Enabel

Because Health - Conference

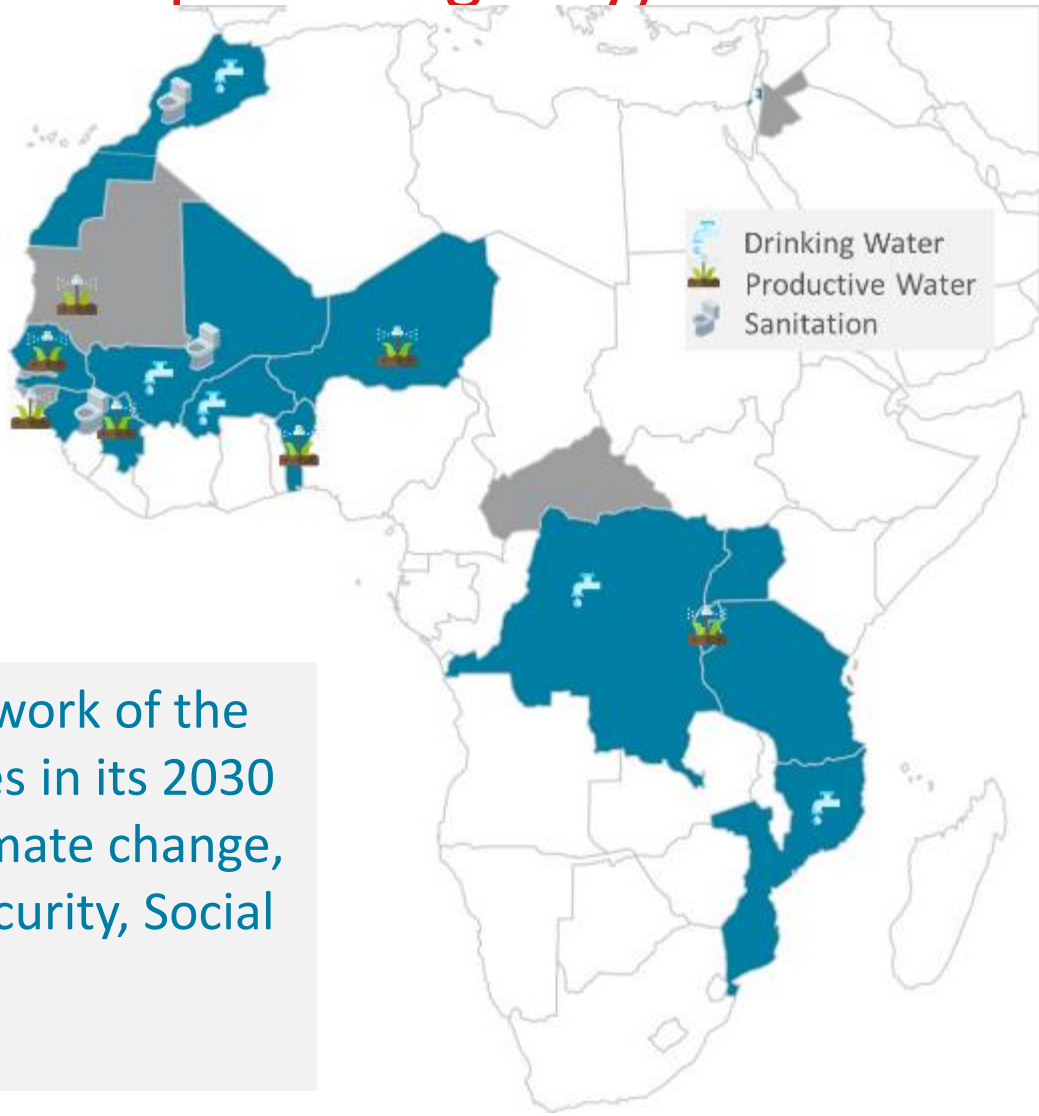
"Climate change and improving access to drinking water and population health: the case of Mozambique"

Akila Munir

Enabel (Belgian Development Agency)

1 implements and coordinates Belgium's international development policy and works mainly for the Belgian State

2 has missions within the framework of the SDG Agenda and 5 global issues in its 2030 Strategy (Environment and climate change, Human mobility, Peace and security, Social and economic inequalities and Urbanization)



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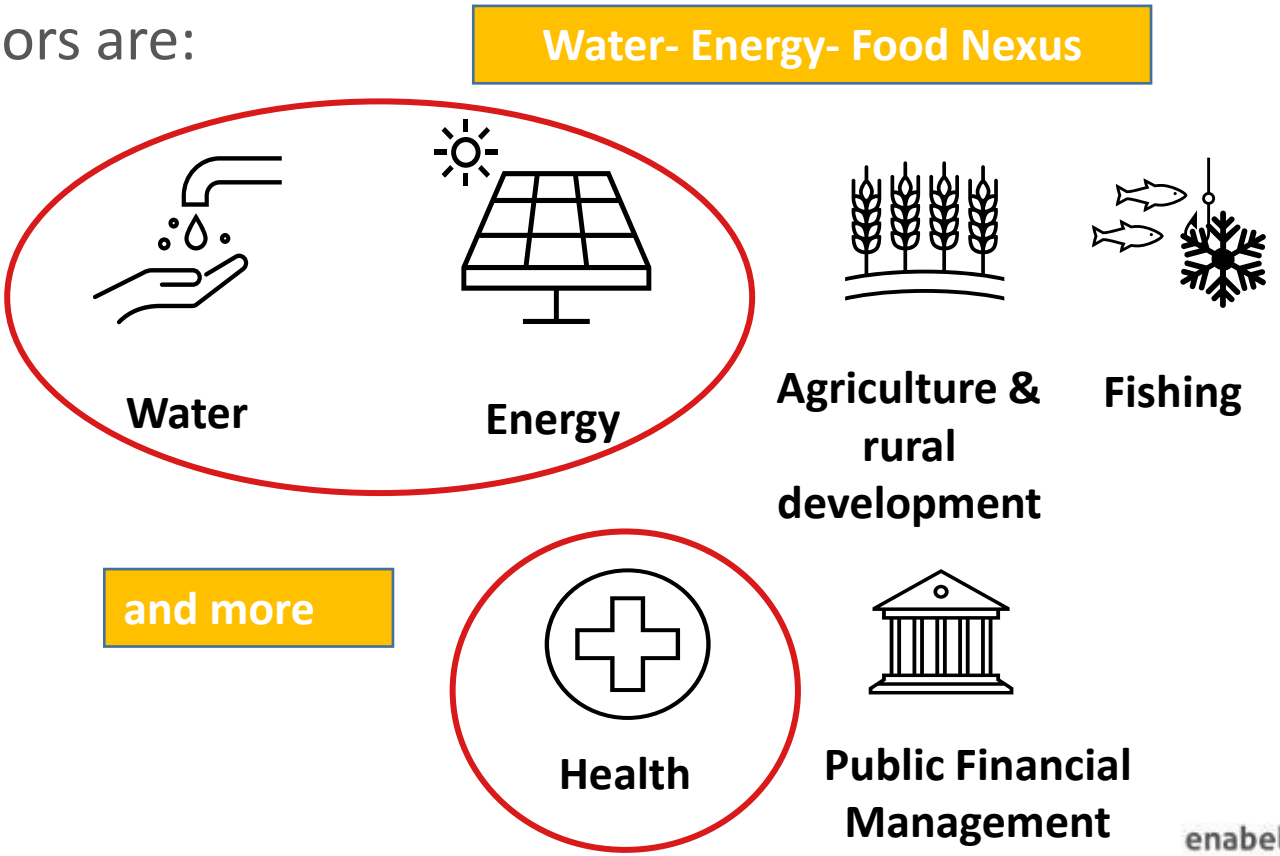
Belgium and Mozambique

- Partner countries since 1999
- Enabel is active in 6 of the country's 11 provinces
- The key sectors are:



The project in Mozambique – A brief analysis of the situation

Climate Change
One of the most vulnerable countries to climate change of the African continent

Environment
Geological context with strong mineral content in the aquifers

Structural
Technical , financial and management weaknesses

Severe droughts and catastrophic flooding have become recurrent

Rising sea levels lead to marine intrusion whereby saline water seeps into water basins

Numerous brackish water aquifers in the project area

Local management (Water Committee)

Inadequate selling price of water

Installation of hand pumps

Few transfer management to private operators

Low share of revenue allocated to repairs

Market access (spare parts and repairs)

Limited infrastructure life

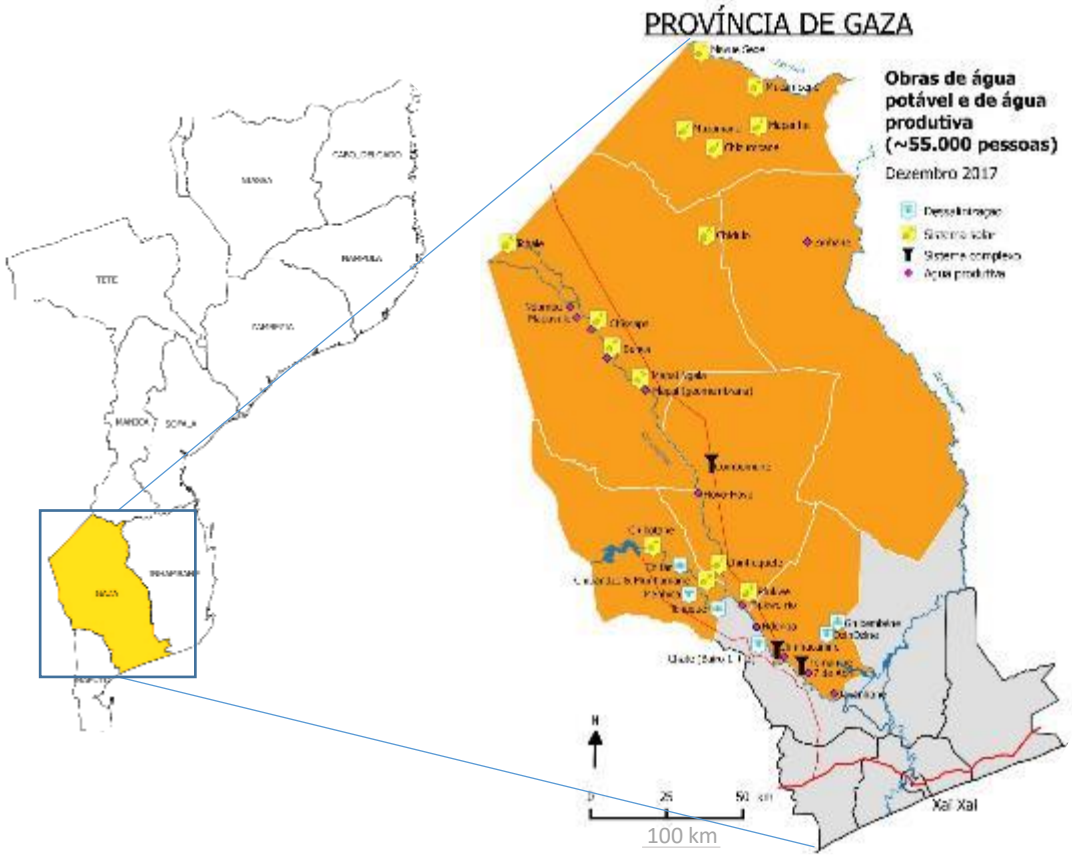
Water is unfit for human consumption

Deterioration and/or abandonment of equipment and infrastructure

Reduced access to drinking water and serious concomitant health problems

No alternative but to drink salt water or to migrate and settle in the shallows, near rivers, prone to flooding

Installation of desalination unit part of Gaza Water Supply Project



- Objective: To improve access to and control of water supply in a sustainable manner for the rural and isolated population in districts of northern Gaza province
- Duration: 2013-2019
- Budget : 600.000 €
- Partners: MOPH (Ministry of Public Works and Housing) and DNAAS (National Directorate of Water Supply and Sanitation)

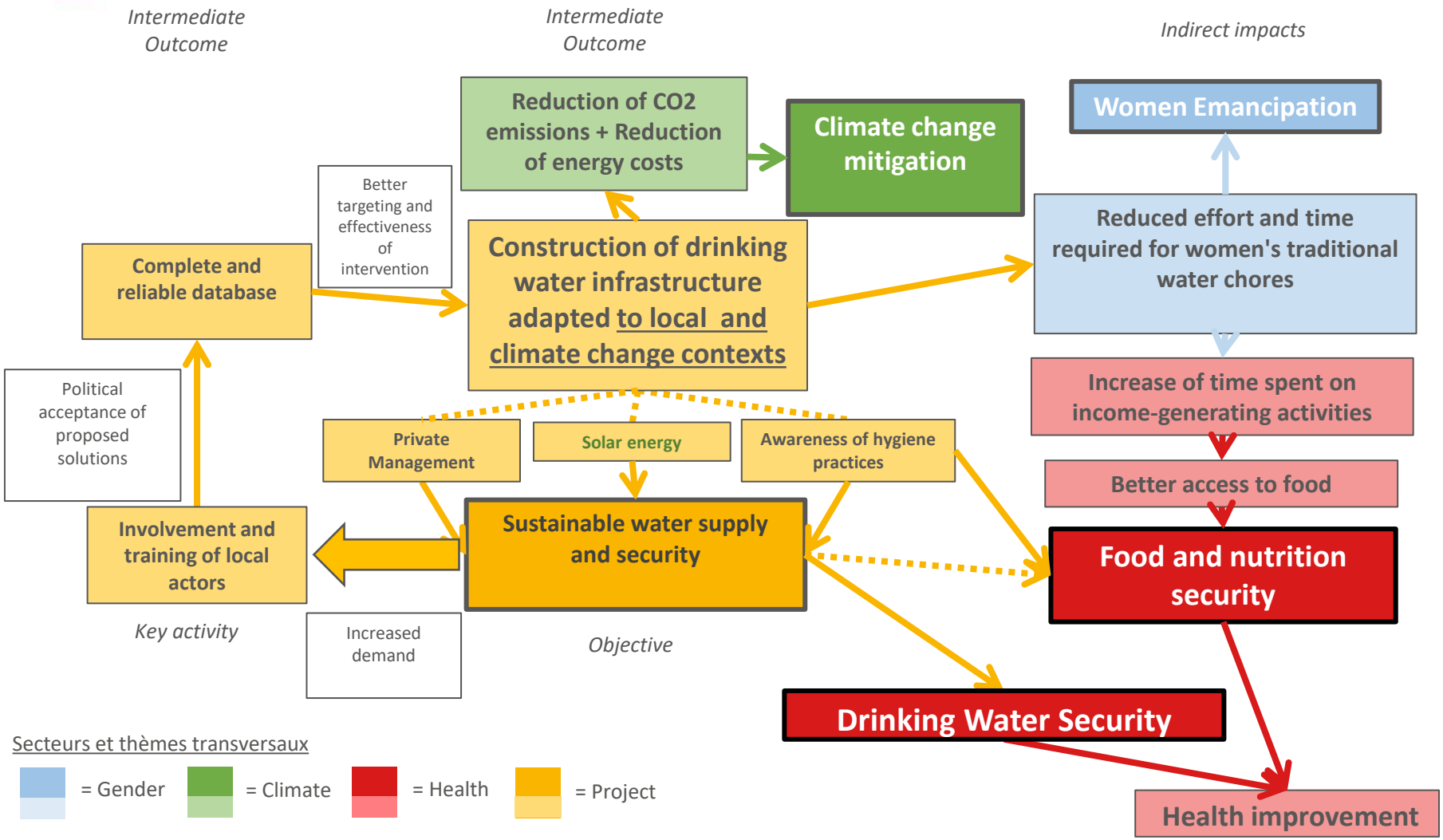
Water Supply Gaza - Essential Facts

1. Introduction of an **innovative technology** of low-cost desalination, so far rarely used in Mozambique
2. **Climate responsive** designed projects, leading to improved access to drinkable water
3. **8,700 inhabitants** have access to water with an acceptable conductivity level (salinity)
4. **6 water desalination units** using solar energy and operating without batteries, with a water selling price identical to that which prevailed before the project
5. **Safe brine disposal** and involvement of local private sector for the O&M of the desalination technology
6. Drinking water supply network carrying water to homes at a reduced cost
7. Availability of regularly updated database on water supply systems in Gaza Province
8. DAS1 and SDPI[2] technicians have been trained in digital data collection
9. Women and girls responsible for fetching water now have more time to study or engage in an **income-generating activity that contributes to food security.**
10. Greater availability of drinking water (better quality) with a **positive impact on the hygiene and health conditions of the beneficiaries** (hypertension and miscarriage among pregnant women, skin diseases, acute respiratory infection, and diarrheal diseases).

[1] DAS= Département Eau et Assainissement
[2] SDPI= Service du District de Planification et Infrastructure



Direct and indirect effects



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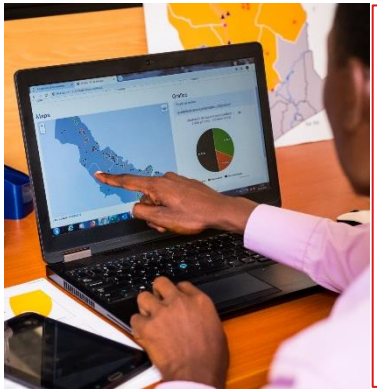
Innovation and training



Digitalization for decision-making:

-> Creation of a water database (Akvo) as a monitoring tool for regional authorities, training and mobile equipment to test water quality

Innovative technical elements in response to natural context and CC:

-> Supply and installation of **autonomous desalination units** operating on solar panels and without batteries

-> Improving access to water in **areas prone to host climate refugees**

A choice of technologies and appropriate approaches to **improve the management** and **sustainability of water** service and its adaptability to **climate change**

An advantage for day-to-day management and support for faster recovery post climate disasters

Lessons Learned

- **Flexibility** to redefine the desired changes and to adjust the activities to the reality of climate change
- **Ownership:** Communities' involvement to ensure appropriation and part of local management
- Consideration of **technologies** adapted to local context as an engine of **transition**
- **Sustainability:** training and involvement of local actors in all phases, reliable **database**, digitalization to allow **remote monitoring** and consideration to **private sector participation** to ensure the O&M
- Constant evaluation of the options available given rapid technical developments in the water sector
- Improvement of **population health** is **a highly valuable** indirect impact.

From *pilot project* to *politics*

In the *National Climate Change Adaptation and Mitigation Strategy of* Mozambique (NCCAMS):

- Water resources are identified as *particularly vulnerable and of priority* importance
- Desalination process is explicitly mentioned as a *technology to be developed* to face the challenge of water resource scarcity

Conclusions

- Climate change is happening now and water is *part of the solution* while being under risk :
  - Decrease *in rainfall*, increase *in temperature* and acceleration of *saline intrusion*
  - → *Impact* on water availability, food security, health and economic growth
- *New Climate responsive technology*
  - → part of the *preventive measure* to ensure water security
- *Database* and *in-depth knowledge and monitoring*
  - → help faster reaction and *decision-making process* increase the *community's resilience*.

Financing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