

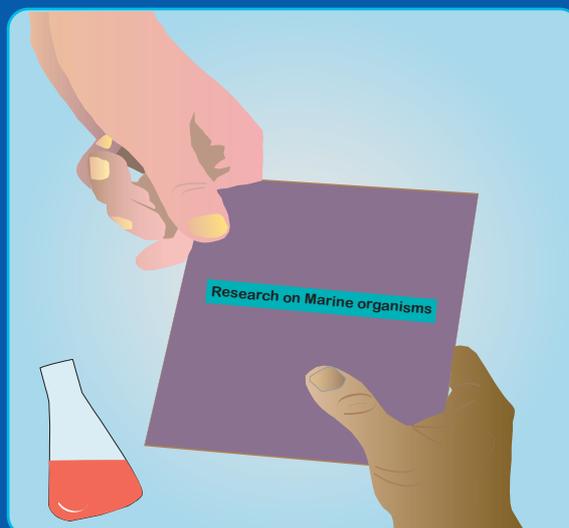


National Biodiversity Authority

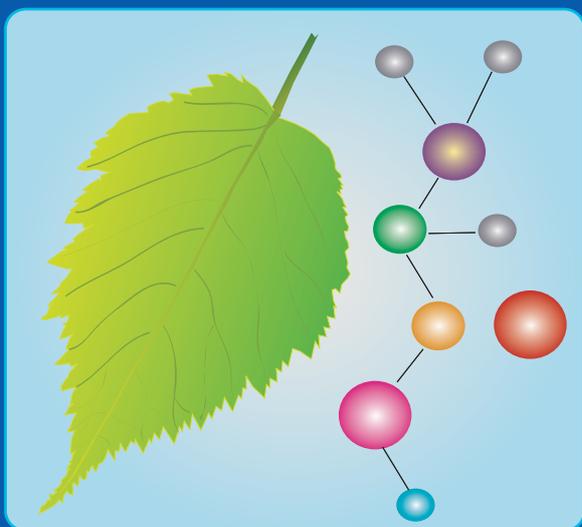
Annual Report 2007-2008



Access to Biological Resources and Associated Traditional Knowledge



Transfer of Research Results



Intellectual Property Rights



Third Party Transfer of Accessed Biological Resources and Associated Traditional Knowledge



ANNUAL REPORT

2007 - 2008

National Biodiversity Authority

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- Prof. Kannaiyan was appointed as Chairperson, National Biodiversity Authority, Chennai for the period starting 20th May 2005 until 19th May 2008.
- Five non-official members from amongst specialists and scientists were appointed for a period beginning 22nd February 2007 until 21st February 2010. The non-official members appointed include -Prof. Raghavendra Gadagkar, Dr.S.Subramaniyan, Prof.K.Kathiresan, Dr.A.K.Ghosh and Prof. Anil Gupta.
- The Ninth Authority Meeting was conducted on 29th of June 2007 at Chennai wherein the approvals for draft guidelines for (i) Designation of National Repository (ii) Endemic Endangered and Threatened Species as well as draft notification on (i) Enforcement of Biodiversity Act, 2002 (ii) Access and Benefit sharing were given. These were besides approval of applications received for Access, Third party transfer and Intellectual Property Rights (IPR).
- The Tenth Authority Meeting was conducted on 23rd of November 2007 at Chennai. Decisions taken include approval of annual accounts, approval of terms of reference for the Expert Committee to prepare guidelines on the establishment of Heritage Sites, approval of National Biodiversity data infrastructure, proposed budget for the year 2007-08 besides the approval of applications received for Access, Third party transfer and Intellectual Property Rights (IPR).
- Four Expert Committees were constituted to deal with the preparation of guidelines on (i) Medicinal Plants (ii) Soil and Microbial Diversity (iii) Intellectual Property Rights (iv) Traditional and Tribal Knowledge in accordance with the decision taken in the 10th Authority Meeting.
- Expert Committee meetings on - "Preparation of guidelines on Enforcement of Biodiversity Act, 2002", "Designation of National Repositories", " Access Benefit sharing and Material Transfer", to implement the recommendation of National Workshop on People Biodiversity Register as well as on "Biodiversity Heritage sites", "Normally Traded Commodities", and "Preparation of guidelines on publication of research results" were held during the year.
- The National Biodiversity Authority (NBA) conducted various exhibitions and training programmes such as - programme in Biodiversity Training at Thanjavur, Tamil Nadu, an international workshop on "Gulf of Mannar Biosphere Reserve -An Ecological Model for Biodiversity Conservation, livelihood and sustainability" in collaboration with UNESCO at Chennai.
- "State Biodiversity Board" has been formed in eighteen States using financial assistance were released by NBA.
- Five applications on "Access of Bioresources for Research/Commercial Purpose", 212 applications on "Intellectual Property Rights", one application on "Third Party Transfer" were approved during the Authority Meetings held during the year.
- Out of Rs.2.14 crores received as funds from the Ministry of Environment and Forests, Rs.1.90 crores was spent during the year. Rs.4.41 lakhs was received as fees for submitting applications from various applicants.



Biogeographically, India is situated at the tri-junction of the Afro-tropical, the Indo-Malayan and the Palearctic realms. Because of its proximity to all three realms, India possesses a unique assemblage of biodiversity elements to each of them. Based on available data, India ranks tenth in the world and fourth in Asia in plant diversity. According to surveys conducted so far, 47,000 species of plants and 90,000 species of animals are found in India. India is an acknowledged centre for rich crop diversity and is considered to be the home to 167 important cultivated plant species and 320 species of their wild relatives. India is considered to be the centre of origin of 30,000 to 50,000 varieties of rice, pigeon pea, mango, turmeric, ginger, pepper, banana, bitter gourd, okra, coconut, cardamom, jack fruit, sugarcane, bamboo, taro, indigo, sun hemp, amaranths, goose berries etc. There are several hundred species of wild crop relatives distributed all over the country. India's domesticated animals consist of diverse livestock including poultry and other animal breeds.

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

After an extensive and intensive consultation process involving stakeholders, the Government of India has brought the "Biological Diversity Act 2002". This Act was passed by the Lok Sabha on 2nd December, 2002 and by the Rajya Sabha on 11th December 2002. The salient features of the Biological Diversity Act 2002 are:



- To regulate access to biological resources of the country with equitable share in benefits arising out of the use of biological resources.
- To conserve and sustainable use of biological diversity.
- To set up National Biodiversity Authority (NBA), State Biodiversity Board (SBB) and Biodiversity Management Committees (BMCs).
- To create National, State and Local Biodiversity Fund and its use for conservation of biodiversity.
- To respect and protect knowledge of local communities traditional knowledge related to biodiversity.
- To conserve and develop the areas of importance from the standpoint of biological diversity by declaring them as biological diversity heritage sites.

The Biological Diversity Act of India, 2002 and the Biological Diversity Rules, 2004, is being implemented by the National Biodiversity Authority established by the Government of India.

The functions and powers of National Biodiversity Authority are as follows:

1. to regulate activities, approve and advice the Government of India on matters relating to the conservation of biodiversity, sustainable use of its components and equitable sharing of benefits arising out of the utilization of biological resources.
2. to Grant approval under Section 3, 4 and 6 of the Biodiversity Act 2002.
3. to select and notify the areas of biodiversity importance as biodiversity heritage sites under this Act and perform other functions as may be necessary to carry out the provisions of the Act.
4. to take necessary measures to protect the biological diversity of the country as well as to oppose the grant of intellectual property rights to any country outside India on any biological resource obtained from India or knowledge associated with such biological resource derived from India.

The National Biodiversity Authority (NBA) also performs functions such as laying down the procedure and guidelines to govern activities such as Access and Benefit Sharing, Prior Informed Consent, Mutually Agreed Terms and Intellectual Property Rights. Some of the key mandates of the Biological Diversity Act 2002 include an undertaking to respect, protect and register at local, state or national levels, the knowledge of local people relating to biological diversity, regulate access to biodiversity, associated knowledge and benefit sharing as well as ensuring equitable sharing of benefits arising out of the use of accessed biological resources, their byproducts, innovative practices

associated with their use and applications and knowledge relating thereto in accordance with mutually agreed terms and conditions between the persons applying for such approval, local bodies concerned and benefit claimers. The authority will also coordinate the activities of the State Biodiversity Boards and Biodiversity Management Committees by providing them with technical assistance and guidance, as well as sponsor investigations and research. All foreign nationals/ organizations require prior approval of NBA for obtaining biological resources and/or associated knowledge for use. Indian scientists/individuals require approval of NBA for transferring results of research to foreign nationals/organizations. Prior approval is needed from NBA for IPRs in any invention in India or outside India on Bioresources.

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

- Lay down procedures and guidelines to govern the activities provided under the Act, such as
 - For obtaining any biological resource;
 - For transferring the results of any research (Certain collaborative research projects exempted).
- To advise the Government of India on specific areas such as:
 - Notifications of threatened species
 - Designation of institutions as repositories for different categories of biological resources; and



Vallanadu Blackbuck Sanctuary, Tuticorin

- Exempt certain biological resources normally traded as commodities.
- To build up database and documentation system
- Create awareness through mass media
- Training of personnel, and
- Necessary measures in the areas of Intellectual Property Rights

State Biodiversity Boards [SBB]

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

Biodiversity Management Committee[BMC]

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

Recent Developments under the NBA

Implementation of different sections of the Biological Diversity Act is the major task of NBA. Guidelines on Collaborative Research Projects (under Section 5 of the BD Act) involving transfer or exchange of biological resources or information relating thereto between institutions, including government sponsored institutions of India and such institutions in other countries has been prepared and notified. Establishment of Designated National Repository (DNR) (Section 39) is an essential part of the infrastructure for biodiversity conservation. DNR consists of service providers and repositories of preserved specimen consisting of all fauna, herbarium (dried plant material for research), living cells, genomes of organism, and information relating to heredity and functions of biological systems. DNRs also contain collections of culturable organisms (e.g. micro-organisms, plant, animal

and human cells), replicable parts of these (e.g. genomes, plasmids, viruses, DNAs), viable but not yet culturable organisms, cells and tissues, as well as databases containing molecular, physiological and structural information relevant to these collections and related bioinformatics." National Biodiversity Authority India has prepared guidelines on Designated National Repository and it is in the process of notification. Other guidelines such as access to bioresources or associated knowledge for research or for commercial purpose by foreigners (Section 3 of the BD Act) and determination of equitable benefit sharing arising out of the use of accessed biological resources, their by-products, innovations and practices associated with their use and applications and knowledge (Section 21 of the BD Act), transfer of results of any research relating to any biological resources occurring in or obtained from India for further research or for commercialization (Section 4 of BD Act), intellectual property rights of invention based on any research or information on a biological resources obtained from India (Section 6 of the BD Act), biological resources normally traded as commodities (Section 40 of the BD Act), and areas of importance as Biodiversity Heritage sites (Section 37) are in the process of notification under the Act.



Medicinal Plants exhibit at Vivekananda Kendra, Kanyakumari under Natural Resource Development Programme (NARDEP)

The Notification S.O.262 (E) was published in the Gazette of India dated 22nd February, 2007.

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

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

Prof. S. Kannaiyan, Chairperson, National Biodiversity Authority, Chennai.

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

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

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

Seven ex-officio members in the rank of Joint Secretary or an Officer of an equivalent rank who deal with the following subjects are appointed by the Central Government vide Notification.

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

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

Five non-official members are appointed (Notification No. 262 (E) on 22nd February, 2007) until 21st February, 2010 from amongst specialists and scientists having special knowledge of or experience 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, representatives of industry, conservers, creators and knowledge-holders of biological resources. The following are the names and address of the non official members notified under Sec. 8 of the Biological Diversity Act, 2002.

1. Prof. Raghavendra Gadagkar

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

2. Dr. S. Subramaniyan

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

3. Prof. K. Kathiresan

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

4. Dr. A. K. Ghosh

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

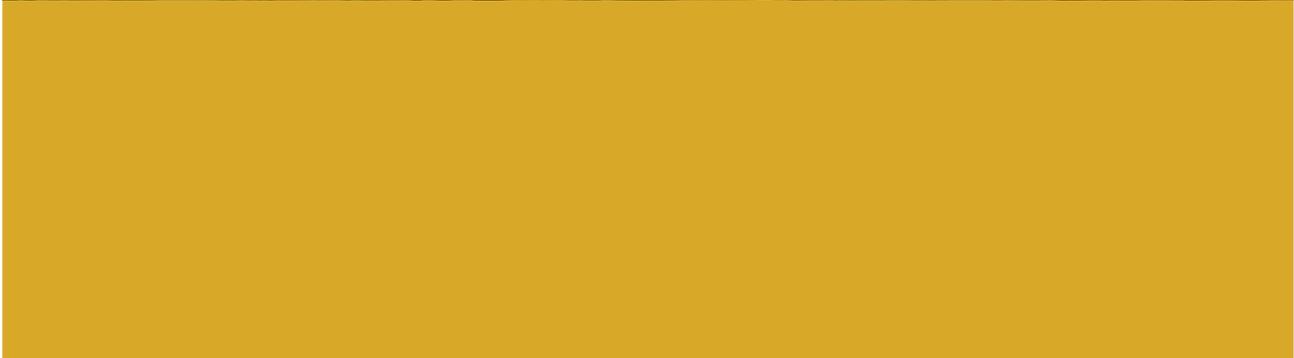
5. Prof. Anil Gupta

Indian Institute of Management, Ahmedabad 380 015.

The term for office of the non-official members of the National Biodiversity Authority shall be for a period of three years with effect from 22nd Feb, 2007.

The term of office of Prof. S. Kannaiyan as Chairperson of the National Biodiversity Authority shall be upto 19th May, 2008.

[F.No.J-22018/46/2003-CSC (BC)]
G. Balachandran, Joint Secretary



9th Authority Meeting

The Ninth meeting of the National Biodiversity Authority was conducted on 29.06.07 at the National Biodiversity Authority Conference Hall, Chennai.

**Meetings Conducted by NBA**

Expert Committee meeting on Preparation of guidelines on Enforcement of Biodiversity Act, 2002" organized by National Biodiversity Authority held on 23.04.07 at NBA Conference Hall, Chennai.



Third meeting of "Expert Committee meeting on Designation of National Repositories" organized by National Biodiversity Authority held on 24.04.07 at Conference Hall of National Biodiversity Authority, Chennai.



Expert Committee meeting to Evaluate the Access, Patent, Transfer of Research Results and Material Transfer Applications organized by National Biodiversity Authority held on 28.04.07 at Conference Hall of National Biodiversity Authority, Chennai.

Expert Committee Meeting on Access, Benefit Sharing and Material Transfer on 16.05.2007 organized by National Biodiversity Authority at Conference Hall, National Biodiversity Authority, Chennai.



Expert Committee Meeting to implement the recommendation of National Workshop on People Biodiversity Register organized by National Biodiversity Authority on 17.05.2007 at Conference Hall, National Biodiversity Authority.



Expert Committee Meeting on Transfer of Research Results organized by National Biodiversity Authority on 13.06.2007 at Conference Hall, National Biodiversity Authority.



Expert Committee Meeting on Biodiversity Heritage sites organized by National Biodiversity Authority on 22.06.2007 at Conference Hall, National Biodiversity Authority.



Important decisions taken in the 9th Authority Meeting:

- Approval of Draft Guidelines on Designation of National Repository.
- Approval of Draft Guidelines on Endemic Endangered and Threatened Species.
- Approval of Draft Notification on Enforcement of Biodiversity Act, 2002.
- Approval of Draft Notification on Access and Benefit Sharing.
- Approval of Appointment of Staff for NBA .
- Recruitment of Staff for National Biodiversity Authority.
- Approval of Minutes of the Meeting on Implementation of the Recommendations of Peoples Biodiversity Register.
- Minutes of the First Meeting on the Guidelines on Research Results

- Minutes of the First Meeting on the Guidelines on Heritage Sites.
- Minutes of the of the Meeting on the EC on evaluation of application on access, Research Results, IPR and Third Party transfer.
- Minutes of the Meeting on the EC on Determinations of Benefit sharing on the applications submitted to NBA.
- Approval of Application on Access, Research Results, IPR and third party transfer on bioresources of India (Between 8th and 9th authority meeting).
- Approval of Approval of Annual Accounts comprising Receipts and Payments, Income and Expenditure, Balance Sheet for the year 2006 - 07.
- Approval of Annual Report of NBA for the year 2006 - 07.
- Approval of Honorarium for the Expert Consultant.

10th Authority Meeting

The Tenth meeting of the National Biodiversity Authority was conducted on 23.11.07 at Conference Hall, National Biodiversity Authority, Chennai.



National Consultation Workshop on Agrobiodiversity Hotspots and Access and Benefit Sharing on 19 & 20th July, 2007 organized by National Biodiversity Authority at Annamalai University, Annamalai Nagar, Chidambaram.



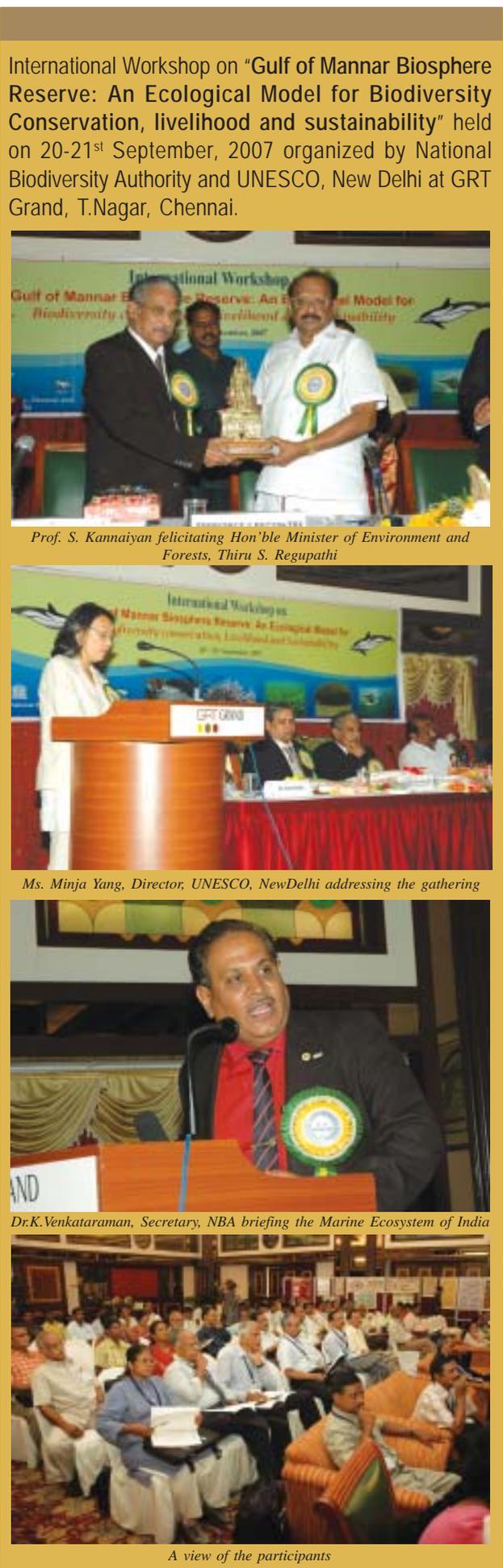
Expert Committee Meeting to evaluate the Access, Patent, Transfer of Research Results and Material Transfer Applications organized by National Biodiversity Authority held on 13th August, 2007 at Conference Hall of National Biodiversity Authority, Chennai.

Expert Committee meeting for Determination of Benefit sharing organized by National Biodiversity Authority held on 14th August, 2007 at Conference Hall of National Biodiversity Authority, Chennai.

Expert Committee to implement the Recommendation of National Workshop on People Biodiversity Register organized by National Biodiversity Authority held on 26th August, 2007 at Conference Hall of National Biodiversity Authority, Chennai.



Biodiversity Training Programme of Thanjavur organized by National Biodiversity Authority and Environment Research centre, Thanjavur held on 3rd September, 2007 at Thanjavur.



International Workshop on "Gulf of Mannar Biosphere Reserve: An Ecological Model for Biodiversity Conservation, livelihood and sustainability" held on 20-21st September, 2007 organized by National Biodiversity Authority and UNESCO, New Delhi at GRT Grand, T.Nagar, Chennai.



Prof. S. Kamaian felicitating Hon'ble Minister of Environment and Forests, Thiru S. Regupathi



Ms. Minja Yang, Director, UNESCO, New Delhi addressing the gathering



Dr.K.Venkataraman, Secretary, NBA briefing the Marine Ecosystem of India



A view of the participants

Expert Committee meeting on preparation of guidelines on publication of Results of Research organized by National Biodiversity Authority held on 3rd October, 2007 at the Conference Hall of National Biodiversity Authority, Chennai.

Expert Committee meeting on Normally Traded Commodities organized by National Biodiversity Authority held on 10th October, 2007 at the Conference Hall of National Biodiversity Authority, Chennai.



Important decisions taken in the 10th Authority Meeting

- Approval of applications received for Access, Third party transfer, and IPR.
- Approval of Annual Accounts as desired by the Scientific Audit Office, Chennai.
- Minutes of the discussion meeting conducted on 1st September 2006 on the draft agreement for access to biological resources including IPR, third party transfer and transfer of research results etc. drafted by National Biodiversity Authority.
- Approval of Appointment of Administrative Officer and Extension of Deputation further by one year.
- Outcome of the Expert Committee on Access and Benefit sharing meeting.
- Approval of Terms of Reference for the Expert Committee to prepare guidelines on establishment of Heritage Sites.
- Approval of Benefit Sharing for IPR application.
- Approval of Application for Access of D1 Oil Company.
- Approval of National Biodiversity Data Infrastructure.

- Approval of Establishment of a Trust for Contributory Provident Fund.
- Approval of Appointment of different posts recruited.
- Approval of Recruitment of different posts through Re-Advertisement.
- Additional applications on Access, Patent, Transfer of research results and Third Party Transfer applications received from 03-10-2006 to 15.02.2007.
- Establishment of a committee to discuss and implement the recommendations of People's Biodiversity Register.
- Proceedings and Recommendations of the Workshop on 'Facilitating Formation of State Biodiversity Boards & Biodiversity Management Committees in Northern India'.
- Approval of Proposed Budget for the year 2007 - 2008.

Meetings conducted by National Biodiversity Authority after 10th Authority Meeting

Expert Committee meeting to Prepare Guidelines on Establishment of Heritage Sites organized by National Biodiversity Authority held on 14.03.2008 at the Conference Hall of National Biodiversity Authority, Chennai.



Expert Committee meeting on Normally Traded Commodities organized by National Biodiversity Authority held on 15.04.08 at the Conference Hall, National Biodiversity Authority, Chennai.

Japan Delegates meeting on 17.3.2008 and 18.3.2008 at the NBA Conference Hall, Chennai organized by National Biodiversity Authority, Chennai.

As per the decision taken in the Tenth meeting of the Authority the following four Expert Committees were constituted to deal with the preparation of guidelines on -

1. Medicinal Plants
2. Soil and Microbial Diversity
3. Intellectual Property Rights
4. Traditional and Tribal Knowledge

Openings for expert consultants for the above committees were advertised on the official web site of NBA. Upon recruitment of consultants, the committee will begin functioning starting the forthcoming financial year.

Status of Expert Committees

In exercise of the powers conferred under Sub-section (2) of Section 13 of the Biological Diversity Act, 2002 and Biological Diversity Rules, 2004 the following Expert Committees have been formed in the fourth National Biodiversity Authority Meeting held on 6th October, 2005 and the Tenth Authority meeting held on 23.11.07. The following are the names of Chairman and Committee Members. Further, the activities of the Expert committees established by National Biodiversity Authority have been listed below.

1. Expert Committee on Access and Benefit Sharing

The Expert committee on Access and Benefit sharing with 10 members met thrice under the Chairmanship of Prof. Dr. P. Pushpangadan (First meeting on 12.6.2006, Second meeting on 29 - 30.8.2006 and third meeting on 16.5.2007) and finalized the preparation of the draft notification. The National Biodiversity Authority organized a Brainstorming Meeting on "Developing Benefit Sharing Guidelines for Implementation on National Biodiversity Act and Rules" on 19th December 2007 at New Delhi, in collaboration with the United Nations University, Institute of Advanced Sciences (UNU-IAS) and the Ministry of Environment and Forests, Government of India (MoEF). The opening session was addressed by the Additional Secretary of MoEF, Mr. B. S.

Parsheera, further to which various speakers discussed elements relating to benefit sharing. The second session focused on brainstorming on the principles and elements of the guidelines. The other dignitaries who were present at the meeting included - Mr. G. Balachandran, Joint Secretary, MoEF, Prof. S. Kannaiyan, Chairman, NBA, Dr. K. Venkataraman, Secretary, NBA and Dr. Balakrishna Pisupati, UNEP. It was proposed that UNU-IAS will develop the draft of the benefit sharing guidelines paper by February 2008. Based on the paper and other elaborations to this report, a side event will be organized during the CoP-9 to the CBD in May 2008, in which India will be invited to be on the panel to share its experiences in implementation of the Act. In August 2008, a national workshop will be held to deliberate on the models suggested by the participants and will form the basis for finalizing the benefit sharing guidelines by November 2008.



2. Expert Committee on Normally Traded Commodities

The Expert committee on Normally Traded Commodities met thrice under the Chairmanship of Dr. J. P. Mishra with 11 Members. The First meeting on Normally Traded Commodities was held on 4th October, 2006. The second and third meeting of the Expert Committee on Normally Traded Commodities was held on 10th October, 2007 and 15th March, 2008 at NBA Conference Hall, Chennai respectively. The outcome of the meeting was placed in the 10th Authority meeting by the Secretary, NBA. It is the decision of the Expert Committee to initially notify major bioresources recommended by the Indian Institute of Spices Research, Spices Board, STCL Ltd., Tobacco Board, Directorate of Cashew Nut and Cocoa Development, Coffee and Rubber Board, as well as list of Medicinal Plants used in the All India Trade by the Export Potential of Indian Medicinal Plants and Products, (Occasional Paper No: 98 Export – Import Bank of India, World Trade Centre Complex, Mumbai – 400 005) as items of normally traded commodities in the Official Gazette.

3. Expert Committee on Designation of Repositories

The Expert Committee on Designation of Repositories met thrice under the Chairmanship of Dr. A. K. Ghosh with 12 members. The first Meeting of the Expert Committee on Designation of Repositories was held at the NBA Conference Hall on 28th November, 2006. The Chairman suggested that the National Repositories such as - ZSI for fauna, BSI for flora, ICAR for agri-horticultural plants, IMTECH for microbial collections, IARI for mycological collections etc, National Institute for Virology for Virus collections will have to be listed and redesignated under the Biodiversity Act, 2002 and Rules, 2004. All these institutions will have to be supported in terms of manpower and finance as part of the 11th plan document. Further, a monitoring mechanism will also have to be put into place.

The second and third meeting of this committee was held on 28th March, 2007 and 24th April, 2007 respectively at the Conference Hall, National Biodiversity Authority, Chennai and finalized the preparation of the draft

notification. The same was placed in the 9th Authority meeting for approval. The draft guidelines were sent to the MoEF, New Delhi for notification as “Designation of National Repositories and Guidelines for the structure and functioning of these Repositories under the Biological Diversity Act, 2002 for different categories of Biological Resources”.

4. Expert Committee on Transfer of Research Results (Section 4 of BD Act).

The Expert Committee on Transfer of Research Results met twice under the Chairmanship of Dr. S. K. Sharma with 24 members. The first meeting of the expert committee was held on 13th June, 2007. The Second meeting of the Expert Committee was held on 3rd October, 2007 in which the draft guideline was prepared. The draft guidelines were approved in the 10th Authority Meeting, further to which it has been sent to the Ministry of Environment and Forests for notification.

5. Expert Committee on Heritage sites (Sec. 37)

The Expert Committee on Heritage Sites met twice with 14 members under the Chairmanship of Shri. R. P. S. Katwal. The first meeting of the Expert Committee was held on 22nd June, 2007 at National Biodiversity Authority Conference Hall, Chennai. It was decided by the Chairman of the committee that Wildlife Institute shall take up the listing of the Biological Diversity Heritage Sites in India in consultation with Dr. S. Kaul, Director, Ministry of Environment and Forests. Also, it was decided not to include all those already protected by Wildlife Act 1972. The Expert Committee met on 14th March, 2008 for the second meeting and prepared the guidelines for the establishment of Biological Diversity Heritage Sites. The final draft guidelines has been placed at the official website of NBA as well as sent to all stake holders for their comments. The final draft will be placed in the Authority meeting for approval.



1. State Biodiversity Boards Notified

The following 18 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.

2. Financial Assistance Rendered by National Biodiversity Authority 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.

3. States which have been paid second Installment of once time Grant of 10 Lakhs

Himachal Pradesh, Arunachal Pradesh, Gujarat, Uttaranchal, Andhra Pradesh, Uttar Pradesh

4. Union Territory

National Biodiversity Authority took initiatives to implement Biodiversity Act 2002 by forming Biodiversity Councils to Monitor and implement the Biodiversity Management Committees in the Union Territories of India.



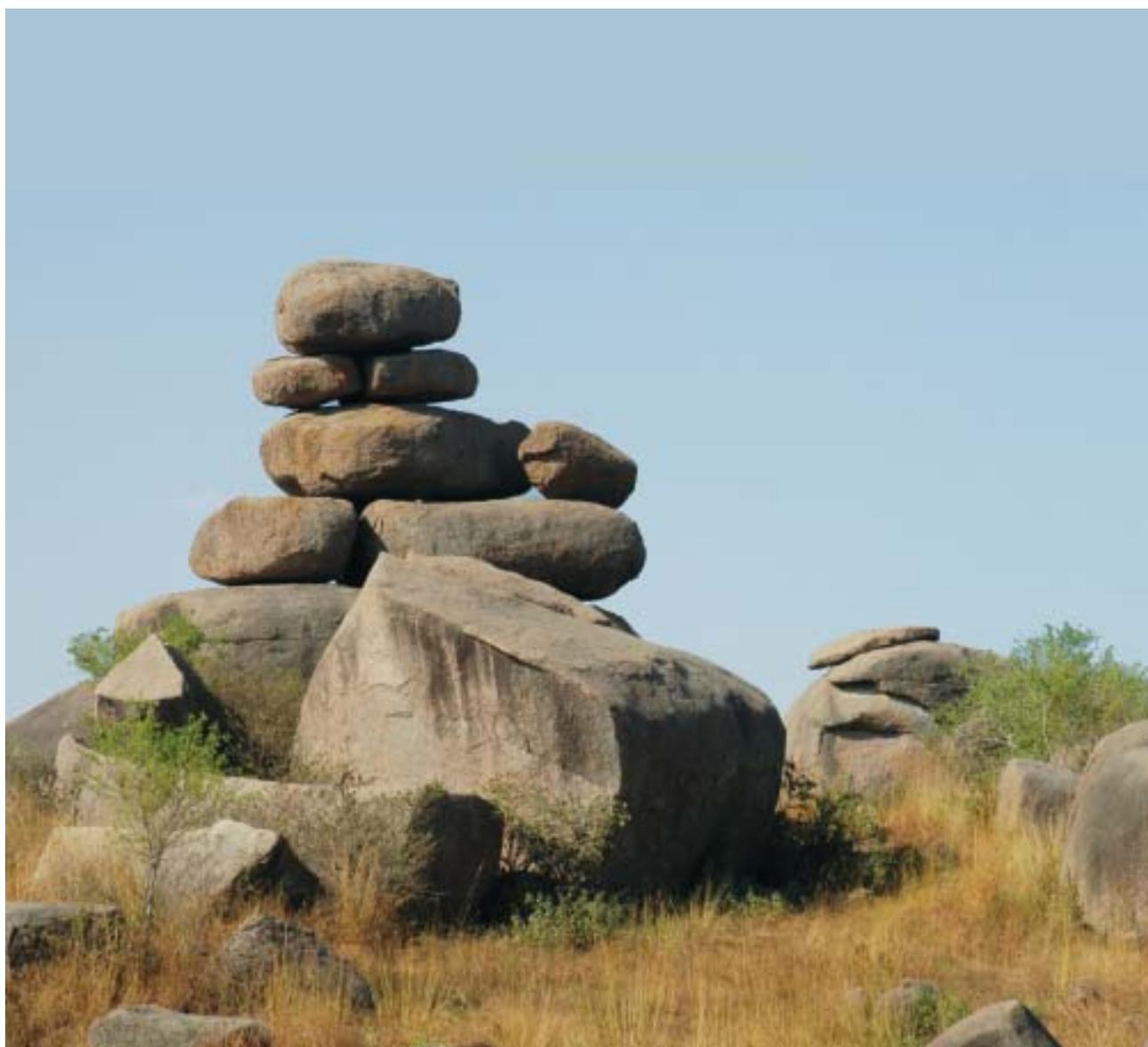


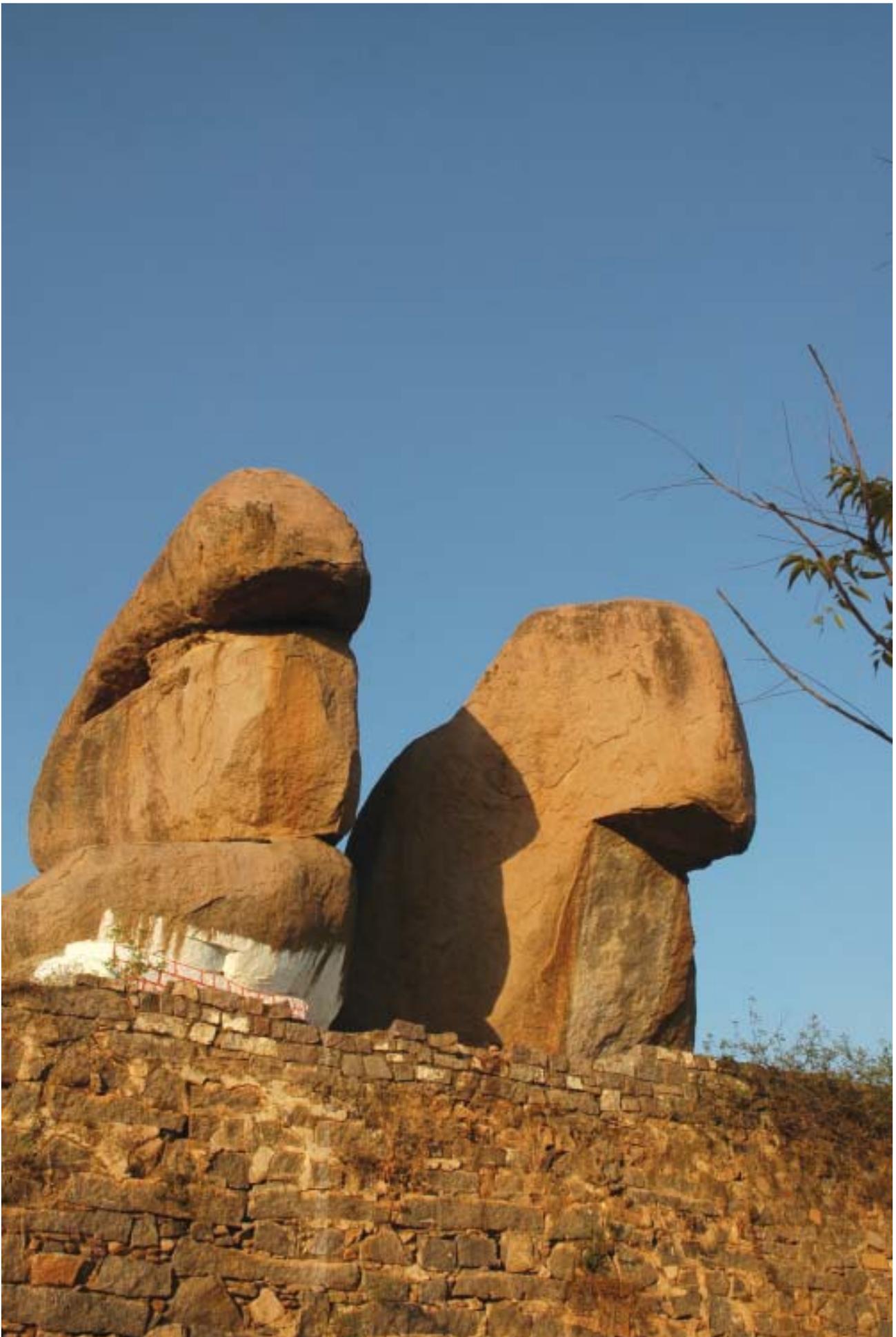
Details of Approval Granted for Undertaking Activities as Referred in Sec. 3, 4 and 6 of the Biological Diversity Act, 2002

With the approval of the Authority, the following applications have been approved by the National Biodiversity Authority during the year 2007 - 2008.

Number of applications approved in the 9th and 10th Authority Meetings

Details of Access Applications	9 th Authority Meeting	10 th Authority Meeting	Total
Form I - Access of Bioresources for Research / Commercial Purpose	3	2	5
Form II - Transfer of Research Results	-	-	-
Form III - Intellectual Property Rights	80	132	212
Form IV - Third Party Transfer	2	1	3
Collaborative Research Projects under Sec.5 of BD Act, 2002	-	2	2





Twin Rock at Golconda Palace, Hyderabad

Expert Committee on Intellectual Property Rights

An Expert Committee on Intellectual Property Rights has been constituted comprising of 16 members under the Chairmanship of Prof. J. P. Mishra, Asst. Director General, ICAR, New Delhi to prepare guidelines based on the following terms of reference.

- To develop guidelines for approval of IPR applications.
- Geographical location and purchase of bioresources from the open market.
- Benefit sharing mechanism for IPR.
- To develop guidelines for facilitating SBB for license fee / collection fee from Indian Industry for commercialization of bioresources.
- To develop guidelines on traditional knowledge and benefit sharing.
- To impart awareness to the commercial groups involved in bioresources trade and sharing benefits.
- Guidelines for safeguarding Intellectual Property Rights for the local bioresources and associated traditional knowledge documented in the PBR.



Point Calimere Bird Sanctuary

Approval Granted by the Authority for Access to Biological Resources



The following applications are approved by the National Biodiversity Authority for access of biological resources under Section 3 and Rule 14 of the Biological Diversity Act, 2002.

Name of the applicant: Dr. Michael Deyholos, University of Alberta, Department of Biological Sciences, Edmonton, Canada T6G 2E9.

Name of the bioresource: Ramie seeds (*Boehmeria nivea*).

Date of approval: 29.06.2007

Name of the applicant: Dr. Martina Aruna Padmanabhan, Faculty of Agriculture and Horticulture, Department of Agricultural Economics and Social Sciences, Chair of Resource Economics, Humboldt-University, Luisenstr.56, Berlin - 10099, Germany.

Name of the bioresource: Dried root powder and extract of *Chlorophytum* sp.

Date of Approval: 07.03.2007

Name of the applicant: Dr. S. S. Gnanamanickam, Senior Scientist - R & D, Novozymes Biologicals Inc., Salem, USA.

Name of the bioresource: Soil/Rhizosphere

Date of approval: 23.11.2007

Name of the applicant: Dr. S. S. Gnanamanickam, Senior Scientist - R&D, Novozymes Biologicals Inc., Salem, USA.

Name of the bioresource: Soil/Rhizosphere: 21 Bacterial strains deposited in IMTECH, Chandigarh, Bacterial strains.

Date of approval: 23.11.2007

Name of the applicant: Mr. Deepak Kiri, Vice president (Commercial - Exports), Pepsi Co India Holdings Private Limited, Gurgaon.

Name of the bioresource: Sea weed (*Kappaphycus alverzi*).

Date of approval: 29.06.2007.

The National Biodiversity Authority (NBA) is entrusted with the task of securing fair and equitable sharing of benefits arising out of the use of accessed biological resources, their by products, innovations and practices associated with their use and application and knowledge relating thereto. In order to increase the capacity of the locals to negotiate the benefit sharing process, National Biodiversity Authority regularly conducts awareness programmes. The following awareness programmes were conducted by the NBA in collaboration with universities, schools, colleges and civil society organizations during the years 2007-2008.

Training on Seaweed Cultivation to Fisherwomen of Mandapam Region - an Alternative Livelihood Approach held on 19.06.07 at Marine Algal Research Station, Mandapam organised by Central Salt and Marine Chemical Research Institute, Bhavnagar and National Biodiversity Authority, Chennai.

Bioliteracy for Biodiversity Conservation held on 02.09.07 at Thanjavur organized by NBA, Chennai and Centre for Ecology and Research, Thanjavur.

Training Programme on Conservation of Biodiversity held on 3rd September, 2007 at Thanjavur organized by NBA, Chennai and Environment Research Institute, Thanjavur.

Biodiversity Exhibition Programme held on 6th December, 2007 at C. S. Matriculation School, Thanjavur organized by NBA, Chennai and C. S. Matriculation School.

Workshop on "Biodiversity Forms and Functions" for Programme Officers of National Service Scheme of Educational Institute of Pondicherry region held on 8th - 9th December, 2007 at Vivekananda College of Education, Pondicherry organized by Department of Plant Sciences, KM Centre for Post Graduate Studies, Pondicherry and sponsored by NBA, Chennai.

Seminar on "Cattle Breeders Traditional Knowledge, Indigenous Cattle Breeds, Protection of Forest Resources and Biodiversity" held on 22nd February, 2008 at Pillar Hall, Nagamalai Pudupettai, Madurai organized by NBA, Chennai and SEVA and Life Network, Madurai.



Grants in Aid sanctioned from Ministry of Environment and Forests for the year 2007 – 2008

S. No.	Grants in Aid	Amount (Rs. in Lakhs)
1.	Salary and Wages	40,00,000
2.	Office Equipment and Furniture	4,00,000
3.	Office Expenses / Contingency	20,00,000
4.	Website and Computers	3,00,000
5.	Authority / Expert Meeting Expenses	30,00,000
6.	Rent and Taxes	10,00,000
7.	Travel	15,00,000
8.	Books	5,00,000
9.	State Biodiversity Board	56,59,000
10.	Project / Awareness on Biodiversity	35,00,000
	TOTAL	2,18,59,000

Expenditure Statement for the year 2007 – 2008

Grants in Aid	Revalidated for 2007 - 2008	Funds Received 2007 - 2008	Expenditure up to March 2008
Office Expenses / Contingent Expenses	3,50,000	16,50,000	19,79,300
Salary and Wages	6,99,703	29,02,000	26,80,320
Websites and Computers	1,00,000	2,00,000	2,94,648
Rent / Rates / Taxes	3,60,000	6,40,000	8,69,964
Office Equipments and Furniture	1,50,000	2,50,000	1,67,846
Traveling Expenses	4,50,000	10,50,000	14,87,520
Awareness Projects	16,00,000	24,00,000	42,00,049
Authority / Expert Committee Meeting	11,00,000	14,00,000	13,40,512
State Biodiversity Board	20,00,000	36,59,000	55,00,000
Library	50,000	4,50,000	4,99,099
TOTAL	68,59,703	1,46,01,000	1,90,19,258

RECEIPTS:

Receipts of application fees : Rs. 4, 40,896/-

Annual Plan of the following year

Authority meetings

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

For the above purpose, four authority meetings are proposed for the year 2008-2009

- 11th authority meeting on May 2008
- 12th authority meeting on August 2008
- 13th authority meeting - November - December 2008
- 14th authority meeting - February - March 2009

Technical

1. Peoples Biodiversity Register

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

For the above purpose, a uniform methodology is to be developed by NBA and support the BMC's to follow the same. The people's knowledge such as knowledge of uses that might find commercial application and that might need to be guarded with respect to IPR

and the knowledge pertinent to prudent management of natural resources that might be widely shared with benefit to all concerned without any unfair commercial profits accruing to any party are to be registered by the locals. The draft guidelines on People's Biodiversity Register as modified by Expert Committee to implement the recommendation of National Workshop on PBR were put up in NBA website for public comments. The comments received have been sent to Dr. A. K. Ghosh, Member, National Biodiversity Authority for incorporation and finalization. On receipt of the final guidelines, the same will be approved by NBA.

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

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

The following are the agreements to be finalised by National Biodiversity Authority

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

The draft agreements already been discussed thoroughly by NBA in an interactive meeting with experts drawn from various parts of the country and the agreements were placed before NBA and approved. These approved agreements have been sent to the Government of India (Administrative Ministry) for notification by Law Ministry.

3. Regulations

In compliance with Section 13(2) of the Biological Diversity Act, 2002, the following Expert Committees have been constituted to prepare the guidelines for notification.

1. Expert Committee on Medicinal Plants,
2. Expert Committee on IPR
3. Expert Committee on Traditional and Tribal Knowledge

Expert Consultants will be appointed to assist these committees for preparation of guidelines and early notification.

The Comments of the Authority on the draft "Guideline on Access and Benefit Sharing" has been sent to Administrative Ministry. As per the conclusion arrived at in a brain storming session organized by Ministry of Environment and Forests on 19th December 2007, UNU-IAS will develop the next draft of the benefit sharing guidelines paper and based on the draft, a national workshop will be held for finalizing the benefit sharing guidelines by November 2008.

4. Establishment of State Biodiversity Boards and Biodiversity Management Committees

As per Section 22 of the Biodiversity Act, 2002, the State Governments shall establish Biodiversity Boards. So far 21 States have notified the formation of State Biodiversity Boards. Efforts will be taken to persuade the remaining 7 states viz., Assam, Bihar, Jammu and Kashmir, Maharashtra, Meghalaya, Orissa and Rajasthan to establish State Biodiversity Boards in accordance with the Biodiversity Act, 2002. While some states who have established SBB have notified their Rules under the Act, many of them are still in the process of doing so. These states have been requested to send their Rules/draft Rules to the NBA, to enable

the NBA to have these examined through a legal consultant. The remaining states will be persuaded to notify the rules.

Further the State Governments have been requested to expedite setting up of State Biodiversity Funds as per the provisions of the Act. The State Governments have been advised to set up BMCs initially at the district level, and in a few villages to be identified by the State Governments in each district. These will be followed up.

5. Regulation on Biodiversity Heritage Sites

To notify guidelines on Biodiversity Heritage Sites in accordance with the Section 37 of Biological Diversity Act, 2002, an Expert Committee has been constituted and the final draft guideline as prepared by the Committee was circulated to all members of the authority and other scientific organizations and civil societies by email. The draft is posted in the official website of NBA for comments from the public. Action will be taken to notify these guidelines early.

6. Preparation of list of Biological Resources normally traded as commodities

Section 40 of the Biological Diversity Act empowers Government to exclude certain Biological Resources which are normally traded as commodities from the purview of the Act by issue of Notification. For this purpose, the National Biodiversity Authority has constituted an Expert Committee on Normally traded Commodities to prepare a list of genetic materials which are used for production of normally traded commodities and then notify the same to enable the Central Government to exclude those biological resources from the purview of the Act. The list prepared by the Committee has been forwarded to Botanical Survey of India, Kolkatta for expert verification of the enlisted items.



Theri soil at Tuticorin District

Activities of the State Biodiversity Boards

1. Punjab Biodiversity Board

The Punjab Biodiversity Board has been re-notified vide notification no. 2/4/2000/STE(I)2875 dated 8th August, 2007 (copy enclosed). The following major activities were carried out.

1.1. Meeting of Punjab Biodiversity Board

The Second meeting of Punjab Biodiversity Board was held on the 10th of March, 2008. Background information on the Biological Diversity Act and trade of Biological materials from Punjab was provided to the members. The lack of financial support from the state government since the constitution of the Board was highlighted. It was also brought out to the forefront that the Board had no staff.



1.2. Joint Project with UNESCO on 'Capacity Building for promoting Environmental Sustainability through Biodiversity Conservation'

The Punjab Biodiversity Board (PBB) got a rare exposure when the educational kit 'Capacity Building for promoting Environmental Sustainability through Biodiversity Conservation', developed by the board, in collaboration with Punjab State Council for Science & Technology, was launched by Mr Koichiro Matsuura, Director-General of UNESCO on 29th November, 2007 at Delhi during his recent visit to India. The kit was selected by the UNESCO, New Delhi office as one of the two publications to be launched on the occasion of inauguration of land for

UNESCO House at Delhi. Dr. Neelima Jerath, Addl. Director-Env., who coordinated the project, was invited to speak about the kit at the occasion.



Mr. Koichiro Matsuura, Director General of UNESCO releasing the sample kit on Biodiversity

The kit is proposed to be used by UNESCO as a sample kit on Biological Diversity in the South Asian region. It had been developed as a part of a joint project, with contributions of US\$5500 and Rs. 2 lakhs from UNESCO and the State Government, respectively.

The kit comprises of the following:

- A film on Biodiversity (filmed by M/s Explorers, Ghaziabad) highlighting the dependence of village communities on their biological resources to meet their daily needs, as well as, a source of livelihood
- A book titled 'Biological Diversity -The very stuff of life'
- A pamphlet on 'Biological Diversity in Agricultural Fields'
- A poster

The kit has also been translated and published in Punjabi.

1.3. Constitution of Biodiversity Management Committees (BMCs)

One of the major activities of the Punjab Biodiversity Board is to facilitate the setting up of Biodiversity Management Committees (BMCs) at village and town levels and train them for implementation of the Biological Diversity Act at the field level. The board is also involved in recording local biological diversity

within the respective village/town, besides taking up initiatives for its conservation, and understanding the concept of collection fee for commercial utilization and preparation of Peoples' Biodiversity Registers (PBRs). It was decided that a few BMCs may be constituted in the Shivalik area in Punjab. Hence, Public contact programmes were conducted in Biodiversity rich areas of the Shivaliks in the districts of Gurdaspur & Hoshiarpur from 17-19 September, 2007 as outlined below:

District Gurdaspur: Villages Garal, Kakrui and Dhartown on 17.9.07 and Villages Keshopur, Dalla and Magar, Mundian and the Keshopur wetland area on 18.09.07.

District Hoshiarpur: Villages Bhavnaur, Ramgarh, Kartoli, Chahera and Bhatoli in the Kandi area and villages Rehmapur, Atwarapur and Dholbaha in Takni, Rehmapur protected area and Dholbaha wetland area on 19.09.07.

Meetings were held with local representatives to motivate them so as to be a part of the BMCs. The team comprised of Additional Director, Environment, Scientist-PSCST, Dr. M. Sharma, Biodiversity Expert & Retd. Dean, Punjabi University, Patiala, local DFOs and Range Officers (Wildlife), social motivators identified by Department of Forests & Wildlife and representatives of local NGOs.

The visits were followed by three major public camps as mentioned below:

- Public camp at Keshopur in collaboration with Forest Dept. on 5.9.07 in which about 100 people participated including teachers, Panchayat members, representatives from line departments, local hakims & vaidas, fishermen and other stakeholders.
- Public camp at Dhar in collaboration with a NGO (Institute of Ecology and Environment, Pathankot) on 6.9.07 in which about 100 people including teachers, students and Panchayat members, representatives from line departments, ayurvedic doctors, hakims and vaidas and other stakeholders participated.
- Public camp at Bhavnaur with NGO (Unnati Cooperative Society, Talwara) on 7.9.07 in which about 30 people from proposed BMCs of 6 villages participated.

- Public camps by trained school teachers (7 in district Gurdaspur and 15 camps in district Hoshiarpur).

These camps were followed by separate meetings at 10 villages where constitution of BMCs were discussed and queries were responded to. As a result, 31 BMCs have been set up including 13 BMCs in Gurdaspur district and 18 BMCs in Hoshiarpur district.

1.4. Teacher training program for Master Trainers

Two teacher training programs were organized with the help of District Science Supervisors in the Districts of Gurdaspur and Hoshiarpur on the 18th and 19th of September, 2007. About 25 teachers from the district of Gurdaspur and 40 teachers from Hoshiarpur were provided information on Biological Diversity Act and Rules. The role of teachers in the preparation of Peoples' Biodiversity Registers was also discussed.

1.5. Celebration of International Biodiversity Day

The theme for the International Biodiversity Day, organised on 22nd May, 2007 was 'Biodiversity and Climate Change'. The following activities were organized in Punjab on the occasion:

S.No.	Activity / Programme	No. of Programme
1	Awareness lectures, workshops/ seminars/ Educational discussions, exhibitions on environmental issues.	60
2	Competitions (Essay writing, Chart making, quiz, poetry, recitation, debates, GK, songs, etc).	106
3	Rallies to make people aware about our environment and biodiversity.	20
4	Cleanliness drives	16
5	Socio-religious & cultural programmes	01
6	Plantation of local tree species	12
	Total Programmes	215

Most of the programmes were organized through eco-clubs set up in schools under the National Green Corps project.

The total number of organizations which participated in the activities included:

Schools	:	95
District level programmes	:	04
NGOs	:	03
University & College level programmes	:	02

The activity is expected to increase the level of awareness and concern for biodiversity issues amongst children and the general public at large.

1.6. Study of varieties of sucking mango in district Hoshiarpur

The first meeting of the 'Sub committee to identify Heritage Sites in Punjab' was held on 11/12/2006 in which the issue of identifying heritage sites outside the Protected Area Network (PAN) was discussed. PBB received information from the then DFO, Hoshiarpur, NGOs and teachers of Hoshiarpur district in the course of various field camps and training programmes that one such potential site existed in the district of Hoshiarpur where several varieties of desi sucking mango had been preserved through the initiative of an individual. The site, a mango orchard was called "Inami Baag". This orchard has about 200 mango trees of many desi varieties, some of which were not available anywhere in wild or in cultivated areas.

PBB, therefore, contacted the Fruit Research Station of Punjab Agricultural University at Gangian village and a joint survey was taken up in the villages of Bassi Kmarkhan, Gangian, Bunga, and surrounding areas. More than 100 samples of desi mango fruit were collected in the fruiting season (May-July 2007) and handed over to the Fruit Research Station for physico-chemical and morphological analysis. Analysis has been completed and 29 varieties of desi sucking mango have been collected from the region alone, out of which 9 varieties have already been conserved at Fruit Research Station, Gangian by PAU and 20 new varieties need to be conserved.

The Board has decided that PAU would be requested to preserve these varieties in its existing Gangian farm and get the same declared as a heritage site. More such studies also need to be conducted in the districts of Gurdaspur and Ropar.

2. Nagaland Biodiversity Board

Awareness programmes conducted on Environment and Bio-diversity Conservation during 2007 involving NGO's and student community are as follows:

2.1. Environmental Awareness campaign:

Environmental awareness campaign sponsored and assisted by the State Forest Department was conducted during April, 2007 with the active participation of Kohima based NGO (Hills Knight Club, Kohima) throughout the State. During the campaign, fifteen members of the club traveled in their bikes for twelve days over a distance of 1000 km. covering all the eleven districts of the hilly state with banners carrying the slogans of environmental and biodiversity preservation. Very good response was received from the general public throughout the campaign. Army personnel of the 15 Assam Rifles also coordinated during the campaign.

2.2. Observance of International day of Biological Diversity:

Essay and debate competition for higher secondary students on topics such as - Conservation and Development and Bio-diversity was organized during May, 2007 coinciding with the observance of International Day of Biological Diversity. A large number of students participated and successful participants were felicitated and awarded prizes.

2.3. State Level Consultative meeting:

A State level consultative meeting on The National Biodiversity Act, 2002 was held on the 8th and 9th of October, 2007. The proceedings and report of the consultation is being examined for finalization.

During 2007, under the 'Year of Farmers' declared by the State Government, State schemes on bio-diversity such as identification

of biodiversity rich areas in all the Districts of the State, their resource mapping, data collection and collation, identification of 'Mother Plus Trees', 'Sacred Groves', etc. were taken up.



3. Manipur Biodiversity Board

Manipur Biodiversity Board is highly committed to the conservation of biodiversity, its sustainable use and sharing the benefit from its commercial utilization with the local people. During 2007-08 Manipur Biodiversity Board held two meetings on 1.10.2007 and 8.1.2008 under the chairpersonship of Shri Jarnail Singh, Chief Secretary, Government of Manipur. The important activities, undertaken by the Board have been described in the sections below.

3.1. Biological Diversity Rules, 2008

The comprehensive "Manipur Biological Diversity Rules, 2008" was drafted by the committee, constituted by the Manipur Biodiversity Board. The draft rules were considered and approved by the Board in its second meeting held on 8.1.2008 along with incorporation of suggestions. The Rules provide for the manner of selection, term of office, and pay and allowances of the Chairperson and members of Manipur Biodiversity Board, Powers and duties of the Chairperson and Member Secretary, Meeting of the Board, Appointment of Expert Committee by the Board and their Entitlements, General Powers and Functions of the Board, Powers and duties of the Chairperson, Restriction on the activities related to access to biological resources, Operation of State Biodiversity Fund, Annual Report and Annual Statement of Accounts, Establishment and Management of Biodiversity Heritage Sites, Constitution of Biodiversity Management Committees, Local Biodiversity

Fund etc. These Rules are in consonance with Biological Diversity Act, 2002 and Biological Diversity Rules, 2004. These Rules would not only be useful for the effective management of Biodiversity in Manipur, but also serve as important reference documents for those States, which are in the process of framing their rules or amending them.

3.2. Release of "Fauna of Manipur"

Three volumes of "Fauna of Manipur," prepared by the Zoological Survey of India (ZSI) was released by Shri Debendra Singh, Hon'ble Minister for Forests & Environment, Revenue and Law & Legislative Affairs Government of Manipur, on 6-10-2007. The publication confirmed the availability of 2601 species belonging to various categories and included 1261 genera and 368 families in Manipur. It was also learnt that five species were new to science, 509 species were new entries to the state records and 28 were new records to the country. The three volumes have great value as an authentic referral resource for anybody interested in the fauna of Manipur. The ceremony of the release of the book was attended by senior officers of the Forest Department, members of Biodiversity Board and Zoological Survey of India and was duly covered by the electronic and print media promoting awareness of biodiversity in the State.

3.3. Collection of Reference Material from different agencies

Reference materials from National Biodiversity Authority (NBA), Chennai; Zoological Survey of India (ZSI), Kolkata; Botanical Survey of India (BSI), Kolkata; Foundation for Rehabilitation of Local Health Tradition (FRLHT), Bangalore, scientific organization and Government Departments of Manipur and from well-performing States e.g. Karnataka, West Bengal, Madhya Pradesh, Tamilnadu etc. were collected during 2007-08. Forest officers, students, researchers and interested persons are using these materials in carrying out their assignments/ work.

3.4. Involving National Level Organization in Documentation of Biodiversity

In due appreciation of the inherent strength of national level organizations, Manipur

Biodiversity Board has adopted a strategy to involve them in authentic documentation of biodiversity of Manipur. Accordingly, BSI and ZSI are being pursued to complete the documentation of 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." These projects are likely to be implemented by FRLHT very soon. The implementation of the project on Local Health Tradition would be a landmark in the documentation for India in general and Manipur in particular as it would go a long way in the development of scientific methodology for documentation of folk medicine and traditional knowledge, associated to biodiversity.

3.5. Contribution to Biodiversity Management at National Level

Manipur Biodiversity Board has constituted

two committees one each for Peoples' Biodiversity Register and Biodiversity Heritage Site. Both the committees are very active and in touch with developments, taking place at the national level. A brain storming session was organized to deliberate guidelines prepared by the committee, constituted by National Biodiversity Authority on Peoples' Biodiversity Register. A comprehensive comment on the draft guidelines was sent to NBA for further development of the guidelines. The suggestions included incorporation of microbes in the inventory of biodiversity, modifications in different formats for better analysis, particularly about recording and change in fish population, covering insects, monetary incentive for sharing traditional knowledge etc. It is pertinent to note that though microbes form an important part of biodiversity, though they have been ignored at large, probably because of their invisibility. It was suggested that there is need to document them on the basis of indirect evidences and isolates.



Cervus eldi eldi at Keibul Lamjao National Park, Manipur

4. Mizoram Biodiversity Board

4.1. International Biological Diversity Day Observed (22nd May, 2007)

The International Day for Biological diversity was observed on the 22nd of May 2007 at ME & PR Auditorium, Aizawl, chaired by Principal Chief Conservator of Forests & Secretary, Government of Mizoram. The Hon'ble Minister, Environment & Forests, Mizoram was the Chief Guest and the Vice Chancellor of Mizoram University, Prof. Dr. A. N. Rai, was the Guest of Honour. Prof. Dr. A. N. Rai is an eminent scholar with several papers to his credit, particularly on Bacteria and is closely associated with microbiology, which form an integral part of biodiversity.



The theme selected for the year is 'Biodiversity & Climate Change' – aimed at the serious threat brought about by the activities of mankind on the global environment. Member Secretary of Mizoram Biodiversity Board and Chief Wildlife Warden, Mizoram delivered the Key-note address.



The following Resource Persons presented papers on selected topics as shown below:-

a) **Shri C. Rokhuma**, Padma Shree - Decadal Rainfall & Temperature

b) **Dr. H. S. Thapa**, Senior Lecturer Deptt. of Botany, Pachhunga University College - Plant Diversity of Mizoram

c) **Shri L. V. Zomuana**, Agronomist, Directorate of Agriculture - Agricultural Crop Diversity of Mizoram.

d) **Dr. Daniel Chianghnuna**, Dy. Director (Admn.) Directorate of AH & Vety. - Livestock Diversity of Mizoram

The target groups included members of Mizoram Biodiversity Board as well as science faculties and students from Mizoram University & Collage and various NGOs.

4.2. One-day Workshop on Understanding Biodiversity through Wildlife Photography (27th July, 2007)

The one-day workshop was organized with the objective of acquainting the frontline staff with the use of Camera as a tool for conducting and documenting biodiversity so as to help generate the much needed awareness among the masses.

4.3. Preparation and publication of the Guide Book for Field Staff (in local dialect, i.e Mizo) titled "Wildlifer's Companion".

4.4. Preparation of the pictorial booklet 'Wild Flowers of Mizoram' (in Mizo) started with the collection of photos in the field. Work is in progress.

4.5. Awareness Programme on Biodiversity Issues at Aizawl (21.2.2008) and Lunglei (28.3.2008).

Similar topics highlighted on International Biodiversity Day (22.5.2008) were discussed in two programmes to educate the general public.

Other activities

University of Calicut and Mizoram University will shortly initiate a research programme on Zinziberaceae for which a MoU has already been entered into. Mizoram University is currently studying the orchid diversity in the State and the work on Herpetofauna will commence shortly.

5. Himachal Pradesh Biodiversity Board

The H.P State Biodiversity Board was reconstituted in 2007-08 vide H.P Govt. Notification No STE-A (3)-1/2004 dated 13.3.2008. The following actions were taken up by the Board during the year 2007-08:

5.1. Panchayats selected for Preparation of Biodiversity Registers in H.P.

The State Biodiversity Board selected eight Panchayats for the constitution of Biodiversity Management Committees in order to prepare Biodiversity Registers on a pilot basis at Gram Panchayat , Naina Tikker , Tehsil Pachad, District Sirmour, H.P, Gram Panchayat , Saho, Tehsil & District Chamba , H.P, Gram Panchayat, Garli, Tehsil Dehra , District Kangra, H.P, Gram Panchayat, Toong , Tehsil Banjar, District Kullu, H.P, Gram Panchayat, Kafnu , Tehsil Nichar, District Kinnaur, H.P, Gram Panchayat Khatnol , Tehsil Sunni, District Shimla, H.P, Gram Panchayat, Darlaghat, Tehsil Arki, District Solan, H.P, Gram Panchayat, Jukhala, Tehsil Sadar, District Bilaspur, H.P in the state.

5.2. Awareness cum interaction meetings organised

A one-day awareness camp was organised for appraising the stakeholders viz., Panchayat Presidents, Vice-Presidents and members of the Gram Panchayats and other stakeholders of the Panchayats from Gram Panchayat, Naina-Tikker (6.10.2008), Gram Panchayat , Toong (13.11.2007) and Gram Panchayat, Kafnu, (5.12.2007) about the Biological Diversity Act, 2002.



5.3. Biodiversity Management Committee Formation

Biodiversity Management Committees have been constituted at Gram Panchayat, Naina-

Tikker in District Sirmour and Gram Panchayat Toong in Kullu District H.P.

5.4. People Biodiversity Register preparation

The State Biodiversity Board organised a one-day meeting for the Biodiversity Management Committee, Naina-Tikker, Tehsil Pachad District, Sirmaur, H. P. on 17.11.2007 for preparation of the Biodiversity Register. The members were briefed about the aims and objectives of documentation. Based on the interaction, documentation on wild and domesticated floral and faunal diversity of the area was also carried out.

5.5. People Biodiversity Register Manual

A field training manual for the preparation of People Biodiversity Register has been prepared.

5.6. Biodiversity Day celebrated

On 22nd of May, 2007 Biodiversity Day was celebrated at the Senior Secondary School, Kasumpati, Shimla, H.P. A lecture was delivered by Sh. K. Kaisth, Principal Scientific Officer, State Council for Science Technology and Environment, H.P on the theme "Biodiversity" to the teachers and students. A quiz competition on the theme "Biodiversity" was organised to +1 & +2 students for the local Senior Secondary Schools of Shimla town. Prizes were distributed to the winners on the World Environment Day i.e on 5th June, 2007.

5.7. Popularizing Conversion of Pine needles Biomass into Briquettes

Pine forests are prone to incidents of fires and the loss to biodiversity is irreparable with fire incidents occurring both during the summer and winter seasons in the state. The State



Council organised a one-day awareness camp to the members of Kisan Club, Barsayan in Balh Tehsil of Mandi District (7.6.2007) for popularising the conversion of Pine needles biomass into briquettes and for using the briquettes as fuel in the households and for space heating during winter. 202 participants attended the one-day awareness camp. The participants were also briefed about the concept of Biodiversity conservation, its general status, importance, threats as well as the provisions of the BD Act, 2002.

5.8. Children Science Congress -2007

Under the science popularization programme, the Children Science Congress-2007 was organized among the students at the Sub-Division, District and State level on the theme "Biodiversity-Nurture Nature for our better future" in the state. Project reports were prepared on various sub-themes on Biodiversity by the students upto+2 level in both junior and senior categories in the state.

6. West Bengal Biodiversity Board

The West Bengal Biodiversity Board (WBBB) has been reconstituted after completion of the tenure of the first constituted Board since 16th September, 2004. The Board continues to function under the Chairmanship of Prof. A. K. Sharma.

The WBBB along with the Wildlife Wing, Directorate of Forest, GoWB celebrated the International Day for Biological Diversity (IBD) on 22nd May, 2007 at Nandan, Kolkata. The central theme of this year was '*Biodiversity and Climate Change*'. The programme was inaugurated by Hon'ble Minister-in-Charge, Dept. of Environment, GoWB and the Chairman, WBBB presided over the



programme. An exhibition was set up at Nandan as a joint endeavor of WBBB, ZSI, Wildlife Wing (Directorate of Forests) and R.K. Mission, Narendrapur.

The Board initiated the formation of six Biodiversity Management Committees during 2007-2008 at Bhagabangola II. P. S., Jalangi P. S. and Nabagram P. S (District - Murshidabad), Coochbehar II P.S (District - Coochbehar), Kalyani Municipality (District - Nadia) and Bishnupur II P.S. (District - 24 Parganas S).

The Board has initiated the project of preparing PBRs for 50 mouzas under Bhagabangola P.S., Jalangi P.S. and Nabagram P.S. (District - Murshidabad), Baneswar G.P under Coochbehar II P.S. (District - Coochbehar), Bakrahat G.P. under Bishnupur II P.S. (District - 24 Parganas S) and 19 wards under Kalyani Municipality. Besides this the Board has sanctioned projects for preparing PBR in different Schools, Colleges, Universities and other Institutes following the Board's decision to involve school, college and university students and teachers in the PBR exercise of the State.

The WBBB organized a number of Awareness-cum-Training Programmes on the issues of biodiversity conservation and PBR exercise in Schools, Colleges and local Organizations in the State, with the objective of involving more school and college students in the PBR exercise.



Publications of the WBBB completed and released during the period 2007-08:

- ▲ A booklet on Biodiversity (in Bengali)
- ▲ People's Biodiversity Register of Gurulia Bhatshala village (Goghat II P.S., District - Hooghly).

- ▲ Field Identification Manuals on 'Common Freshwater Fishes' & 'Common Wetland \Plants' in Bengali.
- ▲ Rice Diversity of West Bengal prepared by the Directorate of Agriculture, Govt. of W.B.
- ▲ An audio-visual CD on Biodiversity in Bengali.
- ▲ An audio-visual CD on Biodiversity in English.

Three Board Meetings have been held during the period under report (10th, 11th & 12th on 7th May, 2007, 20th August, 2007 and 4th March, 2008 respectively). The major decisions taken during these meetings include:

- ▲ Emphasis on awareness generation & sensitization programmes through workshops, seminars, awareness programmes, publication of brochures, leaflets, banners, posters & popular books.
- ▲ Website of West Bengal Biodiversity Board was approved.
- ▲ The Board decided to constitute at least one BMC in all the districts in the state and to designate one officer as a Nodal Officer for Biodiversity activities in the respective district.
- ▲ The Board decided to take necessary action for conservation of Banerwar pond (Dist. Coochbehar) as Community Reserve, a forest patch at Chilkigarh (Dist. Paschim Medinipur) as Sacred Grove and different medicinal plant gardens.
- ▲ The Board decided to initiate ex-situ & in-situ conservation model urgently and to initiate documentation of endangered and commercially exploited species as a prerequisite for preparation of DNA Data Bank and formulating conservation strategy.
- ▲ The Board decided to organize regular Training Programmes on Field Identification (Flora/Fauna) in collaboration with BSI and ZSI for creating a pool of resource persons to expedite the PBR exercise.

- ▲ The Board decided to increase the manpower and infrastructure of the WBBB immediately for smooth functioning.
- ▲ The Report of West Bengal Biodiversity Board for the period 2006 - 2007 was approved by the Board and published during this period.

7. Kerala Biodiversity Board

The Kerala State Biodiversity Board (KSBB) was established in February 2005 as per G.O (Ms) No. 1/2005/STEAD dt. 28.02.2005. The KSBB is working under the newly created Environment Department of the Kerala State. The KSBB made an exhaustive planning of activities for the next few years and brought out a document titled "Strategies and action plan" which was released by the Hon'ble Chief Minister Shri. V.S. Achuthanandan.

7.1. BMCs and PBRs

The activities related to institution of Biodiversity Management Committees (BMCs) have begun and the procedures have been completed in five Panchayats covering the districts of Thiruvananthapuram, Kottayam, Palakkad, Kannur and Kasargode. Actions have also been taken through the Principal Secretary, LSG Department for constituting BMCs in the remaining 994 Panchayats of the State. Action has also been initiated to finalise the format in which the People's Biodiversity Register is to be recorded.

7.2. Environmental Awareness Programmes

During 2007-08, several meetings were conducted throughout the State to create awareness among the college students, teachers, NGOs, Govt. Employees and media persons on the need to conserve the biodiversity and its sustainable use. The eco clubs of selected colleges in the 14 districts of the State were also strengthened by providing financial support. A documentary film on 'Biodiversity of Kerala' was also made and released during this period.

7.3. Environment Awards

Awards for Green Institution, Green teacher and Green schools besides a life time achievement award for an individual who has

contributed to environmental conservation were constituted. The awards for 2007-08 were distributed by the Hon'ble Chief Minister Shri. V. S. Achuthanandan.

7.4. Policies

The State policy on 'Environment' and 'Organic Farming' was prepared through interactive regional meetings in many parts of the State and the draft policies have been submitted to the Government for approval.

7.5. Projects

The KSBB has also outsourced a project to map the wetlands of Kerala at Panchayat level to KFRI and SACON. As part of the project a State-wide waterfowl census was also carried out in collaboration with the State wildlife wing of the Forest Department and NGOs during January, 2008.

7.6. Taxonomy workshops

Two taxonomy workshops - on Lichens and on Echinodermata were supported by KSBB and outsourced to KFRI and Aquatic Biology Department of Kerala University, respectively.

7.7. Finance

During 2007-08, KSBB received a grant-in-aid of Rs.30,00,000/- under the Plan and Rs.29,50,000 under Non Plan heads from the Government of Kerala.



The Hon'ble Chief Minister of Kerala Shri. V.S. Achuthanandan giving away the Green Institution Award-2007 to Society for Environmental Education in Kerala (SEEK) for meritorious work in the area of Biodiversity Conservation and Environmental Education.



The Hon'ble Chief Minister of Kerala Shri. V.S. Achuthanandan inaugurating the one day Workshop on Biodiversity Conservation for Secretariat staff on 17th March 2008 at the Government Guest House, Thycaud, Thiruvananthapuram.



Hon'ble Minister for Education, Shri. M.A. Baby inaugurating the State Level launching of support to Eco-clubs and Seminars on Biodiversity and its Sustainable use at College level on 11th March 2008 at the Priyadersini Seminar hall of the State Science & Technology Museum at Thiruvananthapuram.

8. Karnataka Biodiversity Board

The Karnataka Biodiversity Board was established under the Government of Karnataka G.O.No. FEE 125 ENV 2003 dated: 19-06-2003 and began functioning from 1st August 2003.

During 2007-08 the Board has met on 19-4-2007 and 04-2-2008 and conducted deliberations:

The following activities were taken up by the Karnataka Biodiversity Board during the year as per Section 23 of the Act.

1. Formation of Biodiversity Management Committees.

The Board has formed Biodiversity Management Committees (BMCs) in 541 Gramapanchayats during 2007-08 and 1013 BMCs are formed so far. Further formation of Biodiversity Management of Committees is under progress in all the districts.

2. Biodiversity Awareness Training Programme:

The Karnataka Biodiversity Board has taken up the training programme to create Awareness in respect of Biodiversity and related issues including Traditional Knowledge Biodiversity documentation and Management Plan. 93 Training Programmes have been conducted by board involving Centre for Environmental Education (CEE), NGOs, Colleges and Universities for stakeholders in various districts during the year 2007-08

3. Preparation of People's Biodiversity Registers (PBRs)

The Karnataka Biodiversity Board with the approval of the Government has involved the EMPRI for PBR documentation works in Coastal area. In other areas, KBB has involved the Forest Department, Universities, Colleges & NGOs as the Nodal agency to guide and provide technical assistance to Biodiversity Management Committees and get the PBR documentation in 155 Gramapanchayats representing the 23 districts of Karnataka.

4. Kuvempu Memorial Biopark at Shimoga:

The Government had sanctioned an amount of Rs. 100 lakhs vide G.O.No. FEE 135 ENV 2003 dated 4/11/2003 for the establishment of Kuvempu Memorial Biopark in Kuppalli village of Thirthahalli taluka of Shimoga district. This included Survey and

Demarcation of forest area for Biopark. The Department of Forest has taken up the works of Kuvempu Sandeshavan at Kuppali, while the Department of Fisheries has completed the Development of Chippalagudda Fish sanctuary.

5. Coastal area Biodiversity documentation (KUIDFC sponsored)

The KUIDFC, Karnataka has sanctioned a project in 2005 for Rs. 94.00 lakhs to survey and document the coastal Biodiversity of Karnataka State involving CMFRI, EMPRI, INCERT, Asima Pratishtana and ISRO. This project has been completed the project and the final reports on Coastal Biodiversity viz, Marine Flora and Faunal diversity, Flora and livestock diversity, Butterfly, Odonates, Birds diversity, Training of stakeholders on Biodiversity, Preparation of PBR and development of KCBIS by ISRO has been submitted .

Karnataka Coastal Biodiversity Information System is under preparation by ISRO, Bangalore.

6. Establishment and Management of Biodiversity Heritage Sites:

Prof. Madhav Gadgil and associates have identified several spots of biodiversity significance for declaration as Biodiversity Heritage Sites (BHS) and few proposals are in various stages of consideration.

7. The Karnataka Biodiversity Board has published the following during the year 2007-08

1. Karnataka Biodiversity Act & Rules handbook in Kannada & English
2. Coastal Biodiversity of Karnataka
3. Biodiversity of Netrani Island
4. Training material of Biodiversity.

8. Karnataka Biodiversity Board – Finance and Accounts

KBB has received Rs.77.50 lakhs and same was spent for office maintenance and different activities during 2007-08.

The Board has sent a proposal to the Government to Levy Cess charges on Pharmaceutical companies on the basis of their turnover as per the recommendation of Board.

9. Research projects and special studies:

The following programmes were funded by Karnataka Biodiversity Board 2007-08

S.No.	Name of the Programmes	Name of the Agency	Name of the Place	Amount Released in Lakhs
1.	Pilukula Nisarga Dhama for insect Museum at Biological Park	Pilukula Nisaraga Dhama Society, Science Centre	Mangalore	2.50
2.	State Level Children Science Congress relating to Biodiversity and its conservation	Pilukula Regional Science Centre Society	Mangalore	0.50
3.	Implementation of the Research Project on Bird Diversity	Asima Prathistana	Bangalore	0.15
4.	Research project to determine age of Tamarind Trees and Nellur	UAS	Bangalore	1.50
5.	Conducting Seminar on Biodiversity Assessment	Mangalore University	Mangalore	0.20
6.	Providing protection to Nallur Tamarind Grooves	KFD	Bangalore	0.42
7.	National Conference on Orchids Bangalore	The Orchid Society of Karnataka	Bangalore	0.20
			Total	5.47

10. Fish sanctuary - During the year the following were declared as "fish sanctuaries"

S.No.	Name of the Location	Taluk	River	District
1.	Chippalagudda	Thirthahally	Thungabhadra	Shimoga
2.	Hariharapura	Koppa	Thungabhadra	Chikamagalore
3.	Sringeri	Sringeri	Thunga	Chikamagalore
4.	Thodikana	Sulya	Chandragiri	D.Kannada
5.	Thingle	Karkala	Seethanadi	Udupi

9. Goa Biodiversity Board

The Goa State Biodiversity Board (GSBB) was constituted vide Notification Nos; 7/17/92/STE/PART/858 dt. 2.12.2004 and subsequently re-constituted vide notification No.7/17/92/STE/PART/03 dt. 4.4.2006 and on 23/8/07 was re-constituted vide notification No.7/17/92/STE/PART/568. The following were the activities of the Board during the year 2007 - 08:

1. Tree Planting Programme

To commemorate the **World Environment Day**, a tree planting programme was held at DST & E, premises, Saligao - Goa. Extensive tree planting schemes / drives would be undertaken during the ensuring monsoon season at Saligao, Goa.

2. Environmental Teachers Training Workshop:

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

3. Biodiversity Conservation Programmes organized by the GSBB:

"Million Seed Ball Campaign": In Collaboration with BITS, Pilani-Vasco, and Biodiversity Conservation India Limited (BCIL) Bangalore, the innovative concept of Seed Ball Campaign, was launched by the GSBB, wherein; a seed wrapped up in a ball of soil mixed with manure is planted in the field. Approximately 10,000 seed balls were propagated in the State of Goa, at different places. Schools, colleges and the mining industries were included for the Seed Ball Campaign. The GSBB envisages that this concept should be propagated in the ensuring season.

"Coastal Afforestation Programme:

The programme was officially launched on 24th August, 2006 at Kerim Beach (Pernem Block), in association with the Forest Department. About 500 saplings

were planted with adequate fencing and with sustainable water at Kerim beach. Further, the GSBB also proposes to undertake rigorous tree planting drives on the entire coastal belt of Goa in a phased manner, in collaboration with the Forest and Environment Department, Govt. of Goa.

4. Establishment of People's Biodiversity Register (PBR) in selected Villages:

The following five villages have been proposed for the establishment of PBR, in Goa State. The same will be finalized in the ensuing meeting.

Saligao - (Bardez - Taluka)

Virnoda - (Pernem - Taluka)

Merces - Ribandar (Tiswadi - Taluka)

Mulgao - (Bicholim - Taluka)

Canca - (Bardez - Taluka)

5. Establishment of Biodiversity Management Committee (BMC) in five Municipalities

The GSBB, proposes to establish Biodiversity Management Committee's (BMC) in the following five Municipal areas in the State of Goa. These locations will be finalized in the ensuing meeting.

Mapusa - (Bardez - Taluka)

Bicholim - (Bicholim - Taluka)

Ponda - (Ponda - Taluka)

Valpoi - (Sattari - Taluka)

Pernem - (Pernem - Taluka)

6. Beach Cleaning Drives:

The GSBB has undertaken beach - cleaning drive at Calangute Beach. This program will be extended to selected beaches in Goa as a collaborative programme at NGC programme. The programme is envisaged to motivate school students as well as to create environmental awareness at school, community & village levels.

7. Establishment of a "Medicinal & Herb Park" at DST & E:

The foundation stone for the "Medicinal & Herb Park" of the GSBB was laid by the Hon'ble Deputy Chief Minister / Chairman of GSBB Dr. Wilfred De' Souza on 13.4.07. The Forest Department, Govt. of Goa, Parks and Garden Division, are working the modalities of the park.

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

8. **Workshop on Vermin-compositing at Nagao Panchayat:**

The Goa State Biodiversity Board organized a one-day workshop on vermi-compositing at Nagao Panchayat on 16th November, 2007.

9. **Students outreach and participation Environmental Education programme for the students of VIII & IX:-**

A novel student's outreach programme was conceived by the GSBB. Under this programme, schools students were invited to the Goa State Biodiversity Board, at Saligao and provided with lectures on the need and importance in the preservation and conservation of the environment. Topics related to solid waste management, global climatic change, increasing environment pollution, natural disasters, water conservation, biodiversity, need for green future and biodiversity, energy conservation etc., are being delivered. Under this programme various documentary films related to the environment like biodiversity, tides oceans, etc., are being screened to the students of standard VIII & IX. Around 9 schools with the total of around 450 students participated in the programme.

10. **Waste Management of Nagao Village (Salcette)**

The State Biodiversity Board along with the Nagao Village Panchayat has identified a land fill site in Verna under Survey No. 23/1, in accordance with the Goa Garbage Rules. The State Pollution Control Board has also issued their consent to this site. The Panchayat will now initiate appropriate action in establishing the landfill site. The GSBB will propose a scheme for the waste

segregation, collection, transportation and scientific disposal and treatment. Micro level composting and vermin-compositing demonstration are also proposed to be held for the benefit of the villages.

11. **Coastal Zone Management Workshop:**

A proposal was submitted to the DST & E (Goa) for organizing a workshop on coastal Zone management in the context of the recent tsunami and to generate an awareness of the coastal population and authorities concerned for the need of coastal conservation. Administrative approval is being sought for this initiative.

12. **Proposal on Global Warming and Climatic Change Program:**

The GSBB has submitted a proposal to the DST & E (Goa) for G-I-A for supporting a Global Warming and Climatic change programme for which Administrative approval is awaited.

13. **Development of an Audio Video Information Centre**

An environmental digital documentary library (Compact Discs) is established by the GSBB. The library houses a variety of documentary films on global warming, waste management, national geography, tsunamis, disaster mitigation and so forth. These Compact Discs are being screened in various academic institutions and also would be given to the respective institutions when requested for. Currently, around fifteen Compact Discs are being procured on various environmental subject matters.

14. **Constitution of Sub-Committee's:**

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

1. Biodiversity Inventory Committee
2. Wetland & Agriculture Biodiversity Committee
3. Awareness Committee
4. Heritage Site & Sacred Grove Committee

15. Strengthening of the GSBB

To facilitate the Goa State Biodiversity Board to function effectively, efficiently and attain the objectives envisaged under the Biodiversity Act and Rules, the GSBB proposes to appoint certain staff on "Contract".

16. Grant in Aid and Financial Assistance

The National Biodiversity Authority has released a grant in aid of Rs.10.00 lakhs. In addition, the State Government has released a grant of Rs.3.00 lakhs to the GSBB to meet its initial financial requirements.

17. Infrastructure Support A computer (PC) has been purchased and a Liquid

Crystal Display Projector (LCD) along with a Digital Camera, is proposed to be procured.

18. Eco Summer Camp

An eco summer camp and spring clean up drive was organized in Collaboration with St Elizabeth's High School, Pomburpa High School in which around 1200 students participated.

19. Identification of springs of adaptation

The GSBB is in the process of identifying two springs, preferably one in North Goa and the other in South Goa for adaptation.



Acropora Tabular Coral at North Bay, Andaman island



Annexure

1. Members of the Authority

A. Official Members

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

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

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

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

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

The Joint Secretary,
Department of Earth Sciences,
Mahasagar Bhavan,
Lodhi Road, New Delhi - 110003.

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

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

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

The Joint Secretary,
Department of Scientific and Industrial
Research,
Ministry of Science and Technology,
Technology Bhavan, New Mehrauli Road,
New Delhi - 110 001.

B. Non-Official Members

Prof. Raghavendra Gadagkar,
Center for Biological Science,
Indian Institute of Science,
Bangalore 560 012.

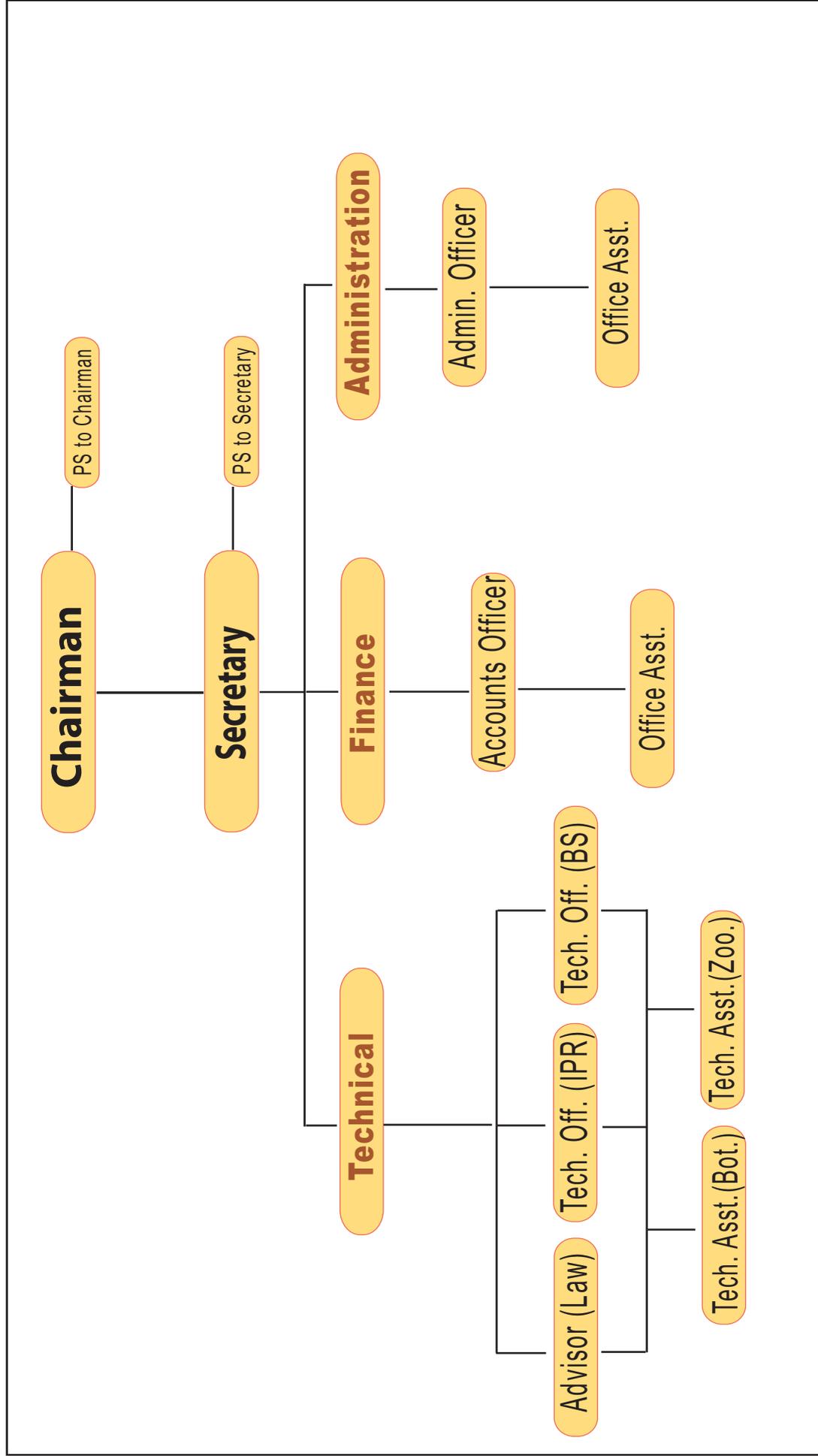
Prof. Anil Gupta,
Indian Institute of Management,
Vastrapur,
Ahmedabad - 380 001.

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

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

Prof. K. Kathiresan,
Professor,
Centre for Advanced Study in Marine
Biology, Annamalai University,
Parangipettai - 608 502.

2. Organisational Chart of National Biodiversity Authority



3. Staff Strength Including Recruitment

Recruitment

Out of 18 (except Chairman), one post of Admin officer has already been filled on deputation for a period of one year. Four posts for peon/ daftry have been sanctioned (2 by outsourcing and two in scale of pay) of which 2 posts on outsourcing has been filled up. As per File No.J-22018/19/2003-CSC (BC) and Notification No GSR 156 dated 30th June, 2006 and the Office Memorandum F.No.2/1/2004/Admin.NBA dated 31st July,2006, the following posts are advertised in the NBA Website and recruited by the Authority. As per Officer order No. 20011/6/07- GC dt. 13th April, 2007 from the Joint Secretary (GC), MoEF, New Delhi one post of Group 'D' - Peon had been surrendered and the remaining one post is filled up on regular basis.

Appointment of Different Post Recruited by NBA

With the approval of the Authority in its eighth meeting held on 7th March, 2007 the post of Stenographer 'C' on a deputation basis and that of a Peon on regular basis are filled up.

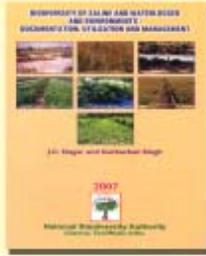
With the approval of the Authority in its Ninth meeting held on 29th June, 2007 the following posts are filled up on regular basis:-

1. Office / Computer Assistant2 posts
2. Advisor (Law).....1 post
3. Technical Officer (IPR).....1 post
4. Technical Assistant (Botany).....1 post

The following posts have been re-advertised for filling up by deputation / absorption & direct recruitment and the recruitment is under process:

1. Secretary
2. Private Secretary to Chairman
3. Administrative Officer
4. Accounts Officer
5. Private Secretary to Secretary
6. Stenographer 'D'
7. Technical Officer (Benefit Sharing)
8. Technical Assistant (Zoology)

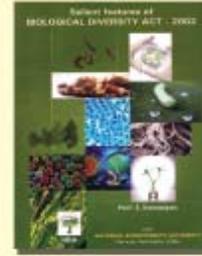
4. Scientific Bulletins and Other Publications



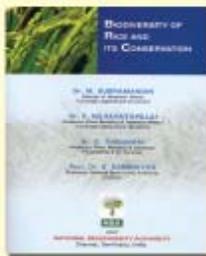
Bulletin No. 9
Biodiversity of Saline and Waterlogged and Environments: Documentation, Utilization and Management



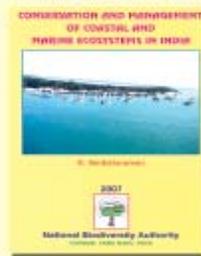
Bulletin No. 10
Diversity in Cryogenes of *Bacillus Thuringiensis*



Bulletin No. 11
Salient Features of Biological Diversity Act-2002



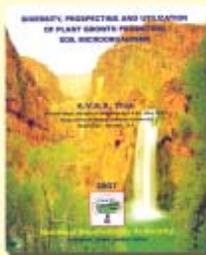
Bulletin No. 12
Biodiversity of Rice and its Conservation



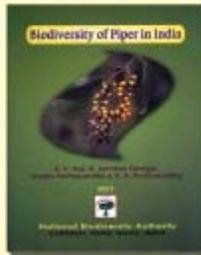
Bulletin No. 13
Conservation and Management of Coastal and Marine Ecosystems in India



Bulletin No. 14
Exploring Biogeographical Diversity of *Trichoderma* for Human Welfare



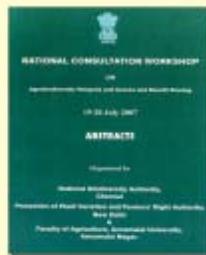
Bulletin No. 15
Diversity, Prospecting and Utilization of Plant growth promoting Soil Microorganisms



Bulletin No. 16
Biodiversity of Piper in India



Abstract Book of National Seminar on Dimension in Zoological Research in Human Welfare published by NBA, ZSI and West Bengal Biodiversity Board



Abstract Book of National Consultation Workshop on Agro biodiversity Hotspots and Access and Benefit Sharing published by NBA, Chennai, PPVFR, NewDelhi and Annamalai University, Annamalai Nagar



Abstract Book of International Workshop on "Gulf of Mannar Biosphere Reserve: An Ecological Model for Biodiversity Conservation, Livelihood and Sustainability" published by NBA, Chennai and UNESCO, New Delhi

5. Training Courses / Seminars / Workshops Organized by National Biodiversity Authority

- a. National level consultation on “Agro-biodiversity hotspots and Biodiversity Heritage Sites”** organized by PPV&FRA, New Delhi and National Biodiversity Authority, Chennai on 1st - 2nd June, 2007 at the North - Eastern Hill University, Shillong, Meghalaya.
- b. Training on Seaweed Cultivation to Fisherwomen of Mandapam Region - an Alternative Livelihood Approach held on 19th June, 2007** at Marine Algal Research Station, Mandapam organized by Central Salt & Marine Chemical Research Institute, Bhavnagar and National Biodiversity Authority, Chennai.
- c. National Consultation workshop on Agrobiodiversity Hotspots and Access and Benefit sharing** held on 19th July, 2007 at Annamalai University, Chidambaram organized by National Biodiversity Authority, Chennai, PPV & FRA, New Delhi and Faculty of Agriculture, Annamalai University.
- d. Bioliteracy for Biodiversity Conservation** held on 2nd September, 2007 at Thanjavur organized by National Biodiversity Authority, Chennai and Centre for Ecology and Research, Thanjavur.
- e. Training Programme on Conservation of Biodiversity** held on 3rd September, 2007 at Thanjavur organized by National Biodiversity Authority, Chennai and Environment Research Institute, Thanjavur.
- f. International Workshop on Gulf of Mannar Biosphere Reserve: An Ecological Model for Biodiversity Conservation, Livelihood and Sustainability** held on 20 & 21st September, 2007 at Hotel GRT Grand, Chennai organized by NBA, Chennai.
- g. National level Training Workshop on Biosafety Regulatory Frame Work: Assessment, Decision, Implication and Public - Private Interface** held on 26th September, 2007 at Madurai Kamaraj University, Madurai sponsored by MoEF, New Delhi.
- h. Biodiversity Exhibition Programme** held on 6th December, 2007 at C. S. Matriculation School, Thanjavur organized by National Biodiversity Authority, Chennai and C. S. Matriculation School.
- i. Workshop on “Biodiversity Forms and Functions” for Programme Officers of National Service Scheme in Educational Institute of Puducherry region** held on 8th - 9th December, 2007 at Vivekananda College of Education, Puducherry organized by Department of Plant Sciences, KM Centre for Post Graduate Studies, Puducherry and sponsored by National Biodiversity Authority, Chennai.
- j. “Studies on Conservation and Utilization of Biodiversity and Creating Awareness through Training Programme”** held on 10th December, 2007 at College of Forestry, Ponnampet organized by National Biodiversity Authority, Chennai and College of Forestry, Ponnampet.
- k. “Workshop on India’s Experience on Access to Genetic Resources and Benefit sharing “** held on 17th - 18th December, 2007 at The Claridges, New Delhi organized by MoEF, New Delhi, UNU- IAS and Japan Bioindustry Association.
- l. “Brainstorming meeting on Developing Benefit sharing Principles and Guideline for Implementation of National Biodiversity Act and Rules** held on 19th December, 2007 at The Claridges, New Delhi organized by MoEF, New Delhi, UNU- IAS and National Biodiversity Authority, Chennai.
- m. National Seminar on “Conservation of Eastern Ghats”** held on 28 & 29th December, 2007 at Central Leather Research Institute, Chennai organized by National Biodiversity Authority, Chennai.
- n. National Seminar on “Conservation of Animal Genetic Resources of Kerala”** held on 29 - 30th December, 2007 at CSI retreat Centre, Kottayam, Kerala organized by NBA and Kerala Veterinary Council.
- o. Seminar on “Cattle Breeders Traditional Knowledge, Indigenous Cattle Breeds, Protection of Forest Resources and Biodiveristy”** held on 22nd February, 2008 at Pillar Hall, Nagamalai, Pudupettai, Madurai organized by NBA and SEVA and Life Network, Madurai.

6. Statement of Accounts

Receipts and Payments for the Year ending 31st March, 2008

Receipts	Current Year 2007-08	Previous Year 2006-07	Payments	Current Year 2007-08	Previous Year 2006-07
I. Opening Balances			I. Expenses		
(a) Cash in hand	3,000	3,000	a) Establishment Expenses	26,80,320	23,01,018
(b) Bank Balances			b) Administrative Expenses	62,64,169	50,53,082
(i) Current A/c	6,31,038	57,088	II. Payment made against funds for various projects		
(ii) In deposit A/c			(Name of the fund or project should be shown along with particulars of payment made for each project)		
(iii) Savings A/c					
II. Grants Received			III. Investments and deposits made		
a) From Govt. of India	2,12,61,000	1,42,00,000	a) Out of Earmarked / Endowment funds		
b) From State Govt.	-----	-----	b) Out of Own Funds (Deposit to BSNL)	1,000	-----
c) From other Sources (details)	2,80,450	-----	IV. Expenditure on Fixed Assets & Capital Work-in-Progress		
III. Income and Investments from			a) Purchase of Fixed Assets	9,61,593	5,21,850
a) Earmarked / Endow. Funds	-----	-----	a) Expend. on Capital Work-in progress	-----	-----
b) Own Funds (Other Investment)			V. Refund of surplus money / Loans		
IV. Interest Received			a) To the Govt. of India		
a) On Bank deposits			b) To the State Govt.	-----	-----
b) Loans, Advances etc.	-----	-----	c) To other providers of funds		
V. Other income			VI. Finance Charges (Interest)	-----	-----
Fees	4,40,896	2,25,835	VII. Other Payments		
VI. Amount Borrowed			(Grants to State Biodiversity Boards)	55,00,000	35,00,000
	-----	-----	VIII. Closing Balances		
VII. Any other receipts			a) Cash in hand	3,000	3,000
	-----	-----	b) Bank Balances		
			(i) Current A/c	27,84,306	6,31,038
			(ii) In deposit A/c	7,50,000	-----
			(iii) Savings A/c		
Total	2,26,16,384	1,44,85,923	Total	2,26,16,384	1,44,85,923

List of Abbreviations Used

BD Act	-	Biodiversity Act
BMC	-	Biodiversity Management Committees
BSI	-	Botanical Survey of India
BSNL	-	Bharat Sanchar Nigam Limited
CBD	-	Convention on Biological Diversity
CMFRI	-	Central Marine Fisheries Research Institute
DFO	-	District Forest Officer
Dir.AH & Vety	-	Directorate of Animal Husbandry and Veterinary
DNR	-	Designated National Repository
DST&E, Goa	-	Department of Science, Technology and Environment, Goa
EC	-	Expert Committee
EMPRI	-	Environment Management and Policy Research Institute
Env.	-	Environment
FRLHT	-	Foundation for rehabilitation of Local Health Tradition
GoWB	-	Government of West Bengal
GSBB	-	Goa State Biodiversity Board
IARI	-	Indian Agricultural Research Institute
ICAR	-	Indian Council of Agricultural Research
IMTECH	-	Institute of Microbial Technology
INCERT	-	Institute for Natural Resources Conservation, Education, Research and Training
IPR	-	Intellectual Property Right
ISRO	-	Indian Space Research Organisation
KCBIS	-	Karnataka Coastal Bio-diversity Information system
KFD	-	Karnataka Forest Department
KFRI	-	Kerala Forest Research Institute
KSBB	-	Kerala State Biodiversity Board
KUIDFC	-	Karnataka Urban Infrastructure and Development and Finance Corporation
MOEF	-	Ministry of Environment and Forests
MoU	-	Memorandum of Understanding
NBA	-	National Biodiversity Authority
NGC	-	National Green Corps Programme
NGO	-	Non-Government Organisation
PAU	-	Punjab Agricultural University
PBB	-	Punjab Biodiversity Board
PBR	-	People Biodiversity Register
PPV & FRA	-	The Protection of Plant Varieties and Farmers' Rights Authority
SACON	-	Salim Ali Centre for Ornithology and Natural History
SBB	-	State Biodiversity Board
UNU-IAS	-	United Nations University, Institute of Advanced Sciences
UT	-	Union Territory
UNESCO	-	United Nations Educational, Scientific and Cultural Organisation
UNEP	-	United Nations Environment Programme
WBBB	-	West Bengal Biodiversity Board
ZSI	-	Zoological Survey of India



प्रधान निदेशक, लेखा परीक्षा
वैज्ञानिक विभाग
ए० जी० सी० आर० भवन, इन्द्रप्रस्थ एस्टेट
नई दिल्ली - 110002
PRINCIPAL DIRECTOR OF AUDIT,
SCIENTIFIC DEPARTMENTS,
A.G.C.R. BUILDING, I.P. ESTATE,
NEW DELHI-110002

No. Pr.DA(SD)/EA/SAR/NBA/Chennai/2008-09/623

Dated : 10.2.2009

To

The Chairman
National Biodiversity Authority,
475, 9th South Cross Street,
Kapaleeswar Nagar, Neelankrai,
Chennai 600 041.

Sub : SAR on the accounts of National Bio-diversity Authority (NBA), Chennai for the year 2007-08.

Sir,

I am directed to forward the Separate Audit Report in respect of **National Biodiversity Authority (NBA), Chennai** for the year 2007-08.

The Annual Account for the year 2007-08 may be adopted by the Authority, before presenting in both the houses of Parliament. Two copies of the each document presented to Parliament may be forwarded to C&AG office and three copies may be sent to this office. The dates of presentation of Annual Accounts to both the Houses of Parliament may also be intimated to this office.

The Hindi version of the Separate Audit Report shall be issued later.

Encl : As stated above.

Yours faithfully,

Director (EA)

- 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 Government of India, Ministry of Finance.
- iii) In our opinion, proper books of accounts and other relevant records have been maintained by the NBA 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 General:

Revision of Accounts

The accounts were revised by NBA at the instance of Audit. The effects of the revision were as below:

Particulars	Rs. in lakh
Increase in income	3.01
Decrease in expenditure	0.47
Increase in Assets	13.70
Increase in liabilities	13.70

B Grants-in-aid

Out of the grants-in-aid of Rs.2.15 crore received during the year, the organisation could utilise a sum of Rs 1.90 crore, leaving a balance of Rs. 0.25 crore as unutilized grant as on 31st March 2008.

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.

Separate Audit Report of the Comptroller & Auditor General of India on the Accounts of National Biodiversity Authority, Chennai for the year ended 31st March 2008

We have audited the attached Balance Sheet of **National Biodiversity Authority, Chennai** as at 31st March 2008 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 include the accounts of Nil Units/branches of the **National Biodiversity Authority, Chennai**. These financial statements are the responsibility of the **National Biodiversity Authority, Chennai'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

- 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)

Place: New Delhi

Date: 10.2.2009

Annexure

1. Adequacy of Internal Audit System

No internal audit of National Biodiversity Authority was conducted since its inception in 2003

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

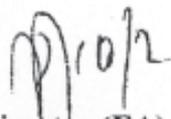
Physical verification of fixed assets was not done by NBA.

4. System of physical verification of inventory

No physical verification of stores/inventories was conducted for the items procured by NBA since inception.

5. Regularity in payment of statutory dues

The NBA had paid the statutory dues.



Director (EA)

