

Title: **Shrimp Production Costs and Returns in Bangladesh: A Step towards Evaluation of Environmental Impacts**

Authors: Hasneen Jahan, The University of Sydney (Australia)
Tihomir Ancev, The University of Sydney (Australia)

Abstract: The economy of Bangladesh has benefited enormously from the rapid development of the aquaculture production, in particular from shrimp cultivation. In 2007-08 Bangladesh earned US\$ 445.41 million from shrimp export, which is about 4.25% of the value of total national export. There are over 600,000 people employed directly in shrimp aquaculture who support approximately 3.5 million dependents. However, these economic benefits are paralleled with substantial environmental, natural resource and health effects that can be attributed to shrimp farming. These include: salinisation of adjacent land that compromises rice growing; reduced drinking water quality; loss of wild fish stocks; and serious human health threats due to the spread of waterborne contagious diseases. The tradeoffs between the economic benefits and these negative impacts from shrimp farming need to be examined if there are ambitions for sustainable development of the industry. The ultimate aim of our research program is to identify those types of shrimp enterprises that have large economic returns but modest environmental, natural resource and health impacts, so that they can serve as a model for sustainable development. In this paper we present the findings on the economic returns, the first component of the above aim. While previous published work has reported findings that apply to Bangladeshi shrimp farming in general, we provide updated estimates of costs and returns for shrimp operations where we distinguish by several important criteria, such as: species of shrimp, management systems (extensive and intensive), farm size, and location (shrimp growing districts).