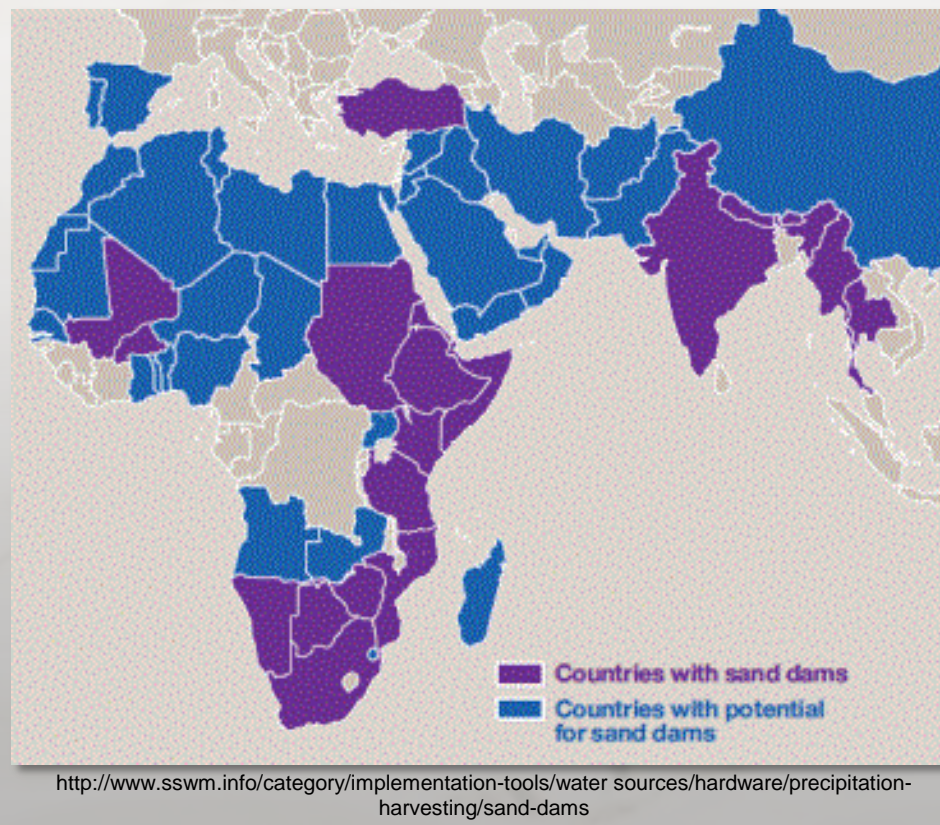


# The Best Dam Solution in Mali

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## Project Goals



Use sand dams to provide water to communities with suitable geographical conditions.

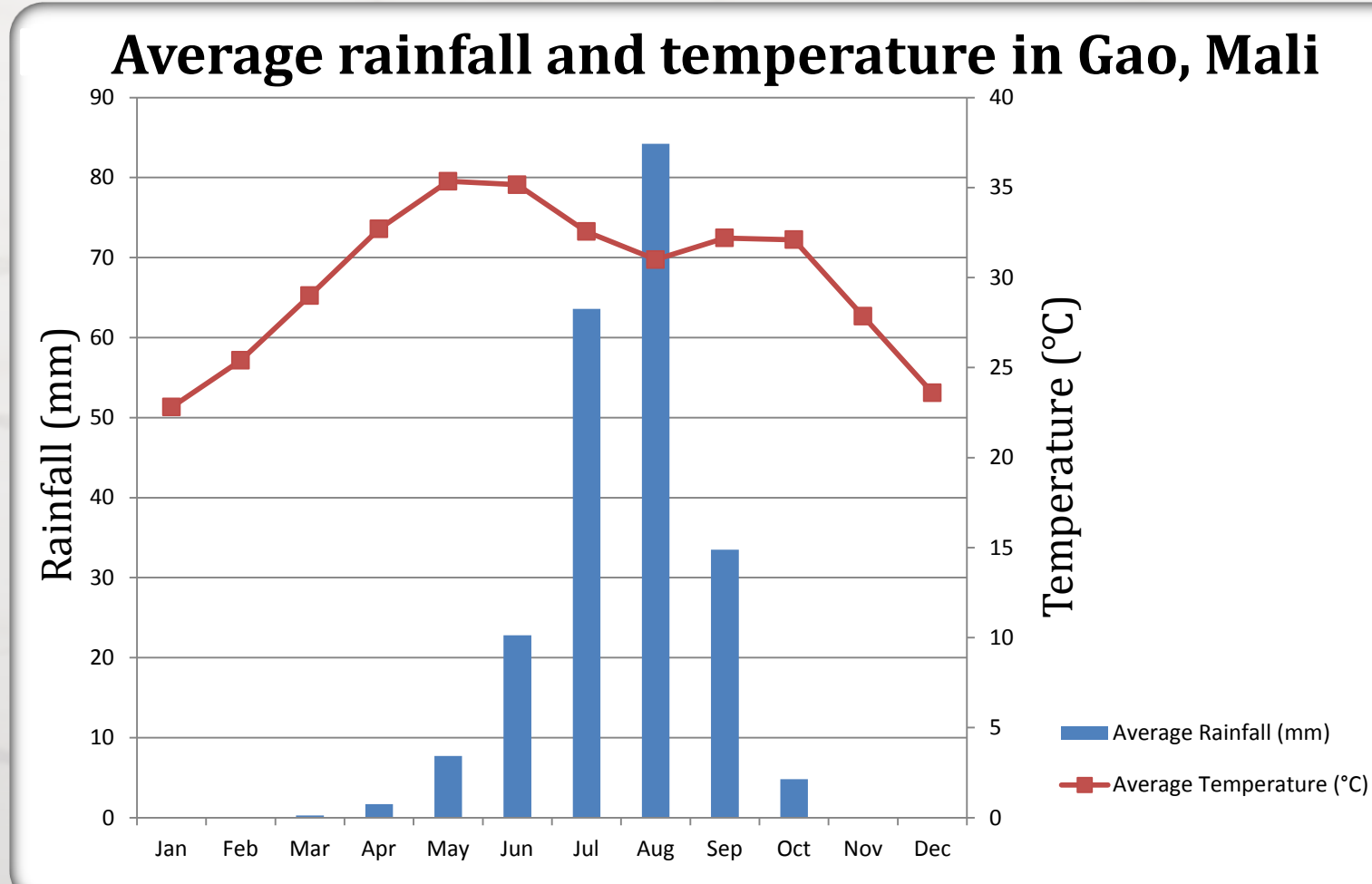
Introduction of sand dam creates clean local source of water.

Water can be used to grow food by the people near the sand dam.

## Need

### Climate

- Borders on Sahelian and Saharan Zones
- Yearly rainfall: 200-350 mm
- Rainy season: June – Sept.



### Consequences of Climate

Maliens walk up to 10 km to reach water, and up to 20 km in a drought.

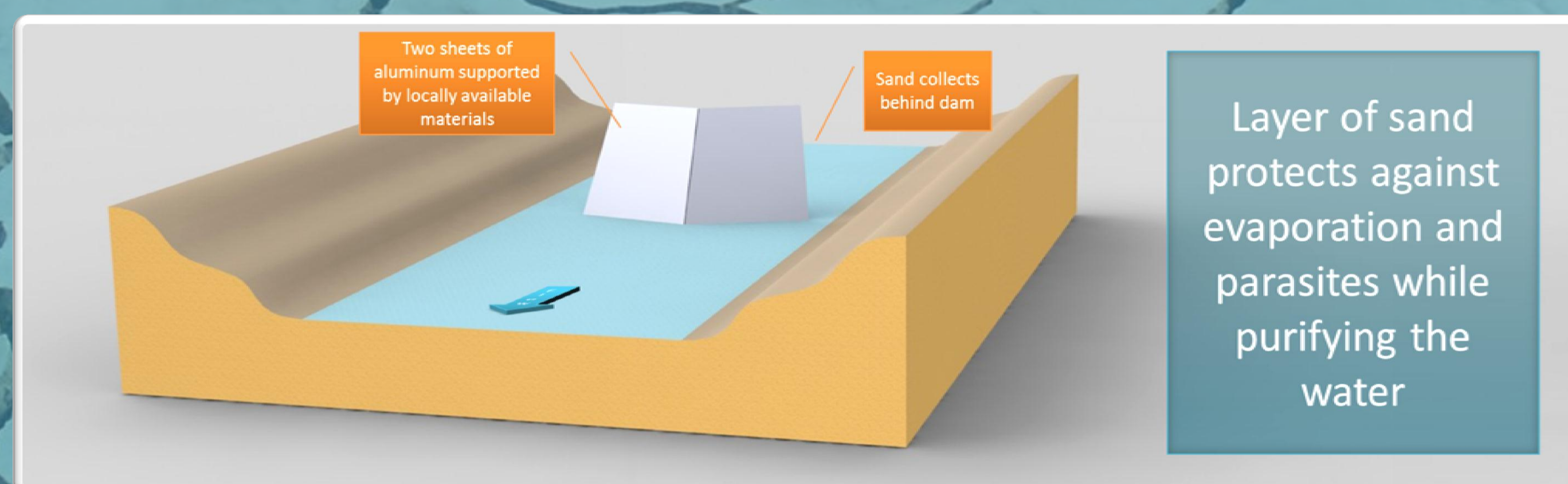
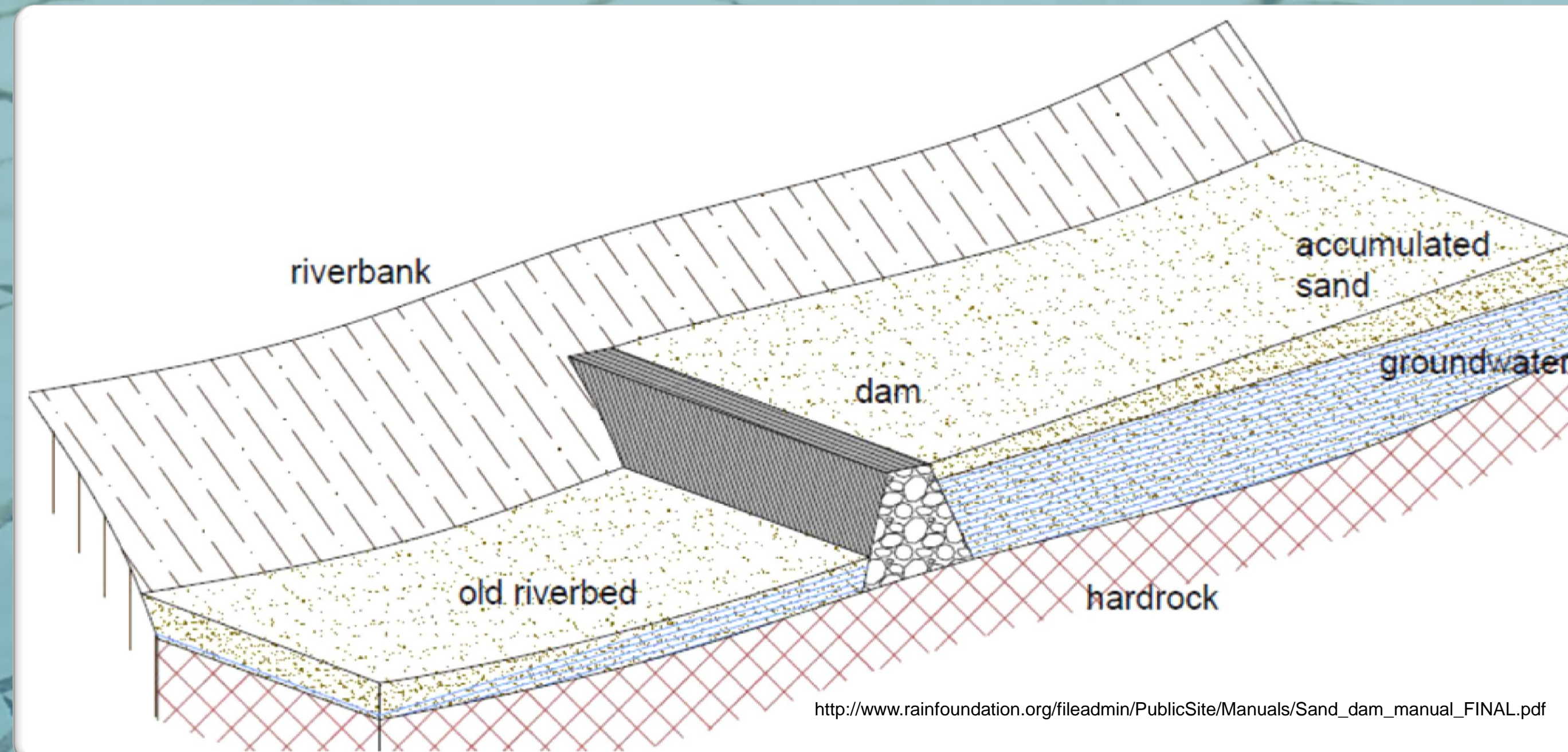
Typical water sources are wells, pumps, and dry riverbeds.

Time spent walking to gather water leaves no time to cook or grow food.



## How It Works

- Sand dams are built on bedrock
- Water runs down river and brings sand, which accumulates behind the dam
- The sand stores and purifies over 3 million liters of water
- When the dam is full to capacity, water passes over and around



## Costs

- Materials are available within Gao
  - Minimal importation
- Most labor provided by community
  - Community grows closer

## Construction

- Supporting materials are available in Gao
  - Rocks, clay, wood
- Skeleton constructed of two sheets of metal
- Optimized for wider rivers



## How This Improves The Community



Sand dams have been shown to:

- inspire community gardens
- increase attendance in schools
- increase sense of community
- improve general quality of life



## Results / Outcomes

Sand dam provides nearby, clean water

More time to grow, appearance of community-owned gardens

Higher crop yield

Fewer hungry people, higher education, and regional stability

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