

# Mechanized Processing and Value Addition for Fish Products

From Catch to Cuisine: Enhancing Fish Quality and Sustainability



Smoking fish suitable for processed fish products

**WorldFish Center**  
Bernadette Fregene

This technology is a fish processing and preservation method involving the use of equipment such as solar tent dryers and smoking kilns. Solar dryers offer a low-cost alternative to refrigeration, and smoking kilns utilize smoke to kill microorganisms while drying the fish.

This technology is **TAAT1 validated**.
 
**8·7**
 Scaling readiness: idea maturity 8/9; level of use 7/9

Inclusion assessment **4**

Climate impact **7**

### Problem

- Post-Harvest Losses, significant post-harvest losses occur due to bacterial activity and oxidation.
- High ambient temperatures in many regions accelerate the spoilage of fish,
- The availability of mechanized equipment and maintenance might pose challenges, particularly in resource-constrained areas.
- Traditional smoking kilns may consume significant energy and time.

### Solution

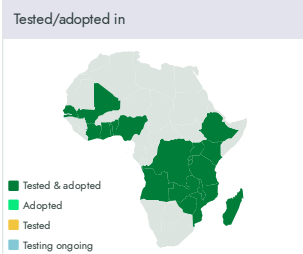
- Fish processing and preservation technologies extend the shelf life of highly perishable fish, reducing post-harvest losses.
- These methods improve the palatability, taste, and nutritional value of fish products, enhancing their market acceptance.
- Solar tent dryers and smoking kilns are cost-effective and widely used, eliminating the need for refrigeration during transport and storage.

Technology from  
**ProPAS**

Commodities  
Fish

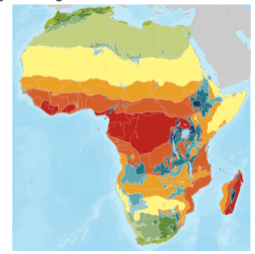
Sustainable Development Goals

Categories  
Postharvest, Practices, Agri-food processing



Where it can be used

This technology can be used in the colored agro-ecological zones.



Target groups  
Processors

## Key points to design your program

Mechanized Processing and Value Addition for Fish Products can be integrated into fisheries development, food security, agribusiness, and fish value chain programs to reduce post-harvest losses, improve product quality, and increase incomes. Its adoption contributes to SDG 1 (No Poverty), SDG 2 (Zero Hunger), SDG 8 (Decent Work and Economic Growth), SDG 12 (Responsible Consumption and Production), and SDG 14 (Life Below Water).

To integrate this technology into your project, plan and budget for the following activities and prerequisites:

- Facilitate access to fish processing equipment, drying and smoking technologies, packaging materials, and processing facilities.
- Build partnerships with WorldFish, fisheries authorities, processors, cooperatives, extension services, and private sector actors.
- Train processors on fish handling, processing, food safety, hygiene, quality assurance, and equipment maintenance.
- Promote women's and youth participation in fish processing and value addition enterprises.
- Monitor post-harvest losses, processed fish volumes, product quality, market access, and income growth.

<b>1,000 USD</b>	<b>2,500 USD</b>	<b>2,000 USD</b>	<b>IP</b>
Filleting equipment	Equipment for skinning and deboning 10 to 20 fish/minute	A greenhouse-style solar dryer 15 m x 8 m with capacity of 850 kg fish per batch	Patent granted