

ORL-EM&P-02**Risk Perception, Management Strategies and Economic Performance of Aquaculture in Nepal**

Shital Bhattarai

Veterinary Hospital and Livestock Service Expert Centre

Bhadrapur, Jhapa, Nepal

shitalbhattarai@gmail.com

Aquaculture in Nepal has grown at a very fast rate and the progress achieved in recent years is highly encouraging. The fast development of aquaculture brings both negative and positive impacts. Talking about the positive impact, it increases an employment opportunity, ensure food and nutrition security. On the other hand, it also brings negative impact like environmental and edaphic issues, disease outbreak, increasing production cost and decreasing price, sustainability and other regional socioeconomic problems which significantly affect the small-scale farmers. The various detrimental risk factors have threatened the Nepalese aquaculture sector and left question of sustainability, so it is necessary to analyze the various sources of risk that affect aquaculture and develop most suitable and reliable management strategies for mitigating risks. Risk in aquaculture is complex and widespread. Farmers are confronted with various types of risk viz; production risk, financial risk, market risk, price risk, natural hazards etc. in their farming operations.

This study examines the perceptions of fish farmers on the sources of risk, risk management strategies and their relationship with farmers' socioeconomic characteristics. The study also analyzes the economic profitability of carp aquaculture farming in Nepal by using benefit-cost ratio, net present value and internal rate of return. Data were collected from a sample of 150 farmers of five different districts representing three provinces using a questionnaire survey. Exploratory factor analysis was used to determine the farmers' perception on risk and risk responses.

The results indicate that the farmer perceived low credit availability, high capital investment and the high cost of equipment as the most important sources of risk. The farmers perceived the supply of quality inputs (feed and fingerlings), crop insurance and disease prevention as the most important risk mitigating strategies. The empirical evidence shows that the farmers use multidimensional strategic approach for risk reduction. The results of economic analysis showed a better economic profitability having positive net present value and benefit cost ratio greater than one for all districts, however, Dhanusa districts seemed to be highly profitable. Sensitivity analysis indicated that the aquaculture production systems are very sensitive to change in market conditions.

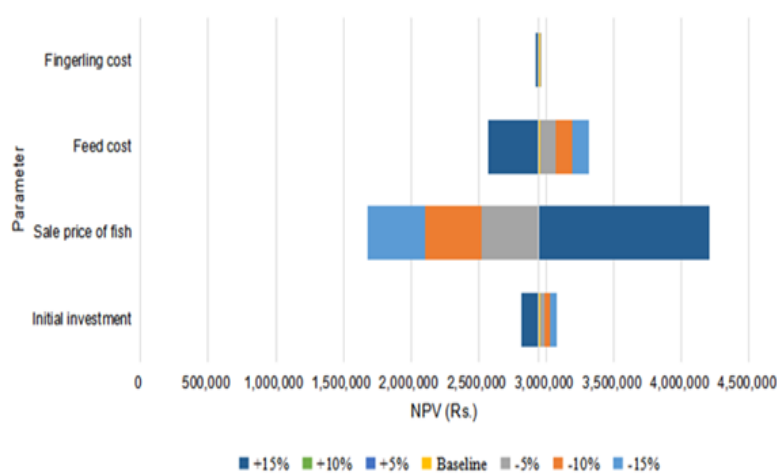


Figure: Sensitivity analysis of aquaculture production system of Dhanusa district