

## Editorial

# Perspective on Low Cost Processing Options for Small Scale Fisher

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## Editorial

Fish is regarded as health food due to its nutritional significance resulting in increased demand globally. In 2018, global fish production was 179 mmt of which 87.15% was used for direct human consumption (FAO, 2020). Nearly 38% of total fish caught was traded internationally resulting in an export value of US \$164 billion. Fish contributed 20% of average per capita intake of animal protein to about 3.3 billion people signifying the importance of fisheries sector. Fisheries sector plays a focal role in the economy of many countries apart from acting as a sole source of employment for millions of people. In India, fisheries sector has evolved from a subsistence traditional activity to a well-organized commercial and diversified enterprise. According to FAO, out of 59.5 million fishermen population globally, nearly 69% are classified as small-scale fish farmers (FAO, 2020). In India, around 70, 90, 95 and 100% of fishermen in marine fisheries, shrimp aquaculture, coastal aquaculture and inland aquaculture belongs to small-scale fishermen community. Although the small-scale fish farmers constitute a major percentage of fisher population, their economic status is still not very good. There are many reasons for this condition including post-harvest quality losses due to poor infrastructure and lack of storage and transportation, involvement of multiple middlemen in the trade and poor adoption of various preservation methodologies. Adopting good handling practices and applying low cost processing and packaging solutions by fisher population can lead to better profit realization.

At present, small-scale fishers involve in fish and shrimp culture, harvesting from open waters, working in fishing boats, processing industries and also involve in processing activities such as open sun drying and curing in very small scale units. They are also involved in certain primitive activities like working in peeling sheds and in processing industries. Nearly 100% of fish caught by small-scale fishers are sold to various agents without any further processing. Over 95% of the fresh fish production is consumed within a distance

of 200 km from the fish landing sites and the rest is distributed to places beyond 200 km from the coast. There is a growing demand for variety of fish products from distant markets due to their health benefits. There are many ways to increase the margin of profitability by small-scale fishers. The first and foremost important task is to maintain proper quality of harvested catch on board the fishing vessel by following proper hygienic handling practices, using ice and storing fish in good storage facilities which minimizes the post-harvest loss as which indirectly reduces the pressure on the fishing activity. The landing centre should have minimum facilities like clean water, sufficient ice, refrigerated vehicles and manpower for hygienic handling. Many instances, small scale fisher seldom carry ice on their boat which reduces their profit margin. When fishes are taken out of water, they will experience higher air temperature compared to water temperature. Apart from this if ice is not used, due to close contact with one another fish, temperature further rises leading to accelerate the spoilage process. As fish is highly perishable, it should be properly iced immediately after harvesting to reduce the temperature of fish so that quality loss can be minimized. Among the different types of ice like crushed block ice, flake ice, tube ice, cylindrical ice, slurry ice, crushed block ice will be economical for the small scale fisher. Fish to ice ratio of 1:1 will be effective in achieving maximum shelf life. By adopting these simple icing practices, the keeping quality of fish can be extended to 10 days to 17 days depending on the variety of fish species. Further, as there is a great demand for good quality fresh fish, small scale fisher can form an association to collect variety of fishes in hygienic way, do minimum processing like descaling, degutting, beheading in some cases in a small hygienically constructed facility. The fish and shellfishes can be cleaned and cut in different forms and styles like fillet, steaks, curry cut, cubes etc in case of fishes, headless, peeled un deveined, peeled and deveined, easy peel, butterfly style, nobashi, etc. in case of shrimps, whole, headless, tentacles, rings, fillet, strips etc in case of cephalopods and packed in suitable packaging material and supply these to households, residential societies and market in suitable retail stores to get more profit [1].

The traditional unhygienic drying practices can be minimized by adopting drying on the platform made of locally available materials which minimized the cost. Apart from these, solar drying with or without energy back-up can be adopted which improves the quality and enhances the shelf life. Also, good quality salt with less impurities and microbial contamination is to be used for maintaining quality of cured products. There is also a great demand for diversified ready to serve and ready-to-eat products in both domestic and export markets; however it is capital intensive in nature. Fish and shell fishes in live, fresh chilled, whole cleaned, fillets, steaks, battered and breaded products, variety of dried products, smoked fish, and traditional products are the range of low cost processing methods

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which can be readily adopted by small-scale fishers. Attractive and suitable quality packaging, advertising and branding are also important which determine the success of any diversified new product. As the processing and preservation technologies require capital investment, many countries have initiated incubation facilities, where the facility have been established and these facilities can be utilized by the entrepreneurs including small scale fishers till they develop confidence to invest and take up the business to next higher levels. This minimizes the burden of initial investment and helps in understanding the market better.

## References

1. FAO. The state of world fisheries and Aquaculture 2020. FAO. 2020:244p.