

Nourishing Nature to Secure our Future

*Aaranyak*

# ANNUAL REPORT

2019-20



A C H I E V E M E N T S

LIVELIHOODS OF

**400**

FAMILIES HAVE CHANGED TO  
OCCUPATIONS THAT PROMOTE  
*CONSERVATION THROUGH WOMEN*

JOINING THE  
**HARGILA ARMY**

A TOTAL OF

**121 FARMERS**  
WERE **TRAINED** ON  
USES OF

INDIGENOUS MICRO-ORGANISM,  
ORGANIC PESTICIDES,  
CUTTING AND GRAFTING

CONVERTED

**16 KM**

ILLEGAL ELECTRIC FENCE INTO  
PROPER  
**SOLAR POWERED FENCE**  
TO MITIGATE  
**HUMAN-ELEPHANT**  
**CONFLICT**  
IN BAKSA DISTRICT, ASSAM

COMPLETED

**15 YEARS**

OF MONITORING THE  
POPULATION OF

**GANGETIC DOLPHINS**

IN BRAHMAPUTRA RIVER SYSTEM  
FROM 2005 TO 2020

DEVELOPMENT OF

**EcoNE**

AN ONLINE MAGAZINE  
AND MEDIA PLATFORM

FOR BIODIVERSITY AND  
ENVIRONMENTAL ISSUES OF  
NORTHEAST INDIA

ORGANIZED THE

**7<sup>TH</sup>**

ASIAN PRIMATE SYMPOSIUM

**2020**

FROM **8<sup>TH</sup> TO 10<sup>TH</sup>**

FEBRUARY 2020

ORGANIZED

**RHINO GOES TO SCHOOL**

**ACTIVITIES**

**IN SCHOOLS** AROUND

KAZIRANGA, ORANG AND  
MANAS NATIONAL PARKS  
AND POBITORA WILDLIFE  
SANCTUARY

FOR THE FIRST TIME,

A

**SCIENTIFIC EXPLORATION**

OF THE

**POORLY KNOWN**

**NAMDAPHA FLYING SQUIRREL**

IN THE

**NAMDAPHA NATIONAL PARK**

WAS INITIATED

APPROXIMATELY

**6.8 THOUSAND**

PEOPLE HAVE BEEN DIRECTLY  
**REACHED-OUT**  
WITH EFFECTIVE CONSERVATION  
MESSAGES THROUGH

**AWARENESS AND**  
**SENSITISATION ACTIVITIES**

## **Aaranyak's MISSION**

Our mission is to foster conservation of biodiversity in Northeast India through research, environmental education, capacity building and advocacy and legal and policy reform to usher a new era of ecological security.

### **Editorial Team:**

#### **Editor:**

Alolika Sinha

#### **Team Members:**

Kallol Deka

Manjum Mahanta

Kongseng Konwar

Parthajyoti Das

Pranjit Borah

#### **Cover Photograph:**

Udayan Borthakur

#### **Design and Layout:**

Media Production & Communications Division, Aaranyak

Aaranyak is a registered society working towards nature conservation in North East India, since 1989. Our strength lies in applied research in biological, environmental and social field and our geographical area of interest is the North Eastern India and Eastern Himalayas. Aaranyak is steered ahead by young professionals dedicated and committed to the cause of conservation. Aaranyak is recognized as a Scientific and Industrial Research Organization (SIRO) by the Government of India.

#### **Know More About Us -**

[www.aaranyak.org](http://www.aaranyak.org)

You can also follow us on Facebook, Instagram and Twitter

#### **Aaranyak Society Registration No - 3096 of 1989-90**

Donations made to Aaranyak in India carry tax exemption under section 80G of the Income Tax Act 1961. Registration under the Foreign Contribution Regulation Act 1976 entitles Aaranyak to receive foreign contribution to work in the field of biodiversity research and conservation.



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## FROM THE DESK OF SECRETARY GENERAL AND CEO

During its 31 years long journey so far since September 9, 1989 with the avowed mission to 'hourish nature to secure our future', Aaranyak has grown considerably in stature, expertise and in respect of the area of operation as a science-driven conservation organisation. The enriching experience has taught us a very important aspect of progressive wildlife and nature conservation initiative – take the community into confidence and work in tandem with concerned government agencies to achieve the desired common goal.

The tremendous support we have received from our members spread over the entire Northeast landscape has been a major source of strength. But for our valued members' goodwill and active/morale support, we could have hardly achieved what we have done so far in tune with our mission and objective.

We have realised the growing need to engage with our esteemed members who has come forward with zeal to strengthen the organisation. We have organised a few fruitful interactions with our members in the atmosphere of nature camps so that we can elicit valued suggestions from our members to steam up our journey further. Such a camp organised for members in February, 2020 in the vicinity of Pabitora Wildlife sanctuary was one of the highpoints of our year-long calendar. We look forward to more such engagements with members with more frequency in days to come for mutual benefits.

Obviously, we are now focused on implementing all our conservation initiatives under various divisions and programmes with engagement of local stakeholders especially the community besides complementing sustained efforts of the official agencies involved in conservation and protection of nature and its resources. All the species that need intensive conservation support, can't be protected unless we continue to garner cooperation and support from local communities towards conservation efforts.

We have flagged the urgent need to secure potable water and pure oxygen that are lifeline for the entire lifeforms by contributing towards conservation of wildlife and human well-being through sustained efforts. If forests, wetlands and other habitats are not conserved, securing potable water and pure oxygen to breath would be very challenging in the Eastern Himalayas. It will be very prudent on part of the people of the region to get proactive in conservation of natural resource base, specially the water and air so as to facilitate a clean and green environment for all of us besides enabling other lifeforms to thrive for the sake of maintaining the ecological balance.

Today, over 100 of our dedicated staff including project heads, researchers, field scientists have been working in different parts of eastern Himalayas in a systematic way addressing diverse conservation challenges that the region has been facing. Unrelenting support and cooperation from our well-wishers, patrons and government agencies towards our initiatives have been instrumental in facilitating our tireless efforts in the field. The high-degree of commitment and dedication exhibited by the Team Aaranyak has been of prime importance for us and I am sure the trend will continue in the years to come.

We have ensured that a competitive professional environment prevails in our organisation to help all our team members to keep their skills upgraded and honed in every passing year. We carry out periodic assessment of all our research and conservation activities, do need-based reshaping of ongoing activities while striving to chart out unique research-based conservation initiatives to shape the future roadmap that we as an organisation remain vibrant, dynamic and always ready to take on the challenges that crop up on our way.

The fruits are there for all to see -- our researchers and conservationists have made us proud by securing national and international recognitions by accomplishing challenging conservation initiatives under the banner of Aaranyak which over the years has completed over 400 projects in different parts of India as well as South and South East Asia.

We humbly want to share that during the past 31 years we have been successful in creating a pool of a select group of highly skilled, enthusiastic youth of North East India capable of taking up the responsibility of field-based research and conservation work. Our human development efforts have lured many dedicated conservation workers who have contributed immensely over the years to make the organisation robust and effective in living up to varied conservation challenges.

A handwritten signature in black ink, appearing to read 'Bibhab Kumar Talukdar'.

(Dr. Bibhab Kumar Talukdar)

# ACKNOWLEDGEMENTS

## GOVERNMENT DEPARTMENTS

Assam State Disaster Management Authority (ASDMA);  
 Department of Environment & Forest, Government of Assam;  
 Department of Environment & Forest, Government of Arunachal Pradesh;  
 Department of Environment & Forest, Government of Nagaland;  
 Department of Environment & Forest, Government of West Bengal;  
 Department of Forests and Park Services, Ministry of Agriculture and Forests, Royal Government of Bhutan;  
 Department of Science & Technology Government of Assam;  
 Department of Soil Conservation, KAAC;  
 Directorate of Museums, Govt. of Assam;  
 District Administration, Majuli District;  
 District Veterinary Department, Baska & Chirang;  
 Forest Department, BTC;  
 Forest Department, KAAC;  
 Golaghat Police;  
 Golaghat West Development Block, Golaghat;  
 Guwahati Wildlife Division;  
 Hajo Block, Kamrup;  
 Kamrup District Administration;  
 Kamrup Police;  
 Koupati Gaon Panchayat, Darrang;  
 Ministry of Environment, Forest & Climate Changes - Government of India;  
 NC Hills Autonomous Council;  
 Sibsagar Police;  
 SSA, Barpeta District;  
 Tinsukia Wildlife Division, Tinsukia;

Assam University, Diphu Campus;  
 Atree;  
 ASTER GDEM;  
 Baska Press Club;  
 Ban Bannyapranı Suraksha Samiti;  
 Bhuban;  
 Bhumi;  
 Bodoland University;  
 Bornadi Wildlife Sanctuary;  
 Center for Global Field Study;  
 Centre for Public Affairs and Critical Theory (C-PACT) of Shiv Nadar University, UP;  
 Centre For Cellular & Molecular Biology (CCMB), Hyderabad;  
 Chandra Sing Rongpi Memorial High School;  
 College of Veterinary Science, Khanapara;  
 Copernicus;  
 Cornell University, USA;  
 Cotton State University;  
 Coventry University, UK;  
 Cultural Journalist Association;  
 Dalgao Ban Banyapranı Suraksha Samiti, Darrang;  
 Department of Ecology & Environmental Science, Assam University;  
 Department of Geography, D.C.B College, Jorhat;  
 Department of Geoinformatics, Bangalore University;  
 Department of Geoinformatics, North Odisha University;  
 Department of History, Dibrugarh University;  
 Department of Mass Communication & Journalism, Tezpur University;  
 Department of Peace and Conflict Studies and Management, Sikkim University, Gangtok;  
 Director, Assam Forest School, Jalukbari, Assam;  
 Don Bosco University, Azara, Guwahati, Assam;  
 Durrell Wildlife Conservation Trust;  
 Dr. Robert John's Terrestrial Ecology Lab, IISER Kolkata;  
 Earth Explorer;

Environment Education and Conservation Global, USA;  
 EcoSystems-India;  
 Folklore Department, Gauhati University;  
 Forest Research Institute;  
 Forum for policy Dialogue on Water Conflicts in India;  
 Gethsemane JFMC, Udalguri, BTAD;  
 Global Wildlife Conservation;  
 Gibbon Conservation Centre;  
 Google Earth Pro;  
 Grameen Development Services (GDS), Lucknow, UP;  
 Green Forest Conservation;  
 Green Forest NGO;  
 Gyan Vigyan Samiti Assam;  
 Dr. Hillol Jyoti Singha;  
 IUCN/SSC Wild Pig Specialist Group;  
 Jan Shikshan Sansthan, Kamrup;  
 Jawaharlal Nehru College, Boko, Kamrup District;  
 Kollol Sanskritik Gosthi, Nagaon;  
 Kohora River Basin Natural Resource Management Committee;  
 Krishi Vigyan Kendra, Chirang;  
 Laboratory for the Conservation of Endangered Species (LaCONES), CCMB;  
 Manas National Park;  
 Manas Chowki Ecotourism Society;  
 Manthan Adhyayan Kendra, Pune;  
 Martin Luther Christian University, Nongrah, Shillong;  
 Members of Print & Electronic Media;  
 Montana State University, USA;  
 National Centre for Biological Sciences (NCBS), Bangalore;  
 North Eastern Space Application Centre, Umiam, Meghalaya;  
 Northeast Research and Social Work Networking (NERSWN), Kokrajhar;  
 Nowgong Girls' College, Nagaon;  
 Orang National Park;  
 Pacific Unit, Mangaldai, Darrang;  
 PAD;  
 Pilgrimage, Dibrugarh;

## ORGANIZATIONS/INSTITUTES/PEOPLE

Dr. Abhijit Das, WII;  
 Action Research Organisation of North East India, Chirang;  
 All India Radio, Guwahati;  
 Aryabhata Science Centre, Nalbari;  
 Assam Agriculture University;  
 Assam State Zoo cum Botanical Garden, Government of Assam;



## BACKGROUND

Aaranyak's nature conservation efforts can be traced back to 1989, when a passionate group of young environment enthusiasts, gave shape to a green concept and named it 'Aaranyak'. Deeply motivated towards protecting the rich biodiversity of the region, Aaranyak, which is based in Guwahati, Assam, embarked on an unrelenting voyage that so far has overcome uncountable barriers. Over a quarter century of work has brought major changes in the nature conservation field of North East India. Aaranyak's beginning was humble, but the mission was as strong as it is today and the vision vibrant with dreams of ushering in a new era of environmental consciousness among the masses. Unearthing new findings on North East region's incredibly rich flora and fauna was the first step towards building much needed awareness among the common people of the region. Aaranyak then and now believes that effective conservation of wildlife and ecology is conceivable only through cooperation from the masses. Aaranyak's initial goal was to generate mass awareness on the wildlife heritage of Assam and the critical need for its conservation. The turning point came in 1989, when Aaranyak filed a Public Interest Litigation in the Gauhati High Court, challenging the decision of the Assam Government to lease out fisheries inside the Dibru Saikhowa National Park in Assam. The Dibru Saikhowa NP is one of the potential conservation sites of Endangered White-winged Wood Duck, the 'State Bird of Assam', and also Aaranyak's symbol encrypted in our logo. The battle was akin to David versus Goliath, and David won! The court ruled in favour of Aaranyak and the Government had to withdraw the destructive lease permits, giving a fresh breath of life to the wildlife and habitats of Dibru-Saikhowa. Steadily progressing, Aaranyak soon became involved in bird-watching that brought together young students from all across Assam and created an emerging group of avid birders. Meanwhile, Aaranyak extended its activities to key conservation aspects, which soon became the major work areas of the organisation. At present, the primary thrust areas of Aaranyak are:

- To conduct quality research on biodiversity, water resources, hydrology, climate, sustainable development, natural disasters and environmental impact assessment in North East India, viz. floods, erosion, revival of traditional water harvesting systems, water shed management, climate variability, deforestation and climate change, rainfall-runoff modeling, application of remote sensing and GIS in environmental research and research on wildlife genetics.
- To create awareness among the people about the need for biodiversity conservation through environmental education and capacity building.
- To curtail and eliminate wildlife trade in the region



- To explore and access the legal and judiciary provisions for protection of biodiversity
- To complement and support Government agencies working for protection of the rich biodiversity of the region
- To assist the fringe communities of protected areas to diversify their livelihood options and minimize dependence on forest resources
- To foster scientific applied research in the field of biodiversity and environment that would provide new avenues for sustainable livelihood generation.

Through 31 years of hard work and commitment, Aaranyak has carved a niche for itself, in the field of biodiversity conservation, not just in India, but also globally. It has established itself as a prominent figure in the global network of institutions involved in nature conservation. Aaranyak is a close-knit team of environmental scientists, researchers, community workers, educators and environmental legal specialists. With great focus on facilitation team spirit, Aaranyak provides space for each individual to emerge as resilient

leaders. Aaranyak's foundation of research and development is augmented by untiring fieldwork by our team members. The team is on a mission to contribute towards protection of nature by providing key inputs to biodiversity management based on quality research on ecosystems, environmental education, capacity building, legal and policy research. Aaranyak at present has 14 Divisions which form the core of our conservation strategy. Together, these blend science and technology resources with involvement of stakeholders to rediscover the traditional peaceful co-existence of man and wildlife in North East India. Aaranyak's efforts towards bridging the gap between research and adaptive management of wildlife and forests have won us many accolades from around the globe. In 2011, Aaranyak received the prestigious RBS 'Earth Guardian Award 2011' conferred by the Royal Bank of Scotland. Aaranyak was bestowed with the 2012 Indira Gandhi Paryavaran Purashkar, by the Ministry of Environment, Forests and Climate Change, Govt. of India. Government of Assam also conferred the "Institutional Award in the field of Science and Technology" to Aaranyak in 2017. Aaranyak has been

building a network of symbiotic alliances with frontline institutions and universities to consolidate research and conservation activities. The formidable pool of database on various ecological aspects of North East India that has been created by Aaranyak is openly available to experts and nature enthusiasts but more importantly also to the common people. Ensuring ecological security across North East India is Aaranyak's goal, and therefore we are keen to encourage and establish a chain of committed to sustaining multiple conservation initiatives, address diverse ecological issues, sustainable development and climate change.

## AARANYAK'S EXECUTIVE COMMITTEE



**Ranjan Bhuyan,**  
President



**Dilip Chetry,**  
Vice President



**Bibhab Kr. Talukdar,**  
Secretary General



**Jimut Prasad Sarma,**  
Finance Secretary



**Bibhuti Prasad Lahkar,**  
Program Secretary



**Partha Jyoti Das,**  
Organizing Secretary



**Udayan Borthakur,**  
Publicity Secretary (Until October, 2019)



**Alolika Sinha,**  
Current Publicity Secretary



**Koushik Boruah,**  
Executive Member



**Ashok Dey,**  
Executive Member



**Jayanta Kr. Sarma,**  
Executive Member





**Avifauna Research & Conservation  
Division (ARCD)**

Photo - Carla Rhodes



## Greater Adjutant Conservation Project (GACP)

### INTRODUCTION

Brahmaputra valley of Assam (India) is considered as the last stronghold for Endangered Greater Adjutant Stork (locally known as Hargila). Dr. Purnima Devi Barman began the Greater Adjutant Conservation Project (GACP) in 2009 and has been successful in building ownership among tree owners and is closely working with 10,000 people. She and her team have also been diligently working with the Kamrup District Administration. By forming an all-women army nest protectors' group of over 400 women called the Hargila Army, a massive woman led voice was raised for the cause, for the cause of the bird as well as the 50 wetlands in the area. Purnima has been reaching out to thousands of women till date in her hitherto successful efforts for creating conservationists out of women folk of the area.

### MAJOR ACHIEVEMENTS

- The GACP and The Assam State Zoo has jointly attained a landmark achievement by successfully hatching a pair of Greater Adjutant chicks in an artificial platform within the zoo enclosure, in the first-ever experiment of its kind during the last and first weeks of November and December 2019. Two bamboo platforms
- of ten feet were constructed as artificial platforms.
- The subject of Greater Adjutant Stork and its conservation was included in the syllabus of many schools in India for the first time. School Books published by Harper Collins books and many other Assamese books now feature the Hargila prominently.
- Creation of Hargila Army, a cooperative unit that has



Photo - Smita Sharma

Dr. Purnima Devi Barman with the women-folk.



Photo - Carla Rhodes

Dr. Barman explaining about the importance of Hargila Conservation to school children

provided training to over 10,000 rural indigenous Indian women to create conservation communities throughout Assam. Traditional handloom and yarn have been made available to the members after they have undergone the training. These members have been steadily creating handloom products with conservation motifs. The products have been gaining popularity among buyers for their excellent quality and unique designs.



These women have now become the guardians of this bird and prevent people from cutting down the trees. They have also banned the bursting of crackers in various ceremonies and the practice has significantly declined.

- Livelihoods of 400 families have changed to occupations that promote conservation through women joining the Hargila Army.
- Nurturing 10,000 children as future guardians of nature by providing training on nature conservation and ecology.
- Restoration of Dadara-Pachariya-Singimari as the largest breeding colony of Greater Adjutants in the world and increase in the number of nests by eight times in 12 years.

## RECOGNITION

- Purnima Devi Barman was awarded the degree of Ph.D. by Gauhati University for her Thesis on "Foraging ecology, breeding success and genetic status of Greater Adjutant stork *Leptoptilos dubius* (Gmelin) in Kamrup District, Assam".
- Nominated for the Indianapolis Prize 2020 Award for her inspiring work to save the Greater Adjutant Storks, the most endangered stork species.
- Kamrup District Administration declared the Stork as mascot of road safety for the District.
- The prestigious USA-based Audubon magazine's spring issue highlighted the Hargila Army's work, especially focusing on the Greater Adjutant Baby Shower.
- Thendral, a well-known Tamil magazine published in the USA has carried a special feature article about Dr. Purnima Devi Barman and the Hargila conservation movement of Assam.
- On the occasion of International Women's Day, March 8, 2020 a special video interview of Dr. Purnima Devi Barman on the Greater Adjutant Conservation work in Assam was shared by the US State Department.
- On 10<sup>th</sup> August 2019, Dr. Purnima Devi Barman was felicitated by the Nodal tourism body of the State; i.e. Tour Operation Association of Assam (TOAA).
- Dr. Barman was nominated by Assam Forest Department to attend Conference of the Parties to the Convention on Migratory Species (COP13) from 15<sup>th</sup>-22<sup>nd</sup> February, 2020



Photo - Smita Sharma

Dr. Barman interacting with school children to create awareness

to represent Assam and her efforts in conservation of the Greater Adjutant Stork.

- A children's book in Marathi Language titled "Hargila Baideo: Purnima Devi Barman" by esteemed Marathi writer Ms. Kavita Mahajan was released on 27<sup>th</sup> September 2019 in Mumbai, Maharashtra by Indrani Sahitya Prakashan.
- A documentary film made by Cornell University, USA, on the work of Dr. Purnima Devi Barman and the Hargila Army was officially released by the Honorable Chief Minister of Assam, Sri Sarbananda Sonowal at Janata Bhawan on October 22<sup>nd</sup> 2019.

## STRATEGIC ACTIONS

- International Earth Day was celebrated by the community members on 22<sup>nd</sup> April 2019.
- 100 new nets fitted under Hargila nesting trees in Dadara, Kamrup District to reduce chick deaths due to fall from nesting trees.



Photo - Carla Rhodes

Awareness Campaign on World Wildlife Day, 2020

- International Day of Biological Diversity was celebrated with a group of students at Panbari High School, Chandrapur. Meritorious students who secured Distinction in High School Leaving Examination were felicitated by Dr. Purnima Devi Barman.
- The first artificial bamboo platform nest-bred stork chick, flew off to the wild as a young adult in May 2019.
- The GACP work was highlighted in a coffee table book documenting the events and activities that took place in Raj Bhavan by the present Governor Prof. Jagadish Mukhi.
- A plantation drive was undertaken by the GACP team and Hargila Army on June 1, 2019, along with an awareness programme in Dadara-Pachariya village.
- With the support from New Zealand High Commission, 280 women from the 'Hargila

Army' came together and 80 sewing machines were distributed among them on July 16<sup>th</sup>. This was a part of the awareness campaign launched on 27<sup>th</sup> June 2019.

- The school students from Dadara learnt to make *Hargila* figurines from clay and *Hargila* rangoli.
- A creative craft workshop

was organized for children of the Hargila Army, at Dadara on 7<sup>th</sup> July. The students of Assam Engineering College guided the children in making colourful Hargila-themed crafts. The AEC students are working as interns of with the programme.

- A Free Health Camp was held at Dadara, organised by the Hargila Army and Aaranyak in collaboration with GNRC and SAPTARSHI.
- Tezpur University procured 100 locally made gamosas woven by members of Hargila Army during August 2019.
- Pre-breeding season survey and monitoring were carried out in Dadara-Pachariya-Singimari area by the project team and volunteers.
- At Dadara, 10 bamboo platforms/machans were constructed. One of the machan was constructed inside the Assam State Zoo as well. More such breeding



Photo - Carla Rhodes

Hargila Army weaving beautiful gamosa with Hargila motifs





Photo - Carla Rhodes

### Hargila Art Competition to create awareness

platforms are also being constructed in habitat areas across Dadara area.

- Dr. Barman was invited as a special guest to meet with the Hon'ble Deputy High Commissioner of UK, Mr. Bruce Bucknell on 26<sup>th</sup> September 2019.
- An awareness rally was organised at Dadara on 27<sup>th</sup> October 2019 to spread cognizance on avoiding loud crackers and urging the people to celebrate green Diwali. The local people supported the cause, wearing Hargila masks and helped spread the message.
- A *Hargila Pancharit* Ceremony (Baby Shower) was celebrated with great joy and huge participation from the Hargila Army women at Dadara on 31<sup>st</sup> October, 2019. This ceremony is celebrated every year to pray for a successful breeding of the Hargila chicks.

- At Dadara, environmental education classes were held for school students at the Dadara Higher Secondary School, on November 3<sup>rd</sup>.
- A birdwatching cum nature trail and a motivational awareness event was held on 12<sup>th</sup> November 2019, for 70 students from different universities and college to pay tribute to the Bird-man of India Mr. Salim Ali. The event was held at the the Assam State Zoo cum Botanical Garden, Guwahati which was attended by host of eminent personalities.
- The foundation stone for "Hargila Nature Education Centre" was laid on 27<sup>th</sup> November, 2019 at the Kushal Konwar High School, Dadara to facilitate awareness campaigns on nature conservation among women, children, and other members of local communities as well as for research and documentation purposes.

- A training was provided to the 65<sup>th</sup> batch of Assam forest guards from Assam Forest Guard School, Makum on December 9<sup>th</sup>, 2019. At Assam Forest School, Jalukbaria workshop on "community conservation" was conducted that included interaction with communities, local schools, and field training at Dadara-Pachariya villages.
- Members of the Hargila Army were taken for a bird watching and exposure trip to Malayabari, Pobitora, Mayong and Bogoribari on 28<sup>th</sup> December 2019.
- Dr. Purnima Devi Barman was interviewed by Manas Pratim Sharma on conservation journey of the Greater Adjutant Storks, which was aired Live on 29<sup>th</sup> December at the All India Radio.
- On the occasion of Saraswati Puja, an art competition was organized at Dadara by the team members of GACP.
- The hatching of the storks was celebrated on January 8<sup>th</sup>, 2020, by GACP team which was attended by the Honourable Forest Minister of Assam Sri Parimal Suklabaidya at Assam State Zoo premises.
- Dr. Purnima Devi Barman conducted a session for the students of Higher Secondary first year of the Dadara Higher Secondary School on "How to do an Environmental Project", where she explained the theory and taught them the ways of making an environmental project. The

session was attended by 60 students.

- The GACP team celebrated the World Wildlife Day at the Sankardev Sishu Niketan, Bongshor, Kamrup District by organizing an art competition with the theme “Love and Care is Our Colour”, and rangoli competition among children. A ‘Web of Life’ demonstration was also undertaken.
- A cricket tournament was organized by the Dadara Boys Club on 7<sup>th</sup> and 8<sup>th</sup> March 2020, with support from GACP team to create awareness among the youths. It was a very successful event with 13 teams of youths from different districts participating in it.

## SUMMARY OF IMPACT

Due to consistent efforts by the GACP team, not a single nesting tree was cut down since 2010, in the nesting colony of Kamrup District. The number of Greater Adjutant nests in Assam has increased from 28 (2007) to 171 (2014) and at present, the average nest number is 208. For the first time, Greater Adjutant Stork chick was hatched in an artificial nesting platform in Assam State Zoo thus paving the way to securing the habitat of this species. The Hargila bird has reached a mass awareness level with local communities now worshipping the bird instead of considering it an evil omen. More and more rural women, youths and community



Photo - Smita Sharma

Hargila Art Competition at Dadara to create awareness among school children

members are taking the conservation pledge and joining the Hargila Army. There has been widespread media interest due to the project thus giving a boost to the whole movement with increased visibility and concern for the otherwise mostly unknown bird. The conservation effort of Hargila Army has inspired school children not only in India but in other countries as well. Dr. Barman met with a young child in UK who had travelled to London to meet her and discuss her work about Greater Adjutant Conservation.

## ROAD AHEAD

- Raise international awareness for Hargila Conservation work in Assam.
- Completion of the Centre for Greater Adjutant Stork awareness education which will be first of its kind in the world.

- Create expanded habitat and tackle deforestation for Hargila during breeding season with artificial nesting platforms.
- Conducting more local awareness programmes among local communities and school children.
- Networking with markets/ platforms for increasing demand of handloom products created by the weavers of Hargila Army.
- Continued skill development trainings of Hargila Army and expanding the activities.
- Livelihood, community programmes and trainings in the pipeline.

## CONTACT

**Purnima Devi Barman, PhD**  
 Project Head, GACP  
 Email: purnima@aaranyak.org  
 Phone: +91 8876429654





## Conservation & Livelihood Division (CLD)



Photo - CLD, Aaranyak



## INTRODUCTION

The Conservation and Livelihood Division (CLD) was established in 2004, and has been working with forest dependent communities in order to improve their livelihood options. The concept of community-based conservation was sought in order to reduce anthropogenic pressure on Protected Areas by local communities, and garner support of local communities for conservation. There has been an increasing trend in India in involving local communities for conservation by implementing community-based conservation methods basically due to interest shown by international and local organisations.

Currently CLD is implementing projects in the fringe villages of Manas Tiger Reserve (MTR) in Bodoland Territorial Council to provide sustainable livelihood opportunities for the local communities. CLD has been working in other landscapes of Assam such as around Kaziranga Tiger Reserve and Pobitora Wildlife Sanctuary, in collaboration with other divisions especially RRCD, TRCD, complementing the conservation efforts.

## MAJOR ACHIEVEMENTS

- Engaged 100 marginalised families using farm and non-farm-based activities for livelihood options in Bansbari, Bhuyanpara and Kokilabari areas around MTR.
- A community-based nursery has been developed to promote organic vegetables



Photo - CLD, Aaranyak

Cultivation of tomatoes by our beneficiary Ghega Narzary in his farm land, Kushratary Village, Bhuyanpara.

- in Chirang District. Vegetable saplings were provided to the farmers of four villages. A total of 121 farmers were trained on uses of indigenous micro-organism, organic pesticides, cutting and grafting. A vermicomposting is exhibited in the nursery for demonstration purpose.
- Three poly-domes developed for rain water harvesting in No. 2 Chourang Village as a model.
- Through micro enterprise development, the division supported tea stalls, carpentry supported tea stalls, carpentry materials, hair cutting, saloon, grocery shop in tricycles, meat shop to selected beneficiaries who are dependent upon natural resources of Manas National Park.



Photo - CLD, Aaranyak

Polydome based rain water harvesting system installed at 2 No. Chourang Village, Panbari



- A common facility centre equipped with looms, sewing machines, drums, calendaring machines *etc.*, was constructed in the Mazrabari village.
- “Manah Community Merchandise” an online platform has been created to provide marketing linkage of products that are produced and cultivated by local communities such as turmeric, red lentils, jelly, pickles and handicrafts. A product brand “MANAH” has been developed for marketing purpose.



Photo - CLD, Aaranyak

A common facility centre equipped with looms, sewing machines, drums, calendaring machines was constructed in the Mazrabari village.

## STRATEGIC ACTIONS

- Regular monitoring and handholding of beneficiaries for successful implementation of livelihood activities, performances and problems.
- A total of 121 beneficiary households of Chirang District were provided with vegetable seeds, sapling of both

summer and winter vegetables and lemon grafting to encourage organic cultivation in the area. Five training programme were organised for these households on organic cultivation focusing on indigenous micro-organism (IMO) serum development, soil health management,

composting and rainwater harvesting in fringe villages of Manas under Chirang District.

- 100 marginalised families from Kokilabari, Bhuyanpara and Bansbari cluster were supported with farm and non-farm alternative livelihood options using the principle of skilling, supporting, hand holding and monitoring. The farm-based livelihood includes agro-forestry based homestead gardening, and seasonal vegetable farming. The non-farm alternative livelihood opportunities include Tea-stalls, supporting vegetable vendors with bicycle/tri-cycle, facilitating barbers, carpenters, pan-shops, meat-shops, selling of handloom products, cattle-shed constructions.
- Linking beneficiaries to government livelihood schemes and financial institutions for sustainability.



Photo - CLD, Aaranyak

Bee keeping training

## SUMMARY OF IMPACT

The CLD works for strengthening SHGs, which were formed earlier. The division has reached over 2000 households and 20 SHGs in Baksa and Chirang Districts. A SHG from Kokilabari, is working on production of natural dye and has successfully made dye from *Chromolaena odorata* plant, which is an alien invasive plant. They have been able to earn Rs. 18000 per year selling the threads coloured with natural dye. Another SHG from Kokilabari use these naturally-dyed threads to weave cloth-material for making value-added products. This group has also able to earn Rs. 40000 per year. A SHG from Bhuyanpara, who have expertise in weaving, weave traditional cloth materil as such as Dokhna, Aronai, Gamosa and other varieties of value-added products, which helped them Rs 7000 to 8000 per month.

Beneficiaries practicing agriculture have been able to earn surplus money from their homestead gardens, horticulture, vegetable garden, ravi crops. This helped reduce their forest-dependency



Photo - CLD, Aaranyak

SHG members selling handloom products

with earning a steady income ranging between Rs 2000- 3000 per week.

Creating micro enterprise among youths and marginalised families for engaging them and constant follow-ups, handholding by the team have made majority of villagers understood that they can sustain easily without being dependent on forest.

- Value chain development of various agricultural and horticultural crops, for creation of local market hub.
- Entrepreneurship development among local boys and girls.
- Rural tourism development through skill building across Manas landscape.
- Local unemployed youth to be absorbed in micro enterprise.

## ROAD AHEAD

- Establishment of market and financial linkages for better price and sustainability of interventions.



Photo - CLD, Aaranyak

A snapshot from beekeeping training

### CONTACT

**Bibhuti P Lahkar, PhD**

Head, CLD

Email: [bplahkar@gmail.com](mailto:bplahkar@gmail.com)

[bibhuti@aaranyak.org](mailto:bibhuti@aaranyak.org)

Phone: +91 9435017687

**Mr. Bipul Das**

Deputy Manager, CLD

Email: [bipulassam@gmail.com](mailto:bipulassam@gmail.com)

Phone: +91 9957287921

**Mr. Swapan Das**

Assistant Manager, CLD

Email: [swapankrdas88@gmail.com](mailto:swapankrdas88@gmail.com)

Phone: +91 9101092758



## Elephant Research & Conservation Division (ERCD)

Photo - Avijan Saha



Photo - ERCD, Aaranyak



## INTRODUCTION

The conservation crisis of the Asian elephants in Northeast India led to the formation of the Elephant Research and Conservation Division at Aaranyak in 2002. With rapid loss of habitats, alteration of land uses, poaching, development of linear infrastructures and increased human-elephant conflict (HEC) has created serious concern regarding conservation of elephants in Northeast India. ERCD has been working on understanding elephant ecology, its habitat, mitigation of HEC and facilitating coexistence with human beings in order to address the current threats to Asian elephants. The Division has spread out its work across the state of Assam and Northern West Bengal.

## MAJOR ACHIEVEMENTS

- Survey of illegal electrocution of elephants and sagging of power supply wire covering 18 districts of Assam.

- Tested the efficacy of five species of plants namely, Citronella, Lemon grass, Wild turmeric (*Curcuma aromatica*), *Homaloma aromatica* and King Chilli as elephant deterrent crops to aid in HEC mitigation.
- Converted 16 km illegal electric fence into proper solar powered fences in Baksa district of Assam.
- More than 400 searchlights were provided to local

communities, members of Village Defense Party (VDP) and Forest Department in various HEC affected areas of Assam.

- Developed a handbook for summer school camp for the team members of the best performing project of the National Children Science Congress (NCSC) on application of science and technology in biodiversity conservation and management.



Installation of solar-powered fence

Photo - ERCD, Aaranyak



An illegal fence installed by local communities

Photo - ERCD, Aaranyak

- Identification of movement pattern of Asian Elephants in NorthBengal Landscape.
- Naam Kamakhya L.P. School of Silghat in Nagaon district has been completely secured by installing solar powered fences surrounding the school premise, which was damaged 18 times by wild elephants.
- Identification of hotspots of road kills of the animals on National highway 37 within the stretch from Kukurakata to Bokakhat.





Torch light distribution at Nagrijuli

Photo - MPCDD, Aaranyak

## Monitoring and mitigation of HEC

- Set-up a surveillance system to monitor illegal electrocution of elephants in Assam.
- Converting illegal electric fences into community based solar powered fences.
- Involve VDP in mitigation of HEC as they are the primary government machinery to address different issues at village level.

## STRATEGIC ACTIONS

### Elephant Ecology and Population monitoring

- As a part of a three-year ecological study on Asian elephants in northern West Bengal, ERCD investigated the population and habitat ecology and the human-elephant conflict pattern in the landscape. Based on our findings we drafted a management plan for elephants.
- In Manas Tiger Reserve we surveyed the landscape to identify the transboundary movement routes of elephants, besides monitoring the elephant population.



Photo - ERCD, Aaranyak

Field survey to estimate elephant population using dung-count method

animal crossing to facilitate the development of 'animal-friendly' linear infrastructure in near future.

### Restoration of elephant habitat

- ERCD has been working with Park Directorate of Manas National Park for restoration of invaded grassland. Currently the restoration is focused on two prime grassland habitats in the central and eastern ranges of Manas National Park.

- Dialogue with the government to declare HEC as a natural disaster and insulation of electric power supply wire specially in elephant bearing areas of Assam.

### Designing mitigation measures for wildlife-vehicle collision

- In the Kaziranga landscape, we have undertaken a survey along the NH-37, stretching from Kukurakata to Bokakhat to identify the hotspots of

### Awareness and sensitisation

- To appreciate the conservation value of elephants and increase tolerance level of different stakeholders ERCD has carried out awareness programmes with various stakeholders.





Photo - ERCD, Aaranyak

Explaining about Solar powered fence at Namkamakhya

## ROAD AHEAD

- Fill up the gap on population estimation, demography and movement ecology of Asian Elephant in Northeast India in the coming years.
- Mitigation of HEC to facilitate human elephant coexistence through community participation.
- Replenishment and restoration of elephant habitats.

## SUMMARY OF IMPACT

- Last year the proactive efforts of the Division have saved the lives of more than 30 elephants from illegal electrocution in different parts of Assam through setting up a surveillance system.
- Installation of solar powered fences in Baksa have benefitted more than 10, 000 people by protecting human lives, properties and providing food security. This at the same time also benefitted around 200 elephants.
- The result of testing the efficacy of elephant deterrent crops has helped us to transfer knowledge from the field to farmers, which will help them in mitigating HEC and earn livelihood as cultivation of these crops as alternative crops. It is worth mentioning that in high HEC areas, farmers have stopped cultivating traditional crops such as paddy.
- Playing a crucial role as catalyst between government machinery and villagers in Baksa, Golaghat and Sibsagar districts.



Photo - Avijan Saha

A lone tusker

### CONTACT

**Bibhuti P Lahkar, PhD**  
 Head, ERCD  
 Email: bplahkar@gmail.com  
 Phone: +91 9435017687

**Jyoti Prasad Das, PhD**  
 Manager, ERCD  
 Email: jyoti@aaranyak.org,  
 elephant.jyoti@gmail.com  
 Phone: +91 9435121752

**Alolika Sinha**  
 Assistant Manager, ERCD  
 Email: alolika@aaranyak.org,  
 sinha.alolika@gmail.com  
 Phone: +91 9435021312



## Environment Education & Capacity Building Division (EECBD)



Photo - EECBD, Aaranyak



## INTRODUCTION

Environment Education (EE) is a dynamic and progressive exercise which enables people to explore environment issues, solve problems and take action to improve environment through developing essential skills and capacity. Environment Education and Capacity Building Division (EECBD) is presently working with multiple target groups across the state of Assam, India and South & Southeast Asia as well, through effective use of EE tools and techniques to address environment and conservation issues on priority basis.

Currently the division is working to achieve the following objectives:

- To work on ecosystem services focusing water, air and soil for human well-being.
- To work for wildlife conservation and environment protection by sensitising and engaging community.
- To capacitate strategic stakeholders to address different ecological issues through training and handholding.



Photo - Jayanta Pathak

A moment of teachers training organized jointly with UNESCO C2C at Manas World Heritage Site focusing “Safeguarding Natural Heritage through education, awareness and network building among teachers and students”

- To develop effective EE resource materials for conservation.
- To develop scientific temperament among younger generation for conservation as well as research on wildlife and environment.

## MAJOR ACHIEVEMENTS

- The division has published a book, “Weather Climate and Life” and also published the second revised edition of the book, “Batar Jalabāyu

āru Jivan”. Besides, EECBD published thirteen popular articles on different ecological issues.

- Capacitated 23 teachers, and sensitised over 600 PRI members on climate change. Around 6.8 thousand people have been directly reached-out with effective conservation messages through awareness and sensitisation activities.
- Successfully conducted 10 orientation workshops, 1 residential training of four days, five sensitisation programmes, 13 awareness programmes, three radio discussions, two strategic plantation programmes along with other activities.



Photo - EECBD, Aaranyak

A moment of 'In dialogue: Nature, Heritage & NE India' program

## STRATEGIC ACTIONS

EECBD has conducted various workshops, trainings, public outreach and awareness activities in different priority locations in Assam. The division has also supervised works of interns from different academic institutions.



The division shared its expertise on different invited platforms as resources persons. During the reporting period, Aaranyak had signed a MoU with the Directorate of Museums, Government of Assam. Some salient activities of the reporting period are mentioned below.

- Under the joint initiative, 'In dialogue: Nature, Heritage & NE India', of Aaranyak and Directorate of Museums, Government of Assam, EECBD had conducted two brilliant panel discussions on 'Amphibian: diversity, conservation policy and research potentiality in Northeast India' and 'Fishes of NE India: conservation and research potential'. The purpose of this initiative is to help conserve the natural heritage of Northeast India through sensitising public and inculcating research and conservation interest among different stakeholders of this region.
- Ten orientation workshops on climate change (CC) were



Photo - EECBD, Aaranyak

A moment of an orientation workshop on climate change held at Udlaguri district of BTAD, Assam

organized in 13 districts to sensitise Panchayati Raj Insinuation / VCDC members and village community leaders about the adverse impacts of climate change on human and natural systems and on CC adaptation and its mitigations.

- EECBD has been working with the fringe communities of Amchang Wildlife Sanctuary to enable human elephant coexistence. So far, three community engagement programmes and an awareness activity to promote coexistence was conducted.

- EECBD under its 'Trees are our Friends' initiative aims to plant and nurture trees. Two plantation drives were carried out wheremore than 90% saplings had survived when monitored after a year. Besides, the division has offered letter of appreciation to the successful institution that have taken care the saplings planted in their premises. EECBD also presented saplings to the over 250 artists of the state.
- A residential teachers' training was organized jointly with UNESCO Category 2 Centre based at Wildlife Institute of India from 22nd to 25<sup>th</sup> February 2020 where 21 teachers from Baksa and Chirang district of BTAD, Assam participated. The aim of the training was safeguarding natural heritage by capacitating teachers. The training emphasized on the outstanding universal values and its significance for the sustainable and long-term conservation of Manas heritage sites and communities surrounding.



Photo - Yugal Krishna, Assam State Museum

A moment of 'In dialogue: Nature, Heritage & NE India' program



Photo - EECBD, Aaranyak

Radio is an effective tool to reach right target audiences with apt environment protection related messages. Some moment of recoding a discussion

## SUMMARY OF IMPACT

- EECBD’s intervention has motivated people for coexistence with elephants in its project site.
- The need of a common platform for the budding researchers, conservationist and experts has been fulfilled by the initiative of ‘In dialogue: Nature, Heritage & NE India’.
- Over 90% saplings planted in the reporting period under “Trees are our friends” initiative had survived.
- Observed various self-motivated initiatives among the participants of CC orientation workshops such as meeting on CC adaption and mitigations, conservation of wetland in their respective localities.
- A functional network among different environment related grassroots organisation and key individuals has established through the implementation of various EE activities of EECBD.



Photo - EECBD, Aaranyak

Release of a popular book, “Weather Climate and Life” at Haflong, Dima Hasao during an orientation workshop on climate change organized jointly with NC Hills Autonomous Council, YADEM and Aaranyak

## ROAD AHEAD

- A popular book on snakebite management for the common public to be published by 2021.
- Initiative to generate 100 Conservation Educators within 4 years from NE region.
- Establish two resource schools by 2023.
- Reach out to 5000 students each year to develop a deeper understanding of the impacts of current practices on the ecosystem services and encourage a shift towards conservation friendly behaviour.
- To strengthen the rapport amongst grassroots conservation agencies/ organisations within the state and beyond to achieve the conservation goal.

## CONTACT

**Jayanta Kumar Pathak**  
Manager, EECBD

Email: aaranyak.jkp@gmail.com,  
jayantapathak@aaranyak.org  
Phone: +91 9864320915





## Gangetic Dolphin Research & Conservation Division (GDRCD)



Photo - Abdul Wakid



## INTRODUCTION

Gangetic Dolphin Research and Conservation Division (GDRCD) was established in 2005 with an aim to undertake long term conservation activities on the Gangetic dolphins (*Platanista gangetica*) of the Brahmaputra river system in association with all concerned stakeholders. With a dedicated survey boat, manpower, equipment and community support, GDRCD is one of the best recognized Dolphin conservation programmes in India. Besides, working on the Ganges River Dolphin of Brahmaputra river system, GDRCD also worked on other dolphin species, mainly the Irrawaddy Dolphin and Indo-Pacific Humpback Dolphins of the Indian Sundarbans of West Bengal.

## MAJOR ACHIEVEMENTS

GDRCD - Aaranyak collaborated with the Wildlife Institute of India (Dehradun) for the project “Development of Conservation Action Plan for River Dolphins” for 2016-21. Under this project and within the reported period, GDRCD received following achievements-

- Completed 15 years of monitoring the population of Gangetic dolphins in Brahmaputra river system from 2005 to 2020.
- Maintained its community-based Dolphin Conservation Network (DCN) for the last 12 years, from 2008 to 2020.
- Maintained its dedicated dolphin research vessel SB

Kahua, which is first of its kind in India for Gangetic dolphin research and conservation, for the last 10 years.

- Enhanced the ecological understanding of Gangetic dolphins in selected river stretches of Brahmaputra.

## STRATEGIC ACTIONS

GDRCD - Aaranyak in collaboration with the Wildlife Institute of India (Dehradun) conducted the following activities during this reported period:

- Completed dolphin survey in Brahmaputra river system including Brahmaputra mainstream (Assam-Arunachal Pradesh border to India-Bangladesh border), Kulsri River and Subansiri



Photo - Abdul Wakid

Dolphin survey in Brahmaputra during Feb-Mar, 2020



Photo - Abdul Wakid

Brahmaputra River near Assam-Arunachal Pradesh border

River during February-March, 2020.

- Conducted summer season dolphin survey in Pahumara-Kadiya River of Barpeta district. This is the second time monitoring survey of this seasonally distributed dolphin population. During this survey, a total of 30 dolphins were recorded with an encounter rate of 0.54 dolphins/km.
- Maximum group size was observed at Pohumara-Kaldiya river confluence and Nakhanda-Beki river confluence.
- Conducted upstream distribution surveys of dolphins in total 33 tributaries of Brahmaputra. This survey indicated summer distribution

of dolphins in 15 tributaries of the river, namely in the Dibru, Burhidihing, Disang, Dikhow, Jhanji, Dhansiri, Sarikoria, Jiabhorli, Kolong, Pahumara, Manas, Beki, Gaurang, Tipkai and Gadadhar.

- Land-based dolphin and habitat monitoring were conducted by 40 trained members of Dolphin Conservation Network (DCN) in 20 important dolphin habitats across Assam during the period.

## SUMMARY OF IMPACT

Residential dolphin populations occurred in most of the major tributaries of the Brahmaputra at least three to four decades

ago. However, due to increased anthropogenic pressures, these residential dolphin populations were wiped out from these tributaries. Now, they are again coming back to these tributaries during summer season. This is because of the consistent efforts by GDRCD through its long-term community engagement and awareness activities in key dolphin habitats, for which there is a significant increase of dolphin population in the Brahmaputra mainstream and these dolphins started moving towards these tributaries during summer season.





Photo - Abdul Wakid

Brahmaputra River near Dibrugarh

## ROAD AHEAD

GDRCD will emphasize more on community engagement and awareness activities for conservation key dolphin habitats across Assam in coming days.

For this the already existing and highly-active and efficient Dolphin Conservation Network (DCN) and boat based 'Dolphin Yatra' will be strengthened. Alongwith

that dolphins in the tributaries of Brahmaputra will be emphasized, where threats are more intense.

### CONTACT

**Abdul Wakid, PhD**  
Honorary Head, GDRCD  
Email: wakid.abdul@gmail.com  
Phone: +91 7002398460





**Geo-Spatial Technology & Application Division (GTAD)**

Photo - GTAD, Aaranyak



## INTRODUCTION

Geo-spatial technology helps us to acquire data in the form of satellite imageries and ground survey data corresponding to earth's surface and associated attributes to use in analysis, query, modelling, prediction, measurements and visualisation. Geo-spatial technology helps stakeholders in policy and decision-making process. With this broader aim, Aaranyak had established a separate division for Geo-spatial and Application (GTAD) in the year 2004 with a GIS lab setup at Aaranyak's research office. Since its establishment, the division has primarily carried out remote sensing, GIS and GPS based analysis and field work of in-house divisions of Aaranyak at various geographical areas in general, and the protected areas of North East India in particular. Apart from lab work, GTAD is actively involved in imparting short-term training, teaching at various academic institutions, including the training of front-line forest division staffs.



Photo - Assam Forest School, Jalukbari

Arup K. Das at Assam Forest School

## MAJOR ACHIEVEMENTS

- The division has reached out to about 750 individuals through various regular activities, including students from academic institutions, researchers and in-service forest department officials (DFOs, ACFs, FROs, Foresters and Forest Guards) from various states of India.
- Supported the Assam Forest Department by preparing different thematic maps of Manas Tiger Reserve (MTR) and shared them to the office of the Field Director, Manas National Park; different thematic maps of Amchang Wildlife Sanctuary and Pobitora Wildlife Sanctuary were shared with the office of DFO, Guwahati Wildlife Division. Moreover, a GIS-based buffer map of fire stations of Guwahati city was handed over to the office of Add. DGP fire service, Guwahati.
- Two staff members of GTAD successfully attended 21 days of free training on the Applications of open-source GIS software in different fields including Level 1 and Level 2, supported by Natural Resource Data Management System, Department of Science and Technology, Government of India, New Delhi.



Photo - Deepjyoti Bonia

Arup K. das at Central Academy for State Forest Service



Photo - Assam Forest School, Jalukbari

Kongseng Konwar at Assam Forest School

bankline shifting over decades of Majuli and Kobo chapori, land cover change of Manas National Park and Chakrashila WLS. In-addition, thematic maps of North Bengal Landscape and Brahmaputra riverine landscape of Eastern Assam was developed, wildlife roadkill on national highway along Kaziranga National Park has been mapped and different base maps of urban periphery of Guwahati city, maps of South East Asia showing possible tiger corridors and present habitats, Doomdoma forest division areas' land use/land cover changes were developed.

## STRATEGIC ACTIONS

- The GTAD team worked as guest faculty for 3<sup>rd</sup> semester students from the Department of Ecology, Environment and Sustainable Development, Tata Institute of Social Sciences, Guwahati campus and took theory and practical classes on remote sensing, GIS and GPS.
- Carried out intensive fieldwork for ground verification, GPS based data collection and preparation of LULC maps and analysis of Kobo chapori, Chalakura, Majuli and Doomdoma Forest division, Kaziranga, Jammu, and Dehradun.
- Arup Kumar Das visited the Wildlife Institute of India (WII) from 12<sup>th</sup> to 19<sup>th</sup> February 2020 for amphibian's microhabitat study and mapping and support to Dr. Abhijit Das, Scientist D, WII. Arup Das visited the field sites

*i.e.* Benog WLS in Deradhun, Mansar and Surinsar Lake in Jammu, and interacted with the researchers conducting the study.

- GTAD has prepared different thematic maps for various divisions and initiatives of Aaranyak, using satellite imageries of different time periods along with ground information. These maps include landmass change and

## SUMMARY OF IMPACT

- The staff of GTAD has imparted classes on remote sensing and GIS to 32 trainee Range Forest Officers (FROs) 2019-2020 batch, at Central Academy of State Forest Service Burnihat. The understanding of RS/ GIS will help the officers to



Photo - Assam Forest School, Jalukbari

Madhumita Borthakur at Assam Forest School



use these applications for the conservation of forest and wildlife in the states of Telengana and Maharashtra.

- Maps provided to various Divisions and Projects of Aaranyak and are being

used for a number of applications such as research, conservation, resource planning and decision making for project management and project technical report development.



Photo - GTAD, Aaranyak

The GTAD team along with the students and Faculty (Dr. Namita Brahma) of TISS Guwahati during a hands-on training on GPS in Assam State Zoo Guwahati



Photo - Dipmoni Nath

Jyotish Deka and Dr. Partha Jyoti Deka at Kobo Chapori during participatory GIS



Photo - Madhumita Borthakur

Kongseng Konwar and Minakshi Dutta reaching out to students on GIS Day Celebration in the premises of Assam State Zoo cum Botanical Garden

## ROAD AHEAD

- To develop understanding and application of synthetic-aperture radar images mainly Sentinel I to study pre and post monsoon flood inundation in Brahmaputra flood plain.
- To impart teaching and practical hands-on training on remote sensing, GIS and GPS application in various educational institutes, organisations and government departments.
- Implementing in-house capacity building activities on the use of open-source GIS and support to other divisions and initiatives of Aaranyak and other end user agencies.

### CONTACT

**Partha Jyoti Das, PhD**  
Head (In-Charge), GTAD  
(Till March 2020)

Email: partha@aaranyak.org,  
parthajdas@gmail.com  
Phone: +91 9435116558,  
9957189404

**Arup Kumar Das, M.Phil**  
Manager, GTAD

Email: arup@aaranyak.org,  
arup.aaranyak@gmail.com  
Phone: +91 7577836104



## Herpetofauna Research & Conservation Division (HRCD)



Photo - Jayanta Kr. Roy



## INTRODUCTION

The Division started working in the field in 1997 to strengthen herpetofauna research and conservation (HRCD) in the Eastern Himalayas and NE India by contributing towards inventory, taxonomy, ecological and conservation research from the Brahmaputra flood plains to alpine forests of the Himalayas. The division maintains a strong research and conservation network among researchers, scientists and institutions within India and abroad.

The prime objectives of the division are to assess and monitor herpetological diversity and distribution, assess vulnerability to species due to anthropogenic impacts, maintain a strong research and conservation network to strengthen herpetofauna conservation, understand and resolve taxonomic problems associated with herpetofauna using integrated taxonomic approaches, create awareness about the importance of herpetofauna in the environment and the need for their conservation.



Photo - Jayanta Kr. Roy

*Xenophrys sp.*

## MAJOR ACHIEVEMENTS

- Gathered two sessions of field data during May 2019 to February 2020 across the Dibang River Basin (DRB), a challenging field site in the Eastern Himalayas.
- Weather monitoring stations established across altitudes in the Dibang River Basin at strategic locations generating data since 2019.
- Highest average annual rainfall during July (400-3500 mm) across the Dibang River Basin. Areas at altitude 2500 m asl (Mayodia Pass) received highest rainfall (3500mm) in the Dibang River Basin, Arunachal Pradesh in 2019.
- Observed an oscillation in the monthly average temperature  $\pm(1-2^{\circ}\text{C})$  at different elevational zones in Dibang River Basin that may have an impact on breeding of amphibians.
- Established and operationalised a platform for interaction among young researchers, Forest Department and Idu Mishmi communities of DRB to share updates of research and understanding of communities.

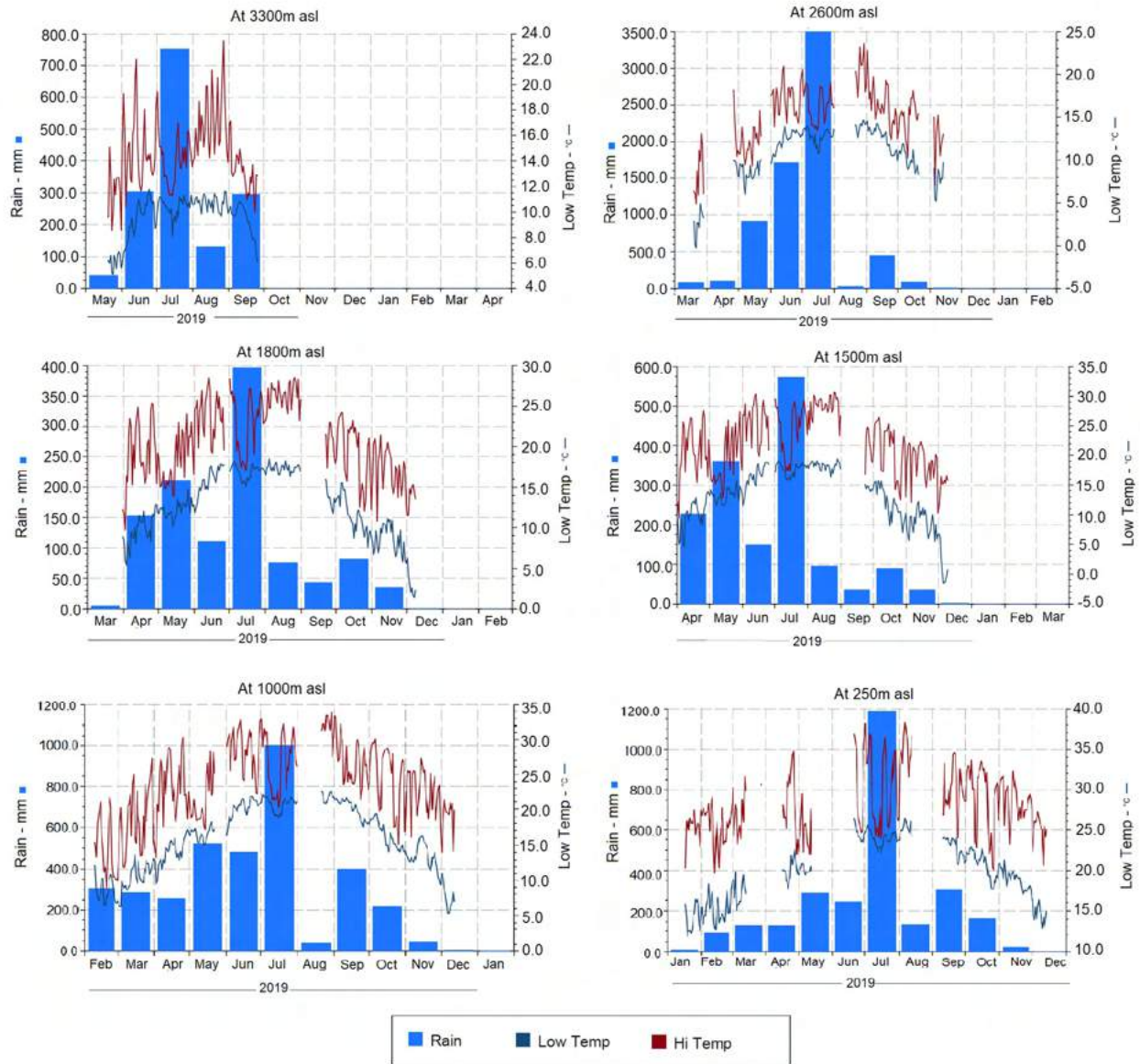


Photo - Jayanta Kr. Roy

*Philautus sp.*

## RECOGNITIONS

- Jayanta Kr. Roy, researcher from HRCD was awarded his PhD degree from the Department of Life Science and Bioinformatics, Assam University, Diphu Campus. His doctoral thesis focuses on research on amphibians, "Elevational and local influence on amphibian distribution along an altitudinal gradient in Dibang Valley, Eastern Himalayan, India"



Monthly precipitation and temperature (high and low) from altitude 250-3300 asl in the Dibang River Basin in 2019, Arunachal Pradesh, India

## STRATEGIC ACTIONS

- Preliminary acoustic survey for six amphibian species: *Nasutixalus jerdonii*, *Philautus sp1*, *Philautus sp2*, *Rhacophorus bipunctatus*, *Xenophrys sp* and *Zhangixalus smaragdinus* across Dibang River Basin.
- Derived predicted distribution models of all known amphibian species recorded



Interaction with Idu Mishmi community people during Dibang Valley Research Seminar at Anini

Photo - HRCDD, Aaranyak



across the elevational zones in the Dibang River Basin.

- Continued to contribute to amphibian taxonomy and understanding their phylogeography in Northeast Hills-Eastern Himalayas-Indo-China region.

## SUMMARY OF IMPACT

- Our research helped in understanding the change in weather conditions and its effect on distribution and abundances of amphibians in a Himalayan River Basin with high altitudinal gradients.
- Multi-year research findings from the Dibang River Basin helped in evaluating potential impacts of developmental projects on herpetofauna in the Dibang Valley, Arunachal Pradesh, India.



Field activity during amphibia acoustic survey in Dibang River Basin

Photo - HRCD, Aaranyak



Interactive session during In Dialogue - Nature, heritage & NE India Amphibians, organized by - Directorate of Museums, Govt. of Assam and Aaranyak

Photo - HRCD, Aaranyak



*Zhangixalus smaragdinus*

Photo - Jayanta Kr. Roy

## ROAD AHEAD

- Understand the role of weather on the distribution patterns of amphibian species in the Himalayan River Basin.
- Address taxonomic problems of amphibians and reptiles in the region using an integrated taxonomic approach.
- Share results of in-depth research in the Dibang River Basin among peers, policy makers and managers through scientific publications and popular articles.

### CONTACT

**M Firoz Ahmed, PhD**  
 Head, HRCD  
 Email: mfa.aaranyak@gmail.com  
 Phone: +91 9435017652

**Jayanta Kr. Roy, PhD**  
 Senior Researcher, HRCD  
 Email: roy.jayantakumar47@gmail.com  
 Phone: +91 9613332400





**Legal & Advocacy Division  
(LAD)**



Photo - LAD, Aaranyak



## INTRODUCTION

This division is one of the proactive action-oriented divisions of Aaranyak for the past two decades. LAD is primarily focused on facilitating efficient enforcement of various provisions of Wildlife (Protection) Act, 1972 and allied laws so as to increase conviction rate and ensure stringent punishment for perpetrators of wildlife crimes.

The LAD conducts legal and advocacy workshops for enforcement agencies and judicial officials to increase conviction rate for wildlife offences. It also provides inputs towards policy formulation/reform to bolster conservation and protection of wildlife and its habitats.

A key component of the division has been the K-9 dog-squad along with its highly efficient team of handlers.

## MAJOR ACHIEVEMENTS

- Four legal workshops were organised – three of them for district-level police officials and one with the BSF at its Frontier Headquarter in Guwahati.
- Four advocacy interactions were organised with villagers and Village Defense Parties' members of rhino-bearing areas in Assam.
- A workshop was organised for judicial officers on wildlife crime and trade in Golaghat in association with Assam State Legal Service Authority. Hon'ble Mr. Justice N. Kotiswar Singh, Hon'ble Mr.



Wildlife Law Orientation Workshop at BSF NE Frontier Office in Patgaon Guwahati

Photo - LAD, Aaranyak



Legal Workshop for Darrang Police

Photo - LAD, Aaranyak

Justice A.M. Bujarbarua from Gauhati High Court addressed the workshop. About 42 judicial officers from seven districts of eastern Assam participated in the workshop.

- The division provided legal orientation to over 150 frontline forest officials of Assam.

## STRATEGIC ACTIONS

- Five K-9 sniffer Dog squad were deployed to support anti-poaching operations in Kaziranga National Park,

Orang National Park and Pobitora Wildlife Sanctuary during the year. The squad of dogs has been trained to track and detect wildlife parts such as rhino horns, tiger and leopard skin and bones, bear bile, ivory and others including weapons.

- The Division in association with Darrang District Police, Mangaldoi Wildlife Division gifted rain coats, field shoes and torch lights to VDPs working in and around Orang National Park to boost their morale and efficiency. A total



Photo - MPCD, Aaranyak

Judicial officers attending the Legal Orientation Workshop at Golaghat

of 101 rain coats, 101 pairs of field shoes and torch lights were provided to 52 VDPs from the area.

- The Division in coordination with Golaghat District Police installed a few signboards by the NH37 near Kaziranga National Park (KNP) to alert vehicle drivers to reduce speed to save wild animals crossing the highway during the flood as part of advocacy for wildlife protection.
- The Division gifted two motor bikes to Darrang District Police for facilitating efficient police patrolling around Orang National Park.
- The Division gifted 30 torch lights to Numaligarh Forest Beat office.
- LAD gifted 250 pairs of field boots, 250 caps and six binoculars to the frontline forest staff at Orang National Park.



Photo - LAD, Aaranyak

Wildlife Law Orientation Workshop at BSF NE Frontier Office in Patgaon Guwahati

## SUMMARY OF IMPACT

The LAD's efforts have contributed towards enhanced rate of convictions in the wildlife crime cases and speedy disposals of such cases because of proactive role played by enforcement agencies and investigating officers who were sensitised in our workshops.

- A total of 170 BSF personnel and nearly 400 police personnel took part in these workshops.
- A workshop on "Importance of Biodiversity and Role of Law Professionals" was organized at Bishnu Ram Medhi Government Law College in Guwahati by the LAD in



association with EECBD of Aaranyak to build future environmental lawyers to cater the need of forest, wildlife and environment protection.

## ROAD AHEAD

- To hold legal workshops for police officials in different districts.
- To develop structured info-legal materials and reach out to more law enforcement agencies.
- The K-9 squad's deployment will be expanded based on the requirement of protected areas in combating designs of wildlife hunters.
- Build a pool of new generation lawyers sensitive to wildlife crimes and overall burning biodiversity conservation issues pertaining to the region.



Workshop for Judicial officers at Golaghat

Photo - LAD, Aaranyak



Legal Orientation Workshop for Judicial officers held at Golaghat

Photo - LAD, Aaranyak

### CONTACT

**Bibhab Kumar Talukdar,**  
PhD

CEO & Head, LAD

Email: [bibhab@aaranyak.org](mailto:bibhab@aaranyak.org),

[ceo.aaranyak@gmail.com](mailto:ceo.aaranyak@gmail.com)

Phone: +91 9435113139

**Manas Kr. Bhattacharjya**

Manager, LAD

E-mail: [manaskrb9@gmail.com](mailto:manaskrb9@gmail.com)

Phone: +91 9435017153

**Mr. Bijay Shankar Bora**

Consultant Documentation

E-mail: [bijayrrcd@gmail.com](mailto:bijayrrcd@gmail.com)

Phone: +91 8638229772





## Media Production & Communications Division (MPCD)



Photo - Udayan Borthakur



## INTRODUCTION

Media Production and Communications Division (MPCD) since its inception in 2018 has been undertaking multimedia tool-based documentation, production and publication on pertinent issues of biodiversity and the environment in Northeast India. MPCD works in tandem with other divisions of Aaranyak as well as other Government and non-government organisations for effective use of multimedia tools for mass communication, to promote biodiversity conservation and environmental protection in the region. The major areas of functioning of MPCD are research-based media production and publications on pertinent issues of biodiversity conservation and environment protection, support to public relations activities of Aaranyak, manpower and in-house facility development for media productions and establish relevant collaborations with organisations and individuals and work jointly towards the use of multimedia tools for mass communication.



Photo - Kukil Gogoi

Dr. Bibhuti P. Lahkar providing orientation to the journalism students of Cotton University at Manas National Park during field visit.

## MAJOR ACHIEVEMENTS

- Promotion of environmental journalism in Assam through training to journalism students of various Universities.
- Publication of “Legends of Hollongapar”, a first ever coffee-table book on Hollongapar Gibbon Wildlife Sanctuary, Assam.
- Development and maintenance of website for Asian Primate Symposium 2020 ([www.aps2020.org](http://www.aps2020.org)).
- Production of several short films on threatened species and the habitat of northeast India.
- Development of ecoNE ([www.econe.in](http://www.econe.in)), an online magazine and media platform for biodiversity and environmental issues of northeast India, which is scheduled to be launched in May 2020.

## STRATEGIC ACTIONS

- Implementation of project for the promotion of environmental journalism in Assam with support from Internew’s Earth Journalism Network (EJN). Activities under this project include training of journalism students of Cotton University, Guwahati, Tezpur University, Tezpur and Assam School of Journalism, Guwahati. In addition to this, the project supported the work of six paid interns for durations of 3 to 6 months, providing multiple story grants to



Photo - Udayan Borthakur

Participants of training for journalism students of Cotton University



Photo - Udayan Borthakur

Journalism students of Tezpur University during a field orientation trip to Nameri National Park

young journalists for the development of original stories on environmental issues of northeast India and in-house capacity building of the media unit of MPCD. The project also supported the development of an online magazine and media platform website for highlighting the issues of biodiversity and the environment of northeast India.

- A coffee-table book on the biodiversity significance of Hollongapar Gibbon Wildlife Sanctuary titled “Legends of Hollongapar” was published and released in September 2019. The printing of the book was supported by the Assam State Biodiversity Board.
- MPCD media unit contributed to the production of several short documentary films for RoundGlass Sustain, on threatened species and their habitat such as Western hoolock gibbon, stump-tailed macaque, capped langur, Greater Adjutant Stork, and

Hollongapar Gibbon Wildlife Sanctuary.

- Editing and designing of Aaranyak’s publications such as Aaranyak Annual Report 2018-19, Biannual newsletter Biolink (June 2019 issue), quarterly newsletter Naturole (April-June 2019; July-Sept. 2019).
- An in-house layout and web designing facility was developed in Aaranyak.

- Photography and video documentation of several organisational events and project activities of other divisions of Aaranyak.

## SUMMARY OF IMPACT

- Three trainings were provided for the promotion of environmental journalism to the students pursuing journalism in Assam. Developed capacity of 82 students in three Universities, which included 49 female and 64 male participants respectively, belonging to indigenous communities.
- Development of online networking with 659 members that included students as well as environmental writers and nature enthusiasts in general.
- Several short films that were produced by MPCD helped generate awareness on species and habitat conservation through various media websites as well as social media.



Photo - Udayan Borthakur

Journalism students of Assam School of Journalism during an orientation trip to Pygmy Hog Conservation Breeding Centre at Basistha, Guwahati.



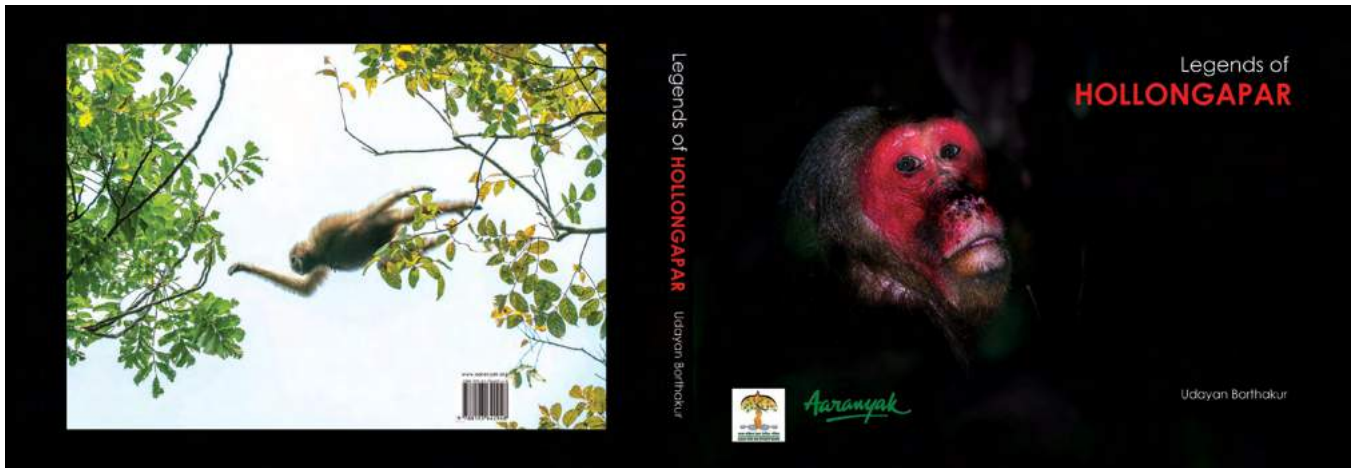


Photo - MPCD, Aaranyak

“Legends of Hollongapar” a coffee-table book on Hollongapar Gibbon Wildlife Sanctuary.

## ROAD AHEAD

- To continue promotion of environmental journalism in northeast India through training and capacity building of journalism students and young journalists, providing online media platforms to publish relevant issues, provide direct support to young journalists to develop original environmental stories.
- Production of films and publications on biodiversity and environmental issues of northeast India.



Photo - Munmita Boruah

Udayan Borthakur delivering Director’s note during screening of the film “Legends of Hollongapar” at Green Hub Film Festival, Tezpur.



Photo - Munmita Boruah

Waterbird census exercise at Pobitora Wildlife Sanctuary

### CONTACT

**Udayan Borthakur**

Head, MPCD

Email: [udayan@aaranyak.org](mailto:udayan@aaranyak.org),

[udayan.borthakur@gmail.com](mailto:udayan.borthakur@gmail.com)

Phone: +91 9435728717

**Munmita Boruah**

Manager, MPCD

Email: [munmita@aaranyak.org](mailto:munmita@aaranyak.org),

Phone: +91 8011539865



## Primate Research & Conservation Division (PRCD)



Photo - PRCD, Aaranyak



## INTRODUCTION

Primate Research and Conservation Division (PRCD), Aaranyak was launched in the year 2002, aiming at spreading awareness, research, training and conservation of the non-human primates of Northeast India. Non-human primate represents one of the major components of the biodiversity of Northeast India. This region has the highest primate diversity in the country with 12 species out of the total 27 species known in India. PRCD works in close collaboration with partner organisations, government agencies, academic institutions, local communities for the conservation of primates in Northeast India. PRCD mainly focuses on the conservation of the primates in particular and biodiversity in general in Northeast India.

## MAJOR ACHIEVEMENTS

- Successfully conducted Hoolock gibbon survey in Doomdooma Forest Division, Assam, India.
- Conducted the 10<sup>th</sup> field course on Conservation Biology and Global Health at Gibbon Conservation Centre in Hollongapar Gibbon Sanctuary, Assam, India. This is a week-long programme conducted annually.
- The World Environment Day was observed in collaboration with Digboi branch of Assam Science Society and Doomdooma Forest Department.
- International Gibbon Day was celebrated in two educational institutions.

- A three-day training programme, “APS 2020 Pre-training” was organized from 5<sup>th</sup> to 7<sup>th</sup> February, 2020 in collaboration with Gauhati University and PRC Northeast, at Scholar’s Institute of Technology and Management, Guwahati, Assam, India.
- Organized the 7<sup>th</sup> Asian Primate Symposium 2020 from 8<sup>th</sup> to 10<sup>th</sup> February 2020 in collaboration with Gauhati University and PRC Northeast at GUIST, Gauhati University, Assam, India.

## STRATEGIC ACTIONS

- Surveyed Hoolock gibbon in Doomdooma Forest Division, Assam, India covering 20 Reserve Forests.
- During the 10<sup>th</sup> Field Course on Conservation



Photo - PRCD, Aaranyak

Pre Symposium Training for 7<sup>th</sup> Asian Primate Symposium 2020





Photo - PRCD, Aaranyak

During Field Course in Conservation Biology &amp; Global Health

- In the pre symposium training of 7<sup>th</sup> Asian Primate Symposium 2020 from 5<sup>th</sup> to 7<sup>th</sup> February, a wide variety of topics related with the primatology and field works in primate study was covered.
- Organized seven plenary talks, nine oral presentation sessions and one poster presentation session as well as competition during the symposium. There was also a session of primate photography competition.

Biology and Global Health a wide range of topics were covered, such as field study methods, management and conservation strategies, wildlife conservation in Assam, primate behaviour and ecology, the human-environment interface, and translational research with the help of daily lectures, field exercises, and community outreach education.

- An awareness programme on Hoolock gibbon conservation was organized to motivate the students and teachers at Borhapanj Hindi M.E.School and Guru Teg Bahadur Academy as a part of International Gibbon Day, 2019. Painting competition was held among the students.
- On the occasion of World Environment Day, a painting competition among the students was organized at Makhyaswar Baruah L.P. School, 2 no. Tokowpathar, Pengeri, in Tinsukia district of Assam, India.



Photo - PRCD, Aaranyak

During Field Course in Conservation Biology &amp; Global Health



Photo - PRCD, Aaranyak

During Field Course in Conservation Biology &amp; Global Health





Photo - MPCD, Aaranyak

7<sup>th</sup> Asian Primate Symposium 2020

## SUMMARY OF IMPACT

- We recorded Western Hoolock Gibbons in nine Reserve Forests of Doomdooma Forest Division and Eastern Hoolock Gibbons in three Reserve Forests of Sadiya range.
- A total of 16 participants from different parts of India were trained during the 10<sup>th</sup> Field Course on Conservation Biology and Global Health.
- 150 students were reached during the awareness programme conducted on the occasion of International Gibbon Day.
- We interacted with 78 students on the occasion of World Environment Day.
- 20 trainees from South Korea, Myanmar, Nepal and India attended the pre symposium Training.
- In the 7<sup>th</sup> Asian Primate Symposium 20 countries participated. A total of 71 oral and 38 posters were

presented along with seven plenary talks. A proceeding comprising the abstracts of the presentation was published.

## ROAD AHEAD

- Extension of hoolock gibbon conservation training programme to other states of Northeast India.
- Exploration of trans-boundary areas for primate conservation.
- Re-assessment on distribution and current status of Hoolock gibbon along its distribution range.
- To formulate Hoolock gibbon action plan in Northeast India.
- Initiation of the study of Man-primate interaction.
- To conduct education and awareness programme on primates conservation.
- Publication of book on different primates of Northeast India.

### CONTACT

**Dilip Chetry, Ph.D**  
 Head, PRCD  
 Email: dilip@aaranyak.org,  
 dilip.aaranyak@gmail.com  
 Phone: +91 9435043892





**Rhino Research & Conservation Division  
(RRCD)**



Photo - RRCD, Aaranyak



## INTRODUCTION

The Rhino Research and Conservation Division (RRC D) has been in operation in Aaranyak since 1994. The division has been contributing substantially towards securing the future of Greater One Horned Rhino in Assam and other rhino-bearing areas in India. From its inception the team has worked in tandem with the Forest Department and other stakeholders in pursuing its avowed goal of protection of the rhino and its habitats.

The RRC D team has been successful in setting up working coordination with the key stakeholders in the conservation efforts such as Forest Department,

Assam Police, fringe villagers and members of Village Defense Party (VDP) under Village Defense Organisations of Assam.

## MAJOR ACHIEVEMENTS

- The RRC D has devised and successfully implemented innovative “Friends of Rhino” programme for high school students from the fringe of rhino-bearing areas in Assam with the objective of endearing the rhino to the next generation besides creating a young pool of rhino conservation workers/volunteers. Student participants were taken on Jeep Safari inside the

national parks as part of the programme.

- The division carried out 40 Rhino Goes to School (RGS) activities in schools around Kaziranga, Orang and Manas National Parks and Pobitora Wildlife Sanctuary (PWLS) in coordination with local Forest offices, civil administration and many eminent persons.

## RECOGNITIONS

- Assam Government through a notification issued on 29<sup>th</sup> August 2019 has nominated Dr. Bibhab Kumar Talukdar, CEO of Aaranyak as a member of newly constituted State Board of Wildlife.



Photo - RRC D, Aaranyak

Greater One-horned Rhino in Pabitora Wildlife Sanctuary



## STRATEGIC ACTIONS

- Dr. Bibhab Talukdar, Head, RRCD took proactive part in capture of two rhinos in Kaziranga National Park on 29<sup>th</sup> February 2020 and translocated and released in Manas NP on 1<sup>st</sup> March 2020 as part of Indian Rhino Vision 2020 team. Dr. Talukdar was also invited by West Bengal Forest Department in September 2019 to attend planning meeting on rhino capture and translocation within West Bengal at Jaldapara National Park.
- Two representatives from our constant supporter David Shepherd Wildlife Foundation (DSWF), Emily Lamb and Matt Armstrong actively participated in two RGS programmes around Kaziranga National Park in early March 2020.
- A Summer Camp for students from fringe areas of Orang

National Park (ONP) was organized in which 15-day coaching was facilitated for about 60 students of Class X with key intention to engage them in studies and seek their support for rhino conservation.

- RRCD organised a pre-flood awareness campaign with KNP authority in Burapahar

Range on June 13, 2019, with a focus to bring everyone on a common platform to work together for safety of wildlife during a probable flood situation. The meeting addressed members of Village Defense Parties (VDPs), Eco Development Committees (EDCs) and local people from Burhapahar to Silghat region.



Head of RRCD during rhino capture in Kaziranga NP

Photo - RRCD, Aaranyak



Participants attending Friends of Rhino Programme

Photo - RRCD, Aaranyak





Photo - RRCD, Aaranyak

Pre-flood awareness by RRCD Team around Kaziranga

### SUMMARY OF IMPACT

- In 2019-2020, about 4371 students from fringe villages of KNP, ONP, MNP and PWLS participated in a series of “Rhino Goes to School” and “Friends of Rhino” programmes. Numerous requests are being received from various school authorities for holding these programmes for their students.
- Sustained support to rhino bearing areas in Assam are being provided by the RRCD to increase the morale of frontline forest staffs in their tireless efforts to secure future of the rhinos in the wild.
- RRCD have been able to engage local villagers, prominent social leaders and members of VDP strategically, garnering their support for rhino conservation.

### ROAD AHEAD

- Initiate applied research to control invasive plant species in rhino bearing areas.
- Continue efforts through Rhino Goes to School and Friends of Rhinos initiatives to garner support for rhino conservation.
- In collaboration with Aaranyak’s GIS Division RRCD shall monitor flood inundated areas in rhino bearing protected areas in Assam.

**CONTACT**

**Bibhab Kumar Talukdar, Ph.D**  
 CEO & Head, RRCD  
 Email: bibhab@aaranyak.org, ceo.aaranyak@gmail.com  
 Phone: +91 9435113139

**Arif Hussain**  
 Manager, RRCD  
 Email: arif.aaranyak@gmail.com  
 Phone: +91 9854797419

**Bijay Shankar Bora**  
 Consultant Documentation  
 Email: bijayrrcd@gmail.com  
 Phone: +91 8638229772





## Tiger Research & Conservation Division (TRCD)



Photo - TRCD, Aaranyak



## INTRODUCTION

Since the inception in 2005, Tiger Research and Conservation Division (TRCD) has been working on ecological research using cutting-edge scientific investigations, community-based conservation by applying natural resource management practices, promoting environment education, providing technical support to strengthen law enforcement and generate decision-making tools to protect tigers, co-predators, their prey animals and their habitats in the conservation-dependent Protected Areas (PAs) of NE India. In 2019-2020, TRCD has conducted extensive camera trapping and other on-ground ecological and social research activities mainly in the Brahmaputra Valley and Indo-Bhutan Transboundary Manas Conservation Area (TraMCA) to generate long term data on prey and predator's ecology to support Forest Department and conservation agencies implement science-based conservation



Photo - TRCD, Aaranyak

Dr. M Firoz Ahmed, HoD, TRCD, interacting with the forest officials and NGO delegates of India and Bhutan

management practices and also positively impact the forest-dependent people living in the fringe areas of PAs. TRCD has successfully collaborated with other conservation agencies and government stakeholders in NE India to address vital conservation issues related to strengthening law enforcement, assessment of connectivity of PAs, policy intervention, and mitigating social issues through environmental education and skill development of forest fringe communities in focused areas.

## MAJOR ACHIEVEMENTS

- The decade-long annual camera trapping surveys (2010-2020) in Manas National Park (MNP) has revealed the recovery of tigers in MNP in the aftermath of ethnopolitical conflict.
- Our assessment of wild ungulates (42.66 ungulates/km<sup>2</sup>) in MNP has revealed that the status of the prey animals is optimum to support the current tiger population, but existing anthropogenic disturbances likely have a negative impact on ungulate guilds.
- Findings of the first ever extensive camera trapping in the upper Brahmaputra valleys of Assam and Arunachal Pradesh has been submitted to Forest Departments for planning and management interventions.
- Continued support to MNP authority and its mobile Law Enforcement teams at Bhuyanpara and Bansbari Ranges to strengthen



Photo - TRCD, Aaranyak

Participants of the phase IV training at Bansbari range, Manas National Park



Photo - TRCD, Aaranyak

Briefing to the participants during phase IV training in Bansbari range of Manas National Park

science-based patrol planning and implementation of law enforcement modules.

- Established Natural Resource-Based and Community-led Sustainable Forest Conservation Initiative in the Kohora River Basin of Kaziranga-Karbi Anglong Landscape.
- For the first time, we have initiated a scientific exploration of the poorly known Namdapha Flying Squirrel in the Namdapha National Park to spot and study the species.

Prof., Dept. of Life Science and Bioinformatics, Assam University (Diphu Campus) and Dr. M. Firoz Ahmed, Scientist-F, Aaranyak.

## STRATEGIC ACTIONS

- The first-ever extensive systematic camera trapping survey was conducted in the Ripu-Chirang forest complex located within the Manas Tiger Reserve (MTR).

- Conducted training for the frontline forest staff and other conservation NGOs of the MTR on camera trapping technique and Phase IV monitoring protocol.
- Ungulate survey using DISTANCE sampling has been executed on a greater scale covering the entire MTR which comprise of approximately 2600 km<sup>2</sup> area to estimate wild ungulate density and distribution.
- Engaged with Community Institutions in four Karbi villages in Kohora River Basin to promote sustainable natural resource management for livelihood and food security.
- Published our study findings in peer-reviewed journals and presented our works at national and international conferences to reach wider audiences.

## RECOGNITIONS

- Dipankar Lahkar, a senior researcher from TRCD was awarded his PhD degree from the Department of Life Science and Bioinformatics, Assam University, Diphu Campus in January 2020. His doctoral thesis focused on “Ecology of tigers in Manas National Park, Assam, India” was conducted under the supervision of Dr. R.H. Begum, Assistant

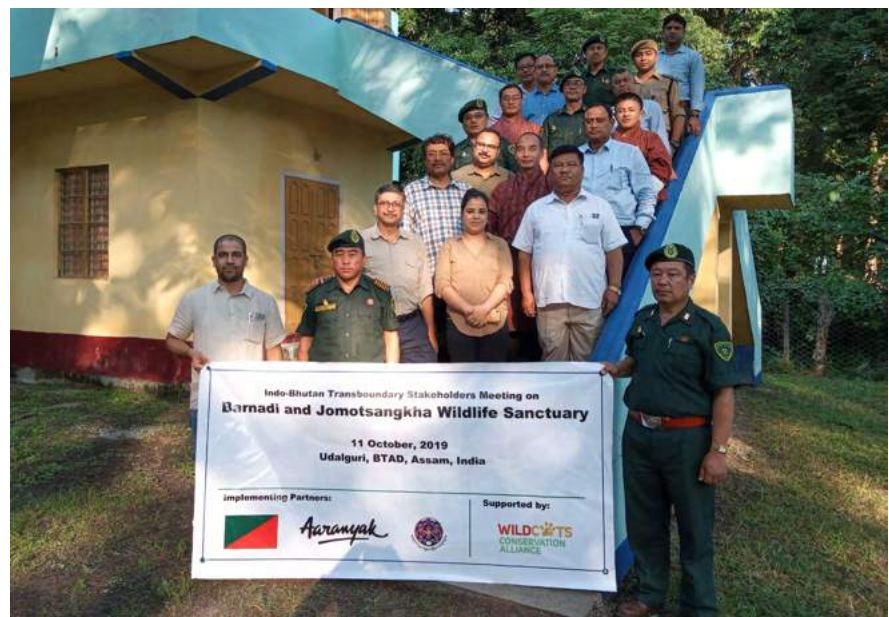


Photo - TRCD, Aaranyak

Participants of the Indo-Bhutan meeting held at Kalingduar RF





Photo - TRCD, Aaranyak

Ingnam Kengkam (*meaning* Walking in the Forest) An ecotourism initiative to explore and learn from nature.

## SUMMARY OF IMPACT

- Extensively contributed to the annual phase IV tiger monitoring exercise in MNP over an area of ~340 km<sup>2</sup> during 2019-20. The team led in data collating, processing, and analysis for a larger field team.
- Apprised senior managers on the impact of human disturbance on ungulates and predators to strengthen strategic conservation and management approaches.
- Explored potential tiger recovery sites within MTR through scientific ecological investigations.
- Undertaken multi-scale landscape-level research in MTR to examine ecological neighborhoods for prey and predators.
- Sensitised communities on participatory natural resource management and implemented sustainable forest-friendly alternative livelihood models (Eco-cultural tourism and homestead agroforestry) in four Karbi villages in Kohora River Basin.
- Completed annual monitoring of river water quality and discharge as well as vegetation sampling in the Kohora River Basin to create impact monitoring benchmarks.
- Conducted an eco-guide workshop for the Kaziranga Jeep Safari Association tour guides to build their capacity and improve the experience of the tourists visiting the park.
- of prey and predators in NE India.
- Detailed ecological investigation on the Fishing Cat in the floodplain landscape of the Brahmaputra.
- Understand the impacts of policies on community-based natural resource management in Karbi Anglong.
- Spot the Namdapha Flying Squirrel and study its ecology to strengthen its conservation and management.

## ROAD AHEAD

- Assessment of animal population, threat, habitat, and connectivity across the Indo-Bhutan Ripu-Chirang-Phibsoo transboundary forest complex.
- Investigation of the ecological and environmental variables that influence the occupancy

## CONTACT

**M Firoz Ahmed, PhD**

Head, TRCD

Email: mfa.aaranyak@gmail.com

Phone: +91 9435017652

**Dipankar Lahkar, PhD**

Manager, TRCD

Email: dipankar.lahkar@gmail.com

Phone: +91 7896427559



Photo - Jonmani Kalita



## Threatened Species Recovery Programme (TSRP)

Photo - Parag Deka





## INTRODUCTION

The Pygmy Hog Conservation Programme (PHCP) is a flagship programme of the TSRP. PHCP is a long term partnership programme of Durrell Wildlife Conservation Trust and is currently being implemented in Assam with Aaranyak as a key partner. Till 2018, the programme was guided by the IUCN Species Action Plan (SAP) 1993, prepared by the Wild Pig Specialist Group. The revised SAP has been enacted with a long term vision till 2030. The PHCP is guided by Durrell’s Rewild our World Strategy and two associated plans which map out the programme until 2025. One of the plans is for field and community activities in Manas and the second for the pygmy hog captive breeding and reintroduction programme.

## MAJOR ACHIEVEMENTS

- To achieve the programme’s vision of restoring pygmy hog population in the wild and protecting their grassland habitat for the benefit of all threatened species and local communities, detailed programme plans have been developed. The Manas Plan renewed the focus of PHCP on the recovery of grasslands and grassland obligate species. The Pygmy Hog Plan envisions establishing pygmy hog population in the entire sub-Himalayan grassland to ensure their long term survival.
- A trial of different grassland management practices in



Photo - Jonmani Kalita

Camera Trapping at Sidajhar Grassland



Photo - Amal Deka

Interacting with local communities

Manas National Park (MNP) has been initiated to design an efficient model for the same.

- An impact assessment study on effectiveness of livelihood interventions in the fringe of MNP has been concluded.
- Community actions in the

fringe villages of MNP have been initiated to identify the drivers of anthropogenic pressure on grassland habitat and to reduce the same by designing targeted and sustainable livelihood interventions.





Photo - Jonmani Kalita

Experimental plot setup

## STRATEGIC ACTIONS

- **Conservation Breeding:** A total of five pygmy hogs were born in captivity. Fourteen captive hogs were taken to pre-release for preparation and reintroduction.
- **Population Monitoring:** Fifty camera traps were deployed in the Sidhajar and Rupohi area of MNP to confirm the presence of wild pygmy hog populations. A sign survey was also conducted across MNP to find evidence of pygmy hogs.
- **Grassland Management:** Experimental plots were established for trial of different grassland management practices. The Control of the encroachment of woody species by manual ring-barking was trialed in the demonstration plot in Kuribeel. Climate data was collected by an automated weather station installed at MNP.
- **Community Intervention:** Community engagement has been initiated in consultations with local

stakeholders including the Eco Development Committees in Bansbari range of MNP. A study on the anthropogenic pressures, extraction of NTFP and the market linkages of the same was undertaken along with another study to understand the skill set of the local population.

- **Training:** Formal and hands-on trainings on grassland habitat management and monitoring of grassland species with a special emphasis on pygmy hogs were given to the frontline forest staff of the MNP and trainees of the Forest school of Assam.

## SUMMARY OF IMPACT

Captive breeding programme maintains two populations of 70 pygmy hogs, in Assam. Two individuals held for educational purposes are on display in the Assam State Zoo. A wild population of 400 pygmy hogs, of which 200 are found in MNP and the other population in Orang, which has grown from an original 50 reintroduced animals to approximately 200 individuals.



Photo - Jonmani Kalita

Installation of Weather Station at Manas





Photo - Jonmani Kalita

Pygmy hog sign survey in Manas

Population monitoring in MNP confirmed the presence of pygmy hogs in Sidhajar area and Panbari range, absence in Rupohi area and likelihood of non-existence in Kuribeel area. With a renewed focus on the recovery of grassland habitat, five sets of habitat management trials in 81 nested plots located in three different trial plots in MNP generated essential information which will be used to design best practice guidelines.

In an attempt to reduce the grassland habitat succession, interventions have been initiated in 1 sq. km. demonstration plot in MNP which will corroborate effectiveness of the practice in future. Essential climate data collected regularly at MNP will also supplement this goal. Additional data will be generated through community monitoring which will help us to understand the anthropogenic pressures in MNP, determining its drivers and impacts.

The study to assess the effectiveness of livelihood interventions undertaken by different civil societies and conservation organizations in the past to decrease the livelihood dependency on MNP also generated valuable information. These will be used to design long-term community engagement plan to reduce the pressure on the grassland.

### ROAD AHEAD

- Reintroduction of pygmy hogs in Rupohi area in MNP.
- Conservation breeding and preparation of hogs in pre-release for future reintroduction.
- Monitoring of wild pygmy hog population in MNP and reintroduce-established population in ONP through sign survey and camera trapping.

- Grassland habitat management research and demonstration in MNP.
- Community interventions through working with EDC and community volunteers in the fringe villages of MNP.



Photo - Parag Deka

An adult female pygmy hog

### CONTACT

**Parag Jyoti Deka, BVSc**  
 Project Director, PHCP  
 Project Manager, TSRP  
 Email: [paragdeka@gmail.com](mailto:paragdeka@gmail.com),  
[parag.deka@durrell.org](mailto:parag.deka@durrell.org)  
 Phone: +91 9435016246,  
 +91 8638569163

**Saljagrangrang R. Marak, BVSc**  
 Project Officer, TSRP  
 Email: [friangchi@gmail.com](mailto:friangchi@gmail.com)  
 Phone: +91 8729963573





## Water, Climate and Hazard (WATCH) Division



Photo - WATCH, Aaranyak



## INTRODUCTION

Established in 2001, the Water, Climate and Hazard Division (WATCH) has evolved with several names and thematic mandates over the last 19 years. It addresses issues in water resources (water governance, river management, wetland management, aquatic ecosystems, water management practices, water conflict, water quality, transboundary waters, gender and water, water and culture); climate change (hydrometeorology, impact, vulnerability, mitigation, adaptation and resilience, renewable energy); disaster (hydrometeorological, tectonic and biological disaster; disaster risk management); environmental governance (law, institution, policy, EIA); water based livelihoods, environmental migration, natural resources management and sustainable development goals. The geographical area of interest of this Division is the Ganga-Brahmaputra-Meghna basin in South Asia.



Photo - MPCD, Aaranyak

An interactive session during the “Mainstreaming gender in water governance in the Brahmaputra river basin, Assam: A Consultation on Women and Water”, April 29 and 30, 2019 at the Indian Institute of Bank Management (IIBM), Guwahati

## MAJOR ACHIEVEMENTS

We created three networks for promoting water governance with three specific groups of stakeholders viz.

- ‘Gender Network on Water Governance for the Brahmaputra River Basin, Assam’ (GEN-WAGNET)
- CSO network on water governance for Central

Brahmaputra River Basin, Assam (CSO WAGNET)

- Youth Network on Water Governance (Youth WAGNET) in Brahmaputra River Basin-Assam (BRBA).

Besides, Dr. Partha J. Das guided two students of the Department of Policy Studies, TERI School of Advanced Studies, New Delhi in carrying out their minor projects and one of them in her major project in partial fulfillment of MA Degree in sustainable development practice.



Photo - MPCD, Aaranyak

Inaugural session of the consultation on ‘Mainstreaming gender in water governance’

## STRATEGIC ACTIONS

- Completed the assigned modules of the project ‘Transboundary Rivers of South Asia (TROSA) - India country project’ funded by Oxfam India
- Completed the project ‘Community resilience to water induced disasters and climate change: A study and documentation of good



Photo - WATCH, Aaranyak

An environmental game going on in the 'Consultative Workshop on Empowering youth action for good water governance in the Brahmaputra River Basin in Assam, India' on June 25 - 27, 2019 at Majuli, Assam

practices in selected river islands of the Brahmaputra River Basin, Assam' funded by the Global Water Partnership-South Asia.

- Completed an assignment on 'citizen science-based approach' to assessing water quality as part of the project 'Low-cost Innovative

Technology for water quality monitoring and water resources management for Urban and rural water Systems in India' (LOTUS) funded by European Union and DST, Gol, as a partner to IIT Guwahati.

- Continued implementing an in-house project on 'Research

and Documentation of issues (vulnerability, risk, impact, adaptation, resilience, governance) of rivers, water, riverine people and aquatic ecosystems in the Eastern Himalayan and Northeast Indian landscape' (in Program Mode) extending work to Bihpuria Circle, Lakhimpur District and Majuli District

- Dr. Partha J Das was featured in a video film directed by Mr. Nachiket Pangare of Bangkok, Thailand in which Dr. Das spoke about his experience of working on various transboundary aspects of the Brahmaputra River as part of the Brahmaputra Dialogue process led by IIT Guwahati.

## SUMMARY OF IMPACT

About 2000 people gained information and knowledge on various aspects of water



Photo - WATCH, Aaranyak

Participants pose for a group photo during the "Consultation on capacity building and networking of CSOs in the Central Brahmaputra River Basin, Assam around water governance", organised by Aaranyak in association with Oxfam India and Nowgong Girls' College at the Conference Hall of Nowgong Girls' College, Nagaon, Assam on May 15 and 16, 2019





Photo -WATCH, Aaranyak

Focus Group Discussion with a section of villagers in the Chalakura Char, Dhubri District in August 2019

## ROAD AHEAD

- Initiate a study on ecological health of selected degraded rivers of Assam.
- Launch a comprehensive study on cause-impact-management (CIM) of flood, flash floods and bank erosion in the Brahmaputra River Basin, Assam.
- Carry out an updated assessment of climate change scenario in the context of water induced disasters in NE India.

governance by participating in our events, programmes, projects and campaigns. Out of these beneficiaries, about 1050 were women and 950 were men. We helped 25 CSOs from different districts of Assam in addressing local water governance issues. We trained staff of two NGOs in designing and implementing field methods on water governance. Moreover, 20 officials of Government of Assam were sensitized about policy gaps and recommendations in the field of water governance in Assam. The youth network on water formed in Majuli is working actively on information dissemination.



Photo -WATCH, Aaranyak

Participatory mapping in Majuli in June 2019

## CONTACT

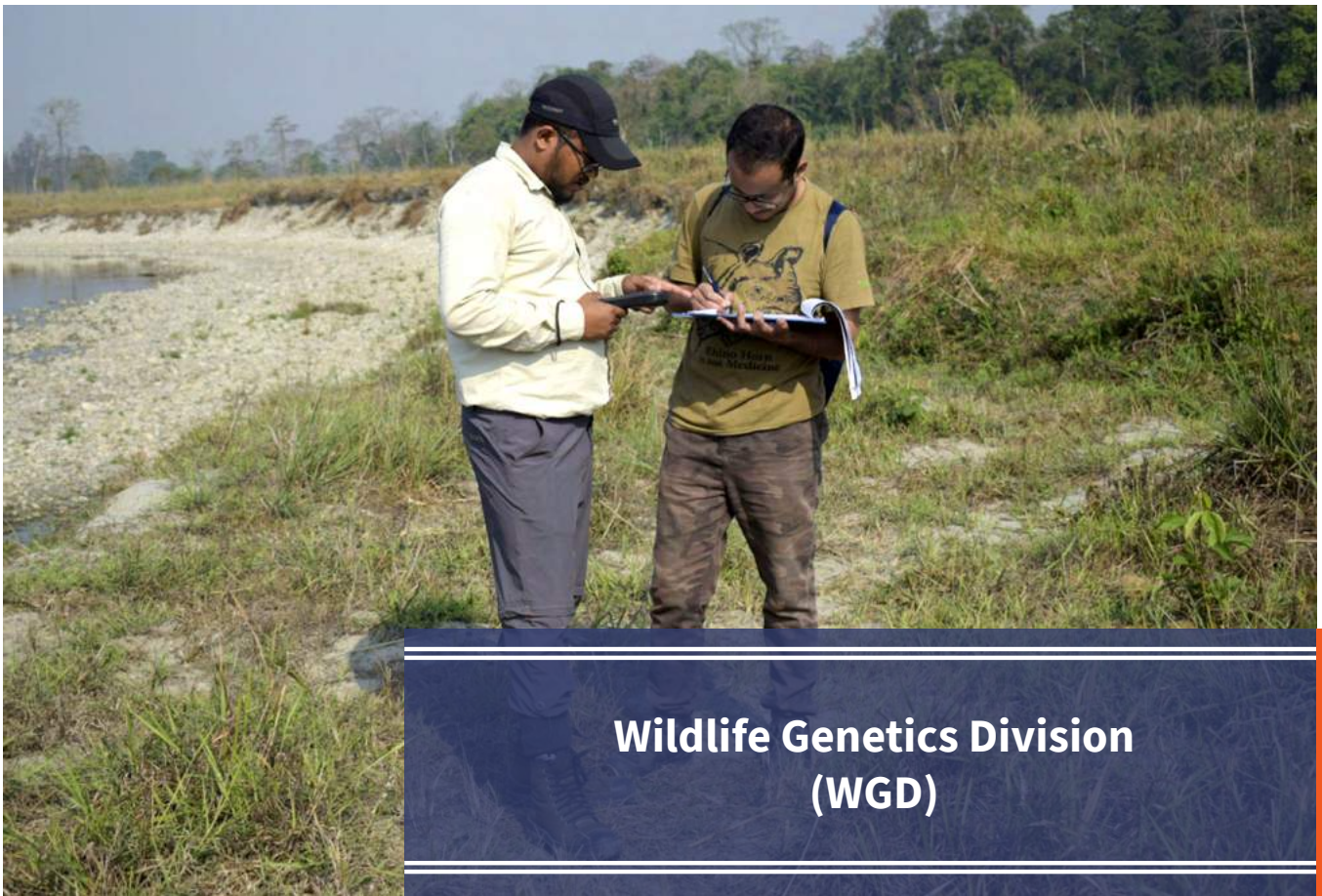
**Partha Jyoti Das, Ph.D.**

Head, WATCH Division

Email: [partha@aaranyak.org](mailto:partha@aaranyak.org),  
[parthajdas@gmail.com](mailto:parthajdas@gmail.com)

Mobile: +91 9435116558,  
+91 9957189404





## Wildlife Genetics Division (WGD)



Photo - WGD, Aaranyak



## INTRODUCTION

The Wildlife Genetics Division (WGD) since its establishment in 2008 has been undertaking research activities in the field of conservation genetics and Wildlife DNA Forensics in India and abroad. The Wildlife Genetics Laboratory (WGL) which is core to the functioning of WGD is one of a kind molecular biology facility in Northeast India working dedicatedly to address pressing issues of wildlife conservation through genetic studies. The WGD has worked to genetically monitor populations of threatened species such as tiger, leopard, greater one-horned rhino, elephant, snow leopard, white-cheeked macaque, White-bellied Heron and also providing DNA forensic analysis support to the Assam Forest Department.

## MAJOR ACHIEVEMENTS

- Assistance to Assam Forest Department in Wildlife DNA Forensic cases involving species identification and forensic matching of evidence with crime scene through DNA fingerprinting.
- Hands on training of frontline staff of Forest Department on collection of biological samples for DNA forensic analysis.
- Ecological and genetic monitoring of leopards in Northern districts of West Bengal covering seven protected areas as well as landscapes dominated by human being.
- Genetic status of Critically Endangered bird White-

bellied Heron in Bhutan was assessed in a collaborative study with Royal Society for Protection of Nature (RSPN), Bhutan.

## STRATEGIC ACTIONS

- Forensic DNA analysis support was given to the Assam Forest Department in cases related to wildlife crime. These include,
  1. Establishment of crime through matching rhino horn and other body parts seized from suspected offenders using DNA fingerprinting.
  2. Identification of species of morphologically indistinguishable samples such as processed meat, nails, bones, egg shell



Photo - WGD, Aaranyak

White-cheeked macaque, one of the study species of primate phylogeny work in Arunachal Pradesh undertaken at WGL.





Photo - WGD, Aaranyak

WGD researcher conducting questionnaire survey for assessment of human-leopard conflict situation in North Bengal

*etc.*, seized by the Forest Department.

- Study on assessment of genetic status of the Critically Endangered White-bellied Heron in Bhutan was completed in collaboration with RSPN, Bhutan.
- Second phase of a study on leopard ecology is in progress in the North Bengal. The phase II of the project aims to estimate the population size of leopard, its association with prey and formulate policy guidelines and management suggestions to conserve the leopard population of North Bengal and address increased human-leopard conflict



Photo - WGD, Aaranyak

WGD researcher conducting questionnaire survey for assessment of human-leopard conflict situation in North Bengal





Photo - WGD, Aaranyak

WGD team conducting sign survey in Senchal National Park, West Bengal

through establishing link between offenders to the scene of crime. Our support has assisted the agencies in various cases pertaining to species such as tiger, leopard, elephant, greater one-horned rhino, and deer species in Assam.

- The study involving White-bellied Heron in Bhutan carried out by WGD in collaboration with RSPN is first ever study to assess the genetic status of this Critically Endangered species as no genetic data was previously available on the species.

situations in North Bengal effectively.

- Phylogenetic relationship of macaques with special reference to white-cheeked macaque found in Arunachal Pradesh is under investigation.

### SUMMARY OF IMPACT

- The continued forensic DNA analysis support provided by WGD has helped Forest Department and other law enforcement agencies in wildlife crime investigations



Photo - WGD, Aaranyak

WGD team conducting sign survey in Jaldapara National Park, West Bengal

### CONTACT

**Udayan Borthakur**

Scientist E

Head, WGD

Email: [udayan@aaranyak.org](mailto:udayan@aaranyak.org), [udayan.borthakur@gmail.com](mailto:udayan.borthakur@gmail.com)

Tel: +91 9435728717

**Pranjal Kumar Das**

Manager, WGD

Email: [pranjal@aaranyak.org](mailto:pranjal@aaranyak.org), [kdpranjal@gmail.com](mailto:kdpranjal@gmail.com)

Tel: +91 9435704611



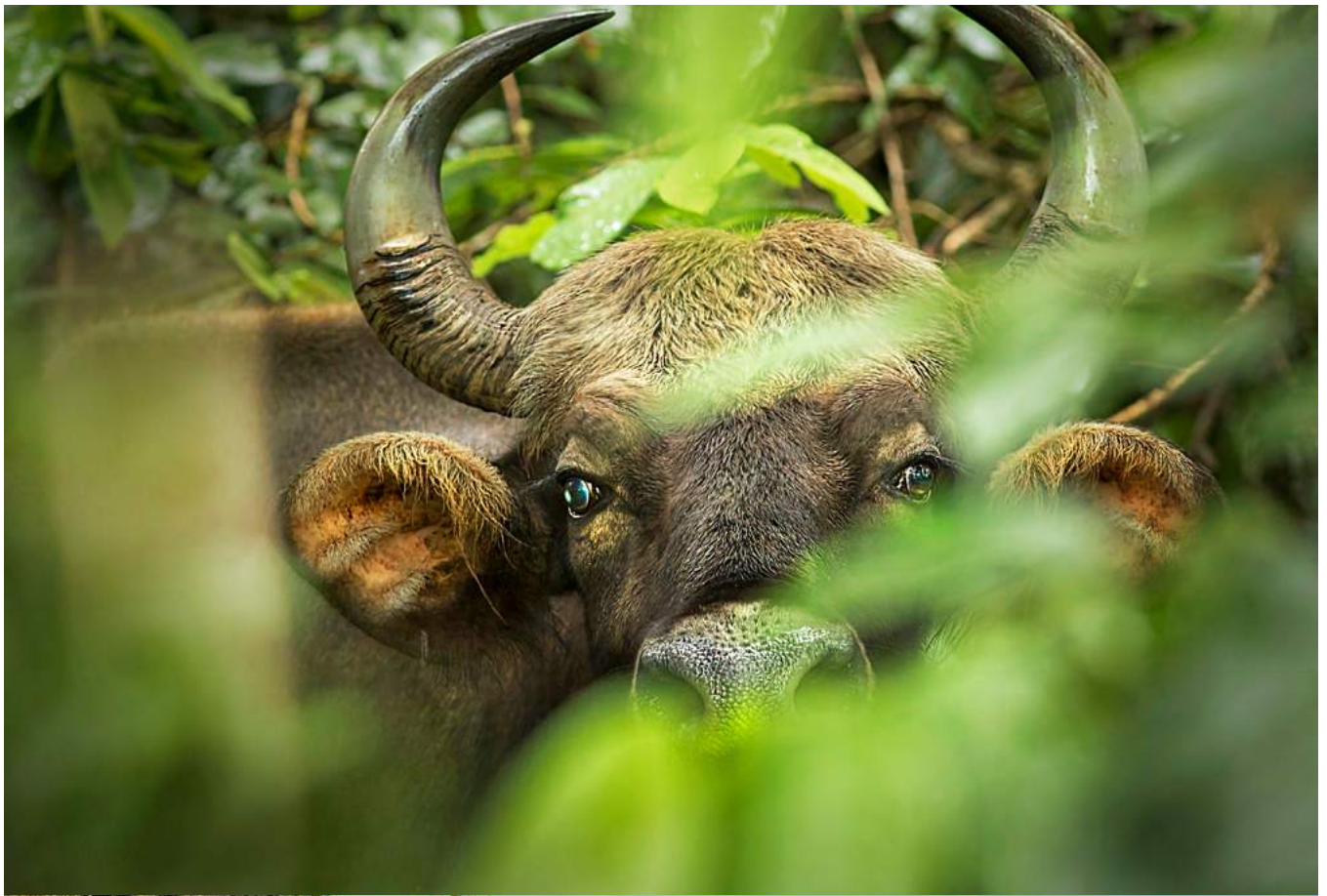


Photo - Avijan Saha

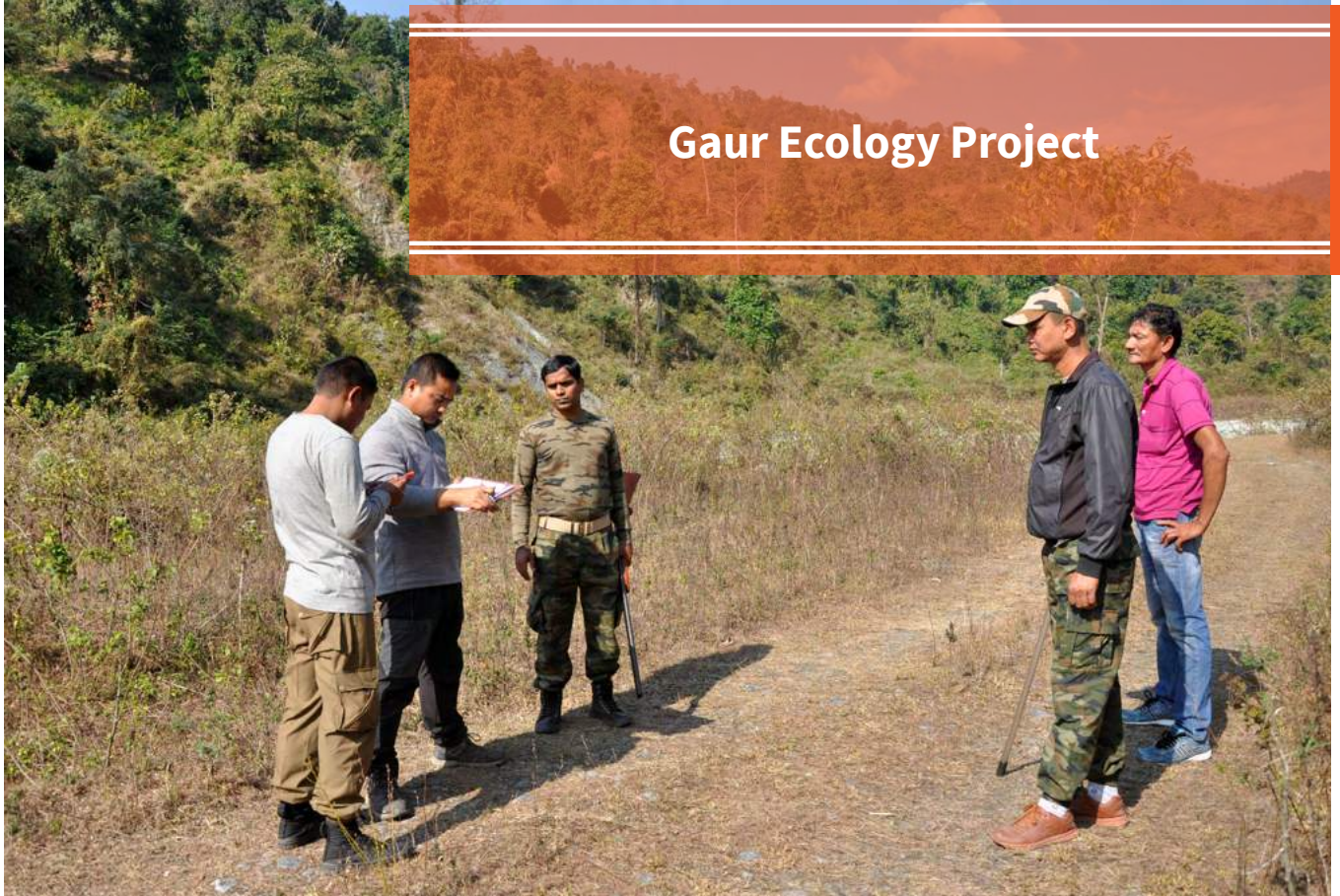


Photo - GEP, Aaranyak



## INTRODUCTION

The Gaur *Bos gaurus* is distributed across India, in four major geographic areas. The northeast India population is distributed along the Himalayan foothills from Narayani river through north Bengal to all the northeastern states. We focused on the gaur subpopulation of the northern West Bengal, as a part of the West Bengal Forest and Biodiversity Conservation Project funded to investigate the distribution pattern, population dynamics, resource utilization and human-gaur conflict pattern in the landscape. The primary goal of the project was to gather ecological information so as to aid in drafting a pragmatic management plan for the species.



Photo - Avijan Saha

A sub-adult gaur



Photo - GEP, Aaranyak

During vegetation sampling in northern West Bengal forests





Photo - GEP, Aaranyak

A herd of Indian Gaur

## MAJOR ACHIEVEMENTS

- An assessment of population abundance of gaurs using DISTANCE sampling method indicated a population size of approximately  $3962 \pm 680$  gaurs ( $\pm$  SE) across the landscape. Further, protected area-wise assessment reported that Buxa Tiger Reserve has the highest population,  $1421 \pm 221.4$  ( $\pm$  SE).
- The gaurs have a preference for semievergreen forests among all the habitat types, using this habitat type more than its availability.
- Human-gaur conflict across the landscape comprised

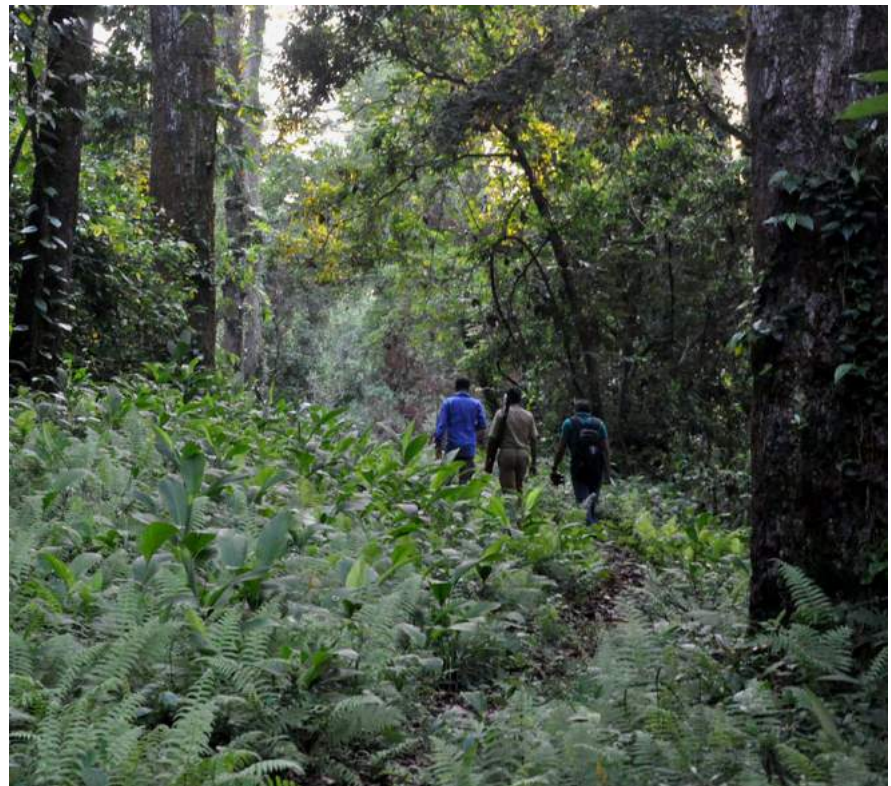


Photo - GEP, Aaranyak

During a field survey in the forests of northern West Bengal



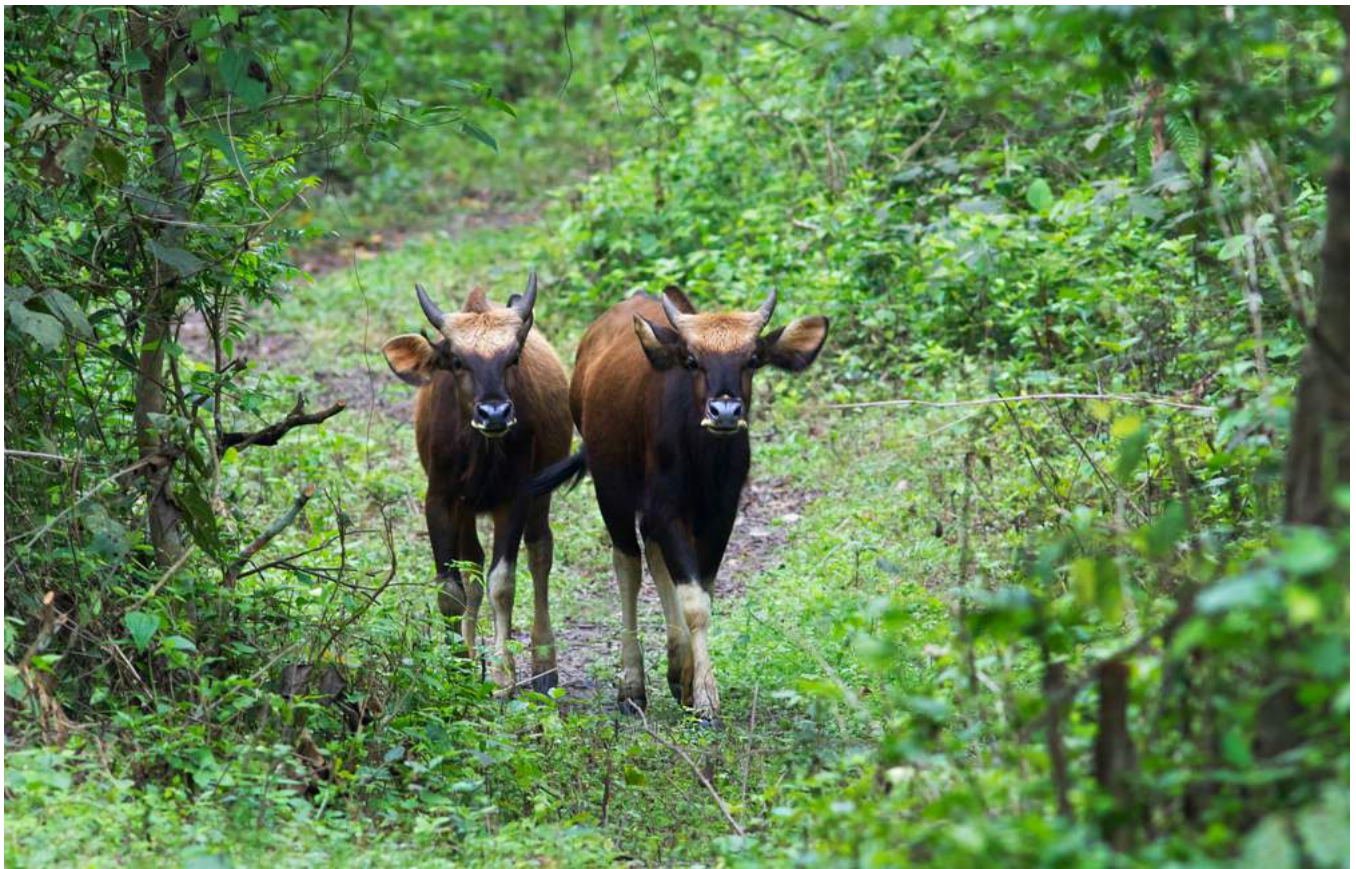


Photo - Avijan Saha

Two young gaurs in the forest of northern West Bengal

mostly in the form of gaur straying-out from forested areas to human-use lands, and crop damages. Few incidents of human injuries and human deaths were also reported.

### STRATEGIC ACTIONS

Ecological studies on gaurs were limited from northern West Bengal landscape, which harbours a healthy gaur population. As a result, site-specific conservation strategies to safeguard the species were lacking. This work, on generating ecological information was taken-up to inform the managers based on scientific studies. This project has generated protected area wise population estimates, and

at broader scale the habitat use pattern by gaur in the landscape. The human-gaur conflict pattern has also been investigated to gain an understanding on the interaction. The landscape is human-dominated, with small and fragmented forested areas. This study has helped understand the current status of gaur in the landscape, which will be useful in drafting the management plan for the species for the landscape.

### SUMMARY OF IMPACT

This project was conducted with the sole aim of drafting a pragmatic management plan for the species in the landscape based on scientific information. We have finished the data collection and analysis and

currently concentrating on drafting the final report. The study findings will be used in preparing the management plan.

### ROAD AHEAD

This was a three-year project, which ended this year. As of now, we do not have any plans to continue the work.

#### CONTACT

**Bibhuti Prasad Lahkar, PhD**

Head, ERCD

Email: [bplahkar@gmail.com](mailto:bplahkar@gmail.com),

[bibhuti@aaranyak.org](mailto:bibhuti@aaranyak.org)

Phone: +91 9435017687





## Hog Deer Conservation Project



Photo - HDCP, Aaranyak



## INTRODUCTION

The hog deer is an Endangered species, that occurs in South and Southeast Asia. Primarily, due to habitat loss and hunting the hog deer population are on the global decline. Nonetheless, currently, Assam is one of the strongholds of hog deer population in South Asia where most of the populations are concentrated in the protected areas. But there is a lack of information on the species' distribution and site-specific extant threats, from northeast India, particularly from the non-protected areas. Through the hog deer conservation project, we aim at understanding the species-habitat relationship and identify the extant site-specific threats by conducting surveys, community engagement, and networking.



Photo - HDCP, Aaranyak

A researcher during line transect sampling from elephant back in the grassland habitat of Manas National Park.



Photo - Alolika Sinha

A hog deer in its grassland habitat





Photo - HDCP, Aaranyak

During a social survey in Tripura

## MAJOR ACHIEVEMENTS

- Research studies on hog deer indicated that it needs undisturbed habitats with a mosaic of tall and short grasslands for their survival.
- In protected areas such as Manas, for long-term conservation of hog deer, proper habitat management by controlling alien invasive plants, implementing a systematic fire regime and reducing human disturbances are essential.
- The threats in the non-protected areas include rampant hunting, and loss of habitats.

## STRATEGIC ACTIONS

The landscape-wide surveys undertaken in Assam and Tripura helped in identifying the hog-deer bearing areas. In the Protected Areas such as Manas National Park, habitat degradation is the main threat. Habitat enrichment activities were undertaken to secure habitat-specialist species such as the hog deer and other grassland dependent species. Given, that a sizeable population of hog deer occurs beyond the Protected Areas of Assam, a volunteer network is planned to be formed to aid in collecting information and undertaking on-ground action-based tasks to

protect the species. Moreover, networking with specialist groups to disseminate information were undertaken.

## SUMMARY OF IMPACT

The information generated through the projects were shared with IUCN SSC group to augment the existing information on the species on the Red List. Population abundance estimation exercise using robust scientific methods generated the baseline information on hog deer in Manas National Park, which will aid in making informed conservation decision. A scientific article was published in a peer reviewed journal for wider reach.





Photo - HDCP, Aaranyak

A researcher during survey in eastern part of Manas Tiger Reserve

## ROAD AHEAD

- Ensuring the long -term persistence of hog deer in the region through action-based conservation intervention and community participation.
- Form a volunteer network to monitor the hog deer population in non-protected areas.
- Develop a site-specific action plan for hog deer conservation in Manas National Park in collaboration with Threatened Species Recovery Programme and Elephant Research and Conservation Division.

### CONTACT

**Alolika Sinha**

Principal Investigator, Hog Deer Project

Email: [alolika@aaranyak.org](mailto:alolika@aaranyak.org),  
[sinha.alolika@gmail.com](mailto:sinha.alolika@gmail.com)

Phone: +91 9435021312



## SEMINARS AND CONFERENCES ATTENDED BY AARANYAK STAFF

- **Alolika Sinha** attended the 29<sup>th</sup> “International Congress for Conservation Biology (ICCB), 2019” organised by Society for Conservation Biology from 21<sup>st</sup> to 25<sup>th</sup> July 2019 at Kuala Lumpur Convention Centre, Kuala Lumpur, Malaysia and presented “Conserving the endangered hog deer (*Axis porcinus*) in Manas National Park, India”.
- **Aparajita Singh** attended “Student Conference on Conservation Science (SCCS), Bengaluru” organised by Foundation for Ecological Security (FES), Indian Institute of Science (IISc), National Centre for Biological Sciences (NCBS) and Nature Conservation Foundation (NCF) India from 15<sup>th</sup> to 18<sup>th</sup> October 2019 at Indian Institute of Science, Bangalore and presented “Understanding mammalian diversity and their response to anthropogenic threats in Indo-Bhutan Barnadi-Jomotsangkha Forest Complex”.
- **Arup Kumar Das** attended “Regional Research Conference for North Eastern States” organised by Rain forest research institute Jorhat, Assam on 4<sup>th</sup> November 2019 at NEDFI Centre, Guwahati.
- **Dr. Dipankar Lahkar** attended 29<sup>th</sup> “International Conference on Conservation Biology (ICCB) 2019 organised by Society for Conservation Biology from 21<sup>st</sup> to 25<sup>th</sup> July 2019 at Kuala Lumpur Convention Centre, Kuala Lumpur, Malaysia and presented “Tiger recovery in the aftermath of ethno-political conflict in Manas, India”.
- **Dr. Dilip Chetry** attended “International Workshop on Conservation of flagship species and their habitats in Hindu Kush Himalaya region” organised by ICIMOD & Chengdu Institute of Biology, Chinese Academy of Sciences from 28<sup>th</sup> to 31<sup>st</sup> August 2019 at Brilliance Garden Hotel, Chengdu, China and presented on “Status of Gibbon Conservation in India”.
- **Dr. Jayanta Kr. Roy** and **Mr. Sourav Gupta** attended “Dibang Research Seminar: Initiating dialogue between Idu Mishmi and Research Scholars” organised by Humanities and Social Sciences, IIT Gandhinagar, Gujarat from 10<sup>th</sup> to 12<sup>th</sup> December 2019 at Anini Circuit House, Dibang Valley, Arunachal Pradesh and presented “Interaction between researcher and Idu Mishmi local community members”.
- **Kongseng Konwar** and **Mr. Bankim Baruah** attended “National seminar on Science, Society and Sustainable Development (SSS-19)” organised by Science departments under DBT star



college scheme and advance level biotech hub, Jawaharlal Nehru College, Boko, Kamrup, Assam on 3<sup>rd</sup> and 4<sup>th</sup> May 2019 at Jawaharlal Nehru College, Boko, Kamrup, Assam and presented “A study of urban sprawl in Guwahati city and consequent changes in the landscape using Remote sensing and GIS”.

- **Madhumita Borthakur** attended “A Consultation on Women and Water” organised by Aaranyak, Oxfam, in association with NERSWN, Kokrajhar, Assam; PAD, Lakhimpur, Assam and GDS, Lucknow, Uttar Pradesh on 29<sup>th</sup> and 30<sup>th</sup> April 2019 at Indian Institute of Bank Management, Khanapara, Guwahati.
- **Dr. M Firoz Ahmed** attended 29<sup>th</sup> “International Conference on Conservation Biology (ICCB) 2019 organised by Society for Conservation Biology from 21<sup>st</sup> to 25<sup>th</sup> July 2019 at Kuala Lumpur Convention Centre, Kuala Lumpur, Malaysia.
- **Dr. M Firoz Ahmed** and **Dr. J. K. Sarma** attended a National Conference on “River of The People, River Against the People: Conceptualizing Livelihood, Identity & Society of Assam Through the Brahmaputra” organised by Centre for North East Studies and Policy Research, JMI on 23<sup>rd</sup> and 24<sup>th</sup> September 2019 at Jamia Millia Islamia University, New Delhi.
- **Minakshi Dutta** attended a pre symposium on “SAR Data (Microwave) Processing & Application” organised by North Eastern Space Application center (NESAC), Department of Space, Government of India, Umium, Shillong, Meghalaya on 18<sup>th</sup> and 19<sup>th</sup> 2019 at NESAC, Umium, Shillong.
- **Minakshi Dutta** and **Kongseng Konwar** attended “Role of Geospatial Technologies in the Development of North Eastern Region of India” organised by Association of Geospatial Industries (AGI) and North-East Hill University (NEHU) on 27<sup>th</sup> and 28<sup>th</sup> November 2019 at Multi-Use Convention hall, North-Eastern Hill University NEHU, Shillong, Meghalaya and presented “Land use/ land cover change analysis in selected areas of North East India”.
- **Dr. Partha J Das** attended a “Seminar on Working together at the intersection of energy and development in climate vulnerable areas” organised by World Resources Institute India on 2<sup>nd</sup> May 2019 at Hotel Gateway Grandeur, Guwahati, India.
- **Dr. Partha J Das** attended “Inclusive Water Governance: TROSA Annual Learning Forum (ALF)” organised by Oxfam India from 21<sup>st</sup> to 23<sup>rd</sup> August 2019 at TERI School of Advanced Studies, New Delhi and the Grand Vasantkunj, New Delhi and presented on “Community Action Network around Water Governance (CAN-WAG): A TROSA Initiative in India”
- **Dr. Partha J Das** attended “Water Talk Series 2019: The Discourse of Flood and Drought in India – The Question of Life, Livelihood and Environment” organised by Students and Alumni of ‘Centre for Water Policy, Regulation and Governance’ in partnership with the RRA network on 7<sup>th</sup> September 2019 at Tata Institute of Social Sciences, Mumbai and presented on “Floods in Northeast India: A case in the Brahmaputra River Basin, India Assam: An Overview’- Cause, consequence and response”.
- **Dr. Partha J Das** attended “National conference on ‘River of the People, River against the People: Conceptualizing livelihood, identity & society of Assam through the Brahmaputra” organised by Centre for North East Studies and Policy Research, Jamia Millia Islamia, New Delhi on 23<sup>rd</sup> and 24<sup>th</sup> September 2019 at Centre for North East Studies and Policy Research, Jamia Millia Islamia, New Delhi and presented “Adapting to Water and Climate induced hazards in the Brahmaputra

River basin, Assam: Need to improve policy regime”.

- **Dr. Partha J Das** attended “6<sup>th</sup> India Water Week-2019: Panel Discussion-7 on ‘Re-orienting the Water Education to Address the Water-Related Challenges’ organised by Department of Jal Shakti, Government of India on 24<sup>th</sup> September 2019 at Vigyan Bhawan, New Delhi and presented on “Need of holistic water education for sustainable development: Perspectives from the North-Eastern Region of India”.
- **Dr. Partha J Das** attended “National Conference Towards Water Federalism 2.0 - Perspectives from the Ganga and Brahmaputra river basins” organised by Hanns Seidel-Stiftung India & Asian Confluence on 27<sup>th</sup> September 2019 at India International Centre, New Delhi and presented on “Water federalism: Issues in the Brahmaputra river basin in India”.
- **Dr. Partha J Das** was invited by Panthataru Sanrakhyani, Nagaon for a talk on 13<sup>th</sup> October 2019 organised at Jasingfa Aquatourism Centre, Mahrol, Dimoruguri, Nagaon and presented “Towards a citizens’ charter on rejuvenation and sustainable management of River Kolong”
- **Dr. Partha J Das** attended “12<sup>th</sup> All India Conference on Chinese Studies” organised by Institute of Chinese Studies and OP Jindal Global University from 8<sup>th</sup> to 10<sup>th</sup> November 2019 at OP Jindal Global University, Sonipat, Haryana and presented on “Brahmaputra River in South Asia: Need of adaptive hydro diplomacy for effective trans boundary water cooperation”.
- **Prosenjit Sheel** attended “World Ranger Congress 2019” organised by International Ranger Federation and Government of Nepal from 11<sup>th</sup> to 17<sup>th</sup> November 2019 at Chitwa, Nepal and presented “Improving Security and Protection in Bhuyanpara Range, Manas National Park by Manas Tigers- a Mobile Patrolling Team”.
- **Dr. Purnima Devi Barman** attended the 29<sup>th</sup> “International Congress for Conservation Biology (ICCB) 2019” organised by Society for Conservation Biology from 21<sup>st</sup> to 25<sup>th</sup> July 2019 at Kuala Lumpur Convention Centre, Kuala Lumpur, Malaysia and presented talks on “How to grow your project impact, measure it, and still do what you love” and “Diversity of Science”. This side events were organised by Whitley Fund for Nature at the ICCB 2019.
- **Dr. Purnima Devi Barman** attended “Eastern Himalayan Natureconomics Forum” organised by Balipara Foundation on 5<sup>th</sup> November 2019 where a film by Cornell University on Greater Adjutant Stork was screened, “Methods to bring together communities to safeguard the wildlife of Eastern Himalayas”.
- **Rubul Tanti** attended “Student Conference for Conservation Science 2019” organised by jointly by Foundation for Ecological Security (FES), Indian Institute of Science (IISc), National Centre for Biological Sciences (NCBS) and Nature Conservation Foundation (NCF)-India from 15<sup>th</sup> to 18<sup>th</sup> October 2019 at Indian Institute of Science, Bangalore and presented “People’s perception on Elephant corridor and Conservation in eastern Assam”.
- **Sarlongjon Teron** attended “7<sup>th</sup> India Biodiversity meet 2019” organised by Agricultural and Ecological Research Unit, Indian Statistical Institute, Kolkata from 19<sup>th</sup> to 21<sup>st</sup> November 2019 at ISI, Kolkata and presented on “Non-timber forest product (NTFP) for livelihood security of forest-dependent community - A case study of Kohora river basin, Karbi Anglong, Assam”.



## TRAININGS AND WORKSHOPS ATTENDED BY AARANYAK STAFF

- **Arup Kumar Das** attended “Refresher course for in-service DFOs and ACFs of various Indian states organised by Central Academy for State Forest Service, Directorate of Forest Education, Ministry of Environment, Forest and Climate Change, Government of India on 27<sup>th</sup> June 2019 at Central Academy for State Forest Service, Burnihat and presented “Application of Geospatial Technology in forestry and wildlife research and conservation”.
- **Arup Kumar Das** attended a workshop, “Augmenting writing skill for Articulating Research” organised by Gauhati University on 9<sup>th</sup> July 2019 at Phanidhar Dutta Seminar Hall, administrative Complex, Gauhati University.
- **Arup Kumar Das** attended a workshop, “Workshop on Geospatial Technology for Faculty Members” organised by Martin Luther Christian University, Nongrah, Shillong, Meghalaya on 8<sup>th</sup> August 2019 at Seminar hall, Martin Luther Christian University, Nongrah, Shillong and presented “Geographic indicator and community knowledge”.
- **Arup Kumar Das** attended “Refresher course for in-service DFOs, ACFs & FROs of various Indian states” organised by Central Academy for State Forest Service, Directorate of Forest Education, Ministry of Environment, Forest and Climate Change, Government of India on 13<sup>th</sup> August 2019 at Central Academy for State Forest Service, Burnihat and presented “Application of Geospatial Technology in forestry and wildlife research and conservation”.
- **Arup Kumar Das** and **Jyotish Ranjan Deka** attended “Consultation Workshop” organised by Ashoka Trust for Research in Ecology and the Environment and Aaranyak on 16<sup>th</sup> October 2019 at NEDFI centre Guwahati and presented “Brahmaputra Flood Plain (BFP) of Assam”.
- **Arup Kumar Das** attended a brainstorming conclave on “Transforming North East India through Science and Technology interventions” organised by North East Centre for Technology Application and Reach (NECTAR), Department of Science and Technology, Government of India on 20<sup>th</sup> November 2019 at Assam Administrative Staff College, Guwahati, Assam.
- **Arup Kumar Das** attended “Advanced winter school in Geospatial Technologies focus on Biodiversity Conservation and Management” organised by Institute of Environment Education and Research, Bharati Vidyapeeth University, Pune Supported by Department of Science

and Technology, Government of India, New Delhi from 9<sup>th</sup> to 29<sup>th</sup> December 2019 at Institute of Environment Education and Research, Bharati Vidyapeeth University.

- **Arup Kumar Das, Madhumita Borthakur, Kongseng Konwar and Minakshi Dutta** attended a stakeholder's workshop on "Community Resilience to Water Induced Disasters and Climate Change" organised by WATCH Division Aaranyak, Guwahati, Assam on 9<sup>th</sup> January 2020 at Indian Institute of Bank Management, Khanapara, Guwahati and presented "A study in selected river islands of the Brahmaputra River Basin, Assam using remote sensing and GIS".
- **Arup Kumar Das** attended "Refresher Course for Range Forest Officers" organised by Assam Forest School Jalukbari, Guwahati, Assam on 30<sup>th</sup> January 2020 at Assam Forest School Jalukbari, Guwahati, Assam and presented "Practical application of geospatial technology in biodiversity conservation with emphasis on different case studies".
- **Arup Kumar Das** and **Kongseng Konwar** attended "Refresher Course for Deputy Range Forest Officers and Forester 1" organised by Assam Forest School Jalukbari, Guwahati, Assam on 11<sup>th</sup> February 2020 at Assam Forest School Jalukbari, Guwahati, Assam and presented "Application of Open-source GIS and GPS".
- **Dr. Bibhab Kumar Talukdar** attended meeting of 1<sup>st</sup> Advisory Board for Sumatran Rhino Husbandry organised by IUCN SSC and Ministry of Environment and Forestry, Republic of Indonesia from 27<sup>th</sup> to 31<sup>st</sup> July 2019 in Jakarta, Indonesia.
- **Dr. Bibhab Kumar Talukdar** attended "4<sup>th</sup> IUCN SSC Leaders' meeting" organised by IUCN SSC from 6<sup>th</sup> to 9<sup>th</sup> October 2019 in Abu Dhabi.
- **Dr. Bibhuti Prasad Lahkar** attended a training, "2<sup>nd</sup> Rural Dialogue" on Entrepreneurship and Innovation organised by AILGGS, Innovior and CRT-IIT Guwahati on 20<sup>th</sup> and 21<sup>st</sup> January 2020 at IIT Guwahati, India.
- **Dr. Bibhuti Prasad Lahkar** attended "IIITG Perspective Meet 47" on Our Winged Friends and Biodiversity organised by IIT Guwahati on 31<sup>st</sup> January 2020 at IIT Guwahati, India.
- **Dr. Bibhuti Prasad Lahkar** attended a workshop "7<sup>th</sup> Eastern Himalayan Naturenomics Forum" on Conservation Beyond Border organised by Balipara Foundation on 5<sup>th</sup> and 6<sup>th</sup> November 2019 at Hotel Palacio, Guwahati, India.
- **Dr. Bibhuti Prasad Lahkar** attended a transboundary stakeholder dialogue, "A Stakeholder Dialogue on Exploring Options for Transboundary Cooperation Towards Resilience Building in the Eastern Himalayas" organised by ICIMOD, UN Environment and Ministry of Agriculture and Forest, Royal Government of Bhutan on 29<sup>th</sup> and 30<sup>th</sup> August 2019 at TermaLinca Resort & Spa, Thimphu, Bhutan.
- **Dr. Bibhuti Prasad Lahkar** attended a brainstorming workshop "Brainstorming workshop for preparation of activity guide book for National Children's Science Congress 2020-2021" organised by Kerala State Council for Science, Technology and Environment from 8<sup>th</sup> to 10<sup>th</sup> August at Kerala Forest Research Institute, Peechi, Thrissur.
- **Dr. Bibhuti Prasad Lahkar** attended "10<sup>th</sup> Meeting of the IUCN SSC Asian Elephant Specialist Group Members" organised by IUCN SSC Asian Elephant Specialist Group from 4<sup>th</sup> to 6<sup>th</sup> December 2019 at Shangri-La's Tanjung Aru Resort & Spa, Kota Kinabalu, Sabah, Malaysia.
- **Binita Baruwati** and **Prosenjit Sheel** attended a workshop "Legal Workshop on Wildlife Crimes" organised by WWF-India and Forest Department of Assam on 22<sup>nd</sup>



September 2019 at Manas Kanya Dhaba, Howly, Barpeta District, Assam.

- **Bipul Das** attended “ITHCP Training workshop for human-wildlife conflict management and coexistence” organised by ITHCP, IUCN from 19<sup>th</sup> to 22<sup>nd</sup> November 2019 in Bangkok, Thailand.
- **Dr. Dipankar Lahkar** attended National Children Science Congress (NCSC) organised by National Council for Science and Technology Communication, Department of Science and Technology, Government of India from 27<sup>th</sup> to 31<sup>st</sup> December 2019 at Mar Ivanios Vidya Nagar, Thiruvananthapuram, Kerala, India.
- **Dr. Dipankar Lahkar** attended “Certificate in Remote Sensing with Google Earth Engine” organised by Institute for Biodiversity Conservation and Training (IBCT), Bengaluru, India from 17<sup>th</sup> to 19<sup>th</sup> May 2019 at The United Theological College, Bangalore, India.
- **Dr. Dipankar Lahkar** attended “National Conference on Green, Sustainable, and Evolving Sciences (GSES-2019) & 64<sup>th</sup> Annual Technical Session of Assam Science Society” organised by Cotton University, Assam, India on 28<sup>th</sup> and 29<sup>th</sup> June 2019 at Cotton University.
- **Dr. Dipankar Lahkar, Aprajita Singh, and Nibir Medhi** attended a training on “Camera Trap Data Management and Analysis” organised by Aaranyak and Panthera from 22<sup>nd</sup> to 25<sup>th</sup> November 2019 at Conference Hall, Aaranyak.
- **Kongseng Konwar** attended “DST summer school on Geospatial Technologies (Level-1)” organised by Department of Earth Science, University of Science and Technology, Meghalaya supported by Natural Resource Data Management System, Department of Science and Technology, Government of India, New Delhi from 8<sup>th</sup> to 28<sup>th</sup> July 2019 at Department of Earth Science, University of Science and Technology, Meghalaya.
- **Kongseng Konwar** attended “Refresher course for Foresters and Forest guards” organised by Assam Forest School Jalukbari, Guwahati, Assam on 10<sup>th</sup> January 2020 at Assam Forest School Jalukbari, Guwahati, Assam and took a class on “Practical application on Open-source GIS and GPS”.
- **Madhumita Borthakur** attended “Refresher Course for Deputy Range Forest Officers and Forester 1” organised by Assam Forest School Jalukbari, Guwahati, Assam on 12<sup>th</sup> February 2020 at Assam Forest School Jalukbari, Guwahati, Assam and presented “Application of Open-source GIS and GPS”.
- **Dr. M. Firoz Ahmed and Dr. Jayanta Kr. Roy** attended “In Dialogue-Nature, Heritage & NE India” organised by Directorate of Museums, Govt. of Assam and Aaranyak on 28<sup>th</sup> January 2020 at Assam State Museum, Guwahati and interacted on amphibians.
- **Dr. Parag Jyoti Deka** attended a workshop titled “Western Visayas Conservation Workshop” on multispecies conservation strategy for five key species in Western Visayas, Philippines organised by IUCN SSC Conservation Planning Specialist Group (CPSG) & Talarak Foundation Inc. (TFI) from 24<sup>th</sup> to 27<sup>th</sup> June 2019 at Sugarland Hotel in Bacolod City, Negros Occidental, Philippines.
- **Dr. Partha J Das and Ms. Neelakshi Dutta** attended “Meeting of TROSA project staff with Microware, software developers” on development of software on information management for water governance organised by Oxfam India on 15<sup>th</sup> and 16<sup>th</sup> April 2019 at Office of Oxfam, Lucknow, India.
- **Dr. Partha J Das** attended a workshop “Understanding biodiversity & environmental issues for better reportage” organised by Media Production and Communication Division, Aaranyak and Department of Mass Communication, Journalism & Media Studies, Cotton University on 17<sup>th</sup> June 2019 at Conference Hall of Cotton University and presented a talk on “Global climate crisis & the northeast scenario”.
- **Dr. Partha J Das** attended “Annual Review and Planning

Meeting of TROSA Project” organised by Oxfam India from 25<sup>th</sup> to 27<sup>th</sup> July 2019 at Hotel Cygnet Inn, Guwahati, Assam.

- **Dr. Partha J Das** attended “High-level policy dialogue on Conflict, Climate and Resilience” organised by International Committee of the Red Cross (ICRC), the Red Cross Red Crescent Climate Center (RCCC), the Overseas Development Institute (ODI) and the Philippine Red Cross Society (PRC) on 1<sup>st</sup> August 2019 at Makati Diamond Residences, 118 Legazpi Street, Legazpi Village, Makati City, Philippines.
- **Dr. Partha J Das** attended “Consultation on the Draft Scientific Social Responsibility Policy, 2019” organised by Indian Institute of Technology (IIT)-Guwahati on 18<sup>th</sup> September 2019 at IIT-Guwahati.
- **Dr. Partha J Das** attended “India CSR Summit & Exhibition 2019” organised by NGO Box and CSR Box on 23<sup>rd</sup> and 24<sup>th</sup> September 2019 at Pullman and Novotel, Aerocity, New Delhi.
- **Dr. Partha J Das** attended “Co-creation workshops on ‘Water distribution network and groundwater management for Guwahati city” organised by IIT-Guwahati, European Union and the Department of Science and Technology, Government of India on 29<sup>th</sup> and 30<sup>th</sup> November 2019 at Conference room, Guest house, Indian Institute of Technology Guwahati and presented “Water federalism: Issues in the Brahmaputra river basin in India”.
- **Dr. Partha J Das** attended “Brain Storming Conclave on Transforming NE region through Science and Technology Interventions” organised by North East Centre for Technology Application and Reach (NECTAR), Department of Science and Technology, Government of India on 20<sup>th</sup> November 2019 at Assam Administrative Staff College, Guwahati and presented “Reducing risk of Water and Climate Induced Disasters (flood and erosion) in Assam: Potential of application of appropriate technology”.
- **Dr. Partha J Das** attended “Brain Storming Workshop on River-research to Evolve Sustainable-projects for People with Eco-friendly Climate-resilient Technology (RESPECT)” organised by IIT Guwahati and Office of the Principal Scientific adviser to the Govt. of India on 15<sup>th</sup> November 2019 at IIT Guwahati and presented “Contribution of Aaranyak to research on the Brahmaputra River and its Basin”
- **Dr. Partha J Das** attended “North East Water Talk” organised by Parivartan, Dhemaji and NEADS, Jorhat on 4<sup>th</sup> and 5<sup>th</sup> December 2019 at Don Bosco Reach Out, Ulubari, Guwahati and presented “Water and the Northeast India: Tale of an endangered hydroscape”
- **Dr. Partha J Das** attended “India Energy For All Summit 2020: Panel discussion on the ‘Energy Access for Climate Vulnerable Areas” organised by World Resources Institute-India and CLEAN on 5<sup>th</sup> February 2020 at India Habitat Centre, New Delhi and presented “Role of energy in developing climate resilience for vulnerable communities of NE India”.
- **Dr. Partha J Das** attended “Consultation workshop on preparation of Assam DRR roadmap” organised by DDMA, Kamrup District on 20<sup>th</sup> February 2020 at Deputy Commissioner’s Office, Kamrup District, Amingaon.
- **Dr. Partha J Das** attended “National Science Day-2020” organised by Botanical Society of Assam and Nowgong College on 28<sup>th</sup> February 2020 at Conference room of the Botany Department, Nowgong College, Nagaon and presented “Climate change and Northeast India: Science, impact and Policy”
- **Prosenjit Sheel** attended “Eastern Regional Workshop on Standardization of frontline staff training curriculum” organised by Global Tiger Forum (GTF), WWF-India, TRAFFIC-India, Forest Department of Assam on 11<sup>th</sup> and 12<sup>th</sup> December 2019 at IIBM, Guwahati, Assam.



## WORKSHOPS AND TRAININGS ORGANISED BY AARANYAK

### CONSERVATION AND LIVELIHOOD DIVISION (CLD)

- **CLD** in collaboration with Indian Institute of Entrepreneurship, Guwahati organised a workshop “Skilling and Capacity Building on Modern Loom” on 21<sup>st</sup> and 22<sup>nd</sup> August 2019 at the Common Facility Center-Mazrabari, Bhuyanpara, Baksa District, Assam.
- **CLD** in collaboration with Krishi Vigyan Kendra, Chirang District organised a “Training on Plant Cutting And Layering Technique” from 1<sup>st</sup> to 3<sup>rd</sup> July 2019 at No 1 Chourang Village, Panbari, Chirang District, Assam.
- **CLD** in collaboration with Krishi Vigyan Kendra, Chirang District organised a “Training on Natural Faming and Horticulture Cropping” from 3<sup>rd</sup> to 5<sup>th</sup> July 2019 at No 1 Chourang Village, Panbari, Chirang District, Assam.
- **CLD** organised a workshop on “Capacity Building Workshop for Implementing Livelihood Project” from 16<sup>th</sup> to 19<sup>th</sup> May 2019 at Aranya Lodge, Jaldapara National Park, West Bengal.

### ELEPHANT RESEARCH AND CONSERVATION DIVISION (ERCD)

- **ERCD** in collaboration with Department of Environment and Forest, Government of Assam, WWF-India, WTI and Bodoland Territorial Council organised a workshop “Habitat Management Workshop” on grassland management in Manas National Park on 29<sup>th</sup> and 30<sup>th</sup> January 2020 at Bansbari Range office premises.
- **ERCD** in collaboration with EECBD of Aaranyak, UNESCO Category 2 Centre, World Natural Heritage Management and Training for Asia and the Pacific Region, and Wildlife Institute of India organised a training for teachers, “Safeguarding natural heritage through education, awareness and network building among teachers and students” from 22<sup>nd</sup> to 25<sup>th</sup> February 2020 at Smiling Tusker, Bansbari, Manas National Park.
- **ERCD** organised a workshop on “Human Elephant Conflict Mitigation” on 14<sup>th</sup> November 2019 at Morangi Development Block, Golaghat.
- **ERCD** organised a workshop on “Human Elephant Conflict Mitigation” on 25<sup>th</sup> November 2019 at Gorokhia Dol, Sivasagar
- **ERCD** organised a workshop on “Human Elephant Conflict Mitigation” on 26<sup>th</sup> November 2019 at Sorogua Community Hall, Sivasagar.
- **ERCD** organised a workshop on “Human Elephant Conflict Mitigation” on 4<sup>th</sup> December 2019 at Bogijan Police Station, Golaghat.
- **ERCD** organised a workshop on “Human Elephant Conflict Mitigation” and distributed torch lights at Numaligarh Police Station on 5<sup>th</sup> December 2019.
- **ERCD** organised a workshop on “Human Elephant Conflict Mitigation” on 3<sup>rd</sup> January 2019 at Dapala High School, Sivasagar.
- **ERCD** organised a workshop on “Human Elephant Conflict Mitigation” on 19<sup>th</sup> January 2019 at Salmari Samarajan LP school, Sivasagar.

## ENVIRONMENT EDUCATION & CAPACITY BUILDING DIVISION (EECBD)

- **EECBD** in collaboration with Aryabhata Science Centre, Nalbari, Aaranyak Science Club (VP-AS0017) & ASTEC organised “Orientation workshop on Climate Change” on 10<sup>th</sup> April 2019 at Barbhag College, Kalag, Nalbari, Assam.
- **EECBD** in collaboration with Shubham & ASTEC organised “Orientation workshop on Climate Change” on 13<sup>th</sup> May 2019 at Government Pensioner Bhawan, Barpeta, Assam.
- **EECBD** in collaboration with Gethsemene JFMC & ASTEC organised “Orientation workshop on Climate Change” on 21<sup>st</sup> May 2019 at Gethsemene JFMC, Udalguri, BTAD, Assam.
- **EECBD** in collaboration with Action Research Organisation of North East India & ASTEC organised “Orientation workshop on Climate Change” on 28<sup>th</sup> May 2019 at Panbari High School, Chirang, BTAD, Assam.
- **EECBD** in collaboration with Baska Press Club, Barama & ASTEC organised “Orientation workshop on Climate Change” on 30<sup>th</sup> May 2019 at Baska press club, Barama, Baksa, BTAD, Assam.
- **EECBD** in collaboration with Pacific Unit & ASTEC organised “Orientation workshop on Climate Change” on 5<sup>th</sup> June 2019 at Uttar Mangaldai High School, Darrang, Assam.
- **EECBD** in collaboration with Tinsukia Zilla Parishad, Tinsukia Wildlife Division & ASTEC organised “Orientation workshop on Climate Change” on 7<sup>th</sup> June 2019 at Conference Hall, Guijan Range Office, Tinsukia Wildlife Division, Tinsukia, Assam.
- **EECBD** in collaboration with Pilgrimage organised “Orientation workshop on Climate Change” on 17<sup>th</sup> June 2019 at Tinthengia Industrial High School, Tinthengia, Dibrugarh, Assam.
- **EECBD** in collaboration with NC Hills Autonomous Council, Youth Association for Development and

Empowerment & ASTEC organised “Orientation workshop on Climate Change” on 22<sup>nd</sup> June 2019 at Cultural Hall, Haflong, Dima Hasao, Assam.

- **EECBD** in collaboration with Jan Shikshan Sansthan, Kamrup, Gyan Vigyan Samiti Assam, Hajo Block, ASTEC organised “Orientation workshop on Climate Change” on 30<sup>th</sup> June 2019 at Ramdia Higher Secondary School, Hajo, Kamrup, Assam.
- **EECBD** in collaboration with Directorate of Museums, Government of Assam organised an awareness series titled “Nature Heritage and NE India” and presented on “Amphibian: diversity, conservation policy and research potentiality in Northeast India” on 28<sup>th</sup> January 2020 at Assam State Muséum.
- **EECBD** in collaboration with UNESCO Category 2 Centre, Smiling Tusker Elephant Camp organised a workshop for teachers titled, “Safeguarding Natural Heritage through education, awareness and network building among teachers and students” from 22<sup>nd</sup> to 25<sup>th</sup> February 2020 at Smiling Tusker Elephant Camp, Manas.
- **EECBD** in collaboration with Directorate of Museums, Government of Assam organised an awareness series titled “Nature Heritage and NE India” and presented on “Fishes of NE India: conservation and research potential” on 29<sup>th</sup> February 2020 at Assam State Muséum.

## GEO-SPATIAL TECHNOLOGY & APPLICATION DIVISION (GTAD)

- **GTAD** in collaboration with Assam State Zoo cum Botanical Garden, Government of Assam organised “GIS Day Celebration” on 13<sup>th</sup> November 2019 at Assam State Zoo cum Botanical Garden and showcased GIS based thematic maps of North East India.



## **MEDIA PRODUCTION AND COMMUNICATIONS DIVISION (MPCD)**

- **MPCD** in collaboration with Department of Mass Communication, Journalism & Media Studies, Cotton University, Guwahati organised a workshop on “Understanding Biodiversity and Environmental Issues for Better Reportage” from 17<sup>th</sup> to 19<sup>th</sup> June 2019 at Department of Mass Communication, Journalism & Media Studies, Cotton University, Guwahati.
- **MPCD** in collaboration with Department of Mass Communication & Journalism, Tezpur University, Tezpur organised a workshop on “Understanding Biodiversity and Environmental Issues for Better Reportage” on 12<sup>th</sup> and 13<sup>th</sup> November 2019 at Department of Mass Communication & Journalism, Tezpur University, Tezpur.
- **MPCD** in collaboration with Assam School of Journalism, Guwahati organised a workshop on “Understanding Biodiversity and Environmental Issues for Better Reportage” on 6<sup>th</sup> and 7<sup>th</sup> March 2020 at Assam School of Journalism, Guwahati.

## **PRIMATE RESEARCH & CONSERVATION DIVISION (PRCD)**

- **PRCD** in collaboration with Centre for Global Field Study at University of Washington, One Earth Institute and Jorhat Forest Department organised “10<sup>th</sup> Field Course in Conservation Biology” from 7<sup>th</sup> to 12<sup>th</sup> December 2019 at Gibbon Conservation Centre, Hollangapar Wildlife Sanctuary, Jorhat, Assam.
- **PRCD** in collaboration with Department of Zoology, Gauhati University, Primate Research Centre, Northeast and Scholar’s Institute of Technology and Management (SITM) organised “Pre-symposium Training on Field Methods on Primate Conservation Biology” from 5<sup>th</sup> to 7<sup>th</sup> February 2020 at SITM, Guwahati, Assam.
- **PRCD** in collaboration with Department of Zoology, Gauhati University, and Primate Research Centre, Northeast organised “7<sup>th</sup>

Asian Primate Symposium & 1<sup>st</sup> International Conference on Human-Primate Interface” from 8<sup>th</sup> to 10<sup>th</sup> February 2020 at GUIST, Gauhati University, Assam.

## **TIGER RESEARCH & CONSERVATION DIVISION (TRCD)**

- **TRCD** in collaboration with WWF-India organised a workshop on “Camera Trapping Data Interpretation and Analysis” from 5<sup>th</sup> to 9<sup>th</sup> June 2019 at Conference Hall, Aaranyak.
- **TRCD** in collaboration with Assam Forest Department and Department of Forests and Park Services, Ministry of Agriculture and Forests Royal Government of Bhutan organised a workshop on “Indo-Bhutan Transboundary Stakeholders Meeting on Barnadi and Jomotsangkha Wildlife Sanctuary” on 11<sup>th</sup> October 2019 at Khalingaduar Reserve Forest, Udalguri, Assam, India.
- **TRCD** in collaboration with Assam Forest Department organised a training on “Training on Phase-IV tiger Monitoring in Manas National Park” on 8<sup>th</sup> and 9<sup>th</sup> December 2019 at Bansbari Range, Manas National Park, Assam, India.
- **TRCD** in collaboration with B COY 1<sup>st</sup> BN NDRF and Forest Department of Assam organised a training “Boat Training cum Disaster Management Workshop for Frontline staff, Bansbari Range, Manas National Park on 22<sup>nd</sup> June 2019 at Elephant Research & Treatment Centre, Bansbari Range Office and Beki River.

## **WATER, CLIMATE & HAZARDS DIVISION (WATCH)**

- **WATCH** in collaboration with Oxfam India, Northeast Research and Social Work Networking (NERSWN), Kokrajhar, People’s Action for Development (PAD), Lakhimpur, and Grameen Development Services (GDS), Lucknow, UP organised a workshop on gender dimensions of water governance, titled “Mainstreaming gender in water governance in the Brahmaputra River Basin, Assam: A Consultation on Women and

Water” on 29<sup>th</sup> and 30<sup>th</sup> April 2019 at Indian Institute of Bank Management (IIBM), Khanapara, Jawahar Nagar Guwahati.

- **WATCH** in collaboration with Jawaharlal Nehru College (Main organiser), Boko, Kamrup District organised a seminar on “Science, Society and Sustainability” on 3<sup>rd</sup> and 4<sup>th</sup> May 2019 at Jawaharlal Nehru College, Boko, Kamrup District.
- **WATCH** in collaboration with Oxfam India, and Nowgong Girls’ College, Nagaon organised a workshop “Consultation on capacity building and networking of CSOs in the Central Brahmaputra River Basin, Assam around water governance” on 15<sup>th</sup> and 16<sup>th</sup> May 2019 at Conference Hall, Nowgong Girls’ College, Haibargaon, Nagaon.
- **WATCH** in collaboration with Sanchipat, Kamalabari, Majuliorganised a seminar “Celebration of International Day for Biological Diversity” on 22<sup>nd</sup> May 2019 at Chamuguri Satra Raonapar Model H.S. School in Raonapar, Majuli.
- **WATCH** in collaboration with Oxfam-India and Northeast Research and Social Work Networking (NERSWN) (main organisers), People’s Action for Development (PAD) organised “Consultation on Trans-Boundary Cooperation for Effective Management of Water Risks, Bhutan-India” on 20<sup>th</sup> and 21<sup>st</sup> June 2019 at Hotel Gaurang Valley, Kokrajhar.
- **WATCH** in collaboration with Oxfam-India, DistrictAdministration, Majuli District and Sanchipaata, Majuliorganised “Consultative Workshop on ‘Empowering youth action for good water governance in the Brahmaputra River Basin in Assam, India” from 25<sup>th</sup> to 27<sup>th</sup> June 2019 at Prashanti Lodge, Kamalabari, Majuli District.
- **WATCH** in collaboration with India Water Partnership, Gurugram, Haryana, Sanchipaata, Majuliorganised “Discussion Forum on ‘Sustainable management of the Brahmaputra River and the future of Majuli” on 26<sup>th</sup> June 2019 at Prashanti Lodge, Kamalabari, Majuli District.
- **WATCH** in collaboration with Department of History, Dibrugarh University organised a discussion programme, “Emerging issues of environmental water management in the Brahmaputra River Basin, India” on 1<sup>st</sup> October 2019 at Conference Hall, Department of History, Dibrugarh University.
- **WATCH** in collaboration with Ashoka Trust for Research in Ecology and the Environment (ATREE), Bengaluru (Main organiser); Department of Science & Technology, Government of India organised “Policy Consultation on Flood Plain Wetlands” on 16<sup>th</sup> October 2019 at NEDFi House, Conference Hall, Guwahati.
- **WATCH** in collaboration with Kollol Sanskritik Gosthi, Nagaon organised a seminar on “বিষয় ব্রহ্মপুত্র: অসমৰ সাহিত্য, সংস্কৃতি, সমাজ আৰু বিজ্ঞান চৰ্চাত ব্রহ্মপুত্রৰ গুৰুত্ব” on 23<sup>rd</sup> December 2019 at Nehru Bali, Nagaon (Premise of the Nagaon Book Fair-2019).
- **WATCH** in collaboration with India Water Partnership, Gurugram, Haryana organised a stakeholder workshop, “Community resilience to water induced disasters and climate change: Vulnerability and Adaptation in selected river islands in the Brahmaputra River Basin” on 9<sup>th</sup> January 2020 at Indian Institute of Bank Management, Khanapara, Guwahati.



## MEMBERSHIP POSITION WITH OTHER ORGANISATIONS

### **Alolika Sinha**

- Member, IUCN SSC Deer Specialist Group
- Member, Society for Conservation Biology

### **Dr. Bibhab Kumar Talukdar**

- Member of Governing Council of Assam Science, Technology and Environment Council, Assam
- Member State Board of Wildlife, Govt. of Assam
- Member, Editorial Board of Pachyderm Journal
- Chair: IUCN/SSC, Asian Rhino Specialist Group
- Commission Member - IUCN CEESP Asia 2017-2020
- Commission Member - IUCN CEESP Theme on Environment and Peace 2017-2020
- Commission Member - IUCN CEESP Theme on Human Wellbeing and Sustainable Livelihoods 2017-2020
- Commission Member - IUCN CEESP Working Group - Natural Resource Governance Framework 2017-2020
- Commission Member - IUCN CEM Biosphere Reserves 2017-2020
- Commission Member - IUCN CEM Ecosystem Restoration 2017-2020
- Commission Member - IUCN CEM Ecosystems and Invasive Species 2017-2020
- Commission Member - IUCN CEM Forest Ecosystems 2017-2020
- Commission Member - IUCN CEM South Asia 2017-2020
- Commission Member - IUCN CEM Sustainable Use and Management of Ecosystems 2017-2020
- Commission Member - IUCN CEM Wetland Ecosystems 2017-2020
- Commission Member - IUCN SSC African Rhino Specialist Group 2017-2020
- Commission Member - IUCN SSC Chairs 2017-2020
- Commission Member - IUCN SSC Conservation Planning Specialist Group 2017-2020
- Commission Member - IUCN WCPA Capacity Development: Network 2017-2020
- Commission Member - IUCN WCPA Climate Change: Network 2017-2020

- Commission Member - IUCN WCPA Connectivity Conservation: Network 2017-2020
- Commission Member - IUCN WCPA Governance of Protected and Conserved Areas: Network 2017-2020
- Commission Member - IUCN WCPA Management Effectiveness: Network 2017-2020
- Commission Member - IUCN WCPA South Asia Region 2017-2020
- Commission Member - IUCN WCPA Tourism and Protected Areas: Network 2017-2020
- Commission Member - IUCN WCPA Transboundary Conservation: Network 2017-2020
- Commission Member - IUCN WCPA World Heritage: Network 2017-2020
- Commission Member - IUCN WCPA-SSC Biodiversity and Protected Areas: Network 2017-2020
- Commission Member - WI-IUCN SSC Threatened Waterfowl Specialist Group 2017-2020
- Member: European Association of Zoos and Aquarium (EAZA)- Rhino Taxonomic Advisory Group (TAG)

### **Dr. Bibhuti Prasad Lahkar**

- Commission Member - IUCN SSC Asian Elephant Specialist Group
- Commission Member - SSC IUCN Invasive Species Specialist Group
- Commission Member - IUCN WCPA Capacity Development: Network 2017-2020
- Commission Member - IUCN WCPA Transboundary Conservation: Network 2017-2020
- Commission Member - IUCN WCPA World Heritage: Network 2017-2020
- Commission Member - IUCN WCPA Biodiversity and Protected Areas: Network 2017-2020
- Commission Member - IUCN WCPA South Asia Region 2017-2020

- Commission Member - IUCN CEM Cultural Practices and Ecosystem Management Thematic Group 2017-2020
- Commission Member - IUCN CEM Dryland Ecosystems Specialist Group 2017-2020
- Commission Member - IUCN CEM Ecosystem Restoration Thematic Group 2017-2020
- Commission Member - IUCN CEM Ecosystems and Invasive Species Thematic Group 2017-2020
- Commission Member - IUCN CEM Nature Based Solutions Thematic Group 2017-2020
- Commission Member - IUCN CEM Sustainable Use and Management of Ecosystems Thematic Group 2017-2020
- Independent Expert Member, Management Effective Evaluation of National Park and Wildlife Sanctuary, Ministry of Environment, Forest and Climate Change, Govt. of India

### **Dr. Dilip Chetry**

- Vice Chair, IUCN, SSC Primate Specialist Group, South Asia Section
- Executive member, IUCN, SSC Small Ape Section
- Steering committee member, IUCN SSC PSG Section on Great Apes ARRC Task Force
- Board of Director in Scholars Institute of Technology and Management, Guwahati, Assam
- Member, International Primatological Society, USA
- Member, American Primatological Society, USA
- Member, Vijnana Bharati Northeast/Northeast Science Movements
- Member, Nepal Biodiversity Research Society
- Member, Gauhati University Ethics Committee
- Member, Zoological Society of Assam



### **Dr. Dipankar Lahkar**

- Member, Society for Conservation Biology (SCB)
- Member of the Editorial Board, Newsletter for Birdwatchers (A bi-monthly newsletter on Ornithology)
- District Level Project Evaluator, National Children Science Congress (NCSC), Assam—a program of the National Council for Science and Technology Communication, Department of Science and Technology, Govt. of India
- State Academic Coordinator, Assam, National Children Science Congress (NCSC-2019)

### **Jayanta Kumar Pathak**

- Member of North American Association for Environmental Education
- Member of Editorial Board, 'Bigyan Jeuti', a science periodical published since 1961 by Assam Science Society

### **Dr. Jyoti Prasad Das**

- Member, IUCN WCPA Trans-boundary Conservation
- Member, IUCN WCPA Management Effectiveness
- Member, IUCN WCPA Connectivity Conservation
- Member, IUCN WCPA Capacity Development

### **Kongseng Konwar**

- Member of the Global group, Women in Nature Network (WINN).

### **Dr. M Firoz Ahmed**

- Member, IUCN-SSC
- Member, Society for Conservation Biology (SCB)
- Advisor, WildLandscapes, USA

### **Dr. Purnima Devi Barman**

- Director, Women in Nature Network, India Chapter
- Member, IUCN SSC Stork, Spoon bill, Ibis group

### **Dr. Parag Jyoti Deka**

- IUCN/SSC Wild Pig Specialist Group

### **Udayan Borthakur**

- Member, IUCN SSC Asian Rhino Specialist Group
- Member, IUSC SSC Heron Specialist Group
- Member, Nikon Professional Services, India
- Official Wildlife Photography Mentor, Nikon School India

## PUBLICATIONS

### ABSTRACT

- Chetry, D., M., Phukan, R., Chetry and P.C., Bhattacharjee. 2020. Current status of eastern hoolock gibbon (*Hoolock leuconedys*) in Assam, India. 7<sup>th</sup> Asian Primate Symposium & 1<sup>st</sup> International conference on Human-Primate Interface, 8 - 10 February 2020, Guwahati, India.
- Chetry, D., M., Phukan, R., Chetry and P.C., Bhattacharjee. 2020. Primates Conservation in Chakrashila Wildlife Sanctuary, Assam, India. 7<sup>th</sup> Asian Primate Symposium & 1<sup>st</sup> International conference on Human-Primate Interface, 8-10 February 2020, Guwahati, India. 17pp.
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- Lahkar, B.P and A., Sinha. 2020. Monitoring and Control of Invasive Plant Species in Grassland Ecosystem of Manas National Park 2<sup>nd</sup> Phase. Final Report submitted to US Fish and Wildlife Service. 19 pp.
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- Sinha, A. and B.P., Lahkar. 2019. Conservation of the endangered hog deer (*Axis porcinus*) in northeast India. Final report submitted to Ocean Park Conservation Foundation, Hong Kong. 21 pp.
- Swargowari, A., A.C., Sarmah, H.K., Sarma, R.N., Boro, M.F., Ahmed, D., Lahkar and S.K., Das. 2019. Annual Monitoring of Tigers, Co-Predators, and Prey in Manas National Park, India, Technical Summary Report. Submitted to Directorate Manas Tiger Reserve, Barpeta Road, Assam, India. 36 pp.



# FINANCIAL REPORT

## 2019-20

**DHAWAN PANDEY & ASSOCIATES**  
Chartered Accountants

92, Dilip Huzuri Path, Sarumotria, Dispur, Guwahati-06.  
Ph. No: - 94350-17438, E-mail: cabiswajitbaru:h7@gmail.com

**FORM NO. 10B**  
(See rule 17B)

**Audit report under section 12A(b) of the Income-tax Act, 1961, in the case of charitable or religious trusts or institutions**

I/We have examined the balance sheet of AARANYAK as at 31<sup>st</sup> day of March, 2020 and the income and expenditure account for the year ended on that date which are in agreement with the books of account maintained by the said trust or institution.

I/We have obtained all the information and explanations, which to the best of my/our knowledge and belief were necessary for the purposes of the audit. In my/our opinion, proper books of account have been kept by the head office and the branches of the above-named trust/institution visited by me/us so far as appears from my/our examination of the books, and proper returns adequate for the purposes of audit have been received from branches not visited by me/us, subject to the comments given below:

In my/our opinion and to the best of my/our information, and according to information given to me/us, the said accounts give a true and fair view –

(i) in the case of the balance sheet, of the state of affairs of the above-named trust/institution as at 31<sup>st</sup> day of March, 2020, and

(ii) in the case of income and expenditure account, of the excess of Income over Expenditure of its accounting year ending on 31<sup>st</sup> day of March, 2020

The prescribed particulars are annexed hereto.

Place: Guwahati  
Date: 28.12.2020

For, DHAWAN PANDEY & ASSOCIATES  
Chartered Accountants



*Biswajit Baruah*  
(CA. BISWAJIT BARUAH)  
Partner  
M. No. 053538  
FRN: 013617C  
UDIN:20063538AAAABK1919



**AARANYAK**  
**SAMANWOY PATH, SURVEY, BELTOLA, GUWAHATI-781028, DIST. KAMRUP, ASSAM.**

**RECEIPTS PAYMENTS ACCOUNT FOR THE YEAR ENDED 31ST MARCH 2020**

RECEIPTS	AMOUNT (Rs)	PAYMENTS	AMOUNT (Rs)
To <b>OPENING BALANCE</b>		By Project Expenses against Foreign Contribution	7,75,69,351.02
Cash in hand	4,875.57		
By <b>INVESTMENTS</b>		By Advance for Project Expenses	13,73,836.42
Fixed Deposits with Bank of Baroda, Dispur Branch	5,23,70,531.06		
Fixed Deposit with Union Bank of India, Basistha Road branch, UTI	9,09,637.00 54,00,000.00	By Furniture and Fixture	6,200.00
	5,86,80,168.06	By TCS	13,737.00
By <b>BANK ACCOUNTS</b>		By TDS	6,94,106.10
HDFC, Bangagarh Branch (ERCI-1)	9,140.98	By Jane Macdonald Expenses	4,09,505.70
HDFC, Bangagarh Branch (ERCI-2)	3,652.45	By Administrative Staff Salary	53,66,469.12
HDFC, Bangagarh Branch (ERCI-3)	697.07	By Income Tax Consultant	85,500.00
HDFC, Bangagarh Branch (GDRCI)	1,332.61	By Municipality Tax	1,645.51
HDFC, Bangagarh Branch (ARCI)	3,38,212.50	By Bank Charge	1,40,355.63
HDFC, Bangagarh Branch (WGP)	4,860.71	By Administrative Expenses	2,932.00
HDFC, Bangagarh Branch (LIVELIHOOD)	437.64	By <b>CLOSING BALANCE</b>	
HDFC, Bangagarh Branch (PRCI)	1,171.67	Cash in hand	20,568.53
HDFC, Bangagarh Branch (RRCI)	45,698.97		
YES BANK (RRCI)	1,76,010.60	By <b>INVESTMENTS</b>	
State Bank of India, Beltola (TRCI-2)	36,720.67	Fixed Deposits with Bank of Baroda, Dispur Branch	4,49,21,380.66
TRCI-4	36,695.67	Fixed Deposit with Union Bank of India, Basistha Road branch	31,78,997.90
State Bank of India, Beltola (TRCI)	45,495.97	UTI	54,00,000.00
TSRP	6,382.00		5,35,00,378.56
IDBI, Beltola Branch (WATCH)	39,925.02	By <b>BANK ACCOUNTS</b>	
Bank of Baroda, Dispur Branch	40,20,187.22	HDFC, Bangagarh Branch (ERCI-1)	19,465.08
Punjab National Bank, Beltola Branch (PRCI)	1,81,771.37	HDFC, Bangagarh Branch (ERCI-2)	3,696.45
Union Bank of India, Basistha Road Branch (PRCI)	1,139.27	HDFC, Bangagarh Branch (ERCI-3)	2,806.10
State Bank of India, Dispur	89,928.94	HDFC, Bangagarh Branch (GDRCI)	1,043.81
AARANYAK LIVELIHOOD-2	19,902.17	HDFC, Bangagarh Branch (ARCI)	1,02,383.60
INDUSLAND BANK	4,36,230.47	HDFC, Bangagarh Branch (WGP)	4,854.51
Union Bank of India	4,53,655.34	HDFC, Bangagarh Branch (LIVELIHOOD)	588.64
AARANYAK HDFC (WATCH)	45.79	HDFC, Bangagarh Branch (PRCI)	69,371.67
AARANYAK (TRCI-3)	32,526.19	HDFC, Bangagarh Branch (RRCI)	49,058.28
YES BANK (AARANYAK)	8,41,345.04	YES BANK (PRCI)	406.78
Bank of Baroda (TTMP)	9,956.35	State Bank of India, Beltola (TRCI-2)	3,188.40
HDFC (TTMP)	238.54	State Bank of India, Beltola (TRCI)	1,38,322.68
Manas Traditional Dress cluster (PNB)	10,67,867.50	TSRP	2,08,455.67
Yes Bank Ltd (WGD-2)	1,757.62	IDBI, Beltola Branch (WATCH)	246.67
	79,03,986.34	Bank of Baroda, Dispur Branch	1,55,52,026.27
To Foreign Contribution Received	9,40,37,075.03	Union Bank of India, Basistha Road Branch (PRCI)	73,524.71
To Recovery of Project Advances	8,25,830.01	State Bank of India, Dispur	20,05,249.94
To Indian Oil Corporation	5,201.58	AARANYAK LIVELIHOOD-2	10,845.17
To TDS Refund	8,11,560.00	INDUSLAND BANK	6,04,016.47
To Interest on TDS Refund	79,110.00	Union Bank of India	87,30,882.78
To Bank Interest	6,50,279.89	AARANYAK HDFC (WATCH)	160.20
To Interest on Bank Fixed Deposits	24,84,988.00	AARANYAK (TRCI-3)	31,393.39
To IOCL Bonus Receipt	216.80	YES BANK (AARANYAK)	2,52,019.04
To DONATION	347,852.00	Bank of Baroda (TTMP)	9,956.35
To Internship fees	31,000.00	HDFC (TTMP)	238.54
		Manas Traditional Dress cluster (PNB)	2,84,503.50
		Yes Bank Ltd (WGD-2)	47,809.99
		YES BANK (LIVELIHOOD)	70,000.00
			2,82,56,524.69

*Biswajit Barch*

To MEMBERSHIP FEES RECEIVED	8600.00		
To 7TH APS REGISTRATION FEE FUND	4,53,097.00		
To Receipt from use of vehicle	71,000.00		
To MCOC EARNEST MONEY RECEIVED	20,000.00		
To Receipt for Gibbon Training Program	3,000.00		
To RECEIVED FROM JMK COMPUTERS	8,000.00		
To Selling of Gypsy	20,000.00		
To Selling of Inverter	3,500.00		
To Recovery from project products	41,670.00		
To Selling of Vehicle	1,50,000.00		
<b>TOTAL</b>	<b>16,74,41,110.28</b>	<b>TOTAL</b>	<b>16,74,41,110.28</b>

Place: Guwahati  
Date: 28/12/2020

For & Behalf of  
AARANYAK  
  
(DR. BIBHAB KR. TALUKDAR)  
SECRETARY GENERAL



As per our report of even date  
FOR DHAWAN PANDEY & ASSOCIATES  
CHARTERED ACCOUNTANTS

  
(CA. BISWAJIT BARUAH)  
PARTNER  
M.No.063538  
FRN.013617C  
UDIN : 20063538AAAABK1919

**AARANYAK**  
**SAMANWOY PATH,SURVEY,BELTOLA,GUWAHATI-781028,DIST.KAMRUP,ASSAM.**

**INCOME & EXPENDITURE ACCOUNT FOR THE YEAR ENDED 31ST MARCH 2020**

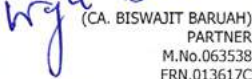
EXPENDITURE	AMOUNT (Rs)	INCOME	AMOUNT (Rs)
To Administrative Staff Salary	53,66,469.12	By Interest on TDS Refund	79,110.00
To Legal charges	85,500.00	By Bank Interest	6,50,279.89
To Municipality Tax	1,645.51	By Interest on Bank Fixed Deposits	24,84,988.00
To Bank Charge	1,40,355.63	By DONATION	3,47,852.00
To Administrative Expenses	2,932.00	By MEMBERSHIP FEES RECEIVED	8,600.00
		By IOCL Bonus Receipt (incidental )	216.80
		By Internship fees (incidental)	31,000.00
		By Receipt from 7TH APS REGISTRATION (incidental)	4,53,097.00
		By Receipt from use of vehicle (incidental)	71,000.00
		By Receipt from Gibbon Training Program (incidental)	3,000.00
		By Discount from JMK computers (incidental)	8,000.00
		By Recovery of salvage value of Gypsy from Project (Incidental)	20,000.00
		By Recovery of salvage value of Inverter (Incidental)	3,500.00
		By Recovery of salvage value of Vehicle (Incidental)	1,50,000.00
		By Recovery from project products (incidental)	41,670.00
		By Deficit of Income over Expenditure	12,44,588.57
<b>TOTAL</b>	<b>55,96,902.26</b>	<b>TOTAL</b>	<b>55,96,902.26</b>

Place: Guwahati  
Date: 28/12/2020

For & Behalf of  
AARANYAK  
  
(DR. BIBHAB KR. TALUKDAR)  
SECRETARY GENERAL



As per our report of even date  
FOR DHAWAN PANDEY & ASSOCIATES  
CHARTERED ACCOUNTANTS

  
(CA. BISWAJIT BARUAH)  
PARTNER  
M.No.063538  
FRN.013617C  
UDIN : 20063538AAAABK1919




**AARANYAK**  
**SAMANWOY PATH, SURVEY, BELTOLA, GUWAHATI-781028, DIST. KAMRUP, ASSAM.**

**BALANCE SHEET AS ON 31ST MARCH 2020**

LIABILITIES	AMOUNT (Rs)	ASSETS	AMOUNT (Rs)
<b>FUND ACCOUNT</b>			
<b>General Fund</b>		<b>Fixed Assets</b>	3,38,74,755.00
Opening Balance	1,82,91,446.95		
Less: Net deficit during the year	<u>12,44,588.57</u>		
General Fund Utilised in Project	8,26,038.00	<b>Current Assets</b>	
		TCS	13,737.00
<b>Capital Fund out of Project Expenses</b>		Tax Deducted at Source	16,55,594.10
Opening Balance	2,60,74,842.00	Advance for Project Expenses	13,73,836.42
Add: During the year	<u>(6,81,634.00)</u>		
	2,53,93,208.00	Indian Oil Corporation	(12,950.91)
<b>Unutilised Project Funds</b>	7,47,09,278.27	Loan to Employee	15,000.00
		<b>CLOSING BALANCE</b>	
<b>Funds from Individual for Specific Purpose</b>		Cash in hand	20,568.53
Jane Macdonald (Greater Adjutant Stork)	10,98,660.00		
Less: Expenditure incurred during the year	<u>4,09,505.70</u>	<b>INVESTMENTS</b>	
	6,89,154.30	Fixed Deposits with Bank of Baroda, Dispur Branch	4,49,21,380.66
Dawson Christopher (Boat)	12,906.44	Fixed Deposit with Union Bank of India, Basistha Road branch	31,78,997.90
<b>MCOC EARNEST MONEY RECEIVED</b>	20,000.00	UTI	54,00,000.00
		<b>BANK ACCOUNTS</b>	
		HDFC, Bangqagarh Branch(ERCI-1)	19,465.08
		HDFC, Bangqagarh Branch(ERCI-2)	3,696.45
		HDFC, Bangqagarh Branch(ERCI-3)	2,806.10
		HDFC, Bangqagarh Branch(GDRCI)	1,043.81
		HDFC, Bangqagarh Branch(ARCI)	1,02,383.60
		HDFC, Bangqagarh Branch(WGP)	4,864.51
		HDFC, Bangqagarh Branch(LIVELIHOOD)	588.64
		HDFC, Bangqagarh Branch(PRCI)	69,371.67
		HDFC, Bangqagarh Branch(RRCI)	49,058.28
		YES BANK(RRCI)	406.78
		State Bank of India, Beltola(TRCI-2)	3,188.40
		State Bank of India, Beltola(TRCI)	1,38,322.68
		TSRP	2,08,455.67
		IDBI, Beltola Branch(WATCH)	246.67
		Bank of Baroda, Dispur Branch	1,55,52,026.27
		Union Bank of India, Basistha Road Branch(PRCI)	73,524.71
		State Bank of India, Dispur	20,05,249.94
		AARANYAK LIVELIHOOD-2	10,845.17
		INDUSLAND BANK	6,04,016.47
		Union Bank of India	87,30,882.78
		AARANYAK HDFC (WATCH)	160.20
		AARANYAK (TRCI-3)	31,393.39
		YES BANK(AARANYAK)	2,32,019.04
		Bank of Baroda (TTMP)	9,956.35
		HDFC(TTMP)	238.54
		Manas Traditional Dress cluster (PNB)	2,84,503.50
		Yes Bank Ltd (WGd-2)	47,809.99
		YES BANK (LIVELIHOOD)	70,000.00
<b>TOTAL</b>	<b>11,86,97,443.39</b>	<b>TOTAL</b>	<b>11,86,97,443.39</b>

Place: Guwahati  
Date: 28/12/2020

For & Behalf of  
AARANYAK  
  
(DR. BIBHAB KR. TALUKDAR)  
SECRETARY GENERAL



As per our report of even date  
FOR DHAWAN PANDEY & ASSOCIATES  
CHARTERED ACCOUNTANTS

  
(CA. BISWAJIT BARUAH)  
PARTNER  
M.No.063538  
FRN.013617C  
UDIN 20063538AAAABK1919

## FIND AARANYAK

### Registered address:

50, Samannoy Path,  
Beltola Survey, Guwahati,  
India - 781028

### Administrative Office:

Aaranyak,  
13, Tayab Ali Byelane,  
Bishnu Rabha Path, Beltola Tiniali,  
Bhetapara Link Road,  
P.O. Beltola, Guwahati,  
India - 781028

Email: [info@aaranyak.org](mailto:info@aaranyak.org)

Tel: +91-361-2230250

Fax: +91-361-2228418

### Research Division Office:

12, Kanaklata Path,  
Byelane 3, Ajanta Path,  
Beltola Survey, Guwahati,  
India - 781028

### Field Stations:

#### Manas Landscape:

Aaranyak, C/o Biraj Das, Chandrapur, Ward No. 7

Aaranyak, C/o Utpal Das, Chandrapur, Ward No. 7

Barpeta Road

- Panbari Field Station, Panbari Range, Manas National Park
- Majrabari Field Station, Bhuyanpara Range, Manas National Park
- Bansbari Field Station, Manas National Park, Baksa  
*C/o Gangarani Sarkar, Gyati Gaon, Bansbari - 781315*  
*Mobile: +91-7896508018*
- Manas Nest, Bhuyanpara, Manas National Park, Baksa.  
*C/o Bhuyanpara Ecotourism Society*  
*Bhuyanpara - 781318*  
*Contact Person - Baburam Basumatary*  
*Mobile: +91-9435763149*

#### Kaziranga Landscape:

Aaranyak, C/o M. Firoz Ahmed, Pilkhana, Kohora - 785609

Contact - Arif Hussain, Mobile: +91-9854797419

#### Golaghat Landscape:

Aaranyak, C/o Girish Lahon, Near LIC Office

Bokakhat, PIN - 785612

#### Eastern Assam Landscape:

Aaranyak, C/o Bipin Chandra Datta

Itabhata, Near Digboi College, Digboi - 786171

#### Gibbon Wildlife Sanctuary and Jorhat District:

Aaranyak, C/o Dilip Chetry, Gibbon Conservation Centre,

Gibbon Wildlife Sanctuary

P.O. Mariani PIN - 785634

Mobile: +91-9435043892

#### North Bengal Field Station

*C/o Utpal Mazumdar, Near Netaji School, Lechutala*

*Alipurduar Junction, PIN - 736121*

#### Roing Field Station

*T. Meya Complex, Mayu, Roing*

*PIN - 792110, District: Lower Dibang Valley (Arunachal Pradesh)*

*Land mark: Near Government Secondary School, Mayu*



## STAFF LIST

(1<sup>st</sup> April 2019 to 31<sup>st</sup> March 2020)

### ADMIN & ACCOUNTS DIVISION

**Dr. Bibhab Kumar Talukdar,**

Scientist G, SG & CEO

**Mrs. Bobby Nath,**

Manager, Administration

**Mr. Ranjan Jyoti Khound,**

Manager, Finance

**Mr. Bhaskar Sarkar,**

Manager, Accounts

**Md. Zakir Islam Bora,**

Manager to the Office of SG & CEO

**Ms. Binita Subba,**

Accountant

**Mr. Tapash Mahanta,**

Accountant

**Mr. Pranab Goswami,**

Organising Officer

**Ms. Bijoyinee Sarma,**

Executive (Administration)

**Mr. Jayanta Gogoi,**

Accounts Officer

**Mr. Nripen Kumar Nath,**

Office Executive (Operation)

**Mr. Jyotirmoy Nath,**

Accounts Assistant

**Mr. Gouranga Mandal,**

Office Assistant

**Mr. Rajesh Das,**

Office Supporting Assistant

**Mr. Krishnamoni Das,**

Office Supporting Assistant

**Mr. Rajghar Kalita,**

Office Supporting Assistant

**Mr. Dhiren Sarma,**

Office Supporting Assistant

**Mr. Moni Kumar Haloi,**

Field Assistant cum Watchman

**Mr. Arun Basfor,**

Office Cleaner

### AVIFAUNA RESEARCH & CONSERVATION DIVISION (ARCD)

**Ms. Purnima Devi Barman,**  
Project Manager, GASCP

**Ms. Ferdousi M choudhury,**  
Program Associate, GASCP

### CONSERVATION & LIVELIHOOD DIVISION (CLD)

**Mr. Bipul Das,**

Deputy Manager

**Ms. Manoshi Goswami,**

Communication Officer, Manas Landscape

**Mr. Silash Basumatary,**

Project Coordinator

**Mr. Kuldeep Das,**

Project Coordinator, Manas Landscape

**Mr. Detsung Basumatary,**

Project Associate, Manas Landscape

**Mr. Manzum Mahanta,**

Documentation Officer

**Mr. Swapan Kumar Das,**

Project Coordinator - Livelihood

**Mr. Kunja Brahma,**

Project Assistant - Livelihood

**Mr. Bijay Basumatary,**

Project Assistant - Livelihood

**Mr. Songsar Basumatary,**

Field Assistant - Livelihood

**Mr. Amit Dewry,**

Office Assistant, Manas Landscape

**Mr. Pankaj Das,**

Field Assistant, Livelihood

**Mr. Bijoy Kalita,**

Driver, Manas Landscape

### ELEPHANT RESEARCH & CONSERVATION DIVISION (ERCD)

**Dr. Bibhuti Prasad Lahkar,**

Scientist E, Head ERCD & Landscape Administrator, Manas Landscape

**Dr. Jyoti Prasad Das,**

Manager

**Ms. Alolika Sinha,**

Assistant Manager

**Mr. Abhijit Boruah,**

Project Coordinator

**Mr. Anjan Chandra Baruah,**

Program Coordinator

**Mr. Rubul Tanti,**

Junior Research Scholar

**Mr. Animekh Hazarika,**

Research Scholar

**Mr. Niranjan Bhuyan,**

Field Coordinator

**Mr. Monjit Konwar,**

Project Assistant

**Mr. Jiban Chetry,**

Project Assistant

**Mr. Rupam Goyari,**

Field Assistant

**Mr. Porash Moni Hazarika,**

Field Assistant

**Mr. Ankur Nahok,**

Field Assistant

**Mr. Pradeep Barman,**

Driver

### ENVIRONMENT EDUCATION & CAPACITY BUILDING DIVISION (EECBD)

**Mr. Jayanta Kumar Pathak,**

Manager

### GANGETIC DOLPHIN RESEARCH & CONSERVATION DIVISION (GDRCD)

**Dr. Abdul Wakid,**

Head

**Mr. Nurjamal Houque,**

Project Assistant

**Mr. Gobardhan Mallah,**  
Boat Pilot

**Mr. Kedar Mallah,**  
Boat Driver

**Mr. Pranjit Das,**  
Assistant Boat Pilot

**Md. Noor Islam,**  
Driver cum Field Assistant

#### **GEOSPATIAL TECHNOLOGY & APPLICATION DIVISION (GTAD)**

**Mr. Arup Kumar Das,**  
Manager

**Ms. Madhumita Borthakur,**  
Spatial Database Officer

**Ms. Kongseng Konwar,**  
Database Officer

**Mr. Bankim Baruah,**  
Project Coordinator

**Mr. Jyotish Ranjan Deka,**  
GIS Assistant

**Ms. Minakshi Dutta,**  
GIS Analyst

#### **HERPETOFAUNA RESEARCH & CONSERVATION DIVISION (HRCDD)**

**Dr. Firoz Ahmed,**  
Scientist F, Head

**Mr. Jayanta Kumar Roy,**  
Senior Researcher

**Mr. Sourav Gupta,**  
Project Officer, Research and  
Monitoring

**Late Salina Sultana,**  
Project Officer, Research and  
Monitoring

**Mr. Sibam Sarkar,**  
Trainee

#### **LEGAL & ADVOCACY DIVISION (LAD)**

**Dr. Bibhab Kumar Talukdar,**  
Scientist G, Head

**Mr. Manas Kumar Bhattacharjya,**  
Manager

**Mr. Ajoy Kr. Das,**  
Associate Lawyer

**Mr. Anil Kumar Das,**  
Coordinator

**Mr. Goura Baidya,**  
Deputy Coordinator

**Mr. Nirmal Kalita,**  
Assistant Coordinator

**Mr. Sanatan Mali,**  
Senior Dog Handler

**Mr. Rahul Das,**  
Dog Handler

**Mr. Minkul Sarma,**  
Assistant Dog Handler

**Mr. Bitumoni Lahkar,**  
Junior Dog Handler

**Mr. Mrigen Das,**  
Junior Dog Handler

**Mr. Bhiraj Deka,**  
Junior Dog Handler

#### **MEDIA PUBLICATION & COMMUNICATIONS DIVISION**

**Mr. Udayan Borthakur,**  
Scientist E, Head

**Ms. Munmita Baruah,**  
Manager

**Mr. Kukil Gogoi,**  
Documentation & Production  
Officer

#### **PRIMATE RESEARCH & CONSERVATION DIVISION (PRCD)**

**Dr. Dilip Chetry,**  
Scientist E, Programme Head

**Mr. Mridupaban Phukan,**  
Field Manager

**Mr. Bishwa Jivan Chakma,**  
Field Manager

#### **RHINO RESEARCH & CONSERVATION DIVISION (RRCD)**

**Dr. Bibhab Kumar Talukdar,**  
Scientist G, Head

**Md. Arif Hussain,**  
Acting Manager, Community Liaison

**Mr. Bijay Sankar Bora,**  
Consultant

**Mr. Yadav Chandra Mandal,**  
Coordinator - Field Investigation -  
Wildlife Crime Monitoring

**Mr. Montu Boro,**  
Animal Keeper

#### **THREATENED SPECIES RECOVERY PROGRAMME (TSRP)**

**Dr. Parag Jyoti Deka,**  
Programme Manager

**Dr. Saljagrang R. Marak,**  
Project Officer

**Mr. Jonmani Kalita,**  
Jr. Field Biologist

**Mr. Ajay Kumar Das,**  
Site Coordinator

**Mr. Bhaben Hazarika,**  
Site Coordinator

**Ms. Sewali Rabha,**  
Site Assistant

**Ms. Mamata Mondal,**  
Site Assistant

**Mr. Sarat Hazarika,**  
Site Assistant

**Mr. Dwipendra Dev,**  
Senior Field Assistant

**Mr. Kishur Payeng,**  
Field Assistant

**Mr. Rajib Boro,**  
Jr. Field Assistant

**Mr. Raju Mili,**  
Field Assistant

**Mr. Amal Deka,**  
Field Assistant

**Mr. Mahanta Das,**  
Field Assistant

**Md. Chand Miyan,**  
Sr. Animal Caretaker

**Ms. Monora Begum,**  
Animal Caretaker

**Mr. Tulshi Nath,**  
Animal Caretaker

**Mr. Dinesh Kalita,**  
Junior Animal Caretaker

**Mr. Dibyeswar Barman,**  
Jr. Animal Caretaker

**Mr. Golap Hazarika,**  
Jr. Animal Caretaker



## **TIGER RESEARCH & CONSERVATION DIVISION (TRCD)**

**Dr. Firoz Ahmed,**  
Scientist F, Head

**Mr. Dipankar Lahkar,**  
Manager

**Ms. Binita Baruwati,**  
Sr. Project Officer - Analyst

**Mr. Prosenjit Sheel,**  
Sr. Project Officer - Law  
Enforcement

**Ms. Aprajita Singh,**  
Project Officer, Research &  
Monitoring

**Mr. Sarlongjon Teron,**  
Project Officer, NRM

**Mr. Pranjon Daimari,**  
Project Officer, Law Enforcement

**Mr. Pronit Basumatary,**  
Asst. Project Officer - Law  
Enforcement

**Mr. Nibir Medhi,**  
Project Officer, Research &  
Monitoring

**Mr. Mizing Boro,**  
Asst. Project Officer- Law  
Enforcement

**Mr. Binod Dewry,**  
Asst. Project Officer - logistics

**Mr. Mukesh Kherkatary,**  
Asst. Project Officer - Law  
Enforcement

**Mr. Phwjwngsar Narzary,**  
Consultant, Law Enforcement

**Mr. Birdutta Baro,**  
Field Assistant - Law Enforcement

**Mr. Ajay Basumatary,**  
Field Assistant - NRM

**Mr. Bijeet Baro,**  
Field Assistant, Law Enforcement

**Md. Majammil Haque,**  
Office Assistant

**Ms. Devi Das,**  
Field Assistant, Law Enforcement

**Ms. Sajati Das,**  
Field Assistant

**Mr. Ratul Das,**  
Field Assistant, NRM

**Mr. Rowel Ingti,**  
Field Assistant, NRM

**Mr. Sanehuma Narzary,**  
Field Assistant - Research and  
Monitoring

## **WATER CLIMATE & HAZARDS DIVISION (WATCH)**

**Dr. Partha Jyoti Das,**  
Scientist E, Head, Water Climate  
and Hazard Division

**Mr. Tonmoy Baruah,**  
Project Coordinator

**Ms. Neelakshi Dutta,**  
Project Associate

**Mr. Dipmoni Nath,**  
Driver cum Technical Field  
Assistant

## **WILDLIFE GENETICS DIVISION (WGD)**

**Mr. Udayan Borthakur,**  
Scientist E, Head

**Dr. Pranjal Kumar Das,**  
Manager

**Ms. Rumana Maheen,**  
Researcher

**Mr. Mitrajit Deb,**  
Project Manager

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## **REGIONAL COORDINATORS**

### **EASTERN ZONE**

**Mr. Tikendrajit Gogoi,**  
Coordinator

**Mr. Sailendra M. Das,**  
Assistant Coordinator

**Mr. Sanjay Das,**  
Assistant Coordinator

### **CENTRAL ZONE**

**Mr. Arif Hussain,**  
Coordinator

**Mr. Niranjana Bhuyan,**  
Assistant Coordinator

### **WESTERN ZONE**

**Dr. Ashoke Kr. Das**  
Coordinator

**Dr. Kushal Choudhury**  
Assistant Coordinator

**Mr. Ankur Barman**  
Assistant Coordinator

## **LEGAL ADVISORS**

**Mr. Gautam Uzir,**  
Advocate - Gauhati High Court

**Mr. Bhaben Narzary,**  
Advocate - Gauhati High Court

## **RESEARCH ADVISORY BOARD**

**Prof. Alak Kr. Buragohain**

**Dr. Annwaruddin Choudhury,**  
D.SC.

**Prof. Qamar Qureshi**

**Prof. S. K. Dutta**

**Chief Wildlife Warden of Assam**

**Secretary General of Aaranyak**

as Member Secretary of RAB





# NOURISHING NATURE TO SECURE OUR FUTURE

We strive to protect nature and its resources ranging from animal and plant species, forests, various water bodies, mountains, as we believe that welfare of our communities is intricately linked to pristine nature. We work to secure a future for all species that are under any sort of threat. We bank on scientific means, law, advocacy, community engagement, education and much more, in our endeavour to protect land, water, and climate that are vital for survival of all animal and plant species. The efforts to leave behind a vibrant nature face a range of national and worldwide threats to biodiversity that include overpopulation, climate change and man's quest for rapid development. Now into the 31<sup>st</sup> year of our mission, we try hard for continued expansion, creativity, and unrestrained action for protection of most endangered species, rivers and water bodies, mitigating impact of changing climate in North East India.



#### **Administrative Office**

Aaranyak, 13, Tayab Ali  
Byelane,  
Bishnu Rabha Path,  
Beltola Tiniali-Bhetapara  
Link Road,  
P.O. Beltola, Guwahati,  
India - 781028

#### **Research Division Office**

12, Kanaklata Path,  
Byelane 3, Ajanta Path,  
Beltola Survey,  
P.O. Beltola, Guwahati,  
India - 781028

#### **Registered address**

50, Samannoy Path,  
Beltola Survey,  
P.O. Beltola, Guwahati,  
India - 781028

[www.aaranyak.org](http://www.aaranyak.org)