

Environmental Assessment (OP 4.01) – This management framework addresses priority conservation objectives and is thus expected to have a highly positive environmental impact. Resources will be directed to import biodiversity issues while ensuring minimum adverse environmental effects. “To examine both independent and cumulative ecological and social impacts of a sequence of small hydro power projects in the construction and post-construction phase and identify indicator species and variables that need to be assessed and considered before the construction of small hydro power projects”

The sub-projects that can have potential negative impacts are listed below:

1. Fish sampling in 1st and 2nd order streams using scoop nets
Impacts: Sampling using scoop nets is one of the least invasive techniques to sample fish communities. Accidental mortality will be minimal.

2. Fish sampling in streams of higher orders (3rd and 4th order)
Impacts: Standard fish sampling techniques include the use of gear such as gill nets and hook and line (Sreekantha et al, 2007). Gill nets can cause a high degree of injury and subsequent mortality to fish.
Mitigation measures:
 - Our project will explore the option of focusing on a few specific fish species (such as *Tor khudree*) rather than complete fish composition. Hook and line methods to catch specific species will be used to assess the impacts of dams. This will ensure minimal mortality to fish. It will also enable us to do away with the use of gill nets, thereby reducing fish injury and subsequent mortality.
 - However, if gill nets are used care will be taken to ensure that the nets be closely monitored and kept submerged only for a few hours at a stretch. Professional fishermen who can remove the entangled fish efficiently will be hired.
 - If reliable angling records can be found within our study site, they will be used as a source of secondary data.
 - Local fish catch will also be used as a source of secondary data.

3. Amphibian sampling using a time-bound method (Doan T.M., 2003) will involve capture and release of individuals.
Impacts: This is a standard technique used to assess amphibian assemblages at various sites. Mortality will be minimal or nil.

References:

- Sreekantha, Subash Chandran M.D., Mesta D. K., Rao G. R., Gururaja K. V. and Ramachandra T. V. (2007). Fish diversity in relation to landscape and vegetation in central Western Ghats, India. *Current Science*, 92 (11)

- Doan T.M. (2003). Which Methods Are Most Effective for Surveying Rain Forest Herpetofauna? *Journal of Herpetology*, 37 (1)