### CHAPTER - II

# BIODIVERSITY AND GEODIVERSITY IMPRINTS: A FEW SNAPSHOTS

## **2.1 Introduction**

Geologically the study area is a part of the Assam-Meghalaya Plateau (Sarma and Dey, 1996) and comprises of largely Precambrian granites and gneisses. Collision of the Indian plate both towards north and east around the eastern Himalayan syntaxis (England and Bilham 2015) makes this plateau a very active geodynamic block south of the Himalayan Frontal Thrust, (Imsong et al., 2018). Epicentre of the Great Earthquake of 12 June 1897 (Mw 8.7) was in the vicinity. The famous Chandubi Lake and many nearby geomorphological entities were creation of that stupendous jerk. The lake is surrounded by natural forest and hilly terrain. The whole area is criss-crossed by many fault lines. The present landscape of the study area is an outcome of the large-scale geodynamic movements across space and time. River or river systems in tectonically active regions are influenced by vertical uplift and climatic variations (Zhisheng et al. 2001). Presence of waterfalls in the vicinity of the study area is a testimony to these realities. With time and, due to favourable climatic conditions, the area became rich in biodiversity too.

The major rocks of the area are Precambrian granites and gneisses followed by much younger river sediments. The Kulsi River in the vicinity is a northward flowing river system which drains into the Brahmaputra River. In Meghalaya this river is known as Um Khri. Some natural mysteries like the Botha River going underground and then resurfacing, the water falls of Bornijora and the Jhalkat and the famous elephant trapping spot Hatigarh have made the environment of the lake highly potential for tourism development.

Ranikhamar exudes most of the elements of nature and as such has started to attract many footfalls in the recent times. It is very important that Ranikhamar remains pristine as long as possible for people to understand many differences. As stated, the total geographical area of Ranikhamar is 61.85 hectares.





As on today, Ranikhamar Retreat plays a very crucial role for the upliftment of tourism in Rabha Hasong area. With the growth of Ranikhamar Retreat, people living in the village are highly benefited in different aspects of business, labour employment, tours and travel, agriculture, handicrafts etc.

# 2.2 A few snapshots

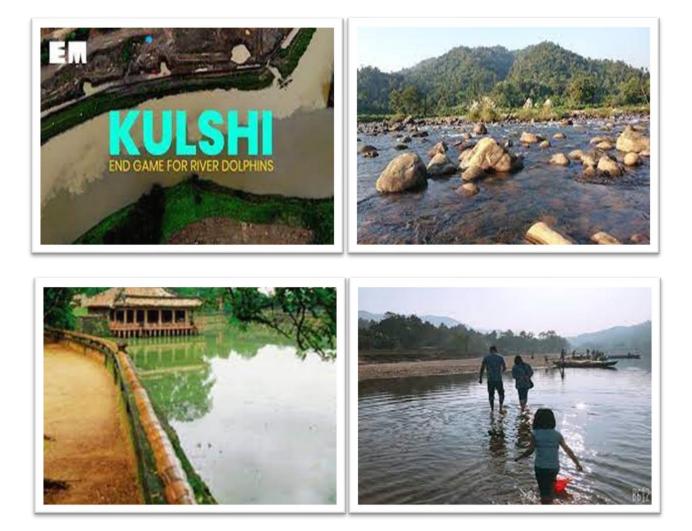
Certain snapshots are depicted under this heading to highlight the tremendous ecotourism potential of Rani Khamar Village.







2. Photo of Kulshi river of Ranikhamar



3. Photographs of Ukiam river





4. Photographs of winter and spring seasons near hill



5. Photographs of pristine waterfalls and Orange orchard:



6. Tea garden: Bagaan tea garden is the largest tea garden in Asia.



7. Betel Leaves, Betel nuts, Banana Plantation, Pine apple, ginger, black pepper, turmeric, papaya, lemon, garlic, black rice







8. Photographs of Hoolock Gibbon, Hornbill, flying fox, deer, jungle pig, birds etc. Hoolock gibbon is an endangered animal which is rarely found in certain region and it is also found in the hills of Rani-Khamaar range







9. Migratory Birds: Various Migratory birds used to come during the period of winter reasons which also make the place a Centre of attractions.



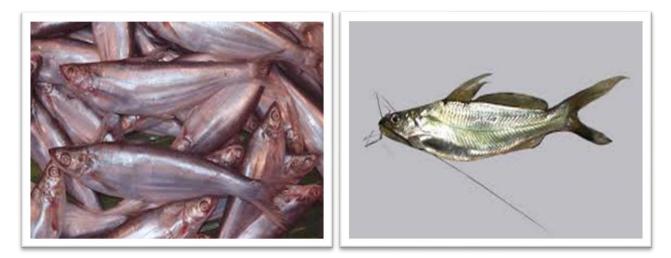








10. Different fishes: Local fishes are also found in the river Kulsi like Puthi, Borali, Kayoi, Tingra, Kholihana, Goroi etc.







11. Wild animals available in the area:



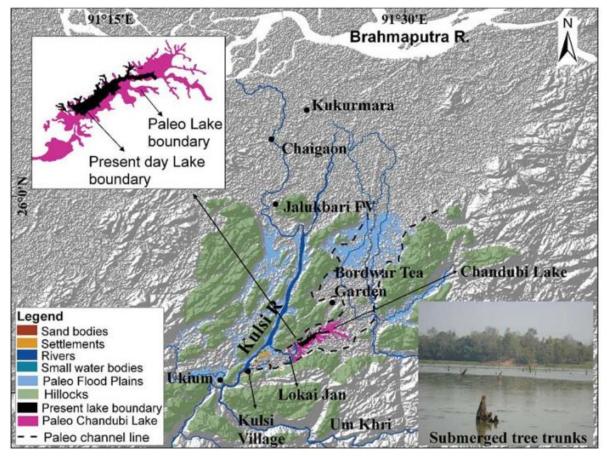


12. Bogijari dance of Ranikhamar: Rani Khammar's Rabha people have their own cultural dance Bogijari Nritya which make them culturally rich





#### 2.3 Potential hotspot of Geotourism



The above figure (source: Imsong et al., 2018) depicts geomorphology of the area in and around Chandubi Lake in Kulsi River basin and includes the Rani Khamar village. Inset figure on top shows the present and paleo boundary of the Chandubi Lake while field photo of Chandubi Lake below shows some submerged tree trunks.

The black dashed lines demarcate the paleo Kulsi River and depict river migration. River migration is not uncommon in such a transitional zone that is between the high relief mountainous topography and low relief alluvial plain (as in the present case). The paleo-course of the Kulsi River as tracked by the authors, inferred based on satellite imagery shows that at the downstream of the transitional zone ( $\sim$ 2.7 km downstream of Ukium), the river used to flow through a U-shaped easterly linear track that has innumerable relict channel bar implying lateral migration ranging (in length) from 0.7 to 2 km westward till 1991. The relict course appears to feed the Chandubi Lake during peak floods. This region can be developed for river rafting and other tourism ventures from Chandubi Lake to Rani Khamar resort. This will highlight the pristine landscape and its biodiversity for the potential tourists / visitors thereby supporting the local people economically.

#### 2.4 Survey snapshots



2.3.1: Entry Gate of Rabha Hasong area.

2.3.2: Team of Teachers and Students engaged in the field survey





2.3.3: Rani Khamar Map Displayed at Ranikhamar L.P. School



2.3.4: discussion with the leader of Borduwar – Bholagaon Anchalik Rabha Students' Union about their local issues



2.3.5: Preparation with students and move towards door-to-door home visit for survey/data collection



2.3.6: Door to door home visit for survey/data collection







2.3.7: Meeting with local successful entrepreneur Mr. Prabitra Rabha about the prospect of tourism of Rani Khamar area







# 2.3.8: Meeting with Village Gaonburahand local people about the Socio- economic scenario of Rani Khamar area



2.3.9: Discussion with members of Sandubi Boat Association regarding problems faced during Lockdown period



