

# FLW M&E Unit Policy Brief No. 4

## Food Loss and Waste Across Food Value Chains in Egypt, Can Efficient Performance Be Achieved?



### Food Loss and Waste Reduction for Better Food Security, Exports and Agricultural Development: What Can Be Done?

April 2019

#### Introduction

High loss and waste in agricultural production is considered a highly significant issue at the national and global levels, both from the environmental and economic perspectives, especially where food security and hunger are concerned. According to the Food and Agriculture Organization of the United Nations, around one-third of the food produced for human consumption every year at the level of the globe, approximately 1.3 billion tons, is either lost or wasted<sup>(1)</sup>.

The challenge to eradicate hunger commenced with the launching of the United Nations Conference on Sustainable Development, known as Rio +20. Such challenge includes achieving sustainability in all food systems and eliminating food loss and waste, which requires that all countries devote attention to how to reduce food loss and waste. Egypt is suffering from increasing rates of losses in agricultural products and lower production compared with a lot of countries. Fish losses were estimated at 35% along the value chain.

#### Economic importance of fish in Egypt

The average value of agricultural GDP in Egypt is about LE 272.2 billion during the period (2010-2015). The value of plant, animal and fish production was about 156.4, 96.7, 19 L.E billion representing 57.5%, 35.5%, 7% during the same period, respectively. The average value of fish production increased from 14 L.E million representing 6.9 % in 2010 to 23.4 L.E million representing 7.4 % of the agricultural GDP at the end of the period 2015. The deficit in the fish balance was about \$ 320 million during the period (1999-2015). This indicates the extent of the contribution of the fish sector to the value of agricultural GDP despite the extension of the Egyptian coasts to the north and east, the existence of the Nile River, its branches and inland lakes. Despite the importance of fish in Egypt's economy, their losses are high, affecting on the efficiency of resource use, food security, exports, national income, social and economic development efforts. The value of fish production in Egypt was estimated at LE 43.8 billion in 2017. And fish production from its various sources in Egypt about 1069 thousand tons during the period (1999-2015). Fish farming ranked first as the most important source of fish production in Egypt, it was about 689 thousand tons per year, representing 64.4% of the average total production

during the same period. production of lakes was about 169 thousand tons representing 16.2%. The sea ranked third with 123 thousand tons representing 11.5% of the total production and 32.2% of the production of natural fisheries. The Nile River and its branches came in the last order as a source of fish, it was about 88 thousand tons representing 8.2% of the average volume of total production and about 23% Of the average production of capture fisheries during the same period. Fish farming accounts for 77% of the total fish production in Egypt.

#### Losses in fish ! How Much and Why?

Fish is one of the most important sources of animal protein and an excellent substitute for meat, for domestic consumption or export. It is therefore important to identify the amount of loss, which is about 35% along the value chain, which is very high.

It should be identified to know the Ways to reduce it in order to achieve better levels of food security, exports, agricultural development and reduction of animal protein deficits.

#### The most important reasons for loss of fish:

1. Inadequate harvesting, handling, conservation, processing, storage and distribution operations.
2. Poor technical capacity for fish hygiene, environmental sanitation and technological mechanisms
3. Absence of quality control.
4. Over-fishing and primitive.
5. Environmental pollution.
6. After setting up warehouses for refrigerators and storage.
7. Fish back after fishing.

The factors affecting loss include farm management, the working environment within each farm, the accuracy of monitoring and recording pond data, the feeding methods used; and the high mortality rates in fry during transport due to hatcheries from fish farms.



<sup>1</sup>FAO, Save Food: Global Initiative on Food Loss and Waste Reduction, <http://www.fao.org/save-food/resources/keyfindings/en/>

### *Implications of good practices*

1. Reduce waste and lost in fish production and marketing level.
  2. Reduce the food gap between production and consumption.
  3. Improving the returns and incomes of fish producers, especially small producers, whether by increasing the quantity of production or by directing their products to manufacture and export as a result of producing a high quality product.
  4. Improve output quality.
  5. Promote sustainable fishing.
  6. Elimination of pollution of the environment and marine waste.
  7. Utilization of the returned fish by manufacturing and converting fish powder to benefit from animal feed.
- Implications of good practices

### *Mechanisms for applying good practices for aquaculture*

1. Identify fish producers according to regions and varieties.
2. Extension by sound fishing and abandonment of unregulated .
3. Training the fishery guide on good fishing practices and introducing legislation.
4. Training fish producers on good fishing practices.
5. Exchange of information on relevant national, regional and regional experiences.

### *For Who is applying?*

1. Small farms and extension farms.
2. Landing places and marketing places.
3. Manufacturing, processing and salting facilities.



### *Recommendations for decision makers*

**To** achieve the elimination and increase production efficiency to promote the fish sector, which contributes to reducing waste and raise the quality of the product and reduce production costs and increase profitability, we make the following recommendations:

- Activating legislation and laws issued to eliminate overfishing, pollution in capture fisheries and rebuilding fish stocks for the development of capture fisheries
- Provision of funding for the reconstruction of the fishing fleet
- Issuing and activating the necessary legislation to treat the agricultural drainage water used in fish farming to reduce pesticide and chemical fertilizers.

- Legislation requiring the cleaning of fish from the intestines and crusts prior to transport to prevent the proliferation of harmful bacteria.
- Provide the necessary support to activate the role of guidance in raising the awareness of fish farmers and wholesalers and retailers of good and reliable practices to improve the quality of fish available to the consumer.
- Encouraging the private sector to invest in the establishment of fish hatcheries.
- Encouraging the private sector to invest in the provision of refrigerated transport and the proper conservation and handling of fish.



#### **Contact Information:**

**Address** : 7, Nadi El-Said Street, Dokki, Giza, Egypt.

**Phone** : (202) 33372318

**Fax** : (202) 37607651

**Email** : [flwmeunit\\_aeri@sci.eg](mailto:flwmeunit_aeri@sci.eg)

**Website** : [www.flwmeu-aeri.sci.eg](http://www.flwmeu-aeri.sci.eg)