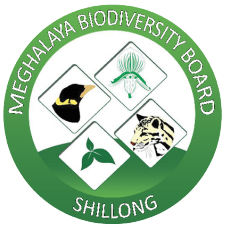
ANNUAL REPORT

FOR THE YEARS
2012-13, 2013-14 & 2014-15



MEGHALAYA BIODIVERSITY BOARD

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1 Introduction&GeneralInformation

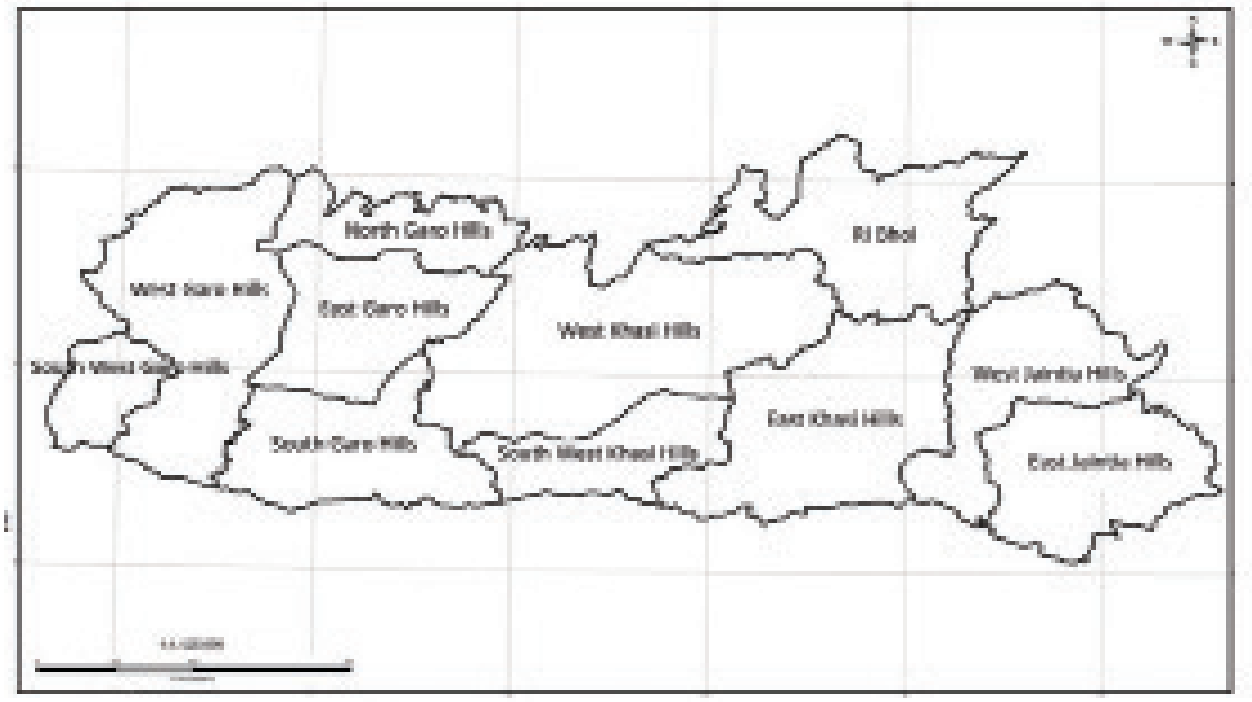
1.1. Introduction

'Biological Diversity' means the variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are a part; this includes diversity within species, between species and of ecosystems (CBD, 1992).

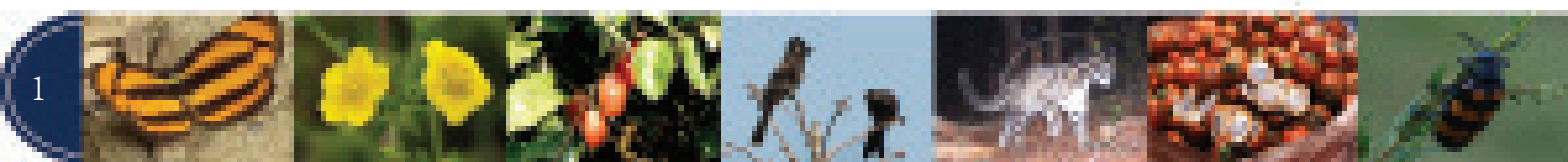
Biodiversity is fundamental in sustaining life on Earth. It provides air to breathe, water to drink and food to eat. Human population depends on biodiversity for meeting their basic needs such as food, clothing, medicines and building materials.

India is one of the 17 mega-diverse countries. It has only 2.4% of the world's land area but harbours 6.7% of the animal species and 9.13% of the floral diversity of the world.

Meghalaya is situated in the North East India Bio-geographic zone (along with Assam, Nagaland, Manipur, Mizoram and Tripura) which is a significant region as it represents a transition zone between the Indian, Indo-Malayan, Indo-Chinese bio-geographic regions as well as a meeting place of Himalayan mountains with that of Peninsular India. The region is one of the richest in biological values with vegetation types ranging from tropical rain forest in the foothills to Alpine meadows and cold deserts. The state also represents an important part of the Indo-Burma biodiversity hotspot which is one of the 4 bio-diversity hotspots present in India and 34 in the world. The state of Meghalaya has been identified as a key area for biodiversity conservation due to its high species diversity and high level of endemism.



Map of Meghalaya



1.2 General information on Meghalaya

The state of Meghalaya (25°-26°10' N & 89°45'-92°47' E) situated in the northeastern region of India is bounded by Assam in the north and east and the plains of Bangladesh in the south and west. The state covers an area of 22,429 sq. km., with a length to breadth ratio of about 3:1 and lies between. Out of this 17,217 sq. km is occupied by forest land which comes to 76.76 % of the total geographical area of the state (India State of Forest Report 2015). The state is the wettest region of India, recording an average of 12,000 mm (470 in) of rains a year. The landscape of Meghalaya is mostly rolling plateau with south-facing slopes being extremely steep. With the hill rising to 2,000 m, the state is cool despite its proximity to tropics. The hilly state is covered with tropical, subtropical and temperate forest cover. The Meghalayan subtropical forests have been considered among the richest botanical habitats of Asia. These forests receive abundant rainfall and support a vast variety of floral and faunal biodiversity. The population of the state is 29,64,007 which resides in 6839 villages and 22 towns.

Administrative Unit	Number in State
Districts	11
Sub Division	4
Blocks	39
Villages	6839
Towns	22
Gram Sevak Circles	10-15 in each blocks; 550 in the state
Municipal Boards	6
Cantonment Board	1
Lok Sabha Constituencies	2
Assembly Constituencies	60

The tiny hill state of Meghalaya despite many constraints has emerged as the fastest-growing state in the whole country with a growth rate of 9.7% in 2013-14, higher than the fastest-growing big state of Madhya Pradesh (9.5%) and several notches ahead of the national growth rate, says a report compiled by IndiaSpend. Meghalaya has favourable agroclimatic conditions that support agriculture, horticulture and forestry. The natural resources, policy incentives and infrastructure in the state favour investments in the tourism, hydroelectric power, manufacturing and mining sectors. Mineral, horticulture, electronics, IT, agro-processing and tourism have been identified as the thrust sectors for industrial development. The state has abundant natural resources, which offer significant avenues for investment. About 14% (3,108 sq. km) of Meghalaya is covered by bamboo forests and the state is one of the leading bamboo producers in the country. Some of the major initiatives taken by the government to promote Meghalaya as an investment destination are:

- Under the Annual Budget 2015-16, an investment of US$ 0.29 million has been approved by the Meghalaya State Medicinal Plants Board to increase the production of medicinal plants.

- Under the 12th Five Year Plan (2012-2017), the state has been assigned with development works including afforestation on clan/community land through Joint Forest Management Committees with a major push in the medicinal plants sector.
- The state is focusing on developing water harvesting and distribution infrastructure to increase the level of mechanisation in the horticulture sector.
- The state government is inviting investments in this area through the PPP mode. Independent power producers (IPPs) are also being invited to develop hydro projects in Meghalaya; this provides immense potential for investment.

The Biological Diversity Act, 2002 and Subsidiary Rules of the State: The Biological Diversity Act, 2002 received the ascent of the President of India on 5th February, 2003. This Act provides for conservation of biological diversity, sustainable use of its components and fair and equitable sharing of benefits arising out of use of the biological resources, knowledge and for matters connected therewith or incidental thereto. The Act has 12 Chapters and 65 Sections and it provides a legal mechanism for establishing sovereign rights of the indigenous biodiversity within the country, its conservation, protection, regulation of access and sustainable use. The Govt. of Meghalaya enacted the Meghalaya Biological Diversity Rules in 2010 in exercise of its powers under Section 63 (i) of the Biological Diversity Act 2002 for carrying out the purpose of this Act in the State. It includes 26 rules.

Formation of Biodivesity Management Committees (BMC's): Section 41 if Biological Diversity Act, 2002 and Rule 23 of Meghalaya Biological Diversity Rules, 2010 provide for formation of Biodivesity Management Committees (BMCs) at the level of local bodies i.e. Village Dorbars, etc for the purpose of promoting conservation, sustainable use and documentation of biological diversity including preservation of habitat, conservation or land races, folk varities and cultivars, domestic stocks and breeds of animals and micro-organisms and chronicling of knowledge relating to biological diversity within their area of jurisdiction. A total of 101 BMCs has been formed in Meghalaya since 2012 up to 2016 and further process is going on.

Functions of BMC's:

- Prepare, maintain and validate People's Biodiversity Register (PBR) in consultation with the local people.
- Advice on any matter referred to it by the State Biodiversity Board or National Biodiversity Authority for granting approval.
- To maintain data about the local 'vaidus' and practitioners using the bio-resources.
- The BMC has to maintain a register giving information about the details of access to bio-resources and traditional knowledge granted to outside agencies and the mode of their sharing.

2 BIODIVERSITY OF MEGHALAYA

Meghalaya is richly endowed with flora, fauna, thick forests, ancient forest groves, large rivers and grass fields. The state of Meghalaya is an important part of the Indo-Burma biodiversity hotspot, which is one of the mega biodiversity regions of the world. Nokrek Biosphere Reserve, Balphakram National Park, Nongkhyllem, Siju, and Baghmara Wildlife Sanctuaries and a large number of sacred groves found in different parts of the state are the main preserves of biodiversity.

2.1. Floral Diversity of Meghalaya

The floral diversity of Meghalaya is well reputed for its richness and has been a centre of attraction for many botanists. The presence of a large number of primitive flowering plants has prompted Takhtajan (1969) to call it the Cradle of Flowering Plants'. Meghalaya harbours about 3,128 species of flowering plants and contributes about 18% of the total flora of the country, including 1,237 endemic species (Khan et al. 1997). A wide variety of wild cultivable plants, edible fruits, leafy vegetables and orchids are found in the natural forests of Meghalaya. However, due to overexploitation, deforestation and habitat destruction many endemic and threatened species are now mainly confined to the protected areas and sacred groves.

The region is a habitat for many botanical curiosities and botanical rarities. Among insectivorous plants *Nepenthes khasiana* Hk. f. and two species of *Drosera* i.e, *Drosera peltata* Sm. and *D. burmanii* Vahl. are important. *Nepenthes khasiana* is endemic to Meghalaya and listed in Appendix I of CITES and placed in Schedule VI of the Wildlife (Protection) Act, 1972. The Khasi and Jaintia hills are considered to be the centre of diversity for several primitive families such as Elaeocarpaceae, Elaeagnaceae, Anonaceae, Ranunculaceae, Piperraceae, Menispermaceae, Caryophyllaceae, Lauraceae, Myricaceae, Lazarbiaceae and primitive genera like Sarcandra, Corylopis, Myrica, Magnolia and Michelia.

Vegetation Types: According to Champion & Seth (1968), major forest types in the state of Meghalaya are Assam Sub-tropical Hill Savanna, Khasi Sub-tropical Hill Forests, Assam Sub-tropical Pine Forests, Assam Sub-tropical Pine Savannah. Haridasan & Rao (1985-87) recognized the following major categories of vegetation in Meghalaya based on altitude, rainfall and dominant species composition *viz*. Tropical Evergreen Forests, Tropical Semi-Evergreen Forests, Tropical Moist and Dry Deciduous Forests, Grasslands and Savannas, Temperate Forests and Sub-tropical Pine Forests.

Tropical Evergreen Forests: This forest type spreads over the lower reaches of Khasi, Jaintia and Garo hills up to 1200 m and usually occurs in high rainfall areas as well as near catchment areas. The dominant tree species include *Castanopsis indica*, *C. Tribuloides*, *Dysoxylum* sp., *Elaeocarpus* sp., *Engelhardtia spicata*, *Syzygium* sp., *Tetrameles nudiflora* etc. which are densely interwoven by lianas. The ground flora of under shrubs and herbs include *Dracaena elliptica*, *Leea edgeworthia*, *Phlogacanthus* sp., and other species belonging to the family Acanthaceae, Rubiaceae, Balsaminaceae and Asteraceae. The tree trunk and branches are covered with epiphytes belonging to Ferns, Orchids, Gesneriads, Piper, mosses and many others. Lianas and climbers like *Rhaphidophora* sp. are also abundant.

Tropical Semi Evergreen Forests: These forest types occupy the north and north-eastern slopes of the state up to an elevation of 1200 m and with an annual rainfall of 1500-2000 mm. However there are deciduous elements along with evergreen types. *Careya arborea, Dillenia pentagyna, Callicarpa arborea, Tetrameles* sp., etc are some of the deciduous species. Other dominant species are *Elaeocarpus floribundus, Dillenia indica, Symplocos paniculata, Sapindus rarak* etc. The ground flora is also much seasonal with greater representation from the Zingiberaceae family.

Tropical Moist and Dry Deciduous Forest: This is a very prominent vegetation of Meghalaya covering a large part of East and West Garo Hills, Ri-Bhoi districts etc, in areas of annual rainfall less than 1500 mm and high temperature. These forests are characterised by seasonal leaf shedding and profuse flowering. The dominant tree species which are valued economically are *Shorea robusta, Tectona grandis, Terminalia myriocarpa, Gmelina arborea, Artocarpus chapsala, Lagerstroemia parviflora, Maorus laevigata* etc. Other associated species are *Schima wallichii, Toona ciliata, Albizzia lebbeck, Dillenia pentagyna* etc. The epiphytic flora is less but orchids, ferns, Asclepidaiceae members are often seen. Bamboo forests are not natural but occur in patches sporadically in jhum fallows. The common bamboo species are *Dendrocalamus hamiltonii* and *Melocanna bambusoides*. Some other species less frequently found are *Bambusa pallida, Bambusa tulda, Chimonobambusa khasiana* etc.

Grasslands and Savannahs:
Grasslands in Meghalaya are secondary in nature and are prevalent in higher altitudes and are a result of removal of pristine forests, the relics of which could be seen amidst these grasslands as sacred groves. The dominant grass genera in the grasslands are *Panicum, Paspalum, Imperata, Axonopus, Neyraudia, Sporobolus, Saccharum, Chrysopogon, Oplismenus* and others along with sedges.

Temperate Forests: The temperate forests occupy the higher elevations (>1000 m) with very high rainfalls (2000-5000 mm) along the Southern slopes of Khasi and Jaintia Hills. The sacred groves largely fall under this category and are the relic type evolved through millions of years. The common trees are *Lithocarpus fenestratus, Castanopsis kurzii, Quercus griffithii, Q. semiserrata, Schima khasiana, Myrica esculenta, Symplocos glomerata, Photinia arguta, Ficus nemoralis, Manglietia caveana, Acer* sp., *Exbucklandia populnea, Engelhardtia spicata, Betula alnoides, Rhododendron arboretum* etc. Shrubs include *Mahonia pycnophylla, Daphne papyraceae, Polygala arillata, Camellia caduca, Rubus* sp., etc. These forests are exceptionally rich in epiphytic flora comprising Ferns, Lichens, Mosses, Orchids, Zingibers, etc.

Subtropical Pine forests: The pine forests are confined to the higher reaches (900-1500 m) of the Shillong plateau in Khasi and Jaintia Hills. Pinus kesiya is the principal species which form pure stands. In certain places the pines are associated with a few broad leaved species like *Schima wallichii, Myrica esculenta, Erythrina arborescence, Rhus javanica, Rhododendron arboretum, Quercus* sp., etc. Shrubs include *Rubus, Osbeckia, Spirea* and *Artemesia*. During rainy season there is a profuse herbaceous undergrowth of *Chrysanthemum, Aster, Hypochaeris, Prunella, Plectranthus, Desmodium, Ranunculus, Anemone, Potentilla, Clinopodium, Polygonum, Elsholtzia* etc. Thus, it could be seen that though there is not much altitudinal variations as compared to the Himalayan states but there occurs a wide variety of vegetation types. This vegetation harbours one of the world's richest flora and biodiversity.

Rare, Endangered and Threatened Plant Species: A recent review of literature carried out Meghalaya Biodiversity Board reveals that a total of 436 Rare, Endangered and Threatened plant species have been recorded from Meghalaya representing 13.09 % of the state's flora. *Gastrochilus calceolaris, Gymnocladus assamicus, Illichium griffithii, Pterocybium tinctorium, Saurauia punduana, Taxus baccata* and *Vatica lanceafolia* are few of the Critically Endangered plant species of Meghalaya.

Extinct Plant Species: *Carex repanda, Cyclea debiliflora, Dendrobenthamia capitata, Hedychium hookeri, Homiorchis rhodorrhachis, Michelia lanuginose, Morinda villosa, Nymphaea pygmaea, Pleione lagenaria, Premna punduana, Schleichera trijuga, Sterculia khasiana* and *Talauma rabaniana* are considered to have gone extinct in Meghalaya (Chauhan and Singh, 1992).

Endemic Plant Species: They are species with restricted range of distribution. A recent review of literature carried out by Meghalaya Biodiversity Board reveals a total of 281 Endemic plant species have been recorded from Meghalaya representing 8.44% of the state's flora. Of these, around 102 are listed under various Threat Categories and two in the Extinct Category. *Ilex khasiana* and *Nepenthes khasiana* are the Endemic and Critically Endangered species.

Some of the Endemic and Endangered species found in Meghalaya are *Adinandra griffithii, Ceropegia arnottiana, Clematis apiculata, Elaeagnus conferta* sp. *dendroidea*, E*riocaulon barba-caprae, Goniothalamus simonsii, Ilex venulosa, Livistona jenkinsiana, Ophiorrhiza subcapitata* and *Trivalvaria kanjilalii*.

Orchids: Meghalaya is endowed with a rich and luxuriant orchid flora of nearly 352 species belonging to 98 genera representing 27.08 % of the country's orchid flora. For several centuries, orchids have been known for their attractive flowers and their medicinal properties. The majority of the orchids are epiphytes, however, lithophytes, terrestrials and saprophytes are also encountered. They are found to inhabit ranges from sub-tropical evergreen to moist mixed deciduous types of forests. *Aerides multiflorum, Coelogyne corymbosa, Cymbidium elegans, Dendrobium devonianum, Dendrobium longicornu, Paphiopedilum insigne, Rhynchostylis retusa, Phaius tankervilliae, Thunia marshalliana* and *Vanda coerulea* are few of the exotic orchids of Meghalaya.

Bamboo and Canes: The state harbours more than 37 species of Bamboos belonging to 14 genera. Some of the important genera are *Arundinaria, Bambusa, Cephalostachyum, Chimonobambusa, Dendrocalamus, Dinochloa, Gigantochloa, Melocanna, Neohouzeoua, Oxytenanthera, Phyllostachys, Pseudostachyum, Schizostachyum, Teinostachyum* and *Thamnocalamus. Arundinaria hirsuta, A. manii, Bambusa jaintiana, B. mastersii, B. pseudopallida, Cephalostachyum pallidum, Chimonobambusa callosa, Chimonobambusa griffithiana, Chimonobambusa khasiana, Chimonobambusa polystachya, Dendrocalamus sikkimensis, Phyllostachys manii, Schizostachyum dulloa, Schizostachyum griffithi, Schizostachyum helferi, S. manii, S. pallidum, Schizostachyum polymorphum* and *Thamnocalamus prainii* are endemic.

Cane (*Calamus* sp.) is a woody climber and several species are known to occur in Meghalaya. It is usually found to inhabit warm and moist climate at lower elevations. *Calamus erectus* and *C. floribundus* are the endemic canes occurring in the state. Cane and Bamboo craft is a very important handicraft sector in Meghalaya.

Medicinal Plants: Of the total 3,331 plant species recorded in the state around 834 (25.04 %) are estimated to be employed in healthcare. These species are distributed in 548 genera and 166 families. The family with the highest number of medicinal plant species is Rubiaceae followed by Asteraceae and Fabaceae. These species are restricted mainly to sacred groves, community forests and reserved forests and some to grasslands, roadsides, cults and fields, etc.

Due to high level of exploitation and faulty harvesting techniques, many of the endemic species such as *Acanthus leucostachys, Calamus erectus, C. aurantium, C. latipes, Curcuma montana, Daphniphyllum himalense, Eleaegnus conferta ssp. dendroidea, Goniothalamus simonsii, Hedera nepalensis, Hymenodictyon excelsum, Ilex embeloides, Mahonia pycnophylla, Munronia pinnata, Nepenthes khasiana, Ochna squarrosa, Ophiorrhiza sub-capitata, Paramignya micrantha, Piper peepuloides, Schima khasiana* and *Sophora accuminata* have been rendered rare (Source: Meghalaya State Medicinal Plants Board, 2009).

2.2. Faunal Diversity of Meghalaya

The fauna of the State of Meghalaya has always attracted both naturalists and zoologists for more than 150 years for its interesting, rare and diverse faunal wealth. The analysis of the fauna of Meghalaya by zoological Survey of India reveals that there are 5538 species of animals in 2545 genera. Of these largest groups belongs to the insects comprising of 3624 species in 1662 genera, and the smallest known in porifera which has only one species in one genus. Next in order of abundance after the insects, birds are the largest group with about 540 species in 232 genera. Mollusca and Arachnids come next with 223 species (67 genera) and 217 species (104 genera) respectively. Total vertebrate fauna reveals 958 species under 451 genera. The fishes and mammals of Meghalaya are well represented in that they are 152 species (74 genera) and 139 species (83 genera) respectively. These faunal records more than amply reveal the rich biodiversity of the State of Meghalaya.

Faunal Diversity of Meghalaya (Source: ZSI, Fauna of Meghalaya, Series 4, 1995)

FAUNAL DIVERSITY	NO OF GENERA	NO OF SPECIES
VERTEBRATE	451	958
Mammals	83	139
Aves	232	540
Reptilia	51	94
Amphibia	11	33
Pisces	74	152
INVERTEBRATE	2094	4580
TOTAL	2545	5538

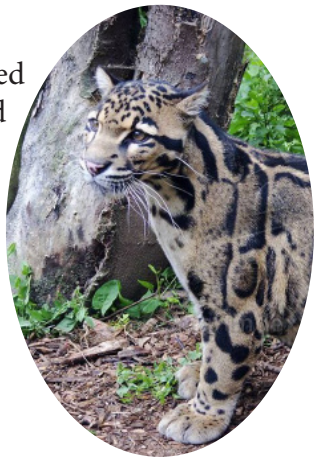
Mammals Diversity: Diversity of mammals in Meghalaya is well represented with about 139 species and sub-species belonging to 83 genera and 27 families.

Primates: The primates are well represented in Meghalaya with about 7 species. The Western Hoolock Gibbon (*Hoolock hoolock)*, one of the only two true ape species found in India, is still found in the state where tropical evergreen forests are still intact. The other one being the Eastern Hoolock Gibbon (*Hoolock leuconedys)*, which is known to be distributed in Myanmar and China and sparsely in India (Arunachal Pradesh and Assam) as well. The main spanholds however are in Jaintia Hills, Ri-Bhoi, West Khasi Hills, East Garo Hills and South Garo Hills. Rapid loss of habitat, habitat fragmentation and hunting are the major threats to the Hoolock gibbons across their entire distribution range in India. The hoolock gibbon is classified as Endangered (EN) on the IUCN Red List, listed on Appendix I of CITES and is a Schedule I animal in the Wildlife (Protection) Act, 1972.

The Bengal Slow Loris (*Nycticebus bengalensis)* is the only nocturnal primate in the North Eastern states and is the largest of the slow loris species. Little is known about its behaviour or ecology, and less information is available on its distribution and population status in the state. The species has been recorded in Balpakram and Nokrek national parks, Nongkhyllem and Siju Wildlife sanctuaries, and some key reserved forests including Baghmara RF (South Garo Hills District). The Bengal Slow Loris is listed under Vulnerable category by IUCN. It is a Schedule I animal of the Indian Wildlife (Protection) Act 1972, and is also in Appendix I of CITES.

The Capped Langur (*Trachypithecus pileatus)* with its bright golden-yellow front is also found in dense forests as well as light woodlands in the state. Meghalaya's capped langurs are often mistaken for golden langurs.

The state has four more primates, all macaques - Northern Pig tailed macaque *Macaca leonina*, Rheus macaque *Macaca mulatta*, Assamese macaque *Macaca assamensis* and Stumped tail macaque *Macaca arctoides*. The stump-tailed Macaca is the rarest but is still seen in Narpuh, Nokrek and Balpakram areas.



Carnivores: The State of Meghalaya has three of the six largest cats recorded in the world - the Tiger (*Panthera tigrss*), Leopard (*Panthera pardus*), and the Clouded Leopard (*Neofelis nebulosa*). Meghalaya's pride is its State animal, the beautiful and rare Clouded Leopard; protected under Schedule 1 of the Indian Wildlife (Protection) Act, 1972 and listed in Appendix 1 of CITES and as Vulnerable, by IUCN. Tiger has become a very rare animal in the State. Other small cats include Jungle Cat (*Felis chaus*), Marbled cat (*Pardofelis marmorata*), Asiatic Golden Cat (*Catopuma temmincki*), Leopard Cat (*Prionailurus bengalensis*).

The state is also home to three species of bears, the Asiactic black bear (*Selenarctos thibetanus*), Malayan sun bear (*Helartos malayanus*) and the sloth bear (*Melursus ursinus*).

The red panda (*Ailurus fulgens fulgens*) called by the Garos as Mitchebel and by the Khasis as Dkhan-bah is confined to Nokrek and Balpakram in the Garo Hills and the adjacent forests of the West Khasi Hills. It is also found it farther east in Trongpleng in the Mawsynram area of the East Khasi Hills district. Red Panda is protected under Schedule I of the Indian Wildlife (Protection) Act, 1972 and listed in Appendix I of CITES and as Endangered, by IUCN.

Smaller carnivores include Asiatic Jackal (*Canis aureus*), Bengal fox (*Vulpes bengalensis*), the Dhole or Indian Wild dog or Red dog (*Cuon alpines*), Yellow throated Marten (*Martes flavigula flavigula*), Yellow bellied weasel (*Mustela kathiah*), Burmese Ferret Badger (*Melogale personata nipalensis*), Hog-badger (*Arctonux collaris*), Common Otter (*Lutra lutra monticola*), Smooth-coated Indian Otter (*Lutra perspicillata perspicillata*), Oriental small-clawed Otter (*Aonyx cinerea concolor*), Large Indian Civet (*Viverra zibetha zibetha*), Small Indian Civet (*Viverricula indica*), Common Palm Civet (*Paradoxurus hermaphrodites*), Masked Palm Civet (*Paguma larvata neglecta*), Binturong (*Arctictis binturong*), Small Indian mongoose (*Herpestes auropunctatus*), Indian Grey Mongoose (*Herpestes edwardsi*) and Crab eating mongoose (*Herpestes urva*).

Pangolins: There is only one species of pangolin in the State.

The Chinese Pangolin (*Manis pentadactyla*) is listed under Endangered category according to IUCN and is also a Schedule I animal of the Indian Wildlife (Protection) Act 1972. It is also listed in Appendix II of CITES.

Elephants: The State of Meghalaya supports a large population of Asian Elephant (*Elephas maximus*). The elephant population in Meghalaya is about 1811 according to the 2007 estimate.

The globally endangered Indian Wild Water Buffalo (*Bubalus arnee*) is still found in small groups of 10 to 20 in the Balpakram-Siju-Baghmara belt and adjacent areas including parts of the West Khasi Hills.

Ungulates: Ungulates that have become threatened and rare include the Himalayan serow (*Capricornis thar*), The Garol (*Naemorhedus goral*), Gaur-Indian Bison (*Bos gaurus*), Hog Deer (*Axis porcinus*), Sambar (*Rusa unicolor*) and four horned antelope (*Tetracerus quadricornis*). Barking Deer (*Muntiacus muntjak*) and Wild Boar (*Sus scrofa*) and still found in plenty. Swamp Deer (*Rucervus duvaucelii*) is not found any more in the state.

Aves: India is rich in bird's diversity with a total of 1167 species including 80 globally threatened birds and 49 endemics. The country has 465 Important Bird Areas and is a part of 12 Endemic Birds Areas.

Despite its relatively small size, Meghalaya is rich in bird life hosting about 659 (Birdlife) species of birds. 34 species of the birds found in our forests are globally threatened species. Meghalaya lies in the Eastern Himalayas (Endemic Bird Area 130) (Statterfield et al. 1998). The region is important for many globally threatened, near threatened and restricted range species. Five restricted range species from this EBA have been reported from the state.

Reptiles: The reptile fauna of Meghalaya is greatly influence by the Indo-Chinese elements. The diversity of reptiles comprises of 12 species of turtles and tortoises, 26 species of lizards and 56 species of snakes.

The Assam roofed turtle (*Pangshura sylhetensis*) was first reported from the Khasi Hills and is one of Asia's Most Endangered Tortoises and Freshwater Turtles (IUCN) 2007. Most of the turtles and tortoises in Meghalaya are threatened with 5 species listed under the Endangered, 1 species Near Threatened, 4 species Vulnerable and 2 species Least Concern categories. (IUCN Category, 2014)

26 species of lizards have so far been recorded from the state. All the 3 species of monitor lizard found in the state are protected under Schedule I (Part II) of the Wildlife (Protection) Act, 1972. The Tokay Gecko (*Gekko gecko*) is one of the largest Geckos alive today and is also found in the state. Another rare lizard is the *Calotes maria* found only in Mizoram and Meghalaya. (MoE&F Annual Report 2011-2012). Other species of the genus *Calotes* includes *C. jerdoni*, *C. emma* and *C. versicolor*. Skink includes *Sphenomorphus courcyanum*, *S. indicus, S. maculatus, Eutropis carinata* and *E. multifasciata*. Recently in 2013 a new species of skink *Sphenomorphus apalpebratus* was describe from the sacred forest of Mawphlang. (Datta-Roy et al. 2013). This shows the huge diversity of lizards in the state.

Meghalaya is also rich in snake's diversity with about 56 species. Some of the common snakes are Brahminy Blind snake (*Indotyphlops braminus)*, Assam snail Eater (*Pareas monticola)*, Copperhead Rat Head (*Coelognathus radiatus)* and Indian-Chinese Rat Snake (*Ptyas korros)* etc. The world longest venomous snake 'The King Cobra' (*Ophiophagus hannah)* is also found in the state. Other venomous snakes include kraits like the rare Himalayan krait (*Bungarus bungaroides)*, Black Krait (*B. niger)*, Banded Krait (*B. fasciatus)* and vipers like the Green Pit vipers *(Trimeresurus albolabris)*, Jerdon's Pit Viper (*T. jerdoni)* etc. Some of the very elusive and rare snakes of Meghalaya are striped neck snake *(Liopeltis frenatus)*, Chinese Many-tooth Snake (*Sibynophis chinensis)*, Khasi Keelback (*Amphiesma khasiensis)*, Gunther's Keelback *(Amphiesma modestum)*, Mountain Keelback (*Amphiesma platyceps*), Cherrapunji Keelback (*Amphiesma xenura*), and Khasi Earth Snake (*Stoliczkaia khasiensis*).

Amphibians : The richest expression in diversity and abundance of amphibians of the North East India is met with in Meghalaya with about 33 species. *Bufoides meghalayanus* and *Philautus shillongensis* are two frog species that are endemic, rare and threatened, found in Meghalaya. Some of the very rare and elusive frogs found in the state are *Philautus cherrapunjiae*, *Rana mawlyndipi, Rana mawphlangensis, Hyla annectans* and *Microhyla berdmorei* etc.

Pisces: Meghalaya exhibits a twin drainage system namely the Brahmaputra in the North and Barak in the South. Because of the topography of the region and its water shed pattern the state of Meghalaya is rich in fish diversity with about 152 species reported so far.

Neolissochilus hexagonolepis and *Tor* sp. are the important sport fishes inhabiting the fast flowing rivers and streams of the state. 29 species of the fish found in the State are threatened in one way or the other.

Mollusca: A total of 223 species of land and freshwater molluscs spread over 67 genera and 28 families are known from Meghalaya.

Fresh water molluscs are represented by 35 species, 15 genera and 10 families. The genus *Paludomus* is abundantly represented in the hill streams and two of the species, namely *Paludomus* regulate and *P. stephanus* are endemic to Meghalaya.

Land dwelling molluscs flourish and abound in the moist hill forests of the state. Some of the species are restricted and endemic to Meghalaya. Of the species endemic to the State, include five species each belonging to the genus *Alycaeus* and *Diplommatina*, two of *Cyclophourus*, one each of *Pupina* and *Gastroptychia*, three of *Macrochlamys*, two of *Oxytes*, one each of *Khasiella, Kaliella, Taphrospira, Amphidromus* and *Lamellaxis*.

The fresh water molluscs that occur in streams and other aquatic bodies also serve as food for the local people. Seven species are used for human consumption. eg: *Bellamya bengalensis f. typica, B. dissimilis, Pila theobaldi* etc.

2.3 Salient Features of Meghalaya's Biodiversity

(a) Sacred Groves: Sacred groves are tracts of virgin forests that have cultural or spiritual significance for the people who live around them. They have been protected by communities around the world for a variety of reasons, including religious practices, burial grounds, and water shed value. As a result of this the rich biodiversity of these forests are protected.

In Meghalaya sacred groves represent a long tradition of environmental conservation based on indigenous knowledge by the tribal communities. They are among the few least disturbed forest patches which serve as natural treasure houses of biodiversity and a refuge for a large number of endemic, endangered and rare taxa. The general term for sacred groves in the Khasi Hills is 'Khlaw Kyntang' or 'Law Kyntang' or 'Law Lyngdoh' while in the Jaintia Hills it is called 'Khloo Blai'. The sacred groves in the Khasi Hills and Jaintia Hills District are fundamentally based on the traditional religious belief of the tribals i.e., Khasis and Pnars, which is called Seng Khasi and Niam Tre respectively. They believed that a forest deity called 'Ryngkew', 'Basa' or 'Labasa' in the local language, resides in these sacred groves which protects and provide for the well being of the village community. Cutting of trees, plucking of flowers, fruits, twigs are not allowed in these forests and it is believed that if done so, the deity would get offended and cause bad things. Various rites and rituals are performed periodically in these forests. Meghalaya has the maximum number of sacred groves in India. The Forest Department, Meghalaya has surveyed and mapped 125 sacred groves in the state recently. Many more are to be covered.

(b) Cave Biodiversity: Caves are Nature's work of art. Meghalaya boasts of a large number of caves and remains a cavers' paradise. Caves are normally formed in sedimentary rocks especially limestone. In Meghalaya they are found in an almost 300 km long belt of diverse sedimentary rocks. The Khasi Hills, Jaintia Hills and the Garo Hills all have their fair share of caves. Many of the caves have been mapped and studied.

Krem Liat Prah, located in the Jaintia Hills is the longest cave in the Indian Subcontinent with a mapped length of 22.2 Km. Synrang Pamjang, the deepest cave in India (317 m) is also located in the State. Mawsmai cave is the most accessible cave for many travellers. Many of the caves present impressive formations of large passages, chambers, waterways, stalacmites and stalagtites.

Common species observed in the caves include spiders, pseudo scorpion, millipedes, crickets, cockroaches, beetles, flies, 'snot gobblers'(larvae of a midge species), woodlice, crabs, shrimps, crayfish and fish, many of them are depigmented and have reduced eyes. The biggest threat to the cave ecosystem in Meghalaya is quarrying.

(c) Living Root Bridges: In most places around the world, bridges are constructed using concrete and steel. But in Meghalaya, bridges are grown !!! The original architects of this natural bridge building technology are the forefathers of the local tribes in Meghalaya. Though this ancient technology appears to be theoretically simple, practically it is very difficult and time consuming.

Roots of certain Ficus trees (including *Ficus elastica*, locally known as 'Dieng jri ') are trained to serve as pavements for these natural bridges across the rivers or steep valleys. Strong secondary roots of these trees are manipulated or trained to grow horizontally through the tunnels of hollowed betel nut trunks or bamboos. Over the years, the roots and branches of these fast growing trees get trained along the bamboo/betel nut guides until they meet and eventually supersede its support. At later stages, stones are inserted into the gaps to eventually gift us the beautiful walkways. Later still, the bridges are further improved upon with additional hand rails and steps.

While construction of modern concrete bridges may take 3-4 years, these living bridges take longer time to develop into a firm bridge, often around 15 to 25 years. However, the life of these bio-engineering wonders is estimated at 500 years, much more than the life span of most of manmade modern bridges. The bridges are made often for lengths of 50 to 100 feet and even up to 50-55 m length. They are proved to carry the load of up to 50 people at a time. Unlike the wooden bridges which may rot and decay in high rains, these root bridges remain alive and grow stronger over time. The development and upkeep of bridges is a community affair.

(d) Cultural Diversity: Meghalaya is a treasure house of ethnic cultural wealth exhibited by the three principal tribal communities of the state. Music and dance are integral to their way of life. The colourful festivals, dances and enigmatic folklores showcase their rich repertoire.

Khasis: Dances are performed often as a part of the "rites de passage"- the life-cycle of an individual in society or the annual passage of the seasons. They are performed at the level of individual villages (Shnong), a group of villages (Raid) and a conglomeration of Raids (Hima). Major Festivals of Khasis are :-

- Ka Shad Suk Mynsiem.
- Ka Pom-Blang Nongkrem
- Ka-Shad Shyngwiang-Thangiap
- Ka-Shad-Kynjoh Khaskain
- Ka Bam Khana Shnong
- Umsan Nongkharai
- Shad Beh Sier

Jaintias: Festivals of the Jaintia Hills, like others, contribute significantly to maintaining a balance between man, his culture and his natural environment or eco-system. At the same time it seeks to revive the spirit of cohesiveness and solidarity among the people.

Major festivals of Jaintias are :-

- Behdienkhlam
- Laho Dance
- Sowing Ritual Ceremony

Garos: The main festivals of Garos are Den Bilsia, Wangala, Rongchu gala, Mi Amua, Mangona, Grengdik BaA, Jamang Sia, Ja Megapa, Sa Sat Ra Chaka, Ajeaor Ahaoea, Dore Rata Dance, Chambil Mesara, Do'KruSua, Saram Cha'A, A Se Mania or Tata.

3 OVERVIEW OF MEGHALAYA BIODIVERSITY BOARD

3.1 Constitution of the "Meghalaya Biodiversity Board"

As per Section 63(1) of the Biological Diversity Act, 2002, every state government shall make rules for carrying out the purposes of this Act. As per the Biological Diversity Act, Section 22(1), each state shall establish a State Biodiversity Board.

Accordingly, Meghalaya Biological Diversity Rules were notified on 30th August, 2010 and subsequently the Meghalaya Biodiversity Board (MBB) was constituted vide Notification No. FOR. 57/2002/Pt/308, dated 20th March, 2012.

3.2 Composition of the Board

The Board is headed by a Chairman in the rank of Principal Secretary to the Government of Meghalaya, Shri. M.S. Rao, IAS. Apart from the Chairman, the Board has five Ex-Officio Members from related Departments of Government of Meghalaya and five Non-Official Members. The officer in-charge of Biodiversity in the Forest Department is the Member Secretary to the Board.

The five ex-officio members are: - (Rule 9 of MBDR, 2010)

Sl. No	Designation
1	PCCF & HoFF, Forests & Environment Department
2	Director, Agriculture Department
3	Director, Veterinary & Animal Husbandary Department
4	Director, Fisheries Department
5	Director, Education Department

The non-official members are: - (Rule 6 of MBDR, 2010)

Sl. No	**Name**	**Designation**
1	Shri. S.Barik	Prof. & Head, Dept. of Ecology, NEHU, Shillong
2	Shri. K.C.Momin	Retd. Director (Soil Conservation), Govt. of Meghalaya, Shillong.
3	Smt. Natalie W. Kharkongor	Assoc. Prof., RGIIM, Shillong.
4	Dr. Kalkame Cheran Momin	NEHU, Tura
5	Dr. Carl Oswald Rangad	Retd. Director of Horticulure, Meghalaya

3.3 Staff of the Board (On Contract)

Sl No.	Name	Designaion
1	Dr. Nigyal John Lakadong	Scientist
2	Dr. Sankhadipta Dey	Taxonomist
3	Ms. Stevia Vincy Kharmalki	Administrative Assistant
4	Mr. Wilbur Zechariah Massar	Accountant cum field Assistant
5	Mr. Khrawjingmut Kharmalki	DTP Operator
6	Ms. Phindarisha Papang	DTP Operator cum Web Publisher
7	Mr. Kitlang Warjri	Multitasking
8	Mr. Aiborlang Kharakor	Driver

Board Office: The Office of the Meghalaya Biodiversity Board is situated at Sylvan House, Lower Lachumiere, Shillong - 793001.

Project Assistants: Six project assistants are recruited on contract to document the existing the literature of the State according to to the topic selected.

Sl No.	Name	Survey Topic/Areas
1	Welfareson Khongriah	1. Survey of tradable plants and animals in Meghalaya and heir locations. 2.Survey and documentation of wild edible mushrooms in Meghalaya
2	Pyndaplin Lyngdoh	1. Survey on traditional seeds of Meghalaya. 2. Survey on indigenous fruits of Meghalaya
3	Baaijingkmen Nongkynrih	1. Survey of traditional health practitioners with documentation of different plants and animals used by them in Khasi and Jaintia Hills. 2. Documentation of ethnobotanically important species in Khasi and Jaintia Hills.
4	Rangme Betlin Yvette Marbaniang	1. Diversity, distribution and uses of pteridophyta flora in the Khasi and Jaintia hills, Meghalaya. 2. Study on threatened endemic species of the Khasi and Jaintia hills, Meghalaya.
5	Raja Nongkhlaw	1. Aquatic biodiversity (Macrophytes, Macro-invertebrates), fishes and amphibians) found in Khasi and jaintia hills, Meghalaya. 2. Livestock Biodiversity found in Khasi and Jaintia Hills of Meghalaya.
6	Sanggra Ch. Momin	1. Survey of tradional health practionars with documentation of different plants and animals used by them in Garo Hills. 2. Documentation of ethnobotanically important species in Garo Hills.

3.4. Functions and Duties of the Meghalaya Biodiversity Board

Without prejudice to the provisions of the Act in general, the Board has following functions:

i. Lay down the procedure and guidelines to govern the activities provided under Section 23 of the Act.

ii. Advise the State Government on many matters concerning conservation of bio-diversity, sustainable use of its components and fair and equitable sharing of benefits arising out of the use of biological resource and knowledge,

iii. Provide technical assistance and guidance to the departments of the State Government.

iv. Regulate by granting of approvals or otherwise requests for commercial utilization or bio-survey and bio-utilization of any biological resource by Indian Nationals.

v. Facilitate updating and implementations of State Bio-diversity Strategy and Action Plan.

vi. Commission studies and sponsor investigations and research.

vii. Engage consultants for a specified period, not exceeding three years, for providing technical assistance to the Board in the effective discharge of its functions. Provided that if it is necessary and expedient to engage any consultant beyond the period of three years, the Board shall seek prior approval of the State Government for such an engagement.

viii. Collect, compile and publish technical and statistical data, manuals, codes or guides relating to conservation of biological bio-diversity, sustainable use of its components and fair and equitable sharing of benefits arising out of the use of biological resource and knowledge.

ix. Organize through mass media a comprehensive programme regarding conservation of biological bio-diversity, sustainable use of its components and fair equitable sharing of benefits arising out of the use of biological resources and knowledge.

x. Plan and organize training of personnel engaged or likely to be engaged in programmes for the conservation of bio-diversity and sustainable use of its components.

xi. Take steps to build-up database and to create information and documentation system for biological resources and associated traditional knowledge through bio-diversity registers and electronics data bases,to ensure effective management, promotion and sustainable uses.

xii. Give directions to the local bodies/Bio-diversity Management Committees in writing and through appropriate oral means, for effective implementation of the Act, and to facilitate their meaningful participation in all measures relating to conservation, sustainable use, and equitable benefit-sharing.

xiii. Report to the State Government about the functioning of the Board and implementation of the Act and Rules made there under.

xiv. Recommend, prescribe, modify, collect fee of biological resources from time to time.

xv. To devise methods to ensure protection of rights including intellectual property rights over biological resources and associated knowledge including systems of maintaining confidentiality of such information as appropriate, including the protection of the information recorded in People's Biodiversity Registers.

xvi. Sanction grants-in-aid and grants to Biodiversity Management Committees for specific purposes.

xvii. Undertake physical inspection of any area, in connection with the implementation of the Act.

xviii. Ensure that biodiversity and bio-diversity dependent livelihoods are integrated into all sectors of planning and management and at all levels of planning from local to State, to enable such sectors and administrative levels to contribute effectively for conservation and sustainable use.

xix. Prepare the annual budget of the Board incorporating its own receipts as also the devolution from the State and Central Government provided that the allocation by the Central Government shall be operated in accordance with the budget provisions approved by the Central Government.

xx. Board shall have full powers for granting administrative and technical sanctions to all estimates it may, however, delegate such powers of administrative and technical sanctions to the Member- Secretary of the Board, as may be deemed necessary.

xxi. Recommend creation of posts to State Government, for effective discharge of the functions by the Board and to create such posts; provided that no such post whether permanent/temporary or of any nature, would be created without prior approval of the State Government,

xxii. Perform such other functions, as may be necessary to carry out the provisions of the Act or as may be prescribed by the State Government from time to time,

xxiii. Shall have power to acquire, hold and dispose of property, both movable and immovable and enter into contract for the same.

3.5 Details of Nodal Officers

Sl No.	Name of the District – TSG	District Nodal Officer cum convenor
1	East Khasi Hills, TSG, Shillong	DFO (EKH Wildlife Division), Shillong
2	West Khasi Hills, TSG, Nongstoin	DFO (WKH Social Forestry Division), Nongstoin
3	South West Khasi Hills, TSG, Mawkyrwat	DFO (EKH Social Forestry Division), Shillong
4	East Jaintia Hills, TSG, Khliehriat	DFO (JH Social Forestry Division), Jowai
5	West Jaintia Hills, TSG, Jowai	DFO (JH Wildlife Division), Jowai
6	Ri-Bhoi, TSG, Nongpoh	DFO (Ri-Bhoi Social Forestry Division), Nongpoh
7	North Garo Hills, TSG, Resubelpara	DFO (E&W GH Wildlife Division), Tura
8	West Garo Hills, TSG, Tura	DFO (E&W GH Wildlife Division), Tura
9	East Garo Hills, TSG, Williamnagar	DFO (EGH Social Forestry Division), Williamnagar
10	South Garo Hills, TSG, Baghmara	DFO (BNP), Baghmara
11	South West Garo Hills, TSG, Ampati	DFO (WGH Social Forestry Division), Tura

3.6. Details of Technical Support Groups (TSG)

1. Divisional Forest Officer having his office/jurisdiction in the district to be nominated by the PCCF & HoFF - District Nodal Officer and Convener.
2. Representative nominated by the Animal Husbandry & Veterniary Department, Govt. of Meghalaya.
3. Representative nominated by the Fisheries Department, Govt. of Meghalaya.
4. Representative nominated by the Agriculture Department, Govt. of Meghalaya.
5. Representative nominated by the Autonomous District council concerned.
6. Representative nominated by the Meghalaya Basin Development Authority (MBDA), Govt. of Meghalaya.
7. Representative nominated by the Botanical Survey of India, Shillong Centre.
8. Representative nominated by the Zoological Survey of India, Shillong Centre.
9. Two members nominated by the Deputy Commisioner of the District, from among the Conservationists/NGOs/prominent individuals of the District.

3.7. Duties and functions of the Technical Support Group (TSG)

i. The TSG shall provide technical guidance to the Biodiversity Management Committees (BMCs) in the district in the preparation of the Peoples' Biodiversity Registers (PBRs).

ii. The TSG shall provide technical guidance to the Biodiversity Management Committees (BMCs) in the district in the preparation of the Biodiversity Management Plans for their respective areas.

iii. The TSG shall recommend measures for 'capacity building' of the BMCs under their jurisdiction and offer their expertise in the training programmes.

iv. The TSG shall recommend to the Meghalaya Biodiversity Board (MBB), potential areas rich in biodiversity/cultural heritage for the establishment of BMCs and/or for their declaration as Biodiversity Heritage Sites (BHS).

v. The TSG shall help the Meghalaya Biodiversity Board (MBB) in its negotiations with the individuals/community/other stake holders for the purposes of implementation of the Biological Diversity Act, 2002 and in awareness campaigns.

vi. The District Nodal Officer shall nominate a forest staff, preferably in the rank of Forester, to function as Secretary to each of the BMCs/group of BMCs constituted in the district for guiding the BMCs in account keeping and record maintenance.

vii. The TSG shall meet as frequently as deemed fit but at least once in 6 (six) months. The Divisional Forest Officer, who is also a member of the TSG, shall convene the meetings in his capacity as the District Nodal Officer cum Convener of the TSG. The TSG is free to devise its own rules/methods for conducting business including determination of the quorum and the decision making process.

viii. The minutes of each meeting of the TSG shall be recorded and submitted to the Meghalaya Biodiversity Board (MBB), by the District Nodal Officer cum Convener of the TSG.

4 MEETINGS OF THE BOARD

4.1 First Regional Meeting of State Biodiversity Boards of Northeast India

The first regional Meeting of the state biodiversity boards of Northeast India was held in Shillong from 4th to 5th May, 2012.

Dignitaries at the dais during the first regional meeting of State Biodiversity Boards of North-East India

Shri. C. Budnah IFS, PCCF, giving suggestions during the Meeting.

Participants attending the first regional meeting of State Biodiversity Boards of North-East India.

4.2 Meetings of the Board during the year 2012-2013

4.2.1. The first meeting of the board was held on 18th May, 2012 at Main Secretariat Building. The meeting was chaired by Principal Secretary, Forest and Environment.

During the meeting discussions were held on the following agenda items:

a. Preparation for celebration of International Day for Biological Diversity.
b. Opening up of Bank account for MBB and operationalization of State Biodiversity Fund.
c. Setting up of MBB office - Infrastructure and man power requirement.
d. Appointment of expert committee.
e. Constitution sub-committee to establish BMCs.
f. Review of State Biodiversity Action Plan.
g. Measures to allocate funds from the plan budget of Department of Forest and Environment towards the grant in aid for MBB.

4.2.2. The second meeting of the Meghalaya State Biodiversity Board was held on 27th September, 2012 in committee Room II (No. 317) in Main Secretariat Building. The meeting was chaired by the Principal Secretary, Forest & Environment Department.

During the meeting discussions were held on the following agenda items:

a. The minutes of the meeting of the state biodiversity Board held on 18th May, 2012 were confirmed.
b. The conference of parties -11 (CoP-11) scheduled to be held from 8th October 2012 to 19th October, 2012 at Hyderabad.
c. The board was apprised by the Member secretary that so far 64 BMCs have been constituted in Meghalaya during the last two months. The BMCs need to be trained on various provisions of Biodiversity conservation Act and Rules and the statutory role assigned to the BMCs in the matter of granting access to the biological resources, formation of BHS, operating Local Biodiversity Fund etc. It was decided that this may be done by outsourcing this activity on payment basis to a willing competent organization.
d. The member secretary suggested five themes for which expert committees could be constituted under Rule 13(1) of Meghalaya Biological Diversity Conservation Rules, 2010.
    (i) Determine access and benefit sharing issues while processing applications for permission to collect bio-resources.
    (ii) Agro and Horticulture biodiversity.
    (iii) Animal Resources and Fisheries.
    (iv) Traditional knowledge and intellectual property rights (IPR).
    (v) Identify biodiversity rich areas and Biodiversity Heritage Sites (BHS) which are out of protected Area Network.
e. The issue of drafting the State Biodiversity Conservation Action Plan.
f. The PCCF and HoFF agreed to send a proposal to the State Government for grants-in-aid to SBB through re-appropriation of State Plan funds.
g. The issue of gearing up Biodiversity Education in the State.
h. The level of participation of non-official Members in the Board meetings.

4.3 Meetings of the Board during the year 2013-2014

4.3.1. The third meeting of the board was held on 10th April, 2013, in the conference hall in Main Secretariat Building.The meeting was chaired by the Chairman of the state Biodiversity Board, Shri PBO Warjri, IAS.

During the meeting discussions were held on the following agenda items:

a. The minutes of the meeting of the board held on 27th September, 2012 were confirmed.
b. A follow up on the decisions rendered during previous Board Meeting were discussed.
c. The secretary of the Board brief the members on the progress achieved in the implementation of the provisions of the Act. It was noted that 79 BMCs at village level have been constituted so far in Meghalaya most of which are rich in biodiversity and forest cover. Each of the BMCs surveyed through PRA and mapped employing GPS and GIS techniques as precursor to composing the People's Biodiversity Register were shown to the members.
d. The secretary MBB demonstrated that substantial progress has been achieved in documenting the sacred groves of Meghalaya. A power point presentation has been prepared on the subject listing 115 sacred groves of Meghalaya.
e. In-principle decision was taken to secure declaration of Mawphlang sacred grove as a biodiversity Heritage Site under section 37 of Biological Diversity Act, 2002.
f. The secretary made a visual presentation of the Annual Work programme of the board for a sum of Rupees Two Crore Thirty Four Lakhs and Seventy Eight Thousand (Rs. 2,34,78,000.00).
g. Five expert committees as mandated under Rule 13(1) of the rules comprising various members were suggested for constitution.
h. It was decided to organize World Biodiversity Day Celebration on 22nd May, 2013 across the state.

4. The fourth meeting of the board was held on 17th May, 2013 in the in the committee Room II (No. 317) in main secretariat Building. The meeting was chaired by Addl. CS Forest & Environment.

4.4 Meetings of the Board during the year 2014-2015

4.4.1. The fifth meeting of the board was held on 16th April, 2014 in the conference hall in Main Secretariat Building.The meeting was chaired by the Chief Secretary, in-charge the Chairman of the board, Shri PBO Warjri, IAS.

During the meeting discussions were held on the following agenda items:

a. Confirmation of the minutes of the last meeting.
b. It was decided that Principal Secretary, Forests, will write to the Principal Secretary, Education for inclusion of "Biodiversity" in the curriculum for classes XI-XII.
c. Absence from meetings of the Board by official members were discussed.
d. 84 new BMCs formed at village level was informed and preparation of PBRs were discussed.
e. Survey and mapping to be continued for sacred groves with the help of GIS cell.
f. Annual work programme of the board were discussed.
g. Secretary, MBB shall take the initiative to move the Govt. Of Meghalaya for a policy decision on constitution of BMC at the village level vis-a-vis rule 23(1) of Meghalaya Biological Diversity Rules (MBDR, 2010).
h. Funding and activation of BMCs were discussed.
i. Formation of an expert committee for content development for the website "Meghalaya Biodiversity Information System" and maintenance thereof.
j. Formation of an expert committee on Legal matters connected with Biodiversity Act, IPR issues.
k. Diversification in the activities of the board.
l. Nomination of 'Technical Support Group (TSG)' at district level and district Nodal Officers.
m. Exploring the possibilities for convergence of Government initiatives at the BMC level.

4.4.2. The sixth meeting of the board was held on 3rd December, 2014 in Conference Room in Sylvan House, Shillong. The Chairman, MBB, chaired the meeting.

During the meeting discussions were held on the following agenda items:

a. Confirmation of the minutes of the meeting held on 16th April, 2014.
b. Discussion on the sanctioned State Plan Scheme for 2013-14.
c. Discussion on the proposal for the next financial year 2014-2015.
d. Any other relevant issue from the members with the permission of the Chairman.

4.4.3. The seventh meeting of the board was held 1st May, 2015 in Conference Room in Sylvan House, Shillong. The Chairman, MBB, chaired the meeting.

During the meeting discussions were held on the following agenda items:

a. Confirmation of the minutes of the meeting held on 3rd December, 2014.
b. Discussion on the sanctioned State Plan Scheme for 2014-15.
c. Discussion on the activities of Meghalaya Biodiversity Board.
d. Discussion on the IDB Celebration, 2015.
e. Discussion on the - Amendment to Rule 23 of Meghalaya Biological Diversity Rules, 2010.
f. Any other relevant issue from the members with the permission of the Chairman.
g. Research grants to eligible candidates.

5 ACTIVITIESOFTHEBOARD

5.1. International Day for Biological Diversity 2012

School students participating in drawing & painting competitions.

Shri. V. K. Nautiyal, IFS, PCCF & HoFF, Govt. of Meghalaya, distributing prizes to a winner.

Display of the drawings & paintings.

Shri Prestone Tynsong, hon'ble Minister of Forest & Environment, Govt. of Meghalaya, distributing prize to a winner

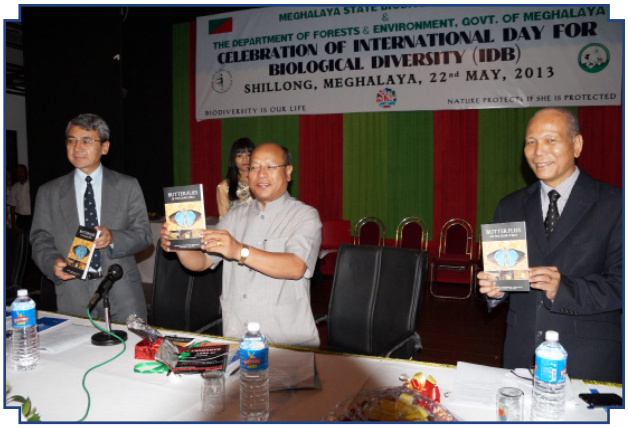
Shri. Barkos Warjri, IAS, Chairman, MBB, distributing prize to a winner

5.2. International Day for Biological Diversity 2013

Students participating in the drawing & painting Competitions

Participants during the International Biodiversity Day (IBD) celebrations 2013

Dignitaries on the dais during the IDB celebrations 2013



Shri. Prestone Tynsong, hon'ble Minister of Forest & Environment, Govt. of Meghalaya, releasing the book "Butterflies of Garo Hills"

Shri. TTC Marak, IFS, PCCF & HoFF, awarding prize to a winner.

Shri. MBK Reddy, IFS, Member Secretary of MBB, addressing the participants.

5.3. International Day for Biological Diversity 2014

School students participating in essay competition

Shri. A. Lyngdoh, IFS, addressing the participants at Tura

School students participating in drawing & painting competition

Dignitaries at the event at Tura

Shri. MS Rao, IAS, Chairman, MBB, addressing the participants during International Biodiversity Day (IBD) celebrations 2014 at Shillong

Dr. Mukul Sangma, hon'ble Chief Minister of Meghalaya, releasing a poster published by MBB

5.4. International Day for Biological Diversity 2015

School students participating in drawing and painting competitions

Hon'ble Chief Minister of Meghalaya, Dr. Mukul Sangma planting a tree during IBD celebrations 2015 at Ampati

Dignitaries on the dais at IBD celebrations 2015 at Shillong

Shri. Prestone Tynsong, hon'ble Minister of Forest & Environment, presenting the 1st MBB Research Grant

Release of a brochure on Meghalaya during IDB 2015

Shri. Barkos Warjri, IAS, the Chief Secretary, presenting an award to the winner of Photography Competition

PHOTOGRAPHY COMPETITION

With a view to generate awareness about biodiversity, the Board organized a photography competition on the themes: (i) Beauty of the Wild (ii) Monsoon Moments and (iii) Culture & Heritage. Prize distribution was held during the IBD celebrations at Shillong on 22nd May, 2015.

Winners - General Category :

Reuben Sohkhlet
1st Prize
Theme: Beauty of the wild

Aridapha Shullai
2nd Prize
Theme: Beauty of the wild

Justarwell Nonglait
3rd Prize
Theme: Beauty of the wild

Anointment Banshanlang
1st Prize
Theme: Culture & Heritage

Reuben Sohkhlet
2nd Prize
Theme: Culture & Heritage

Gregory Alyaa
3rd Prize
Theme: Culture & Heritage

Gidien Marb
1st Prize
Theme: Monsoon Moment

Aridapha Shullai
2nd Prize
Theme: Monsoon Moment

Ebor Tariang
3rd Prize
Theme: Monsoon Moment

Winners - Student Category

CLIFFTON WARJRI
1st Prize
Theme: Beauty of the wild

Antanu Bora
2nd Prize
Theme: Beauty of the wild

Janardhan Massar
3rd Prize
Theme: Beauty of the wild

Oinam Joychandra Singh
1st Prize
Theme: Monsoon Moment

Nobojit Dey
2nd Prize
Theme: Monsoon Moment

Baphilinia Mylliemngap
3rd Prize
Theme: Monsoon Moment

Oinam Joychandra Singh
1st Prize
Theme: Culture & Heritage

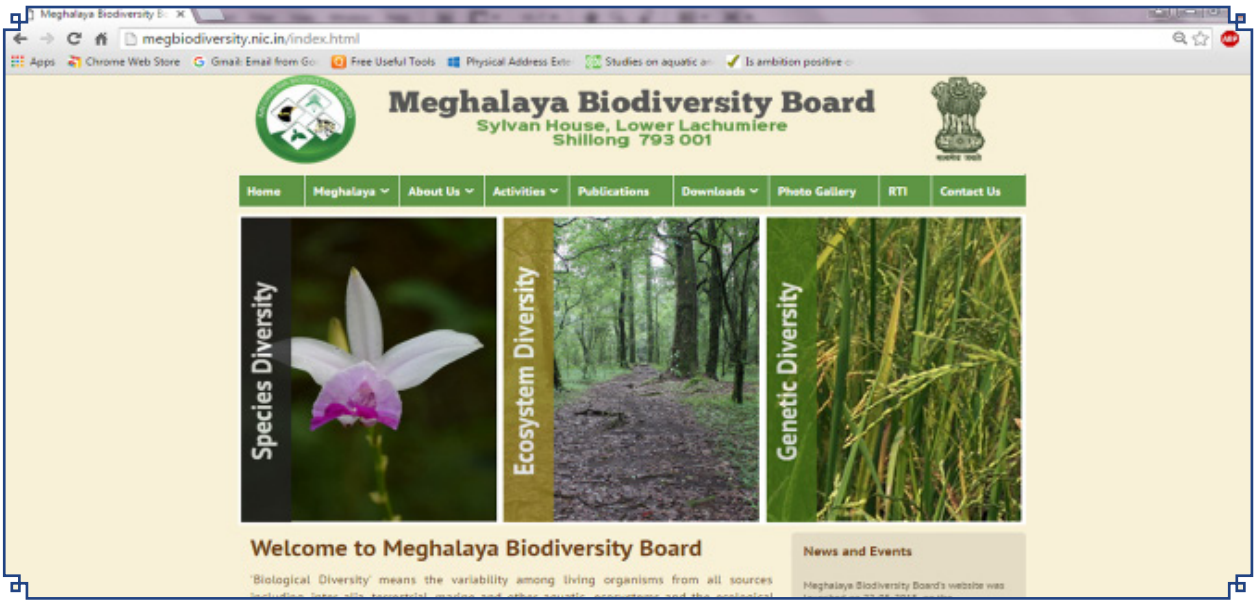
Panborlang Toi
2nd Prize
Theme: Culture & Heritage

Judges of the Photography Competition:
Shri. Rafael Warjri &
Shri. Benedict Hynniewta

Deepshikha Ram
2nd Prize
Theme: Culture & Heritage

Launching of the Meghalaya Biodiversity Board's website: Hon'ble Minister of Forest & Environment, Govt. of Meghalaya, Shri. Prestone Tynsong launched the Website of the Board (http://megbiodiversity.nic.in) on 22nd May, 2015, commemorating the International Day for Biological Diversity.

Hon'ble Minister of Forest & Environment, Shri. Prestone Tynsong launching the Meghalaya Biodiversity Board's website



Homepage of Meghalaya Biodiversity Board's website

The above hoarding with a message on keeping our rivers clean, was launched on the occasion of International Day for Biological Diversity 2015. The concept & photos of this hoarding were provided by Shri P.B.O Warjri, IAS, Chief Secretary, Govt. of Meghalaya.

Another banner displayed on the occasion of International Day for Biological Diversity 2015.

5.5 Financial support to conservation/research projects by MBB

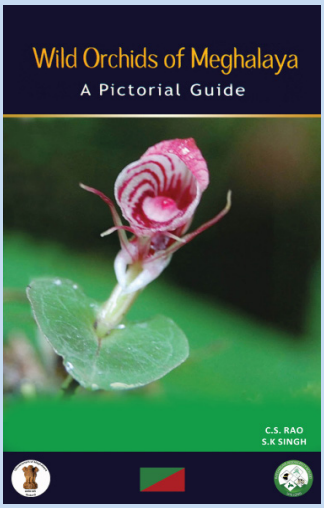
The Board granted financial support for 10 conservation/ research projects on biodiversity of Meghalaya to different research as given below:

SL No	Name of Candidate	Topic of the Conservation/ Research Project	Budget (Lakhs)	Duration (Months)
1.	Shri. Atanu Bora	Butterflies of Meghalaya	0.75	12
2.	Shri. D Khlur B. Mukhim	Wroughton's Free –Tailed Bats	1.0	12
3.	Smt. Dalari Lyngdoh/Darina Kharshandi & Dr. Aroma Lyngdoh	Wild Edible Fruits of East Khasi Hills	0.75	12
4	Smt. Deimaphisha Lyngdoh/ Gregory A Warjri/Ialam-phang Lyngdoh	Documentation on Biodiversity Rich Areas & Heritage Sites	0.75	12
5	Shri. Kanhaiya Lal Chaud-hary	Biodiversity Mapping of Surbathiang Bird Sanctuary, Ri-Bhoi District	1.0	12
6	Shri. Morningstar War	Conservation of Orchids	0.50	6
7	Shri. Pynshailang Syiemiong	Cave Terrestrial Anthropods and Aquatic Biota in Mawshyr-pait and Riblai Caves	0.75	12
8	Shri. Pius Ranee	Bio-Garden- Conservation of Biodiversity	0.75	12
9	Shri. Pynioolut Miki Ryngki	Wild Edible Plants in West Jaintia Hills District	0.75	12
10	Ms. Lavinia M Dkhar	Earthworms Diversity in East Khasi Hills District.	0.75	12

5.6 Publications by MBB

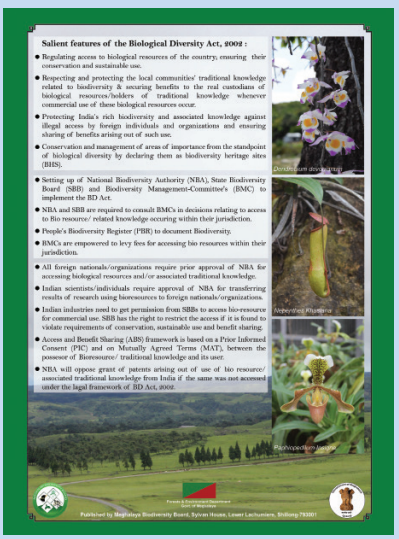
The Board published the following books, brochures, posters and standees to create awareness:-

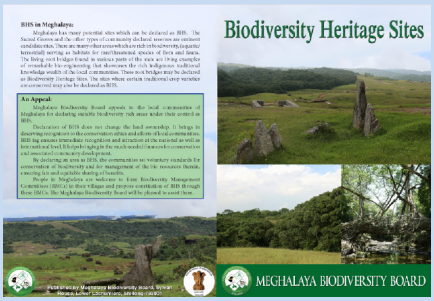
- Book :

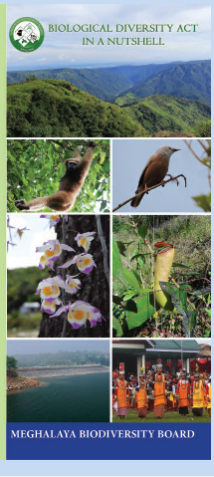


- Brochure :

- Pamphlets :







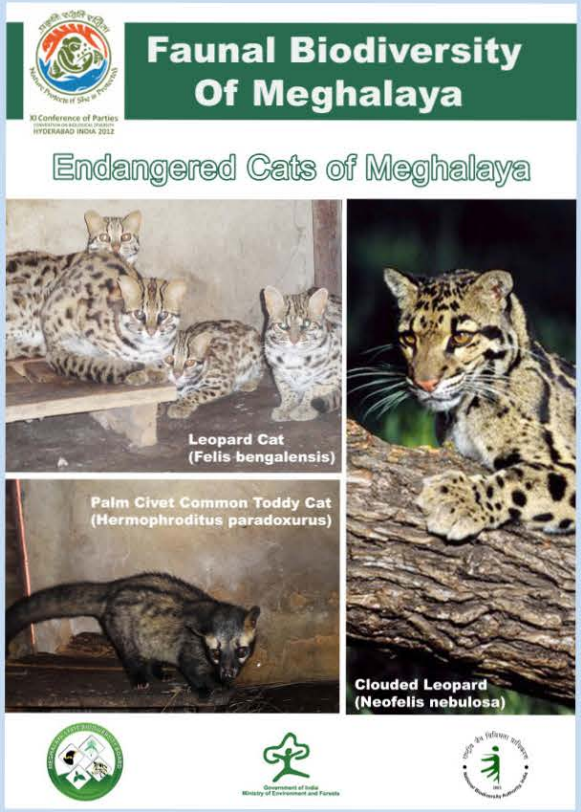
- Posters :


Bamboos of Meghalaya
Government of India
Ministry of Environment & Forests

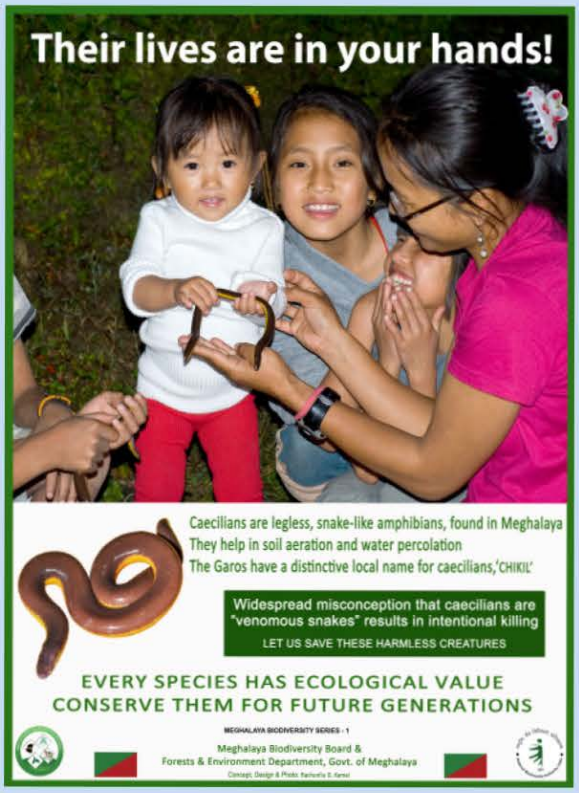

ORCHIDS OF MEGHALAYA
Cymbidium eburneum
Rhynchostylis retusa
Phaius tankervilliae
Aerides multiflorum
Government of India
Ministry of Environment & Forests


MINOR FOREST PRODUCE OF MEGHALAYA
Broom
Lycheelnner Trunk
Black pepper
Bayleaf
Wood lichen
Government of India
Ministry of Environment & Forests


RARE ANIMALS OF MEGHALAYA
Leopard cat
Serow
Jackal
Yellow throated marten
Bengal slow loris
Common Fox
Government of India
Ministry of Environment & Forests


Faunal Biodiversity Of Meghalaya
Endangered Cats of Meghalaya
Leopard Cat (Felis bengalensis)
Palm Civet Common Toddy Cat (Hermophroditus paradoxurus)
Clouded Leopard (Neofelis nebulosa)

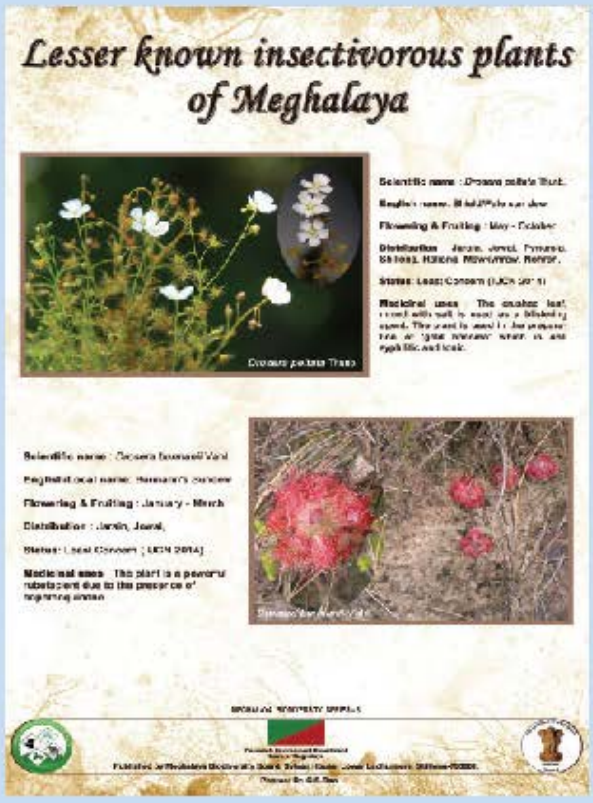

Orchids of Meghalaya
Conservation of endangered orchida through In vitro germination and Micro propagation
EX-SITU CONSERVATION OF ORCHID


Their lives are in your hands!
Caecilians are legless, snake-like amphibians, found in Meghalaya
They help in soil aeration and water percolation
The Garos have a distinctive local name for caecilians,'CHIKIL'
Widespread misconception that caecilians are "venomous snakes" results in intentional killing
LET US SAVE THESE HARMLESS CREATURES
EVERY SPECIES HAS ECOLOGICAL VALUE
CONSERVE THEM FOR FUTURE GENERATIONS
MEGHALAYA BIODIVERSITY SERIES - 1
Meghalaya Biodiversity Board &
Forests & Environment Department, Govt. of Meghalaya


THE GENUS PAPHIOPEDILUM IN MEGHALAYA
A PLEA FOR CONSERVATION
Scientific Name- Paphiopedilum hirsutissimum (Lindl. ex. Hook.) Stein.
Habit- Terrestrial as well as epiphytic
Altitude- 700-1800m
Flowering- February - March
Distribution-NE India (Khasi Hills, Javal, Mizoram, & Nagaland)
Status- Rare
Scientific Name- Paphiopedilum venustum (Wall. ex. Sims.) Pfitz.
Habit- Terrestrial
Altitude- 500-1500m
Flowering- December - February
Distribution- Meghalaya, Sikkim, Bangladesh.
Status- Vulnerable
Scientific Name- Paphiopedilum insigne ((Wall. ex Lindl.) Pfitz.
Habit- Terrestrial sometimes lithophytic
Altitude- 1000-1500m
Flowering- October-December
Distribution- Khasi Hills, Sylhet & Nepal.
Status- Vulnerable


ORCHIDS OF MEGHALAYA
Orchids are the living masterpieces of nature - Save them

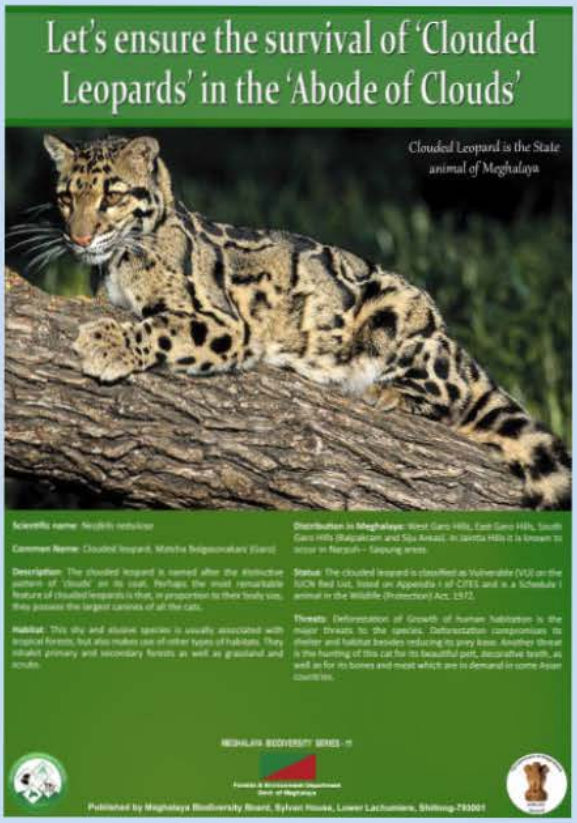

Bamboo orchid


Lesser known insectivorous plants of Meghalaya

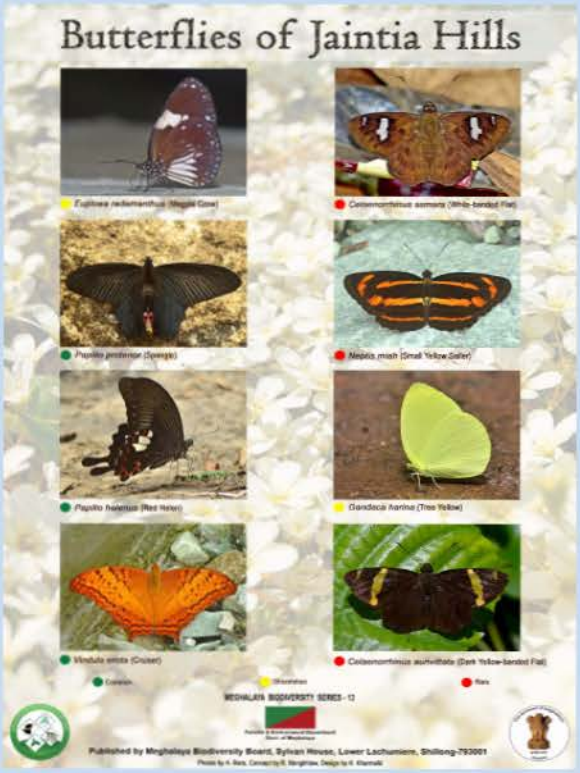

FOOD AND GAME FISHES OF MEGHALAYA


Ornamental Fishes of Meghalaya
Published by Meghalaya Biodiversity Board, Sylvan House, Lower Lachumiere, Shillong-793001


In India the Pitcher Plant is found only in Meghalaya : Save them
Scientific Name: Nepenthes khasiana Hook.f.
English/Local Name: Pitcher plant (English),Tawrukot (Khasi) - devouring or demon flower; Kasit-phara (Jaintia)- A device for traping insects; Memang kokai (Garo) - basket of the devil
Distribution: Endemic to Meghalaya; Khasi, Jaintia and Garo Hills
Status: Listed in Appendix 1 of CITES, Critically Endangered and placed in Scheduled VI of the Wildlife (Protection) Act 1972
Habitat: The plant grows in open rocky slopes amidst grass, forest edges and in dense primary forests.The pitcher is a modified leaf which traps insects to compensate nitrogen deficiency in soil.
Medicinal uses: Fluid in the unopen pitcher is used as eye drops and also for stomach troubles, urinary troubles, diabetes and for gynecological problems.The pitcher with its contents is made into a paste and applied on affected parts of leprosy patients.


Let's ensure the survival of 'Clouded Leopards' in the 'Abode of Clouds'
Clouded Leopard is the State animal of Meghalaya
Published by Meghalaya Biodiversity Board, Sylvan House, Lower Lachumiere, Shillong-793001

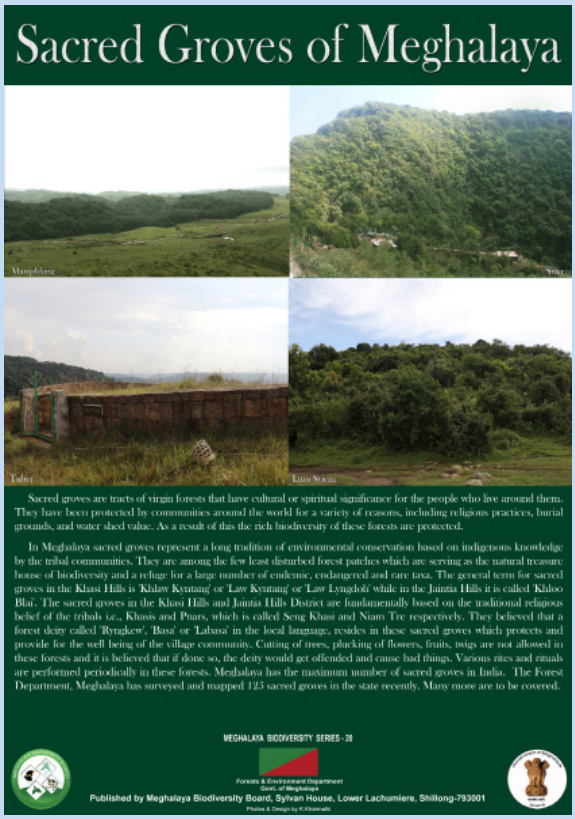

Butterflies of Khasi Hills
Published by Meghalaya Biodiversity Board, Sylvan House, Lower Lachumiere, Shillong-793001


Butterflies of Jaintia Hills
MEGHALAYA BIODIVERSITY SERIES - 12
Published by Meghalaya Biodiversity Board, Sylvan House, Lower Lachumiere, Shillong-793001


Butterflies of Ri-Bhoi
MEGHALAYA BIODIVERSITY SERIES - 14
Published by Meghalaya Biodiversity Board, Sylvan House, Lower Lachumiere, Shillong-793001

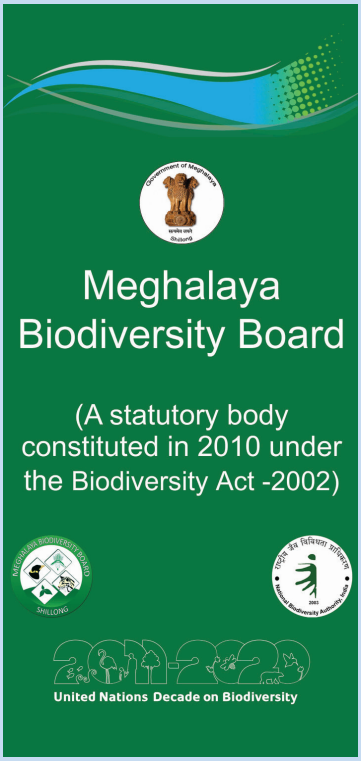

Butterflies of Garo Hills
MEGHALAYA BIODIVERSITY SERIES - 15
Published by Meghalaya Biodiversity Board, Sylvan House, Lower Lachumiere, Shillong-793001


TRADITIONALLY USED SEEDS OF MEGHALAYA
MEGHALAYA BIODIVERSITY SERIES - 16
Published by Meghalaya Biodiversity Board, Sylvan House, Lower Lachumiere, Shillong-793001


Sacred Groves of Meghalaya
Sacred groves are tracts of virgin forests that have cultural or spiritual significance for the people who live around them. They have been protected by communities around the world for a variety of reasons, including religious practices, burial grounds, and water shed value. As a result of this the rich biodiversity of these forests are protected.
In Meghalaya sacred groves represent a long tradition of environmental conservation based on indigenous knowledge by the tribal communities. They are among the few least disturbed forest patches which are serving as the natural treasure house of biodiversity and a refuge for a large number of endemic, endangered and rare taxa. The general term for sacred groves in the Khasi Hills is 'Khlaw Kyntang' or 'Law Kyntang' or 'Law Lyngkot' while in the Jaintia Hills it is called 'Khloo Blei'. The sacred groves in the Khasi Hills and Jaintia Hills District are fundamentally based on the traditional religious belief of the tribals i.e., Khasis and Pnars, which is called Seng Khasi and Niam Tre respectively. They believed that a forest deity called 'Ryngkew', 'Basa' or 'Labasa' in the local language, resides in these sacred groves which protects and provide for the well being of the village community. Cutting of trees, plucking of flowers, fruits, twigs are not allowed in these forests and it is believed that if done so, the deity would get offended and cause bad things. Various rites and rituals are performed periodically in these forests. Meghalaya has the maximum number of sacred groves in India. The Forest Department, Meghalaya has surveyed and mapped 125 sacred groves in the state recently. Many more are to be covered.
MEGHALAYA BIODIVERSITY SERIES - 20
Published by Meghalaya Biodiversity Board, Sylvan House, Lower Lachumiere, Shillong-793001


A RARE PHENOMENON
of flowering once in 12 years
Strobilanthes tomentosa
Scientific Name: Strobilanthes tomentosa (Nees) J.R.I. Wood
Local Name: Tiew Jah Khei (Khasi) and Tiew Ia-Khi (Jaintia)
Distribution in India: E- & NE-India, Himalayas, Jammu, Punjab plains, Upper Gangetic Plains, Darjeeling.
Distribution in Meghalaya: Khasi and Jaintia Hills (Mawpynshong, Sung valley, Puriang, Khleh Tyrsi, Mh Myntdu, Kut, Shangpung, Myrso, Relang).
Description: A small erect shrub up to 1 m tall which flowers once in every 12 years. The last time it flowered was in 2003. This unique plant belongs to family Acanthaceae and is expected to flower gregariously again in 2027.
Flowering and Fruiting: August - October and November-December.
Habitat: Grassy mountain slopes, open forests in relatively dry areas (500 - 2300 m). The plant prefers well drained soils.
Threats: Slash and burn agriculture or shifting cultivation eliminates the species from their natural habitat. They are likely to be suppressed by dominant and aggressive shrubs primarily Lantana camara.
Conserve this beautiful plant that adds colours to the scenic beauty of our State. Protect its habitats.
MEGHALAYA BIODIVERSITY SERIES - 19
Published by Meghalaya Biodiversity Board, Sylvan House, Lower Lachumiere, Shillong-793001

- Standees :


Meghalaya Biodiversity Board
(A statutory body constituted in 2010 under the Biodiversity Act -2002)
United Nations Decade on Biodiversity


BIOLOGICAL DIVERSITY ACT - 2002
OBJECTIVES
Conservation of biological diversity
Sustainable use of its components
Fair and equitable sharing of benefits arising out of the utilization of biological resources and associated traditional knowledge
Meghalaya Biodiversity Board, Sylvan House, Lower Lachumiere, Shillong-793001
United Nations Decade on Biodiversity


Access and Benefit Sharing (ABS)
Access and Benefit Sharing (ABS) is founded on the principle that those who access and utilize biological resources do so with the prior informed consent of the providers of the resources along with an agreement to share the benefits accrued from such uses.
Article 15 of the Convention on Biological Diversity (CBD) and Sections 3,4, 6,7 and 21 of the Biological Diversity Act, 2002 and Rule 21 of the Biological Diversity Rules, 2004, elaborate the provisions of ABS.
The Nagoya Protocol on ABS was agreed to as the international legally binding multilateral agreement on ABS in October 2010 by 193 countries who are Parties to the Convention on Biological Diversity (CBD).
What Constitutes Equitable Benefit Sharing?
Research exchanges, Collaborative research
Grant of joint ownership of Intellectual Property Right (IPR).
Transfer of technology.
Location of production, research and development units to facilitate better living standard to the benefit claimers.
Association of Indian Scientists, benefit claimers and the local people with research and development in biological resources and bio-survey and bio-utilization.
Setting up of venture capital fund for aiding the cause of benefit claimers.
Payment of monetary compensation and other non-monetary benefits to the benefit claimers.
A range of non-monetary benefits
UNEP
gef


Economic Value of Biodiversity
Biological diversity is a global asset with tremendous economic values to present and future generations.
Biological resources have huge economic potential, that is still poorly understood and accounted for.
Globally more than 1.3 billion people depend on biodiversity and on basic ecosystem goods and services for their livelihoods
Biodiversity is base for sectors such as pharmaceuticals, agriculture, horticulture, cosmetics and biotechnology.
Most of the biodiversity values are implicit rather than explicit, hence often difficult to capture by markets.
Biodiversity is still considered "public good" and do not have well defined property rights even now.
Biodiversity value can be estimated through the application of different valuation techniques such as: market prices, replacement costs, damage cost avoided, production function, hedonic price, travel cost and contingent valuation.
Estimation of the real economic value of different biological resources is a pre-requisite for determining well-targeted and calibrated economic incentive measures like Access and Benefit Sharing (ABS) agreements as per CBD and Biological Diversity Act, 2002.
The existing market price for bio-resources at its collection point is not the real value.
Economic valuation of biodiversity goods is still poorly analysed and documented. NBA is currently working on methodology for this.
UNEP
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Biological Diversity Act,2002
The Biological Diversity Act, 2002 was enacted for conservation of biological diversity, sustainable use of its components and fair and equitable sharing of the benefits arising out of the use of biological resources and associated knowledge.
The Bodies Under the Act
Biological Diversity Act,2002
NBA
SBB
BMC
Roles
Regulation
Advisory
Facilitation
Conservation
Role of National Biodiversity Authority at National Level
State Biodiversity Board's at State Level
Role of Biodiversity Management Committees
Chronicling of Traditional Knowledge
Conservers of Local Biodiversity
UNEP
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Biodiversity and Food Security
What is Food Security?
Food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life (FAO).
What is biodiversity?
Biodiversity is the variability among living organisms from all sources and the ecological complexes of which they are part and includes diversity thin species or between species and of eco-systems(Biological Diversity Act,2002).
Contribution of Biodiversity to India's Food security
India stands seventh in the world in terms of contribution of species to agriculture and animal husbandry.
India is home for over 50,000 varieties of rice, 5000 of sorghum and 1000 varieties of mango etc.,
India has the repository of agriculturally important micro organisms which includes 2,517 cultures of filamentous fungi, bacteria, actinomycetes and yeasts.
The National gene bank holds 3,66,933 domestic and animal genetic resources that is used for current and future research.
The National Bureau of Animal Genitic resources maintaining 97,835 deep frozen doses belonging to 257 breeding males (Bulls/Rams/Bucks/Stallions) from 31 breeds representing cattle, buffalo, sheep, goat, camel, yak and equine.
India has inland and marine bioresources, is the third largest producer of fish in the world.
India is known for its rich biodiversity having 91,212 species of animals and 45,000 species of plants.
Agriculture India is the pivotal sector ensuring food and nutritional security, sustainable development and for alleviation of poverty.
India's agriculture contributes to 8% global agricultural gross domestic product.
The Biological Diversity Act, 2002 enacted by the Parliament of India aims to Conserver biological diversity
Sustainable utilization of its components
Fair and equitable sharing of the benefits arising out of the use of biological resources, knowledge and for matters connected therewith.
UNEP
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Biological Diversity Act, 2002
Provisions of the Biological Diversity Act, 2002 : Exemptions
Section - 5 International Collaborative Research Projects
Persons / Entities exempted: Institutions including government sponsored institutions in India and such institutions in other countries, which are engaged in collaborative research projects, involving the transfer or exchange of bio-resources, information, associated knowledge including traditional knowledge occurring in or obtained from India.
Activity exempted: International collaborative research projects that comply with the Central government Guidelines on the subject.
Purpose exempted: Access / Transfer or exchange of bio-resources, associated knowledge including traditional knowledge for research purpose, transfer of research results under an International Collaborative Research project [Section 3 & 4].
Regulatory Guidelines: Guidelines for International Collaboration Research Projects Involving Transfer or Exchange of Biological Resources or Information relating thereto between Institutions including Government sponsored institution and such institutions in other countries, issued by Ministry of Environment Forests and Climate Change, Government of India, dated 8th November 2006.
Section - 40 Certain Items including Biological Resources Normally Traded as Commodities
Items exempted: Any items including biological resources normally traded as commodities, notified by the Central Government in consultation with National Biodiversity Authority for exemption from the Act.
Activity exempted: Items notified are exempted from the purview of the Act as long as they are traded as commodities.
Purpose exempted: If the notified item is a biological resource, the same is exempted if the biological resource is normally traded as a commodity.
Regulatory Guidelines: Presently the Ministry of Environment Forests and Climate Change, Government of India, has notified certain itemsl biological resources, as being exempted from the purview of the Act, provided they are normally traded as commodities, vide notification dated 26th October 2009.
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Biological Diversity Act, 2002
Accessing and Obtaining Biological Resources and Associated Knowledge Occurring in India
Section - 3
Persons / Entities covered: Foreign citizens, foreign entities such as companies, associations, organisations etc., NRIs, Indian entities such as companies, associations, organisations etc., having non-Indian participation in the share capital or management.
Activity covered: Access and obtainment of biological resources occurring in India
Purpose covered: Commercial utilization, research, bio-survey and bio-utilization.
Regulatory Body: National Biodiversity Authority (Prior approval necessary)
Section - 7
Persons / Entities covered: Indian citizens or body corporates, associations or organizations which are registered in India.
Activity covered: Access and obtainment of biological resources occurring in India
Purpose covered: Commercial utilization or bio-survey and bio-utilization for commercial utilization.
Regulatory Body: State Biodiversity Boards (Prior intimation necessary)
UNEP
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Biological Diversity Act, 2002
Utilization of Biological Resources and Associated Knowledge Occurring in or Obtained from India
Section - 4 Transfer of Research Results
Persons / Entities covered: Indian citizens, Indian entities such as companies, associations, organisations, etc., NRIs, foreign citizens, foreign entities such as companies, associations, organisations etc.
Activity covered: Transfer of results of research based on biological resources occurring in or obtained from Indian to foreign citizens, foreign entities such as companies, associations, organisations etc., NRIs, Indian entities such as companies, associations, organisations, etc., having non-Indian participation in the share capital or management.
Purpose covered: Transfer of research results for monetary consideration or otherwise for any purpose.
Regulatory Body: National Biodiversity Authority (Prior approval necessary)
Section - 6 Prior approval of NBA before applying for any Intellectual Property Right
Persons covered: Indian citizens, Indian entities such as companies, associations, organisations, etc., NRIs, foreign citizens, foreign entities such as companies, associations, organisations etc.
Activity covered: Application for any IPR for an invention based on research or information relating to any biological resource obtained from India.
Purpose covered: Application for any IPR anywhere in the world for inventions based on research or information relating to any biological resource and associated knowledge obtained from India.
Regulatory Body: National Biodiversity Authority (Prior Approval necessary)
UNEP
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5.7 Recent Activities of the Board

Awareness campaigns: Meghalaya Biodiversity board conducted many awareness campaigns for the benefit of various stakeholders in general and the BMCs in particular, on conservation of biodiversity and on provisions of the Biodievrsity Act, 2002, at various places of the State.

Exhibition at Mawphlang during International Terra-Madre festival: The Board, along with the Department of Forest & Environment, Govt. of Meghalaya, participated in the exhibition orgnised during the International Mei-Ramew (indigenous food festival - Terra Madre) held in Mawphlang on 7th November, 2015 displaying the biodiversity of Meghalaya.

Stall put by MBB in Mawphlang displaying the biodiversity of Meghalaya during international Terra Madre.

Awarness campaign at Jowai - The Board carried out awareness programme on biodiversity Management Committee (BMC) and Peoples Biodiversity Register (PBR) on the 19th November, 2015 at the District Library Auditorium at Jowai, Mynthong. All the stakeholders of biodiversity were invited for this programme.

Shri. C. Budnah, IFS, PCCF & HoFF, addressing the gathering.

Dignitaries on the dais during the awareness campaign.

Eighth Meeting of the Board: The eighth meeting of the board was held on 27th November, 2015 in the Conference Room of Sylvan House, Lower Lachumiere, Shillong. The Chairman, MBB, chaired the meeting. During the meeting discussions were held on the following agenda items:

a. Confirming the minutes of the 7th meeting.
b. Action taken on decisions made.
c. Audited Account statements for FY 2012-13, 2013-14 and 2014-2015 placed for MBB approval.
d. Discussion and approval to State Plan Scheme Proposal for 2015-16.
e. Fund receipts from NBA in 2015-16.
f. Items placed for MBB approval.
g. 5 year plan for MBC, PBR, BHS placed for discussions and approval.
h. Other Activities.
i. Any other issue, with the permission of the chair

Board members having discussion during the 8th meeting of the Board.

Shri. D. Sathiyan, IFS, presenting the agenda items during the meeting.

Shri. MS Rao, IAS, Chairman of the Board, addressing the Board members.

Distribution of books on biodiversity to schools in all districts: Meghalaya Biodiversity board gave financial support of Rs. 30,000.00 per district of Meghalaya for purchase of books and DVDs on Biodiversity. The board also suggested/recommended up-gradation of Biodiversity syllabus in the primary, middle and secondary schools.

Awarness campaign at Nongstoin: The Board carried out awareness programme on Biodiversity Management Committee (BMC) and Peoples Biodiversity Register (PBR) on 16th February, 2016 at Bishop Hall, Nongstoin.

Dr. NJ Lakadong addressing the village elders at the awareness programme on BMC and PBR.

Dr. B. Myrthong addressing the village elders at the awareness programme on BMC and PBR.

Awarness campaign at Khliehriat : The Board carried out awareness programme on Biodiversity Management Committee (BMC) and Peoples Biodiversity Register (PBR) on 24th February, 2016 at Khliehriat, West Jaintia Hills.

Ms. N. Laloo, DFO, SF, addressing the village elders at the awareness programme on BMC and PBR.

Shri. D. Sathiyan, IFS, addressing the village elders at the awareness programme on BMC and PBR.

Awarness campaign at Laskein: The Board carried out awareness programme on biodiversity management committee (BMC) and peoples biodiversity register (PBR) on 29th February, 2016 at Laskein, Jaintia Hills.

Ms. H. Lato, DFO, Wildlife, Jowai addressing the participants during the awareness programme.

Banner on the awareness campaign.

Exhibition during 'Vibrant Agri Horti - North East' meet : The Board participated in the exhibition organised during the 'Vibrant Agri Horti North East Meet, 2016 held at Guwahati (Assam) from 18th to 20th February, in collaboration with the National Biodiversity Aurthority.

Posters and standees displayed during the event.

Staff of MBB distributing posters and pamphlets to students during the event

Science Day Celebrations: The Board participated in the exhibition organised during the science day celebrations held at science centre, NEHU, Shillong on 26th and 27th February, 2016.

Staff of MBB managing the stall during the Science Day celebrations

Staff of MBB distributing posters and pamphlets to the visitors

Participation in SANCALP, a training programme for community leaders, at IBRAD, Kolkata: The Board sponsored 4 community leaders from Meghalaya to participate in the SANCALP-2016 training program held from 19th to 21st February, 2016 conducted by IBRAD, Kolkata.

Community Leaders of Meghalaya who participated in the programme.

Community Leaders during the training programme with IBRAD staff

6 DETAILS OF BMCS CONSTITUTED IN THE STATE SINCE 2012-13 (Upto February, 2016)

Meghalaya Biodiversity board constituted101 BMCs during the year 2012-13, 2013-14, 2014-15 and 2015-16.
Details of the BMCs constituted in Meghalaya are as follows:

SL No.	NAME OF BMC	BLOCK	DISTRICT	CHAIRMAN NAME	DATE ON WHICH BMC CONSTITUTED	REGISTRATION NO.
1	MOWKAIAW	LASKEIN	WEST JAINTIA HILLS	SHRI. LOVINGSON LALOO	25.08.2012	BMC/WJH/MOWKAIAW/01
2	JAKSONGRAM	BAGHMARA	SOUTH GARO HILLS	SHRI. DALBAS CH. SANGMA	21.08.2012	BMC/SGH/JAKSONGRAM/02
3	GOKA-WAKCHOL	BAGHMARA	SOUTH GARO HILLS	SHRI ETTILSON.A. SANGMA	21.08.2012	BMC/SGH/GOAKA-WAKCHAL/03
4	GOKAGRE	RONGARA	SOUTH GARO HILLS	SHRI. SUKEN.S. MARAK	22.08.2012	BMC/SGH/GOKAGRE/04
5	HALWA-HATI BERGRE	RONGARA	SOUTH GARO HILLS	SHRI. SILASH.G. MOMIN	13.08.2012	BMC/SGH/MALWA-HATI BERGRE/05
6	BOLBOKGRE	RONGARA	SOUTH GARO HILLS	SHRI. WILLIAM.D. SANGMA	13.08.2012	BMC/SGH/BOLBOKGRE/06
7	DAMBUK ATONG	RONGARA	SOUTH GARO HILLS	SHRI. CLEMENT.M. SANGMA	12.08.2012	BMC/SGH/DAMBUK ATING/07
8	DAMBUK JONGKOL	RONGARA	SOUTH GARO HILLS	SMT. MONICKA.M. SANGMA	12.08.2012	BMC/SGH/DAMBUK JONGKOL/08
9	TAIDANG 1	RONGARA	SOUTH GARO HILLS	SHRI. GRENSON.A. MARAK	13.08.2012	BMC/SGH/TAIDANG-1/09
10	TAIDANG 2	RONGARA	SOUTH GARO HILLS	SHRI. NEHAR.A. MARAK	13.08.2012	BMC/SGH/TAIDANG-2/10

11	AILATULI	RONGARA	SOUTH GARO HILLS	SHRI. GROSING. K. SANGMA	13.08.2012	BMC/SGH/AILATULI/11
12	TEPTEPA	RONGARA	SOUTH GARO HILLS	SHRI. KIRON SANGMA	17.08.2012	BMC/SGH/TEPTEPA/12
13	NONGBAH MYRDON	UMSNING	RI-BHOI	SHRI. B.P. THANGKHIEW	01.09.2012	BMC/RD/NONGBAH MYRDON/13
14	MONGALGRE	RONGRAM	WEST GARO HILLS	SHRI. DONSENG. B. MARAK	28.08.2012	BMC/WGH/MONGALGRE/14
15	DECHINGRE	DADENGRE	WEST GARO HILLS	SHRI. NENGRAN. A. SANGMA	28.08.2012	BMC/WGH/DECHNGRE/15
16	DALJAGRE	RONGRAM	WEST GARO HILLS	SHRI. NAMGJOM. A. SANGMA	28.08.2012	BMC/WGH/DALJAGRE/16
17	CHIBONGRE	DADENGRE	WEST GARO HILLS	SHRI. STEPSON MARAK	27.08.2012	BMC/WGH/CHIBONGRE/17
18	MAGALPARA	DADENGRE	WEST GARO HILLS	SHRI. NEPSON MARAK	27.08.2012	BMC/WGH/MAGALPARA/18
19	SELBALGRE	RONGRAM	WEST GARO ILLS	SHRI. PILOTSON SANGMA	27.08.2012	BMC/WGH/SELBALGRE/19
20	CHANDIGRE	RONGRAM	WEST GARO HILLS	SHRI. KIPSTONE MARAK	18.08.2012	BMC/WGH/CHANDIGRE/20
21	ROMBAGRE	RONGRAM	WEST GARO HILLS	SHRI. PREMSON SANGMA	18.08.2012	BMC/WGH/ROMBAGRE/21
22	RANGWALKAMGRE	RONGRAM	WEST GARO HILLS	SHRI. JEREN CH. MARAK	23.08.2012	BMC/WGH/RANGWALKAMGRE/22
23	ARUAKGRE	RESUBELPARA	NORTH GARO HILLS	SHRI. KAINAND. B. MARAK	18.08.2012	BMC/NGH/ARUAKGRE/23

24	DAP RONGA-DINGGRE	CHOKPOT	SOUTH GARO HILLS	SHRI. DINISON CH. MARAK	18.08.2012	BMC/SGH/ RONGADING-GRE/24
25	DANGKIPA-RA	CHOKPOT	SOUTH GARO HILLS	SHRI. TREELIN. T. SANGMA	18.08.2012	BMC/SGH/ DONGKIPA-RA/25
26	SATILOKGRE	CHOKPOT	SOUTH GARO HILLS	SHRI. MONINDRO SANGMA	18.08.2012	BMC/SGH/SATI-LOKGRE/26
27	DANA ADU-GRE	CHOKPOT	SOUTH GARO HILLS	SHRI. JOHN MARAK	18.08.2012	BMC/SGH/DANA ADUGRE/27
28	DURABANDA AGITOKGRE	CHOKPOT	SOUTH GARO HILLS	SHRI. DIPHU MOMIN	17.08.2012	BMC/SGH/DU-RABANDA AGI-TOKGRE/28
29	SAKALGRE	RONGRAM	WEST GARO HILLS	SHRI. BALJENG SANGMA	22.08.2012	BMC/WGH/ SAKALGRE/29
30	BALADING-GRE	RONGRAM	WEST GARO HILLS	SHRI. CLASON SANGMA	25.08.2012	BMC/WGH/ BALDINGRE/30
31	DURA KAL-AKGRE	RONGRAM	WEST GARO HILLS	SHRI. ROWITH-SON MOMIN	23.08.2013	BMC/WGH/ DURA-KALAK-GRE/31
32	DARIBOKGRE	SAMANDA	EAST GARO HILLS	SHRI. NITE CH. MOMIN	22.08.2012	BMC/EGH/DARI-BOKGRE/32
33	SANCHON-GRE	RONGRAM	WEST GARO HILLS	SHRI. DALLEN MARAK	23.08.2012	BMC/WGH/SAN-CHONGRE/33
34	AMPANGGRE	RONGRAM	WEST GARO HILLS	SHRI. MILLIN MARAK	19.08.2012	BMC/WGH/AM-PANGGRE/34
35	PYNDENG NONGBRI	MAIRANG	WEST KHASI HILLS	SHRI. DONCHESTER WARJRI	09.08.2012	BMC/WKH/PYN-DENG NONG-BRI/35
36	MAWLONG	MAIRANG	WEST KHASI HILLS	SHRI. B.S. LYN-GDOH	09.08.2012	BMC/WKH/ MAWLONG/36

37	JONGSHA	MAWKYN-REW	EAST KHASI HILLS	SHRI. KARMA-LIN RYNJAH	09.08.2012	BMC/EKH/ JONGSHA/37
38	MAWKASAIN	MAWSYN-RAM	EAST KHASI HILLS	SHRI. BRASSING DEWSAW	13.08.2012	BMC/EKH/MAW KASAIN/38
39	KHARANG	MAWKYN-REW	EAST KHASI HILLS	SHRI. TLISHAN MARBOH	21.08.2012	BMC/EKH/KHA-RANG/39
40	MAWLYNG-BNA	MAWSYN-RAM	EAST KHASI HILLS	SHRI. BLIY KYNTER	14.08.2012	BMC/EKH/ MAWLYNG-BNA/40
41	SYNNIASYA	MAWKYN-REW	EAST KHASI HILLS	SHRI. POLIN MYRBOH	17.08.2012	BMC/EKH/SYN-NIASYA/41
42	PINGWAIT	MAWKYN-REW	EAST KHASI HILLS	SHRI. KRESEN LYNGDOH	20.08.2012	BMC/EKH/PING-WAIT/42
43	UMTASOR MAWDKHAR	UMSNING	RI-BHOI	SHRI. ALPHA KHONGJOH	28.08.2012	BMC/RBD/UM-TASOR MAWD-KHAR/43
44	MAWDIANG-UM	UMLING	RI-BHOI	SHRI. MORIS DIENGDOH	28.08.2012	BMC/RBD/MAW-DIANGUM/44
45	MAWEITNAR	UMLING	RI-BHOI	SMT. PHRIDO-LIN	27.08.2012	BMC/RBD/ MAWEITNAR/45
46	DIWON	UMLING	RI-BHOI	SHRI. S.D. MA-TONG	16.08.2012	BMC/RBD/ DIYON/46
47	PAHAMRIOH	UMLING	RI-BHOI	SHRI. NOBAR-SON LAWAI	16.08.2012	BMC/RBD/PA-HAMRIOH/47
48	LAILAD	JIRANG	RI-BHOI	SHRI. BOBIL PYNGROPE	16.08.2012	BMC/RBD/ LAILAD/48

49	SOHKHWAI	UMLING	RI-BHOI	SHRI. BLIND WARJRI	16.08.2012	BMC/RBD/SOH-KHWAI/49
50	UMLYNGK-DAIT (NEW TAKSU)	JIRANG	RI-BHOI	SHRI. KERLIN NONGJRI	16.08.2012	BMC/RBD/UM-LYNGKDAIT/50
51	OLD TAKSU	JIRANG	RI-BHOI	SHRI. PHLAN NONGJRI	18.08.2012	BMC/RBD/OLD TAKSU/51
52	UMSOHMA	UMLING	RI-BHOI	SHRI. TURBAN LYNGDOH	18.08.2012	BMC/RBD/ UMSOHMA/52
53	UMLAKRO	JIRANG	RI-BHOI	SHRI. INTEIS-ING DOLOI	18.08.2012	BMC/RBD/UM-LAKRO/53
54	NONGDIER	JIRANG	RI-BHOI	SHRI. ANDIRA RANI	21.08.2012	BMC/RBD/NON-GDIER/54
55	SOHKYRBAM DOM PHLANG	JIRANG	RI-BHOI	SHRI. CENTRE-WEEL DOLOI	20.08.2012	BMC/RBD/SOH-KYRBAM DOM PHLANG/55
56	MYNNAR JIRANG	JIRANG	RI-BHOI	SHRI. DILBERT WAHLANG	21.08.2012	BMC/RBD/MYN-NAR JIRANG/56
57	PAHAM	JIRANG	RI-BHOI	SHRI. RIADIENG SHADAP	21.08.2012	BMC/RBD/PA-HAM/57
58	CENTRE VIL-LAGE	JIRANG	RI-BHOI	SHRI. DEMAN-WEL RANI	18.08.2012	BMC/RBD/CEN-TRE VILLAGE/58
59	UMTONG	JIRANG	RI-BHOI	SHRI. JESBIL NARLENG	18.08.2012	BMC/RBD/UM-TONG/59
60	UMRIT	JIRANG	RI-BHOI	SHRI. H. ROY MAWIONG	17.08.2012	BMC/RBD/UM-RIT/60
61	LAITKYNSEW RAID MAWL-IEH	KHATAR-SHNONG LAITK-ROH	EAST KHASI HILLS	SHRI. KYNTIEW NONGSTENG	18.08.2012	BMC/EKH/LAIT-KYNSEW RAID MAWLIEH/61
62	KUTMADAN	SHELLA-BHOLAG-ANJ	EAST KHASI HILLS	SHRI. IARAP MAJAW	10.08.2012	BMC/EKH/KUT-MADAR/62

63	PHOTJAUD-RANGTHONG	MAWKYR-WAT	SOUTH WEST KHASI HILLS	SHRI. H.T. SNAI-TANG	22.08.2012	BMC/SWKH/ PHOTJUAD-RANGTH-ONG/63
64	NONGLAWJEW	NONG-STOIN	WEST KHASI HILLS	SHRI. LESTINAL NONGBRI	18.08.2012	BMC/WKH/ NON-GLAWJEW/64
65	WAHLYN-GDOH	NONG-STOIN	WEST KHASI HILLS	SHRI. SIPRIAN UMIONG	18.09.2012	BMC/WKH/ WAHLYN-GDOH/65
66	NONGKUSBA	NONG-STOIN	WEST KHASI HILLS	SHRI. WITTING SHYRKAN	18.08.2012	BMC/WKH/ NONGKUS-BA/66
67	MAWMARIN	NONG-STOIN	WEST KHASI HILLS	SHRI. S. G. NON-GBRI	14.08.2012	BMC/WKH/ MAWMARIN/67
68	PORMAWLAI	MAWSHY-NRUT	WEST KHASI HILLS	SHRI. RAPTHAP RYNTONG	14.09.2012	BMC/WKH/ PORMAW-LAI/68
69	PAMSANNGUT	MAWSYN-RAM	EAST KHASI HILLS	SHRI. MANIK-STAR UMDOR	19.08.2012	BMC/EKH/ PAMSANNG-UT/69
70	RAID NONG-POH	NONGPOH	RI-BHOI	SHRI. SONSINGH LYNGDOH	11.09.2012	BMC/RBD/ RAID NONG-POH/70
71	MAWPHLANG	MAWPH-LANG	EAST KHASI HILLS	SHRI. N. K. LYN-GDOH	17.09.2012	BMC/EKH/ MAWPH-LANG/71
72	SOHBAR	SHELLA-BHOLAG-ANJ	EAST KHASI HILLS	SHRI. K. S. LYNGSKOR	05.09.2012	BMC/EKH/SO-HBAR/72
73	UMTASOR	UMSNING	RI- BHOI	SHRI. RICHARD NONGPHLANG	03.08.2012	BMC/RBD/UM-TASOR/73
74	MAWMYR-SIANG	LAITKROH - KHATAR SHNONG	EAST KHASI HILLS	SHRI. PLIWEL SYNREM	29.11.2012	BMC/EKH/ MAWMYR-SIANG/74
75	PHLANGWAN-BROI	MAWSYN-RAM	EAST KHASI HILLS	SHRI. SPINGLAN MARNGAR	08.11.2012	BMC/EKH/ PHLANGWAN-BROI/75

76	MAWRAPAD	MAWSYN-RAM	EAST KHASI HILLS	SHRI. PHLOMING-STAR SHANG-DIAR	25.08.2012	BMC/EKH/MAW-RAPAD/76
77	LAWBAH	MAWSYN-RAM	EAST KHASI HILLS	SHRI. E. WANKHAR	14.08.2012	BMC/EKH/LAW-BAH/77
78	LAD LAKA-DONG	KHLIEH-RIAT	EAST JAINTIA HILLS	SHRI SILBINUS LYNGDOH	21.12.2012	BMC/EJH/LAD LAKADONG/78
79	KHULIA	UMLING	RI-BHOI	SHRI JAANAM INGTI	01.05.2013	BMC/RBD/KHU-LIA/79
80	MAWLYNGK-HUNG	UMSNING	RI-BHOI	SHRI BALAN SHADAP	26.08.2012	BMC/RBD/ MAWLYNGK-HUNG/80
81	UMRAN-NIANGBYRNAI	UMSNING	RI-BHOI	SHRI MARK KHARHUJON	27.07.2013	BMC/RBD/UM-RAN-NONGBYR-NAI/81
82	UMRAN DAIRY	UMSNING	RI-BHOI	SHRI L.M BING	20.07.2013	BMC/RBD/UM-RAN DIARY/82
83	BYRWA	UMSNING	RI-BHOI	SHRI KWIRI-NUS SHYLLA	26.07.2013	BMC/RBD/BYR-WA/83
84	MARMAIN	UMLING	RI-BHOI	SHRI SUN-SHINE RAMDE	12.06.2013	BMC/RBD/MAR-MAIN/84
85	RITMAWNIEW	MYLLIEM	EAST KHASI HILLS	SHRI EVING DKHAR	18.03.2014	BMC/EKH/RIT-MAWNIEW/85
86	MAWKLOT	MYLLIEM	EAST KHASI HILLS	MAWKORDOR NONGNENG	28.04.2014	BMC/EKH/MAWK-LOT/86
87	SYNTEIN	MAWSYN-RAM	EAST KHASI HILLS	AMOSSINSTAR MALNGINAG	30.10.2014	BMC/EKH/SYN-TEIN/87
88	UMRAKAM	MYLLIEM	EAST KHASI HILLS	WADBORLANG KHARKONGOR	10.02.2015	BMC/EKH/UM-RAKAM/88
89	NONGRIM-SADEW	MYLLIEM	EAST KHASI HILLS	FIGHTERCLAN KHARKONGOR	12.02.2015	BMC/EKH/NON-GRIMSADEW/89
90	NONGPIUR	MYLLIEM	EAST KHASI HILLS	Shri I . LYNGDOH	19.02.2015	BMC/EKH/NONG-PIUR/90

91	MAWRAH RANGTMAH	LAITKROH KHATAR SHNONG	EAST KHASI HILLS	AUGUSTING DOHLING	17.03.2015	BMC/MAWRAH RANGTMAH/91
92	KYNDONG NONGKYNRIH	MYLLIEM	EAST KHASI HILLS	PHANSTAR-WELL KURKA-LANG	17.03.2015	BMC/EKH/KYN-DONG NONGKYN-RIH/92
93	UMLYNGPUNG 12 MER	MYLLIEM	EAST KHASI HILLS	STANDING KHARKONGOR	09.02.2015	BMC/EKH/UMLYN-GPUNG 12 MER/93
94	MARBANIANG MYLLIEM	MYLLIEM	EAST KHASI HILLS	DHIPSING SOH-TUN	10.02.2015	BMC/EKH/MARBA-NIANG 12 MER/94
95	HIMA LYN-GIONG EAST KHASI HILLS	MAWPH-GLANG	EAST KHASI HILLS	HAMPHREY L RYNTATHIANG	11.02.2015	BMC/EKH/HIMA LYNGIONG/95
96	BOLCHUGRE (A)	BETASING	SOUTH WEST GARO HILLS	AMRITH MARAK	15.07.2015	BMC/SWGH/BOL-CHUGRE/96
97	WAGIPARA	ZIKZAK	SOUTH WEST GARO HILLS	EMONSING T. SANGMA	17.07.2015	BMC/SWGH/WA-GIPARA/97
98	UMRU	UMRU	RI-BHOI DIS-TRICT	PHILIP PAH-SYNTIEW	06.01.2016	BMC/RD/UMRU/98
99	MAWLANG-WIR	MAWKYR-WAT	SOUTH WEST KHASI HILLS	B. DRALLINTON	22.01.2016	BMC/SWKH/MAW-LANGWIR/99
100	NONGLWAI – II	NONG-STOIN	WEST KHASI HILLS	SHRI LAWREN TYMPUIN	16.01.2016	BMC/WKH/NON-GLWAI/100
101	KHLIENMUSH-UT	LASKEIN	WEST JAIN-TIA HILLS	SHRI NIDAYOO PAPANG	16.02.2016	BMC/WJH/KHLIEN-MUSHUT/101

7 DETAILS OF EQUIPMENT AND MATERIALS PURCHASED DURING THE YEARS 2012-13, 2013-14 & 2014-15

Year	Particulars	No. of Items
2012-13	Canon digital copier (iR2420L)	01
	2 KVA stabilizer	01
	Canon SLR camera (EOS 60D)	01
	Godrej table (T-8)	05
	Godrej computer table (C-11)	03
	Godrej chair CH7B	04
	Godrej computer chair (41031)	03
	Four door bookcase	02
	Four door vertical filing cabinet	01
	Godrej Store well plain	01
	HP 8300 PC core 7 with 18.5" monitor	02
	HP laserjet P1108 printer	04
	APC UPS (1100VA)	04
	HP-17 – 3770 Desktop	02
	HP monitor 18.5 LED (LE1902)	02
	Quick Heal internet security	01
	HP 45A black cartridge	01
	HP 78 colour cartridge	01
	HP scanjet (G2410)	02
2013-14	Quick Heal internet security	01
2014-15	Bolero LX (Jeep Hard Top)	01
	Micromax Dongle (3G USB)	02
	Steel Rod room heater with extension cord	03
	Ajanta Clock	01
	Godrej Cushion	04
	Calculator	01
	Nikon Coolpix P600	01
	Sony DSC camera	03
	Canon EOS7D Mark II camera	01
	Garmin GPS 30 handset	06
	Dell desktop with 20 inch monitor	01
	Micromax Dongle (3G USB)	01
	APC I KVA UPS	01

MEGHALAYA BIODIVERSITY BOARD
SYLVAN HOUSE : LOWER LACHUMIERE : SHILLONG

BALANCE SHEET AS AT 31.03.2013

LIABILITIES			ASSETS		
CAPITAL FUND :			FIXED ASSETS:		
Opening Balance	-		As Per Schedule 'A'		413031.00
(-) Excess of Expenditure over Income	60831.00	(60831.00)			
			CURRENT ASSETS :		
GRANT FUND :			Cash in hand	-	
Opening Balance	-		Cash at Bank :		
(+) Received during the year from National Biodiversity Authority, Chennai	1696000.00		SB A/c with SBI, A/c No.32375460838	1021839.00	1021839.00
	1696000.00				
(-) Utilised during the year for revenue expenses as per Income & Expenditure Account	200299.00	1495701.00			
		₹ 1434870.00			₹ 1434870.00

In terms of our report of even date
for KIRON JOSHI & ASSOCIATES
Chartered Accountants

KIRON JOSHI
(Membership No.051046)

Place : Shillong
Date : 30.07.2015

Chairman
Meghalaya Biodiversity Board
Shillong, Meghalaya

Secretary
Meghalaya Biodiversity Board
Shillong

MEGHALAYA BIODIVERSITY BOARD
SYLVAN HOUSE : LOWER LACHUMIERE : SHILLONG

INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED 31.03.2013

EXPENDITURE		INCOME	
ADMINISTRATIVE EXPENSES:		Grant in Aid from National Biodiversity Authority, Chennai,	
Salary of outsourcing/contract personnel	169666.00	to the extent utilised for Revenue Expenditure	200299.00
Computer Consumables	20864.00		
Printing & Stationery	9769.00		
		Bank interest	24117.00
Depreciation	84948.00		
		Excess of Expenditure over Income	60831.00
	₹ 285247.00		₹ 285247.00

In terms of our report of even date
for KIRON JOSHI & ASSOCIATES
Chartered Accountants

KIRON JOSHI
(Membership No.051046)

Place : Shillong
Date : 30.07.2015

Chairman
Meghalaya Biodiversity Board
Shillong, Meghalaya

Secretary
Meghalaya Biodiversity Board
Shillong

MEGHALAYA BIODIVERSITY BOARD
SYLVAN HOUSE : LOWER LACHUMIERE : SHILLONG

RECEIPTS AND PAYMENTS ACCOUNT FOR THE YEAR ENDED 31.03.2013

RECEIPTS		PAYMENTS		
Opening Balance :		ADMINISTRATIVE EXPENSES:		
Cash in hand/bank	-	Salary of outsourcing/contract personnel		169666.00
Grant in Aid from National Biodiversity Authority, Chennai	1696000.00	Computer Consumables		20864.00
		Printing & Stationery		9769.00
		Infrastructure for development of State Biodiversity Board		
Bank interest	24117.00	Purchase of:		
		a) Furniture & Fittings	159814.00	
		b) Computer & Peripherals	229310.00	
		c) Office Equipments	108856.00	497979.00
		Closing Balances :		
		Cash in hand	-	
		Cash at Bank :		
		SB A/c with SBI, A/c No.32375460838	1021839.00	1021839.00
	₹ 1720117.00			₹ 1720117.00

In terms of our report of even date
for KIRON JOSHI & ASSOCIATES
Chartered Accountants

KIRON JOSHI
(Membership No.051046)

Place : Shillong
Date : 30.07.2015

Chairman
Meghalaya Biodiversity Board
Shillong, Meghalaya

Secretary
Meghalaya Biodiversity Board
Shillong

MEGHALAYA BIODIVERSITY BOARD
SYLVAN HOUSE : LOWER LACHUMIERE : SHILLONG

SCHEDULE FORMING PART OF BALANCE SHEET AS AT 31.03.2013

SCHEDULE A : FIXED ASSETS AS AT 31.03.2013

		GROSS BLOCK					DEPRECIATION				NET BLOCK
Sl. No	PARTICULARS	OPENING BALANCE	ADDITIONS BEFORE 30.09.2012	ADDITIONS AFTER 30.09.2012	DELETION	AS ON 31.03.2013	RATE	OPENING BALANCE	FOR THE YEAR	TOTAL	AS ON 31.03.2013
1	Furniture & Fittings	-	-	159814.00	-	159814.00	10%	-	7991.00	7991.00	151823.00
2	Computer & Peripherals	-	-	229310.00	-	229310.00	60%	-	68793.00	68793.00	160517.00
3	Office Equipment	-	-	108855.00	-	108855.00	15%	-	8164.00	8164.00	100691.00
	TOTAL	-	-	497979.00	-	497979.00		-	84948.00	84948.00	413031.00

Chairman
Meghalaya Biodiversity Board
Shillong, Meghalaya

Meghalaya Biodiversity Board
Shillong

8.2. Audited Account statements for the year 2013-14

Kiron Joshi & Associates
Chartered Accountants Regn. No. 313048 E
LDB Building: G. S. Road, Shillong-793001, Phone: 2223727, Fax: (+364) 2224647, Email: kironjoshiassociates@gmail.com

AUDITORS' REPORT

We have examined the annexed Balance Sheet as at 31.03.2014 and Income & Expenditure Account and Receipts and Payments Account for the year ended on that date of **MEGHALAYA BIODIVERSITY BOARD: SYLVAN HOUSE : LOWER LACHUMIERE : SHILLONG.**

These financial statements are the responsibility of the Board. Our responsibility is to express an opinion on these financial statements based on our audit.

We conducted our audit in accordance with the auditing standards generally accepted in India. Those standards require that we plan and perform the audit to obtain reasonable assurance whether the financial statements are free of material misstatement.

An audit includes examining on test basis, evidence supporting the amounts and disclosure in financial statement. An audit also includes assessing the accounting principles used and significant estimates read with the estimate related disclosures made in the notes on accounts by the centre as well as evaluating the overall financial statement presentation. We believe that our audit provides a reasonable basis for our opinion.

We have obtained all the information we have required for those accounts which were placed before us. The said accounts are in agreement with the books and according to the explanations given to us and read with the annexed notes on accounts, said accounts give true and fair view in conformity with the accounting principles generally accepted in India of the state of affairs of the Board as on 31.3.2014 and of its Income & Expenditure for the year ended on that date.

for KIRON JOSHI & ASSOCIATES
Chartered Accountants.

KIRON JOSHI.
(Membership No.051046)

Place:Shillong
Date: 30.07.2015

MEGHALAYA BIODIVERSITY BOARD
SYLVAN HOUSE : LOWER LACHUMIERE : SHILLONG

BALANCE SHEET AS AT 31.03.2014

LIABILITIES			ASSETS		
CAPITAL FUND :			FIXED ASSETS:		
Opening Balance	(60831.00)		As Per Schedule 'A'		322874.00
(-) Excess of Expenditure over Income	90054.00	(150885.00)			
			CURRENT ASSETS :		
GRANT FUND :			Cash in hand		-
Opening Balance	1495701.00		Cash at Bank :		
(+) Received during the year from National Biodiversity Authority, Chennai	1949666.00		SB A/c with SBI, A/c No.32375460838	1949778.00	1949778.00
	3445367.00				
(-) Utilised during the year for revenue expenses as per Income & Expenditure Account	1021830.00	2423537.00			
		₹ 2272652.00			₹ 2272652.00

In terms of our report of even date
for KIRON JOSHI & ASSOCIATES
Chartered Accountants

KIRON JOSHI
(Membership No.051046)

Place : Shillong
Date : 30.07.2015

Chairman
Meghalaya Biodiversity Board
Shillong, Meghalaya

Secretary
Meghalaya Biodiversity Board
Shillong

MEGHALAYA BIODIVERSITY BOARD
SYLVAN HOUSE : LOWER LACHUMIERE : SHILLONG

INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED 31.03.2014

EXPENDITURE			INCOME	
ADMINISTRATIVE EXPENSES:			Grant in Aid from National	
Advertisement		8100.00	Biodiversity Authority, Chennai	
Bank Charges		230.00	to the extent utilised for Revenue	
Computer Consumables		4800.00	expenditure	1021830.00
Salary of outsourcing/contract personnel		840500.00	Bank interest	41835.00
Expenses on celebration of International Biodiversity Day:				
1) Financial Assistance to :				
a) DFO, Silviculture, Shillong	225000.00			
b) DFO Wildlife Division, Jaintia Hills, Jowai	35000.00			
c) DFO Wildlife Division, East and West Garo Hills, Tura	20000.00			
d) DFO Wildlife Division, Khasi Hills, Shillong	50000.00			
e) DFO, Training, Shillong	5000.00			
f) DFO, Social Forestry, Tura	30000.00			
	365000.00			
2) Honorarium	3400.00	368400.00		
Depreciation		131689.00	Excess of Expenditure over Income	90054.00
		₹ 1163619.00		₹ 1153519.00

In terms of our report of even date
for KIRON JOSHI & ASSOCIATES
Chartered Accountants

KIRON JOSHI
(Membership No.051046)

Place : Shillong
Date : 30.07.2015

Chairman
Meghalaya Biodiversity Board
Shillong, Meghalaya

Secretary
Meghalaya Biodiversity Board
Shillong

MEGHALAYA BIODIVERSITY BOARD
SYLVAN HOUSE : LOWER LACHUMIERE : SHILLONG

RECEIPTS AND PAYMENTS ACCOUNT FOR THE YEAR ENDED 31.03.2014

RECEIPTS			PAYMENTS		
Opening Balance :			ADMINISTRATIVE EXPENSES:		
Cash in hand	-		Advertisement		8100.00
Cash at Bank :			Bank Charges		230.00
SB A/c with SBI,			Computer Consumables		4600.00
A/c No.32375460838	1021839.00	1021839.00	Salary of outsourcing/contract personnel		640500.00
Grant in Aid from National Biodiversity Authority, Chennai		1949666.00	Purchase of Books		41532.00
			Expenses on celebration of		
Bank interest		41635.00	International Biodiversity Day:		
			1) Financial Assistance to :		
			a) DFO, Silviculture, Shillong	225000.00	
			b) DFO Wildlife Division, Jaintia Hills, Jowai	35000.00	
			c) DFO Wildlife Division, East and West Garo Hills, Tura	20000.00	
			d) DFO Wildlife Division, Khasi Hills, Shillong	50000.00	
			e) DFO, Training, Shillong	5000.00	
			f) DFO, Social Forestry, Tura	30000.00	
				365000.00	
			2) Honorarium	3400.00	368400.00
			Closing Balances :		
			Cash in hand	-	
			Cash at Bank :		
			SB A/c with SBI,		
			A/c No.32375460838	1949778.00	1949778.00
		₹ 3013140.00			₹ 3013140.00

In terms of our report of even date
for KIRON JOSHI & ASSOCIATES
Chartered Accountants

KIRON JOSHI
(Membership No.051046)

Place : Shillong
Date : 30.07.2015

Chairman
Meghalaya Biodiversity Board
Shillong, Meghalaya

Secretary
Meghalaya Biodiversity Board
Shillong

MEGHALAYA BIODIVERSITY BOARD
SYLVAN HOUSE : LOWER LACHUMIERE : SHILLONG

SCHEDULE FORMING PART OF BALANCE SHEET AS AT 31.03.2014

SCHEDULE A : FIXED ASSETS AS AT 31.03.2014

Sl No	PARTICULARS	GROSS BLOCK					DEPRECIATION				NET BLOCK
		OPENING BALANCE	ADDITIONS BEFORE 30.09.2013	ADDITIONS AFTER 30.09.2013	DELETION	AS ON 31.03.2014	RATE	OPENING BALANCE	FOR THE YEAR	TOTAL	AS ON 31.03.2014
1	Furniture & Fittings	159814.00	-		-	159814.00	10%	7981.00	15192.00	23173.00	136641.00
2	Computer & Peripherals	229310.00	-		-	229310.00	60%	68793.00	96310.00	165103.00	64207.00
3	Office Equipment	108855.00	-		-	108855.00	15%	8164.00	15104.00	23268.00	85587.00
4	Books	-	9401.00	32131.00		41532.00	20%	-	5093.00	5093.00	36439.00
	TOTAL	497979.00	9401.00	32131.00	-	539511.00		84943.00	131699.00	216637.00	322874.00

Chairman
Meghalaya Biodiversity Board
Shillong, Meghalaya

Secretary
Meghalaya Biodiversity Board
Shillong

MEGHALAYA BIODIVERSITY BOARD
SYLVAN HOUSE : LOWER LACHUMIERE : SHILLONG

BANK RECONCILIATION STATEMENT AS ON 31.03.2014

Bank Balance as per Pass Book	₹ 1949778.00
Balance as per Cash Book	₹ 1949778.00
	₹ NIL

Chairman
Meghalaya Biodiversity Board
Shillong, Meghalaya

Secretary
Meghalaya Biodiversity Board
Shillong

MEGHALAYA BIODIVERSITY BOARD
SYLVAN HOUSE : LOWER LACHUMIERE : SHILLONG

SIGNIFICANT ACCOUNTING POLICIES AND NOTES ON ACCOUNTS FOR THE YEAR ENDED 31.03.2014

1 The financial statements have been prepared on the basis of historical cost convention and on the cash method of accounting.

2 Accounting policies not specifically referred to otherwise are consistent and in consonance with generally accepted accounting principles.

3 Grant received to the extent utilised for revenue expenditure during the year have been recognised as income in the Income and Expenditure Account. The balance is shown as liability under Grant Fund in the Balance Sheet.

4 a) Fixed Assets have been stated at cost with addition during the year, depreciation charged till 31.03.2013 and depreciation for the year as per details given in the Schedule 'A'

b) Depreciation on Fixed Assets have been charged as per WDV method and as per the rates and manner prescribed under the Income Tax Rules.

Chairman
Meghalaya Biodiversity Board
Shillong, Meghalaya

Secretary
Meghalaya Biodiversity Board
Shillong

8.3. Audited Account statements for the year 2014-15

Kiron Joshi & Associates
Chartered Accountants
Regn. No. 313048 E
LDB Building : G.S. Road, Shillong - 793001, Phone : 2223727, Fax : (0364) 2224847, Email : kironjoshiassociates@gmail.com

AUDITORS' REPORT

We have examined the annexed Balance Sheet as at 31.03.2015 and Income & Expenditure Account and Receipts and Payments Account for the year ended on that date of **MEGHALAYA BIODIVERSITY BOARD: SYLVAN HOUSE : LOWER LACHUMIERE : SHILLONG.**

These financial statements are the responsibility of the Board. Our responsibility is to express an opinion on these financial statements based on our audit.

We conducted our audit in accordance with the auditing standards generally accepted in India. Those standards require that we plan and perform the audit to obtain reasonable assurance whether the financial statements are free of material misstatement.

An audit includes examining on test basis, evidence supporting the amounts and disclosure in financial statement. An audit also includes assessing the accounting principles used and significant estimates read with the estimate related disclosures made in the notes on accounts by the centre as well as evaluating the overall financial statement presentation. We believe that our audit provides a reasonable basis for our opinion.

We have obtained all the information we have required for those accounts which were placed before us. The said accounts are in agreement with the books and according to the explanations given to us and read with the annexed notes on accounts, said accounts give true and fair view in conformity with the accounting principles generally accepted in India of the state of affairs of the Board as on 31.3.2015 and of its Income & Expenditure for the year ended on that date.

for KIRON JOSHI & ASSOCIATES
Chartered Accountants

KIRON JOSHI.
(Membership No.051046)

Place:Shillong
Date: 30.07.2015

MEGHALAYA BIODIVERSITY BOARD
SYLVAN HOUSE : LOWER LACHUMIERE : SHILLONG

BALANCE SHEET AS AT 31.03.2015

LIABILITIES			ASSETS		
CAPITAL FUND :			FIXED ASSETS:		
Opening Balance	(150885.00)		As Per Schedule 'A'		944607.00
(+) Excess of Income over Expenditure	277324.00	126439.00			
			CURRENT ASSETS :		
GRANT FUND :			Cash in hand	-	
Opening Balance	2423537.00		Cash at Bank :		
(+) Received during the year from:			SB A/c with SBI,		
(a) National Biodiversity Authority, Chennai	4153500.00		A/c No.32375460838	2250725800	22507258.00
(b) State Biodiversity Board, Meghalaya	20000000.00				
	26577037.00				
(-) Utilised during the year for revenue expenses as per Income & Expenditure Account:					
a) National Biodiversity Authority, Chennai	1489233.00				
b) State Biodiversity Board, Meghalaya	1762378.00	23325426.00			
		₹ 23451865.00			₹ 23451865.00

In terms of our report of even date
for KIRON JOSHI & ASSOCIATES
Chartered Accountants

KIRON JOSHI
(Membership No.051046)

Place : Shillong
Date : 30.07.2015

Chairman
Meghalaya Biodiversity Board
Shillong, Meghalaya

Secretary
Meghalaya Biodiversity Board
Shillong

MEGHALAYA BIODIVERSITY BOARD
SYLVAN HOUSE : LOWER LACHUMIERE : SHILLONG

INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED 31.03.2015

EXPENDITURE			INCOME		
ADMINISTRATIVE EXPENSES:			Grant in Aid received to the extent utilised for Revenue Expenditure :		
Bank Charges		40.00	a) National Biodiversity Authority, Channai	1486233.00	
Computer Consumables		3530.00	b) State Biodiversity Board, Meghalaya	1792378.00	3278611.00
Printing & Stationery		12479.00			
Salary of outsourcing/contract personnel		942714.00			
Amount refunded to National Biodiversity Authority, Chennai		33530.00			
			Bank interest		407815.00
Expenses on celebration of International Biodiversity Day					
i) Financial Assistance to :					
a) DFO, Balpakram National Park, Baghmara	50000.00				
b) DFO Wildlife Division, East & West Garo Hills, Tura	50000.00				
c) DFO Wildlife Division, Jaintia Hills, Jowai	50000.00				
d) DFO, Silviculture Division, Shillong	350000.00	500000.00			
STATE PLAN:					
A) Salary Component :					
1. Salary & Allowances		-			
2. Wages for Driver		6030.00			
B) Non Salary Component :					
1. Office Expenses					
a) Stationery	14821.00				
b) P.O.L & vehicle maintenance	34135.00				
c) Consumables for computers	20117.00				
d) Postal Stamps	2583.00	71256.00			
2. Materials & Supplies		-			
3. Other Charges					
Contingent expenditure		500.00			
4. Minor Works					
a) Publicity materials	18722.00				
b) Organising/sponsoring District/ State Level Biodiversity related Symposia/Workshop, etc	710000.00				
c) Supply of Books, DVD, etc on Biodiversity & local culture to schools	19700.00	748422.00			
Balance C/D		2318811.00	Balance C/D		3686426.00
					Cont. P/2

Chairman
Meghalaya Biodiversity Board
Shillong, Meghalaya

Secretary
Meghalaya Biodiversity Board
Shillong

2

Balance B/O	₹	2315611.00	Balance B/O	₹	3659426.00
5 Major Works					
a) GPS Survey and mapping		936000.00			
Depreciation		130491.00			
Excess of income over expenditure		277324.00			
	₹	3659426.00		₹	3659426.00

In terms of our report of even date
for KIRON JOSHI & ASSOCIATES
Chartered Accountants

KIRON JOSHI
(Membership No.051046)

Place : Shillong
Date : 30.07.2015

Chairman
Meghalaya Biodiversity Board
Shillong, Meghalaya

Secretary
Meghalaya Biodiversity Board
Shillong

MEGHALAYA BIODIVERSITY BOARD
SYLVAN HOUSE : LOWER LACHUMIERE : SHILLONG

RECEIPTS AND PAYMENTS ACCOUNT FOR THE YEAR ENDED 31.03.2015

RECEIPTS			PAYMENTS		
Opening Balance :			ADMINISTRATIVE EXPENSES		
Cash in hand	-		Bank Charges		40.00
Cash at Bank :			Computer Consumables		3500.00
SB A/c with SBI,			Printing & Stationery		12479.00
A/c No.32375400838	1948778.00	1948778.00	Salary of outsourcing/contract personnel		940714.00
Grant in Aid from			Amount refunded to National		
a) National Biodiversity Authority, Chennai	4153500.00		Biodiversity Authority, Chennai		23500.00
b) State Biodiversity Board, Meghalaya	20000000.00	24153500.00	Purchase of Books		2200.00
			Expenses on celebration of		
Bank interest		407815.00	International Biodiversity Day:		
			1) Financial Assistance to :		
			a) DFO, Balpakram National Park, Baghmara	50000.00	
			b) DFO Wildlife Division, East & West Garo Hills, Tura	50000.00	
			c) DFO Wildlife Division, Jaintia Hills, Jowai	50000.00	
			d) DFO, Silviculture Division, Shillong	350000.00	500000.00
			STATE PLAN:		
			A) Salary Component :		
			1. Salary & Allowances		-
			2. Wages for Driver		6200.00
			B) Non Salary Component :		
			1. Office Expenses		
			a) Stationery	14621.00	
			b) Purchase of Vehicle : Bolero	888605.00	
			c) P.O.L & vehicle maintenance	34135.00	
			d) Consumables for computers	20117.00	
			e) Office furniture	1000.00	
			f) Postal Stamps	2363.00	
			g) Purchase of Biodiversity related books, DVDS etc	60419.00	821260.00
			2. Materials & Supplies		-
			3. Other Charges		
			Contingent expenditure		500.00
Balance C/O		₹ 20511093.00	Balance C/O		₹ 2319413.00

Cntd. P/2

NAMAN JOSHI & ASSOCIATES CHARTERED ACCOUNTANTS SHILLONG

Chairman
Meghalaya Biodiversity Board
Shillong, Meghalaya

Secretary
Meghalaya Biodiversity Board
Shillong

Balance B/D	₹ 26511093.00	Balance B/D	₹ 2319413.00
		4. Minor Works:	
		a) Publicity materials	18722.00
		b) Organising/sponsoring District/ State Level Biodiversity related Symposia/Workshop, etc	710000.00
		c) Supply of Books, DVD, etc on Biodiversity & local culture to schools	19700.00 746422.00
		5. Major Works:	
		a) GPS Survey and Mapping	836000.00
		Closing Balances :	
		Cash in hand	-
		Cash at Bank :	
		SB A/c with SBI, A/c No 32375460838	22507258.00 22507258.00
	₹ 26511093.00		₹ 26511093.00

In terms of our report of even date
for KIRON JOSHI & ASSOCIATES
Chartered Accountants

KIRON JOSHI
(Membership No.051046)

Place : Shillong
Date : 30.07.2015

Chairman
Meghalaya Biodiversity Board
Shillong, Meghalaya

Secretary
Meghalaya Biodiversity Board
Shillong

MEGHALAYA BIODIVERSITY BOARD
SYLVAN HOUSE : LOWER LACHUMIERE : SHILLONG

SCHEDULE FORMING PART OF BALANCE SHEET AS AT 31.03.2015

SCHEDULE A : FIXED ASSETS AS AT 31.03.2015

		GROSS BLOCK						DEPRECIATION			NET BLOCK
Sl. No	PARTICULARS	OPENING BALANCE	ADDITIONS BEFORE 30.09.2014	ADDITIONS AFTER 30.09.2014	DELETION	AS ON 31.03.2015	RATE	OPENING BALANCE	FOR THE YEAR	TOTAL	AS ON 31.03.2015
1	Furniture & Fittings	159814.00	-	1000.00	-	160814.00	10%	23173.00	13714.00	36887.00	123927.00
2	Computer & Peripherals	229310.00	-		-	229310.00	60%	165103.00	38524.00	203627.00	25683.00
3	Office Equipment	108855.00	-		-	108855.00	15%	23268.00	12838.00	36106.00	72749.00
4	Books	41532.00	2200.00	60419.00		104151.00	20%	5093.00	13770.00	18863.00	85288.00
5	Vehicle	-		688605.00		688605.00	15%	-	51645.00	51645.00	636960.00
	TOTAL	539511.00	2200.00	750024.00	0.00	1291735.00		216637.00	130491.00	347128.00	944607.00

KIRON JOSHI & ASSOCIATES CHARTERED ACCOUNTANTS SHILLONG

Chairman
Meghalaya Biodiversity Board
Shillong, Meghalaya

Secretary
Meghalaya Biodiversity Board
Shillong

MEGHALAYA BIODIVERSITY BOARD
SYLVAN HOUSE : LOWER LACHUMIERE : SHILLONG

SIGNIFICANT ACCOUNTING POLICIES AND NOTES ON ACCOUNTS FOR THE YEAR ENDED 31.03.2015

1 The financial statements have been prepared on the basis of historical cost convention and on the cash method of accounting.

2 Accounting policies not specifically referred to otherwise are consistent and in consonance with generally accepted accounting principles.

3 Grant received to the extent utilised for revenue expenditure during the year have been recognised as income in the Income and Expenditure Account. The balance is shown as liability under Grant Fund in the Balance Sheet.

4 a) Fixed Assets have been stated at cost with addition during the year, depreciation charged till 31.03.2014 and depreciation for the year as per details given in the Schedule 'A'

b) Depreciation on Fixed Assets have been charged as per WDV method and as per the rates and manner prescribed under the Income Tax Rules.

KIRON JOSHI & ASSOCIATES CHARTERED ACCOUNTANTS SHILLONG

Chairman
Meghalaya Biodiversity Board
Shillong, Meghalaya

Secretary
Meghalaya Biodiversity Board
Shillong

MEGHALAYA BIODIVERSITY BOARD
SYLVAN HOUSE : LOWER LACHUMIERE : SHILLONG

BANK RECONCILIATION STATEMENT AS ON 31.03.2015

Bank Balance as per Pass Book ₹ 22640258.00

Less: Cheque issued but not presented for payment till 31.03.2015

Date	Cheque No	Amount
31.03.2015	496346	35000.00
31.03.2015	496349	27000.00
31.03.2015	496347	27000.00
31.03.2015	496345	40000.00
31.03.2015	496348	4000.00
		133000.00

Balance as per Cash Book ₹ 22507258.00

Chairman
Meghalaya Biodiversity Board
Shillong, Meghalaya

Secretary
Meghalaya Biodiversity Board
Shillong

9 Five-year plan of Meghalaya Biodiversity Board on BMC, PBR and BHS

(2015-2016 to 2019-2020)

9.1 Introduction

The Earth's biological resources are vital to humanity's economic and social development. As a result, biological diversity has been recognized as a global asset of tremendous value to present and future generations. At the same time, the threat to species and ecosystems has been increasing every day. To address the issue of declining biodiversity, the United Nations Environment Programme (UNEP) convened the Ad Hoc Working Group of Experts on Biological Diversity in November 1988 to explore the need for an international convention on biological diversity. In May 1989 the Ad Hoc Working Group of Technical and Legal Experts (later known as the Intergovernmental Negotiating Committee) was formed to prepare an international legal instrument for the conservation and sustainable use of biological diversity. Its work culminated on 22 May 1992 with the Nairobi Conference for the Adoption of the Agreed Text of the Convention on Biological Diversity.

The Convention on Biological Diversity (CBD) was opened for signature on 5 June 1992 at the United Nations Conference on Environment and Development (UNCED; the Rio "Earth Summit"). It remained open for signature until 4 June 1993, by which time it had received 168 signatures. The Convention entered into force on 29 December 1993, which was 90 days after the 30th ratification.

The Convention on Biological Diversity was inspired by the world community's growing commitment to sustainable development. It represents a dramatic step forward in the conservation of biological diversity, the sustainable use of its components, and the fair and equitable sharing of benefits arising from the use of genetic resources.

The Biological Diversity Act, 2002 was born out of India's attempt to realize the objectives enshrined in the United Nations Convention on Biological Diversity (CBD) 1992 which recognizes the sovereign rights of states over their own Biological Resources. The Act aims at conservation of biological resources and associated knowledge as well as facilitating access to them in a sustainable manner and through a just process. Thus, the three objectives that the BDA seeks to achieve are conservation of biological diversity, sustainable use its components and fair and equitable sharing of benefits arising out of use of biological resources.

The Ministry of Environment and Forests, Government of India, notified the Biological Diversity Rules in 2004 u/s 62 of the BD Act. The Government of Meghalaya notified the Meghalaya Biological Diversity Rules, 2010 (MBDR) on 30-08-2010.

In the year 2002, the Johannesburg World Summit on sustainable development called for developing an international regime to advance the 3rd objective of the CBD, i.e. to ensure fair and equitable distribution of benefits out of the use of biological resources. The Conference of Parties (COP), the governing body of the CBD, in their 10th meeting at Nagoya, Japan finalised and adopted that regime on 29.10.2010, which is known as the 'Nagoya Protocol'. Thus, Nagoya Protocol is an international agreement which aims at sharing the benefits arising from the utilization of genetic resources in a fair and equitable way, including by appropriate access to genetic resources and by

appropriate transfer of relevant technologies, taking into account all rights over those resources and to technologies, and by appropriate funding, thereby contributing to the conservation of biological diversity and the sustainable use of its components. As a follow up in India, the Ministry of Environment, Forests & Climate Change, notified the ABS (Access and Benefit Sharing) Guidelines in 2014.

9.2 Biodiversity Administration in India:

For implementation of the Biological Diversity Act, a three tier institutional structure has been in place in India whereby the National Biodiversity Authority (NBA), created in the year 2003 u/s 8 of the Biological Diversity Act with its headquarter at Chennai, occupies the apex position and implements the provisions of BDA at the national level. The State Biodiversity Boards (SBB), created u/s 22 of the Biological Diversity Act, occupy the 2nd tier in terms of its operation at the state level. The Biodiversity Management Committees (BMCs) that are formed at the local level (village/ elaka/ syiemship / dolloiship / sirdharship / akhing, etc), as per sec-41 of the Act and Rule-23 of the Meghalaya Biological Diversity Rules 2010 as amended in 2015, occupy the third tier. All these are thus statutory bodies.

9.3. Biodiversity Management Committees (BMCs):

These are statutory bodies that are to be created by the "Local Bodies" as per Section 41 of the Biodiversity Act.

9.3.1. Section 41 (i) of the BD Act, 2002 states that: 'Every "Local Body" shall constitute a BMC within its area for the purpose of promoting conservation, sustainable use and documentation of Biological Diversity including preservation of habitats, conservation of land races, folk varieties and cultivars & domesticated stock and breeds of animals and micro organisms and chronicling of knowledge relating to Biological Diversity'.

9.3.2. Section 2 (h) of the BD Act, 2002 states that 'local bodies' means Panchayats and Municipalities, by whatever name called, within the meaning of Clause (1) of the Article 243 (b) and clause (1) of Article 243 (q) of the Constitution and in the absence of any panchayats or municipalities, institutions of self-government constituted under any other provision of the Constitution or any Central Act or State Act'.

9.3.3. The Govt. of Meghalaya enacted the Meghalaya Biological Diversity Rules in 2010 in exercise of its powers under Section 63 (i) of the Biological Diversity Act 2002. Rule 23 (i) of Meghalaya Biodiversity Rules, 2010 states that 'Local Body shall constitute a BMC within its area of jurisdiction'. Accordingly, BMCs have to be constituted at the Elaka, Syiemship, Dolloiship, Sirdarship, Aking or any other similar bodies recognized by the KHADC, JHADC and GHADC as well as at Municipality and Municipal corporation level'.

9.3.4. Rule 23 (i) of MBDA 2010, was amended by the Govt. of Meghalaya vide Notification No.FOR.57/2002/Vol.II/569 dated 23.3.2015 as per which the phrase 'or any other similar bodies recognized by the KHADC, JHADC and GHADC as well as at Municipalities and Municipal corporation level' was substituted with phrase 'or at the village level, recognized by the Govt. of Meghalaya or the Autonomous District Councils in the State as well as at the Municipality and Municipal Corporation level'.

9.3.5. In Meghalaya, till 2015, 97 BMCs have been constituted through the village durbars or equivalent bodies. Attempts are being made to constitute BMCs at Elaka/Municipality level too.

8.3.6. In Meghalaya, the Chairman and the Members of the village level BMC are nominated by the village durbars or equivalent bodies. The ex-officio Secretary of the BMC is nominated by the Forest Department. The Chairman and the ex-officio Secretary shall jointly operate the funds of the BMC based on BMC resolutions duly recorded. The ex-officio Secretary of the BMC is responsible for maintenance of the BMC accounts. Nomination of ex-officio Secretary to each BMC was done in the year 2015 in compliance to the guidelines issued by the NBA for operationalising the BMCs.

9.4. Role of BMCs:

9.4.1. BMCs are expected to function as vital statutory bodies operating at the grass-root level to achieve the objectives of the Biodiversity Act. As per the Biodiversity Act and Rules, the first responsibility of these BMCs is to create a database of the biological resources available in their villages and related traditional knowledge, in the form of 'People's Biodiversity Register' (PBR). Funds for constitution of BMCs and preparation of PBRs may be released by the State Governments or the NBA. BMCs are also expected to monitor and control access to biological resources under their jurisdiction. In this regard, they are legally empowered to levy access fees also. They are expected to offer advices to the NBA and SBB on matters of access, biodiversity conservation and sustainable use. They are expected to take steps in protecting the biodiversity in their jurisdiction.

9.4.2. The BMCs shall participate in ensuring the following:

- Conservation and sustainable utilization of biological resources
- Eco-restoration of the local biodiversity
- Proper feedback to the SBB in the matter of IPR, Traditional Knowledge and local Biodiversity issues, wherever feasible and essential feedback to be provided to the NBA.
- Management of Heritage Sites including Heritage Trees, Animals/ Microorganisms etc., and Sacred Groves and Sacred Water bodies.
- Regulation of access to the biological resources and/ or associated Traditional Knowledge, for commercial and research purposes.
- Sharing of usufructs arising out of commercial use of bio- resources
- Conservation of traditional varieties/breeds of economically important plants/animals.
- Biodiversity Education and Awareness building.
- Documentation, enable procedure to develop bio-cultural protocols
- Sustainable Use and Benefit Sharing.
- Protection of Traditional Knowledge recorded in PBR

9.4.3. For technically assisting the BMCs in their functioning and to monitor / advise them, Technical Support Groups (TSG) have been notified for each District by the Government vide No. FOR.57 /2002/ VOL-1/ 531, dated 29.09.2014. These TSGs have been constituted by including district level officers of the line departments, representatives from BSI, ZSI, and MBDA besides two civil society representatives/ eminent persons/conservationists who are nominated by the Deputy Commissioner of the respective District. Subsequently on the basis of this notification,

One Divisional Forest Officer has been nominated per district as a member of the TSG who shall also function as the District Nodal Officer cum Convener of the TSG, by the PCCF & HoFF, vide O.O no.269 dated 12.11.2014.

9.4.4. These BMCs are to be activated, trained to build capacity, and financially enabled so that they can effectively discharge the duties assigned to them under the Biodiversity Act at the local level, under the guidance of the 'Nodal officers'/ 'Technical Support Groups (TSG)' and the MBB. Once a BMC has starts functioning on its own and has its members properly trained, it is expected to prepare an Action Plan/ Management Plan for Biodiversity Conservation, with guidance from Technical Support Group (TSG) and the district level Nodal Officers. It is hoped that, in future, in this manner, the BMCs will be in a position to scientifically manage the local biodiversity.

9.5. Financial support to BMCs:

8.5.1. Start-up Funds for the BMCs are provided by the National Biodiversity Authority (NBA) or the State Governments. At present, NBA provides a financial assistance of Rs. 60,000/- as start-up Fund. The Meghalaya Biodiversity Board has been releasing this fund to those BMCs who have submitted their Bank Account details and for which the District Nodal Officer has nominated an ex-officio Secretary. Funds meant for the BMCs are released directly to the Chairman & Ex-officio Secretary by the MBB with intimation to the District Nodal Officers.

8.5.2. While the BMCs are constituted at 'Panchayat' level in other states covering few villages, it is being formed at individual villages in Meghalaya. In view of this, granting the same amount of Start-up fund to the village level BMC was reviewed in the meeting of the Meghalaya Biodiversity Board held on 27-11-2015, wherein it was decided that, henceforth, an amount of Rs. 20,000/- only shall be released as start-up fund to these village level BMCs. NBA will be approached for grant of start-up funds for constituting these BMCs.

9.6. Five-year plan for BMCs:

9.6.1. Meghalaya has about 7000 villages. It also has very rich forest cover of about 77 percent. Many of the villages are in the fringes of forests and are rich in biodiversity. In addition there are villages, which are rich in aquatic as well as other components of biodiversity. However, it would be an impossible task to constitute BMCs in every single village within a short span of time. Taking into consideration the staff strength of the MBB, the willingness or otherwise of the communities towards formation of BMCs and the financial constraints in supporting all such BMCs, it is deemed proper to set a viable target which can be realistically achieved in the next five years.

9.6.2. In Meghalaya, we have 11 Districts and in every District, one DFO level Officer has been nominated as District Nodal Officer for the purposes of Biodiversity Act 2002. They are expected to constitute the BMCs, facilitate their capacity building and monitor their functioning. Besides this the Chief Forest Officers serving under the three Autonomous District Councils have been requested to form BMCs under their respective jurisdiction.

9.6.3. In the meeting of the Meghalaya Biodiversity Board held on 27-11-2015, it was decided that in the next 5 years, BMCs shall be formed representing all the Gram Sevak Level Units (GSUs) in the State. In Meghalaya, there are 15 Gram Sevak Units under 32 Community & Rural Development (C&RD) Blocks and 10 Gram Sevak Units under the remaining 7 C & RD Blocks i.e a total of 550 GSUs. It was decided to set a target of constituting 2 BMCs under each of the GSUs in the next 5 years, whereby we will have 1100 BMCs in total. This also means constitution of 220 BMCs every year, which is 20 BMCs in each of the 11 districts every year.

9.7. Preparation of PBRs:

9.7.1. As per the Biodiversity Act and Rules, the first responsibility of these BMCs is to create a database of the biological resources available in their villages and related traditional knowledge, in the form of 'Peoples' Biodiversity Register' (PBR). PBR is a vital document which may be helpful in proving the existence of bio-resources or traditional knowledge on the use of Bio-resources available in an area, in a legally acceptable way. PBR is expected to serve as a tool to prevent bio-piracy. They are expected to serve as a tool for access control and benefit sharing. Hence, PBR has to be prepared in a scientific way. Funds for preparation of PBRs can be sourced from the National Biodiversity Authority (NBA) or the respective State Governments. NBA provides a financial assistance of Rs. 1,15,000/- for each 'village level' PBR and Rs. 1,50,000/- for each 'Block level' PBR.

9.7.2. In Meghalaya, at present PBRs are prepared at village level covering the jurisdiction of the village level BMCs. At present 25 PBRs are under preparation covering 25 village level BMCs with financial assistance from NBA of Rs. 1,15,000/- per PBR. A multi- disciplinary team comprising of experts from various fields has been engaged for this purpose.

9.7.3. It would be an enormous task to prepare PBR for each of the village level BMCs constituted in Meghalaya. It calls for huge funds, manpower and efforts from various stakeholders. Moreover, since the biodiversity available in adjacent villages are generally similar, preparation of PBRs for every village would amount to doing a simple thing in a complex way and duplication of work. An ideal way could be to make PBRs for each of the Eco-regions in the State. Moreover, an approach, which is based on definite, widely used territorial boundaries, is considered to be easy to adopt and the PBRs so prepared can be easily integrated into planning. Keeping this in mind, the Meghalaya Biodiversity Board in its meeting dated 27-11-2015 decided that, henceforth, PBRs shall be prepared for each of the 'Gram Sevak Units' (GSU) in the State and the present exercise of preparing village level PBRs will be stopped after the completion of the ongoing village level PBRs.

9.7.4. It is noted that the jurisdiction of Gram Sevak Unit could be easily recognised, understood and mapped on the ground. Meghalaya has 39 Community & Rural development (C&RD) blocks and 550 Gram Sevak Units that need to be covered with PBRs.

9.7.5. As far as the 5-year target is concerned, the Meghalaya Biodiversity Board has decided to cover all Gram Sevak Level units in the state, i.e. 550. In order to achieve the above target within 5 years, it was also decided to assign the task of PBR preparation to capable institutions like BSI, ZSI, NEHU, ICAR, etc., and also capable NGOs. The NBA will be approached to provide an enhanced financial assistance for preparing the PBRs at GSU level on a 'cluster based approach', since this approach will cover a larger area under each PBR comprising about 12-15 villages. Thus, at the end of the 5-year period, with the preparation of 550 GSU level PBRs, the whole State will stand covered.

9.8. Biodiversity Heritage Site (BHS):

9.8.1. According to NBA, "Biodiversity Heritage Sites" (BHS) are well defined areas that are unique, ecologically fragile ecosystems - terrestrial, coastal and inland waters and, marine having rich biodiversity comprising of any one or more of the following components: richness of wild as well as domesticated species or intra-specific categories, high endemism, presence of rare and threatened species, keystone species, species of evolutionary significance, wild ancestors of domestic/ cultivated species or their varieties, past pre-eminence of biological components represented by fossil beds and having significant cultural, ethical or aesthetic values and are important for the maintenance of cultural diversity, with or without a long history of human association with them.

9.8.2. Under Section 37 of Biological Diversity Act, 2002 (BDA) the State Government in consultation with local bodies may notify in the official gazette, areas of biodiversity importance as Biodiversity Heritage Sites (BHS). Under sub section (2) of Section 37, the State Government in consultation with the Central Government may frame rules for the management and conservation of BHS. Under sub section (3) of Section 37, the State Governments shall frame schemes for compensating or rehabilitating any person or section of people economically affected by such notification.

9.8.3. The BHS may be identified in accordance with the definition mentioned above. Accordingly areas having any of the following characteristics may qualify for inclusion as BHS, in the context of Meghalaya:

a) Areas that contain a mosaic of natural, semi-natural, and manmade habitats, which together contain a significant diversity of life forms.
b) Areas that contain significant domesticated biodiversity component and /or representative agro-ecosystems with ongoing agricultural practices that sustain this diversity.
c) Areas that are significant from a biodiversity point of view as also are important cultural spaces such as sacred groves/trees and sites, or other large community conserved areas.
d) Areas including very small ones that offer refuge or corridors for threatened and endemic fauna and flora, such as community conserved areas or urban greens and wetlands.
e) All kinds of legal land uses whether government, community or private land could be considered under the above categories.
f) As far as possible those sites may be considered which are not covered under Protected Area network under the Wildlife Protection Act 1972 as amended.
g) Areas that provide habitats, aquatic or terrestrial, for seasonal migrant species for feeding and breeding.
h) Areas that are maintained as preservation plots by the research wing of Forest department.
i) Medicinal Plant Conservation Areas.

9.8.4. As per the above criteria, Meghalaya has great potential in declaring a number of BHS and thereby expanding the reach of conservation. There are more than 100 sacred groves and plenty of 'Law Adongs', which are prime candidate sites. The Fish Sanctuaries formed in Garo Hills and the Jaintia Hills can also be declared as BHS. The living root bridges which stand testimony to the rich traditional knowledge of the local people and for the sustainable use of bio-resources can be declared as BHS. Unique habitats having rich endemic flora, medicinal plants, etc. can be considered for declaration as BHS. The small habitat supporting a vital population of Nymphae tetragona (water lily) can be a candidate site similar to the sites where rare orchids are aplenty.

9.8.5. Meghalaya is a Sixth Schedule State wherein the District Councils as well as the State Government co-exist. The local people and communities own their land. The land under the control of the Government is minimal. The local communities here have been traditionally inclined to protect and conserve the biodiversity. The existing 'law Kyntang' and 'law Adong' are prefect examples of community based conservation initiatives witnessed in the State for many centuries. While the people are doing their bid for conservation on their own, any such initiatives on the part of the Government that relates to their land is viewed with suspicion and fear that in the process, their ownership over the land and resources thereon may get compromised. This is the major factor which has to be overcome through suitable awareness programmes and other confidence building

measures based on frequent interaction, in order to achieve success in BHS declaration. It shall be clearly conveyed to the people that declaration as BHS, will not, in any way, change the land ownership.

9.8.6. In this regard, considering the practical difficulties as mentioned above, it is decided to achieve a modest target of declaring 10 suitable sites in Meghalaya as BHS in the next five years.

9.9 Synopsis of the 5-year Targets Set:

As explained in detail in the preceding pages, the following targets are set by the MBB in connection with BMC constitution, PBR preparation and BHS declaration.

9.9.1. BMC constitution:

At least 2 village level BMCs shall be constituted in the next 5 years, in each of the Gram Sevak Units (GSU) in the State. It may be noted that each GSU has 12- 15 villages. There are 550 GSUs in the State. So, the target for the next 5 years is constitution of at least 2 village level BMCs per GSU x 550 GSUs= about 1100 village level BMCs.

In other words, this will mean constitution of about 220 village level BMCs every year or 20 village level BMCs under each of the 11 districts every year.

In addition, elaka level BMC and Municipality level BMCs will be constituted where ever possible.

9.9.2. PBR Preparation:

The present exercise of preparing village level PBRs will be stopped after the completion of the ongoing village level PBRs.

PBRs will be prepared for each of the Gram Sevak Units (GSU) having a cluster of 12- 15 villages each, within the next 5 years. The 39 C&RD blocks in the State have 550 GSU Units. Hence 550 GSU level PBRs have to be prepared in the next 5 years. This will cover the whole State. This means preparation of 50 GSU level PBRs in each of the 11 Districts in the next 5 years or 10 GSU level PBRs per District every year.

These GSU level PBRs will be endorsed and shared by about 12-15 villages that form the GSU. Any additional information can be added to the PBR as and when the need arises, making it a dynamic document.

9.9.3. Declaration of BHS:

A modest target of 2 BHS per year is set for the next 5 years resulting in about 10 BHS. No District level target is set.

(Shri. D. Sathiyan IFS),
Secretary, Meghalaya Biodiversity Board.

(Shri. M.S.Rao, IAS),
Chairman, Meghalaya Biodiversity Board.

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