

12.2 This Agreement is a good will arrangement which reflects the current understanding of each of the parties and does not create a legally binding obligation under international law or under the parties' applicable domestic law.

12.3 Any conflict arising out of the interpretation or implementation of this overarching framework collaboration agreement will be settled amicably by the parties through consultation and will not be referred to any court or tribunal.

SEAL OF THE PARTIES

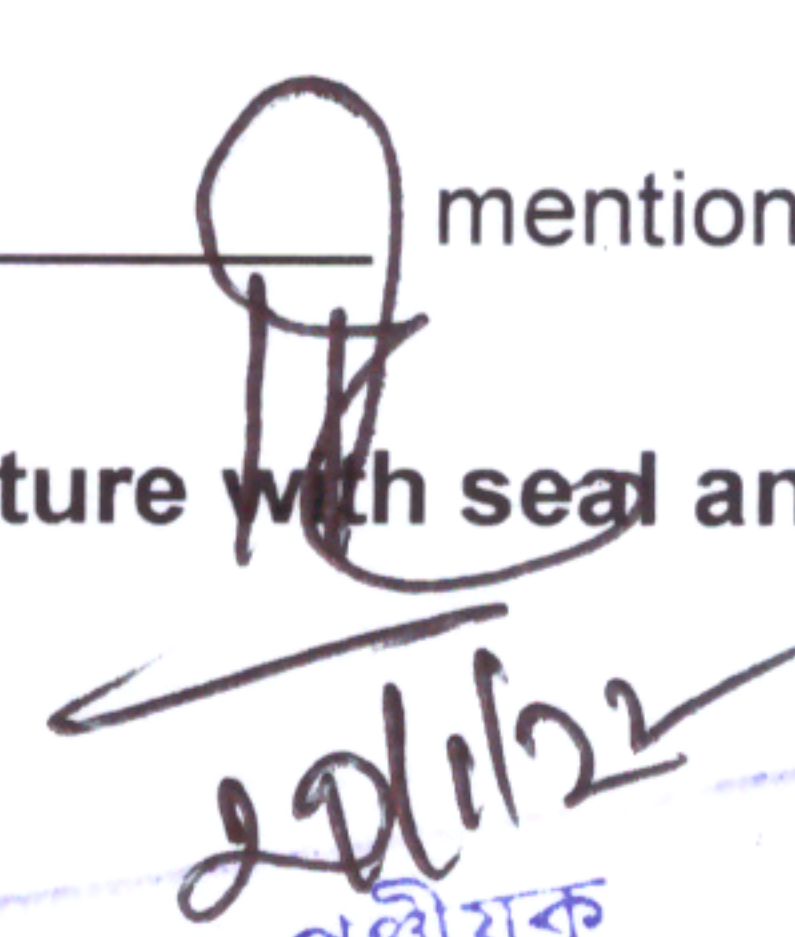
In witness whereof the parties hereto have signed this agreement on _____ mentioned herein:

Name and Designation

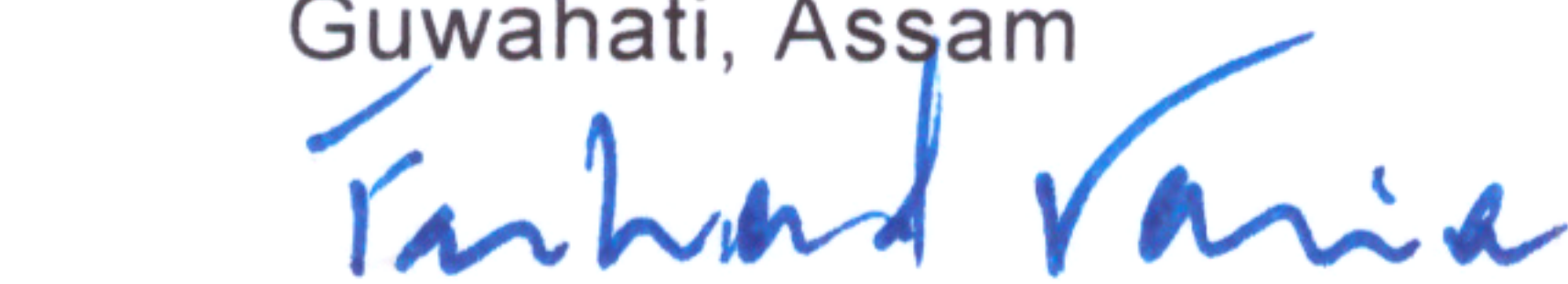
Ms./Mr.

Designation:

Signature with seal and date


পঞ্জীয়ক
গুৱাহাটী বিশ্ববিদ্যালয়, গুৱাহাটী-১৪
Registrar
Gauhati University, Guwahati-14

For the Department of Zoology, Gauhati University,
Guwahati, Assam



for Dr. Ulrike Reviere
Country Director
GIZ India

Deutsche Gesellschaft für Internationale Zusammenarbeit
(GIZ) GmbH
46, Paschimi Marg, Vasant Vihar, New Delhi 110057, India

Dr Uwe Scholz

Project in Charge NERAQ Project

Deutsche Gesellschaft für Internationale Zusammenarbeit
(GIZ) GmbH



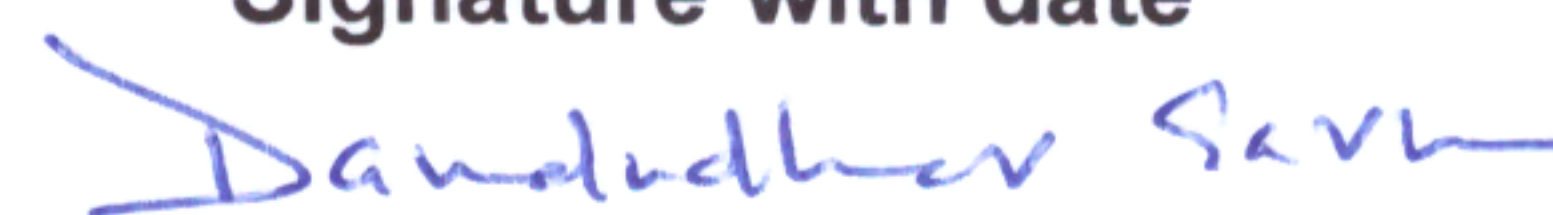
WITNESS:

Name and Designation

1. Prof. Dandadhar Sarma

2. Sudip Kanta Basistha, NERAQ, GIZ

Signature with date



2.

ANNEX 1

BACKGROUND

About the NERAQ Project

Population growth, increasing intensity of use and the consequences of climate change are increasingly threatening aquatic habitats and their ecosystem services in the North Eastern Himalayan region of India.

Against this background, the overall project objective is to strengthen the conservation and sustainable use of the unique aquatic ecosystems in the region, which are the basis of life for millions of people. To this end, the capacities of relevant stakeholders for the participatory development of protection and sustainable use concepts for aquatic resources in selected river sections in four North Eastern states are being promoted. The developed concepts will then be validated in selected pilot projects. Relevant actors are the Indian administrative and research institutions concerned, but also local user groups.

The project objective contributes to the sustainable securing of the livelihoods of river riparian communities.

The eastern part of the Himalayas includes parts of Nepal, Bhutan and the region of North Eastern India. This part of the country is important for India because of its still largely unspoilt natural and cultural landscape, which is characterised by a high biodiversity on land, water and in the crops grown. The local population is mainly composed of ethnic minorities recognised by the Indian central government, so-called Scheduled Tribes. The Indian constitution guarantees them special rights and protects their culture.

Traditionally, natural resources have been managed and administered at village and community level. Private ownership was largely unknown. Decisions on the use of communal land or waters were taken jointly within predetermined social structures (kingdoms, city states). Management concepts were based on experience and traditional knowledge accumulated over centuries. In recent times, these old concepts have been eroding mainly due to political influences from outside and social changes in general. As a result, the formerly established management concepts are no longer effective and are replaced by non-sustainable and uncontrolled uses. The consequences have a negative impact on the condition of ecosystems and become a threat to aquatic resources in particular.

Two of the world's 34 biodiversity hotspots are located in North Eastern India. In both hotspots taxonomic inventories in freshwater biotopes were carried out in 2010. A total of 520 fish species - including 35 endemic

fish species only found in North Eastern India¹, 186 mollusc species and 367 different dragonfly species (odonata) were identified.

The North Eastern region of India is supplied by two large water catchment areas, the Brahmaputra and the Barak river system, with their numerous tributaries. Both are characterised by the southwest monsoon (June - September) with extremely high precipitation (up to 10 m!). The consequences are frequent floods, sometimes disastrous floods, landslides and soil erosion. In the dry winter months, however, springs and smaller rivers may dry up, and there may be a general shortage of water in the higher-lying low mountain ranges. This causes supply bottlenecks for the local population, but also stress for the aquatic ecosystems. A further increase in frequency and impact of extreme weather conditions is expected and attributed to the consequences of climate change.

For the planned project the Indian part of the Indo-Burma hotspot south of the Brahmaputra River (see area marked in pink in the following illustration) was selected. It includes parts of the states of Arunachal Pradesh and Assam and the states of Meghalaya, Nagaland, Manipur and Mizoram in their entirety. Anthropogenically unaffected areas are only estimated to cover 5% of the area in this, in the worldwide comparison of all biodiversity hot-spots², the most densely populated region.

The North Eastern Region of India is of high economic importance for the local population and also for India as a whole, due to its water potential and biodiversity, including aquatic resources. Against this background, conflicts of use and objectives arise, the consequences of which threaten the conservation of biodiversity and services of aquatic freshwater ecosystems. These include above all:

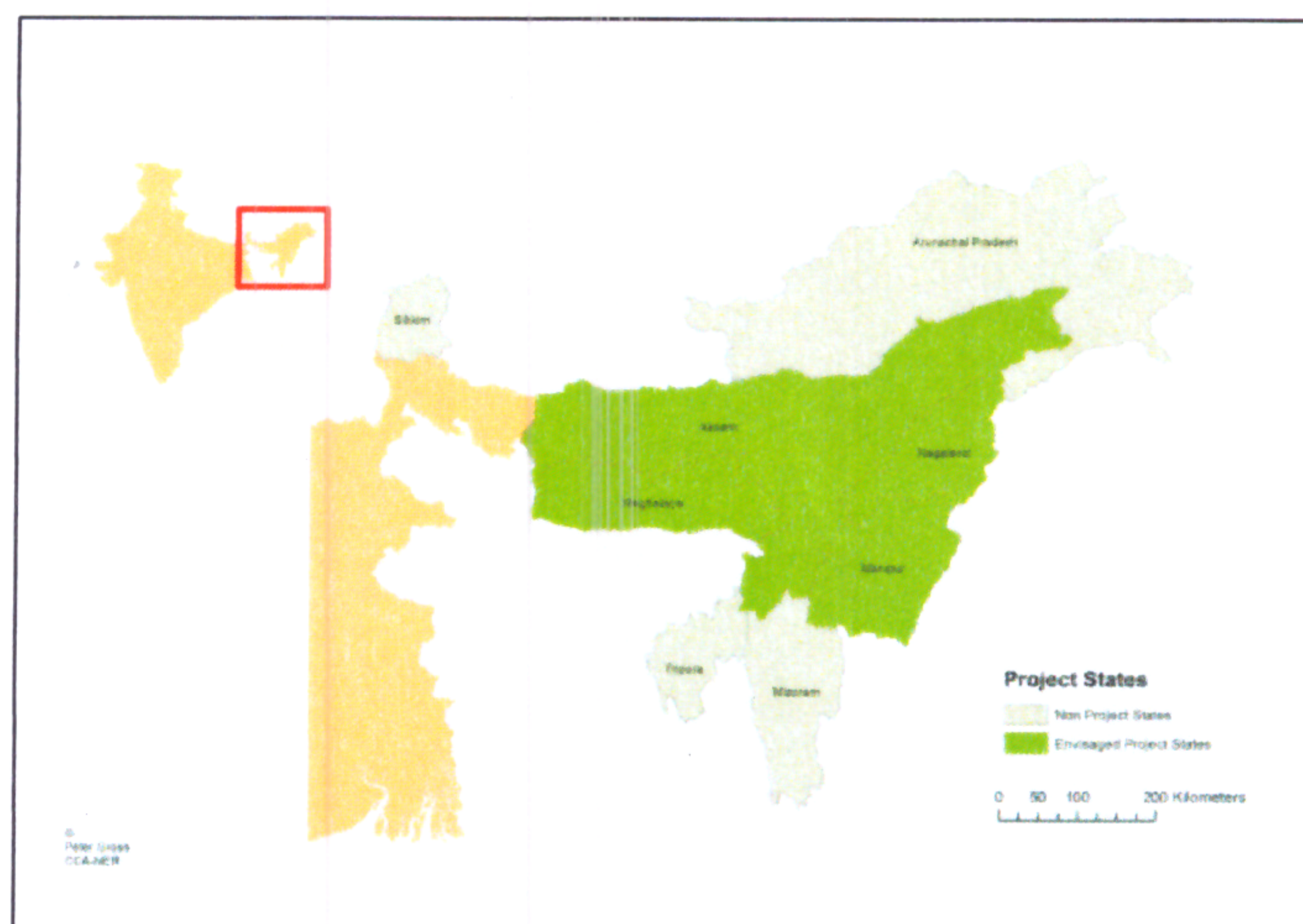
- Overfishing and the use of unsustainable fishing methods and prohibited fishing techniques (explosives, poison, etc.)
- Destruction of aquatic habitats through direct anthropogenic interference, including
- Dam construction for hydropower and irrigation
- Pollution through the input of chemicals and sediments from agricultural and other land use activities (mining, quarrying.), wastewater discharges, etc.
- Sedimentation of rivers and wetlands as a result of deforestation
- Development of residential and industrial areas
- Direct and long-term effects of climate change (higher frequency of extreme weather events, increase in water temperatures))

Four states in the North Eastern region of India have been selected as possible intervention areas. Criteria for the selection are the willingness of the states to support the project, existing basic data, and the existence of

¹Allen, D.J. et al. 2010: The status and distribution of freshwater biodiversity in the eastern Himalaya

²Sharma et al. 2009: Biodiversity in the Himalayas - Trends, Perception and Impacts of Climate Change

institutes and administrative authorities with the necessary expertise. In the course of two stakeholder meetings, corresponding information was gathered (see following map with the four states in green, GIZ 2019).



NERAQ Project goals and results:

The following target groups are reached by the project:

1. In the political arena, the target groups are the ministries MoEFCC and MDoNER with their subordinate administrative structures at both central and state level. The aim is to promote capacity development, especially with regard to inter-agency cooperation. This will enable actors at national and federal level to develop and implement effective planning concepts for the protection and sustainable management of aquatic ecosystems and their services with a focus on wildlife fisheries.
2. Capacity development measures adapted to the responsibilities, tasks and needs are aimed at the decision-makers and staff to strengthen the competence of institutions and research facilities that will make a significant contribution to the implementation of the project. These actors will build up capacities at different levels with the technical support of the subcontractor IfB / Potsdam, collect basic data, design pilot projects, develop monitoring tools and provide scientific support for the overall project. These actors will contribute significantly to quality assurance.

This target group includes the State Biodiversity Boards (SBBs), the Department of Science Technology and Climate Change (DSTCC), the Department of Environment and Climate Change (DECC), the fisheries authorities in the respective states, the Zoological Survey of India (ZSI), the Indian Council of Agricultural Research (ICAR), the State Institute of Rural Development (SIRD), the Faculty of Fisheries Sciences of Assam Agricultural University and the Gauhati University, Assam

3. The pilot projects focus on population groups (communities, districts, cooperatives and self-help groups) whose livelihoods and income are directly dependent on aquatic resources - especially wild fish and invertebrates. Together with them, climate-related protection and use strategies are developed and implemented. Within the framework of the pilot projects, different concepts of alternative sources of income to

secure the long-term economic livelihood of the local population are to be developed and tested. Successful pilot measures are then incorporated into the development of protection plans at block, district and state level.

The overall objective of the NERAQ project is the conservation and sustainable use of the unique aquatic ecosystems in the North Eastern Himalayan region of India, which provides the livelihood for millions of people. Only intact and species-rich aquatic ecosystems will provide the irreplaceable services in a sustainable manner and ensure the potential for resilience and adaptability to the consequences of climate change. This will be achieved by:

1. Scientifically sound and sufficient information is available for selected freshwater ecosystems and their services with focus on fish and invertebrates. The necessary capacities have been developed.
2. National and state level institutions promote a participatory approach to the involvement of local stakeholders, whereby conservation and sustainable use strategies and plans are jointly developed and implemented. In this way, the different interests and needs of the riparian communities are taken into account, conflicts of interest are reduced or avoided. Ownership and thus the prerequisites for success and sustainability beyond the project duration have been created.
3. Designated freshwater areas are protected and/or sustainably managed (e.g., sustainable fisheries and tourism management) and generate additional income for local communities. Thus, the services of the affected ecosystems are maintained and the livelihoods of the population dependent on them are secured.

The pressure on the aquatic freshwater ecosystems in the North Eastern region of India is steadily increasing, mainly due to population growth, increasing intensity of use and the consequences of climate change. At the same time, traditional systems for managing natural resources at village and community level are eroding due to external political influences and social changes. As a result, aquatic freshwater ecosystems and their ecosystem services are increasingly being destroyed, with devastating consequences for fish and invertebrate stocks and the livelihoods of the riverine population.

The long-term goal of the project is to counteract these developments and to ensure the protection and sustainable management of aquatic freshwater ecosystems and thus the livelihoods of the riparian communities dependent on these systems (**Impact**).

To achieve this, the project aims to strengthen the knowledge and management capacities of state and local stakeholders for the protection and sustainable, climate-friendly management of aquatic freshwater ecosystems. Freshwater fish and invertebrates (mussels, crustaceans, etc.) are the focus of the project activities (**Outcome**).

With the support of the project, scientifically proven protection and sustainable use concepts for aquatic resources in selected river sections of the Indo-Burma hotspot are developed and tested. A central role is played by the federal authorities, civil society organisations and the local river riparian communities with their

traditional administrative structures. Following a participatory approach, they develop concepts that are adapted to the respective conditions (**Output II**).

This requires improving the knowledge and expertise of research institutions on the aquatic resources relevant to the project and their sustainable management. This will be achieved through cooperation with the IfB Potsdam. An important milestone is the establishment of an institutional mechanism (knowledge network, regional hub) that defines and offers clear tasks and communication structures for its members. In cooperation with universities and research institutions, analyses of fish and invertebrate stocks, climate vulnerability and locally available traditional knowledge are carried out and processed into concrete recommendations in state action plans (**Output I**).

Based on the learning lessons (good practices) from the pilot measures, the scientific analyses and the recommendations formulated in the action plans, the knowledge network develops capacity building measures for governmental and non-governmental stakeholders with the aim of raising their awareness of the value - both ecological and economic - and thus the need to protect the aquatic resources concerned. In order to ensure the dissemination of the project measures at state and regional level, the project supports the state government in revising the sections relating to aquatic ecosystems in the State Action Plans on Climate Change (SAPCCs) (**Output III**).

The implementation of the sustainable use concepts developed in the project for the protection of aquatic ecosystems at further locations outside the project areas with funds of the state governments is supported. The steering committee established by the project at national level, with the participation of the Indian Ministry of Environment (MoEFCC) and the Ministry of Development of the North East Region (MDoNER), will take up the project contents and promote mainstreaming in the respective sectors (e.g., within the framework of the National Mission on Sustaining the Himalayan Ecosystem (NMSHE) and the National Mission on Himalayan Studies (NMHS)). In the long term, the impacts of the project measures contribute to the preservation and safeguarding of the livelihoods of the affected riverine riparian communities.

**MEMORANDUM OF UNDERSTANDING FOR IMPLEMENTING VARIOUS
WILDLIFE CONSERVATION ACTIVITIES IN ASSAM**

This Memorandum of Understanding (MoU) is entered into this ^{12th} day of
July 2022

BETWEEN

The Gauhati University, Gopinath Bardoloi Nagar, Jalukbari, P.O. Gauhati University – 781014, hereafter referred to as the “FIRST PARTY” (which term and expression shall unless repugnant to the context mean and include its successors, administrators, executors, legal representatives and assigns) on the ONE PART.

AND

The WILDLIFE TRUST OF INDIA, B-176, First Floor, East of Kailash, New Delhi-110065, hereafter referred to as the “SECOND PARTY” (which term and expression shall unless repugnant to the context mean and include its successors, administrators, executors, legal representatives and assigns) on the OTHER PART.

WHEREAS THE FIRST PARTY is the State government academic institution established under the Gauhati University Act, 1947 engaged in providing higher education for equity and empowerment of people of all castes, creed and religion in Assam, hereafter referred to as and matters incidental for related thereto.

AND WHEREAS the SECOND PARTY is a charitable trust registered under the Income Tax Act 1961 under Section 12 (a) and is engaged in the promotion of conservation and welfare of wildlife and matters incidental thereto.

AND WHEREAS the mandate of the FIRST PARTY is to provide higher education through designed curriculum with practical experiences with broadly in academic purpose and the SECOND PARTY is mostly engaged in the wildlife conservation actions. Both the parties are desirous of working together for the betterment of knowledge generation and conservation of wild flora and fauna in Assam through the following activities:

Both parties agree to provide opportunities to researchers (personnel) of each others organisations to



Signature
1

Signature

পৰীক্ষক
গুৱাহাটী বিশ্ববিদ্যালয়, গুৱাহাটী-১৪
Registrar
Gauhati University, Guwahati-14



Memorandum of Understanding (MoU)

between

**Gauhati University
Jalukbari, Gopinath Bordoloi Nagar,
Guwahati-14, Assam, India**

-hereinafter referred to as “Gauhati University”

AND

**“Institut of Inland Fisheries Potsdam-Sacrow,
Germany**

-hereinafter referred to as “IFB”