Building trade capacity of small-scale shrimp and prawn farmers

The key objective of this project was for small-scale shrimp producers in Bangladesh to improve compliance with international SPS measures in order to increase market access. The project aimed to strengthen the concept of Good Aquaculture Practices (GAPs) and better management practices (BMPs) in shrimp aquaculture, and establish cluster management to accomplish responsible and sustainable farming.

Watch a film on the project here. A result story on the project is also available here.

STDF/PG/321

Status
Completed

Start Date
01/04/2012

End Date
30/06/2016

Project Value (US$)
$823,800

STDF Contribution (US$)
$637,000

Beneficiaries
Bangladesh

Implementing Entities
Food and Agriculture Organization of the United Nations (FAO)

Partners
Bangladesh Shrimp and Fish Foundation (BSFF)
Department of Fisheries (DOF) in Bangladesh
WorldFish (WF)

Background

Aquaculture is widely considered to make important contributions in meeting the UN's Sustainable Development Goals (SDGs), including SDG2 (Zero hunger), SDG8 (Decent work and economic growth), SDG12 (Responsible consumption and production),

and SDG14 (Life below water). Aquatic animal products have become the most traded food commodity from developing countries. As more and more aquatic products are traded globally, international standards have been introduced to protect consumer health and the environment. In order to access and maintain export markets, producers need to apply appropriate controls and practices to ensure that their product meets relevant international standards.

In Bangladesh, many of the shrimp products for export were coming from small-scale farmers who were unorganized, uninformed and vulnerable. Individually they have very limited capacity to implement good bio-security measures and better management practices to keep pathogens/diseases away from their production systems. This situation forced them to find quick-fix solutions, mainly based on therapy and antimicrobial treatment. As a consequence, residues of banned antimicrobials and other substances accumulated in the shrimp and prawn products and risked rejection at importing country borders, resulting in lost revenue. The problem was aggravated by long non-value-adding product chains with alleged adulterations. This project helped address the problem at the grass-roots level, by exploring the reasons for disease incidents in shrimp farming, applying BMPs to minimise them, and thus reducing the use of antimicrobials and other therapeutic agents for internationally traded shrimp and prawn products. Lessons learned from other countries in the region that are establishing cluster farming and implementing BMPs/GSPs, were adapted to conditions in Bangladesh.

Results

An implementation plan and a detailed value chain analysis was completed

The report assessed the existing value chains in the sector and came up with recommendations. The farm to fork analysis included buyers and retailers of shrimp and prawn products from small-scale farmers, and addressed SPS risks associated with food safety and animal health as well as environmental and social issues. Training sessions were also delivered for filed supervisors and government officials.

Creation of registered clusters of small-scale shrimp and prawn farmers

The farmers, many of them women, were organized into 40 clusters, each made up of 25 farmers, with an average farm size of 0.54 hectares. This, in turn, created economies of scale. Working together, the farmers increased their bargaining power, purchasing feed directly from manufacturers and which cut out their reliance on middlemen. They developed local support networks with the knowledge, skills and support to upgrade the safety and quality of shrimp production, and provide a steady supply to processors.

Development and application of better management practices (BMP/GAPs) in shrimp and prawn aquaculture

The FAO and implementing partners - the Department of Fisheries, along with WorldFish, and the Bangladesh Shrimp and Fish Foundation - mobilized one thousand small-scale shrimp and prawn farmers supporting them to adopt Better Management Practices (BMPs) and Good Aquaculture Practices (GAPs), which was instrumental to reduce the risks of diseases and malpractices by using BMPs/GAPs. These BMP/GAPs complement FAO's Aquaculture Certification Guidelines, FAO's Code of Conduct for Responsible Fisheries (CCRF) and the Bangladesh National Code of Conduct on Responsible Aquaculture. The application of these BMP/GAPs also help in producing shrimp and prawn products that comply with national food safety and animal health standards (Codex and OIE) and other aquaculture certification standards including those of private certifiers.

Development and operationalization of a traceability system

A basic traceability system at the farm level was set up by mapping out the shrimp and prawn value chain. Every STDF cluster farmer was registered, and received an individual registration number. A database including basic farming information on all cluster farmers was prepared. Farmers' ID cards and record books were prepared and distributed to individual cluster members, and are now in operation. These are the prerequisite for the preparation and establishment of an e-traceability system facilitating international market access; and a compliance testing and monitoring plan was prepared, which included testing the residues of antibiotics, pesticides and heavy metals periodically in farmed shrimp products and taking measures accordingly. Together, these initiatives will improve the capacity of the value chain actors for attaining third party certifications ensuring better price for farmers and SPS safety for consumers.

Increased income and harvest yields

Total income from shrimp and prawn ponds increased more than 70% in 2015, compared with the baseline in 2013. Data from the 2016 harvest is expected to show even greater gains. There was also an increase in harvest yields of 60-70% thanks to knowledge transfer. This included how to stock ponds with tested shrimp seed, introduce a nursery system, reduce the number of times ponds are stocked and harvested, and how to increase pond depths.

Dissemination of project results and lessons learned

Project results and lessons learned were disseminated at national and regional level through, printed materials, virtual information, a national scaling up strategy, and project workshops attended by the key stakeholders.

Recommendations

The cluster approach established by this project needs to be considered for other ongoing and pipeline projects of DoF. Group certification and an associated concept of internal control systems (ICS) would enable clusters to access better market arrangements, such as participating in contract farming, or a premium supply chain. Group certification is a system that allows small-scale producers to comply with a selected certification scheme as a single entity, and is widely used in the organic certification of agriculture products worldwide, and an increasing number of schemes are used for aquaculture products. In Bangladesh, the WAB Trading International organic shrimp business is a working model of group certification.

ICS is feasible and can be sustainable when farmer clusters are well organized with common objectives, and there is transparency in the relationship between the cluster and the certifier (or buyer). For these reasons, it is recommended that funds be sought to provide support and training courses for this purpose.