

## **Executive Summary**

Increasing contribution of developing countries to the unprecedented growth of global aquaculture motivated the research within this project to focus on farm economics, business management, risks in farming, and impact of production environment on farm performance. The projects used different micro econometric production models for studying efficiency and productivity (SFA, DEA). In addition to varying parametric and nonparametric production models, the project used different regression models that can account for heterogeneity, endogeneity, time and spatial lag in the data. In total, 1945 farms (940 tilapias and 1005 pangas) were interviewed during 2016, 2017 and 2018. The farms were selected randomly and were located in the seven most important districts (Mymensingh, Comilla, Bogra, Jessore, Khulna, Bhola, and Chittagong) in terms of volume of production and the species in focus tilapia and pangas. The results indicated that improved business management practices together with managerial abilities could improve farm financial performance. Furthermore, farmers need to have more than one risk management strategy (response) to address a particular risk, which could be made more effective if governmental and institutional interventions, like financial support, can be ensured in case of inefficient responses by farmers to the particular risks. Farm level productivity can be increased significantly with if farmers were able to use inputs more efficiently, if educated and trained properly. Besides, efficient pond water management and use of specialized inputs, combined with credit opportunities and implementation of new technology and the choice of the right species suiting farms physical location can be important factors in increasing farm level productivity as well. Positive agglomeration externalities (knowledge spillovers, learning-by-seeing and learning-by-sharing) seem to contribute positively to the productivity and more than outweighs the negative externalities, such as spreading of diseases. Finally, if the barriers identified in this project are addressed, farmers in Bangladesh will become more productive and thereby be able to supply more and cheaper fish for the domestic market, which will contribute positively to the Bangladesh economy, food security and poverty alleviation in general