

Check dam: Runoff Water Harvesting

The sustainable solution for irrigating your crops and watering your livestock using rainwater collected on your farm.

Water harvesting infrastructure is a practical solution for water scarcity in dry and irregular rainfall regions. It uses structures like farm ponds, check dams, and small reservoirs to capture and store water from streams and surface runoff. These systems range from small natural depressions and dug-outs to large embankment dams, providing flexible options for storing water. By collecting water that would otherwise be lost, this method ensures reliable water supply for agriculture and improves soil moisture, helping crops grow better.



International Water Management Institute
Adebayo Oke

Commodities

Vegetable crop, Rice, Maize, nursery

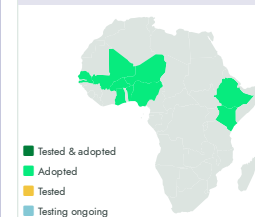
Sustainable Development Goals



Categories

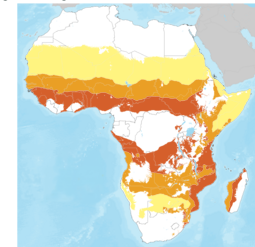
Pre-production, Practices

Tested/adopted in



Where it can be used

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



Target groups

Farmers, Governments, Fish Farmers, Cooperatives and Agribusinesses

 This technology is **not yet validated**.



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

Inclusion assessment



Climate impact



Problem

- **Water Scarcity:** In dry areas, farmers struggle with limited water for irrigation and livestock, causing crop losses and declining groundwater.
- **Water Waste:** Rainfall and runoff are often lost, increasing soil erosion and reducing water availability.
- **High Costs:** Traditional irrigation systems are often too expensive for small farmers. Need for Conservation: Affordable water harvesting structures like ponds and dams are essential to capture and store water for sustainable farming.

Solution

- Farmers, especially in drylands, face limited water availability for irrigation and livestock.
- Water harvesting structures (ponds, dams, reservoirs) capture and store runoff and streamwater, preventing its loss.
- These flexible and cost-effective systems increase irrigation, livestock watering, groundwater recharge, and erosion control, thereby strengthening climate resilience and agricultural sustainability.

Key points to design your project

Runoff Water Harvesting supports sustainable agriculture and several Sustainable Development Goals by improving productivity, water management, and land health. To integrate it into a project, follow these key steps:

1. Raise awareness and train farmers and extension agents on benefits and construction techniques suited to local conditions.
2. Select optimal sites based on topography, soil, and rainfall, and mobilize necessary tools, materials, and skilled labor.
3. Construct appropriately sized ponds or dams for efficient water storage.
4. Monitor, maintain structures regularly, manage sediment, and involve the community to ensure sustainable management and ownership.

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Check dam

<https://taat.africa/zpy>

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