

NOTE ON THE STATUS OF FISHERIES IN PAKISTAN

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ABSTRACT

In Pakistan, fishery sector provides employment to about 379,000 fishermen directly. In the year 2000, fish and fishery products valued at Rs.7.878 billion were exported from Pakistan. The present trend of production indicates that conventional fisheries resources are reaching at their optimum level. The conservation and management will ensure stock rebuilding of long-lived **demersal & large pelagic** species. Attempts have been made to use improved fishing gears and search new fisheries or to exploit the untapped or under-utilized resources through new and improved fishing technologies. 40% of the catch goes to reduction to fish meal as a result of post harvest losses. Considerable scope exists for marketing of fish as higher valued products, particularly uneconomic use of shrimp by-catch and small pelagic fishes in fishmeal. Realizing the importance for improvement of quality of fish and fishery products an effective quality control programme of fish and fishery products has been introduced. Aquaculture has now become the fastest growing food activity in the world. Introduction of some exotic species for aquaculture purposes has led to serious environmental consequences. Biodiversity of the natural water bodies and coastal areas has seriously affected due to over-fishing, pollution and environmental degradation as well. Therefore, there is a need to develop aquaculture on responsible manner.

INTRODUCTION

Fisheries as a sub-sector of agriculture plays a significant role in the national economy and towards the food security of the country, as it reduces the existing pressure on demand for mutton, beef and poultry. As a sub-sector to agriculture, it contributes, on an average, about 1.0 % to the total GDP, this amounts to about 4.0% of the GDP of the agriculture sector. Moreover, it absorbs 1.0% of the country's labour force. It is considered as one of the most important economic activity along the coastline of Sindh and Balochistan. It has been estimated that about 379, 000 fishermen and their families are dependent upon the fisheries sector for their livelihood. In addition, another 400,000 people are employed in ancillary industries.

During the year 2002, out of total production of 614,824 metric tons, 438,361 metric tons of fish was contributed by marine sector (71.3%), whereas contribution of inland sector was 176,463 metric tons (28.7%). In marine sector, out of total production of 438,361 metric tons, 294,400 metric tons (67.1%) was contributed by Sindh coast, whereas that of Balochistan was 129,686 metric tons (29.6%) and the contribution from EEZ was only 14,275 metric tons (3.3%).

The contribution of fisheries sector to the country's export earnings is quite substantial. In the year 2000, almost 84,693 metric tones of fish and fishery products valued at Rs. 7.878 billion were exported. Pakistan exports its seafood to about 61 countries of the world. Our major importers are European Union, Japan, the USA, China, Sri Lanka, Middle Eastern and African countries.

HANDLING PRACTICES IN PAKISTAN

Fish is highly perishable commodity. Deterioration of fish starts immediately as soon as it caught. The rate and rapidity of spoilage vary with storage time and temperature. Thus fish spoils rapidly within a few hours if the fish is allowed to remain on deck without adopting measures to preserve its freshness. In order to provide high quality fisheries product, it is necessary to control a) contamination and b) spoilage from fishing boat to the final processing. About 50-60% of the production is lost due to post-harvest deterioration due to the following reasons: i) Fish and shrimps are not being stored properly in the fish hold. Fish holds are not properly insulated; ii) the supply of ice to the fishing boats is not proper. Fishermen do not like to use the crushed ice; iii) the fish/shrimp are removed from the hold by scraping, scooping, shoveling. Shrimp are crushed, mashed, and broken during this process. For marketing the fish/shrimp are hipped in wholesale market by dirty mat-baskets; iv) The fish/shrimp are, then dumped directly onto the concrete floor in market hall. The purpose of dumping shrimp is to display the quality and freshness of the shrimp for the purchaser and for the convenience of separating of ice pieces; v) the water supply to the Karachi fish harbour from KWSB is inadequate to fulfill the cleaning and other requirements of the industry, which is about two million gallons per day.

FACTORS EFFECTING QUALITY OF FISH

Fish is a nutritious and relatively safe protein food. However, the extensive utilization of fish as food raises public health problems, and with the same risk of products being contaminated with pathogenic organisms or toxins. The environment from where the fish is caught is important because potential public hazards may exist in environment from where the fish is harvested. Bivalve (shellfish) filter the water of their habitat and concentrate microflora and chemicals. Therefore, the concentration of pathogenic microorganisms, biotoxins and/or chemical toxicants in bivalve shellfish may constitute a serious health hazard to the consumer. Pathogenic microorganisms that occur in the natural environment where fish and shellfish are caught, may be transmitted by the consumption of these products.

The fish industry, deals with hundreds of species, different from each other in its own peculiar size, shape, physiology, ecology, chemical composition, catching and processing technologies. The catching method will also contribute considerably to fish quality. For instance, fish caught by the trawler's net will suffer considerably more physical damage than those caught by hook and line. Spoilage occurs as a combined result of rise in temperature that promotes microbial activity and enzymatic breakdown, and poor handling that causes physical damage. Therefore the plan of action needed to prevent spoilage and preserve quality will include all steps necessary to handle the fish with care and speed.

MARKETING OF MARINE FISH

The total landings of marine fish are used for various purposes. These are classified as marketed fresh, freezing, canning, curing & reduction to fishmeal, other purposes and for subsistence use. Whereas the freshwater catch is marketed only as fresh for local consumption. During years 1996-2000 about 70% of the total marine fish production was consumed by humans and rest of the catch was largely reduced to fishmeal.

Fish and fishery products are processed and exported to 61 countries of the world. About 54% of the fish and fishery products are exported to European Union countries. Japan, U. S. A., China, Saudi Arabia, U. A. E., Malaysia, Sri Lanka and Singapore are other major importing countries. A major fraction of seafood is exported in frozen form whereas dried, chilled, fresh fish and live crab are also exported.

Fishery in Pakistan is shrimp oriented due to its export market. The major reasons for the sluggish growth of finfish sector are: a) Limited and traditional marketing system; b) Lack of infra structural facilities; c) Unfamiliarity of marine fish to the general public in the interior or up country thus resulting in very low level of demand for marine fish; d) Highly perishable nature of the commodity; e) Poor handling, collection and distribution methods; f) lack of quality control system; g) fishing villages having poor link roads. All the efforts for the development of fin fish sector of the country are being hampered by the limited traditional marketing system and other bottlenecks as mentioned above, coupled with the price of the fish; which is highly variable and is negatively correlated with supply of fish.

QUALITY CONTROL PROGRAMME

The processing units of the country are 40 years old. Most of these units are either not in operation or in bad condition and the products produced in these units are not in accordance with the requirements of the importing countries particularly European countries. Since European Union countries are major importers of seafood products from Pakistan, therefore, according to regulations of the European Union Commission, the exporting countries must comply with their standards. An Inspection Mission of European Commission visited Pakistan in December 1997 to evaluate conditions of seafood production and processing and pointed out certain shortcomings particularly poor hygienic conditions in Karachi Fish Harbour and in processing establishments. The quality control of fish and fishery products should be exercised under appropriate legislative cover. Therefore in 1997 Pakistan Fish Inspection and Quality Control Act, 1997 was promulgated. This deals with the registration of the fish processing plants and fish exporters, and constitutions and functions of inspection committee. The function of the committee includes inspection of fishing boats, fish processing plants, fish exporters, handling of fish and fishery products. It also spells out the powers, duties and functions of fishery officers and penalties on the processors/exporters for contraventions.

Federal Government has provided intelligentsia and technical assistance to seafood establishments for improving their processing conditions in line with various EU directives. So far, 18 establishments have improved their conditions and were allowed to export seafood to European Union countries. As a result of above highlighted efforts, now Pakistan is included in those countries that possess harmonized system of quality control of fish and fishery product.

After meeting the criteria prescribed under Quality Control Act/Rules, the firm/ establishment is registered on payment of prescribed fee. Pre-shipment inspection is required of seafood consignments intended for export and certificate of Quality and Origin is issued on payment of prescribed fee. A quality control services are provided for seafood intended for export or domestic consumption on payment of prescribed fee. The Quality Control Act/Rules also governs the conditions for laboratory examination for parasites, microbiology, chemistry, environmental contaminants, monitoring of the production areas, tolerance levels for environmental contaminants (heavy metals), pesticides and residues of veterinary medical drugs for aquaculture products.

Further, in order to improve the fishery sector of Pakistan, the Government of Pakistan has establishment a national fish inspection and quality assurance programme of invaluable significance for the better utilization of fishery resources so as to maximize revenues, increase foreign exchange earnings, generate employment opportunities and provide valuable protein food. The basic objective of the programme is to: a) reduce post-harvest loses in fish catch; b) improve the environment, in which fish is handled, processed, stored and distributed; c) create confidence in consumers by providing and maintaining good quality in fish and fishery products; d) guarantee a high reputation for fish as food and to promote the fish industry as a whole; e) increase the fish consumption; f) contribute to a substantial improvement in national self-reliance and development of fisheries; g) improve the earnings of fishermen and industry; h) expand regional and national marketing opportunities and foreign exchange earning through the improvement and stabilization of quality of fishery products and I) minimize the losses due to rejection or detention of exported products.

In the first phase about 2,000 fishing vessels which supply fish/shrimp to processing establishment will be upgraded. A ban is being imposed on sorting of fish and shrimp, use of wicker basket. Mixed catch will be brought to fish sorting area in the fish harbour where these will be de-iced and sorted under hygienic condition on sorting tables. After sorting, the fish or shrimp will be placed in the plastic crates and flake ice will be added in adequate quantity. Infrastructure facilities at Karachi fish harbour are being improved. Karachi Fisheries Harbour Authority has planned to establish three flake- ice making plants (100 m.tons per day capacity) to provide flake ice directly to fishing boats through a proper ice delivery system operating under hygienic conditions so as to avoid contamination during delivery and off loading process. The traditional trollies are also being replaced by more efficient and hygienic ones. In order to ensure the good quality fish and shellfish, fishing period is being reduced (not exceeding 10 days). Efforts are being made to ensure that seafood should be handled properly through all channels during transportation.

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