

Thesis Title	Post Impact Assessment of Hydropower Project on Fisheries: A Case of Thuen-Hinboun Hydropower Project, Lao People's Democratic Republic
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ABSTRACT

The study aimed to assess the impact of the Thuen-Hinboun Hydropower Project (THHP) on fishery since the project operation over the last 12 years from 1998 to 2010. One village in head-pond at Nam Thuen River and two villages in the Recipient River areas alongside upper and lower Nam Hai River were selected for this comparative study through review of reports and household interview conducted with 78 households in these three study villages.

The result of field research shows that before the project, selling of the fish catch was the supplementary income for all study villages. Currently the amount of fish catch is much less when compared to the past. Post-THHP amount of fish catch per household in the study villages has substantially declined in the range of 49-85%. There are several causes for such reductions in fish catch as indicated by the respondents interviewed. Namely, destructive fishing methods employed are believed by 25.6% of the households; followed by the hydrological change by 23.1%; and by

population growth by 21.8%. Apart from the quantity change, the composition of fish caught has also changed. In the head-pond area, only 42 species are found now by the villagers, as compared to 79 fish species available previously in the Nam Thuen River. In recipient river areas, only 68 species are found now, reduced from 118 fish species found earlier in the Nam Hai River. These changes can be affected by the project in many ways, such as loss of fish habitat due to increased water level and rapids being submerged in the head-pond area. In the recipient river areas, the project has changed the hydrologic regime and submerged fish habitat areas from erosion of the embankments, sediment deposits along the river bottom covering food sources, and filling of bottom pools along the Nam Hai River as possible reason for loss of some fish species. However, in order to assess all the relevant factors of reduction in fish species, future research is recommended to identify project impacts from both construction and operation phases of dams.

To mitigate the impact and improve fisheries for affected villages, fishery management such as stocking and introduction of aquaculture and cage culture has been reviewed and recommended. Designs of appropriate fish passage type in the dam site need more research to select a suitable type of fish pass for the Thuen River fish species.

Keywords: Thuen-Hinboun Hydropower Project/Fisheries Decline/Loss of Fish Species/
Mitigation Measures