

## Loktak Lake: a Potential Site to Become the First UNESCO Global Geopark (UGGp) in India

Krishanu Datta

Station Road (Near Kalitala), Murarai - 731 219, India  
E-mail: krishanuacademic2022@gmail.com

Received: 22 May 2023 / Revised form Accepted: 9 June 2023

© 2023 Geological Society of India, Bengaluru, India

According to UNESCO (2015; <https://unesdoc.unesco.org/ark:/48223/pf0000260675>), a geopark is a defined territory that not only has international significance from geological point of view but may also have ecological, archaeological, historical, or cultural significance with respect to the global context. The concept of geopark was first emerged in the mid-1990s and supported by UNESCO since 2004 as opposed to the concept of a protected area (like a national park) because in a protected area, indigenous people are forced to leave the place and meanwhile, they either have no rights or have very limited rights in the management of the area. But in the case of a geopark, local or indigenous people get the full opportunity to involve themselves in achieving the three sets of targets: conservation, education, and local economic development through geotourism. This approach is popularly known as the bottom-up approach and it is an onsite approach in which local communities are the real policymakers as well as decision-makers for the holistic development of the concerned area. Presently, there are 195 UNESCO Global Geoparks (as of 8th June 2023) in 48 countries all over the world but unfortunately not a single one from India so far. Even so, India is endowed with many exceptional geographical areas that may have the full potential to become UNESCO Global geoparks, and among them; the most eligible claimant is the Loktak Lake in Manipur. The Loktak Lake is the largest freshwater lake in the entire north-east of India with an area of 246.72 sq km, as per the National Wetland Atlas, 2011, (Space Application Centre (ISRO), Ahmedabad, pp.256) and it is considered a lifeline to the people of Manipur that live in and around it. The lake is located in the middle of Manipur or Imphal valley between 24°25" N to 25°42" N latitudes and 93°46" E to 93°55" E longitudes. Most geoscientists believe that the origin and evolution of Loktak Lake coincided with the origin and genesis of Manipur or Imphal Valley. Initially, Imphal Valley was formed tectonically as a linear depression that was surrounded by hills on all sides. This type of geological setting also resulted in an intermontane basin that developed a centripetal drainage pattern and consequently, the formation of Loktak Lake. The etymology of Loktak Lake also indicates its unique geographical setting in which 'Lok' means Stream and 'Tak' means the end. So, the literal meaning of Loktak is that it is a lake where the journey of several rivulets and streams come to an end, which means they empty themselves in Loktak Lake. The Lake was primarily formed during the Quaternary period and particularly lies on the Eocene rocks of the Disang Group. Presently, the Loktak Lake possesses a fluvial-lacustrine environment and it is dotted with so many islands, out of which the paramount ones are Sendra, Thanga, Karang, Ithing, Chingthi, Mukap, and many others. These islands provide majestic views of Loktak Lake and its surrounding areas and therefore, also serve as important viewpoint sites. Eventually, several resorts, homestays, and restaurants were constructed on many of these islands. The concerned lake underpins a

unique and valuable ecosystem that is rich in biodiversity and comes under the realm of Indo-Burma biodiversity hotspot. The most unique and valuable feature of Loktak Lake is the floating islands (swamps or mats), locally called "Phoomdis" that are the heterogeneous masses of soil, vegetation, and organic matter in different stages of decay and present in various sizes from small to large. Now, the largest single mass of 'Phumdi' is located in the south-eastern part of the lake, occupying an area of almost 40 sq. km. This mass recognised as the only floating National Park in the world, named the Keibul Lamjao National Park (KLNP). Moreover, this park is the only natural habitat of the famous and most endangered brow-antlered Sangai deer (*Rucervus eldi eldi*), popularly known as the 'Dancing' deer. Considering its ecological uniqueness, the concerned lake achieved the designation as a wetland of international importance under the Ramsar Convention in 1990. Recently, the Geological Survey of India has also recognised it as an important geotourism/geoheritage site of India in its official web portal. Besides, the story of human attachment to this lake is praiseworthy. The lake was mentioned several times in many important folk tales and folk songs especially belonging to the Meitei society of Manipur. But, it is also a pitiful fact that at the present moment, the environmental condition of the lake is continuously degrading owing to multifarious anthropogenic threats. Therefore, for proper management and conservation of the concerned lake, the Loktak Development Authority (LDA) was formed in 1987 by the Manipur Government. This management group has been engaging to formulate numerous initiatives for territorial marketing, planning as well as conservation of the concerned lake since its inception in 1987. Moreover, it also has an active website and newsletter for disseminating all the initiatives taken so far for Loktak Lake across the web. This is an important criterion that must be fulfilled by a UNESCO Global Geopark and the concerned lake already has it. Therefore, from the above discussion, it is evident that Loktak Lake has immense international importance in terms of geological as well as ecological points of view. Moreover, the aesthetic view of Loktak Lake attracts thousands of tourists from all over the world to visit it and enjoy the majestic beauty that has made it an important tourist destination of North East India. Hence, the site is ideal to promote geoeducation as well as geotourism. Meanwhile, the present site needs a more comprehensive approach to restore its ecological balance. Besides, the local Meitei people have a deep affection for the Loktak Lake which also helps to follow the bottom-up approach properly as proposed by UNESCO. Therefore, considering its exceptional geoscientific, ecological, aesthetic, cultural, and economic values the concerned state government as well as the Union government of our country should follow the proper modalities to make it a UNESCO Global Geopark and if it happens, then it will be the first UNESCO Global Geopark in our country.