

# ANNUAL REPORT

## 2019-20



**MEGHALAYA BIODIVERSITY BOARD**  
**GOVERNMENT OF MEGHALAYA**  
(A STATUTORY BODY SET UP UNDER BIOLOGICAL DIVERSITY ACT, 2002)  
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# FOREWORD

The Meghalaya State Biodiversity Board has finalised Annual Report for the year 2018-2019. The Annual Report chronicles achievements of the Board in pursuance of its mandate under the Biological Diversity Act, 2002.

Meghalaya is rich in biodiversity, traditional knowledge and culture. Many rare, endemic and endangered species of flora and fauna are naturally thriving here. However, of late, the biodiversity of the State has become vulnerable to factors like forest degradation, mining, soil erosion, water pollution and urbanization. Creating awareness among all the stakeholders is the first and foremost step in safeguarding the valuable biodiversity from these threats.

Meghalaya Biodiversity Board was constituted to implement the provisions of the Biological Diversity Act, 2002, Biological Diversity Rules, 2004 and the Meghalaya Biological Diversity Rules, 2010. Creating awareness among the local communities related to conservation of biodiversity, constitution of Biodiversity Management Committees (BMC) and preparation of People's Biodiversity Registers are the main activities of the Board.

I express my gratitude to the National Biodiversity Authority for their financial and technical assistance to the Board for carrying out its functions and duties under the Biological Diversity Act, 2002.

I express my thankfulness to the Board Members and the Expert Committees for their valuable guidance. Finally, I commend the scientists and Staff of Board who rendered yeoman's service in producing the report in print form.



C. P. Marak, IFS  
Principal Chief Conservator of Forests & HoFF  
cum Chairman (07/06/2019 to 31/12/2019)  
Meghalaya Biodiversity Board

# FOREWORD

I am very pleased to note that the Annual Report of the Meghalaya Biodiversity Board for the year 2019-2020 is being released. The Annual report provides a glimpse of the activities taken up for the implementation of the Biodiversity Act, 2002, Biological Diversity Rules (2004) and the Meghalaya Biological Diversity Rules (2010) for conserving Meghalaya's rich biodiversity.

The State of Meghalaya is a land of diverse micro climates and soil types that support luxuriant growth of myriads of flora. Its different types of forests are also provide safe haven for variety of fauna. The State has high concentration of many endemic plant and animal species. However, factors like forest degradation, soil erosion, water pollution caused by anthropogenic activities has become serious threat to these natural assets. By creating mass awareness about the importance of the role of biodiversity and the need of their conservation amongst the key stakeholders shall immensely catalyze our efforts in biodiversity conservation in the State and also in the Country. The support of the both State and Central Governments, the stakeholders and the local people shall always be necessary for conservation and sustainable use of biodiversity for providing both tangible and intangible benefits.

Meghalaya Biodiversity Board has always been striving to implement the provisions of the Biological Diversity Act, 2002 to achieve the three objectives *viz*, biodiversity conservation, sustainable utilization of the bio-resources and ensuring a fair and equitable sharing of benefits arising out of the bio-resources. The current major challenge is to achieve our goal in constitution of Biodiversity Management Committees (BMCs) for 6471 local bodies and preparation of People's Biodiversity Register (PBRs) for each BMC. The active participation of local stakeholders is the key to overcome this challenge.

I am glad that the Annual Report for the year has presented a bird's eye view about the activities of the Board during the past year and I wish all the very best for the future endeavor of the Meghalaya Biodiversity Board.



D. P. Wahlang, IAS  
Principal Secretary, Forests & Environment Department  
Government of Meghalaya  
cum Chairman (05/02/2020 onwards)  
Meghalaya Biodiversity Board

# PREFACE

I am pleased to present the Annual Report of the Meghalaya Biodiversity Board (MBB) for the years 2019-2020. This Annual Report gives bird's eye view on the activities of the Meghalaya Biodiversity Board (MBB) during the year.

It is indeed an awesome sight to look at the ability of the fertile land of the State to regenerate and sustain variety of flora and fauna and to maintain the intricate balance that exists between them. However, the increasing demand of the ever-increasing human population for the various biological resources has now caused threats on them. Their protection has therefore becomes very important and taking urgent measures for this has become inevitable.

The land ownership system in our State makes the people also more responsible for the proper management of the biological resources in their own lands.

The Meghalaya Biodiversity Board has been playing its vital role in creating awareness amongst the people about the importance and the need to protect and conserve the biological resources in the State and about the legal provisions available to support their effort.

I am happy that the people's support in the effort of the State Government and the Meghalaya Biodiversity Board in the constitution of Biodiversity Management Committees (BMCs) and preparation of People's Biodiversity Registers (PBRs) during the year has been excellent. The documentation of Meghalaya State Biodiversity Strategy and Action Plan (MBSAP) 2017-2030 has been completed and published.

I express my sincere gratitude to the National Biodiversity Authority, State Government of Meghalaya for their financial and technical assistance to the Board to carry out its functions. I am also grateful to all the members of the Board and its Sub-Committees, officials in the Board Office for the valuable roles played in the activities of the Board.



P R. Marak, IFS  
Chief Conservator of Forests (Wildlife)  
& Member Secretary,  
Meghalaya Biodiversity Board



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### 1.1. Introduction:

Biodiversity is the variety of all life forms of life. It is the variability among living organisms and their habitats, including the diversity within species, among species and within ecosystems. Biodiversity is the vast array of plants and animals including the insects and micro-organisms inhabiting the Earth. Human civilization depends directly and indirectly to this diverse group of plants and animals for meeting basic needs of survival, food, fodder, fuel, fiber, fertilizer, timber, medicines and raw materials. This diversity is the prerequisite for long term sustainability of the environment and continuity of life. All over the globe people are now conscious and concerned about habitat degradation, accelerated loss of species and diminishing local traditional knowledge.

The growing concern for depletion of biological diversity world-wide led to the establishment and adoption of the Convention on Biological Diversity (CBD) in 1992. This Convention recognizes the sovereign rights of the states over their biological resources. With this objective the Government of India enacted the Biological Diversity Act, in 2002. This Act provides for conservation of Biological Diversity, sustainable use of its components and fair and equitable sharing of the benefits arising out of commercial use of biological resources and associated traditional knowledge. At the national level, National Biodiversity Authority (NBA) oversees implementation of the Act. The State Biodiversity Boards (SBBs) are formed at the state level and Biodiversity Management Committees (BMCs) are constituted by the local bodies to decentralize the implementation of the Act.

### 1.2. Constitution of the Meghalaya Biodiversity Board (MBB):

The Meghalaya Biodiversity Board (MBB) is a statutory and autonomous body constituted by the Government vide Notification No. FOR. 57/2002/Pt/308 dated 20<sup>th</sup> March, 2012 in accordance with Section 22 (1) of the Biological Diversity Act, which states 'each state shall establish a State Biodiversity Board' and Section 63 (1) of the Biological Diversity Act, 2002, which states 'every state government shall make rules for carrying out the purposes of this Act'.

### 1.3. Composition of the Board:

The Board is headed by a Chairman of the rank of Additional Chief Secretary/Principal Secretary to the Government of Meghalaya, holding the charge of Forests & Environment Department. Apart from the Chairman, the Board has five Ex-Officio Members from related Departments of the Government of Meghalaya and five Non-Official Members. The Officer in-Charge of Biodiversity, in the Forests & Environment Department of the Government of Meghalaya, functions as Member Secretary of the Board.

**Details of incumbents of the following posts during the year 2019-2020 (Name, Designation & tenure):**

Chairperson	Member Secretary
<p>Shri. P W Ingty, IAS Additional Chief Secretary, Forests &amp; Env. Dept, Meghalaya, w.e.f 15<sup>th</sup> June, 2018 till 30<sup>th</sup> May, 2019</p>	<p>Shri. M B K Reddy, IFS Conservator of Forests (Development &amp; Biodiversity) w.e.f. 11<sup>th</sup> April, 2017 till 6<sup>th</sup> January, 2020</p>
<p>Shri. C. P Marak. IFS Principal Secretary, Forests &amp; Env. Dept, Meghalaya, w.e.f 7<sup>th</sup> June, 2019 till 31<sup>st</sup> December, 2019</p>	<p>Shri. P R Marak, IFS Conservator of Forests (Development &amp; Biodiversity) w.e.f. 6<sup>th</sup> January, 2020 till 25<sup>th</sup> August, 2020</p>
<p>Shri. D P Wahlang, IAS Principal Secretary, Forests &amp; Env. Dept, Meghalaya, w.e.f 5<sup>th</sup> February, 2020 onwards</p>	

**Ex-Officio Members (Rule 9 of MBDR, 2010):**

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

**Non-Official Members (Rule 6 of MBDR, 2010):**

Sl. No	Name	Designation
1	Prof. S. K. Barik	Director, CSIR- National Botanical Research Institute, Lucknow.
2	Shri. K.C.Momin	Retd. Director (Soil & Water Conservation Dept.), Govt. of Meghalaya, Shillong.
3	Dr. Natalie W. Kharkongor	Associate Prof., IIM, Shillong.
4	Dr. Kalkame Cheran Momin	NEHU, Tura
5	Dr. Carl Oswald Rangad	Retd. Director of Horticulture Dept., Govt. of Meghalaya.

**Staff of the Board (on contract)**

SL No.	Designation	Number of Posts
1	Scientist	01
2	Taxonomist	01
3	PA cum Administrative Assistant	01
4	Accountant	01
5	DTP Operator	01
6	DTP Operator cum Web Publisher	01
7	MSW (Constitution of BMC)	03
8	Project Assistants	03
9	Driver	01
10	Cleaner	01

**Office of the Board:** Meghalaya Biodiversity Board is situated in the Silviculture Building, Lower Lachumiere, Shillong - 793001.

**1.4. Key Functions and Duties of the Board :**

- ❖ Advise the State Government subject to any guidelines issued by the Central Government on matters relating to conservation of biodiversity, sustainable use of its components and fair and equitable sharing of benefits arising out of the use of biological resource and knowledge.
- ❖ Regulate by granting of approvals or otherwise requests for commercial utilization or bio-survey and bio-utilization of any biological resource by Indian Nationals.
- ❖ 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.

### 1.5. Details of the District Nodal Officers:

The following District Nodal Officers have been nominated to co-ordinate the activities of the Board at the district level and guide the BMCs. The Government of Meghalaya has also notified Technical Support Groups in every district to offer technical guidance to the BMCs.

<b>S I No.</b>	<b>Name of the District-TSG</b>	<b>District Nodal Officer cum Convenor</b>
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 Wildlife Division), Tura
8	West Garo Hills, TSG, Tura	DFO (E&W 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

### 1.6. Constitution of Expert Committees:

Meghalaya Biodiversity Board provisionally reconstituted seven (7) State Level Expert Committees under 13 (1) of the Meghalaya Biological Diversity Rules 2010 to assist the Board for the purposes of the Biological Diversity Act and Rules as under:

- 1) Expert Committee on “Legal matters connected with Biodiversity Act”
- 2) Expert Committee on “Access and Benefit Sharing”
- 3) Expert Committee on “Agro & Horticulture Biodiversity”
- 4) Expert Committee on “Animal Resources and Fisheries”
- 5) Expert Committee on “Traditional knowledge, IPR and Documentation”
- 6) Expert Committee on “Identification & Conservation of Biodiversity rich areas and Biodiversity Heritage Sites”
- 7) Expert Committee on “Modernising the Public Interface of MBB”

## **2.1. Biodiversity Management Committees (BMCs):**

As per Section 41 of the Biological Diversity Act, 2002 and Rule 23 of Meghalaya Biological Diversity Rules, 2010, every local body shall constitute a Biodiversity Management Committees (BMCs) within its area to ensure conservation, sustainable utilization and equitable sharing of benefits from the biodiversity. According to Census of India 2001, 2011, the State has 6459 villages and 10 urban bodies. Till 31<sup>st</sup> March, 2020 , 3614 BMCs has been constituted through the village level local bodies and efforts are going on to constitute BMCs in all the village level local bodes and urban bodies. With capacity building, these grass root level BMCs are expected to play a key role in administration of local biodiversity, in future.

## **2.2 Functions of Biodiversity Management Committees (BMCs):**

- i. Prepare, maintain and validate People's Biodiversity Registers (PBRs) in consultation with the local people. The main function of the BMCs is to maintain a Register giving information about the details of access to biological resources and traditional knowledge granted, details of the collection fee imposed and details of the benefits derived and the mode of their sharing.
- ii. Advice on any matter referred to it by the Board or NBA for granting approval, to maintain data about the local Vaid, Hakims and other Practitioners using the biological resources.
- iii. Local biodiversity funds, for conservation and promotion of biological resources and associated knowledge and socio-economic development of these areas need to be established under section 43 of the Biological Diversity Act, 2002 and Rule 24 of Meghalaya Biological Diversity Rules, 2010.

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

Under the Rule 23 (13) of Meghalaya Biological Diversity Rules, 2010, Biodiversity Management Committees shall facilitate preparation of People's Biodiversity Registers. The Register shall contain comprehensive information on availability and knowledge of local biological resources, their medicinal or any other use or any other traditional knowledge associated with them. Since the BMCs lack technical expertise, the Board is assisting the BMCs in the State in preparation of their PBRs with the help of technical expertise. The Board has completed preparation of 78 PBRs till 31<sup>st</sup> March, 2020 and 64 are nearing completion.



#### 4. Activities of the Board:

The main activities of the Board from 1<sup>st</sup> April, 2019 up to 31<sup>st</sup> March, 2020 are encapsulated as follows:

##### 4.1. International Biological Diversity Day (IDB) Celebration

The following are the details of the IDB celebration held on 2019:

**Theme:** Our Biodiversity, Our Food, Our Health.

The celebration of International Day for Biological Diversity (IDB) was organized by Meghalaya Biodiversity Board in collaboration with Forests & Environment Department, Government of Meghalaya on the theme “Our Biodiversity, Our Food, Our Health.” on 22<sup>nd</sup> May, 2019 at U SoSo Tham Auditorium, State Central Library, Shillong.

To create and increase awareness among the people, particularly the students on the importance of biodiversity, drawing, essay writing and quiz competition were organized in all the eleven districts of Meghalaya. Students from different schools in and around Shillong were invited to take part in the competitions that was held on 11<sup>th</sup> May, 2019. More than hundred students from various schools took part in the competition enthusiastically on different themes.

The drawing competition was conducted under three categories:-

- i. 1<sup>st</sup> Category (Differently abled)  
Topic: “Biodiversity of Meghalaya”
- ii. 2<sup>nd</sup> Category (Class IV and below)  
Topic: “Flora and Faunal Diversity of Meghalaya”
- iii. 3<sup>rd</sup> Category (Class V-VII)  
Topic: “Biodiversity: Food Security”

The Essay competition it was conducted under two categories:-

- i. 1<sup>st</sup> Category (Class VIII-X)  
Topic: “Biodiversity Conservation and its Role in Food Security”
- ii. 2<sup>nd</sup> Category (Class XI-XII)  
Topic: “Our Biodiversity, Our Food Our Health”

In the main event at Shillong, Shri. Lakhmen Rymbui, Hon’ble Minister (Forests & Environment Department) Govt. of Meghalaya was the Chief Guest. Shri. C.P. Marak, IFS, PCCF & HoFF, Meghalaya, was the Guest of Honour and Shri. Y. Shullai, IFS, PCCF (T) as a Special guest of the function. A huge audience including school children guided by their respective teachers, representatives of BMCs, researchers and general public attended the function. Welcome address was presented by Shri. C. P. Marak, IFS, PCCF & HoFF, Meghalaya, followed by a presentation on the ‘Achievements/Milestones

of Meghalaya Biodiversity Board' by Shri. M B K Reddy, IFS, Secretary, Meghalaya Biodiversity Board.

Shri. Lakhmen Rymbui, Hon'ble Minister (Forests & Environment Department) Govt, of Meghalaya along with the other dignitaries released the Annual Report of the Board for the financial years 2015-2018. Publicity Materials were also released which included Posters and Booklets on the biodiversity of Meghalaya and Pamphlet on recently notified Biodiversity Heritage Site in Meghalaya. The Posters released were Odonata of West Khasi Hills, Wild Edible Fruits of Garo Hills, Wild Flowers of Khasi Hills, *Adiantum flabellulatum* L. a less known fern of Meghalaya and Threatened Trees of Meghalaya. Three booklets on Biodiversity viz. 'Birds of Meghalaya', 'Odonata of Meghalaya' and 'Threatened Fish, Ornamental Fish, Food and Game Fish, of Meghalaya' were also released. The dignitaries also released a pamphlet on 'Biodiversity Heritage Site (BHS) of Meghalaya, Khlaw Kur Syiem Kmie Ing (Umkon Village of Ri- Bhoi District).

Prizes were distributed to the winners of the various competitions like essay, drawing, painting and photography which were organised by Meghalaya Biodiversity Board.

Addressing the gathering as chief guest, Forests and Environment Minister, Govt, of Meghalaya, Shri. Lakhmen Rymbui stressed on the need for maintaining a balance in the biodiversity for a sustainable ecosystem. "As we are in an ecosystem where we are interdependent on each other, all have an important role to play in our ecosystem, we have to renew our commitment to preserve our rich biodiversity," he said. He urged the students in particular to carry and preserve our rich biodiversity, so that our future generation will benefit. Lamenting on the increased dwindling of rare species, Hon'ble Minister Shri. Rymbui said that there is a need to realize the value of organisms and species. He also suggested an idea of coming up with a museum to showcase the rich biodiversity of the state with a focus on conservation and protection of the biodiversity found here. With the State coming up with different missions such as Aquaculture mission, Jackfruit mission, he suggested the Meghalaya Biodiversity Board (MBB) to work hand-in-hand with other line departments. "There is a need to devise conservation measures to save threatened species and protect indigenous traditional knowledge," he added.

Short documentary film on "Giant Steps to Conservation by a Small Village, Mawlyngbna" and "Our Biodiversity, Our Food, Our Health" was also screened.

The celebration ended with vote of thanks by Shri M B K Reddy, IFS, Secretary Meghalaya Biodiversity Board, which was followed by light refreshments to all those present during the celebration.

Such IDB celebration were organized in all the other districts of Meghalaya as well viz., West Khasi Hills, South West Khasi Hills, West Jaintia Hills, East Jaintia Hills, North Garo Hills, West Garo Hills, East Garo Hills and South Garo Hills and Ri-Bhoi District.



Photographs of IBD Celebration in the Main Event at Shillong (East Khasi Hills District):



Addressing the gathering as chief guest, Forests and Environment Minister, Govt. of Meghalaya, Shri. Lakhmen Rymbui.



Shri. C. P. Marak, IFS, PCCF & HoFF, Meghalaya presenting prize to a school student.



Shri. Lakhmen Rymbui, Hon'ble Minister (Forests & Environment Department) Govt. of Meghalaya distributing prizes to the winners of photography and essay competition.



School students and teachers from different schools of Shillong participating in the main event at Shillong.

Drawing and Painting Competition photos organized in the main event at Shillong:



School students participating in drawing and painting competition

## Photographs of IDB Celebration in the other towns of Meghalaya:

**Nongpoh (Ri-Bhoi District):** IDB was celebrated at Tyrso Village on 22<sup>nd</sup> of May 2019 organised by the Divisional Forest Officer, Social Forestry Division Nongpoh. Five villages and three BMCs participated in the event. Essay writing, drawing and quiz competitions among the students were conducted. Prizes and certificates were awarded to the students who participated and 500 seedlings were distributed to the villagers for planting in their village.



School students participating in IDB Nongpoh, Ri-Bhoi District.



Range Forest officer, Nongpoh presenting prize to a winner.



DNO, Ri-Bhoi District presenting a sapling to a villager.

**East Jaintia Hills District:** IDB celebration was organised by Divisional Forest Officer, Social Forestry Division, Jaintia Hills Jowai held at Sacred Heart Secondary School Lamyrsiang, East Jaintia Hills District on the 28<sup>th</sup> May, 2019.



Shri. D Rymbai, Chairman of Moolamyliang BMC addressing the gathering.



Tree Planting in the School Campus by Shri. V Singh, IPS Superintendent of Police, East Jaintia Hills.



Shri. D Pala, Headman of Lamyrsiang villia addressing the gathering.



Students participating in the IDB celebrations at Jowai.

**South West Khasi Hills:** The Office of the Divisional Forest Officer, Social Forestry Division East Khasi cum District Nodal Officer cum Convenor TSG for South West Khasi Hills observed the International Day for Biological Diversity on 24<sup>th</sup> May, 2019 at Jakrem Presbyterian Secondary School, South West Khasi Hills.



Students participating in the Drawing & Painting Competition.



Students participating in the IDB celebrations.



Smt M.J.A Sangma, D.F.O., Social Forestry Division East Khasi Hills, giving award to a winner.



Shri S.K Budnah, D.F.O., Social Forestry Division, West Khasi Hills planting a tree at Jakrem Presbyterian Secondary School.

**South West Garo Hills District:** IDB celebration was organised by Divisional Forest Officer Social Forestry Division of Forests & Environment Department, South West Garo Hills at Matalagre Upper Primary School under Rerapara C&RD Block in South West Garo Hills (SWGH) District on 22<sup>nd</sup> 05, 2019.



Shri. B.M. Sangma, Retd. Joint Director, Soil & Water Conservation, West Garo Hills addressing the participants.



Shri. B.M. Sangma, Retd. Joint Director, Soil & Water Conservation, West Garo Hills presenting award to a winner.



Students participating in the drawing competition.



Tree plantation by the Chief Guest at the School campus.

News clipping on the celebration of International Day for Biological Diversity on 22<sup>nd</sup> May, 2019, published by the daily newspaper (Shillong Times) of Meghalaya.

## Intl Day for Biological Diversity observed across state

By Our Reporter

**SHILLONG:** The International Day for Biological Diversity was observed in the city on the theme 'Our Biodiversity, Our Food, Our Health' during a function held at U Soso Tham Auditorium on Wednesday.

The programme was organised by the Meghalaya Biodiversity Board (MBB) and the Department of Forests & Environment, Government of Meghalaya, to generate awareness among the people, particularly the students, on the rich biodiversity of the State and the importance of preserving it.

Addressing the gathering as chief guest, Forests and Environment Minister Lakhmen Rymbui stressed on the need for maintaining a bal-

ance in the biodiversity for a sustainable ecosystem.

"As we are in an ecosystem where we are inter-dependent on each other, we have to renew our commitment to preserve our rich biodiversity," he said.

Lamenting on the increased dwindling of rare species, Rymbui said that there is a need to realise the value of organisms and species. He also suggested an idea of coming up with a museum to showcase the rich biodiversity of the state with a focus on conservation and protection of the biodiversity found here.

With the state coming up with different missions such as Aqua culture mission, jackfruit mission, he suggested the Meghalaya Biodiversity Board (MBB) to

### Biodiversity museum mooted



Tyrso Govt. L.P. School celebrates International Day for Biological Diversity on the theme 'Our Biodiversity, Our Food, Our Health' in Tyrso, Ri-Bhoi, on Wednesday. (ST)

work hand-in-hand with other-line departments.

"There is a need to devise conservation measures to save threatened species and protect indigenous traditional knowledge," he said.

During the function, Rymbui, along with other dignitaries, released Annual Report for the years 2015-2018, booklets and posters on biodiversity, pamphlet on Biodiversity Heritage

Site of Meghalaya, Khlaw Kur Syiem Kmielng (Umkon Village of Ri Bhoi district).

Short documentary films titled, *Giant Steps to Conservation by a Small Village*, *Mawlyngbna* and *Our Biodiversity, Our Food, Our Health* were also screened during the programme.

Meanwhile, NESFAS celebrated the International Day for Biological Diversity 2019 on Wednesday with Khasi, Jaintia, Bhoi and Garo custodian farmers, Meiramew Café entrepreneurs, women group members and youths from six villages.

Students of the Department of Environment and Traditional Ecosystems of Martin Luther Christian University, as part of the celebration, participated in an early-morning agrobiodiver-

sity walk from Madan Rngi to Laitsohpliah village along with the locals of the area where they identified 21 wild edibles.

Acknowledging the problems that community members have with pests in their fields, NESFAS organised, within its premise, a practical sharing of ideas on how to undertake pest management with the members of the Agroecology Learning Circle (ALC) from Mawhiang, Liarsluid, Umsawwar, Pyrda and Darichegre in Garo Hills.

The emphasis was on the sharing of local knowledge amongst farmers themselves along with the acknowledgement that modern science can also make useful contribution to the current local knowledge.

**PHOTOGRAPHY COMPETITION:** The photographs of the winners of the photography competition held on the Theme "Our Biodiversity, Our Food, Our Health" during the IDB 2019 is given below:-



### 1<sup>st</sup> Prize- Riteilang Khongrangjem

**Description of the Photo :** A local villager in Ri-Bhoi District taking his produce to the local market after harvest.



### 2<sup>nd</sup> Prize- Bankitkumar Sten

**Description of the Photo :** Sohphlang (*Flemingia vestita*) is an organic edible tuberous root that has a sweet crunchy nutty flavour. It is creamy white in colour and is consumed well by the tribals of North East India. The name sohphlang is a local name given by the Khasi community of Meghalaya. Soh means fruit and phlang means grass. It is widely produced in the states of Meghalaya for commercial purposes. It is eaten with Nei-lieh (ground Perilla seeds) by the locals or with some salt and chilli powder keeping you warm in the winter weather.



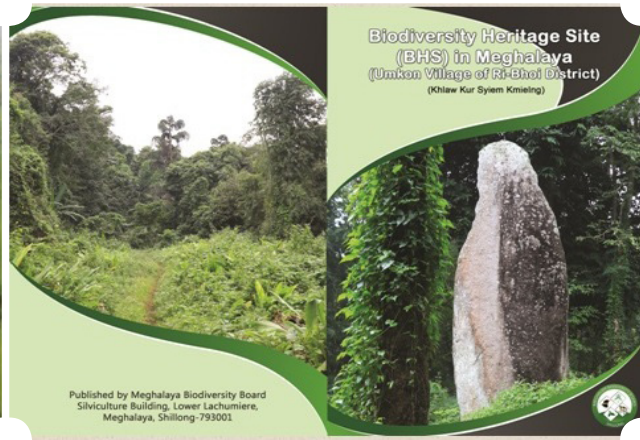


**3<sup>rd</sup> Prize - Wanpynsuk Makri**


**Description of the Photo** - Soh-Phie (*Myrica nagi*) is a seasonal fruit of Meghalaya which can be found available in the state from late month of April-May. Pudina (*Mentha* sp.) cultivated through out the year and best harvested during the spring season in the state. The combination of these serve the best cuisine as chutney in Khasi food. beside they are widely use by the locals for medicinal purposes,like stomach ache gastric and others.

## 4.2. Publications by the Board:

In the year 2019-20, the Board has published the following:




## Threatened Trees of Meghalaya



*Fraxinus floribunda*



*Fraxinus floribunda* belonging to the family Oleaceae is a medium-sized deciduous tree growing to 10–15 m tall with a trunk up to 50 cm diameter, with grey bark. Leaves opposite, pinnate, with 7–9 serrate leaflets. Flowers white, with petals 3–4 mm long, in large branched clusters up to 25 cm across.

*Magnolia lanuginosa* belonging to the family Magnoliaceae is a medium-sized tree that grows in subtropical broad leaved forests. It has an average height of 15m but there were some individuals that had attained a height of 25m. The tree has a broad crown. It attains a girth of 180cm. The leaves measure 12-21 by 2-5 cm and are densely hairy beneath. Flowering buds are initiated in late July and it attains peak flowering in August. Fruiting starts from August and the fruit matures during the months of September–October. The fruit is made up of 12–20 follicles which contain 2–4 seeds covered by a pale orange fragrant aril during the early stages of growth which turns deep orange at maturation.



*Magnolia lanuginosa*

MEGHALAYA BIODIVERSITY SERIES - 38


Published by Meghalaya Biodiversity Board, Silviculture Building, Lower Lachumiere, Shillong - 793001  
Photos and Information: Pradyumn Langkhli, Design by Khairunnesa Khannikhi

## Adiantum flabellulatum L. a less known fern from Meghalaya




*Adiantum flabellulatum* L. is a fern species of ferns has been collected from Umrai in Ri-Bhoi district of Meghalaya. Description: Plant terrestrial or lithophilic. 20-45cm tall. Rhizome short, erect or ascending with a dense tuft of clustered fronds. The rhizome is covered with brown tomentum showing brown sori.

Distribution: INDIA (Assam, Meghalaya, Nagaland, Manipur, Tripura), China, Taiwan, Japan, Myanmar, Sri Lanka and S.E. Asia (Prasin-Johnson et al., 2012).

Uses: The whole plant is used in Chinese traditional medicine and it is also an indicator of soil acidity.

MEGHALAYA BIODIVERSITY SERIES - 40





Published by Meghalaya Biodiversity Board, Silviculture Building, Lower Lachumiere, Shillong - 793001  
Photos and Information: K.J. Choudhary, Lady Kisan College, Design by Khairunnesa Khannikhi

## WILD EDIBLE FRUITS OF GARO HILLS

 <p><b>Acronychia sp.</b> Family: Rutaceae Local name: Te kring/Te srenq bite Edible parts: Ripen/unripen fruits are eaten raw.</p>	 <p><b>Artocarpus chaplasi</b> Family: Moraceae Local name: Chram bite Edible parts: Ripen fruits are eaten raw and seeds are eaten by cooked.</p>
 <p><b>Bauhinia sp.</b> Family: Caesalpiniaceae Local name: Bakbaki bite Edible parts: Young fruits are eaten by cooked.</p>	 <p><b>Crypteronia paniculata</b> Family: Crypteroniaceae Local name: Matchu gingsap bite Edible parts: Ripen fruits are eaten raw.</p>
 <p><b>Flacourtia jangomas</b> Family: Flacourtiaceae Local name: Ponal bite Edible parts: Ripen fruits are eaten raw.</p>	 <p><b>Melastoma malabathricum</b> Family: Melastomataceae Local name: Keta bite Edible parts: Ripen fruits are eaten raw.</p>
 <p><b>Meyna spinosa</b> Family: Rubiaceae Local name: Te sking bite Edible parts: Ripen fruits are eaten raw.</p>	 <p><b>Hydnocarpus sp.</b> Family: Flacourtiaceae Local name: Anuwak bite Edible parts: Ripen fruits are eaten raw.</p>

MEGHALAYA BIODIVERSITY SERIES - 39





Department of Forests, Environment & Climate Change  
Govt. of Meghalaya  
Published by Meghalaya Biodiversity Board, Silviculture Building, Lower Lachumiere, Shillong-793001.  
Photos & Concept: Sangga O.K. Moin & Design: Pradyumn Langkhli



Birds of Meghalaya

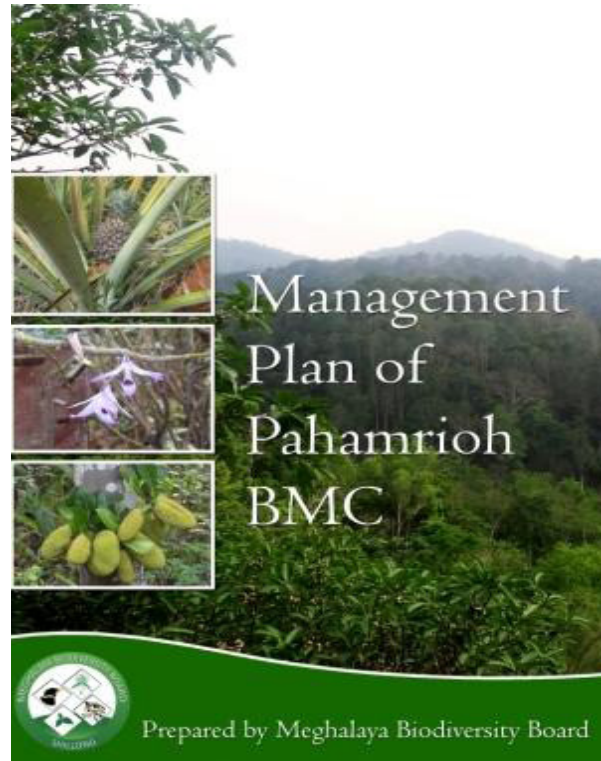
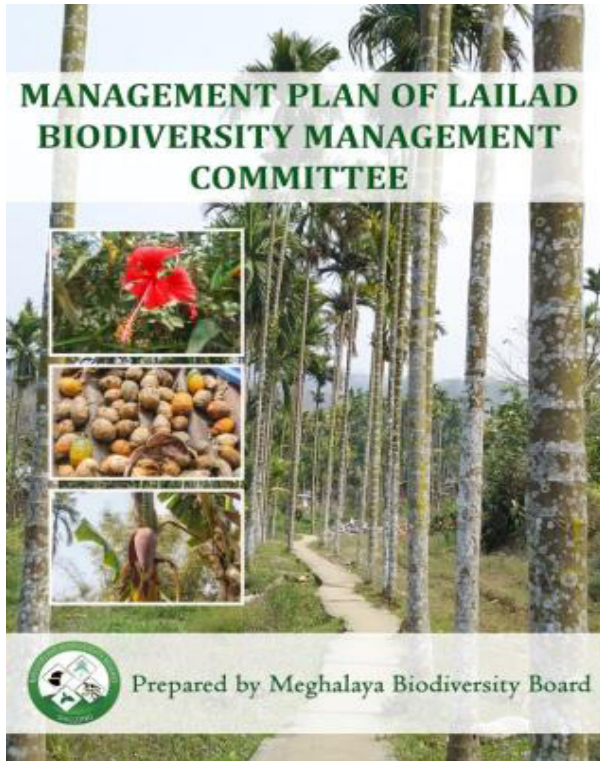


Odonata of Meghalaya



Threatened Fish, Ornamental Fish, Food & Game Fish, of Meghalaya

**Management Plans:** The Board prepared Biodiversity Management plans of two Biodiversity Management Committees (BMCs) viz. Lailad and Pahamrioh of Ri-Bhoi District.



**4. 3. Research Projects of the Board:** A total of 23 projects have been completed by the Project Assistants of the Board till the year 2019-2020 as given below:

1. Survey of indigenous seeds varieties of Meghalaya.
2. Survey on indigenous fruits of Meghalaya.
3. Survey and documentation of wild flowers with horticulture potential of Khasi and Jaintia Hills.
4. Survey and documentation of threatened tree species and bryophytes in Khasi and Jaintia Hills along with their economic uses.
5. Survey and documentation of rare and threatened aquatic and parasitic plants of Khasi and Jaintia Hills.
6. Survey and Documentation on wild edible mushrooms in Khasi and Jaintia Hills of Meghalaya.
7. Survey and documentation of tradable bio-Resources of Garo Hills.
8. Survey of traditional health practitioners with documentation of different plants and animals used by them in Khasi and Jaintia Hills.
9. Documentation of ethnobotanically important species in Khasi and Jaintia Hills.
10. Survey and documentation of on Beetles of Khasi and Jaintia Hills of Meghalaya.
11. Survey and documentation of hydrophytes of Khasi and Jaintia Hills of Meghalaya along with their economic and medicinal uses, location details, enumeration of rare, threatened hydrophytes and the canes of Khasi and Jaintia Hills.
12. Survey, documentation and IVI studies of endemic plant species of West Khasi Hills.
13. Diversity, distribution and uses of pteridophyta flora in the Khasi and Jaintia Hills of Meghalaya.
14. Survey and documentation on climbers and creepers of Khasi and Jaintia Hills of Meghalaya.
15. Documentation and distribution of rhododendrons and insectivorous plants of Meghalaya; and *Hedychium* species in Khasi and Jaintia Hills of Meghalaya.
16. Survey and documentation of medicinal plants and their medicinal uses in the sacred groves of Mawphlang, Sohra and. Shella Bholaganj.
17. Survey and documentation of the birds of East Khasi Hills, Jaintia Hills and Ri-Bhoi District which visit the BMCs and adjoining sacred groves and private forests falling therein.
18. Survey and documentation of amphibians in East Khasi Hills, Jaintia Hills and Ri-Bhoi District and list the endangered species.
19. Livestock biodiversity in Khasi and Jaintia Hills of Meghalaya.
20. Aquatic biodiversity in Khasi and jaintia Hills of Meghalaya.

21. Survey and documentation on tradable bio-resources in Khasi and Jaintia Hills of Meghalaya.
22. Survey and documentation on ethnobotanically important species (wild species) and their uses in Garo Hills, Meghalaya.
23. Survey and documentation of Poaceae family in Khasi and Jaintia Hills and its economic importance.

The Project Assistants of the Board are now engaged in updating and compiling all the 23 completed projects for publication.

**4.4. Awareness Campaigns:** The Board conducted nine awareness campaigns during the year 2019-20 at block level in different districts of the State for constitution of BMC, PBR preparation and on provisions of the Biological Diversity Act, 2002 with the help of Block Development Officers and District Nodal Officers. The list of various awareness campaigns conducted at different places are as follows:

Sl.No.	Date	Place
1	3.07.2019	Mawsynram, East Khasi Hills
2	24.07.2019	Ladmukhla, West Jaintia Hills
3	26.07.2019	Jongska, East Khasi Hills
4	23.08.2019	Myllem, East Khasi Hills
5	30.10.2019	Mawkyrwat, South West Khasi Hills
6	8.11.2019	Saipung Block, East Jaintia Hills
7	30.09.2019	Borsora, South West Khasi Hills
8	16.01.2020	Mawkyrwat Block Office, South West Khasi Hills
9	13.03.2020	Thuruk, East Jaintia Hills

Few pictures of the awareness campaigns



Mawkyrwat, South West Khasi Hills



Saipung Block, East Jaintia Hills



Borsora, South West Khasi Hills



Thuruk, East Jaintia Hills



**4. 5. Formation of BMCs:** 3329 BMCs were formed by the Board in Meghalaya during the year 2019-20. Below is the list of BMCs formed in all the Districts of Meghalaya:

<b>Sl No.</b>	<b>District</b>	<b>No. of BMCs formed</b>
1	East Khasi Hills	423
2	West Khasi Hills	577
3	South West Khasi Hills	246
4	Ri-Bhoi District	468
5	East Jaintia Hills	12
6	West Jaintia Hills	48
7	East Garo Hills	306
8	South West Garo Hills	43
9	South Garo Hills	242
10	North Garo Hills	423
11	West Garo Hills	541

**4. 6. Release of Start-up funds to the BMCs:** In the year 2019-20, the Board has released Start-up funds for three BMCs which are detailed below:

<b>Date</b>	<b>BMC to which local biodiversity fund is released during 2019-20</b>	<b>Amount</b>
05/11/2019	Mrik Wari	20,000
05/11/2019	Mariem	20,000
05/11/2019	Langrtor	20,000





## Kiron Joshi & Associates

Chartered Accountants

Regn. No. 313048 E

LDB Building : G. S. Road, Shillong - 793 001, Phone : 2223727, Fax : (0364) 2224647, Email : kironjoshiassociates@gmail.com

:2:

- i) In the case of the Balance Sheet, of the state of affairs of the above named Board as at 31.03.2020.

And

- ii) In the case of the Income & Expenditure Account, of the excess of Income over Expenditure for the year ended on that date.

And

- iii) In the case of Receipts & Payments Account, of the receipts and payments of funds during the year.

### 6. Report on Other Legal and Regulatory Requirements:

As per our Audit, we report that:

- a) We have obtained all the information and explanations, which to the best of our knowledge and belief were necessary for the purpose of our audit.
- b) In our opinion, proper books of accounts as required by law have been kept by the Board, so far as appears from our examination of the books.
- c) Subject to our comments / remarks given in this report, the Balance Sheet and the Income & Expenditure Account and Receipts & Payments Account dealt by this Report are in agreement with the books of accounts.
- d) In our opinion, the Balance Sheet and the Income & Expenditure Account and Receipts & Payment Account comply with the Accounting Standards referred as would be applicable for Board.
- e) The Board is required to get itself registered U/s 12AA of Income Tax Act and file its return annually.

Place: Shillong  
Date: 06.06.2020

for KIRON JOSHI & ASSOCIATES  
Chartered Accountants.



KIRON JOSHI.  
(Membership No. 051046)  
UDIN:20051046AAACFZ7735



**MEGHALAYA BIODIVERSITY BOARD**  
SILVICULTURE BUILDING : LOWER LACHUMIERE : SHILLONG

BALANCE SHEET AS AT 31.03.2020

LIABILITIES		ASSETS	
<b>CAPITAL FUND:</b>		<b>FIXED ASSETS:</b>	
Opening Balance:	3494616.86	As per Schedule 'C'	854770.00
(+) Excess of Income over Expenditure	<u>751368.00</u>		
	4245984.86		
<b>GRANT FUND:</b>			
1. <u>National Biodiversity Authority :</u>			
Opening balance	3462188.00		
(+) Received during the year	<u>1650000.00</u>		
	5112188.00		
(-) Utilised during the year for revenue expenses as per Income & Expenditure Account (Schedule 'A')	<u>1151696.00</u>	3960492.00	
2. <u>State Plan :</u>			
Opening balance	21463018.00		
(+) Received during the year	<u>21463018.00</u>		
(-) Utilised during the year for revenue expenses as per Income & Expenditure Account (Schedule 'B')	<u>1866072.00</u>	19596946.00	
	<u>₹ 27803422.86</u>		<u>₹ 27803422.86</u>
		<b>CURRENT ASSETS:</b>	
		Cash in Hand	9454.00
		Cash at Bank :SB A/c with SBI A/c No. 32375460838	<u>26939198.86</u> 26948852.86

Place : Shillong  
Date : 06.06.2020



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

KIRON JOSHI  
(Membership No. 051046)  
UDIN:20051046AAACFZ7735

*[Signature]*  
Chairman  
Meghalaya Biodiversity Board  
Shillong, Meghalaya

*[Signature]*  
Secretary  
Meghalaya Biodiversity Board  
Shillong

**MEGHALAYA BIODIVERSITY BOARD**  
**SILVICULTURE BUILDING : LOWER LACHUMIERE : SHILLONG**

**INCOME & EXPENDITURE ACCOUNT FOR THE YEAR ENDED 31.03.2020**


EXPENDITURE		INCOME	
<u>National Biodiversity Authority Expenses :</u>		Grant in Aid from:	
As per Schedule 'A'	1151696.00	a) National Biodiversity Authority, Chennai	1151696.00
<u>State Plan Expenses :</u>		b) Forest & Environment Department, Government of Meghalaya, Shillong	
As per Schedule 'B'	1866072.00		1866072.00
Depreciation	140424.00	Bank Interest	840292.00
Excess of Income over Expenditure	751368.00	Sale of books	26500.00
		Old cheques written back	25000.00
	<u>₹ 3909560.00</u>		<u>₹ 3909560.00</u>

Place : Shillong  
 Date : 06.06.2020



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

KIRON JOSHI  
 (Membership No. 051046)  
 UDIN:20051046AAACFZ7735

  
 Chairman  
 Meghalaya Biodiversity Board  
 Shillong, Meghalaya

  
 Secretary  
 Meghalaya Biodiversity Board  
 Shillong

**MEGHALAYA BIODIVERSITY BOARD**  
**SILVICULTURE BUILDING : LOWER LACHUMIERE : SHILLONG**

RECEIPTS & PAYMENTS ACCOUNT FOR THE YEAR ENDED 31.03.2020

RECEIPTS		PAYMENTS	
Opening Balances :		<b>National Biodiversity Authority Expenses :</b>	
Cash in Hand	8720.00	As per Schedule 'A'	1151696.00
Cash at Bank :SB A/c with SBI A/c No. 32375460838	27415908.86 27424628.86	<b>State Plan Expenses :</b>	
		As per Schedule 'B'	1866072.00
Grant in Aid received from National Biodiversity Authority, Chennai	1650000.00	Closing Balances :	
Bank Interest	840292.00	Cash in Hand	9454.00
Sale of books	26500.00	Cash at Bank :SB A/c with	
Old cheques written back	25000.00	SBI A/c No. 32375460838	26939198.86 26948652.86
	<u>₹ 29966420.86</u>		<u>₹ 29966420.86</u>


Place : Shillong  
 Date : 06.06.2020



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

KIRON JOSHI  
 (Membership No. 051046)  
 UDIN:20051046AAACFZ7735

  
 Chairman  
 Meghalaya Biodiversity Board  
 Shillong, Meghalaya

  
 Secretary  
 Meghalaya Biodiversity Board  
 Shillong

MEGHALAYA BIODIVERSITY BOARD  
SILVICULTURE BUILDING : LOWER LACHUMIERE : SHILLONG

SCHEDULE FORMING PART OF BALANCE SHEET AS AT 31.03.2020

SCHEDULE C : FIXED ASSETS

Sl No	PARTICULARS	GROSS BLOCK					DEPRECIATION				NET BLOCK
		OPENING BALANCE	ADDITION		DELETION	AS ON 31.03.2019	RATE	OPENING BALANCE	FOR THE YEAR	TOTAL	AS ON 31.03.2020
			BEFORE 30.09.2019	AFTER 30.09.2019							
1	Furniture & Fixtures	466468.00	-	-	-	466468.00	10%	164743.00	30173.00	194916.00	271552.00
2	Computer & Peripherals	323810.00	-	-	-	323810.00	40%	308234.00	6230.00	314464.00	9346.00
3	Office Equipments	600922.00	-	-	-	600922.00	15%	302244.00	44802.00	347046.00	253876.00
4	Books	132456.00	-	-	-	132456.00	20%	85738.00	9344.00	95082.00	37374.00
5	Vehicle	688605.00	-	-	-	688605.00	15%	356108.00	49875.00	405983.00	282622.00
	TOTAL	2212261.00	-	-	-	2212261.00		1217067.00	140424.00	1357491.00	854770.00

  
Chairman  
Meghalaya Biodiversity Board  
Shillong, Meghalaya

  
Secretary  
Meghalaya Biodiversity Board  
Shillong



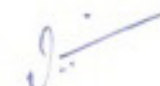
**MEGHALAYA BIODIVERSITY BOARD**  
**SILVICULTURE BUILDING : LOWER LACHUMIERE : SHILLONG**

**Schedule forming part of Financial Statements 31.03.2020**

**Schedule - 'B' - STATE PLAN EXPENSES**

Sl No.	Particulars	Amount(₹)	Amount(₹)
A)	Salary Component :		
	1. Salary & Allowances	979833.00	
	2. Wages for Assiatants during survey of field work	2360.00	982193.00
B)	Non Salary Component :		
	1. Allowance		
	a) Travelling	32947.00	
	b) Sitting	52500.00	
	2. Office Expenses		
	a) Stationery	18465.00	
	b) Telephone	17704.00	
	c) Advertisement	21121.00	
	d) POL & Vehicle Maintenance	62507.00	
	e) Consumables for Computers	38727.00	
	f) Postal Stamps	6450.00	250421.00
	3. Other Charges :		
	Formation of expert group, field visits, consultation & preparation of State Biodiversity Conservation Action Plan		200000.00
	4. Minor Works		
	a) Publicity materials	230750.00	
	b) Start up fund to Biodiversity Management Committees (As per Annexure I)	60000.00	290750.00
	5. Major Works :		
	Sponsoring investigation / research on components of Biodiversity in Meghalaya		120000.00
	6. Miscellaneous Expenditure		18417.00
	7. Celebrating International Day for Biological Diversity in the State transferred to Divisional Forest Officer, Silviculture Division, East Khasi Hills		4291.00
	<b>Total(₹)</b>		<b>1866072.00</b>

  
 Chairman  
 Meghalaya Biodiversity Board  
 Shillong, Meghalaya

  
 Secretary  
 Meghalaya Biodiversity Board  
 Shillong






**MEGHALAYA BIODIVERSITY BOARD**  
**SILVICULTURE BUILDING : LOWER LACHUMIERE : SHILLONG**

Schedule forming part of Financial Statements 31.03.2020

**Annexure - I : Start up Funds to Biodiversity Management Committees**

Sl No.	Particulars	Amount(₹)
1	Mrik Wari East Garo Hills	20000.00
2	Mariem South West Khasi Hills	20000.00
3	Langto South West Khasi Hills	20000.00
	Total(₹)	60000.00



  
Chairman  
Meghalaya Biodiversity Board  
Shillong, Meghalaya

  
Secretary  
Meghalaya Biodiversity Board  
Shillong

**MEGHALAYA BIODIVERSITY BOARD**  
**SILVICULTURE BUILDING : LOWER LACHUMIERE : SHILLONG**

**BANK RECONCILIATION STATEMENT FOR THE YEAR ENDED 31.03.2020**

Bank balance as per Pass Book				₹ 26951965.86
(-) Cheque issued but not presented for payment till 31.03.2020 :				
	<u>Date</u>	<u>Cheque No.</u>	<u>Amount</u>	
	16.03.2019	268018	12767.00	12767.00
Bank balance as per Cash book				₹ <u>26939198.86</u>



  
Chairman  
Meghalaya Biodiversity Board  
Shillong, Meghalaya

  
Secretary  
Meghalaya Biodiversity Board  
Shillong



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