

Quality control and value addition sub-component in KCDP

Component 1: Fisheries

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The main objective of QC and value addition sub-component is to improve the socio-economic benefits from fisheries through development of enhanced value chains and reduced post-harvest losses. The specific objectives include:

- to contribute to food security through reduced post-harvest losses by proper fish handling;
- to enhance fish quality assurance, value addition and marketing for improved livelihood.

The areas of focus of the QC and Value addition sub-component are: fresh, dry, smoked, fried fish value chain and marketing.

Fresh fish cold chain: an improved fish banda with icemaker and cold room is being introduced in Shimoni to cater for Kibuyuni fish banda as well in the fresh fish cold chain. Other infrastructure includes introduction of insulated containers for artisanal fishermen to carry ice up-stream, insulated containers at the fish banda, a fishing boat and fish collection boat with insulated containers.

Dry fish chain: the Sardine fishery at the coast are commonly dried by broadcasting on sand leading to contamination by birds, sand particles and rodents. Lower quality fish is produced with a limited market circulation and low income to the fisher-folk. Thirteen improved fish drying racks measuring 20ft by 3ft with nylon mesh have been introduced in the pilot site of Jasini-Vanga to avoid contamination of fish by sand particles during drying. Seventeen more are to be introduced to include Jimbo area.

Smoked fish chain: most freshwater fish in the North coast including Tilapia, catfish and *Protopterus* and some marine catfish are processed using traditional methods of fish smoking. This is practiced in Moa, and Mpeketoni areas of Lamu county. The traditional methods use high amounts of wood fuel (contributing to high carbon footprint), have low fish smoking capacity and produce poor quality fish. Eight double door improved fish smoking ovens have been introduced in Mpeketoni. They use 60% less wood fuel (lowering carbon footprint), smoke more fish per unit time because of trays pile up one on top of the other and produce better quality fish.

Fried fish chain: small scale deep frying method is being practiced by a large number of women (Mama 'Karangas') at the coast and accounts for 68% of value added fish products along the coast. The fish is sold from early evening to almost midnight every day in display box shelves. They use paraffin candle light 'Korobois' to illuminate the fish. These emit smoke contamination increasing the carbon footprint. Three prototype improved fish display shelves have been introduced on trial basis in Kilifi Central of Kilifi county with eco-friendly and chargeable lamps replacing the 'Korobois'. This ensures no contamination of fish and no smoke emission with concomitant reduction in carbon footprint. The response from the community is very positive and a roll-out on pilot basis is awaited.

Product development, packaging and marketing: the first strategy towards value added product development was capacity building of KMFI scientists and technologists. This was done by both local and external training in the Philippines at the Institute of fish processing. Technology transfer of product development has started being implemented with local communities. Product packaging and marketing: this is being done together with local consultants.