

Pond Liners to Save Water and Ease Maintenance

Preserving Water, Pond Liners for Sustainable Fish Farming.

Pond liners, made of materials like PVC or polyethylene, act as synthetic geomembranes, preserving water, enhancing biosecurity, and simplifying pond maintenance. They are adaptable to various pond sizes and shapes, with plastic liners being robust but slightly harder to install in smaller ponds.



Excavated pond with liner



Technology originally documented by

ProPAS

Commodities

Fish

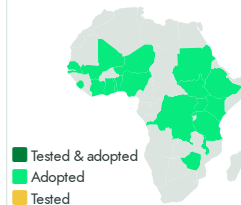
Sustainable Development Goals



Categories

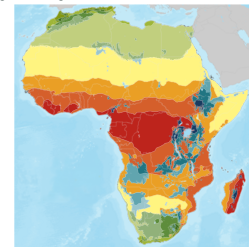
Production, Equipment, Water management

Tested/adopted in



Where it can be used

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



Target groups

Fish Farmers

This technology is **TAAT1 validated**.

8-9



Scaling readiness: idea maturity 8/9; level of use 9/9

Gender assessment

3

Climate impact

7

Problem

- Water seepage on porous soils like sands and silts causes significant water loss in ponds.
- Evaporation, especially in hot climates, further reduces water availability for fish farming.
- Algal blooms due to excessive nutrient levels can degrade water quality, affecting fish health and productivity.
- Inefficient nutrient cycling between water and sediment occurs without pond liners, necessitating intensive maintenance.
- Sandy soils and regions with limited access to freshwater are particularly vulnerable to water loss, worsening water scarcity for fish farmers.

Solution

- Prevents water loss and reduces evaporation by creating impermeable barriers.
- Enhances water quality by preventing algal blooms and promoting nutrient cycling.
- Facilitates pond construction in areas with porous soils or limited freshwater access.
- Offers flexibility in pond size and shape, accommodating different landscapes.
- Provides options for different liner materials, thicknesses, and installation techniques to suit diverse needs.

Cost: \$\$\$ **500 USD**

a 15m x 10m x 1m pond.

2 - 3.5 USD/square meter

Sheet plastic

ROI: \$\$\$ **50 %**

reduction in water-related costs



Open source / open access



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<https://e-catalogs.taatafrica.org/org/technologies/pond-liners-to-save-water-and-ease-maintenance>

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Enquiries techs@taat-africa.org