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*Promotion of Export Processing of Value-Added  
Fishery Products from Bangladesh  
A Success Story of an Integrated Project*

*By S Subasinghe, Director, Infofish  
Kuala Lumpur, Malaysia*

# **Promotion of Export processing of value-added fishery products from Bangladesh - a success story of an integrated project**

## **Background**

This paper discusses the achievements of an integrated project entitled "Export Promotion of Value-Added Fishery Products and their Sustainable Development" undertaken in Bangladesh. The project activities were mainly carried out in Chittagong, Khulna and Cox's Bazar areas and in the capital Dhaka.

The project was co-financed by the Common Fund for Commodities (CFC), the International Fund for Agricultural Development (IFAD), INFOFISH, the FAO marketing information service for Asia and the Pacific region, and the participating Bangladeshi firms. The project was supervised by the Food and Agriculture Organisation (FAO), Fish Utilization and Marketing Service.

The project was aimed at maximising socio-economic benefits to small-scale operators in the industry, through promoting product and market diversification.

## **Fisheries sector and aquaculture sector in Bangladesh**

Fish plays an important role in the economy of Bangladesh. Most of the fish supply comes from aquaculture. Out of a total production of about 839,000 mt of fish in 1998, 583,000 mt, or nearly 70% came from aquaculture and the value of aquaculture production was estimated at US\$ 1,493 million. Even though shrimp accounts for only around 10% of aquaculture production, it accounts for nearly 30% in value.

Fish exports, specially shrimp exports, figure prominently in the country's exports. Exports of fish and fishery products from Bangladesh in 2000 were valued at US\$ 360 million, second largest foreign exchange earner after garments. Shrimps account for nearly 86 per cent of exports by value and the volume of shrimps exported in 2000 stood at 28,000 mt.

Aquaculture production in Bangladesh is primarily based on extensive shrimp farming practice. Trapping shrimp fry and juveniles in rice fields as well as areas impounded by dykes with facilities allowing tidal water to flow in and out, is the common practice. This practice was restricted to coastal districts of Khulna and Sathkira until 1960s, covering a total area of 2,500 ha. With the expansion of shrimp aquaculture in the 70s and 80s more land was put under shrimp culture. By early 90s the area expanded to over 100,000 ha coming under over 4000 extensive farming facilities. At present shrimp farms cover 140-150,000 hectares and produces nearly 90% of the shrimp exports while the balance comes from marine capture fishery. From a socio-economic angle, aquaculture industry is of very much importance in Bangladesh.

## **Small-scale producers and fish marketing**

Since there is a wide gap between supply and demand and all types of fish, irrespective of the price, are marketed easily due to the presence of a heterogeneous mixture of buyers. High cost fish like carps, catfish and live fish from inland waters and pomfrets, Indian salmon, and grunters from the sea are either sold to the higher income group or are processed for exports. Other fish are usually sold to people from the low income group. Due to high domestic and international demand, the prices of exportable species of fish have increased significantly. The basic fish marketing network is given in Figure 1 (annexed).

Export-processing sector is based on raw materials supplies from marine/inland capture fishery and shrimp culture fishery. As already pointed out the industry heavily depends on aquaculture shrimp, which forms the backbone of the industry. Aquaculture farms buy live wild caught juvenile prawns, which are then grown in water bodies. They interact directly with the small-scale collectors, through a network of middlemen who manage and assure supply of fry to farm owners. Export-processors buy semi-processed products from either commercial processors or buy raw stock from the fishermen/fish farmers and process it themselves. Some exporters also export fresh fish, frozen fish, dried shark fins, fish maws and live mud crab. Thus the small-scale farmers and fishermen form the backbone of the industry and stand to benefit from any positive developments in the industry by way of increased income and employment.

## **Project achievements and impact on the aquaculture sector and small-medium scale export-processing operations**

The key objectives of the three-year project were: to demonstrate the financial feasibility of value-added production, to develop market opportunities, to improve quality of processing, to promote investment by private sector and finally to disseminate project results in the region.

These project objectives were achieved through several project components, including market development and promotion. The project tried to open up Bangladeshi market by diversifying the products and by introducing Bangladeshi exports to new and major markets, such as the US, the Australian and the Indian ones. Adaptation and transfer of technology was another aspect thought necessary to achieve the project objectives. The aim was to transfer new technologies in fish handling, processing, packaging, quality control and marketing. Technologies chosen were low-cost ones, mainly using manual labour and with minimum new investment.

Third, in order to have a wider effectiveness and applicability, following an adequate project management and supervision, the dissemination of the project findings was encouraged. Finally, as a further means for promoting value-added production, the investment by the private sector was enhanced.

In order to allow a correct and efficient implementation of the project, the companies were provided with marketing and technical advice from consultants, particularly from Vietnam and Thailand, through the technical cooperation among developing countries; thus bringing their experience and expertise and applying it in accordance to the Bangladeshi needs.

### **Project objectives and achievements**

The overall objectives of the project as identified in the project document could be summarised as follows:

- Demonstrate technical and financial feasibility of value-added production
- Develop market opportunities
- Improve quality and sustainability of processing
- Feasibility studies and market promotion
- Promote investment by private sector
- Disseminate project results in the region

The above project objectives were achieved through four basic project components namely (a) Market development and promotion of exports, (b) Adaptation and transfer of technology, (c) Investment by private sector and (d) Information dissemination.

### **Market development and promotion of exports**

The project facilitated closer interaction between Bangladeshi exporters and buyers in major markets through visits to major markets and trade fair participation. New products were introduced to the Bangladeshi industry through pilot production trials. The project also provided guidance on packaging and product presentation. Continued buyer-seller matching, investment promotion and provision of market information and information related to regulatory developments, assisted in market development.

At the end of the project period, the Bangladeshi seafood industry in general, participating companies in particular, have shown an improved access to major markets through expanding their product range and higher in export volumes, particularly of value-added exports.

### **Adaptation and Transfer of technology**

The project has facilitated and effectively transferred new technologies in fish handling, processing, packaging, quality control and marketing. These were done through 8 training programs namely: Training Program in Fish Handling, Quality Control and

Value-Addition, Chittagong and Khulna (50), US FDA HACCP Training Workshop, Dhaka (84), FAO/DANIDA HACCP Verification and Audit Training Program, Chittagong (44), Training Program in Laboratory Techniques and QC, Chittagong (16), Training Program in Laboratory Techniques and QC, Khulna (39), Advanced Training in Laboratory Techniques and QC, Chittagong (40) and Advanced Training in Laboratory Techniques and QC, Khulna (56). The eight programs trained a total of 329 persons.

The training and exposure imparted during the programs enabled the Bangladeshi industry to address various product safety related issues through the implementation of new quality/safety assurance systems such as HACCP. The project also introduced simple, new technologies of packaging such as tray packing, stretch / shrink wrapping, vacuum packing etc and various methods of product presentation. The project also upgraded the laboratory analytical systems and also introduced new analytical techniques, including rapid test systems.

### **Investment by private sector**

The project facilitated and initiated private sector investment in the improvement of processing plant layout, laboratory facilities, processing equipment as well as product promotion and personnel training.

As per Bangladesh Department of Fisheries, during 1997-99 period, most of the processing plants have invested to upgrade their facilities to fall in line with EU requirements. The project provided guidance and assistance for many Bangladeshi companies in their effort to improve plant layout, selection of machinery and equipment, modification and upgrading the laboratory facilities and analytical techniques etc.

### **Dissemination of project findings**

Project findings were effectively disseminated through a series of 6 seminars and workshops; Industry Seminar, Chittagong (85), Industry Seminar, Khulna (65), First National Workshop, Dhaka (60), Second National Workshop, Dhaka (77), Investment Seminar, Dhaka (89) and Regional Workshop, Cochin (85). A total of 461 persons attended the above programs.

The project findings were also disseminated through publications such as Processing Manual, Feasibility Studies, Investment Profiles etc. as well as regular dissemination of project related information through various INFOFISH Publications. The above project components were executed through 20 activities.

### **Results achieved**

- The total value-added exports from 1998 to 1999 from three of the companies participating in the project, exceeded US\$ 5.0 million.
- Within the context of the transfer of appropriate technology for the processing of value-added fisheries products, the project organised a training course where 329 people participated. The course brought to the companies new expertise and knowledge on value-added production and quality assurance (i.e. HACCP); at the same time it made the personnel highly marketable in the seafood export sector, some of the trainees changed companies, thus bringing their new expertise to those companies that did not participate in the project.
- The project, through eight training programs, effectively transferred know-how, particularly in terms of product safety and packaging and product presentation.
- The findings were disseminated through six seminars, and workshops and several publications.
- It also facilitated and initiated private sector investment, in the improvement of processing equipment (selection of machinery and equipment), product promotion and personnel training. Through INFOFISH channels of communication and information dissemination, it provided 38 Bangladeshi companies joint ventures or investment promotions.
- The project contributed positively in upgrading seafood plants, particularly following the EU ban in 1997 on Bangladeshi seafood because of unsatisfactory compliance with EU sanitary requirements. Five out of seven plants coming under the project have upgraded their processing facilities to meet EU standards.
- From July 1999 to June 2000, fisheries exports volume increased by 38 percent compared to the previous year and shrimp exports contributed for 89 percent to the total value of the exports.

### **Domestic linkages conducive to the attainment of benefits to small producers and exporters**

#### ***a) The organization of small producers and traders in their export-oriented activities***

The project has successfully integrated small-scale exporters in to the international network of seafood processor exporters. The project also helped to create an awareness on the potential for value-addition and market diversification among a wide segment of the industry including some shrimp farmers and collectors / middlemen who wish to enter export marketing. Training programmes and industry seminars were useful in this respect to give them an insight into modalities of organizing export-processing and product marketing.

***b) Links between export-oriented commodity sectors and other sectors of economic activity***

The high level of planning and coordination and market intelligence needed in export-processing and marketing, including addressing safety / quality, of a perishable product like seafood would undoubtedly give the small-scale operators the confidence and ability to gain access to other sectors of economic activity. It is interesting to note that a large number of present day export-processors have been shrimp collectors, transporters or middlemen prior to successfully venturing into seafood export-processing.

***c) Links, if any, between export orientation and food security***

Export orientation of the aquaculture industry has had several beneficial effects on food security and health hygiene of the fishermen and their families. The economic benefits by way of better farm gate prices and an assured market serves as a catalyst for investment in aquaculture production of fish in general including non target species, which is marketed locally. Awareness on proper fish handling and transport also helps to improve such practices in the industry in general and would help to reduce physical and quality losses in the industry. However, there is no quantifiable direct link between export orientation and food security at this juncture.

Training in safe and hygienic handling practices has shown to educate the factory operatives, who are mostly women, on hygienic handling of food in general, and personal hygiene. It has been reported that factory workers with such exposure put this knowledge to good use.

***d) Favourable private sector initiatives and organizations for attainment of benefits to small producers and exporters***

In addition to promoting product/market diversification, the project successfully integrated academia, researchers, service providers etc through extensive training and dissemination activities undertaken with their involvement, as well as the research component involving environmental monitoring and monitoring sustainability of resources.

Bangladesh Frozen Food Exporters Association (BFFEA) played an active role in broad-basing dissemination activities, through the involvement of various District level fisheries bodies as well as several NGOs and Women's Organisations.

***e) Role of government policies and services***

The key governmental authorities which are involved in the seafood export promotion effort are the Export Promotion Bureau (EPB) and the regulatory body, Inspection and Quality Control Division of Department of Fisheries (DOF). The project has supported extension activities undertaken by the latter through its support in providing its staff with advanced training in modern seafood safety assurance techniques,

verification and audit of processing plants to ensure their adherence to food safety measures, hygiene and sanitation etc. Training and dissemination activities undertaken by a team of 15 foreign consultants over the three-year project period also involved industry personnel, government policy makers and planners, academia as well as NGO / Women's organisations. The overall coordination was done jointly by the Bangladesh Frozen Food Exporters Association and Bangladesh Fisheries Development Corporation. The integrated approach of the training and dissemination activities ensured healthy interaction of all the parties concerned in the export-promotion effort and in helping the development of a coordinated, balanced approach to ensure sustenance of the project efforts.

The continuity of various activities initiated by the project such as market intelligence, monitoring of exports and market / product requirements in major markets including legislation and legal enactments etc. would be ensured by the continued support to be extended by the PEA. The Project has also helped to network the various governmental/industry organizations with international trade bodies as well as buyer/seller groups and technical support services.

Figure 1: Bangladesh: Fish Market Levels

