



Himalayan Otter Network



© Photo: Kencho Gyeltshen, Smooth-coated Otters in Bhutan

*Otters in the Himalayas*  
*Newsletter from the Himalayan Otter Network*  
*December 2024 #2*

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Published biannually

News from the Himalayan Otter Network is a new platform for the community of students, researchers, and conservationists for sharing recent and current research and conservation projects in the Himalayan Mountains Region.

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# Ongoing Otter Research and News from the Himalayas

## Introducing the Himalayan Otter Network Data Centre

**Pushpinder S. Jamwal**

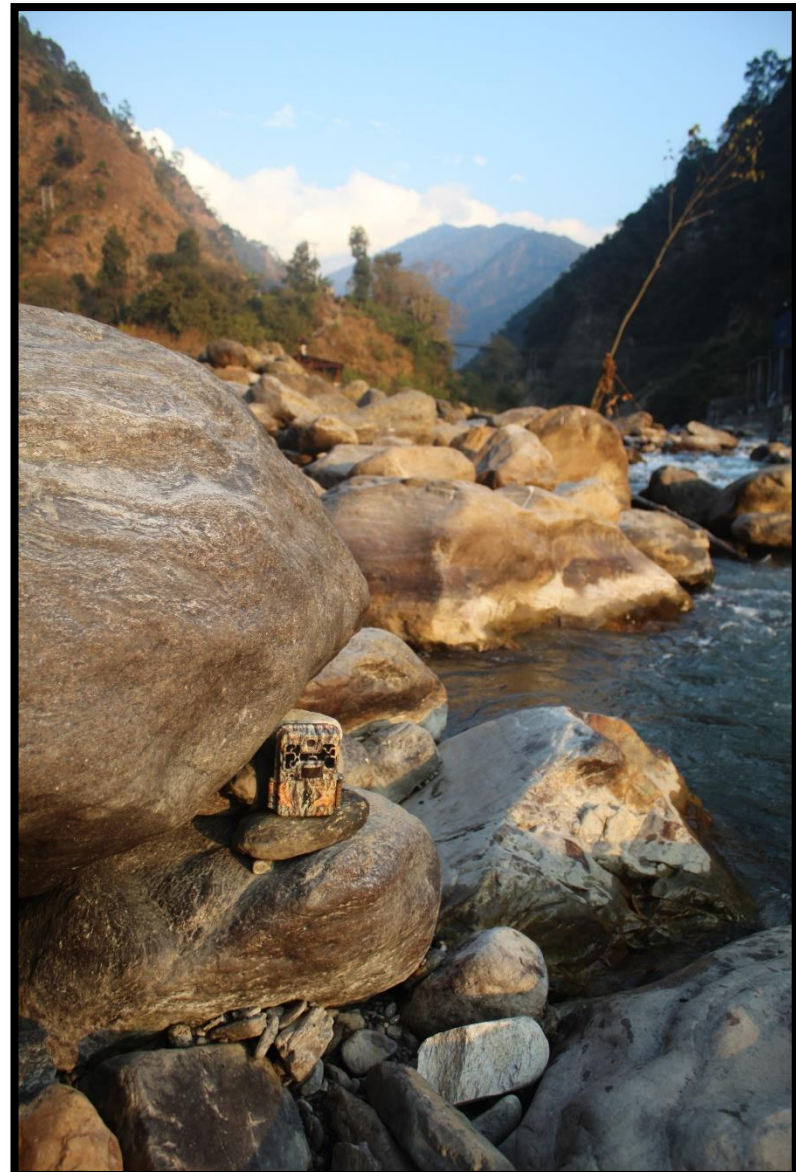
Dear HON member,

We are proud and pleased to announce the upcoming launch of the Himalayan Otter Network (HON) Data Centre at the University of Molise, Italy. Slated to be fully operational by February 2025, this new repository will empower researchers by offering detailed datasets related to climate, topography, land use, and surface water in the Himalayan region. By aggregating and refining essential environmental data, the HON Data Centre will enable scientists to investigate habitats more thoroughly and devise efficient conservation strategies.

Conducting field studies in the Himalayas poses significant challenges due to rugged landscapes and severe weather conditions. The HON Data Centre will help the scientists and researchers overcome these obstacles by providing high-resolution information at scales ranging from 250 meters to one kilometer. To enhance research efficiency, the Centre will produce data through advanced computational workflows implemented in R and Python, making code samples and scripts readily available.

This comprehensive data will allow researchers to analyze ecological patterns, understand how landscape features shape species distributions, and draw meaningful insights that can guide long-term conservation planning.

Data-access will follow a transparent and collaborative model. Members of HON and the IUCN Otter Specialist Group will be able to request datasets at no cost. Upon receiving these requests, analyzing its implementation and use, and ensuring that researchers will utilise the information responsibly and maintain proper attribution, the data will be made accessible. By fostering open data sharing and cooperation, the HON Data Centre will cultivate trust, encourage new



partnerships, and promote innovative avenues for wildlife research.

Beyond data provision, the HON Data Centre will support capacity building through student exchanges and faculty training initiatives. It also aims to strengthen local wildlife departments, equipping them with the necessary tools and knowledge to address pressing conservation issues. By 2027, the centre aspires to evolve into Advanced Biodiversity Research Center for the Himalayas, integrating cutting-edge technologies such as AI, machine learning, GIS, and eDNA analysis to accelerate progress and expand the scope of scientific discovery.

Through this initiative, we reaffirm our commitment to scientific excellence, nurturing collaboration, and protecting the delicate ecosystems of the Himalayan region. By enabling more effective research, the HON Data Centre will light the way towards a sustainable future for otters and the habitats they depend on.

## **The Effects of Biological Water Quality on the Presence of the Smooth-Coated Otter in Far Western Nepal**

**Balram Awasti**

Otters are a key indicator species for assessing ecological integrity and are highly vulnerable to habitat alteration and environmental pollution. The Smooth-coated otter inhabits both terrestrial and aquatic habitats, preferring shallow water, soft sand and clay riverine banks, and riparian vegetation with good coverage. In our study, we conducted field surveys and analyzed various factors such as water quality, human disturbance, and vegetation structure to investigate the correlation between otter presence and these parameters. This study reported that Smooth-coated otter habitat in the western Terai is influenced by water quality, vegetation structure, and human activities.

Human disturbance has a negative relationship with otter presence, whereas tree canopy is positively correlated with otter presence. The water quality parameters (temperature ranging

around 37-38 °C, pH around 8, Dissolved Oxygen ranging from 5.12 -5.91 mg/L, Biological Oxygen Demand > 3.35 to 4.55 mg/L and a high concentration of chloride and hardness are the preferred habitat conditions for the Smooth-coated otter. Microbe concentration in the water appears to have no relation with otter presence. This study suggests that riparian vegetation and water



Photo: Sameer Shrestha

quality is likely to affect the capacity of a river or wetlands to support otter populations, and habitat restoration can encourage their return to areas where they are currently absent. Regular monitoring of water quality and vegetation, together with reduced anthropogenic pressures, are urgent needed to maintain long-term population and habitats of Smooth-coated otter in river basins of western lowlands of Nepal.

## New Research on Eurasian Otters in Nepal

**Mohan Bikram Shrestha**

*We are excited to extend our warmest congratulations to Mohan Bikram Shrestha on embarking on the path toward earning a PhD in China. His doctoral research concept is as follows:*

### Eurasian Otter Study Concept

The Eurasian otter (*Lutra lutra*) is considered to have distribution in wetlands in flatlands and mountains up to 3660m. However, the distribution needs to be verified through more information since threats such as dam construction, pollution in waterways, and overfishing have likely affected the species population and distribution (Jnawali et al., 2011). To address this information gap, my study will be focused on gathering data so as to produce new distribution map, the intensity of threats and interventions required for the conservation of Eurasian otter in Nepal.

of Eurasian Otter from several rivers in Nepal. However, the records are from few rivers considering that there are 6,000 large and small rivers in Nepal. Thus, more rivers are required to be reached so as to attain the higher precision while producing distribution map. Thus, I plan to survey 15 more rivers across Nepal seeking otter presence in addition to the rivers already surveyed.

In addition, I plan to study threats primarily associated with dams



constructed in rivers, comparative study on prey availability upstream and downstream of dams and among the rivers selected. My opportunistic study for impact assessment of hydropower on faunal diversity in some rivers have assumed a shift in otter diet. I intend to carry out a detailed study on otter diet to validate this assumption. The detailed study would help to gather the information of how otters adapt to changing habitats. I then plan to carry out sensitization activities for the responsible developers in otter conservation.

*Wishing you success and fulfillment as you begin this new chapter, and may your research*



*contribute to meaningful progress in otter conservation in Himalayan region. -- Jyoti Bhandari*

### **Recent HON publications**

Awasthi, B., B. Banjade, N. Pandey, S. Joshi, M. Savage, P.M. Shrestha, P.R. Bhatt. 2024. The effects of biological quality on the presence of the Smooth-coated otter in Far Western Nepal. *IUCN Otter Spec. Group* 41(2): 71-87.

Awasthi, B., K. Uprety, P. M. Shrestha, B. R. Banjade, G. M Yoxon, A. Kunwar. 2024. Behavior and Activity Patterns of Smooth-coated Otters (*Lutrogale perspicillata*) in Shuklaphanta National Park, Nepal. *Journal of Institute of Science and Technology* 29(2): 19-28.

Giri, P. and P.M. Shrestha. 2024. Local peoples' knowledge, perceptions, and conservation threats to Eurasian otters in the Kali Gandaki Watershed in Myagdi District, Nepal. *IUCN Otter Specialist Group Bull.* 41(5): 216-231.

Javid, M., K. Ahmad, O. Ilyas. 2024. Once distributed throughout the Kashmir Valley, now on the verge of extinction: A sighting of the Eurasian otter (*Lutra lutra*) in the Gurez Valley, Jammu and Kashmir. *IUCN Otter Spec. Group Bull.* 41(4): 189-196.

Kathariya, R, D.R. Pant, K.R. Gosal, R.P. Sapkota, and M.B. Shrestha. 2023. Effects of habitat variables on the distribution of Smooth-coated otters (*Lutrogale perspicillata*) along the Kauriala branch of the Karnali River, Nepal. *IUCN Otter Spec. Group Bull.* 40(3): 165-174.

Menzies, R.K. 2023. An update on Asian Small-clawed otters (*Aonyx cinereus*) from Namdapha Tiger Reserve, Arunachal Pradesh, India. *IUCN Otter Spec. Group Bull.* 40(4): 225-229/

Norbu, L., T. Jamtsho, K. Jamtsho, P. Tenzin, U. Lhendup. 2024. A Survey of Otters in the Kholongchu and Upper Drangmechu Rivers, Eastern Bhutan. *IUCN Otter Spec. Group Bull.* 41(3): 125-139.

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Photo Nicole Duplaix, Smooth-coated