



Centurion  
UNIVERSITY



Centurion  
UNIVERSITY

# Reducing Post-harvest fish losses for improved Food security



## WHAT ARE POST HARVEST LOSSES?

- Post-harvest losses (PHL) are defined as a reduction in quantity, or quality or monetary value of fish in the supply chain.
- PHL of fish occur in all fisheries or value-chains, to varying extents. Losses typically result in lost income and a loss in the availability of fish as food hence they represent a major food security concern in Africa, where many people are food insecure.
- There are two main types of fish loss that are of primary concern in terms of value-chain performance and ultimately to food security: reduced price loss and what is called, physical loss.

# **Cause of fish post-harvest loss**

- The post-harvest losses are generally caused due to poor handling, processing of fish leading to quality deterioration arising out of biochemical and microbiological spoilage, inadequate packaging, marketing malpractices and lack of proper storage facilities.

- **Reduced price loss:** Producers such as fishermen and processors lose income when they have to sell their fish for a low price due to the affects of spoilage or damage.
- **Physical loss:** In cases of severe spoilage or if processed fish is infested by insects, then fish may become un-saleable and the result is a physical loss where no income is generated but importantly there is no contribution to food security.
- The most common causes of losses are found in inadequate handling and processing methods, lack of knowledge and skills amongst producers, as well as poor access to infrastructure, equipment and services such as water, ice, electricity, roads and credit are all fundamental..

- Other underlying causes of loss are also lack of or poor market information, weak and unsupportive policy and socio-cultural factors. Whilst there are often estimates of loss in terms of percent or monetary value, these are often generalisations of complex and dynamic situations.
- Basing intervention decisions on these assumptions is a risk, so in order to reduce losses we first of all require a more detailed picture of the who, what, where, why, how and when of post-harvest fish losses. For example, losses are often seasonal, for example occurring during times of glut catches or the rainy season when traditional processing methods are less effective.

- Losses are also associated with certain species of fish or types of fishing or processing method. They may also be occurring in particular types of location e.g. remote areas where services and infrastructure are poor. In addition, coping strategies to control losses may already exist and could form the basis of effective interventions.
- Understanding these essentials is therefore key to prioritising and planning effective loss reduction interventions, where these should be targeted and the potential benefits that will accrue. Developing this understanding of losses is usually termed an “assessment”.

# ASSESSING LOSSES

- The assessment work was built on the FAO's recently developed comprehensive Post-Harvest Loss Assessment (PHLA) methodology which identifies relevant loss patterns and baseline information. This has involved capacity development in postharvest loss assessment methodologies for key institutions in the region.

# REDUCING LOSSES

- The loss reduction interventions implemented so far by SmartFish focus on working with key partner organizations to improve knowledge and skills as well as demonstrate the uptake and benefits from using appropriate improved handling and processing technology and solutions.



# Here are some examples of the main programme's loss reduction initiatives:

1. Education is an important part of the loss reduction process. SmartFish tackled the issue of lack of knowledge and understanding that many fishermen, processors and traders have about the causes of spoilage and fish losses using video.



2. In parallel to raise awareness, skills and knowledge development of all those involved in the value-chain is key to raising standards and encouraging the proper use of landing site facilities, cold chain management and meeting regional food safety requirements.

3. Strengthening the cold chain is one of the major opportunities for loss reduction in the region. Quality deterioration and spoilage of fresh fish are accelerated in hot ambient conditions. The use of ice is one of the most effective means to retard spoilage and maintain quality and hence prevent reduced price losses.

Post-harvest fish losses are a major concern and occur in most fish distribution chains throughout the world. Not only do losses constitute lost income to fishers, processors and traders, they also contribute to food insecurity a loss of fish means less fish available for the consumer.

