

# Protection and Sustainable Management of Aquatic Resources in the North-Eastern Himalayan Region of India (NERAQ)



## Context

India is one of the mega biodiversity centres in the world and houses two of the world's thirty-four biodiversity hotspots, located in the North Eastern Region (NER), namely, the Indo Burma Biodiversity hotspot and the Himalayas. The region has abundant species of flora and fauna, in particular an extraordinary aquatic biodiversity. Aquatic resources serve as significant sources for food and income security for considerable parts of the local population in NER.

Population growth, and climate change impacts, increased usage intensity resulting in pollution and unsustainable activities such as destructive fishing methods, sand mining, quarrying and logging are increasingly threatening aquatic habitats in India's Northeastern Himalayan region. Conflicting interests and lack of integrated approaches among the various stakeholders further lead to unsustainable management practices.

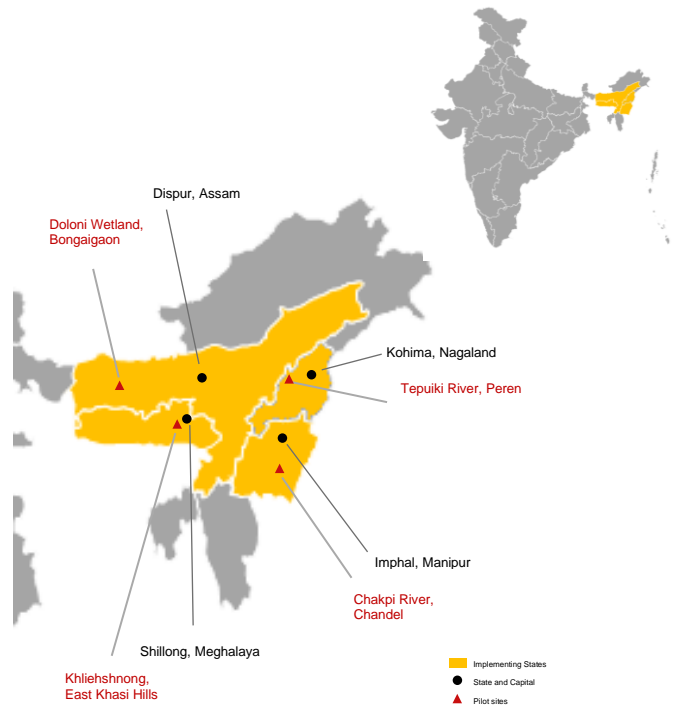
## Objective

NERAQ is an International Climate Initiative (IKI) Project funded by the German Federal Ministry of the Environment, Nature Conservation and Nuclear Safety, and the Indian Ministry of Environment, Forest and Climate Change is the nodal partner at the Union level. The overall objective of the project is the protection, sustainable and climate-resilient management of aquatic resources with focus on wild fish and invertebrates (such as snails, crabs, frogs). The project aims to strengthen the knowledge and management capacities of state, research and local stakeholders for aquatic resources in the states of Assam, Manipur, Meghalaya and Nagaland.

## Approach

The Project is helping to ensure the protection and sustainable management of this region's unique aquatic ecosystems, which form the basis for the livelihoods of millions of people. Capacity-building in the relevant Indian

administrative and research institutions, as well as local user groups, aims to provide the resources and skills needed for the participatory development of protective and sustainable usage models for aquatic resources in selected sections of rivers in the four states. These usage models are then tested in the context of pilot projects. The establishment of a regional network promotes knowledge sharing and the dissemination of good practices.



## Major Activities

- In cooperation with the Zoological Survey of India (ZSI), a holistic inventory of the aquatic species including both aquatic flora and fauna is being conducted in sixteen areas that are found to be data deficient but high in biodiversity.
- For the first time in India, the climate risks of aquatic resources are being assessed at the state level for Assam, Nagaland, Meghalaya and Manipur. Further, together with the Institute of Inland Fisheries (IFB)

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Potsdam, ZSI and interested researchers of the region the climate vulnerability of selected fish species is being assessed. Both assessments will guide further conservation and management planning of aquatic resources.

- In cooperation with the University of Kent, the project developed a methods manual for practitioners on how to document traditional knowledge of aquatic resources. The manual is currently being tested in the pilot areas and will support in-depth documentation of TK in the pilots which is building the basis for the local conservation management plans.

The following cooperations and measures take place in the respective four states:

- In Assam, the project is working on the development and implementation of the Integrated Wetland Management Plan (IWMP) for the Doloni wetland in Bongaigaon district. Due to its integration into a wide wetland complex, the wetland is of high ecological relevance. The project is also supporting the development of the IWMP for the ecologically sensitive Ramsar wetland-Deepor Beel. The research partner in Assam, Gauhati University, has identified hotspots of indigenous and endemic fish species in Assam along with its conservation measures.

- In Manipur, the Project is implementing the pilot measures on a section of the Chakpi River in Chandel district. The research partner in the state-Manipur University, which, in addition to research on small indigenous fish, is also coordinating the updation of the status of aquatic species according to the so-called "Red List" of the International Union for Conservation of Nature (IUCN) with leading researchers from the region.
- In Meghalaya, a sustainable aquatourism concept is being developed in cooperation with the Meghalaya Fisheries Department and active participation of the village institution in Khliehshnong in Sohra, East Khasi Hills District. The three-hectare water body is surrounded by eleven hectares of forest, which is traditionally protected as a sacred forest.
- In Nagaland, Kohima Science College, Jotsoma, is working towards conservation and sustainable management of endemic aquatic fish species such as snow trout and Chocolate mahseer in Poilwa village in Peren District on a seven-kilometer section of the Tepuiki River. The families aim to increase their income through income-generating measures to breed carp and native snails in the rice fields cultivated daily by the families.



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