# Dcfrn-~1Developing Countries Farm Radio Network

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Three Fishing Ladies with a Message about Solar Dryers

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**Notes to Broadcaster**

Post-harvest losses in food production in Africa are a very serious problem, and fisheries are no exception. Post-harvest losses in small-scale fishing enterprises in Africa are extremely high, with estimates varying between 20% and 50% of the catch. The majority of losses are termed ‘economic’ losses, meaning that fish sellers lose money because the fish they sell are of lower quality due to insect infestation or breakage. The burden of losses makes life much more difficult for those who rely on fishing and fish processing for their livelihoods.

All over Africa, projects are addressing the issue of post-harvest losses in fisheries. This script tells the stories of three women in three different countries. All three are involved in projects which focus on the use of solar dryers to dry fish. The stories derive from projects managed by the Sustainable Fisheries Livelihood Program (SFLP), an international partnership with operations in twenty-five countries in West and Central Africa. SFLP, the Food and Agriculture Organization of the United Nations and other organizations are working with communities to decrease the burden of post-harvest losses in fisheries.

**Characters:**

Host

Fisherwoman #1 (from Sao Tome and Principe)

Fisherwoman #2 (from Nigeria)

Fisherwoman #3 (from the Republic of Congo)

**Host:** Hello and welcome to today’s very special program. In a few moments, we will be talking with three women from fishing communities in three different countries: Sao Tome and Principe, Nigeria and the Republic of Congo. These women have all benefited from the introduction of solar fish dryers to their communities. Solar dryers have raised their income and had many other benefits. But enough from me! I will let these three ladies tell you all about it. From Sao Tome and Principe, we have Fisherwoman #1. From Nigeria, we have Fisherwoman #2. And last, but not least, from the Republic of Congo we have Fisherwoman #3. Welcome, all of you, to the show. Fisherwoman #1, I’ll start with you. Tell me how fish are traditionally dried in your community.

**Fisherwoman #1:** Well, as you probably know, the women do all the hard work in fishing communities! (*Laughter from all*). The traditional practice is to lay the fish on horizontal racks about one metre above the ground. The racks are wooden frames with a covering made from bamboo, small tree branches, or a mat of palm leaves or twigs, then covered with a fishing net. After laying the fish on the racks, we simply dry them in the sun.

**Host:** Are traditional practices similar in Nigeria, Fisherwoman #2?

**Fisherwoman #2:** Yes, much the same. The fish are spread on mats or sometimes even on the ground to dry.

**Fisherwoman #1:** Yes, there are still many women who dry fish on the ground in Sao Tome as well.

**Host:** What about in the Republic of Congo, Fisherwoman #3?

**Fisherwoman #3:** Yes, things are much the same. There’s a lot of big fish in the Republic of Congo, so we have to take that into account when we make the frames.

**Host:** I want to ask you what kinds of changes you have made to traditional practices in your countries, and what are the benefits? Fisherwoman #3, I’ll ask you first.

**Fisherwoman #3**: Well, we are all using solar fish dryers now, and that has been a great benefit. The dryers we use in the Republic of Congo are quite large because, as I said, our fish are very large. And we have lots of them! Our dryers are about four metres wide, four metres long and two metres high, with two shelves and a salting box. I’ve been told that they are a lot like greenhouses.

**Host:** Can you tell me how these solar dryers are constructed, Fisherwoman #2?

**Fisherwoman #2**: Certainly! The fish are laid on two levels of racks made from bamboo strips lying on mosquito netting. A transparent plastic sheet covers the wooden structure, and there are holes along the bottom and top of the plastic sheet for ventilation. We make the frame and purchase the mosquito netting and the plastic sheets. At first, we had a black polyethylene sheet at the base of the dryer to better absorb solar energy. But we changed that.

**Host:** Did you make other changes to the construction of the dryer?

**Fisherwoman #2:** Well, in our community, we talked a lot with the project sponsors about how to construct the dryers. We told them we wanted to replace the black plastic sheet with rocks covered in locally produced black dye. Also, while their idea was to build the frame from metal, we convinced them to use locally available wood. We had to make another change as well. We increased the size of the ventilation holes after a while because it was just too humid inside the dryer.

**Host:** And have the solar dryers benefited you, Fisherwoman #1?

**Fisherwoman #1:** Absolutely! Otherwise, why would I be here talking to you (*laughter*)? By the way, we also found that we had to increase the size of the ventilation holes. And we angled the dryer to take advantage of the usual direction of the wind. (*Pause*) You see the main problem with traditional drying methods is that the fish are not covered. So they get coated in dust and sand, and they are infested with insects and bacteria. Because the fish are covered in the solar dryer, there’s much less chance of that kind of contamination. So the quality of the fish we sell is much higher.

**Fisherwoman #3:** And that means that fewer fish are spoiled and have to be thrown away. So, because we lose fewer fish, both the quality and the quantity of fish increases. So we women get more money. Some women in the Republic of Congo have doubled their income with the solar dryers. One of our large dryers can produce 400 kilograms of salted and dried fish every month. We sell part of this locally, and send the rest to other towns in the Republic of Congo.

**Fisherwoman #1:** In Sao Tome,because our fish is a higher quality, we can sell it for a higher price. Before, one kilogram brought us about four US dollars, but now we sell it for up to six US dollars (*broadcaster: use local currency*).

**Fisherwoman #2**: Another problem with traditional methods is that, whenever it rains, we have to bring the fish inside. And the solar dryer is much quicker. Fish dried with the solar dryer can be stored for up to four weeks, and sometimes more. But fish dried in the traditional way last for between three to eight days. This means that we can salt and dry the fish that we don’t sell, even during the rainy season.

**Host:** So, Fisherwoman #2, the solar fish dryers in Nigeria are smaller than the ones in the Republic of Congo?

**Fisherwoman #1**: Yes, we have two sizes: a larger dryer that measures about three metres wide by one and one half metres long, and an individual dryer that is two metres wide and one metre long. But many women find the individual dryer too small – it limits the amount of fish they can dry. There are new projects in Sao Tome and Principe which use only the larger-sized dryer.

**Host:** I understand that there are environmental benefits as well to using the solar dryer.

**Fisherwoman #2:** In northern Nigeria, as elsewhere, deforestation – cutting down trees - is a big problem. Because we’re not using firewood to smoke fish, we’re decreasing deforestation.

**Host:** What about cost? Isn’t the cost of the solar dryer a barrier to its use in poor fishing communities?

**Fisherwoman #3**: In the Republic of Congo, the project sponsors arranged loans for the women who were part of the project. The women each received $840 US, to buy the dryer and to buy the raw materials. So far, seventy percent of the women are up-to-date with their repayments, and the other are just a few weeks late.

**Fisherwoman #1**: In Sao Tome, the youngest women received a loan of about $27 US to set up their business, and the others received loans to expand their activities. They’ve used the loans to buy fish and as working capital to run the family businesses properly. But we don’t think this is enough money. Really, the women need larger loans – between $60 and $120 US. In Sao Tome, the solar dryer is not too expensive; it costs about $90 US.

**Fisherwoman #3:** In the Republic of Congo, we want to use local materials like eucalyptus wood to build the dryer. This should bring down the cost quite a bit.

**Host:** Well, I am very impressed by all of you – and by your project. I wish you continued good luck with it.

**Fisherwoman #3:** Okay, ladies, now, remember what we practised … one, two, three …

**All three:** Eat more fish!

**Host:** Thank you for listening. This is your host, \_\_\_. Goodbye.

## Acknowledgements

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Reviewed by: Joseph Ndenn, Sustainable Fisheries Livelihood Program.

## Information sources

S. Braguy, 2003. Fish drying: an adaptable technology. SFLP Liaison Bulletin Number 13, July-December 2003. Available on-line at <http://www.sflp.org/eng/007/pub1/index.html>

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