AN INTRODUCTION TO THE SWIM PROGRAMME

SWIM MEDIA INFORMATION WORKSHOP – 14 May, Beirut - LEBANON

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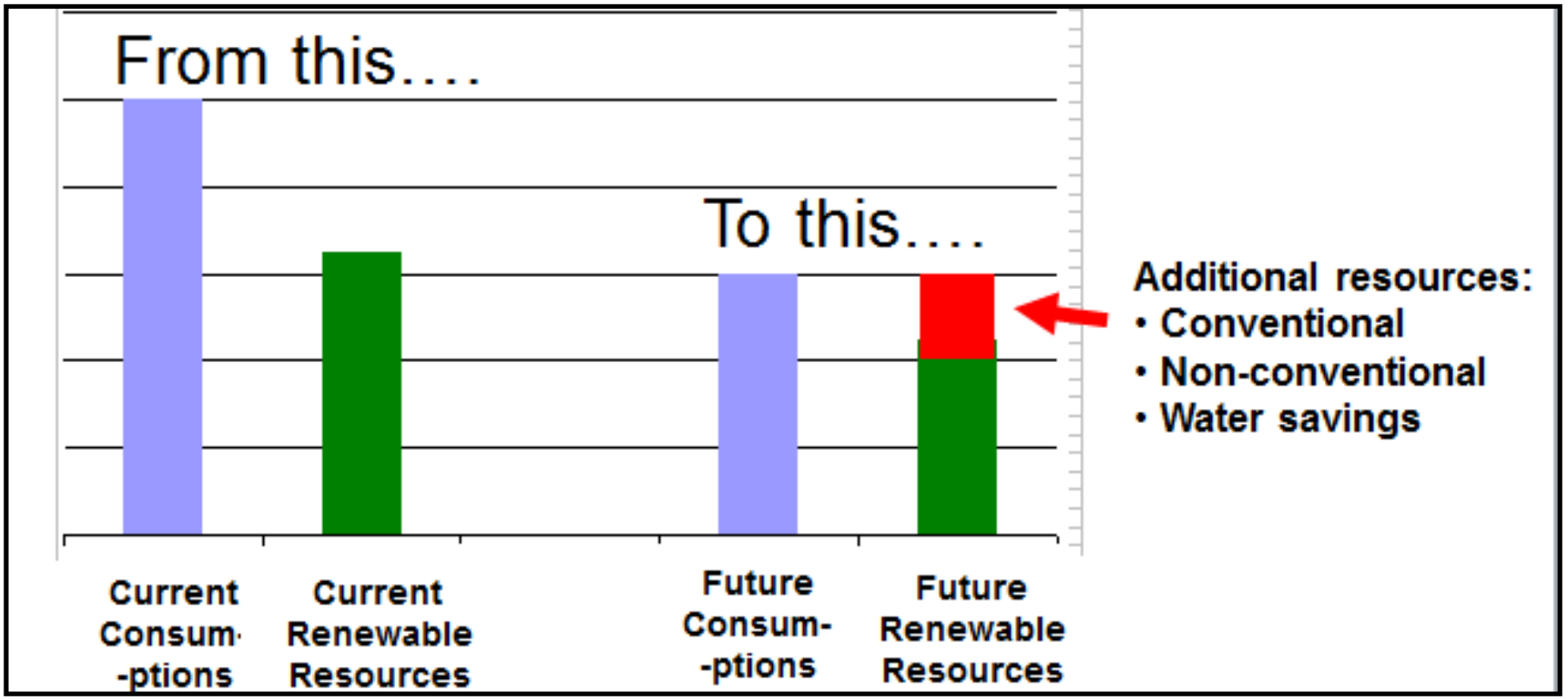
Water situation in the Southern Mediterranean Region: a Recap

- Renewable water resources withdrawals are the highest in the world;
- Per capita consumption is the lowest in the word;
- Most of water withdrawals are in agriculture, ranging from 70-90% and are among the highest in the world;
- Cost of degradation due to water pollution is high (0.6-1.2% of GDP) and along the coastline is even higher (from 7-8% of GDP in Algeria and Egypt to 2-4% in Morocco and Tunisia).

→ **Is this Sustainable?**

The most plausible solutions...

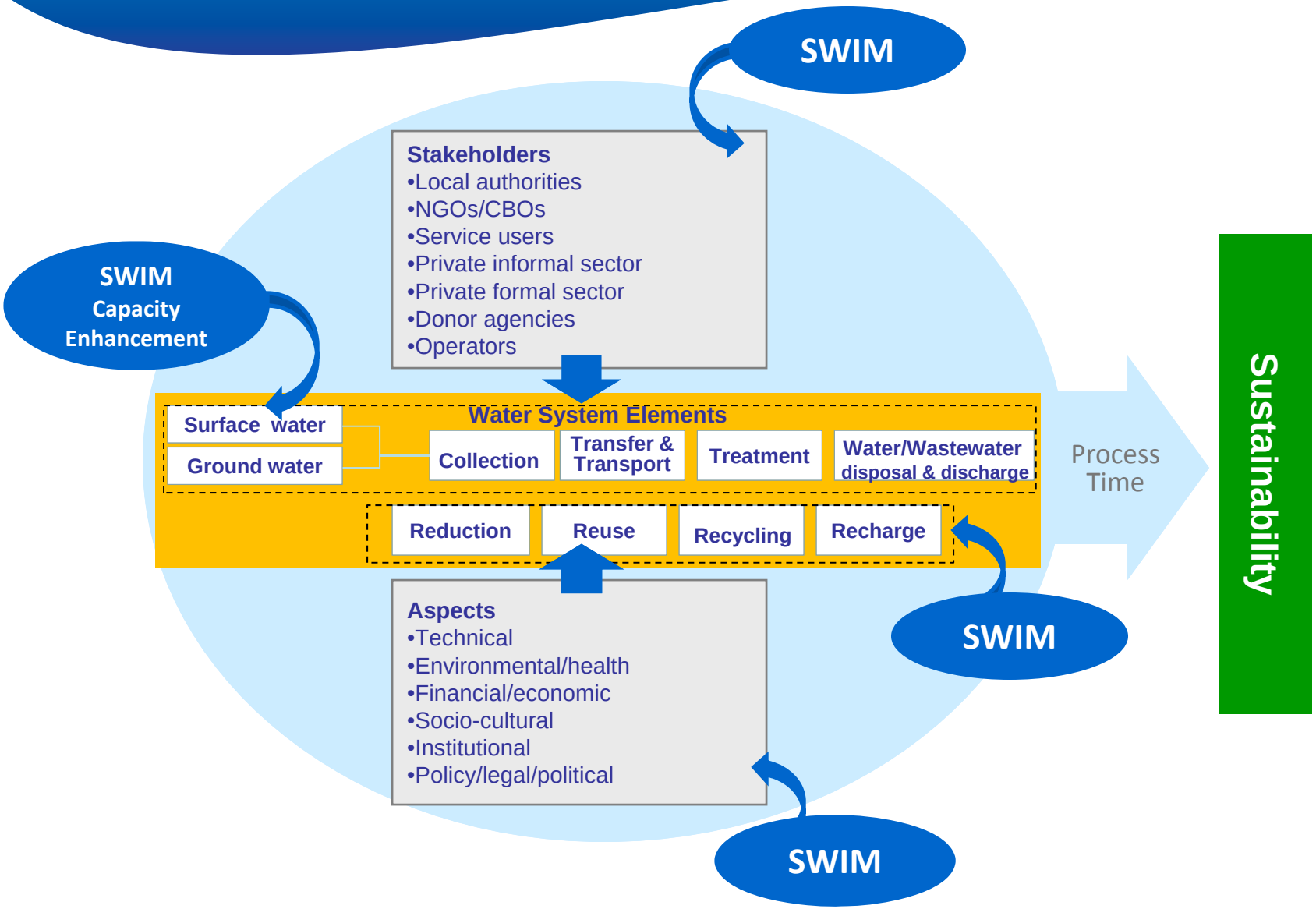
MANAGE WATER DEMAND AND ADD WATER SUPPLIES



Source: P. Montovani (2008), Climate Change and Water in the Arab World, 13th World Water Congress

THE MOST PLAUSIBLE SOLUTIONS…

Manage Water Holistically, in an Integrated Manner that leads to Sustainability



The EC-Funded Sustainable Water Integrated Management (SWIM) Project

Support Mechanism
6.7 Mi Euro, 2011-2014
SWIM-SM

5 Demonstration Projects
15 Mi Euro, 2012-2014

Overall objective:

To promote actively the extensive **dissemination** of sustainable water management policies and practices in the region given the context of increasing water **scarcity**, combined pressure on water resources from a wide range of users and **desertification** processes, in connection with **climate change.**

The SWIM Program Bridges Partners Countries & EC Initiatives Related to Water & Pollution

SWIM Partner Countries:

Algeria, Egypt, Israel, Jordan, Lebanon, Libya, Morocco, the occupied Palestinian territory, Syria and Tunisia

Sustainable Water Integrated Management (SWIM)

Mediterranean Component of EU Water Initiative (MED EUWI)

UfM Draft Strategy for Water in the Mediterranean (SWM)

Horizon 2020 Initiative to de-pollute the Mediterranean Sea

Dynamic interaction

SWIM-SM Specific Objectives

- Raise awareness of decision-makers & stakeholders in the Partners Countries (PCs) on the imminent threats on water resources, the need to implement more sustainable water consumption models and the adoption of possible solutions to meet the existing and forthcoming challenges;
- Support PCs in designing and implementing sustainable water management policies at the national and local levels, in liaison with existing relevant initiatives in the area;
- Contribute to ensuring institutional reinforcement and the development of the necessary planning and management skills, in line with Horizon 2020 objectives, and facilitate know how transfer.

SWIM-SM is closely linked to the Themes of the Demonstration Projects

They address:

- **Water Governance**
- **Water and Climate Change**
- **Water Demand Management and Efficiency, including non-conventional water resources**

SWIM Support Mechanism: 6 Work Packages

Water Governance and Mainstreaming: Focus on Governance Structures and Mainstreaming Water in Economic Sectors

Capacity Building: Focus on Water Institutions, Empowerment and Enhancement of Centers of Expertise

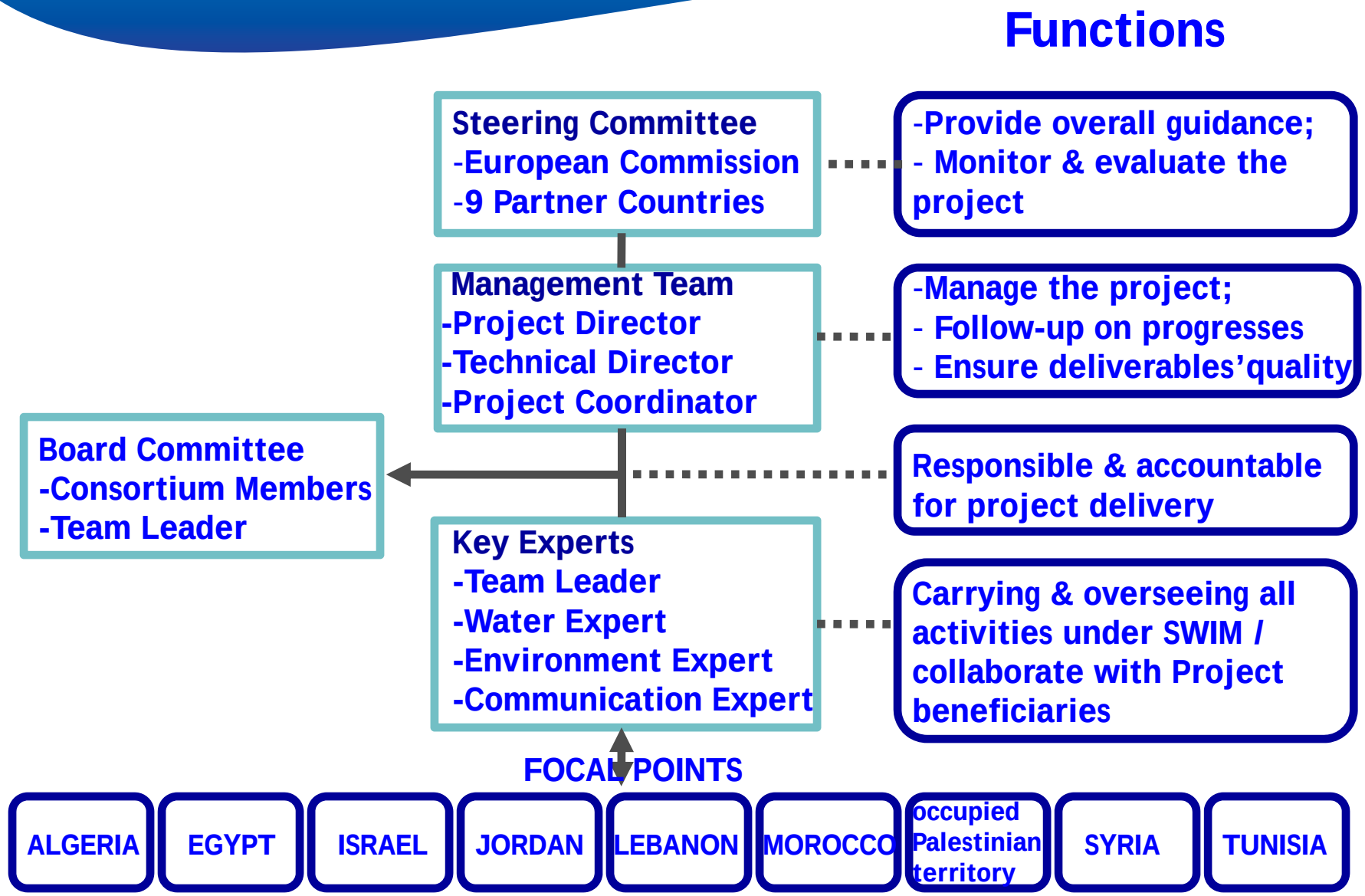
Water Management Plans' application: Focus on South–South Exchange of experiences among water intensive sectors

Identification of good practices and success stories in the region and beyond: Focus on Lessons Learned in Water Management and De-pollution of the Mediterranean

Development of a Communication and Awareness Raising Strategy: Focus on Bottom-Up Approaches Adapted to Regional & National stakeholders Inside and Outside the Water Sectors

Support the EC with the overall coordination of SWIM: Focus on technical support of the demonstration projects and strengthening interaction between these & SWIM-SM

SWIM-SM Implementation arrangements



SWIM-SM Implementation arrangements

In the Partners Countries:

- **The Ministry responsible for Water as the official counterpart of the Project;**
- **A National Focal Point officially nominated by the Ministry to be the counterpart of the SWIM-SM technical Team;**
- **An Environment Liaison Officer nominated by the Ministry of the Environment to ensure synergy with the water activities financed under Horizon 2020 and other regional activities (GEF, MAP etc.).**

The Inception Phase
December 2010-August 2011

Its purpose

- To ensure a swift and effective start of the project;
- To gather information to better address the needs and expectations of the beneficiaries and stakeholders;
- To identify proper sequencing of the activities planned under the project's work packages, and;
- To ensure the establishment of proper cooperation and management mechanisms to facilitate the smooth implementation and ascertain the long-term ownership and sustainability of the project's outcomes

The Approach

SWIM-SM Design

- To be demand-driven by responding to the identified needs of the region and the country priorities
- To operate in ways that are iterative, adaptable and flexible at the interface of the six proposed work packages
- To anticipate development in the international arena with regard to climate change and the water-food-energy nexus, particularly in view of Rio+20
- To respond to emerging /challenges and priorities as a result of the recent change in the political scenery of the Region (The Arab Spring)

The Content of the Inception Phase

Technical Work

- **Preparation of desktop brief assessments;**
- **Fact finding missions to all PCs and coordination with regional organisations; and**
- **The Pillar Structure**

Project management, Communication, Networking/Synergies:

- **Project Management Arrangements;**
- **Preparation of Communication and Promotional Material;**
- **Networking, visibility activities and identification of synergies with key stakeholders**

Inception Phase
The Results

- All PCs have shown genuine interest and expressed their commitment in participating actively in the project;
- The work packages provide a useful and appropriate framework that can assist them with the implementation of an integrated water resources management (IWRM) approach for the sustainable use of their country's water resources;
- There is a need "to cut across" these work packages and focus on a set of priority issues that, while serving the implementation of different IWRM components, will avoid dispersion of SWIM-SM efforts and make its overall contribution more effective.

Major Themes identified by the Partners Countries

Themes	Algeria	Morocco	Tunisia	Egypt	Jordan	Lebanon	Syria	oPt	Israel
Non conventional water resources, as indispensable part of the water cycle	x	x	x	x	x	x	x	x	x
Wastewater treatment and reuse (including recharge of aquifers)		x	x	x	x	x	x	x	
Capacity building on rural sanitation and low cost sanitation techniques		x	x	x				x	
Treatment & reuse of industrial wastewater and awareness raising of industrialists	x			x		x			x
Environmental guidelines for desalination and capacity building on new technologies		x	x	x				x	
Desalination with renewable energy, including the exchange of good practices	x	x	x	x				x	x
Develop ToR and Environmental Impact Assessment (EIA) guidelines for wastewater reuse, recharge of aquifers and desalination		x	x	x		x			
Technical support for rainwater harvesting		x	x	x			x		
Climate change non-regret actions and mainstreaming CC adaptation in water-related policies, including capacity building	x	x	x	x	x	x	x	x	x
Strengthen/expand the use of prediction models for climate change		x	x		x				x
Awareness of climate change impacts & creation of a virtual Platform on adaptation mechanisms to allow for exchange of experiences, practices, etc		x			x			x	x
Water Valuation and cost of mitigating degradation, including ecosystem restoration	x	x	x	x	x	x		x	x
Water Governance at the local level, including support of social and water users' groups and strengthening water users' associations and River Basin Organisations	x	x	x	x	x	x	x	x	x
Application of IWRM principles, including at the river basin level						x	x	x	x

Inception Phase
The Four Pillars

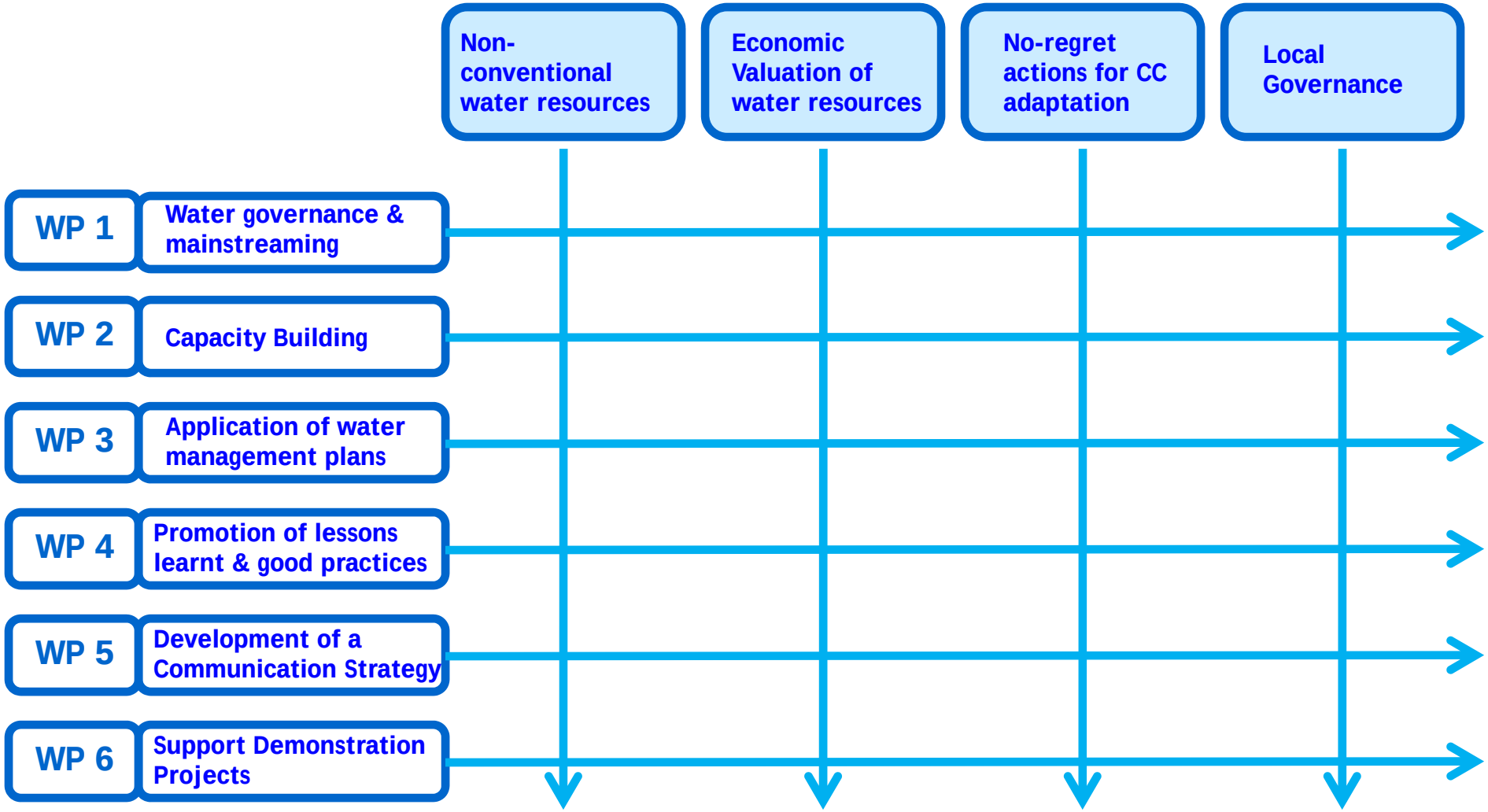
1- Non Conventional Water Resources

2- Economic Valuation of Water Resources

3- No Regret Actions for the Adaptation of the Water Sector to Climate Change

4- Water Governance at the Local Level: Sharing Experiences from Water Users' Associations

Inception Phase
The Pillar Structure



Four main pillars

1. Non-conventional water
2. Local water governance
3. No regret actions for climate change adaptation
4. Economic valuation of water degradation at basin level

Non-conventional water

Because our conventional water is being depleted and it is not enough to supply our current and future needs

Non-conventional water

Because a “circular” society is more sustainable

Non-conventional water: Focus on…

- **Wastewater treatment and reuse for agriculture and groundwater recharge in rural areas**

- **Desalination using renewable energy**


ZERO M
Sustainable Concepts Towards A Zero Outflow Municipality

Human yearly production

- 500 liters of urine
- 50 liters of feces

Need to dispose off safely

If reused...

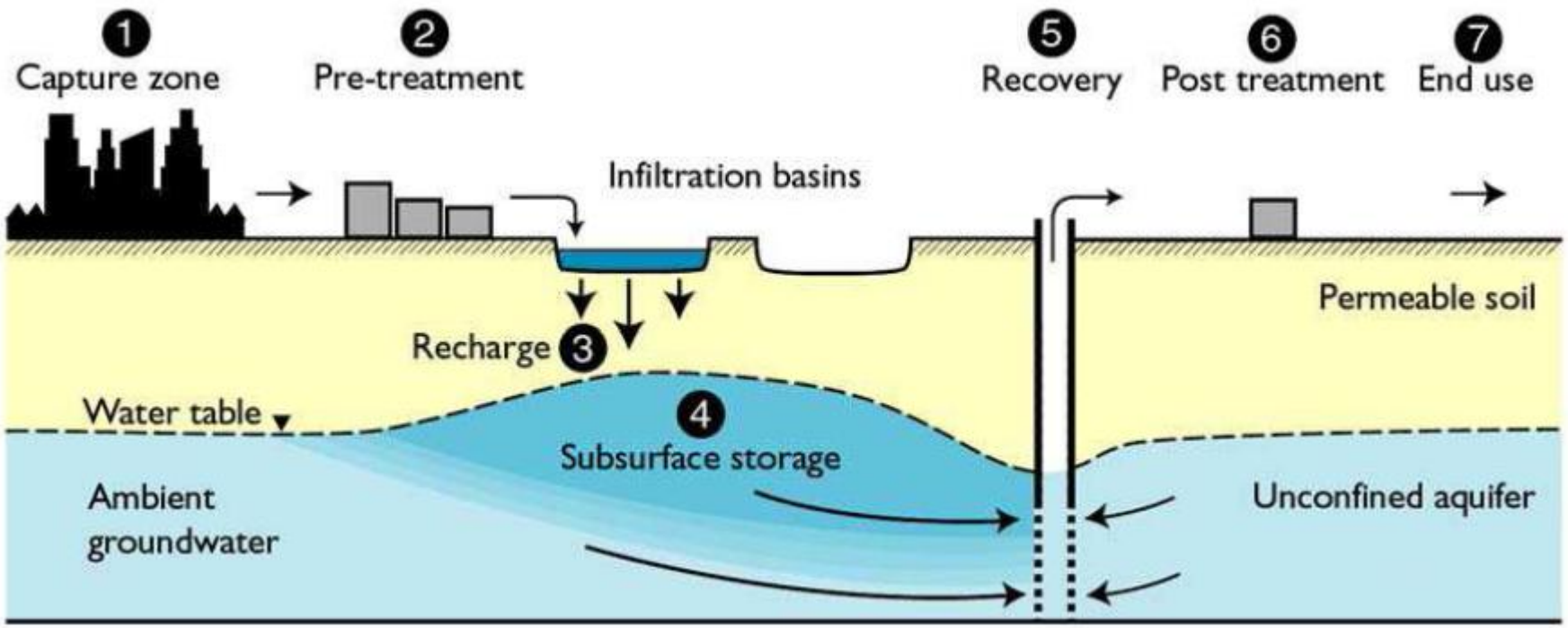
Can produce the equivalent of 230 kg of cereals yearly

Can recharge groundwater with about 15 m3 of water at a consumption rate of 50l/person.day

Non-conventional water

- **Assessment of Best Available Technologies for Wastewater Treatment and Reuse in Agriculture and Groundwater Recharge**
- **Assessment of Best Available Technologies for Desalination using solar energy**
- **Two sub-regional trainings**

Soil Aquifer Treatment SAT and Groundwater recharge



Natural systems for rural sanitation

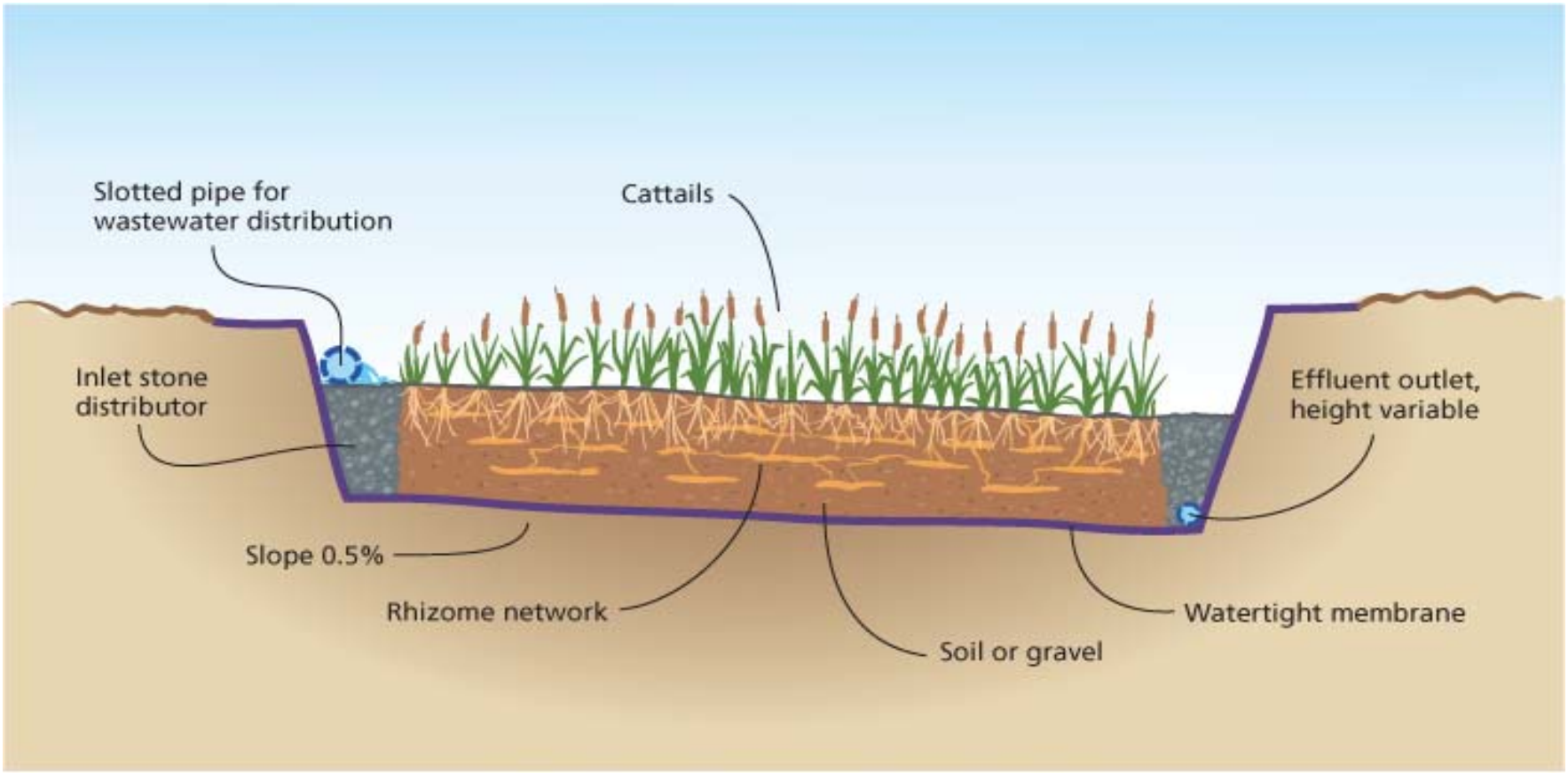
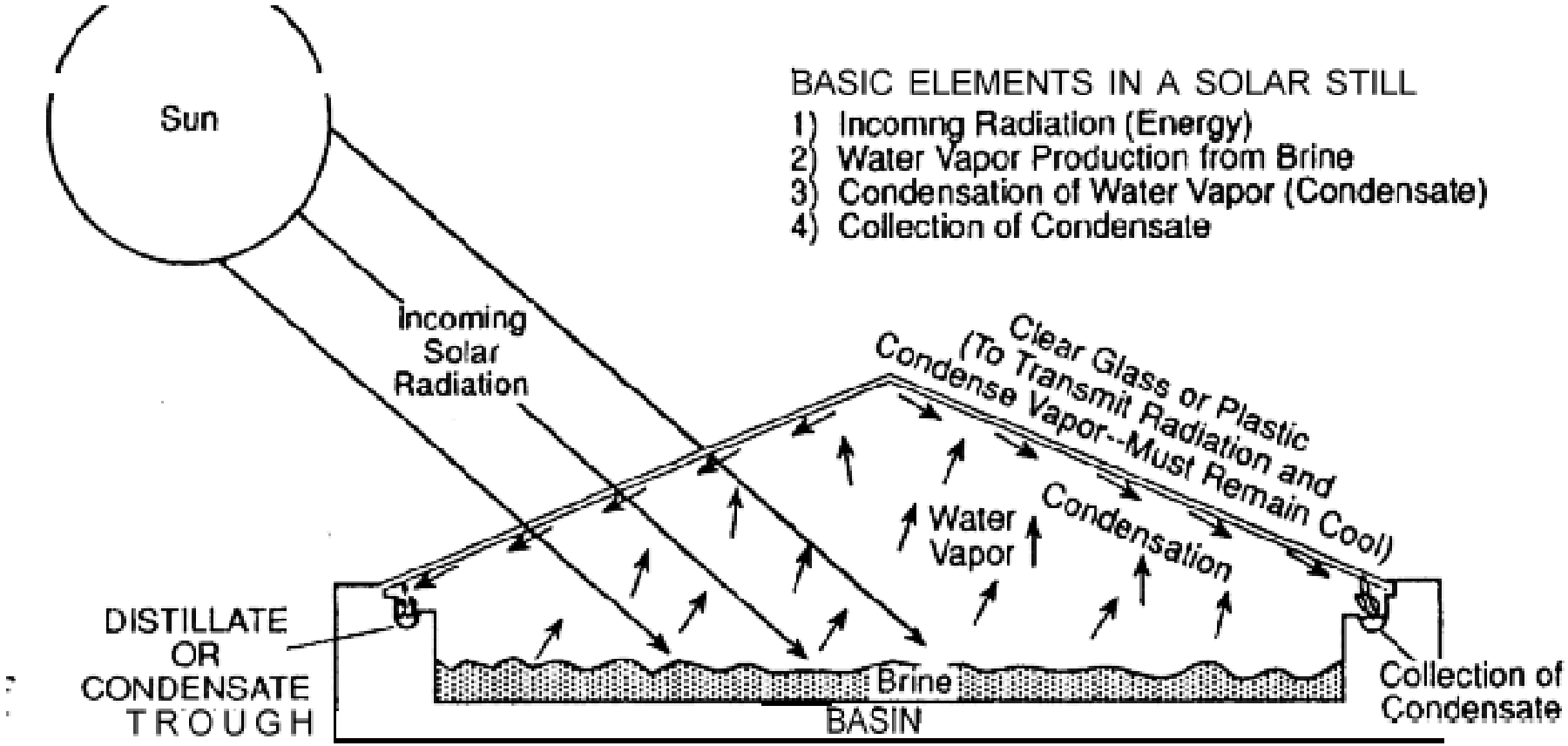


Fig. 1. Cross-section of subsurface-flow constructed wetland.

Simple solar desalination



Non-conventional water

- **Support to farmers using treated wastewater in agriculture**
  - **Needs assessment**
  - **Support materials**
  - **Information sessions**

Four main pillars

1. **Non-conventional water**
2. **Local water governance**
3. **No regret actions for climate change adaptation**
4. **Economic valuation of water degradation at basin level**

Water Users Associations

- **Because water management at the farm level cannot be done in the capital**
- **Because there is an improved efficiency in water use when the management is done by the users**
- **Because it is cheaper for the government and accordingly the tax payers**

Water Users Associations

- Assessment of status in the region
- Validation of results in a workshop in Athens
- Training of stakeholders

Four main pillars

1. **Non-conventional water**
2. **Local water governance**
3. **No regret actions for climate change adaptation**
4. **Economic valuation of water degradation at basin level**

No regret actions for climate change adaptation

No regret actions for climate change adaptation

Anyway it is going to help the water cycle…so why not

No regret actions for climate change adaptation

- **Soft adaptation measures that will help in adaptation to CC**
- **If there is no CC the “no regret” actions can help the water cycle**

Awareness

- Website
- News Flash
- Press events
- Printed material
- Documentary

Exchange of experience SS and NS

1. In each training and workshop

2. Collection and dissemination of best practices

Trainings

1. **Each pillar has a training component either:**

   - **Regional**
   - **Sub-regional**
   - **National**

Information session for parliamentarians

Information for parliamentarians

Because things work better if supported by legislation

مع خالص شكري
وامتناني

Thank you
for your attention

Merci pour
votre attention

For additional information please contact:
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