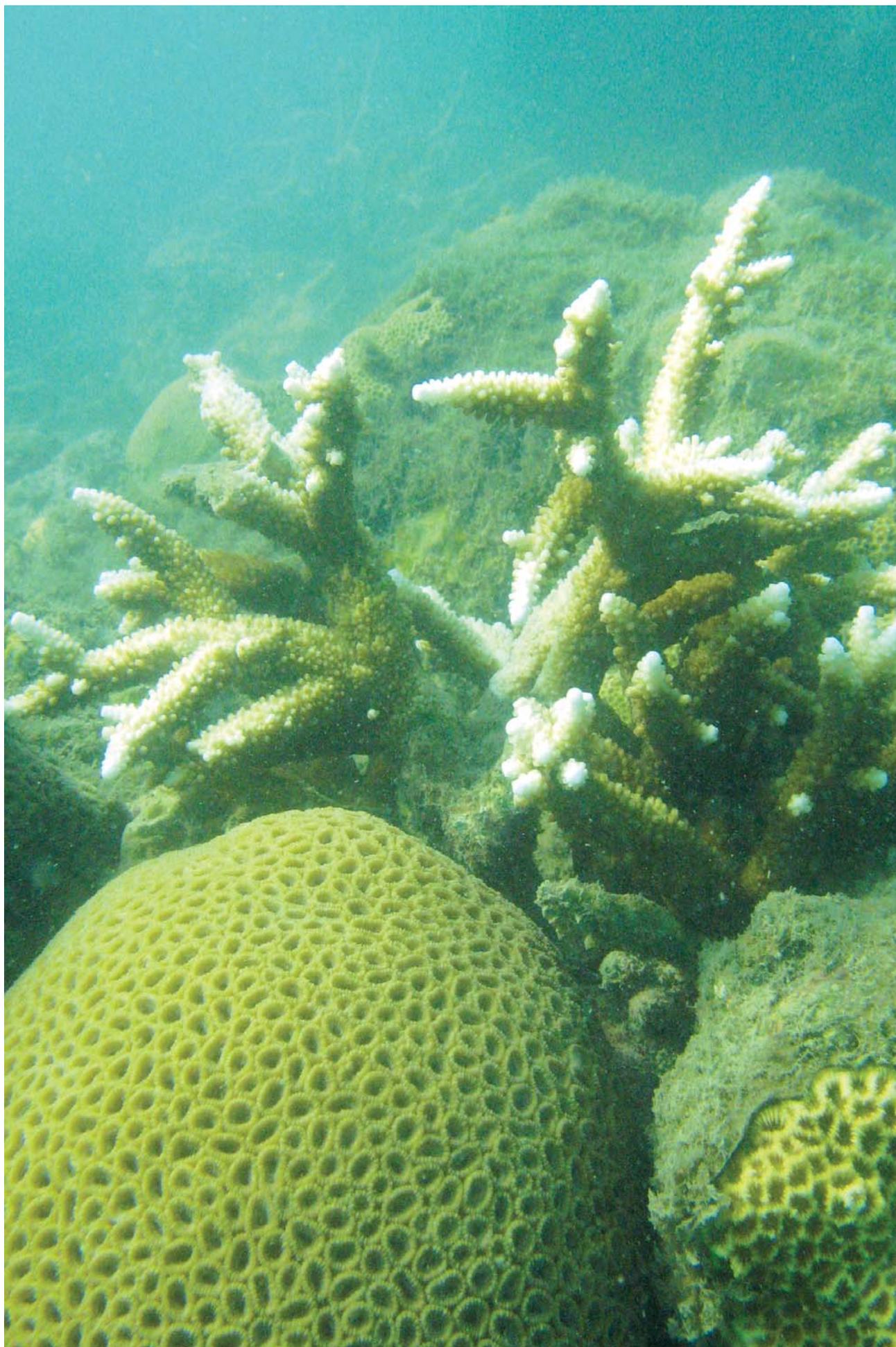
Preparation of People’s Biodiversity Registers (PBRs): As per Biological Diversity Act, People’s Biodiversity Registers are to be prepared. The Register shall contain comprehensive information on availability and knowledge of local biological resources, their medicinal or any other uses and traditional knowledge associated with them. People’s Biodiversity Registers have been prepared in various districts at the grama panchayath level. People’s Biodiversity Registers is a panchayat level register that documents local biodiversity and the local community’s knowledge on biodiversity including its conservation and its uses.

PBR documentation taken up in 2008-09: So far, 69 PBRs covering 13 districts have been completed and released. The biodiversity documentation in remaining gram panchayats/districts is continuing.

Establishment and Management of Biodiversity Heritage Sites

Prof. Madhav Gadgil and his associates have identified several spots of significance with regard to biodiversity in Karnataka, which has been sent to the Forest Department, Karnataka, to provide better protection for these areas.

Biodiversity Heritage Sites: The tamarind groves at Nallur village of Devannahalli taluk (Bangalore district) has already been declared as a heritage site. Erecting a barbed wire fencing



Coral Reefs at Karaichalli Island, GoMBR

Source: Tamil Nadu Forest Department, Ramanathapuram

of the site and putting a display board at the site have been undertaken. The proposal to declare Nethrani Island in Karwar district as a heritage site has been submitted to the Government.

Heritage Trees: The field level officers have been requested to submit a proposal to declare unique trees as heritage trees.

The Board has published the following literature:

1. Karnataka State Biodiversity Strategy and Action Plan (KSBSAP)
2. Bird diversity in Tamarind Grove, Nallur village, Devanahalli taluk, Bangalore
3. Trees in Ancient Indian Literature
4. Nallur Tamarind Grove Research Report
5. Notes on various aspects of Biodiversity Act and Rules
6. First newsletter named the *Biodiversity Quarterly*
7. Proceedings of Workshop on Documentation of Local Traditional Knowledge

Newsletter: Karnataka Biodiversity Board has started publication of a newsletter, which provides important information and contains articles from various sources on various components of biodiversity.

Survey of Bio-Industries and Utilisation of Bio-Resources: The National Biodiversity Authority has funded a project for a survey of bio-industries and utilisation of bio-resources. Rs. 3 lakhs has been released by the NBA for the project. Action has been initiated to collect the information on bio-resources from bio-industries with the involvement of Karnataka Indian Manufacturer's Association (Regd), Karnataka Unani/Homeopathy Medical Association, Department of Bio-Technology, Department of Horticulture, Department of Agriculture and Department of Animal Husbandry and Forestry.

Workshop/Seminar: A workshop on documentation of local traditional knowledge was conducted in Bangalore. The Chairman, National Biodiversity Authority, inaugurated the workshop and gave a keynote address. The workshop was attended by representatives from Karnataka Drug Manufacturers Association, Nati Vidyas, various government departments,

universities, NGOs, media persons and retired officers. The workshop was funded by National Biodiversity Authority.

In-situ Conservation of Biodiversity in dry districts: Action has been initiated to identify and demarcates an area of 100–200 ha depending upon availability and in-situ conservation of the species, which are on the decline in the forests of 13 districts, namely, Bangalore, Bagalkot, Bellary, Bidar, Bijapur, Chamarajnagar, Chitradurga, Gulbarga, Kolar, Koppal, Mandya, Raichur, and Tumkur. The Deputy Conservators of Forests (Territorial) of the district are the implementing officers of this project.

Advise to Government: The Board has sent a proposal to the Government for levy, of cess charges on pharmaceutical companies on the basis of their turnover.

3.7. Madhya Pradesh Biodiversity Board

As per Sub-section (1) of Section 63 of the Biological Diversity Act, 2002, the Government of Madhya Pradesh has notified the Madhya Pradesh Biodiversity Act, 2004. As per the provision of the Madhya Pradesh Biodiversity Act, 2004 read with the Biological Diversity Act, 2002, the State Government has constituted Madhya Pradesh State Biodiversity Board w.e.f. 11 April 2005. The activities of the Board in 2008–09 are as follows.

During the year 2008–09, project works were carried out and interim/final reports have been submitted to the MPSBB.

People's Biodiversity Registers: It has been decided that the preparation of People's Biodiversity Registers (PBRs) of both forest as well as revenue villages located in forest areas shall be entrusted to the State Forest Department. During the year 2008–09, the State Forest Department carried out the preparation of PBRs of 867 forest and 233 revenue villages. Samples of PBRs have been submitted to the MPSBB.

Biodiversity Atlas of MP: The preparation of Biodiversity Atlas of Madhya Pradesh showing species/varieties of both wild and cultivated plants/crops, and wild and domestic animals in each tehsil of all 50 districts of Madhya Pradesh has been entrusted to Madhya Pradesh Council of Science and Technology (MPCOST),

Bhopal. The required data were procured from the concerned departments, viz., Forest Department, Agriculture Department, Horticulture Department, Animal Husbandry Department, and Fisheries Department.

Education, Awareness and Training:

Mowgli Utsav, 2008: For creating awareness of conservation of forests, wildlife, biodiversity and environment among school children, Mowgli Utsav (2008) was organized in Pench Tiger Reserve, in Seoni district, with the active participation of the MPSBB, State Education Department, Tribal Department, MP Tourism Development Corporation, MP Eco-tourism Development Board, District Administration, etc. For participating in this Utsav, four school children were selected from each district on the basis their performance in painting and essay competitions in schools. During the Mowgli Utsav (2008), various activities, viz., eco-trekking, safari and village visits in Pench Tiger Reserve areas, games and quiz, were organized for participating schoolchildren. "Mowgli ki Pati" was circulated to school children inviting their replies.

International Biodiversity Day (22 May 2008): For celebrating International Biodiversity Day (22 May 2008), an amount of Rs.10,000/- was sent to each District Collector for organising seminars, meetings, rallies, competitions etc. The theme for celebrating International Biodiversity Day (22 May 2008) was "Biodiversity and agriculture".

Documentary film on Biodiversity of MP: The preparation of a short documentary film on biodiversity of Madhya Pradesh has been entrusted to the Madhya Pradesh Madhyam, an undertaking of the State Government. The work on the documentary is in progress.

Quarterly Bio-diversity Newsletter of MPSBB: Regular publication of a quarterly newsletter *Jaiv Vividhta* of MPSBB has been taken up since December 2006. These newsletters were sent to all the related Government departments/undertakings, universities, District Collectors, BMCs, etc.

Exhibition of MPSBB: A stall for exhibition of activities of MPSBB was included in the "Van Mela" organized by MP Minor Forest Produce Federation.

Biodiversity Interpretation Centre: A blueprint of the Biodiversity Interpretation Centre in Guru Govind Singh Park, Bhopal was prepared by the Centre of Environment Education, Pune.

Web Site: The official website of MPSBB (www.mpsbb.org.in) is being maintained.

Ex-situ/In-situ Conservation:

Study Project: "Threats of sand mining on the nesting of turtle and ghariyal in the National Chambal Sanctuary, Madhya Pradesh" has been entrusted to School of Studies in Zoology, Jiwaji University, Gwalior. The final report was received by MPSBB and was sent to the Wildlife Wing of the State Forest Department for taking appropriate measures.

Competition for Best Biodiversity Garden: For creating awareness about the role of gardens for ex-situ conservation of biodiversity, all District Collectors were directed to organize competition in their districts for selecting public/private garden having the best biodiversity. An amount of Rs. 5,000 as prize money was sent to each District Collector for distributing to the best biodiversity garden.

Biodiversity Park in Gwalior District: MPSBB has entrusted the project of establishment of Biodiversity Park in Gwalior district to the State Forest Department. The work is under progress.

Establishment of Botanical Garden: MPSBB has entrusted the project of establishment of botanical garden in Ujjain district to the State Forest Department. The work has been completed.

Establishment of Nurseries of RET Plants: Nurseries of RET Plants have been established in Bhopal, Rewa and Jabalpur districts. Plants are being grown for plantation works as well as for sale to private persons.

Establishment of Biodiversity Heritage Sites: All District Collectors have been directed to identify Biodiversity Heritage Sites as per the criteria laid down in the draft guidelines circulated by the NBA. Some sites have already been identified and suggested by the BSI.

Governance:

Biodiversity Management Committees (BMCs): All District Collectors have been directed to constitute BMCs at the level of Gram Sabhas in their districts. The work is in progress. It may be mentioned that BMCs have already been constituted at the level of all District Panchayats, Janpad Panchayats, Village Panchayats, Nagar Panchayats, Nagar Nigams and Nagar Palika Parishads.

Workshops for Biodiversity Management Committees: It has been envisaged to organize workshops for training of BMCs. This task has been entrusted to Indian Institute of Forest Management, Bhopal. For this programme, training manual is being prepared.

Workshops on Biodiversity Act/Rules and on Intellectual Property Rights: It has been envisaged to organize workshops on Biodiversity Act/Rules and on Intellectual Property Rights with the help of the National Law Institute University, Bhopal. For this programme, the National Law Institute University, Bhopal has prepared a detailed utilisation note on the Biological Diversity Act, 2002, the Biological Diversity Rules, 2004 and the Madhya Pradesh Biodiversity Rule, 2004. The preparation of a detailed note on Intellectual Property Rights is in progress.

Incorporation of Biodiversity Issues in Working Plans of Forest Divisions: The State Forest Department has been asked to incorporate biodiversity issues in working plans of all the forest divisions of Madhya Pradesh. Earlier, a workshop of senior level officers of the State Forest Department, the State Forest Research Institute has been organized. Recommendations of this workshop have been sent to the State Forest Department for appropriate action.

Incorporation of Biodiversity Issues in Policies, Programmes of Concerned State Government Departments: All the concerned State Government Departments have been asked to appropriately incorporate biodiversity issues in their policies as well as programmes/schemes.

3.8. Chattisgarh Biodiversity Board

The State Biodiversity Board came into being vide notification No. F-8-29/2006/102 dt. 16-02-06. In pursuance to the review meeting of SBBs of all the states at Ooty on 28 and 29 April 2008 and the directions issued vide DO No.28-10/2008-CS-III(NBA) of Secretary to GOI, Ministry of Environment & Forests addressed to Chief Secretary of Chhatisgarh State, a proposal has been sent to State Government vide office letter No. WL/BD/08/1896 dt.01-08-2008 to reconstitute Chhatisgarh Biodiversity Board. The desired amendment to the existing notification No. F-8-21/2005/102 dt. 16-02-2006 is awaited.

The required staff for SBB has been approved by the Board. However, the Government has so far sanctioned part of the required staff, for example: 1 Scientist, 1 Dy Conservator, 1 Head Clerk and Data Entry Operator/PA vide Government of Chattisgarh Forest department Letter No. F 1-6/2007/10-1/van dt. 08-09-2008. Recruitment & Appointment/staff from other departments On Deputation is in the process. As on today, a solitary data entry operator with the Member Secretary of the Board is at work. Efforts are on to procure rest of the staff.

Instructions have been issued at the field level to form biodiversity management committees at Gram Panchayat and Jila Panchayat levels and for preparation of People's Biodiversity Register in all the 18 districts of the State. These tasks are expected to be accomplished in due course.

Biodiversity Heritage Sites: A team from UNESCO visited the state and held meeting with the Chief Secretary on 17 October 2008. Forest Department and Department of Culture and Tourism jointly made presentations for declaration of potential heritage sites of Sirpur and Kanker Valley National Park and parts of Bastar for declaration as heritage sites to be recognized by UNESCO. Other Biodiversity Heritage Sites are being identified and a list is being published shortly.

3.9. Arunachal Pradesh Biodiversity Board

- Draft Arunachal Pradesh Biological Diversity Rules, 2009 have been prepared

and submitted to State Government for approval. Member Secretary of the Board visited Bhopal, Andhra Pradesh and Karnataka for extensive discussion regarding implementation of Biological Diversity Act.

- A comprehensive list of threatened floral and faunal species prepared under Section 38 of the Act and submitted to the State Government for notification.
- State Biodiversity Strategy and Action Plan has been updated, revised and published.
- Office of the Biodiversity Board has been strengthened.

3.10. Andhra Pradesh Biodiversity Board

The First Biological Heritage Site of Andhra Pradesh

Based on resolution of the Veerapuram Grama Panchayati of Anantapur, A.P. Biodiversity Board has advised the State Government to declare Veerapuram Conservation of Tanks in the Industrial Park, which is a feeding zone for the pelicans as Biological Heritage Site. Similar initiative has been taken for recognition of Biodiversity Park established by Dolphin Conservation Society in Visakhapatnam as a Heritage Site.



The Conservator of Forests (P & E), Warangal, has proposed the existing conservation of rattans in Warangal area of Andhra Pradesh. The Board has sanctioned a project for raising seedling for the purpose. It is also proposed to develop Pегion Pea Diversity Park in Seetampeta. The Pегion Pea Diversity Park will be under the management of Biodiversity Management Committee (BMC) of the respective Grama Panchayats and would receive the technical guidelines from High Altitude Research Station, Seetampeta of Acharya N.G. Ranga Agricultural University.

A.P. Biodiversity Board as made an attempt to assess the quantity of biological resource being utilized by various biological resource utilisation agencies such as herbal units, seed industries and other biotechnological companies of Andhra Pradesh and they were requested to submit details in Form I of the Biological Diversity Act, 2002. The BMC Mahanandi has decided that an accession fee of Rs. 300 lakhs would be levied on multinational seed company Monsanto for alleged biopiracy of the bacteria, *Bacillus thurengensis*. The A.P. Biodiversity Board proposes to initiate action against the soft drink companies, which are preparing “herbal cola” drink based on the traditional knowledge of the *Hemidesmus* (nannari juice) in Rayalaseema areas of Andhra Pradesh.

The biopiracy case as per the Biological Diversity Act, 2002 was booked against a German national Dr. Marc Clark Baumgarten and his local associate, Mr. Venkat Reddy, who landed in Araku Valley of Visakhapatnam in November 2007.

Till date, about 11 Biodiversity Management Committees have been constituted in Kurnool, Nalgonda, Mahaboobnagar, Visakhapatnam and Anantapur districts. Sona Masuri variety of rice of Acharya N.G. Ranga Agricultural University was released in 1980 and Malaysia Trademark Office has registered it as a trademark. The export of rice under Sona Masuri trade name was objected to by the Board.

Capacity Building and Human Resource Development

Organising photo exhibition and samalochana for various stake holders such as Biodiversity Management Committee members, NGOs and officials of various departments and research scholars from different universities through local, district level, state level and national level workshops and seminars such as the following:

- National Workshop on “National Workshop on Bio Piracy and Intellectual Property Rights related to Biodiversity”. On 23-08-2008 at Administrative Staff College of India, Hyderabad.

- Southern States Forest Ministers Conference on 25–26 October, 2008 at Hyderabad.
- District Level meetings at Araku Valley, Visakhapatnam and Chittoor.
- The IIT Bombay, Powai, Mumbai conducted a two-day seminar at IIT Bombay on global warming and Challenges for Bio-Technology Students in Carbon-di-oxide Migratory and on biodiversity. The Member Secretary attended the seminar on 21 and 22 October 2008.
- A two-day workshop on “Public Private Partnership in Forestry” held at Valkunth Mehra National Institute of Co-operative Management (VAMNICOM), Pune on 23 and 24 December 2008.
- Interactive session held at Administrative Staff College of India, Bella vista on 18 June 08.
- National workshop on Bio-Piracy And Intellectual Property Rights, related to biopiracy held on 23 August 08.
- Meeting on threatened species by Expert Committee held on 12 December 2008.
- Brain storming session on traditional knowledge on 16 December 2008.
- Biodiversity and Conservation in Sikkim EDTS-Power 10 Programme Educational Development Trust of Sikkim.
- Indian Biological Diversity Act, 2002 and the Biological Diversity Rules, 2004 Training cum Awareness programme on ABS from Genetic Resources and Associated TK at Lingee, South Sikkim, Khamdong-Simik, East, Singtam-Pendam, East Society for Better Environment, Sikkim, ICIMOD, NAPED.
- Biodiversity (flora, fauna, habitats) of Sikkim for SSB personnel at Marchak, East Sikkim 24th Battalion, SSB.
- Curbing of WL Trade in Sikkim forest, Army, ITBP, police, excise, personnel, etc. (two workshops). WWF-India Sikkim Field Office TRAFFIC and IUCN.
- Workshop for Eastern region for developing Master Zoo Education Plan Padmaja Naidu Himalayan Zoological Park Centre for Environment Education (CEE).
- Peoples’ Biodiversity Register EDCs to be notified as BMC/SBB.
- Meeting and interactive discussion on Access and Benefit Sharing from Genetic Resources and Associated Traditional Knowledge at Hee-Gaon West Sikkim 26 September 2008.

3.11. Sikkim State Biodiversity Board

- The International Centre for Integrated Mountain Development (CIMOD), Kathmandu, Nepal has supported the SBB, Sikkim on “Creating Awareness, Capacity Building on Access and Benefit Sharing from Genetic Resources and associated Traditional Knowledge in Sikkim, India”.
- Biodiversity and Agriculture Wildlife Diversity in Sikkim. International Day for Biological Diversity; Training Workshop for students and teachers on Conservation of Biodiversity. GBPIHED, Sikkim.
- Environment and Conservation awareness cum planning workshop: Tsomgo Pokhari Sanrakshan Samiti.
- Training cum Awareness on Access and Benefit Sharing from Genetic Resources and Associated Traditional Knowledge at Lingee, South Sikkim on 20 November 2008.
- Training cum Awareness on Access and Benefit Sharing from Genetic Resources and Associated Traditional Knowledge at Sumik, East Sikkim on 10 December 2008.
- Exposure Visit to ICIMOD Katmandu, Godawari Demonstration Centre, Li-BIRD and Begnas Village under Lekhnath Municipality in Pokhara Nepal, 26 October to 1 November 2008 (4 people from Sikkim participated including one senior forest officer and a Zilla Panchayat).

- Meeting in the Forest, Environment and Wildlife Management Department Forest Secretariat, Deorali, Gangtok Sikkim, 25 September 2008.
- Training workshop on Access and Benefit Sharing from Genetic Resources and Associated Traditional Knowledge to Media, Shillong, December 15–16 (2 people including one media person participated from Sikkim).
- Training cum awareness programme on Access and Benefit Sharing from Genetic Resources and Associated Traditional Knowledge at Khamdong, East Sikkim on 28 February 2009 by the Khamcong Gram Panchayat Unit.
- Training workshop Access and Benefit Sharing from Genetic Resources and Associated Traditional Knowledge documentation to BMCs/TKCs, East Point School, Singtam East Sikkim, 30–31 May 2009.
- A simple reading material “Awareness, Capacity Building on Access and Benefit Sharing from Genetic Resources and associated Traditional Knowledge in Sikkim, India” in Nepali has been developed. The material includes brief information on Indian Biological Diversity Act 2002, Indian Biological Diversity Rules, 2004 and Sikkim State Biological Diversity Rules, 2006.

3.12. Kerala State Biodiversity Board

- 15 BMCs were constituted. (14 Panchayats and 1 Corporation)
- People’s Biodiversity Register (PBR) is being documented in 14 Panchayats; 100 panchayats are expected to complete the documentation by the end of the year 2009—2010.
- Wetland maps at the scale 1 : 12,000 are being prepared for the whole State. Will be completed within two months.
- A model wetland management programme enhancing wetland biodiversity and

livelihood is being implemented in the Kole wetlands in Malappuram district.

- Mapping of the Coastal Ecosystems at 1 : 4000 will be completed by the end of 2009–2010.
- A model coastal ecosystem management programme enhancing biodiversity and livelihood has been initialised.
- A project to restore the biodiversity of an agro-ecosystem was launched during the year in a 400-acre microwatershed.
- Biodiversity-rich areas outside the Protected Area Network are being identified through a project initiated in 2008–2009. The identified areas will be included in the existing Pas, designated as Conservation Reserves, Community Reserves or Biodiversity Heritage Sites.
- Annual Waterfowl Census started during 2007 with participation of bird watchers across the state. The programme continued during 2008–2009.
- Conservation programme for heronries in the State was launched during 2008 by tilization enumeration of the heronries across the State by the bird watchers.
- Nature education programme conducted by the KSBB during the year includes
 - a. Nature education programmes for schools and colleges
 - b. School campus biodiversity enhancement programme
 - c. Nature Education Programme for media
 - d. Nature Education programme for Secretariat Staff
 - e. Children’s Biodiversity Congress
- The KSBB was constituted and Green Awards were given by KSBB for: (1) individuals for lifetime contributions to nature conservation, (2) schools, (3) school teachers and (4) institutions.
- The KSBB formulated the following two policies during the year, which have relevance in biodiversity conservation:

- Kerala State Organic Farming Policy
- Kerala State Environment Policy
- KSBB conducted a National Seminar during April 2008 on the Genetically Modified Crops and Foods. The exhaustive discussions at the seminar brought out the irrevocable damage that the genetically modified (GM) crops would inflict on: (1) the local biodiversity, (2) health, (3) economy, and (4) food security and sovereignty and, came out with the inevitable resolution to keep Kerala GM-free and urge the Central Government to keep India GM-free.

3.13. Jharkhand Biodiversity Board

Two meetings of the Jharkhand Biodiversity Board were held on 16-01-2008 and 20-01-2009 and following decisions were taken:

- To make people aware of the Biological Diversity Act, 2002 through wide publicity via print and electronic media.
- To put in place Biodiversity Management Committees at the local body level for preparation of People's Biodiversity Register.
- To initiate work for preparation of People's Biodiversity Register in protected areas.

3.14. Uttar Pradesh Biodiversity Board

- A national level workshop on International Biodiversity on 22 May 2008 was organized on Biodiversity & Agriculture presided by Prof. R. V. Singh. A souvenir was released on "Biodiversity & Agriculture".
- Launching of Uttar Pradesh Biodiversity Board website: www.upsbdb.org
- Approval for establishment of Biodiversity Park at Gorakhpur.
- The following research projects have been sanctioned:
 - (i) Survey mapping and documentation of current of floristic diversity and antiquity

of vegetation in Lucknow & adjoining areas

- (ii) Development of biodiversity garden based on Bentham and Hooker system of classification to explore floral diversity in Isabella Thoburn College, Lucknow
 - (iii) Baseline survey and mapping of microbial diversity of newly developed Kukrail Biodiversity Park
- UPBB has also recommended "*Indopiptadenia oudhensis* Brenan" to be declared as threatened species to the NBA.

3.15. Uttarakhand Biodiversity Board

- 139 People's Biodiversity Registers documented.
- Books *Vulnerable Wildlife* and *Lantana* published.
- 28 workshops / meetings organized by Uttarakhand Biodiversity Board.

3.16 West Bengal Biodiversity Board

The West Bengal Biodiversity Board completed another year of successful implementation of the mandates of The Biological Diversity Act, 2002 and other allied Acts, Rules and Notifications under the guidance of Prof. A. K. Sharma, Chairman, and Sri Debal Ray, Member Secretary.

Six Biodiversity Management Committees were constituted during 2008–2009 in five districts of West Bengal at Ketugram P.S. (Burdwan district), Jamboni P.S. (Paschim Medinipur district), Jhalda II P.S (Purulia district), Karimpur I P.S and Chakdah II P.S. (Nadia district) and Sonamukhi P.S. (Bankura district).

The Board has initiated the preparation of PBRs at Nabagram G.P. under Ketugram and Kochdihi G.P. under Sonamukhi P.S. PBR exercise was already in progress at Jamsherpur G.P. under Karimpur I P.S., Silinda II G.P. under Chakdah II P.S. and Jhalda–Darda G.P. under Jhalda II P.S. Other than this, the Board has assigned projects for preparing PBR to different schools, colleges, universities, other institutes

and non-government organisations following the Board's decision to involve schools, colleges and university students and teachers in the PBR exercise of the State. Twenty-three such projects are in progress throughout the state covering eight districts.

The West Bengal Biodiversity Board observed the International Biological Diversity Day 2008 through a two-day long programme at Paribesh Bhawan, Salt Lake City Kolkata on 22 and 23 May 2008. The theme as designated by the CBD was 'Biodiversity and Agriculture'. The celebration witnessed the formal release of two identification manuals on edible mushrooms and wild mammals of rural Bengal; also two PBRs were released on the occasion in the presence of the members of the BMC and the PBR activists. The day was also marked by the formal launch of the Board's website www.wbbb.gov.in. The second session of the day's schedule was chaired by Dr. A. K. Ghosh, Member, NBA and started with a short film on the PBR Experience of the West Bengal Biodiversity Board, followed by representations by PBR activists from different districts of the State, regarding their experiences during PBR exercise. An exhibition of posters prepared by the different agencies carrying out PBR exercise in State (emphasising their activities related to agriculture) was kept open for public viewing. A short film on 'Wetlands of Bengal' (*Banglar Pukur* in Bengali) produced by the WBBB was also screened at the end of the day. A seminar on the theme 'Biodiversity and Agriculture' was arranged on the second day of the programme, i.e., on 23 May 2008. The day started with the release of the Board's publication 'Biodiversity—Issues & Concerns', a proceedings of the seminar lectures presented during the observation of IBD, 2006. Five invited lectures on the topics 'Plant Genetic Resources & Sustainable Production', 'Prokaryotic Microorganisms: The Unseen Majority', 'Rice Diversity & Traditional Knowledge', 'Conservation of Biodiversity and Development of Animal Husbandry' and 'Status of Inland Fisheries in India: Biodiversity and Environmental Concerns' were delivered by experts in the field. More than 150 participants including students, PBR volunteers, representatives of the formed BMCs, NGOs, school, college and university teachers, distinguished scientists and officers were present and actively took part in this two-day programme.

A number of Awareness Programmes and People's Biodiversity Register Workshops were arranged by the Board and Board officials were invited to participate during the period under report, out of which five were at different colleges, universities and other training institutes throughout West Bengal, three were PBR Workshops in different districts, two were arranged by different NGOs working in the field of biodiversity conservation and one Nature Study Camp involving school students.

Two Czech Nationals were arrested from Singalila, Darjeeling district by Forest Officials and a large number of insects were seized from them, which is an act of gross violation of The Biological Diversity Act. Since the authority to execute the provisions of penalties were not specified in The Act, the case was referred to the NBA; an outcome has been the MoEF Notification No. S.O. 2708(E), dated 17 November 2008 and an amendment to the same Notification No. S.O. 120(E), dated 7 January, 2009, which designates the Officers to file complaints under Section 61(a) of the Biological Diversity Act, 2002.

The Board has commissioned a number of research activities in collaboration with other educational and research institutes during the period under report, which include 'Plant DNA Bank of Economic, Endemic and Endangered Species of West Bengal', 'Assessment and Documentation of Faunal Diversity of Buxa Tiger Reserve: Insects and Spiders', 'Studies on Diversity and Ecology of Macro-fungi in Lateritic Zone of West Bengal', 'Survey on the Biological Status of Porcupine Population in Kanduah, Howrah', 'Study on the Diversity of Scum and Bloom Algae in some Polluted Environs of West Bengal and their Potential Use as Bioindicators' and 'A Study of Wild life Biodiversity Elements in Non-forest Man-made Ecosystems, Traditional Management, Changing Status and Conservation Model'.

Publications/ other Releases of the WBBB completed and released during the period under report:

- i. People's Biodiversity Register of Paschimpara Mouza (Goghat II P.S., Hooghly district)

- ii. People's Biodiversity Register of Patharpratima G.P. (7 mouzas) (Patharpratima Panchayat Samiti, 24 Parganas South district).
- iii. Field Identification Manual on 'Edible Mushrooms' in Bengali.
- iv. Field Identification Manual on 'Common Wild Mammals of Rural Bengal' in Bengali
- v. 'Biodiversity—Issues & Concerns: Proceedings of the Lectures delivered on IBD, 2006.
- vi. A short film on Wetlands of Bengal *Banglar Pukur* (in Bengali) produced by WBBB.

Two Board Meetings have been held during the period under report (13 and 14 on 4 July and 18 November 2008 respectively). The major decisions taken during these meetings include the following:

- Emphasis on awareness generation and sensitisation programmes through workshops, seminars, awareness programmes, publication of brochures, leaflets, banners, posters and popular books.
- Decision to constitute 3–5 BMCs in all the districts in the state and initiate PBR activities thereof, as per the directives of the NBA.
- The Board noted with concern that in the process of expediting PBR activities in the state the actual spirit and method of PBR should not be lost.
- Initiation of the process for conservation of Baneswar pond (Coochbehar district) as Community Reserve and for declaring a forest patch at Chilkigarh (Paschim Medinipur district) as Sacred Grove.
- Decision to request West Bengal Pollution Control Board to ensure clearance from the West Bengal Biodiversity Board before issuing

'Consent to Establish' and 'Consent to Operate' certificates to the applicants who propose to utilise bio-resources for commercial purposes.

- The Heritage Site and Sacred Grove Committee of the West Bengal Biodiversity Board prepared its comments on the Draft Guidelines on Biodiversity Heritage Site, which was forwarded to the NBA.
- Decision to incorporate the clause 'Research activities using bio-resources of the State should be intimated to the State Board by the concerned person/ authority' in the West Bengal Biological Diversity Rules Amendment, based on the provisions of Sec 23I of The Biological Diversity Act, 2002.
- Approval of the draft of the West Bengal Biodiversity Board (Appointment of Officers and other Employees) Regulations, 2009 and the Gazette Notification was subsequently made vide No. 118/1E (Bio)-1/2008, dated 4 March, 2009.
- The Board proposed and got financial sanction for 15 new posts for increasing the manpower of the WBBB.
- Resolution on the issue of assistance to the BMCs for creation of Local Biodiversity Fund, that the assistance to the BMCs should be action-oriented, as per the recommendations envisaged in the PBRs of the respective areas.
- Decision to training programmes on proper implementation of The Biodiversity Act, 2002 in the state and also PBR activities through the State Institute of Panchayat & Rural Development (SIPRD).

Annex-1

Members of the Authority

The present members of the authority as per Section 8(4) of the Biological Diversity Act, 2002 are as under:

Chairperson: Dr P. L. Gautam, Chairman, National Biodiversity Authority, Chennai (*No 12, Part I, Sec 2 Gazette of India Weekly, New Delhi, March 21-27, 2009 page 291*).

Ex-Officio Members (*Letter No 28-16/2008-CS-III MoEF, dated 17 July 2008*)

S.No.	Ex-Officio Member	Represented by
1	Joint Secretary or an officer of an equivalent rank to the Government of India in the Ministry of Tribal Affairs	Shri A.K.Srivastava, Director, Min. of Tribal Affairs, Shastri Bhawan, New Delhi
2	Additional Director General (Forests), Ministry of Environment and Forests, Government of India	Shri. M.B.Lal, IFS, ADG (Forests), Min. of Environment & Forests, New Delhi
3	Joint Secretary to the Government of India dealing with the subject in the Ministry of Environment and Forests	Shri A.K.Goyal, IFS, Joint Secretary (CS), Min. of Environment & Forests, New Delhi
4	Joint Secy. or an officer of an equivalent rank to the GoI dealing with the subject in the Agricultural Research and Education, Min. of Agriculture	Dr. P. L. Gautam (17 July to 31 December, 09) / Dr S. P. Tiwari, (1 Jan to 17 Jun 09)/ Dr. S. K.Dutta (18 Jun 09 to date) Deputy Director General (Crop Science), ICAR, New Delhi
5	Joint Secretary or an officer of an equivalent rank to the Govt. of India dealing with the subject in the Dept. of Biotechnology	Dr. Renu Swarup, Advisor, Dept. of Biotechnology, New Delhi
6	Joint Secretary or an officer of an equivalent rank to the GoI of India dealing with the subject in the Dept. of Ocean Development	Shri P. Madeswaran, Director, Min. of Earth Sciences, New Delhi
7	Joint Secretary or an officer of an equivalent rank to the GoI dealing with the subject in the Dept. of Agriculture and Cooperation	Shri Pankaj Kumar, Joint Secy. (Plant Protection), Dept. of Agri. & Cooperation, New Delhi.
8	Joint Secy. or an officer of an equivalent rank to the GoI dealing with the subject in the Dept. of Indian Systems of Medicine and Homoeopathy	Shri B.S. Sajwan, IFS, Chief Executive officer, Nat.Medicinal Plants Board, New Delhi
9	Joint Secretary or an officer of an equivalent rank to the GoI dealing with the subject in the Dept. of Science and Technology	Dr.B. Harigopal, Advisor, Department of Science & Technology, New Delhi
10	Joint Secretary or an officer of an equivalent rank to the GoI dealing with the subject in the Dept. of Scientific and Industrial Research	Dr. Naresh Kumar, Head, R&D Planning Division, CSIR, Rafi Marg, New Delhi.

Non-Official Members vide (*Notification no S.O.262 (E) dated 22 February 2007*)

1. Prof. Raghavendra Gadagkar,
Center for Biological Science,
Indian Institute of Science,
Bangalore – 560 012. Karnataka.
2. Prof. Anil Gupta,
Indian Institute of Management,
Vastrapur,
Ahmedabad – 380 001. Gujarat.
3. Dr A. K. Ghosh,
Director,
Centre for Environment and Development,
329, Jodhpur Park,
Kolkata 700 068. West Bengal.
4. Dr. S. Subramaniyan
54, VGP Golden Sea View,
Part II, 2nd Main Road, 5th Cross Street,
Palavakkam, Chennai – 600 041. Tamil Nadu.
5. Prof. K. Kathiresan,
Professor,
Centre for Advanced Study in Marine
Biology, Annamalai University,
Parangipettai – 608 502. Tamil Nadu

Secretary:

1. Dr K. Venkataraman (up to March 11, 2009)
2. Shri C. Achalender Reddy (since March 12, 2009)

Participation / Representation in the biodiversity related conference lecture/symposia workshop by non-official members

1. Dr. A K Ghosh, Member, National Biodiversity Authority

May 2008 - West Bengal Biodiversity Board -Session Chairman International day on Biodiversity 'PBR: Sharing experience with the activities'.

June 2008 - Society for Participatory Action & Reflection at BITM, Kolkata - Lecture on 'Global Warming and Biodiversity'.

June 2008 - JBNSTS - Senior Scholars Meet, Kolkata - Lecture on 'Our Environment and Us'

June 2008 - Institute for Development, Education & Action (IDEA) at Academy of Fine Arts, Kolkata - Lecture on 'Global Warming: Food, Water, Sanitation: Future Challenge'

July 2008 - Zoological Survey of India, Kolkata - Lecture on 'Climate Change and Sustainable Development'

August 2008 - Acharya Prafulla Chandra Roy Polytechnic, Kolkata - Lecture on 'Global Warming and Biodiversity'.

August 2008 - Centre for Environment Education meet on CMZ, Dhamakhali, north 24 Parganas - Keynote Speaker on Coastal Zone Management.

August 2008 - State Wildlife Advisory Board, Kolkata - 6th Meeting Attended as Member.

August 2008 - Meeting on UNEP – GEF Project at MoEF, New Delhi - Sharing Opinion as Invited Expert for discussion.

September 2008 - Indira Gandhi Rashtriya Manab Sangrahalaya, at Santiniketan - Lecture on 'Sacred Groves of India'.

September 2008 - Centre for Urban Economic Studies, University of Calcutta - Lecture on Urban Environment Management: Urban Biodiversity.

September 2008 - WIPRO, Kolkata- Chief Guest on Inaugural Programme on 'Eco-Eye'.

September 2008 - State Forest Department, West Bengal - Session Chairman, Management of Human–Elephant conflict.

October 2008 - Kerala State Biodiversity Board, Trivandrum, Kerala - Discussion meeting on Biodiversity Act and Rules.

November 2008 - Geography Department, University of Calcutta - Lecture on, 'Resource Appraisal and Environmental Challenges'

November 2008 - National Academy of Customs Excise & Narcotics (NACEN), Kolkata - Lecture on 'ODS: International Convention and National Obligation'

Note: In addition, Dr. A K Ghosh, has delivered a series of lectures on 'Environment and Human Rights' to the students of post-graduate course on human rights at the University of Calcutta; he also delivered as a visiting faculty, a series of lectures on 'Environmental Issues' including 'Biodiversity Conservation' to the M.Phil students at the Jadavpur University, School of Environmental Studies; Dr. Ghosh also acted as a visiting faculty to the Statesman Print Journalism School teaching 'Environmental Journalism', which included a major component on 'Biodiversity Conservation'— Policy, Law and Role of NBA.

Publications on Biodiversity Conservation:

Ghosh, A. K., 2008. *A Comprehensive Handbook on Biodiversity*, TERI Press, New Delhi, pp. 1 – 130.

Ghosh, A. K., 2008. Faunal Resources of India (pp. 16–24). In *Biodiversity: Issues and Concern*, West Bengal Biodiversity Board.

Ghosh, A. K., 2008. *Environmental Conservation: Challenges and Actions*. APH, New Delhi, 250 pp. (includes chapters on 'Biodiversity and Climate Change', pp. 61–69; 'Future Biodiversity Scenarios in India and South East Asia', pp. 70–83; 'Sacred Groves', pp. 84–91; 'Invasive Species', pp. 91–111.

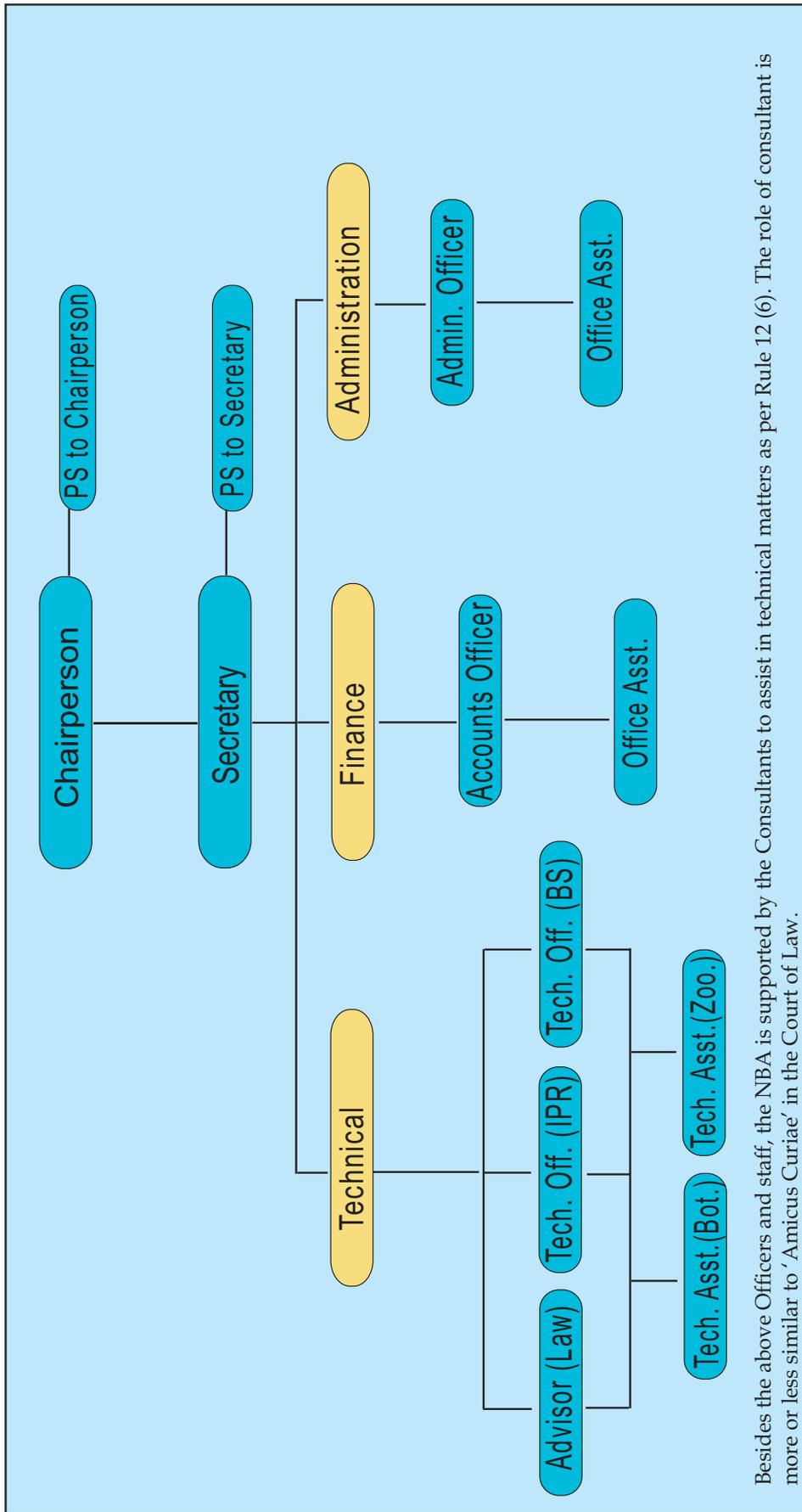
2. Prof. Raghavendra Gadagkar, Member, National Biodiversity Authority

Invited Technical Seminars and Lectures

- (1) Invited lectures entitled “Testing Hamilton’s Rule using the primitively eusocial wasp *Ropalidia marginata*” and “The Functional Organization of a Tropical Insect Society” delivered at the Department of Entomology, The Ohio State University, USA, 23 April 2008.
- (2) Plenary Lecture entitled “The Functional Organization of a Tropical Insect Society” delivered at the 23rd International Congress of Entomology 2008, Durban, South Africa, 10 July 2008.
- (3) Centenary Lecture entitled “What Can We Learn from Insect Societies?” delivered at the University of Pretoria, South Africa, 15 July 2008.
- (4) Invited lecture entitled “Testing Hamilton’s Rule using the Primitively Eusocial Wasp *Ropalidia marginata*” delivered at the Department of Genetics, University of Pretoria, South Africa, 14 July 2008.
- (5) Invited lecture entitled “Possible novel functions of aggression in the primitively eusocial wasp *Ropalidia marginata*” delivered at the Department of Zoology and Entomology, University of Pretoria, South Africa, 16 July 2008.
- (6) Plenary Lecture entitled “The Functional Organization of a Tropical Insect Society” delivered at the 63rd Conference of the Korean Association of Biological Sciences, Mokpo University, Korea, 20–22 August 2008.
- (7) Invited lecture entitled “The Evolution of a Tropical Insect Society” delivered at Seoul National University, Korea, 22 August 2008.
- (8) Invited lecture entitled “War and Peace: Conflict and Cooperation in a Tropical Insect Society” delivered at the World Knowledge Dialogue Foundation Symposium, Crans-Montana, Switzerland, 11 September 2008.
- (9) Public Lecture entitled “Interrogating an Insect Society” delivered at Wissenschaftskolleg zu Berlin, Germany, 23 November 2008.
- (10) Darwin Bicentenary Lecture entitled “Is the peacock merely beautiful or also honest?” delivered at the Kerala Shastra Sahitya Parishad, Calicut, Kerala, 13 February 2009.

Annex-2 Organizational Chart of NBA

Organisational Chart of National Biodiversity Authority



Besides the above Officers and staff, the NBA is supported by the Consultants to assist in technical matters as per Rule 12 (6). The role of consultant is more or less similar to 'Amicus Curiae' in the Court of Law.

Annex-3**Staff Strength of NBA**

Position	Sanctioned	Filled	Vacant	Remarks
Chairperson	1	1	-	
Secretary	1	1	-	
PS to Chairperson	1	-	1	
PS to Secretary	1	-	1	
Administrative Officer	1	1	-	
Accounts Officer	1	1	-	
Technical Officer - IPR-1 Benefit sharing-1	2	1	1	Post re-advertised third time after resignation of the incumbent.
Advisor (Law)	1	1	-	
Office/Computer Assistants	2	2	-	
Technical Assistants	2	2	-	
Stenographer "C"	1	1	-	
Stenographer "D"	1	-	1	Due to non-receipt of candidate on deputation, this post is being advertised.
Peon	1 (1-post surrendered as per MoEF Lr. No. 20011/6/07-GC dt 13.4.07)	1	-	Two persons engaged through outsourcing.
Total	16	12	4	

The list of the officers and staff of NBA

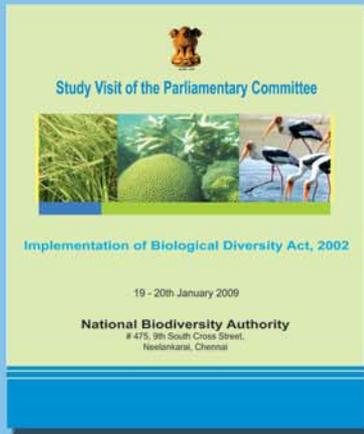
No.	Person	Designation
1.	Dr. P. L. Gautam	Chairman
2.	Mr. C. Achalender Reddy	Secretary
3.	Dr. K. Venkataraman	Senior Consultant on loan basis from ZSI
4.	Ms. S. Padmavathi	Administrative Officer
5.	Ms. Lakshmi Sankararaman	Accounts Officer
6.	Mr. K. Chitrarasu	Advisor(Law)
7.	Dr. K. P.Raghuram	Technical Officer (Benefit Sharing)
8.	Mr. P. Anandhakumar	Technical Assistant (Botany)
9.	Mr. P.Jaishankar	Technical Assistant (Zoology)
10.	Mr. D.Chezhian	Office/Computer Assistant
11.	Ms. S. Kanchana	Office/Computer Assistant
12.	Ms. G. S. Sheeba	Stenographer Grade C
13.	Mr. Surendra Ram	Group D

Chairperson and Secretary of State Biodiversity Boards

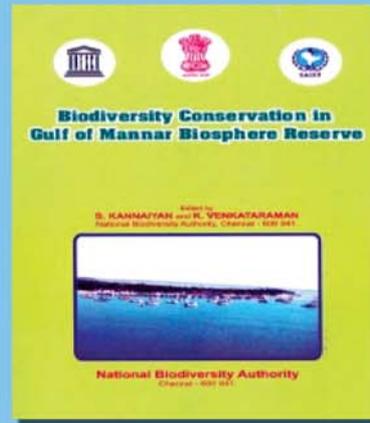
No	State	Chairperson	Secretary
1	Andhra Pradesh	Dr. Hampaiah Ralladoddi	Dr. V.Bhaskara Ramana Murthy
2	Arunachal Pradesh	Mr. Tabom Bam	Mr. G.N. Sinha
3	Chhattisgarh	Mr. Vikram Usaindi	Mr. N.K.Bhagat
4	Goa	Mr. Alexio Sequeira	Dr. Joseph S.R. de Souza
5	Gujarat	Mr. D.Rajagopalan	Mr. N.S.Yadav
6	Haryana	Hon'ble Minister for Forests	Mr. Vijai Vardhan
7	Himachal Pradesh	Ms. Asha Swarup	Dr.Nagin Nanda
8	Jharkhand	PCCF (Biodiversity)	Mr. S.K. Sharma
9	Karnataka	The Principal Secretary, Dept. of Forest, Ecology & Environment	Mr. Ramesh C. Prajapathi
10	Kerala	Dr. V. S. Vijayan	
11	Madhya Pradesh	Mr. Rakesh Sahani	Mr. A.K. Jain
12	Manipur	Mr. Rakesh	Mr. Balaprasad
13	Mizoram	Mr. H. Rohluna	Mr. L.R. Thanga
14	Nagaland	Honorable Minister for Forests	Mr. Albert Solo
15	Punjab	Mr. Prakash Singh Badal	Dr. Neelima Jerath
16	Sikkim	Dr. Pawan Chamling	Mr. N.T. Bhutia
17	Tamil Nadu	Mr. N. Selvaraj	Mr. R.Gunasekaran
18	Tripura	Secretary/ Commissioner, Department of Forests	Dr. A.K.Gupta
19	Uttarakhand	Honorable Minister for Forests	Mr.A.R. Sinha
20	Uttar Pradesh	Shri. Parameswaran Iyer	Mr.Pawan Kumar
21	West Bengal	Prof. Arun Kumar Sharma	Mr.Debal Ray

Annex-4

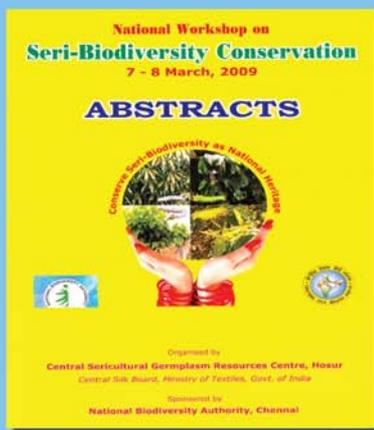
Important Publications of NBA



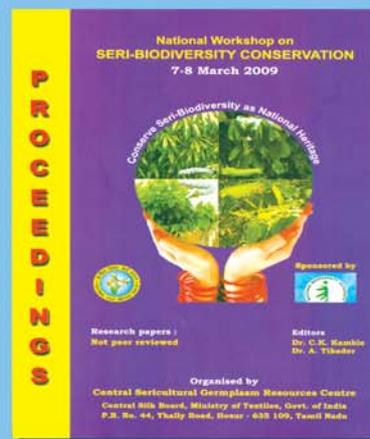
Report for the Study Visit of the Parliamentary Committee, 19-20 January 2009



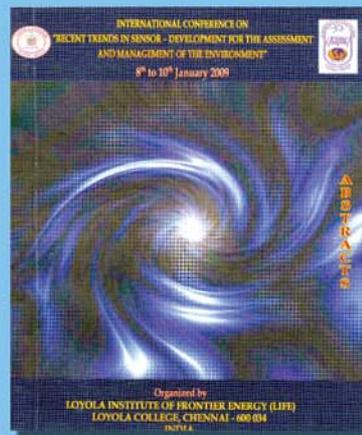
Proceedings of the International Workshop on "Gulf of Mannar Biosphere Reserve: An Ecological Model for Biodiversity Conservation Livelihood and Sustainability"



Abstract and proceedings of "Conserve Seri-Biodiversity as National Heritage" National Workshop on Seri-Biodiversity Conservation, 7-8 March 2009



Abstract and proceedings of "Conserve Seri-Biodiversity as National Heritage" National Workshop on Seri-Biodiversity Conservation, 7-8 March 2009



Proceedings of International Conference on Recent Trends in Sensor – Development for the Assessment and Management of the Environment.

Annex-5**Support extended for trainings/seminars/workshops etc.**

No	Institution	Theme
1.	Loyola College, Chennai	"Biodiversity and Agro biodiversity Conservation Mela" from 19 to 22 May 2008
2.	MSSRF, Taramani, Chennai	Capacity Building legislation pertaining to Biodiversity and Farmers Rights-one year duration 2008-2009
3.	Andhra Pradesh Biodiversity Board	National Workshop on Bio-piracy and Intellectual Property Rights, Capacity Building initiative for Biodiversity held on 23 August 2008
4.	Botanical Survey of India, Southern Circle	"Consultation Meeting with invited experts to finalise state-wise of threatened plant species for implementation of Section 38 of BD Act, 2002 held on 11 and 12 September 2008
5.	Karnataka Biodiversity Board	Inventorying industries involved in exploitation of Biodiversity in Karnataka 2008.
6.	Andhra Pradesh Biodiversity Board	Inventorising industries involved in exploitation of Biodiversity in Andhra Pradesh 2008.
7.	West Bengal Biodiversity Board	Inventorising industries involved in exploitation of Biodiversity in West Bengal-six months duration 2008.
8.	Punjab State Council for Science & Technology	Inventorising industries involved in exploitation of Biodiversity in Punjab 2008-2009.
9.	Karnataka Biodiversity Board,	Organising workshop on Biodiversity related to traditional knowledge in Karnataka on 2 March 2009
10.	Madhya Pradesh Biodiversity Board	Documenting of Bio-resources based industries in Madhya Pradesh and the quantum of bio-resources being utilized in Madhya Pradesh-six-months duration 2008.
11.	Central Sericultural Germplasm Resources Centre, Central Silk Board, Hosur, Tamil Nadu.	National workshop on "Seri- Biodiversity Conservation" on 7 and 8 March 2009
12.	Loyola College, Chennai	"Recent Trends in Sensor-Development for the Assessment and Management of the Environment" held from 8 to 10 January 2009
13.	Trust for Environment, Conservation & Community Development (TREE), Chennai	"Summit for Students to Empower Them To Take Action to Create Individual Plans for Protecting The Biodiversity" held on 20 and 21 January 2009.
14.	National Bureau of Animal Genetic Resources, Karnal	National Symposium on "Livestock Biodiversity Conservation and Utilisation: Lessons from past and future perspectives" held on 12 and 13 February, 2009
15.	Bharathiar University, Coimbatore	"International Congress of Global Warming on "Biodiversity of Insects: Management and Conservation" held from 9 to 12 February 2009
16.	Trust for Advancement of Agricultural Sciences (TASS), New Delhi	"Brainstorming workshop to discuss important issues pertaining to conservation of Farm Animal Genetic resources in India" held on 10 April 2009
17.	Loyola College, Chennai	"Modern Approaches to Research Methodology, Electronic Research Tools, E-Content and Biotechnological Tools for Biodiversity Conservation", Held from 10 to 13 March 2009
18.	Bombay Natural History Society, Mumbai	"Conservation and Management of Point Calimer, Ramsar Site: Past Present and Future" held on 22 February 2009.
19.	Kalpavriksh Environment Action Group, Pune	Publication of directory of community conserved areas in India

Annex-6

NBA Citizen's Charter

1. Vision

Conservation and sustainable use of India's rich biodiversity and associated knowledge with peoples participation, ensuring the process of benefit sharing for well being of present and future generations.

2. Mission

Ensure effective implementation of Biological Diversity Act, 2002 and the Biological Diversity Rules 2004 for conservation of biodiversity, sustainable use of its components and fair and equitable sharing of benefits arising out of utilization of genetic resources.

3. Mandate

Reaffirm the sovereign rights over the bioresources of India and contribute towards prevention of misappropriation of bioresources and/or associated knowledge.

Provide policy and support relating to conservation, sustainable use of its components and equitable sharing of benefits arising out of utilization of biological resources.

Regulate activities by formulation of guidelines, extension materials for access to biological resources and for reaching the stakeholders and ensuring fair and equitable benefit sharing in accordance with the provisions of the Biological Diversity Act, 2002.

Take measures to oppose the grant of the intellectual property rights to persons in other countries on any biological resource of India or knowledge associated with such biological resources of Indian origin.

Advise the State Governments concerning their area specific biodiversity, and in notifying heritage sites and also suggest measures for their management and sustainable use.

Provide guidance and technical and financial support to Biodiversity Management Committees (BMC) for preparing People's Biodiversity Registers (PBR) in the areas falling under their respective jurisdiction.

Perform such other functions as may be necessary to implement the provisions of Biological Diversity Act, 2002

4. Stakeholders

Biodiversity is a multidisciplinary subject involving diverse activities, initiatives and

stakeholders. The stake holders in biological diversity include the Central Government, State Governments, Union Territories, Institutions of Panchayat Raj and Civil Society Organisations, industries, NGOs, Research and Development Institutions, Universities and public at large.

5. Services Offered

Promotion of Conservation and sustainable use of biodiversity.

Co-ordination of the activities of the State Biodiversity Boards and Biodiversity Management Committees, sponsor studies and adaptive/operational investigation and research by providing technical guidance, and Commissioning of studies as found necessary.

Advise Government of India on matters relating to conservation of biodiversity, sustainable use of its components and equitable sharing of benefits of biological resources.

Grant approval for - access to biological resources occurring in India or associated knowledge, transferring the results of research, seeking intellectual property right, third party transfer of accessed bioresource for research or for commercial utilisation or for bio-survey and bio-utilisation.

Facilitate access to bioresources by all stakeholders and ensuring equitable benefit sharing between users and conservers of biodiversity in a transparent manner.

6. Grievances Redressal Mechanism

Secretary, National Biodiversity Authority is the designated Officer for Re-dressal of Public Grievances and can be addressed to:

The Secretary,
National Biodiversity Authority,
TICEL Bio Park
5th Floor, Taramani Road,
Taramani, Chennai - 600 113.
Phone : 044-2254 1071; Fax : 044-2254 1074
email: secretary@nbaindia.in

7. Expectations from the citizens and stakeholders

To abide by the provisions of Biological Diversity Act, 2002 and rules made there under and imbibe and promote the spirit of conservation of natural resources and respect for the laws of nature and extend cooperation for carrying out the above activities by NBA and SBBs in the overall interest of human kind.

Audit Report of the Comptroller & Auditor General of India on the Accounts of National Bio Diversity Authority, Chennai for the year ended 31 March 2009.

We have audited the attached Balance Sheet of **National Bio Diversity Authority, Chennai** as at 31 March 2009 and the Income & Expenditure Account/Receipts & Payment Account for the year ended on that date under Section 19(2) of the Comptroller & Auditor General's (Duties, Powers & Conditions of Service) Act, 1971 read with section 29 of the Biological Diversity Act, 2002. These financial statements are the responsibility of the **Authority's** management. Our responsibility is to express an opinion on these financial statements based on our audit.

2. This separate Audit Report contains the comments of the Comptroller & Auditor General of India (CAG) on the accounting treatment only with regard to classification, conformity with the best accounting practices, accounting standards and disclosure norms, etc. Audit observations on financial transactions with regard to compliance with the Law, Rules & regulations (Propriety and Regularity) and efficiency-cum-performance aspects, etc., if any are reported through Inspection Reports/CAG's Audit Reports separately.

3. We have conducted our audit in accordance with auditing standards generally accepted in India. These standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatements. An audit includes examining, on a test basis, evidences supporting the amounts and disclosure in the financial statements. An Audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of financial statements. We believe that our audit provides a reasonable basis for our opinion

4. Based on our audit, we report that

- i) We have obtained all the information and explanations, which to the best of our knowledge and belief were necessary for the purpose of our audit.

- ii) The Balance Sheet and Income & Expenditure Account/Receipts & Payment Account dealt with by this report have been drawn up in the format approved by Govt. of India, Ministry of Finance.
- iii) In our opinion, proper books of accounts and other relevant records have been maintained by the National Biodiversity Authority as required under Section 29 of the Biological Diversity Act 2002 in so far as it appears from the examination of such books.
- iv) We further report that

A Accounting Policy

Note in Significant Accounting Policy at item no. 6 states that depreciation was provided on Straight Line Method (SLM) at the rates prescribed by the Income Tax (IT) Act, 1961. However the depreciation was charged on Written Down Value (WDV) method. The accounting policy is deficient to this extent.

B Grants-in-aid

Out of the grants in aid of Rs 3.10 crore (Grant of Rs. 2.86 crore and revalidation of unspent amount of Rs. 0.24 crore from previous financial year 2007-08.) received during the year, the organisation could utilise a sum of Rs 2.81 crore leaving a balance of Rs. 0.29 crore as unutilised grant as on 31 March 2009.

C Management letter

Deficiencies which have not been included in the Audit Report have been brought to the notice of the NBA through a management letter issued separately for remedial /corrective action.

- v) Subject to our observations in the preceding paragraphs, we report that the Balance Sheet and Income & Expenditure Account/Receipt & Payment Account dealt with by this report are in agreement with the books of accounts.
- vi) In our opinion and to the best of our information and according to the explanations given to us, the said financial statements read together with the Accounting Policies and Notes on Accounts, and subject to the significant matters stated above and other matters mentioned in Annexure I, to this Audit Report give a true and fair view in conformity with accounting principles generally accepted in India.

- a. In so far as it relates to the Balance Sheet, of the state of affairs of the **National Biodiversity Authority, Chennai** as at 31 March, 2008 and
- b. In so far as it relates to Income & Expenditure Account of the surplus for the year ended on that date.

For and on behalf of the C&AG of India.


**Principal Director of Audit
 (Scientific Departments),
 New Delhi.**

Place: *New Delhi*

Date: *22/10/09*

Annexure-I to Audit Report

1. Adequacy of Internal Audit System

Internal audit of National Biodiversity Authority was conducted for the first time since its inception in April 2009.

2. Adequacy of Internal Control System

The Internal control system was not adequate. Periodical check to ensure sound internal control mechanism in NBA is necessary and action thereon needs to be taken by Ministry of Environment and Forests.

3. System of physical verification of fixed assets

Physical verification of fixed assets was carried out by the NBA.

4. System of physical verification of inventory:

Physical verification of stores/inventories was conducted first time for the items procured by NBA since inception.

5. Regularity in payment of statutory dues

The NBA had paid the statutory dues.


Principal Director of Audit

List of Abbreviations Used

ADMA	-	Ayurvedic Drug Manufacturers Association
BD Act	-	Biological Diversity Act
BMC	-	Biodiversity Management Committees
BSI	-	Botanical Survey of India
BSNL	-	Bharat Sanchar Nigam Limited
CBD	-	Convention on Biological Diversity
CSIR	-	Council for Scientific and Industrial Research
DFO	-	District Forest Officer
DGFT	-	Director General of Foreign Trade
DNR	-	Designated National Repository
EC	-	Expert Committee
FRLHT	-	Foundation for Rehabilitation of Local Health Tradition
GBIF	-	Global Biodiversity Information Facility Foundation
GEER	-	Gujarat Ecological Education and Research Foundation
IARI	-	Indian Agricultural Research Institute
IBIS	-	Indian Biodiversity Information System
IBID	-	International Day for Biological Diversity
ICAR	-	Indian Council of Agricultural Research
IMTECH	-	Institute of Microbial Technology
IPR	-	Intellectual Property Right
ISRO	-	Indian Space Research Organisation
ITC(HS)	-	Indian Trade Classification (harmonised system)
KFD	-	Karnataka Forest Department
KSBB	-	Kerala State Biodiversity Board
LMMC	-	Like Minded Mega Diverse Countries
MPSBB	-	Madhya Pradesh State Biodiversity Board
MoEF	-	Ministry of Environment and Forests
MoU	-	Memorandum of Understanding
NBA	-	National Biodiversity Authority
NBAGR	-	National Bureau of Animal Genetic Resources
NBPGR	-	National Bureau of Plant Genetic Resources
NGC	-	National Green Corps
NTC	-	Normally Traded Commodities
PAU	-	Punjab Agricultural University
PBR	-	People's Biodiversity Register
PPV&FRA	-	The Protection of Plant Varieties and Farmers' Rights Authority
RET plants	-	Rare, Endangered and Threatened Plants
SBB	-	State Biodiversity Board
SACON	-	Salim Ali Centre for Ornithology and Natural History
SACRTF	-	South Asia Coral Reef Task Force
SACEF	-	South Asia Co-operative Environment Programme
UT	-	Union Territory
UNESCO	-	United Nations Educational, Scientific and Cultural Organisation
UNEP	-	United Nations Environment Programme
WBBB	-	West Bengal Biodiversity Board

