

**STUDY ON IMPACTY OF IRRIGATION DAM**  
**ON FISH AND FISHERY**  
**OF**  
**KESALI RIVER, MORANG, NEPAL.**

A DISSERTATION SUBMITTED TO THE CENTRAL DEPARTMENT OF  
ZOOLOGY FOR THE PARTIAL FULFILLMENT OF THE MASTER'S  
DEGREE IN ZOOLOGY (FISH AND FISHERIES)

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**2008**



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## RECOMMENDATION LETTER

This is to certify that Mr. Shailesh Rai has completed dissertation work entitled 'Study on Impact of Irrigation Dam on fish and fishery of Kesali River' for the partial fulfillment of M. Sc. Degree in Zoology under my supervision. This is his original work and has not been submitted for any degree earlier. I recommend this dissertation for approval.

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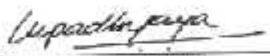
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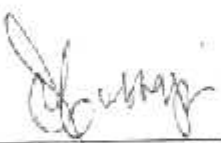
### EVALUATION

We, all the members of the evaluation committee, went through the dissertation entitled 'Study on Impact of Irrigation Dam on fish and fishery of Kesali River' and found satisfactory to recommend qualified for awarding Mr. Shailesh Rai M.Sc. Degree in Zoology with Fish and Fisheries as special paper.

  
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## ABSTRACT

The present work was conducted in Kesali River close to irrigation dam. The study was focused in the analysis of physicochemical parameters of water, biological studies like diversity and population of fishes. The different implements and techniques used in fishing in this area were also recorded. The basic objective of present study was to assess the impact of irrigational dam on fish diversity and population.

Altogether 21 species of fishes was recorded in present study belonging to 15 genera, 10 families and under 5 orders. Fish composition and frequency distribution of fish catches revealed majority fishes belonged to Cyprinidae family and *Puntius* species as most dominant species followed by common species such as *Barilius* sp, *Garra* sp, *Channa* sp, and *Colissa fasciatus*. *Amphipnous cuchia* was least recorded and reported in this river. The sampling record showed fish diversity high in upstream of dam during November and February but high fish diversity was recorded in downstream of dam during May and August. The highest fish catch per unit hour was recorded in August and lowest in November.

Both conventional and non-conventional fishing methods were noted to be used in and around the Kesali river area. The use of most of the fishing appliances were recorded seasonal; but some implements like cast net, chhanki net, hook and line were found to be used throughout the year. Fish diversity and population is declining day by day due to development work (damming), non conventional fishing methods, pollution and natural calamities like heavy flood and erosion.

People living around Kesali Rive were found to be involved in fishing only as part-time fisherman, but fisherman from India were found to be fishing throughout the year.

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