**Summary of the Final report on:**

**Title:** Documentation of diversity of fresh water fishes of Jalpaiguri and Alipurduar districts of West Bengal.

**Study conducted by:** Dr Debashis Das, Associate Professor in Zoology, Tufanganj Mahavidyalaya, Tufanganj; Coochbehar; W.B.

**In association with:** West Bengal Biodiversity Board, Department of Environment, Government of West Bengal

**Duration of the Survey:** From 2017 To 2019


**Summary**

District Jalpaiguri is sub-divided by 7 Blocks. During present study we covered 5 waterbodies from Rajganj block, 3 from Jalpaiguri sadar, 3 from Maynaguri, 4 waterbodies from Dhupguri, 8 waterbodies from Mal block, 1 from Meteli and 8 waterbodies from Nagrakata block. All GPS reading of the surveyed waterbodies along with the administrative parameters are presented in a summary format in Table-1 of the final report. Regarding selection of the waterbodies, stress has been given to the advice of the local knowledgeable fishermen. The study had covered 24 river spots, 1 barrage, 4 fish landing center and 3 Beel in Jalpaiguri district of West Bengal.

District Alipurduar is sub-divided by 6 Blocks. In this study we covered 9 waterbodies from Falakata block, 3 from Alipurduar-I, 8 from Alipurduar-II, 4 waterbodies from Madarihut, 6 waterbodies from Kalchini block, and 5 waterbodies from Kumargram block. All GPS reading of the surveyed waterbodies along with the administrative parameters are presented in a summary format in Table-3 of the final report. According to the advice by the local knowledgeable fishermen, in this district, the study had covered 26 river spots, 7 fish landing center and 2 ponds in Alipurduar district of West Bengal.

In Jalpaiguri district, a total of 125 fresh water fish species recorded, of which 113 indigenous fish species were recorded that belong to 9 orders and 29 families during the course of the study. A checklist of all recorded species along with their common / local name, local abundance status (according to WBBB format: Present abundance status in I-V category), IUCN conservation status and trends were presented in Table-2 of the final report. Family Cyprinidae represented the highest number (44 species) of recorded species. This observation corroborated with the findings of Banerjee et al. (2009), Patra et al. (2011), Acherjee and Barat (2012) and Sharma and Baro (2014). Regarding trend of the population, IUCN noted that population of 14 species are decreasing, but about other 80 species there is no data in the website of IUCN. After reviewing available literature, we found that, there is no published data of fresh water fish species of Jalpaiguri district specific. All published literatures are related to any one or three river specific or any one or more Beel specific study. Therefore our fish diversity figure is the first scientific study of fresh water fish data of Jalpaiguri district.
In Alipurduar district, a total of 142 fresh water fish species were recorded, of which, 130 are indigenous fish species belong to 9 orders and 31 families. A checklist of all recorded species along with their common / local name, local abundance status (according to WBBB format: Present abundance status in I-V category), IUCN conservation status and trends were presented in Table-4 of the final report. Family Cyprinidae representing the highest number (47 species) out of all recorded species. This observation corroborated with the findings of Banerjee et al. (2009), Patra et al. (2011), Acherjee and Barat (2012) and Sharma and Baro (2014). Here also the population trend as per IUCN, the population trend of 14 species are decreasing, but about other 80 species there is no data in the website of IUCN. After reviewing available literature, we found that, there is no published data of fresh water fish species of Alipurduar district specific. All published literatures are related to any one or three river specific or any one or more Beel specific study. Therefore our fish diversity figure is the first scientific study of fresh water fish data of Alipurduar district.

After analyzing the data of Table-2, it is observed that 1 Endangered, 2 Vulnerable and 11 Near Threatened species were recorded from Jalpaiguri District of West Bengal. *Tor putitora* is recorded under ‘endangered (A 4acde)’, *Cyprinion semiplotum* is ‘vulnerable (A 2acde+3cde)’ and *Cirrhinus cirrhosus* is also recorded as ‘vulnerable (D2)’ category. Out of these three the first one was recorded as ‘very rare’ in Jalpaiguri, second one was found to be ‘rare’ category and the third one recorded as ‘common’ in Jalpaiguri.

We have recorded 4 crustacean from Jalpaiguri district of which two were identified and one is still under ‘yet to be identified’ category. Help of the ZSI resources may require to identify it. Name, scientific name and photographs of recorded crustacean were presented in Annexure-5. Out of these four crustaceans, three are prawn and one is crab.

Detail database of the surveyed waterbodies under Jalpaiguri district is presented in Annexure-1 and for the Alipurduar district in Annexure-2.

Surprisingly two species of indigenous wild fishes whichever recorded from Jalpaiguri district were not recorded from Alipurduar district. Of which one is *Pseudecheneis sulcata* under the family Sisoridae were recorded from Gajoldoba, and other one is *Sicamugil cascasia* under the family Mugilidae were recorded from lower basin of Teesta river.

It is special to mention that the Alipurduar district has diversified in indigenous wild fish population with typical 16 fish species compare to Jalpaiguri and Cooch Behar districts. This might be due to the geographical position of the district as it is adjacent to the Indo-Malaysian Hotspot or due to presence of diversified waterbodies crossed the Buxa Tiger Reserve, Jaldapara National Park and adjacent to the Chilapata forest. Wide range of diversified habitat is more in this district. Out of four recorded, three ornamental *badis* were recorded only from this district, whose records were limited to Assam belt only. Six
species of Snakehead (*Channa sp.*) were recorded from the waterbodies adjacent to forest area from Alipurduar district. It needs further pinpoint study for their detail distribution and habitat.

After analyzing the data of Table-4, it is observed that 2 Endangered, one Vulnerable and 11 Near Threatened species were recorded from Alipurduar District of West Bengal. *Tor putitora* is recorded under ‘endangered (A 4acde)’, *Cyprinion semiplotum* is ‘vulnerable (A 2acde+3cde)’ and *Cirrhinus cirrhosus* is also recorded as ‘vulnerable (D2)’ category. Out of these three the first one was recorded as ‘very rare’ in Alipurduar, second one was found to be ‘rare’ category and the third one recorded as ‘common’ in Alipurduar.

We have recorded 10 edible or ornamental crustacea from Alipurduar district of which 4 were under the category of Prawn, three were identified and one is still ‘yet to be identified’ category. The study recorded 4 varieties of shrimps, again one is ‘yet to be identified’ category. Common name, scientific name and photographs were presented in Annexure-5 of the final report. Out of these 10 crustaceans three are crab. We recorded 5 types of edible Mollusca (including Bivalvia as well as Gastropoda).

During our survey we have recorded similar 12 exotic fresh water fishes (all are listed in Annexure-3 and photographs are presented in Annexure-4) from both Jalpaiguri and Alipurduar district of West Bengal of which 10 are having food value, the fish *Gambusia affinis* were recorded from the drainage system of various town and one is aquarium fish.

During the study we have recorded 8 species of hydrophytes from 9 waterbodies of Jalpaiguri district. These are *Hydriella sp.*, *Ceratophyllum sp.*, *Trapa sp.*, *Pistia sp.*, *Eichornia sp.*, *Azola sp.*, *Nymphodes sp.* and, *Enhydra sp.* Similarly from Alipurduar district, we have recorded 8 species of hydrophytes from 12 waterbodies, of which *Hydrilla sp.*, *Ceratophyllum sp.*, *Pistia sp.*, *Eichornia sp.*, *Azola sp.* are common in both the districts. But, *Ipomoea sp.* and, *Colocasia sp.* are recorded from Alipurduar district only. Detail records of hydrophytes from various waterbodies of both the districts are presented separately in the WBBB format in the final report of the Project.