



KERALA STATE BIODIVERSITY BOARD

ANNUAL REPORT 2012 - 2013



KSBB
ANNUAL REPORT
2012 - 2013

Published by:
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Member Secretary

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KSBB

Kerala State Biodiversity Board
Pallimukku, Pettah, Thiruvananthapuram - 695 024



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Dr.Oommen.V.Oommen

Chairman

Foreword

I am happy to present the Annual Report 2012-2013, a compilation of the significant achievements and initiatives of Kerala State Biodiversity Board in Biodiversity conservation. Over the year, work on the first ever Marine Biodiversity Register was initiated and several project concepts were submitted, while some others are under development. Urban Biodiversity enhancement programme is one our flagship projects being successfully implemented in Thiruvananthapuram to promote the conservation of urban natural ecosystem, ponds and other water bodies. In addition, Board has also undertaken programmes targeted at Aquatic and Marine Biodiversity Conservation, Conservation of traditional breeds and varieties and Ecosystem conservation.

Kerala is defined by its green cover, but as a famous economist wrote "Humans tend to extract without fear of limits, consume without awareness of consequences and produce without responsibility for third-party costs". Sustainable harvest of medicinal and aromatic species from wild should become an important conservation strategy for the long term survivability of medicinal plant resources and has been prioritized. Biodiversity education and awareness are primary to the conservation of biodiversity to attain sustainable use of bioresources. Our nature education programmes such as Children's congress, Biodiversity clubs, Shanthistal, as also state wide International day celebrations and exhibitions were intended to promote the importance of biodiversity in our lives and encourage children and youth to take action to better understand and protect our natural heritage.

Despite much progress in dealing with environmental issues, more focus is needed to address the pressing environmental challenges faced by the state. The State Government has been implementing several regulatory and promotional measures for environmental protection and conservation. The Department of Environment is revamping the Environmental Policy so as to integrate environmental aspects in the developmental agenda to ensure sustainability. Proper valuation of ecosystem services for achieving sustainable development will be enabled to a great deal by the digitalization of The Peoples Biodiversity Register by KSBB which is underway.

The Annual report will serve to assess progress in key areas and identify and analyze actions and initiatives for the coming years. KSBB will continue to strengthen its capabilities so as to face the environmental challenges of the future and to cultivate environmental awareness and action from grassroot level. For carrying forward our conservation initiatives, key priority is mobilizing resources to implement the identified plans for explicitly linking PBRs and the time tested knowledge and local issues recorded by the people to an agenda for conservation and developmental action of panchayats.

I am sure with our combined efforts we can translate the ideas into actions to achieve our vision for a green Kerala, which will naturally prosperous.



Dr. K.P Laladhas
Member Secretary

Prelude

2012-2013 will be remembered for being a challenging year with a high positive impact on Biodiversity policies and legislations worldwide. India was truly privileged to host Conference of Parties to the Convention on Biological Diversity, when the world came together to adopt many far-reaching documents, including two legally binding Conventions, on the 20th anniversary of the Earth Summit, Rio de Janeiro. As the only state in India with fully functional BMCs in all LSGs the response received during the international event to the pavilions put up by KSBB was truly gratifying. This was followed by National Biodiversity Congress 2012 hosted by KSBB, a national mega biodiversity event and Biodiversity expo to showcase the richness of biological, cultural and ecological heritage of the country.

Our major challenge during the last two years was the establishment of Biodiversity Management Committee in all Local Self Governments of Kerala for the purpose of promoting conservation of biological resources in a decentralized way. KSBB has been successful in this venture of establishing an institutional framework for implementation of Biological Diversity Rules 2004 and was declared as BMC notified state during COP11. BMC established within the jurisdiction of LSG is the most effective vehicle to address the issue of conservation of biodiversity at the grass-root level, but a need for increasing awareness of roles and responsibilities and strengthening BMC was identified. During the reporting year all efforts were directed towards strengthening the BMC by appropriate guidelines and notifications and by capacity building, awareness generation and education. The institutional mechanism for strengthening BMC has been enhanced by authorizing them to deal with environmental issues at Gram Panchayat level and also to function as "Environmental watch group". The authority of BMC to regulate access and protection of the biodiversity information and traditional knowledge included in biodiversity registers, to outside persons and agencies has been reinforced. The Board has also established State Biodiversity Fund and a technical support group comprising experts in the field of biodiversity in all 14 districts of Kerala. This report presents a summary of the many activities undertaken by the Board for conservation of biodiversity and sustainable use of its components and equitable sharing of the benefits arising out of utilization of biological resources.

With our concerted effort our knowledge base to conserve biodiversity can be definitely widened. I would like to take this opportunity to acknowledge that success realized is owed to the hard work and dedication of entire KSBB family, notably, the leadership of Chairman, and Board members and dedication of staff of KSBB.

KERALA STATE BIODIVERSITY BOARD



The Kerala State Science, Technology & Environment took up the proposal for setting up of the Kerala State Biodiversity Board (KSBB) in October, 2003, in accordance with the provisions of the Biological Diversity Act, 2002. Government of Kerala subsequently constituted the Kerala State Biodiversity Board in 2005 as per section 22 to 25 of the Biological Diversity Act 2002. It is the state's leading statutory organization with Environment department and performs facilitative, regulatory and advisory function for the Government of Kerala on dealing with matters relating to the conservation of biodiversity and sustainable use of Biological resources. The headquarters of the Board is at the state capital Thiruvananthapuram. The State Biodiversity Rules were formulated on 2008 and during the brief span of seven years since establishment, KSBB has served the cause of Biodiversity conservation by implementing various projects

and awareness programs such as documenting local biodiversity in Peoples Biodiversity register, Conservation of Agro biodiversity, Conservation of Wetlands, Water birds and Heronry. Taking into consideration the importance of nature and environmental education and the need for creating awareness among the future generations, children's ecological congress is conducted yearly. The Board has also been instrumental in developing policies and guidelines for protecting the interests of Biodiversity conservation. KSBB has the distinction of the being the only state board which has been successful in constituting functional Biodiversity Management Committees in all Panchayats, Corporations and Municipalities of the state. KSBB is able to translate its mandate effectively through a structure that comprises five ex-officio members, five members nominated by the Government, Chairman and Member Secretary.

MEMBERS

Ex-Officio Members

1. **The Executive Vice President,**
Kerala State Council for Science, Technology and Environment,
Sasthra Bhavan, Pattom
2. **The Principal Secretary,**
Forest and Wildlife Department
3. **The Principal Secretary,**
Fisheries Department
4. **The Principal Secretary,**
Environment Department
5. **The Agriculture Production Commissioner,**
Government of Kerala

Non Official Members

1. **Dr.K.G.Sreekumar,**
Chief Executive Officer, State Medicinal Plant Board, Kerala
[Senior Research Officer (Botany) and Head of Department,
Pharmacognosy Unit, Ayurveda Research Institute, Govt. Ayurveda College,
Thiruvananthapuram]
2. **Dr.N.Omanakumari,**
Arunima, Babuji Gardens, Mannanthala P.O., Thiruvananthapuram
3. **Dr.Achuthsankar S. Nair,**
Head, Dept. of Computational Biology and Bioinformatics,
Director, State Inter-University Centre of Excellence in Bioinformatics,
University of Kerala, Thiruvananthapuram - 695581
4. **Dr.A.K.Sherief,**
Cloud – 9 Apartment, Law College Road, Vachiyoor P.O., Thiruvananthapuram
5. **Dr.K.Mohana Kurup,**
Neriampallil House, Elippakulam,
Pallickal P.O., Alappuzha – 690 503

Chairman

Prof. (Dr.) Oommen V.Oommen

Member Secretary

Dr. K.P. Laladhas

Staff

Senior Administrative officer

Smt.K.Mini

Principal Scientific Officer

Dr.C.Anilkumar

Scientific Officer

Shri.G.S.Unnikrishnan Nair

Technical Assistant

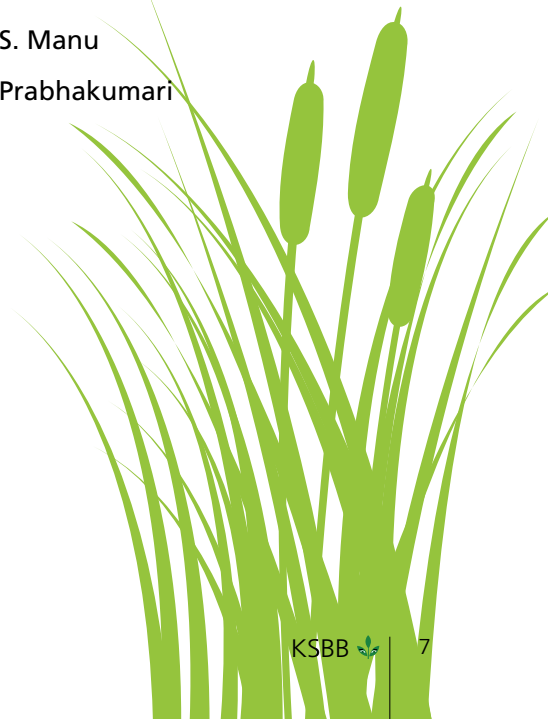
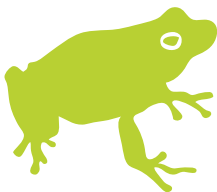
Smt. Nisha S.K.

Cashier Cum-Assistant

Shri. S. Manu

Part time Sweeper

Smt. Prabhakumari



K.S.B.B Project Personnel

Senior programme coordinator
Programme Coordinator
Assistant Programme Coordinator
Project Assistant
Administrative Assistant
Project Associate
Project Associate
Project Associate
Data Entry Operator
Data Entry Operator
Data Entry Operator
Data Analyst
Skilled Assistant
Project Assistant
Helper
Helper

Prof. Justin Manohar Raj
Dr. Annie Mathai
Smt. Vijayasree A.S.
Shri. G. Ramachandran Pillai
Shri. Sivanesan
Smt. Mithrambika N.B.
Smt. Sandhya Rani S.K.
Ms. Shyni N. Mony
Smt. L.R. Ashalatha
Smt. P. Revathy
Smt. Priya S. Nair
Smt. Madhumati Balachandran
Shri. J. Gopakumar
Shri. Sreekumar
Shri. Muraleedharan Nair
Smt. Priya

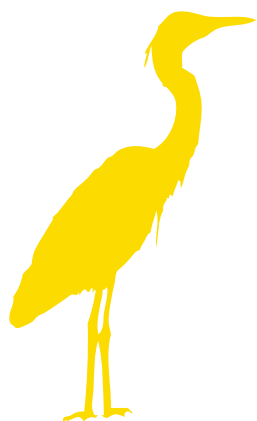
NBA Aided Project Personnel

Technical Associate
Technical Associate
Project Assistant
Library Assistant

Dr. Preetha N.
Dr. Baijulal B.
Shri. Sreekumaran Nair
Shri. Vinod Sen



BOARD MEETINGS



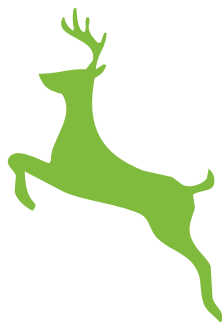
During the reporting period four regular meetings (on 11th April 2012, 22nd Sept 2012, 6th Feb 2013 and 23rd March 2013) were conducted.

KERALA STATE BIODIVERSITY BOARD VISION AND MISSION

Kerala State Vision and Mission 2012- 2017 was formulated to give a clear direction to the conservation initiatives for thrust areas which require priority attention. The 10 top priority areas identified are listed below and KSBB is taking up targeted projects to address these issues.



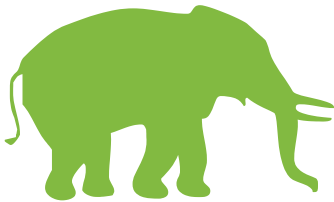
No.	Themes
1.	Biodiversity exploration of Kerala
2.	Conservation of traditional cultivars and seed banks
3.	Mechanism for assessing environmental and biodiversity issues in Kerala
4.	Translational Research
	i. Biodiversity and Conservation Research
	ii. Traditional Knowledge exploration for the betterment of mankind
	iii. Research on Ethno medicine and Traditional Knowledge
	iv. Access and Benefit sharing
	v. Grass root innovations and benefit sharing
5.	Developing database for monitoring & conservation of biodiversity
6.	Green Economy policy
7.	Kerala Biodiversity Park
8.	In-situ and ex-situ conservation and exhibition of Western Ghats Plant Biodiversity
	i. Ex-situ conservation
	ii. In-situ conservation and exhibition of western Ghats biodiversity
9.	Ecosystem conservation
10.	Publications on Biodiversity for Public awareness



The Board has been successful in some of the areas as Biodiversity exploration of Kerala at the LSG level, Conservation of traditional breeds and varieties and the rest of the targeted themes will be taken up in a phased manner.

SIGNIFICANT ACHIEVEMENTS

1. Strengthening institutional mechanism for implementing Biological Diversity Act 2002 by establishing Biodiversity Management Committee (BMC) in all the 978 Panchayats, 60 Municipalities and 5 Corporations of Kerala
2. Documenting Biodiversity of cultural landscapes- 'Peoples Biodiversity Register- PBR'
3. Constitution of State Biodiversity Fund
4. Biodiversity Conservation Programmes through BMC
5. Implementation of Biodiversity conservation projects
6. Ecorestoration programmes for ponds and spent quarries
7. Research wing for KSBB
8. Formation of Biodiversity Exhibition wing
9. Hosted National Biodiversity Congress 2012
10. Organized National Biodiversity Expo at Thiruvananthapuram for the first time
11. Workshops/ Seminars
12. Nature education and Awareness Programmes



ONGOING PROGRAMMES

Strengthening institutional mechanism for implementing Biological Diversity Act 2002

- Kerala has the distinction of being the only state in India to have a state wide network of BMC in all the 978 Panchayats, 60 Municipalities and 5 Corporations.
- Kerala was declared as BMC notified state during CoP-11 by Chairman of National Biodiversity Authority, Dr. Balakrishna Pisupati.
- State Biodiversity Fund has been constituted for the conservation and promotion of biological resources for socio economic development of the area.
- Technical support groups (TSG) comprising of experts in the field of biodiversity are constituted in all the districts of Kerala to enhance the existing capacities of BMC's.
- Regional meetings of TSG's and District coordinators are conducted regularly, zone wise, for strengthening the institutional capacity of local community in implementing Biological Diversity Act.
- BMC awareness programmes- Capacity building and awareness programmes targeted at BMC are conducted in the districts of Kerala frequently to increase the awareness of the roles and responsibilities of BMC in effective implementation of the Biological Diversity Act
- Training programmes for PBR staff are conducted periodically



District-wise details of functional Biodiversity Management Committees in the 60 Municipalities and 5 Corporations of Kerala. BMCs have already been constituted in all the 978 Panchayats during 2011-12.

Number of BMCs constituted during 2012-13

Sl. No.	District	No. of Municipalities	No. of BMCs Constituted
1.	Thiruvananthapuram	4	4
2.	Kollam	3	3
3.	Pathanamthitta	3	3
4.	Alappuzha	5	5
5.	Kottayam	1	1
6.	Idukki	4	4
7.	Ernakulam	11	11
8.	Thrissur	6	6
9.	Palakkad	4	4
10.	Malappuram	2	2
11.	Kozhikode	7	7
12.	Wayanad	1	1
13.	Kannur	6	6
14.	Kasaragod	3	3
Total		60	60

Sl. No.	District	No. of Corporations	No. of BMCs Constituted
1.	Thiruvananthapuram	1	1
2.	Kollam	1	1
3.	Ernakulam	1	1
4.	Thrissur	1	1
5.	Kozhikode	1	1
Total		5	5



Chief Minister Oommen Chandy declaring Kerala as the first State to form Biodiversity Management Committees in all LSG's

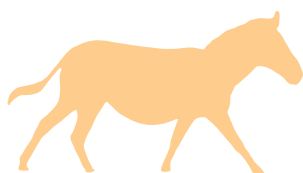


NBA Chairman declaring Kerala State as the First State in India to constitute Biodiversity Management Committee(BMC)

PEOPLES' BIODIVERSITY REGISTER (PBR)

PBR is an authentic document chronicling the local biodiversity at Panchayat, Municipality and Corporation level prepared in a participatory manner. The PBR is prepared in a truly decentralized manner with prior informed consent of the local community with active involvement of concerned community supported by scientists, teachers and expertise of Technical support group. PBR records peoples knowledge and ongoing changes in biodiversity of the area which is substantiated by

the expertise of our Technical support group. The records serve as a baseline database for future management strategies. An evaluation of the PBR was conducted and necessary additions of scientific names were incorporated under guidance of taxonomy specialist. The process of digitalization of the PBR so as to facilitate storage of the information and analysis of data is underway. Details of PBRs completed in various districts of Kerala is shown in the table given below.



Number of PBRs Prepared up to March 2013

Sl. No.	District	No. of GPs where PBR training has been conducted up to March 2013	No. of PBRs completed and submitted till date
1.	Thiruvananthapuram	58	39
2.	Kollam	52	36
3.	Pathanamthitta	44	34
4.	Alappuzha	64	51
5.	Kottayam	47	35
6.	Idukki	45	34
7.	Ernakulam	44	36
8.	Thrissur	56	54
9.	Palakkad	48	36
10.	Malappuram	56	39
11.	Kozhikode	41	34
12.	Wayanad	25	20
13.	Kannur	52	33
14.	Kasaragod	38	23
	Total	670	504





As per Rule 20(6) of Kerala Biological Diversity Rules 2008, a technical support group comprising of experts in the field of biodiversity drawn from Government agencies, NGO and academic fields were constituted in all 14 districts of Kerala. The group will support BMC at Grama Panchayat level in the preparation of PBR and also give advices and suggestions for resolving environment related issues (Table 3).



Number of Technical Support Group (TSG) members in various districts of Kerala

Sl. No.	District	No. of TSG Members
1.	Thiruvananthapuram	5
2.	Kollam	5
3.	Pathanamthitta	5
4.	Alappuzha	5
5.	Kottayam	5
6.	Idukki	5
7.	Ernakulam	5
8.	Thrissur	5
9.	Palakkad	5
10.	Malappuram	5
11.	Kozhikode	5
12.	Wayanad	5
13.	Kannur	5
14.	Kasaragod	5
	Total	70



BIODIVERSITY CONSERVATION PROJECTS

AQUATIC AND MARINE BIODIVERSITY CONSERVATION

Marine Biodiversity Register

This is a unique initiative of KSBB to document the traditional knowledge of fishermen community. The study proposes to document traditional knowledge systems in a first of its kind "Marine Biodiversity Register", suggest conservation measures and address concerns of the traditional hook and line fishers in Trivandrum coast. The MBR will document the underwater ecology of the inshore areas and the traditional knowledge systems of fishermen in the State. The pilot phase will cover a 20-

km stretch of the Thiruvananthapuram coast from Valiathura to Puthukurichy. The project seeks to create a biodiversity register of ecologically important reefs and rocky areas. It will record the demersal (fish living and feeding on or near the bottom of the sea) species around the reef areas and document traditional knowledge on navigation, bottom configuration of the seabed, ocean currents, and wind patterns. It will also provide indicators to overfishing and marine resource depletion.



Turtle conservation at Thaikadappuram

Thaikadappuram of Kasaragod District is an important nesting ground of marine turtles. The denuded sand dune ecosystem of the area is becoming unfavourable for the turtles to lay eggs. The project is aimed to create awareness on turtle conservation among common people of this area for protecting the eggs laid by turtles.



Action plan for conservation of Biodiversity of Pampa river:

An action plan for Conservation of Pampa river at LSG level with 8 modules encompassing Base line data collection (Flora, Fauna, Water quality), Habitat improvement, Conservation of biodiversity, Environmental protection, Capacity building along with a special module focussed on Equitable sharing of benefits derived from use of biological

resources was proposed by KSBB after a detailed study. Based on the baseline data collected identification and grading of threats across Pampa river will be undertaken and changes in ecosystem will be monitored. A pilot project was initiated in the Panchayats of Pandanad, Koipuram and Mannar initially.



Management of Aquatic Invasive species in Pampa Riverine system with special emphasis to Cabomba

The project is aimed to eradicate aquatic invasive weeds from stretches of river Pampa and envisages the study of the alarming growth of invasive weeds like Cabomba, Limnocharis, Cyperus along the different regions of Pampa river . The Cabomba with its extremely dense strands obstructs the free flow of water, increases the silting of river and suppresses the growth of other species. The Pampa river and its tributaries support many unique ecosystems and threatened species. The invasion of these weeds imbalance the entire ecology of water bodies. The Cabomba presence in the river Pampa is an indication of fast decreasing river flow and alarming rate of degradation of river system



CONSERVATION OF TRADITIONAL BREEDS AND VARIETIES

Conservation of Tuber diversity of Wayanad

Wayanad is home to 20 types of yams, 16 types of taro, elephant foot yam, six types of sweet potatoes, different types of cassavas, arrowroots and yam-beans. 21 Wild Dioscorea species are used by tribal people in Wayanad and tuber diversity of Wayanad includes 19 Traditional Dioscoria cultivars, 20 Aroids and

other edible tubers. Many of them have medicinal properties and are at the verge of extinction. This project is aimed at collection and conservation of traditional varieties of Yams, Aroids, Curcuma and sweet potato and to organize awareness programs through interactive classes, pamphlets, posters with documentation in visual media



Conservation of Cheruvally and Vechur cattle

Conservation of Cheruvally cattle, strengthening the germplasm centre of native cattle and production and processing of semen of Vechur and Cheruvally bulls for conservation and genetic improvement of the variety are the highlights of this programme focussed on the native cattle breeds of Kerala.

Conservation of high range dwarf cattle at Elappuly

High range dwarf cattle breed found in Western Ghats is diminishing due to deforestation, replacement with European cross breeds and the available local cattle breeds are at high risk of extinction. The project is aimed at conservation of this traditional breed of Kerala.



ECOSYSTEM CONSERVATION



Conservation of Mangroves:

This is an action research programme, at Atholi grama panchayat of Kozhikode district for conservation of mangroves and fish diversity of the ecosystem. The programme promoted participatory mangrove planting along Korappuzha river banks

Urban Biodiversity enhancement programme

This programme was launched to promote the conservation of urban natural ecosystem, ponds and other water bodies. As part of this programme planting and protecting the tree cover on the banks of 7 ponds in Thiruvananthapuram district; Pattom Manganoor Kulam, NCC Kulam, Thoppilkulam, Chadiyara Kulam, at Poojapura, Vattioorkavu, Pongummood and Thundathil has been completed.



Eco restoration and Water harvesting in abandoned Quarries-

The abandoned quarry at Ambalapara, Palachuvadu in Kakkand is a perennial source of water and is connected with Edapally thodu but the area is highly degraded. A preliminary study was conducted involving water quality, geographical details, quarry dimensions and details, and water availability. The project on Eco restoration of abandoned quarries envisages developing nature trail by planting recommended native species of grasses, shrubs, trees and riparian vegetation. The large water body is proposed to attracts many birds , butterflies and serve as an important habitat for a range of amphibians, and other invertebrates. Hence development of this area is expected



to enrich the biodiversity of this area and generate public awareness. The project is also beneficial to local communities that often face water scarcity. Water stored in the quarry can be utilized for household purposes and fish cultivation. The project will also help in recharging the underlying aquifer, raising the water table which will increase the vegetation in the surrounding area



Conservation of Biodiversity Rich Areas Outside Protected areas-Udumbanchola

KSBB has launched a scheme for sustainable development of Biodiversity rich areas in Cardamom Hill Reserve which is a treasure house of gene pools of wild relatives of cultivated plants and wild orchids. The area includes grasslands and shola forests and covers seven Panchayats of Udumbanchola Taluk in Idukki district



Afforestation programmes:

A tree planting campaign was organised by KSBB in Karunapuram Panchayat of Idukki district during August 2012. 20,000 tree saplings were planted by NSS volunteers



Shanthisthal

A unique initiative of KSBB for biodiversity conservation in urban settings and rural Kerala for the purpose of improving the environment and conservation of endangered plant diversity. This protected man-made forest maintained by biodiversity clubs will become a biodiversity rich area for Rare and endangered plants and animal species without human hindrance. Shanthisthal is significantly aimed to improve rare, endemic, endangered and threatened species of plants. The Board offers financial support for initial establishment/ protection of Shanthisthal. In the financial year 2012-13, 19 institutions covering a total area of 7 acres have been granted financial aid by the Board for establishing Shanthisthal.



Idamalakudi Tribal Panchayat

Idamalakkudi is the only tribal Panchayat located in Idukki district spread over 106 sq km area, with a population of 2,236 people comprising 1,196 men and 1,040 women. A team of 20 experts lead by KSBB Member Secretary Dr. K. P. Lalhadas carried out a week long Biodiversity assessment study of the Panchayat in connection with preparation of Peoples Biodiversity Register. The KSBB team learnt that medicinal plants in the area were facing extinction as they were being taken away by traders. This is causing concern to the tribal community who are depended entirely on the forest for food, shelter and medicine. Species like *Coscinium fenestratum* (Maramanjil) is facing threat of habitat loss here. Based on this Biodiversity

Register, KSBB will carry out necessary interventions for protecting biodiversity loss of Idamalakudi and provide sustainable livelihood for tribes. The field study found that some developments that had taken place were not in tune with sustainable development of the region. The traditional houses are environment-friendly huts made of locally available raw materials like wooden frames, bamboo sticks and small stones in combination with pasty soil. But due to developmental activities tin sheet roofs and plastic pipes are increasingly used. KSBB feels that the intervention is required in areas like housing, electrification, drinking water and agricultural practices for sustainable development of the area





Inventory of Organic farmers in Kerala:

In Kerala efforts to act against undue exploitation of natural resources and uncontrolled use of synthetic chemicals is underway. But no systematic study has been undertaken so far to assess the present status of organic cultivation in the state. The project is expected to study the organic farmers in each panchayat and keep a record of their farm activities and marketing of produce. The project will study the knowledge, skill and attitude of organic farmers of Kerala and explore the potential for expansion of area under organic farming

SUSTAINABLE RESOURCE UTILIZATION

Conservation and benefit sharing of medicinal plant resources of Wayanad at LSG level:

KSBB is undertaking a pilot study in the district of Wayanad for sustainable collection of medicinal plant resources and fair benefit sharing to the user groups. Sustainable harvest of Medicinal and Aromatic species from the forests should become an important conservation strategy for the long term survivability of medicinal plant resources. Guidelines for good collection practices, especially for those species for which destructive collection is employed and Guidelines for Good sourcing practices are being developed. A framework of principles and criteria were developed in house and it is proposed to conduct a pilot study to field test these guidelines for management and monitoring of MAP species and their ecosystems



Medicinal Plants Database:

A district wise inventory of medicinal plants of Sulthan Bathery of Wayand along with associated traditional knowledge was compiled based on data from PBR. Based on this, a project (Geospatial Database for Medicinal Plants of India for innovative applications) in collaboration with Foundation for

revitalization of Local health traditions, Bangalore and University Centre of Earth & Space Science, Hyderabad is in the pipeline. The project proposes to link dimensions of geospatial attributes relating to wild occurrence of plant species to the existing Indian Medicinal Plant Database .

NATURE EDUCATION

Children's Ecological Congress

An action oriented and fun filled workshop for children is organized by KSBB every year where children are allowed to express their innovative ideas and initiatives for nature conservation. Loss of biodiversity will be an irreplaceable loss to the youth and children whose lives will be directly affected by environmental problems. Students biodiversity congress is oriented towards the leaders of tomorrow who should function as a catalysts for a change to a sustainable mode of development. The congress is intended to promote the importance of biodiversity in our lives and encourages children and youth to take action to better understand and protect our natural heritage.



The fifth children's ecological congress was held as a part of the National Biodiversity Congress from 29-30 December 2012. Member Secretary of KSBB, Dr. Laladhas welcomed the budding conservationists and the programme was inaugurated by Director of Kerala State Balasahitya Institute Prof. Nedumudi HariKumar. Chariman, KSBB, Dr. Oommen V.Oommen presided over the function. More than 30 schools represented by 170 students from various parts of the state participated in the event. Dr. R.V.Varma, Former Chairman, KSBB and Dr. K.MohanaKurup, Board member felicitated the congress. The inaugural session was followed by various programmes to create an awareness of the varied agro diversity specific to Kerala and to provide an opportunity for the children to bring the colours of nature and the essence of life onto canvas.



Biodiversity workshop

As part of Mathrubhumi Seed programme a Biodiversity workshop was conducted by KSBB. Dr. P K Unnikrishna Pillai, Principal Scientific officer, KSBB and G S Unnikrishnan Nair, Scientific Officer, KSBB delivered interactive lectures on the Biodiversity of Western Ghats and Agrodiversity of Kerala respectively. This was followed by a quiz programme and screening of documentary film.



Biodiversity clubs

Biodiversity clubs are established in colleges and higher secondary schools to implement programs to conserve biodiversity in a timely manner. They will carry out programmes for conservation of local biodiversity in accordance with Biodiversity Acts in association with local Biodiversity Management Committee to identify specific area for Shanthisthal and propagate the culture of conservation of environment and biodiversity, planting of seedling, its maintenance, and the preservation of know-how of such resources.



INTERNATIONAL DAY CELEBRATIONS

International day for Biodiversity (May 22, 2012) :

UN proclaimed Marine Biodiversity as theme for International day for Biodiversity 2012. To commemorate this occasion KSBB celebrated the day in the nine coastal districts of Kerala with presentations by eminent persons and documentary screening. Honourable Minister for Home, Shri. Thiruvanchoor Radhakrishnan inaugurated the

function at Thiruvananthapuram. He stressed the fact that development should not be at the cost of environment. Since the focal theme of international Day for biological diversity 2012 was Marine Biodiversity, presentations on challenges and threats faced by Marine Biodiversity and screening of a documentary entitled Mangroves was also done.



World Environmental Day (June 5, 2012)

KSBB organized an environmental awareness rally to commemorate World environment day advocating use of renewable sources of energy. Pamphlets were distributed on the need to conserve environment/ protect wetlands and adopt an organic way of farming. Over 200 students from schools and colleges participated in the rally which was flagged off by Chief Minister Shri Oommen Chandy. The environment rally was organised with a vision that individuals can contribute a lot towards conservation of environment. School children, Students from higher education institutions, researchers and nature lovers participated in the rally. Biodiversity Board Chairman Dr. R.V.Varma and Member Secretary Dr. K.P.Laladhas gave leadership to the rally. The main

idea behind the rally was, to promote the spirit of afforestation, to reduce the use of plastics, to conserve fresh water, shun pesticides and be parts of conversation biodiversity

BIODIVERSITY CONFERENCE, EXHIBITIONS

CoP 11- CBD (October 8-19, 2012):

KSBB participated in CoP11 hosted by India for the first time with exhibits, posters, documentaries and traditional artifacts. The main activities undertaken in this regard were

- Development of awareness generation materials as Brochures, Documentary and updates in dailies regarding CoP11
- Preparation of display panels highlighting the diversity of Kerala
- Translation of model PBR in English for the benefit of wider audience.
- Collection of representative specimens of agrodiversity of Kerala
- Collection of cultural artifacts made by traditional artisans of Kerala



The panels on the biological and cultural diversity of Kerala displayed in the KSBB pavilion were acclaimed as highly informative. The viable specimens of rice diversity brought into focus the significance of agro-diversity for food security in coming decades. The cultural diversity of Kerala, God's own country was amply represented by the traditional artifacts of rural Kerala. In the high-level deliberations of the conference KSBB Chairman and member secretary participated.



National Biodiversity Expo 2012 (Dec. 21-30, 2012):

A Biodiversity expo showcasing diversity of life was organized by KSBB, which was highly appreciated by public as well as media and viewed by a staggering 40,000 people. The stalls took the audience through the myriad biodiversity of India, biogeographical zones, critically endangered flora and fauna, biodiversity heritage sites, domesticated biodiversity, conservation measures, success stories, traditional varieties and breeds. National Biodiversity Expo -2012, jointly organized by National Biodiversity Authority and Kerala State Biodiversity Board, was inaugurated on December 21st by Hon: Minister for Home Sri.Thiruvanchoor RadhaKrishnan. Minister for Health Sri.V.S.Sivakumar chaired the meeting. Kerala State Biodiversity Board Chairman Dr.Oommen.V.Oommen, Member Secretary Dr.K.P.Laladhas and Dr.K.G.Sreekumar, Board Member addressed the gathering. About 300 persons attended the inaugural

function The Expo was appreciated by many dignitaries including Chief Minister Oommen Chandy who also visited the Expo. Each theme was presented as a series of display panels featuring text, images and graphics, as well as audio visual tools along with informative pamphlets. The picture gallery was a celebration of pristine nature, a gateway to stunning diversity of flora and fauna. The major attraction of the Expo was the display on Western Ghats put up by the Central Ministry of Environment and Forests through the National Museum of Natural History. It showcased a series of panels, each devoted to a particular aspect of the multifarious biodiversity that cloaks the Western Ghats. The stunning photographs were accompanied by informative text that stresses on issues such as population encroachment that threatens the ecological treasures of the Western Ghats. Indigenous food festival and Cultural festival were added attractions of the Expo.



SEMINARS/ WORKSHOPS

National Biodiversity Conference 2012 (December 27-30, 2012)

A national level colloquium of more than 260 scientists and grass root level conservationists was hosted by KSBB under the auspices of National Biodiversity Authority from December 27-30. The scientific sessions reiterated the need for conservation and sustainable management of biological resources and associated traditional knowledge besides ensuring appropriate capacity building at individual and institutional levels and raising the awareness of a range of stakeholders.

The Conference started after a formal inauguration by Dr. Shashi Tharoor, Minister of State for Human Resources Development, Government of India. Dr. R Chidambaram, Principal Scientific Advisor to Government of India, proposed the Key Note Address and Dr. Sam Pitroda, Chairman, Prime Minister's Innovation Council joined through a video link. Dr. Sam Pitroda announced a proposal to establish a National Innovation Council on Biodiversity. During his key note address Dr. R. Chidambaram confirmed the establishment of a National Biodiversity Grid to facilitate and support the work of NBA in collating, analyzing and synthesising nation-wide biodiversity data and information for conservation and sustainable management of biodiversity of the country and also to assist in appropriate policy making. The Grid, that will be established as a part of the National Knowledge Network (NKN) with assistance from Centre for Development of



Advanced Computing (C-DAC) will provide an unique technology based platform for linking biodiversity based data and information across the country. Another path breaking recommendation of NBC 2012 is the setting up of a Biodiversity Information and Data Management- Future Road Map which will serve to provide a single window for the Biodiversity information of the country. The key recommendations of the summit were communicated at the state and central level.

The Conference also brought together twenty state biodiversity boards (SBBs) across the country to discuss issues of implementation of the Biological Diversity Act and Rules with specific focus on preparation of Peoples' Biodiversity Registers (PBRs) and strengthening the Biodiversity Management Committees (BMCs). The discussions during the sessions of SBBs elaborated the state level opportunities and challenges in preparing the PBRs. Complementing the pro-active approaches used by the Kerala State Biodiversity Board, the SBBs committed to completing the PBRs in a timely manner to ensure biodiversity related information and knowledge are appropriately registered and future benefits shared with respective communities.



WORKSHOPS



Haritha Sangamam (December 22, 2012):

An interactive workshop aimed at farmers and grass root level conservationists attended by more than 130 Traditional knowledge holders was organized by KSBB. Many of the local land races preserved by farmers/ user groups, have evolved through natural selection and are more adapted to the local conditions, more tolerant to climatic stress, and to local parasites and diseases. The main objective of Haritha sangam was to enable these grassroots level conservationists to present their painstaking efforts in conserving biodiversity of crop plants/ medicinal plants and exchange ideas.



NGO and BMC meet (26.12.2012):

A capacity building workshop exclusively targeted at NGO's was organized to provide a common platform for airing constructive suggestions for conservation of our heritage. The programme was inaugurated by Dr. M.K. Muneer, Hon Minister for panchayat and social welfare. In his inaugural session he commended KSBB saying that the state leads in biodiversity thanks to active participation of local bodies and that Kerala should be proud of the fact that Human development index of Kerala is next to that of Norway and the role of conservation is imperative in maintaining this. BMC meet, a capacity building workshop for creating awareness and strengthening the role of BMCs in biodiversity conservation in which more than 200 BMC members participated, was organized by KSBB



“Management of People’s Biodiversity Register (February 28th, March 1st and 2nd, 2013)”

A Three day Workshop on “Management of People’s Biodiversity Register” was organised by Kerala State Biodiversity Board, at KFRI, Peechi for the benefit of project fellows and District Co-ordinators belonging to all districts of Kerala. Dr. Ravishankar Thupalli, Project Manager, UNDP-NBA, Chennai emphasised the importance of following aspects - Issues in PBR preparation, Role of Dept. and Institutions, Role of Biodiversity Management Committee and Custodianship of People’s Biodiversity Register & Present Status during PBR preparation. Dr. R. V Varma former Chairman KSBB spoke on “Traditional Knowledge documentation- Challenges

and emerging issues in the context of PBR preparation”. The participants were taken to the Peechi-Vazhani Wild life Sanctuary for Biodiversity assessment



Intangible Natural Heritage (March 9 - 11, 2013)

A workshop on Intangible Natural Heritage was organized at Centre for Environment and Development, Thiruvananthapuram, with focus on methodology. The workshop was organised by National Museum of Natural History jointly with Centre for Environment and development, Kerala State Biodiversity Board and Jawaharlal Nehru Tropical Botanical Garden and Research Institute. The workshop was inaugurated by Shri. K.Jayakumar, Vice Chancellor, Thunchath Ezhuthachan Malayalam University. Dr.Oommen V. Oommen, Chairman,KSBB gave a presentation on “Preparation of Peoples Biodiversity Register”. On the second day a Field Visit- PBR exercise

at Kani tribal hamlets was organised. Prof. S.Justin Manohar Raj, Senior Programme Co-ordinator, KSBB was the Group Leader of the team, to assess the birds, animals and fishes in Ariyavala Tribal Settlement.

Discussion meeting on Western Ghats Ecology Expert Panel report,

KSBB conducted discussion meeting in WGEEP Report at Chief Ministers Conference Hall. Western Ghats Expert Ecology Panel Report- A Kerala Perspective in English and Malayalam was presented.



AWARENESS AND TRAINING PROGRAMMES

Regional meetings of Technical support groups, district coordinators and project fellows were conducted for Northern zones, (5 districts), Central zone (5 districts) and southern zone (4 districts). During the meeting various issues faced by BMC, role of TSG and recommendations for Biodiversity conservation were discussed.



A meeting chaired by KSBB chairman Dr Oommen V Oommen was held on October 30, 2012 to discuss the environmental issues of Pampa river. The meeting stressed that biodiversity of Pampa river is alarmingly declining and urgent measures are needed to restrict unscientific sand mining, habitat destruction, to re-establish riparian vegetation, and create awareness among stakeholders.

Training programmes were initiated for PBR projects in 174 panchayats for 2012-2013.

Training on consolidation of People's Biodiversity Register was held at KSBB office, Pettah, Thiruvananthapuram, on 12-03-2013. They were formally welcomed by Prof. S. Justin Manohar Raj, Senior Programme Coordinator. Dr.K.P. Laladhas, Member Secretary, KSBB briefed them about the uniformity to be followed in PBR preparation and prompt completion of the same. Smt. Mithrambika N.B, Project Associate, KSBB explained the consolidation process (PBR) with the help of related forms.



Awareness programmes to promote Green journalism were conducted for visual and print media persons in Kollam district of Kerala.



AWARDS AND COMPETITIONS

Green awards were instituted by KSBB since 2008 to biodiversity and nature conservation in the state to encourage and promote individuals, organisations, institutions, schools, colleges, media persons in Kerala for playing an active role in biodiversity/ nature conservation. The 2012 awards were distributed to Journalists, Schools, Colleges and individuals for exemplary work on conservation of traditional breeds and varieties and preservation of Traditional Knowledge. Eleven persons belonging to various categories received the award from the Chief Minister. Each award included a cash prize of Rs. 50,000/-, memento and a certificate.

Green Individuals

1. G. Devaki Amma, 79 year old Devaki Amma maintains a man-made forest having about 600 species of plants and trees in her homestead spread over 4.5 acres. Two ponds having rare aquatic plants are also preserved in the homestead. This model ecosystem is often visited by students, farmers, environmentalists, and research workers.

2. Cheruvayal Raman, belongs to the traditional Kurichya Community of Wayanad. He preserves and cultivates 33 traditional varieties of paddy in his 5 acre land. Cheruvayal Raman also promotes cultivation of traditional Wayanad rice varieties by supplying seeds to other farmers.

3. Sebastian Vaidyar, a traditional Chiropractor, belonging to Kannur. He travels all over the world and has treated several hundreds of people using his traditional medicinal knowledge. He also conserves many rare medicinal plants.





4. M.M. Safer, a 22 year old youngster, belongs to Murukkumpuzha, Thiruvananthapuram. He has taken up environmental conservation as a life mission since his childhood. Safer maintains two medicinal gardens- one in Thiruvananthapuram having 75 cents area and another one in Wayanad spread over 2 acres. Many rare and endangered medicinal plants and trees are grown in these gardens.



5. K. Narendran, native of Karunagappally, Kollam, has devoted his life for preserving medicinal plants. He has travelled to many places including forests for collecting rare medicinal plants. Mr Narendran maintains a collection of over 1000 medicinal plants in his homestead.



6. Chandran master, 73 Years old, native of Kodungallur conserves 16 breeds of Indian cattle. He also practices natural farming in his 13 acre land. He has won National Breed Saviour Award and Thara Mody Rashra Udhan Puraskar in recognition of his conservation activities.



7. Green Institution - Pampa Parirakshana Samithy, an environmental organization was established in 2006 and is committed to the cause of conserving river pampa and maintaining healthy ecosystem in and around this sacred river. This organization also serves as an environmental research centre for collection of the rich cultural heritage and scientific data related to river Pampa.

8. Green School – CKNS GHSS Pilicode, Kasargod. Haritha Sena, the Eco club formulated in this school is engaged in environmental protection and conservation activities, including tree planting, maintaining medicinal garden, mangrove planting, vegetable cultivation, environmental awareness, campaigns etc. The overall trophy of the 5th Children's Ecological Congress, organized by KSBB was also bagged by this school.

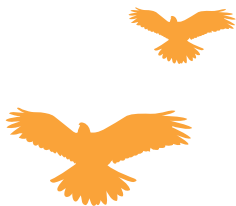
9. Green College – Govt. College Kasargod

Biodiversity Park and herbal garden are maintained in the campus. Ecological study of coastal environment, conduct of awareness classes for public regarding conservation of the flora and fauna, nature study camps in forest and planting mangroves in coastal environment are some of the activities undertaken by the college.

10. Green Journalist – Malayalam Print Media P.K. Jayachandran, Chief correspondent of Mathrubhumi Pathananthitta Bureau, has written many articles on topics related to Biodiversity and Environmental conservation.

11. Green Electronic Media Person was bagged by the environmental awareness programme "Green Report" directed by Saj Kurian and telecast through India-vision Channel. This programme has succeeded in creating awareness regarding environmental threats faced by our state.

PHOTOGRAPHY COMPETITION



A photography competition, with 'Biodiversity of Kerala' as the theme was organised in connection with National Biodiversity Congress 2012. The response to the contest was tremendous and 279 entries were received. The Judging committee included wildlife photographers Balan Madhavan, Suresh Elamon and news photographer B. S. Prasannan. The prizes were awarded to the winners by Hon. Home Minister, Shri. Thiruvanchoor Radhakrishnan at the inaugural ceremony of NBC 2012 at Kanakakkunnu Palace. Ullas G. Kalappura of Kattappana South, Kunthalampara, Idukki, bagged the first prize of Rs. 15001 along with a certificate and memento. The

second prize went to Jobymon C.P. of Arepparambu, Kottayam and Benny Ajantha of Vilivinal, Pathanamthitta won the third prize. The cash awards for the second and third positions were Rs. 10001 and Rs. 5001 respectively. The consolation prize were won by B.S. Biju, Kadavoor, Kollam; RajanKuttur, Kuttur, Thrissur; SalimPichan, Kalpetta, Wayanad; Babu Thomas, Rajakkad, Idukki; D. Karthika, Pulayanarkotta, Thiruvananthapuram; PrakashThachakkudy, Vanchiyoor, Thiruvananthapuram; M.D. Bijulal, Kanjiramkulam, Thiruvananthapuram; Devdas, Ulloor, Thiruvananthapuram; T. Anilkumar, Edappally, Kochi and P. Karunakaran, Golf Links Road, Thiruvananthapuram.

PUBLICATIONS

Handbooks:

KSBB published 10 illustrated handbooks for assisting field level researchers in the accurate identification of the flora and fauna of Kerala. Our range of handbooks included diverse topics such as, Amphibians, Mangroves, Mushroom, Butterflies, Medicinal Plants, Marine fauna, Invasive plants, Common trees of Kerala, Organic farming, Gastropods and Fresh water fishes of Kerala.

Documentaries and short films:

Our Documentaries entitled PBR preparation in Wayanad and The Attapady-Black Beauties, has generated enthusiasm among the public and has been widely viewed on screening in Visual media.

Brochures:

Brochures highlighting KSBB achievements and the endangered traditional flora and fauna of Kerala were printed. The brochures on Native cattle breeds of Kerala, Native goat breeds of Kerala, Aromatic and medicinal rice varieties of Kerala and Poultry breeds of Kerala generated keen interest when distributed during CoP11 held at Hyderabad.

Green Life- KSBB newsletter:

2 Editions of "Green Life" - A KSBB newsletter highlighting activities of KSBB, success stories and latest developments pertaining to biodiversity conservation interspersed with folklores for the younger generations has been brought out.

Western Ghats-A Kerala Perspective:

A condensed and easily comprehensible report for layman in Malayalam based on Western Ghats Ecology Expert Panel report was distributed to 633 concerned LSG to create awareness of salient features of the report pertaining to their area. A detailed technical report based on Western Ghats Ecology Expert Panel report with a Kerala perspective was also prepared in English and Malayalam.

POPULAR ARTICLES

- 1) WGEEP Report Needs Review (2012), **Oommen V Oommen and Laladhas K P** December, Kerala Calling, pp16-18.
- 2) "Avakashangal Hanikilla, Karshakare Pankalikalakkum" (2012) Interview with **Dr. Oommen V Oommen**, Karshakan, October, pp 10-15.
- 3) Dheseeya Jaiva Vividhya Congress 2012 review- **Oommen V Oommen, K P Laladhas** Yojana (Govt. of India) 2013 (41) pp 50-52.
- 4) Protective effect of dietary curcumin in with a special note on DNA fragmentation assay on hepatocytes and micronucleus assay on erythrocytes in vivo (2013) – **M Manju, A S Vijayasree, M A Akbarsha, Oommen V Oommen**, Fish Physiol Biochem, 21 March.
- 5) Identification, purification and characterization of two novel cyclic peptides from **K P Laladhas, Vishnuraj, P Balaram , S Sudarslal** , National Biodiversity Congress, Dec 27-30.
- 6) Multifariousness in the structure and fabrication of 'KODDU' – A Traditional Fish Trap of Kerala (2013), **C P Shaji, K P Laladhas**.
- 7) Monsoon flood plain fishery and traditional fishing methods in Thrissur district, Kerala (2013), **C P Shaji, K P Laladhas** Ind J. Traditional knowledge, 12(1) pp 102-108.
- 8) Writing Science for the children of New Era (2012), **G S Unnikrishnan Nair** Effective Science Writing-CSIR, North East Institute of Science and Technology, Jorhat.
- 9) The dews from Heaven (2012), **G S Unnikrishnan Nair**, Indian Coconut Journal, Kerala Calling, April.
- 10) Farmville in Real World (2012), **G S Unnikrishnan Nair**, The Hindu-Metro, 11-10-2012.
- 11) Harvest Time (2012), **G S Unnikrishnan Nair**, The Hindu-Metro, 23-8-2012.
- 12) A Green Village Dream (2012), **G S Unnikrishnan Nair**, Kerala Calling, December.
- 13) Pesticide from Tapioca (2012), **G S Unnikrishnan Nair**, Science Reporter-February.
- 14) Blue Green Algae: Food for the future (2013), **G S Unnikrishnan Nair**, Vegetable and their allied as protective food (Scientific Publisher Jodhpur)
- 15) Therapeutic significance of minor fruits(2013), **G S Unnikrishnan Nair**, Vegetables and their allied as protective food (Scientific publisher, Jodhpur)



REPRESENTATION IN EXPERT COMMITTEES AND OUTREACH PROGRAMMES



KSBB Representation in Expert Committees

Dr. Oommen V Oommen , Chairman, KSBB

1. Vice chairman of State Expert Appraisal Committee (SCAC).
2. State Level Committee on Conservation of Water resources.
3. Expert Committee on Curriculum revision (SCERT), Kerala.
4. Research Committee-Department of Environment and Climate Change (DOECC).
5. State Level Committee of Paddy and Wetland Conservation.
6. Task force on Biodiversity Management Committee, National Biodiversity Authority, Chennai
7. Hon' Director, Centre for venom informatics, Kariavattom, University of Kerala.
8. Expert member, Science Board, Indira Gandhi National Open University (IGNOU) New Delhi.
9. President, Kerala Academy of Sciences.

Dr. KP Laladhas, Member Secretary

National level Expert committee on Access and Benefit Sharing,
National Biodiversity Authority, Chennai



Outreach Programmes

Dr. Balakrishna Pisupati, Chairman, NBA, visited Kerala and held discussions with the Chief Minister on biodiversity related issues.

Dr. Oommen V Oommen, Chairman, KSBB

- Gave a presentation on "Western Ghats " at Kollam Press Club on 24-07-2012.
- Delivered a lecture on "Biodiversity and Climate Change" at S N College, Varkala on 7- 9- 2012.
- Elucidated the diversity of Western Ghats in a presentation "Western Ghats Biodiversity" at Marian College, Kuttikkanam on 18.09.2012.
- Gave a talk on the environmental degradation of Pamba river at YMCA, Thiruvananthapuram on 30-10-2012.
- Gave a talk on "Biodiversity and Human welfare" detailing the ecosystem services and other services provided by Biodiversity for human welfare at KSCSTE on 14-11-2012.
- Gave a talk on Constituting and strengthening of BMC- The Kerala experience on 29-12-2012, National Biodiversity Conference, Thiruvananthapuram.
- Delivered a talk on Preparation of People's Biodiversity Register- at National Biodiversity Authority, Chennai on 5-03-2013.
- Gave a lecture on Conservation: An Indian Initiative- at Interdisciplinary National Conference on " BIODIVERSITY AND ECO-TOURISM" , Avinashalingham University, Coimbatore.
- Gave a talk on the salient features of WGEEP "Western Ghats Ecology Expert panel" at Idukki
- Delivered a lecture on "Biodiversity Conservation" at Coimbatore on 5-02-2013
- Delivered a talk on "Medicinal Plant Diversity for Human Welfare" at Medicinal Plant Board on 2-03-2013.
- Gave an invited lecture on "Organic Farming", Workshop on Organic farming arranged by CROPS Presentation" at 5-03-2013, Pinarayi, Kannur.
- Gave a talk on "Water Use" at Bishop Moore College, Mavelikkara on 20-03-2013.
- Delivered lecture on "GM crops - PROS and CONS", University B.Ed Training College, Kumarapuram.





Participation in National Events

COP 11 : KSBB was represented in the high level segment of COP 11 held at Hyderabad during October 8-19, 2012 by the Chairman and Member Secretary of KSBB

8th National meet of State Biodiversity Boards (15th to 16th March 2013, Chennai).

The meet was inaugurated by Smt Jayanthi Natrajan, Union Minister of Env't and Forests. Dr Balakrishna Pisupati Chairman NBA delivered the keynote address. Dr. Oommen V Oommen and Dr. K P Laladhas represented Kerala State Biodiversity Board. The National meet was primarily meant to address the key Biodiversity issues in the post CoP11 scenario and strategies for combating them. Technical sessions included Administration and Legal issues at State level on implementation of Biological Diversity Act and Rules, Supporting PBR , Preparation and BMC formation process at state level followed by a review of SBB rules and implementation of Biodiversity Act and update on new initiatives and programs at NBA.

Dr Oommen V Oommen , Chairman, KSBB

- Chaired a meeting to select the ToR for evaluating the effect of agrochemicals on Ecosystem of CHR, Kannan Devan Hills and Kuttanad wetland at DoEC, Govt. of Kerala in Trivandrum.
- Attended the First meeting of the reconstituted Expert Committee / Task Force on Biodiversity Management Committee on 19-20 November 2012 at NBA, Chennai
- Attended National Ramsar Sites Stakeholders Meet and Wetland Conservation Seminar at Alappuzha on 3-5 March 2013 conducted by ATREE
- National seminar on 'Law and Policy on Fisheries Conservation and Management: Issues and Challenges by NUALS at Kalamassery, Kochi on 5.3.2013

Dr KP Laladhas Member Secretary, KSBB

- Attended the three days Training Programme on National Legislation on Biodiversity for the Government Officials of SAARC Member States during 29-31 August, 2012 at Chennai.
- Attended the discussion meeting on Status of ABS mechanism in India on 26th February, 2013 by National Biodiversity Authority, Chennai.
- Led the team of experts to the only Tribal Grama Panchayat Edamalakudi, located in Idukki, for PBR preparation during 13-16 April 2012.
- Attended the meeting held at Karunapuram Grama Panchayat, Idukki on June 16, 2012
- Carried out a biodiversity assessment study of the Edamalakkudy Grama Panchayat in connection with the PBR preparation from 06-09 July, 2012.
- Attended the Press Club meeting in Kollam on the 27th of July, 2012.
- Evaluated the progress of the tuber conservation project in Wayanad and took part in the PBR workshop on 11-09-2012.
- Visited Kattappana and attended the Cardamom Hill Reserve conservation meet on 17th September, 2012.
- Attended the meeting conducted on Conservation of native breeds held in Kottayam on 18-10-2012.
- Attended the meeting on conservation of river Pamba, at Kozhenchery, on the 25th of October, 2012.
- Took part in the Pamba Conservation meeting held at Thiruvalla on 7th January, 2013.
- Attended the meeting at Muzhakkunnu Grama Panchayat, Kannur, conducted on the 12th of January, 2013, for Regional Botanic Garden.
- Addressed the meeting on BMC empowerment to Grama Panchayat Presidents held in Kozhikode during 23-24 February, 2013.



POLICY ISSUES AND ADVICE TO GOVERNMENT

1. Unauthorized brick kilns of Velloor Panchayat in Vaikom Taluk of Kottayam District - The report submitted by the Expert Committee did not indicate any real ecological, adverse health problems at Velloor Panchayat, Kottayam due to unauthorized brick kilns production.
2. Adverse effects of sand mining on breeding of Sea Turtles at Kolavippalam, Payyoli Grama Panchayat, Kozhikode - A four member expert committee has been constituted to study the adverse effects of sand mining on breeding of Sea Turtles at Kolavippalam, Payyoli Grama Panchayat, Kozhikode.
3. The Protection of Mangroves in Kannur District - It is seen that mangroves are seen growing in more than 500 acres of non- cultivating paddy fields especially in four Panchayats- Ezhome, Kunnimangalam, Cheruthazham, Madayi. A proposal has been submitted before the Government to allot Rs.25000/- as financial assistance to farmers who own land above one acre for farming.
4. Soda water industries in Choorippara, Kinnanoor Karithalam Grama Panchayat, Kasargod District - Ground Water Department has sanctioned the establishment of packed drinking water unit at Choyyankode, Kasargod district. A complaint was submitted by Choorippara-pondy action Committee and a letter was sent to the Principal Secretary, LSGD to prevent the establishment of Soda water industries. In the enquiry report, it is stated that in order to ensure stable drinking water facility Biodiversity Management Committee has taken a decision not to give permission to start Soda water industries.
5. Purpose of setting up of Heritage Museum and Culture complex at Munnar from Tourism Department - Setting up of Heritage Museum and Culture complex at Munnar by Tourism Department was proposed and a letter was sent to Principal Secretary, Culture Department for consideration. Well planned and managed tourism must contribute funds towards Biodiversity Conservation, livelihood for local people and should give a strong incentive for conservation and sustainable use of natural resources. Therefore it was suggested that the infrastructure development should be such as not to spoil the natural beauty of hills.
6. Issues of Kovalam Beach degradation in Thiruvananthapuram - Steps were taken to convene a meeting on the consolidated development of Kovalam Beach degradation in Thiruvananthapuram involving all the concerned departments to address the issues of Environmental degradation.
7. Protection of Sacred Groves in PWD- Inspection Bungalow at Mattanoor Corporation, Kannur District - It is reported that Protection of Sacred groves in Kannur district is a very important issue due to the construction work in the area of PWD- Inspection Bungalow (IB) at Mattanoor Corporation, Kannur District. It was proposed that developmental activities may be executed on that aspect by preserving the biological diversity in that area.

8. Environmental Problems created by China Clay factory at Madai Panchayat in Kannur district - The Kerala Clays and Ceramics company, a Govt. of Kerala undertaking at Madai in Kannur is doing mining of china clay for the last 20 years. The well water surrounding one kilometer of the premises of the company was found to be polluted due to mining. The pit-lignite contaminated polluted water is drained to Muttam-Palakode River and it is understood that the biological diversity of around 30 acres of land was completely destroyed due to mining. Hence, it is recommended that a detailed study by a Medical Team about pollution and health of local people is necessary to prevent diseases like Cancer and Skin diseases etc for eliminating the environmental problems created by China Clay factory at Madai Panchayat in Kannur district.
9. Construction of small air strip at Kaniampatta, Panamaram Village in Wayanad district - There is a proposal to construct an air strip (Mini airport) at Kaniyambetta-Panamaram Village Office area in Wayanad district. The proposed project is to be commissioned in the paddy cultivation areas of the above villages. This will cause havoc to the population of this area as this lands is the grainbowl of Wayanad with traditional farmers cultivating paddy for many generations. The place is also roofing home for migratory birds, herbs medicinal plants, fishing etc. It may also cause nuisance to wild animals also. Hence, it is recommended to take action against the construction of airstrip under section 23 of Biological Diversity Act 2002.
10. A proposal of Environmental committee on Shore protection, Coast protection and Sea defense methods by planting Mangroves in Coastal areas of Kerala - A proposal submitted by the Environmental committee stated that management of Shore protection, Coast protection and Sea defense methods can be achieved by planting Mangroves in Coastal areas of Kerala. The following general considerations were discussed in connection with shoreline protection and management. A) Preserve the natural variation in Coastal landscape B) Restrict new developments/ housing close to coastline in the open uninhabited coastal landscape C) Maintain and improve the public access to and along the beach, legally as well as in practice. D) Reduce pollution and sustainable utilization of Coastal waters. Letter was sent to Principal Secretary, Environment department regarding this issue and report is awaiting.
11. Pollution of Water reservoir in Mattupetty Dam at Munnar - Mattupetty in Munnar is blessed with lush green vegetation and is a favourite sport for trekking in to the deep shola forest and is famous for highly specialised dairy farm. The water reservoir in Mattupetty is polluted by Kerosene oil looking from tourist boats. Hence it was requested to initiate steps to stop the motor boat service in the Mattupetty reservoir in the large interest to protect aquatic environment and biodiversity. A communication was sent to Principal Secretary, Environment Department regarding the pollution of Water reservoir in Mattupetty Dam at Munnar.
12. Construction of Green field International Aranmula Airport- The report submitted by the Environmental Committee (Third Report, 2011-2014) stated the Construction of Green field International Aranmula Airport at Pathanamthitta district. The 500 acres of land declared for Aranmula International airport consists of around 400 acres of Greenfield. The river flowing nearby the proposed project is the sacred Pamba River. It is rich with varied species and breeds of fishes and birds. Hence it was requested that while constructing the Aranmula International Airport the Biological diversity in the area should be properly maintained.

**KERALA STATE BIODIVERSITY BOARD
PETTAH, TRIVANDRUM**

BALANCE SHEET AS AT 31st MARCH, 2013

LIABILITIES	Sch No	As at 31.03.2013		ASSETS	Sch No	As at 31.03.2013	
		Rs.Ps.	Rs.Ps.			Rs.Ps.	Rs.Ps.
CURRENT LIABILITIES	I	48,42,914.15	16,15,988.00	FIXED ASSET	IV	20,31,949.21	12,65,609.01
CAPITAL RESERVE	II	20,31,949.21	12,65,609.01	CURRENT ASSET			
UNSPENT BALANCE OF PLAN FUNDS	III	10,50,349.85	21,66,698.00	Cash in Hand-Plan		4,930.00	801.00
				Cash in Hand-Non Plan		6,972.00	56.00
				Bank A/c - SBI		4,31,317.00	16,14,319.00
				Bank A/c - Treasury A/c No.14618		13,548.00	6,862.00
				Bank A/c - Treasury A/c No.15176		61,26,337.00	21,79,459.00
				Bank A/c - SBT		3,344.00	0.00
				Bank A/c - IDBI		12,462.00	0.00
INCOME & EXPENDITURE A/c	V	7,17,009.00	18,811.00	Advance to Staff		11,363.00	0.00
TOTAL		86,42,222.21	50,67,106.01	TOTAL		86,42,222.21	50,67,106.01

Notes to Accounts form part of Financial Statements

For Kerala State Biodiversity Board, Trivandrum


Member Secretary

Dr. P. ALADHAS

Kerala State Biodiversity Board

Thiruvananthapuram-695 024

Place: 

Date: 27.09.2013




Prof. Dr. Oommen. V. Oommen
Chairman
Kerala State Biodiversity Board



For JVS & ASSOCIATES
Chartered Accountants
FRN 0118795


R.VINOD KUMAR, FCA
M.NO. 217216
Partner

**KERALA STATE BIODIVERSITY BOARD
PETTAH, TRIVANDRUM**

INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED 31st MARCH, 2013

EXPENDITURE	Sch No	Year Ended		INCOME	Sch No	Year Ended	
		31.03.2013	31.3.2012			31.03.2013	31.3.2012
		Rs.Ps.				Rs.Ps.	
To Plan Expenditures	VIII	3,03,28,605.00	2,01,55,709.00	By Grant in aid Income		70,21,526.15	49,20,000.00
To Employees Cost	IX	61,60,193.15	41,21,025.00	By Plan Fund Income	VI	3,07,24,881.80	2,03,54,314.53
To Administrative Expenses	X	4,52,449.00	4,34,969.00	By Other Income	VII	6,25,661.00	90,319.00
To Other Expenses	XI	4,12,559.00	3,90,654.00	By Interest from Banks		76,212.00	23,922.00
To Depreciation	XII	3,96,276.80	2,88,005.53				
To Excess of Income Over Expenditure transferred to Balance Sheet		6,98,198.00		By Excess of Expenditure Over Income transferred to Balance Sheet			1,807.00
TOTAL		3,84,48,280.95	2,53,90,362.53	TOTAL		3,84,48,280.95	2,53,90,362.53

Notes to Accounts form part of Financial Statements

For Kerala State Biodiversity Board, Trivandrum



Dr. K.P. BALAJI HAS

Member Secretary
Kerala State Biodiversity Board
Thiruvananthapuram-695 024

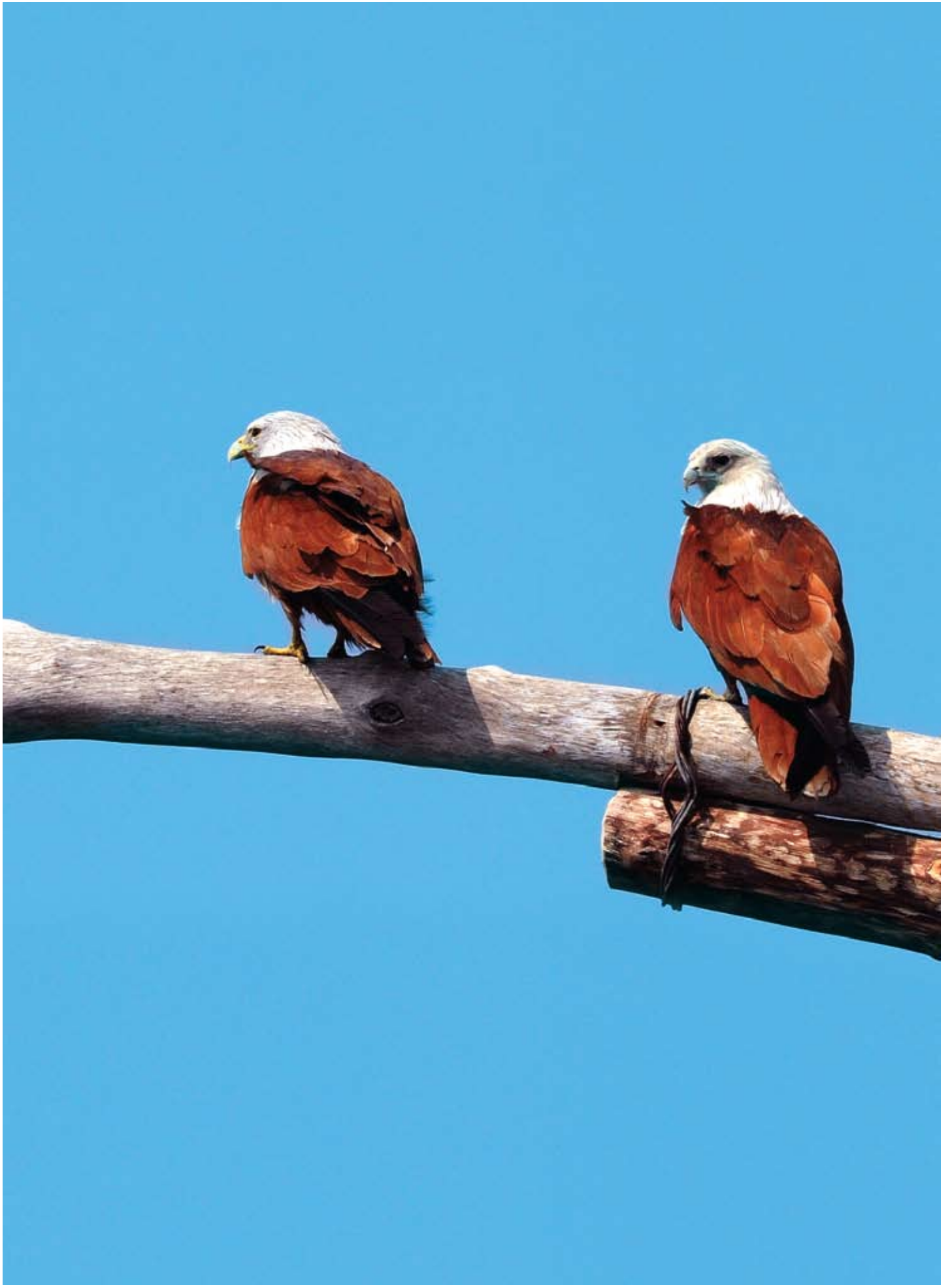
Place: *Thiruvananthapuram*
Date: *27.09.2013*

[Signature]
Prof. Dr. Gommen, V. Oommen
Chairman
Kerala State Biodiversity Board



S.R. ASSOCIATES
Chartered Accountants
FRN/011879S

[Signature]
R VINOD KUMAR .FCA
M.NO. 217216
Partner





NATIONAL BIODIVERSITY AUTHORITY

(A statutory and autonomous body under the
Ministry of Environment & Forests, Government of India)

The Biological Diversity Act was enacted in 2002 and Biological Diversity Rules were notified in 2004 by the Government of India to conserve, sustainably use, fairly and equitably share the benefits arising out of the use of India's biological resources and associated knowledge.

The following are some salient features of the Biological Diversity Act:

- Prior approval of the National Biodiversity Authority (NBA) should be obtained whenever foreign individuals / foreign entities / NRIs / Indian entities having non-Indian participation in their share capital or management, access and use Indian biological resources and knowledge associated thereto, for research or for bio-survey and bio-utilization or for commercial utilization such as drugs, industrial enzymes, food flavours, fragrance, cosmetics, emulsifiers, oleoresins, colours, extracts and genes.
- Prior approval of the NBA should be obtained whenever the results of any research relating to any Indian biological resources are transferred for monetary consideration or otherwise by any person to foreign individuals / foreign entities / NRIs / Indian entities having non-Indian participation in their share capital or management.
- Prior approval of the NBA should be obtained whenever an application is made for obtaining any Intellectual Property Right, in or outside India, for any invention based on any research or information on Indian biological resources.
- Prior approval of the NBA should be obtained whenever any person, who has been granted approval by NBA for accessing the Indian bioresources or associated knowledge, intends to transfer the same to a third party.
- Approval of the NBA is not required when Indian biological resources are used for conventional breeding or traditional practices in agriculture, horticulture, poultry, dairy farming, animal husbandry or bee keeping.
- Approval of the NBA is not required when Indian biological resources listed in the Gazette Notification No. S.O. 2726 (E) dated 26.10.2009 are normally traded as commodities.
- Collaborative research projects are exempted from the purview of the Act provided they are in conformity with the Gazette Notification No. S.O. 1911 (E) dated 08.11.2006.
- Indian citizens / entities shall give prior intimation to State Biodiversity Boards before obtaining any biological resource for commercial utilization, or for bio-survey and bio-utilization for commercial utilization. Local people and communities of the area, including growers and cultivators of biodiversity, *vaids* and *hakims* who have been practising indigenous medicine are exempted from this requirement.
- The offences under this Act shall be cognizable and non-bailable.

This advertisement is for illustrative purposes only.

For exhaustive and full details, Please visit <http://www.nbaindia.org>

With best Compliments from



Kerala State Biodiversity Board
Pallimukku, Pettah P.O., Thiruvananthapuram

Secretary

National Biodiversity Authority
5th Floor, TICEL Biopark, CSIR Road Taramani,
Chennai-600113.
Tel: 044-22542777, Fax: 044-22541200.





Kerala State Biodiversity Board
Pallimukku, Pettah P.O., Thiruvananthapuram-695024 Tel : 0471-2740240, Fax : 0471-2740234
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