

THE PAN-AFRICAN FISHERIES
AND AQUACULTURE POLICY FRAMEWORK
AND REFORM STRATEGY: ENHANCING FOOD
AND NUTRITION SECURITY

STRETCHING THE FRONTIER FOR
FOOD PRODUCTION BY IMPROVING
POST-HARVEST SYSTEMS





Executive Summary



Fish is an important part of the African diet, and in several countries it is the main source of animal protein.



Fish is a source of micronutrients and essential fatty acids which are not found in other types of food. However, supply of fish has difficulties to keep path with population growth. Fisheries and aquaculture are frequently overlooked when preparing policy papers and development plans.



The importance of fish in the diet, especially for the poorer segments of the population, is usually overlooked, as especially food security policies are mainly based on terrestrial foods, such as crops and livestock.



It is important for policies to urgently focus on raising the status of fish in the national and regional food and nutrition security debate.



It is critical for governments and nutrition stakeholders to raise the importance of fish in human nutrition, particularly to consumers through public awareness, consumption promotion, school feeding programmes, TV-cooking classes, etc.



In order for fish to make a meaningful contribution to Africa's food and nutrition security, there is need to control post-harvest losses which are estimated at 20 to 25% or a total of 2 million tonnes of fish annually.

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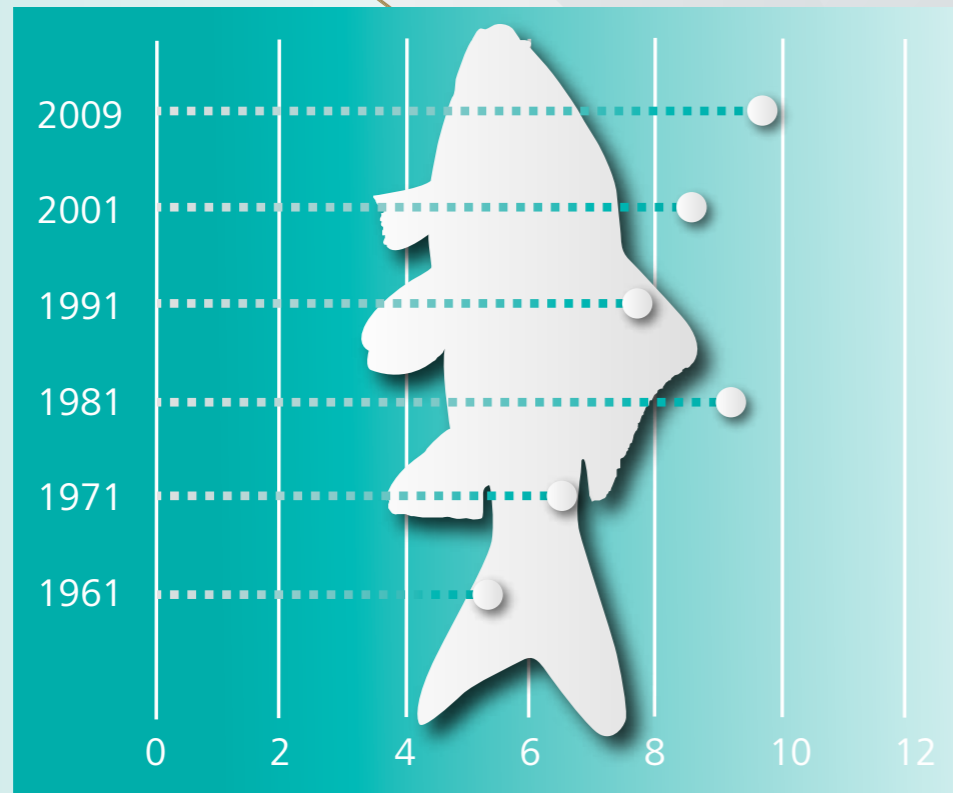
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Introduction & Background

There is no life without food and there is no human development without food security. The prevalence of hunger is highest in Sub-Saharan Africa. One in every four African is under-nourished. The count was 239 million in 2012. Sub-Saharan Africa is losing slightly above 1.5 million children under the age of five annually due to malnutrition, hunger and malnourishment which attack the very foundation of human development.

Graph 1: African fish per capita supply (in kg)

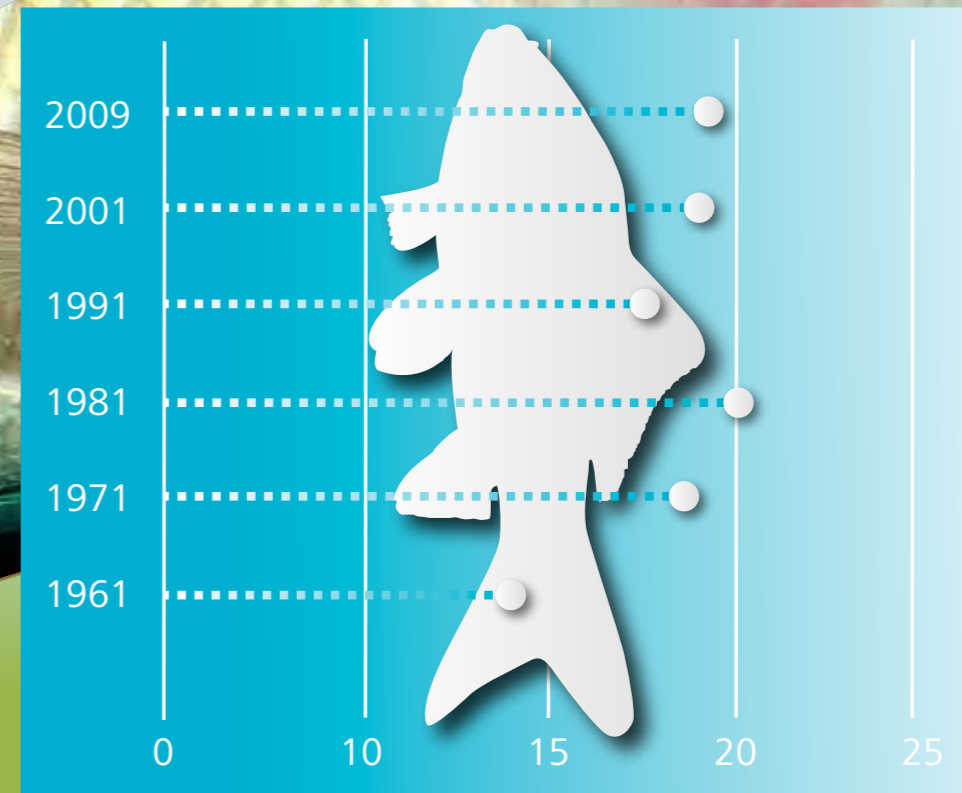


Humans cannot live on fish alone, but small quantities of fish in human diets can make a crucial difference in brain development, help the development of bone and muscle tissue, prevent blindness and heart attacks as well as mitigate the effects of HIV/AIDS. There is evidence, even though the proof is difficult to bring, that eating fish prevents cancer. Foods from the aquatic environment have a particular role as a source of the long-chain omega-3 fatty acids (EPA or DHA), important for optimal brain and neuro development in children. More and more attention is also given to fisheries products as a source of micronutrients such as vitamins and minerals. This is in particular true for small sized species consumed whole with heads and bones, which can be an excellent source of many essential minerals such as iodine, selenium, zinc, iron, calcium, phosphorus and potassium, but also vitamins such as A and D, and several vitamins from the B-group. Fish represents an excellent supplement to nutritionally deficient cereal-based diets.

Total African fish production was 9.1 million tonnes in 2011. Fisheries create employment for about 15 million people, with 80% employed in the artisanal sector. Marine fisheries are dominating the fisheries (9.2 million people in Africa). Fisheries are thus important for creating employment and indirectly for favouring food security.

The per capita supply of fish in Africa is 9.7 kg, a bit more than half the world average (18.5 kg). Supply figures have stayed stable (see graph 1) over the years, which indicates that increases in catches and aquaculture production have only kept path with population growth. In some island nations, however, such as Seychelles, the Comoros and Mauritius, per capita fish supply is one of the highest in the world.

Graph 2: African share of fish in animal protein (in %)



Fish is an important source of protein for most African countries, and especially for the poorer segments of the population. In some countries the proportion of dietary animal protein is very high e.g. 47% in Senegal, 62% in Gambia and 63% in Sierra Leone and Ghana. As graph 2 shows, the importance of fish as supplier of animal protein to the African population has stayed quite stable over the years.

Problem Statement

Fish supply in Africa is growing very slowly, and has problems to keep path with the growing population. The main reasons for this deficiency are over-exploited marine and inland fisheries resources, including Illegal, Unreported and Unregulated (IUU) fishing in African waters, limited aquaculture production and high post-harvest losses. This brief will concentrate on the latter issue.

Post-harvest handling, processing and transportation of fish require particular attention in order to ensure proper quality and food safety. Retaining the nutritional value of the fish, preserving the benefits of its rich composition and avoiding costly and debilitating effects of fish-borne illnesses, are vital or the benefits of fish products are lost.

While artisanal fisheries rarely discard fish, they do lose a substantial amount of the value of their catch before it can be eaten. Particularly in tropical countries, high temperatures mean that fish can be spoiled while still in the boat at landing, during storage or processing, on the way to the market and while waiting to be sold. In Africa, some estimates put post-harvest losses at 20-25%, and in some countries as much as 50% is lost.

Three different types of post-harvest losses can be observed:

- 1 Physical losses, such as throwing away (because of spoilage and attack by insects or even theft);
- 2 Quality loss, in other word the reduction in revenue caused by spoilage, damage and detentions/rejections) and
- 3 Market-force loss, which is not easy to measure but is caused by changes in demand and supply.



Losses are a concern because they are a waste of resources and result in a loss to operators in the fishery. As the possibility to harvest more from the world's oceans, rivers and lakes is now limited, the problem of losses and the need to reduce losses is even more relevant.

An additional problem for the use of fish to obtain food and nutrition security is the generally very limited attention paid by policy makers to the whole sub-sector, including inland fisheries and aquaculture. A recent study¹ that analysed 84 policy papers of Eastern African countries, found that only 40% of policy papers mention fish, and only very few food-security policy papers take fish products into account. The overlooking of fish happens in many countries, even in those countries where fisheries contribute significantly to animal-protein intake.

Policy Recommendations

It is possible to reduce fish losses by changing practices, training, technical and/or non-technical interventions. Some losses, however, may be too difficult to reduce easily and economically and will often be accepted as a normal operating loss.

Governments and the private sector can reduce post-harvest losses by

- 1 Better integrating fish products into food policies of the countries
- 2 Introduction of insulated containers - especially in tropical, warm climates. This allows the cost-effective use of ice on small boats, pirogues, canoes, etc. in tropical areas, reducing spoilage of the fish already on the boats
- 3 Training of fishermen, fish processors – with specific training for women processors - and fish traders on better handling of fish products, in order to reduce physical post-harvest losses.
- 4 Training sessions of public-sector staff and private-sector stakeholders on understanding consumer preferences, fish and fishery products quality and safety
- 5 Promotion campaigns for consumers, explaining the benefits of fish, but also how to avoid eating spoiled fish
- 6 Creation and dissemination (through leaflets, TV-cooking lessons, etc.) of country-specific recipes with fish as a main ingredient
- 7 School feeding programmes, where fish is integrated into the normal school kids diet



¹ Kurien, John and López Ríos, Javier. 2013. June 2013. Flavouring Fish Into Food Security. FAO-SMARTFISH Programme of the Indian Ocean Commission.

In the overall context of policy discussion and programming exercises, Governments and Regional Economic Communities (RECs) have to insure that the importance of fisheries and aquaculture is highlighted and that its role with regard to food security and the provision of healthy food to the population is correctly testified. Fisheries officers have to be involved in the design of countries' and RECs' policy frameworks.

Conclusion or Implications

Fish is an important component of the African diet as the main source of essential fatty acids and a very important natural source of many minerals such as iodine, iron, zinc and calcium, but also vitamin A and some vitamin Bs. This is particularly true for fish eaten whole such as small pelagics and lake sardines. These nutrients are often difficult to find in other foods. Fish is also a main provider of animal protein to the population in many African countries. In order to increase the supply of fish to the African population post-harvest losses have to be reduced. On a continent where an estimated 20-25% of the catch/culture production is lost on the way to the consumer, substantial additional supply can come from a reduction in post-harvest losses. Better information to the consumer, on how to choose the fish in the market and how to prepare a healthy meal with fish, will also increase the benefits from fish for the African population.

Despite this strategic importance, recent studies have found that the discussions, debates and policy-making processes with regard to food and nutrition security in Africa (and in other parts of the world as well) are centred on cereals, pulses and meats. Food policy is largely oriented towards food produced on land. Little is said about fish – even in countries where fish is central to people's diets, irrespective of their income levels and social status. The pivotal role which fish can play in direct food and nutrition security is not adequately recognised.

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