

CLIMATE CHANGE ADAPTATION TECHNOLOGIES – WATER MANAGEMENT SECTOR

TRADE AND ENVIRONMENTAL SUSTAINABILITY
STRUCTURED DISCUSSIONS (TESSD)
INFORMAL WORKING GROUP MEETINGS

- *Dr Lindy Charlery*
- *Advisor - UNEP-CCC*



Outline of presentation

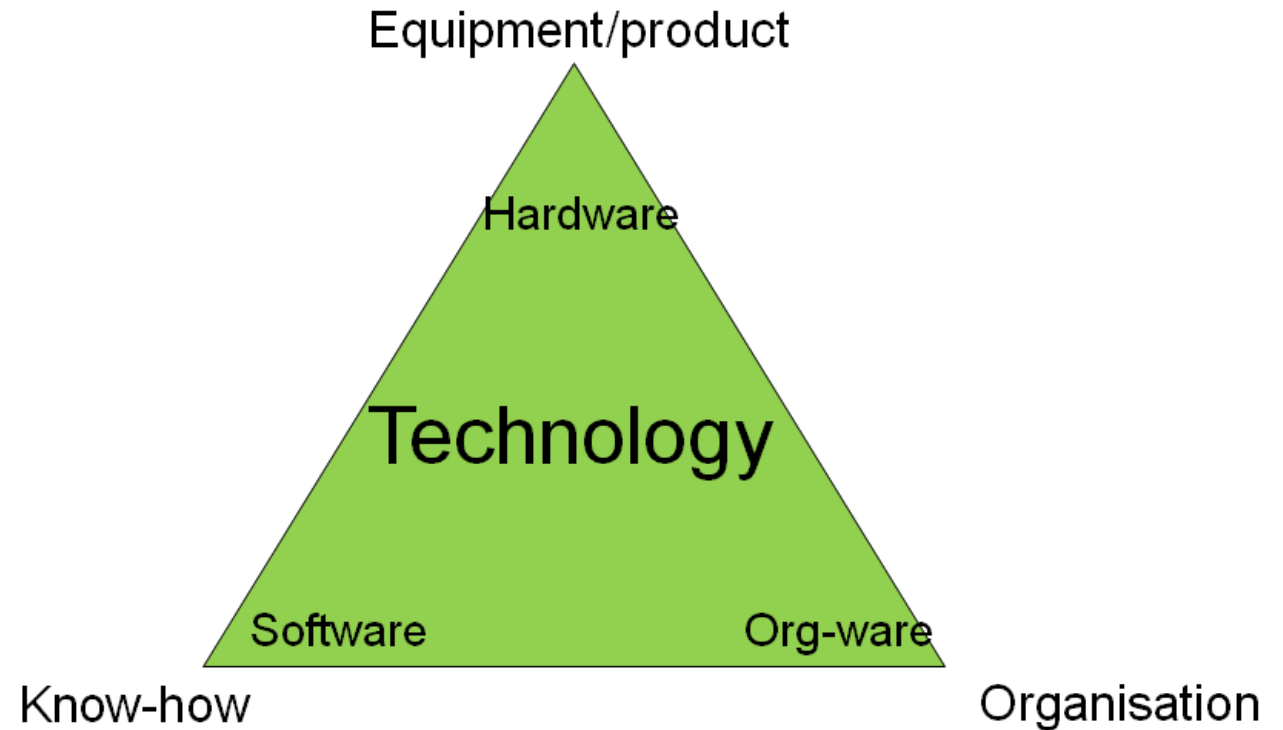
- Broad Overview
 - The TNA Project
 - What are technologies?
- Climate Change Adaptation What and Why
- The water Sector – Prioritised adaptation technologies
 - The technology cycle
- Barriers, challenges and bottlenecks
 - Example from the ground:
 - St. Kitts and Nevis

Technology Needs Assessment project

- TNAs are a set of activities that **identify and analyse mitigation and adaptation technology priorities** of developing countries, culminating in identifying **pathways for the diffusion of these technologies** in the respective countries.
- **country driven, implemented by national TNA teams**
- **align with national development objectives**
- **explore synergies with other national processes, striving towards implementation of NDCs**

What are technologies?

- *Hardware:*
 - tangible components (equipment, machinery, products)
- *Software:*
 - know-how (skills, experience, manuals, practices)
- *Orgware:*
 - the institutional framework (organisation, management)



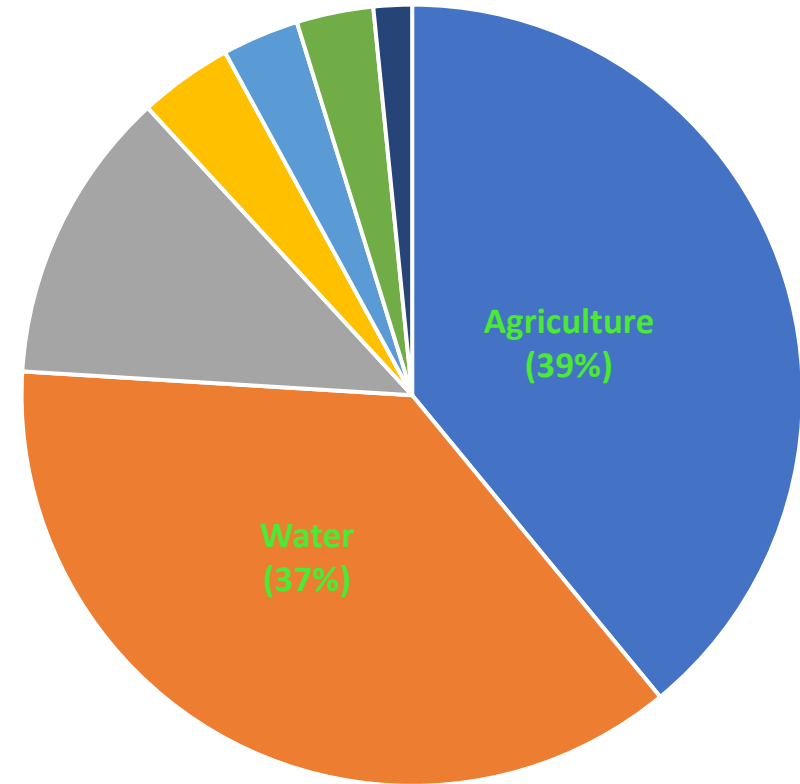
Climate Change Adaptation – What and Why?

- *Altering our behavior (way of life) and systems to protect human society from the impacts of climate change.*
- *All sectors can be affected, directly or indirectly*
- *Adaptation involve building resilience, especially in the most vulnerable sectors*
 - *Withstand the effects of climate change*
- *Key sector for climate change adaptation*
 - *Highly climate-sensitive*

Climate Change Adaptation – Technologies.

- *Technologies play a crucial role in helping human societies adapt to the impacts of climate change.*
- *Two critical sectors emerge from the results of technology prioritisation under the TNA project:*
 - *Agriculture sector*
 - *Water sector*

Sector distribution of adaptation technologies



■ Agriculture ■ Water ■ Coastal zone ■ LULUCF & Forestry ■ Disaster risk management ■ Other ■ Public Health

Source: TNA project. <https://tech-action.unepccc.org/>

The Water Sector – Prioritised technologies

- *Most prioritised technologies include:*
 - *Irrigation systems: including solar pumps, efficient drip irrigation systems, etc.*
 - *Water storage technologies: more efficient above and below ground storage tanks, e.g. “bladder tanks”*
 - *Water harvesting technologies: Rooftop rainwater harvesting*
 - *Water management technologies: smart metering, leakage detection and repair technologies, pressure management technologies...*

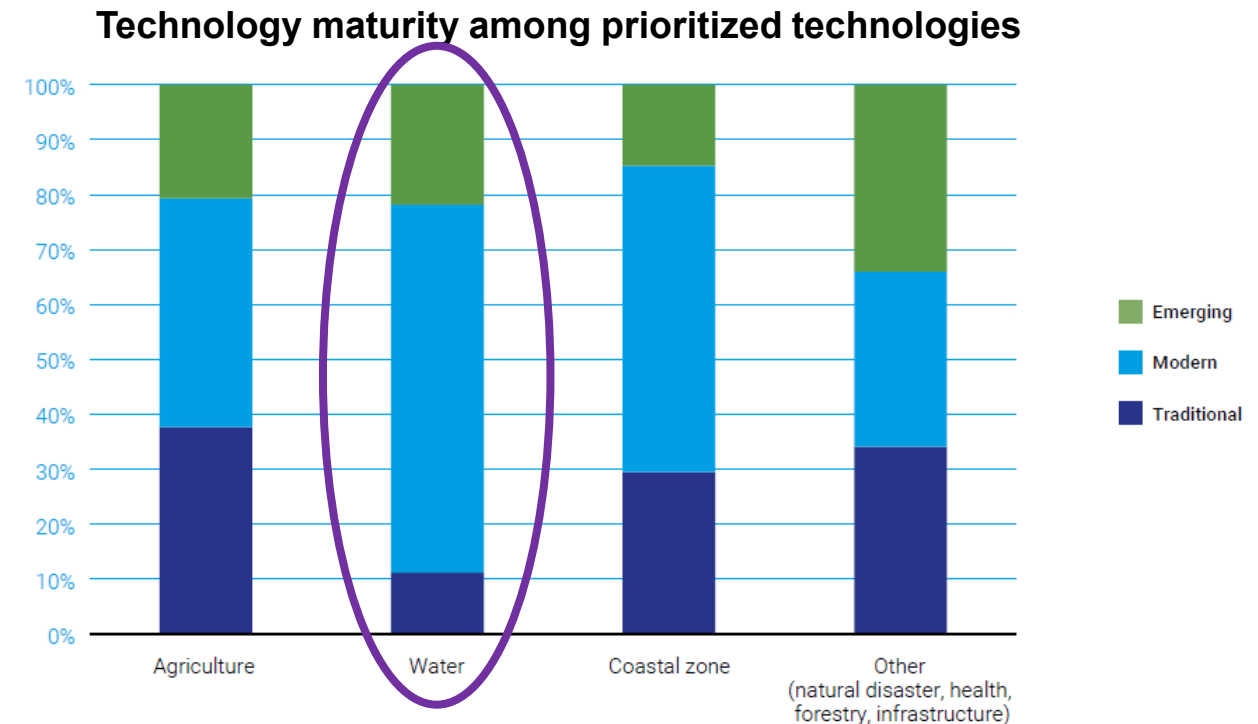


The technology cycle - Prioritized adaptation technologies.

Emerging technologies: characterized by more recent scientific advances - often still under development

Modern technologies: are at a stage of the technology cycle where they are still achieving competitiveness. These technologies have been commercialized and are widely, though not universally, available.

Traditional Technologies: characterized as mature. Commonalities to technologies that are categorized as traditional are that they are generally low -cost and accessible to most countries



Source: TNA project. <https://tech-action.unepccc.org/>

Barriers, challenges and bottlenecks

Close to 80% of prioritised water sector related technologies are modern or traditional

Barriers to greater diffusion of these technologies include:



Barriers, challenges and bottlenecks

These are primarily related to factors such as:

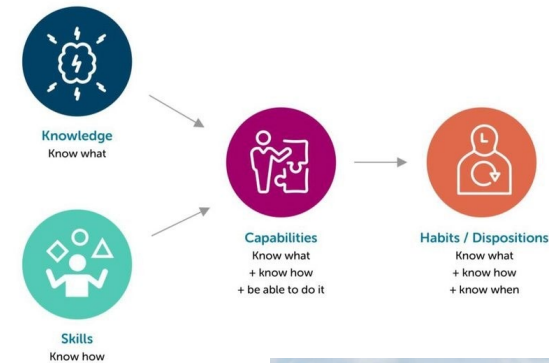
➤ **Costs,**



➤ **absence of local producers or suppliers**



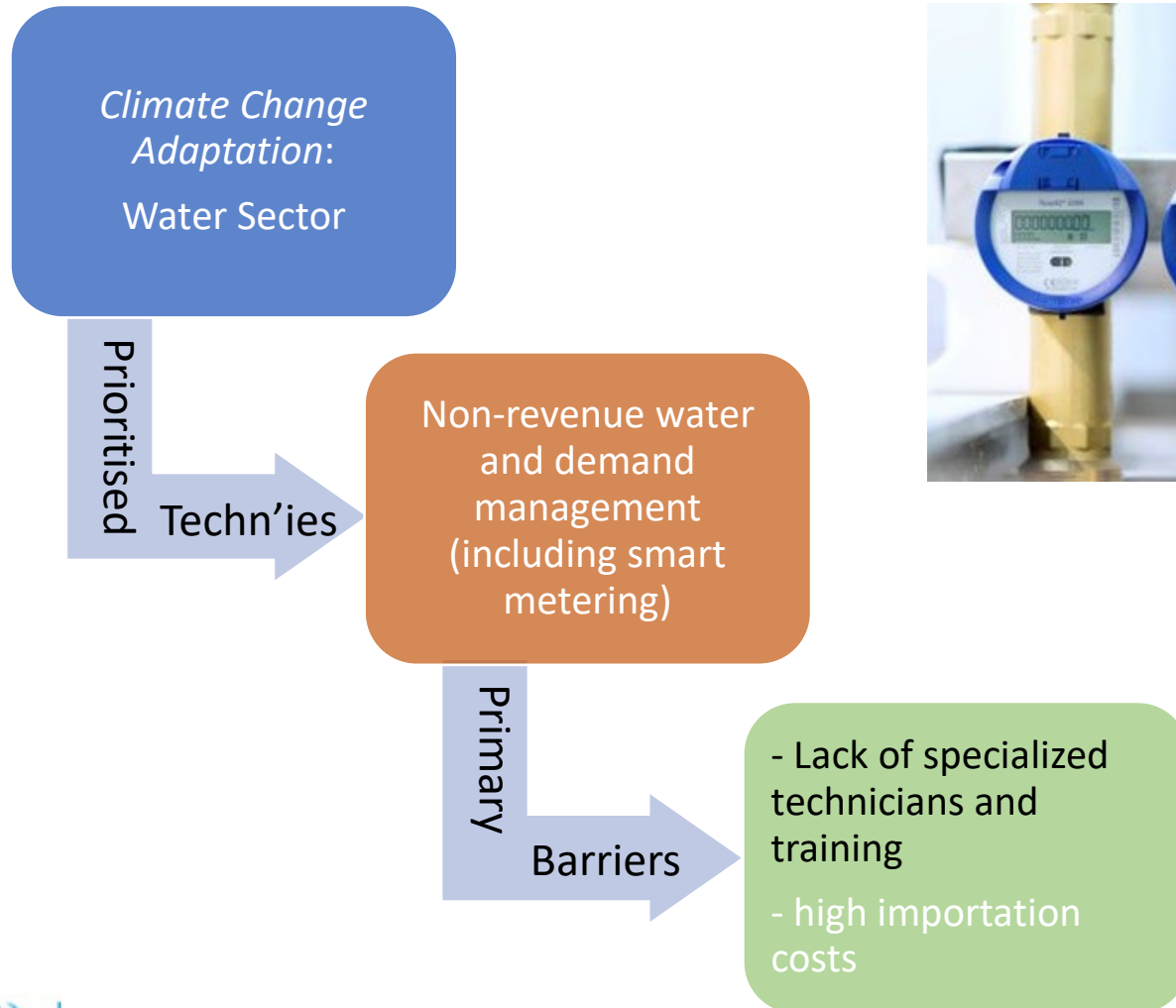
➤ **skill/know-how** for the installation, repair and maintenance.



➤ **trade related barriers** (high transportation costs and import taxes)



Case of St. Kitts and Nevis



- Capacity building and greater access to professional development
 - Short-term onboarding of consultants or experts to manage the implementation
 - Knowledge sharing and partnerships with other utilities.
-
- ❖ Regional collaborations to import in bulk, to reduce shipment costs.
 - ❖ Reduction of importation costs.
 - ❖ Partnerships between suppliers and water utilities in the region.

Thank you!

Lindy Charlery
lindy.charlery@un.org

Source: Global TNA Project <https://tech-action.unepccc.org/>