

A photograph of a solar-powered water supply system in an emergency setting. The system consists of a large array of solar panels mounted on a metal frame. A white water tank is mounted on a wooden stand to the left of the solar panels. A blue tarp covers a large, cylindrical water storage tank in the foreground. The background shows a cloudy sky and some buildings in the distance.

Solar Powered Water Supply Systems in Emergencies



IOM WASH

IOM provides Water, Sanitation and Hygiene (WASH) services to crisis affected populations, namely migrants and the displaced, as part of its mandate to respond to the mobility dimensions of crises.



IOM WASH in 2020

45

Countries of operations

10.7 M

Estimated total individuals assisted

111.4 M

Total funding



758 K
individuals assisted with access to latrines



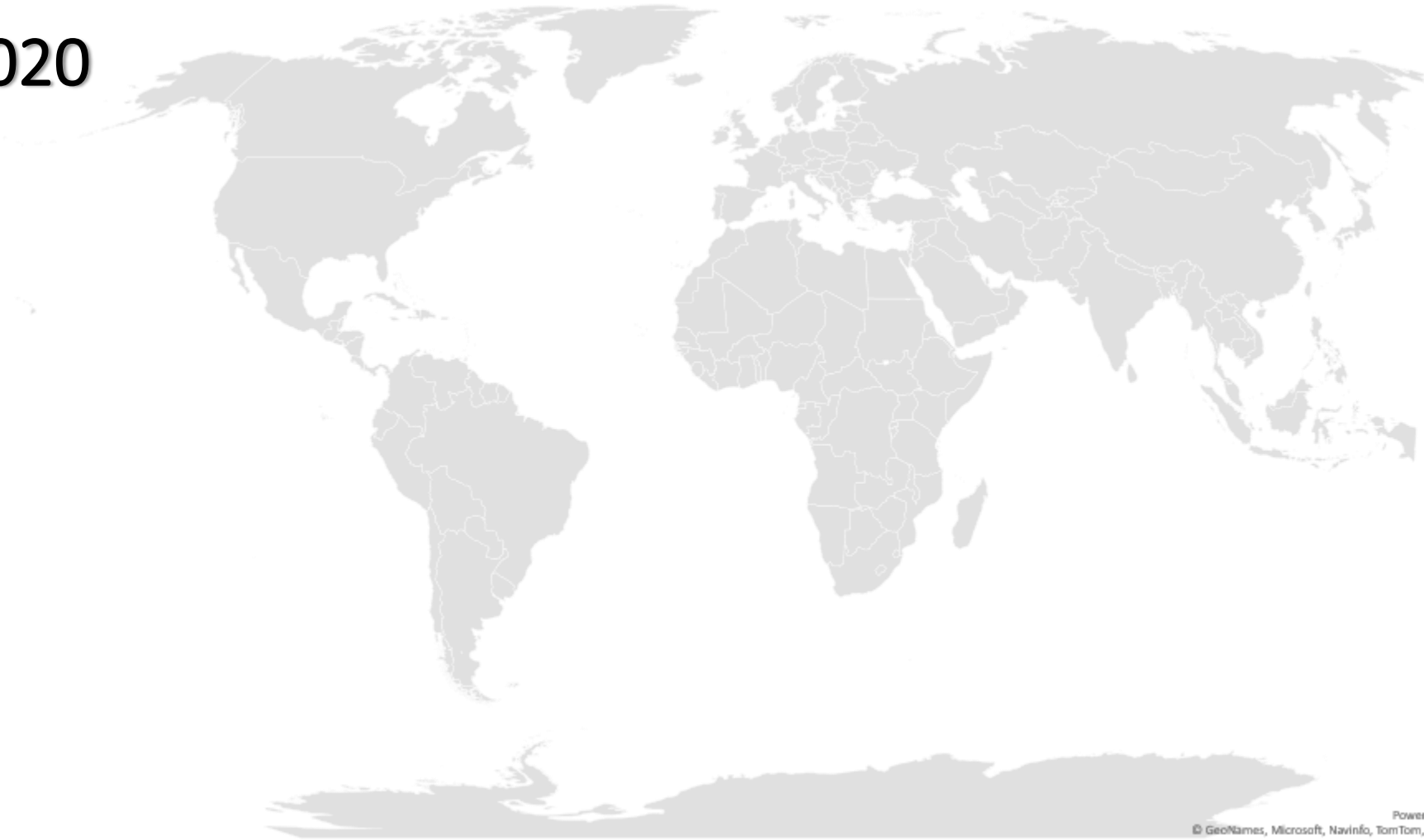
3.5 M
Individuals assisted with safe water



7 M
individuals served with hygiene promotion



3.4 M
Individuals served with sanitation services



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WHY SOLAR?

IOM promotes the use of solar and other renewable energy where possible in its WASH operations from the outset of emergencies, to minimize the impact emergencies have on the environment, to ensure a reliable water supply and low operating cost, and to encourage sustainable energy access.

Cox's Bazar, Bangladesh, Solar Powered Community Water Supply System in Camp 12



COUNTRY OVERVIEW

1955- 1972: First South Sudanese War

1985-2005: Second Sudanese War

2011: Independent country

2013 (Dec): Renewed conflict.

2018: Revitalized Agreement for the Resolution of the Conflict

People on the move:

Over 1.6 M IDPs.

315.000 Refugees.

374K IDPs in displacement camps

1.24 M in host communities.

WASH facts:

41% don't have access to safe water.

Only 11% access to improved sanitation.

5.9 M people in need of basic WASH services.

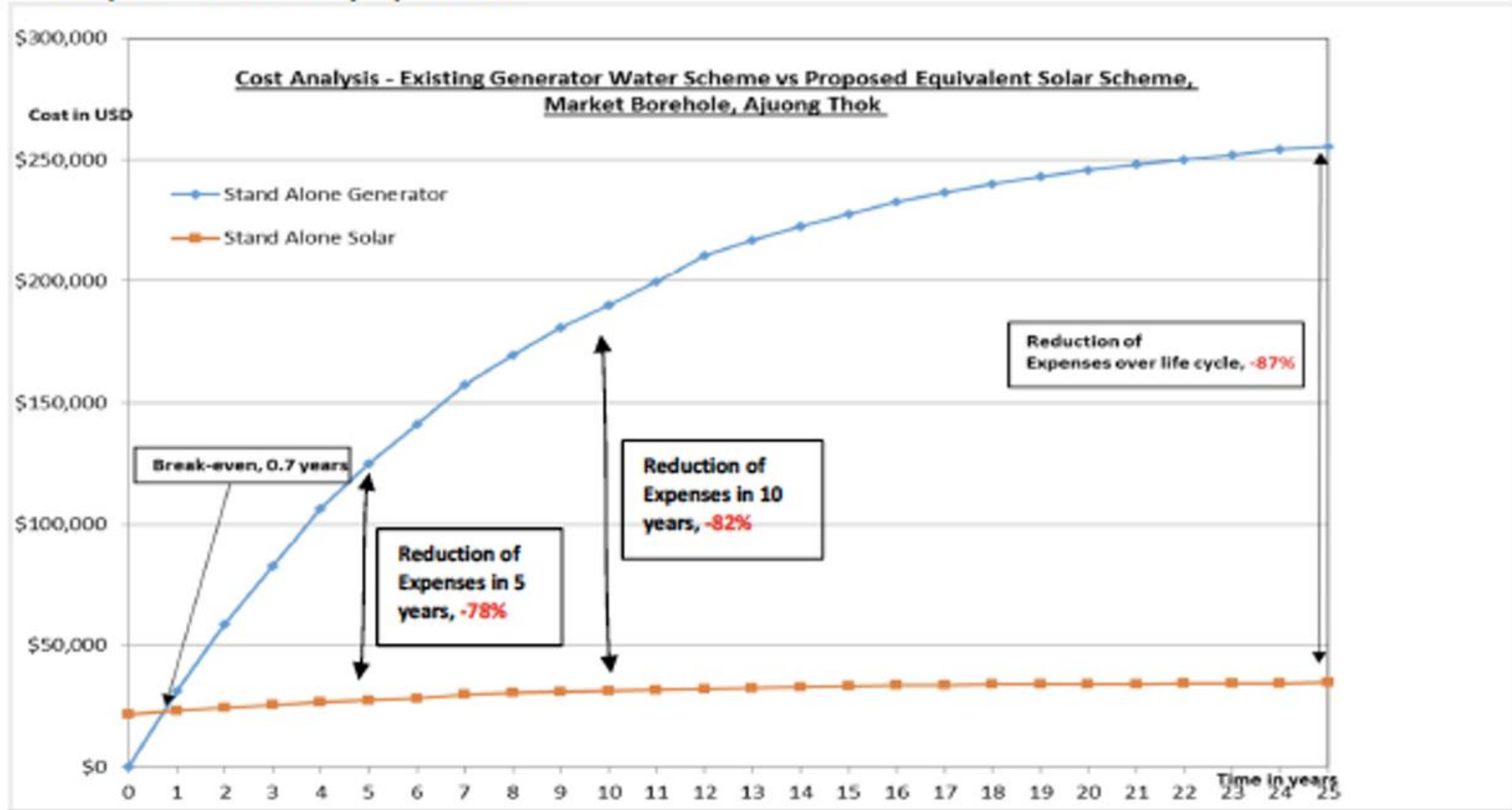
Example: Implementing solar powered water systems in South Sudan



Reasons for adopting solar powered water systems in South Sudan

- Solar energy potential
- Risk reduction of interruptions in water supply
- Reducing operational costs
- Return of investment

Figure 1: Example of 1 economic analysis performed.



Reasons for adopting solar powered water systems in South Sudan

- Solar energy potential
- Risk reduction of interruptions in water supply
- Reducing operational costs
- Return of investment
- Environmental sustainability



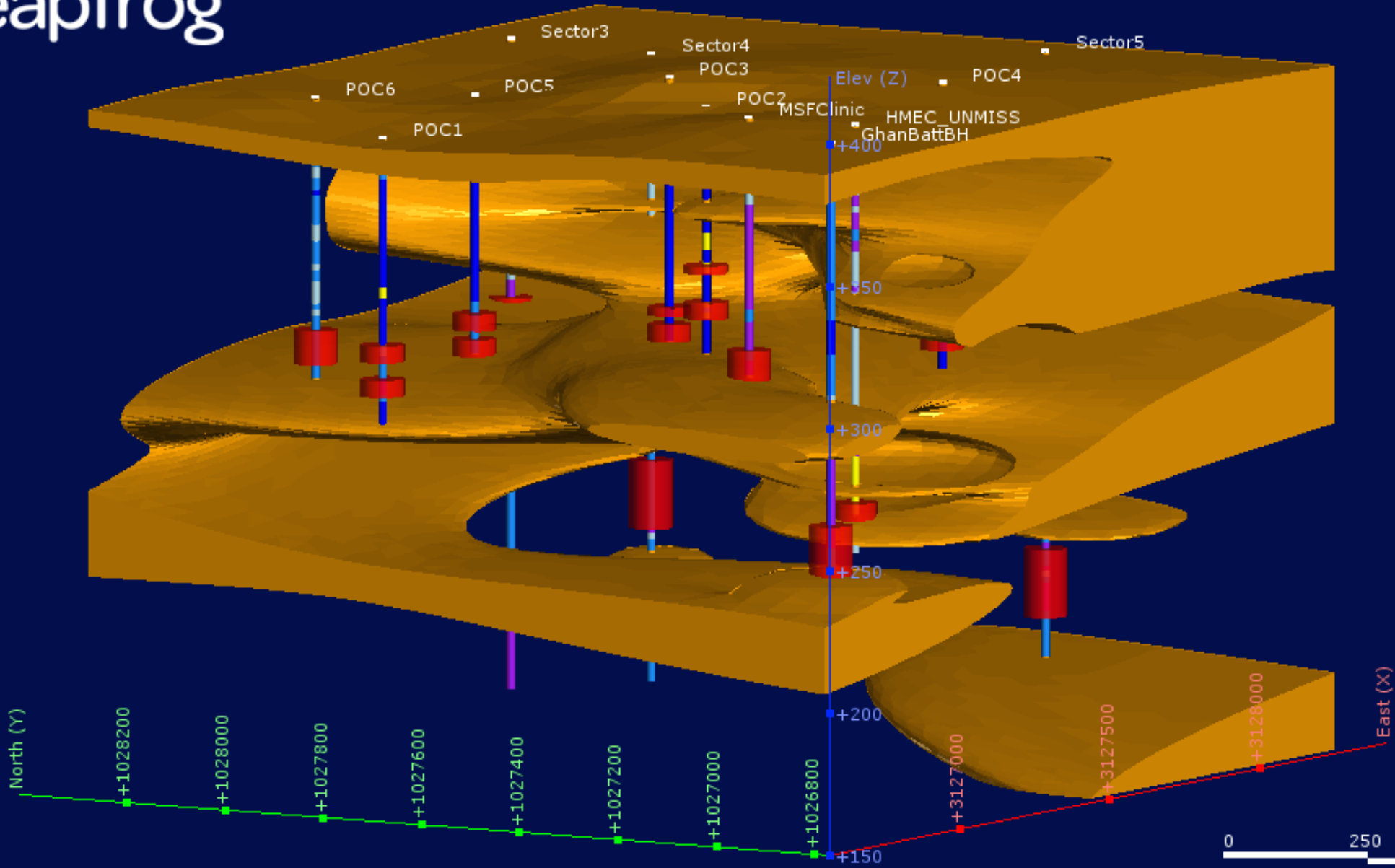
Barriers to implement solar powered systems in South Sudan

- In-house technical knowledge
- Emergency funding schemes
- Lack of knowledge of the groundwater resource and its potential
- Lack of capacity of the local private sector
- Prejudices and misconceptions

Disentangling the problem

- Training – Internal capacity building
- Establishing groundwater monitoring programmes





Plunge +07
Azimuth 059



Disentangling the problem

- Training – Internal capacity building
- Establishing groundwater monitoring programmes
- Meaningful collaboration and reciprocal learning with the local private sector
- Increasing the awareness on solar energy

Operationalizing the systems

- Cleaning of solar panels is also important
- Empowering ownership
- Governance
- Real time monitoring

Final remarks

- Hybrid systems:
At the onset of
displacement
situations.
- Enhancing
monitoring
- Capacity
development at
all levels

A close-up photograph of a person's hand operating a manual water pump. The hand is dark-skinned and has a blue bracelet. The pump handle is a long metal rod. Water is flowing from the spout into several yellow plastic jerrycans. The background is slightly blurred, showing other people and structures, suggesting a community water point in a rural or developing area.

Thank you!