

Schooling in quality

A visit to Senegal, in late February, of 15 fish processing specialists highlighted the main constraints to the trade

Joal, 100 km from Dakar and the birthplace of the former Senegalese president, Leopold Sedar Senghor, witnessed a feverish atmosphere in late February, as the songs and rhythms of the crowds took the fishing centre by storm. All around thick smoke rose into the air, as if to compete with the majestic 'ronier' trees that dominate the skyline of these parts.

As in any typical African market, on display were roasted and smoked fish; dried, salted and fermented fish; molluscs, rays and sharks, both salted and dried; and smoked grouper. All these products seem to be vying with one another in the negotiations between traders from different parts of west Africa.

Fish processing experts from Senegal, Gambia, Guinea, Mali, Mauritania, Benin, Nigeria and Togo had arrived to learn about Senegalese good practices. "Senegal was chosen because of the progress its processing sector has achieved. The objective is to use the Senegalese experience to give inspiration to the other participant countries," said Anthony Achéampong, consultant to the Technical Centre of Agriculture and Rural Development (CTA), an instrument of the Cotonou Convention that financed the visit.

CTA's main objective is to facilitate access to information to promote agriculture and rural development. For this particular study tour, it was assisted by the West African Association for Artisanal Fisheries Development (ADEPA).

"Often when we receive smoked fish its colour changes. Not only does it become yellow, but sometimes it gets mouldy," a Beninois professional pointed out. That set the tone for the programme. Apart

from quality objectives, its purpose was to help add value to seafood, reduce post-harvest losses, and promote women's activities in the rural sector.

In recent years, there has been a massive influx of Senegalese women into the sector. To finance their activities, they are organized into economic interest groups (GIES) and in savings and credit unions. The processed fish sector, a large part of which provides for the consumption needs of the Senegalese population, also faces a bundle of constraints that are generally associated with poor infrastructure and hygiene.

The most widely used technique for fish processing is braising on the ground, which is often unhygienic and pollutes the environment. "We use two techniques for dried braised fish. In the first, the fish is processed on the bare earth using straw and wood shavings as fuel. The second uses an oven to smoke the fish, and this gives a better quality product," explained Fatou Kiné Diop, president of Fenagie-Pêche, the local union from Bargny, some 30 km from Dakar.

Fatou Kiné Diop did not mince words over the constraints that undermine her business: "If we have to work on the bare earth, it's because we have no oven. We know that braising on the ground does not give a good quality product. We know it poses hygiene and health problems. We tried to work with ovens but often they exploded.

Japanese aid

Recently, thanks to aid from the Japanese International Co-operation Agency (JICA), we started to produce satisfactory results using ovens. The other problem is the increasing resource scarcity. Previously, we were processing between 15 and 20



boxes of sardinelle per day, but now sometimes we can't work because there is no fish."

The problems that they have encountered in recent years have pushed the fish processing women and the Senegalese State to come up with new techniques of braising and smoking using ovens or by cooking. These techniques, supported by the Institute of Food Technology (ITA), a Senegalese government body, JICA and the United Nations Industrial Development Organization (UNIDO), have been added to the array used by the women processors.

But despite the progress achieved through the new processing techniques, some problems remain. For example, the specialists contend that the ITA technique of oven braising "has a short lifetime, there is a big loss on investment, the energy consumption is very high, and, in addition, a major oversight is the lack of training for the users."

Many factors are at play in processing technology: the nature of the fuel, the amount of heat needed, the material for building the oven (red bricks, cement, sea sand), temperature control, smoking time, the quantity of salt used and so on. All these factors exert an influence on the quality of the final product, including its colour and moisture content.

A manager of the GIE for processing workers of Seuti Ndiaré (which, in the Ouolof language means "grandsons of the Ndiaré", the protector of the village of Yoff, a suburb of Dakar) recalled: "One morning fisheries administration agents paid us a surprise visit. They arrived very early at our place of work without even saying hello. They forced the door and went in, just to come back some minutes later to tell us that they wanted to check on the cleanliness of our installations. After their visit, they understood that our reputation was not false."

Seuti Ndaré is one of the most advanced fish processing centres in Senegal. Its site next to the sea adjoins an area where other women carry out processing activities using traditional methods. In this area, which has an entirely cemented floor, 63 women on regular salaries have developed modern processing methods. Equipped with running water and electricity, and dryers, ovens and modern buildings, Seuti Ndaré processes fish products for countries like the Democratic Republic of Congo, a large consumer of *sali* (salted and dried fish). It has been recommended that the Seuti Ndaré be made a training centre for processing women in west Africa.

"Sometimes some of our customers complain about the colour of the fish. After getting their orders, we try very hard to get the colour they like," explained Seynabou Samba, one of the managers of the GIE and also president of the Senegalese National Federation of Processing Women and Women Small Traders (FENATRIMS).

"We were advised to use the wood of edible fruit trees as fuel. According to the specialists who taught us the new processing techniques, the smoke produced is better for the consumer," she added.

Trade flows

Traditionally, the coastal areas of west Africa have witnessed trade flows—in the past, due to colonization and currently, due to globalization. In Kayar, for instance, on the Grande Côte of Senegal, Deckon Ayaba Virginie, a Togolese woman living in Senegal for more than 50 years, has built up her business since the

colonial era, specializing in the export of salted dried fish to Togo.

Numerous variations can be observed both in the practices used and among the traders themselves. At one time, for example, only Senegalese were to be found in the fish trade. But nowadays, in some processing sites like Joal, one comes across Bourkanabes, Guineans and Malians who have invested in the entire production chain. Overall, the main constraints that the trade and processing of fish have to face are the same in all west African countries.

Progress has been associated with organizational forms, the availability of credit, and the intervention of the State or funding agencies. Yet problems remain, including archaic working methods, lack of knowledge of improved techniques and insufficient support. Difficulty in access to adequate equipment and lack of space for processing sites, particularly in urban centres, and the scarcity and high price of inputs like oil, fuel, salt, firewood and water, are some other constraints.

Organizationally, illiteracy and lack of training in management and appropriate technology are stumbling blocks. Environmental aspects, including pollution and the effects of weather, need to be managed as well. Lack of credit and the means for conservation and transportation, coupled with the isolated nature of certain markets and the lack of space in markets to sell their ware, are other disadvantages.

Structured exchange networks are already in place in west Africa. For example, Ghana exports smoked sardinelle, smoked anchovy and smoked, dried and salted freshwater fish to Togo and Benin. Ivory Coast supplies Burkina Faso and, to some extent, Benin with mussels. Benin supplies Togo and Ghana with fresh and smoked crustaceans. Benin also exports catfish and smoked sardinelle to Nigeria.

These exchange flows can be developed if some barriers are lifted, not the least of which is the lack of information. Already, numerous professionals have requested for a replication of the ADEPA study. "Back in Mali, I would like to organize a study

visit to Senegal to initiate Malian processors in the art of certain production techniques", said Boubacar Cissé, who heads the Mali operations of the Sustainable Fishing Livelihoods Programme (SFLP) of the Food and Agriculture Organization of the United Nations (FAO).

To improve information flows, participants also proposed that information systems be strengthened. Everyone agreed that there should be an exchange of training materials and information on braising and smoking techniques. Also stressed was the need to take advantage of the strengths of each country to try and resolve constraints in a given area. For example, how could traders in Senegal, faced with a lack of raw material (*Sardinella*) for processing, get supplies from Mauritania? How can fish products be exported to landlocked zones like Burkina Faso?

Some initiatives, however, are often undermined by State regulations. Several departments are involved in these controls and despite a policy of African integration in the flow of goods and people, countries of the subregion have different regulations.

All these present obstacles and constraints to the flow of fisheries products, which were summed up by a Togolese operator: "In Senegal, a fishing boat takes five days to arrive in the port of Lomé. But to get the fish out of the port, I need about 10 days. So the product takes about 15 days to reach its owner. Under such conditions, if the fish is not dry enough, as recommended by the CTA, there is a high risk that the produce will be spoilt when it arrives."

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