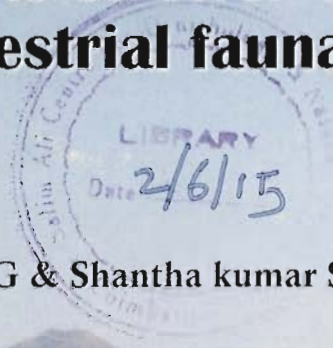


Cumulative Impact Assessment study of Hydro Power Projects on river Yamuna, Tons and tributaries; Terrestrial fauna and Avifauna

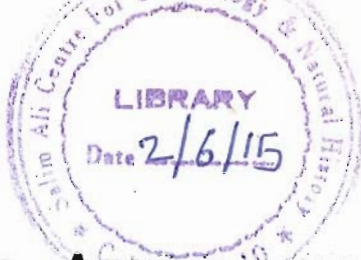


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CUMULATIVE IMPACT ASSESSMENT STUDY OF HYDRO POWER PROJECTS ON RIVER YAMUNA, TONS AND TRIBUTARIES - FAUNAL ASPECTS

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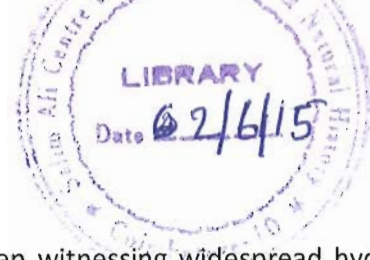
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Executive Summary

The Himalayan river basins of the country has been witnessing widespread hydro-power project developments. According to recent estimates, the Indian Himalayas currently has a dam density of 62 times the global average. However the cumulative effects of such developmentl activities on ecosystems are largely unknown. According to a study which examined 292 dam projects across Indian himalays has predicted that If all proposed dams in the Indian Himalaya would come up by 2025, associated deforestation due to dam building would result in significant impacts on flora and fauna.

One of the major impediment in objective evaluation of cumulative impacts for developing sustainable development strategies is the lack of any quality data on baseline status and past trends. The present landscape level macro study covered 46 Hyro-electric project sites under varios stages of development in Yamuna basin. In the asbsence of pertinent data, the study had to resort to some best available proxy indicators and whatever primary data generated during the study. However, faunal data from all possible primary and secondary sources are compiled and presented in this report and are used for the assessments in best possible manner.

Uttarakhand is uniquely placed in the Himalayan Biogeographic zone at close proximity to multiple Biogeographic zones such as Trans-Himalaya, Gangetic plain, and Semi-Arid zones. The state also marks the limits of some of the globally important faunal species distributions such as the Western limit of several species in the Himalayan range including Tigers and Asian Elephants. The state is also important as the Eastern limit of Western Tragopan distribution. Yamuna basin of Uttarakhand falls along the western part of the state bordering the state of Himachalpradesh. An important area from the faunal point of view, with diverse spectrum of habitats ranging from lower altitude wetlands important for migratory avifauna to high elevation forests with snow leopards, pheasants and mountain ungulates. The present study documented 535 faunal species under the major taxonomic groups studied namely, Birds (359), Mammals (32), Reptiles (16), Amphibians (3) and Butterflies (125). The faunal list included 21 threatened species (14 sp of birds, 06 Mammals and one Amphibian) and 19 near threatened species (14 birds and 05 Mammals). The Rupin and Supin sub basins in the uppermost reaches of Tons river are located in the protected area of Govind National park and Wildlife Sanctuary and it is very important from

the forests and wildlife point of view as wildlife habitats including that of Snow leopard and pristine water sources for the downstream areas. Outside the protected areas, the Lakhwar and Vyasi project sites along Yamuna downstream of Aglar, a Tributary of Yamuna was also found to have good amount of faunal diversity.

From the faunal point of view, it is recommended that the Protected areas in the upper catchments should ideally be declared as no go areas for all kinds of development for ensuring the long term survival and sustainability of the the faunal and wildlife wealth and ecosystem services for posterity.

Latest technologies including the trench method, which do away with any physical obstruction to the rivers may be explored for all the RoR projects with appropriate case to case evaluation and review of impacts.

A comprehensive long-term ecological monitoring programme in the area may be undertaken in collaboration with a regional or national institute and relevant Departments of Energy, Environment and Science of the Government of Uttarakhand to monitor the impacts in real time.