COLLOQUE « REUSE »

17th & 18th October 2022

International initiatives : project of global Observatory on Non-Conventional Water Resources and Associated Renewable Energy

-Sahel & Mediterranean pilot area-

Presentation of the project by IME :
François Guerber

MEDITERRANEAN WATER INSTITUTE

*A **network of water professionals**, created in Morocco in 1982, composed of 4 colleges:*

- *Local authorities*
- *Ministerial departments*
- *Public and private companies*
- *Individual experts*

*With the objective of **initiating and accompanying regional cooperation** actions of its Members, all around the Mediterranean countries, in the field of **water, sanitation, irrigation, environment and energy-related issues**.*

*Activities: monthly **webinars** and **press review**; regional **events or studies***

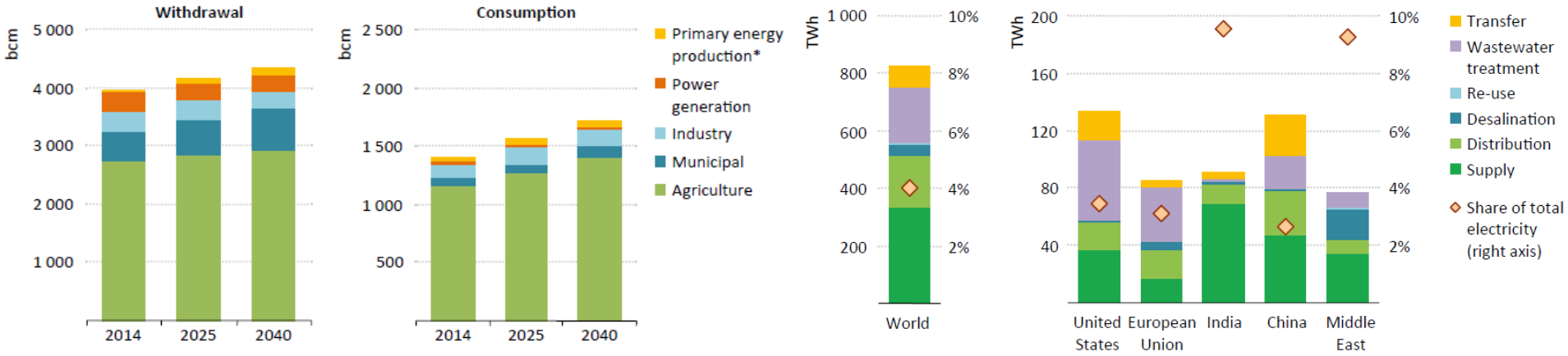
Office based in Marseille (France) and València (Spain); Scientific & Technical Council Chair in Rabat (Morocco)

FEASIBILITY STUDY of a REGIONAL OBSERVATORY of NCWRs & related Ren Energy

In the context of:

1. ***evolution of water resources and their use:***
   - *Increase of water demand vs renewable water resources*
   - *Climate change*
2. ***contradictions (nexus) caused by the dual need:***
   - *to mobilize new water resources such as desalinated water or reuse of treated wastewater*
   - *to reduce the carbon footprint of any activity*

*The World Water Council asked IME to study the **feasibility** of an Observatory of NCWRs and Ren Energy, firstly on the Mediterranean & Sahel region. Results were presented in Mediterranean and World Water Fora (December 21 & March 22)*

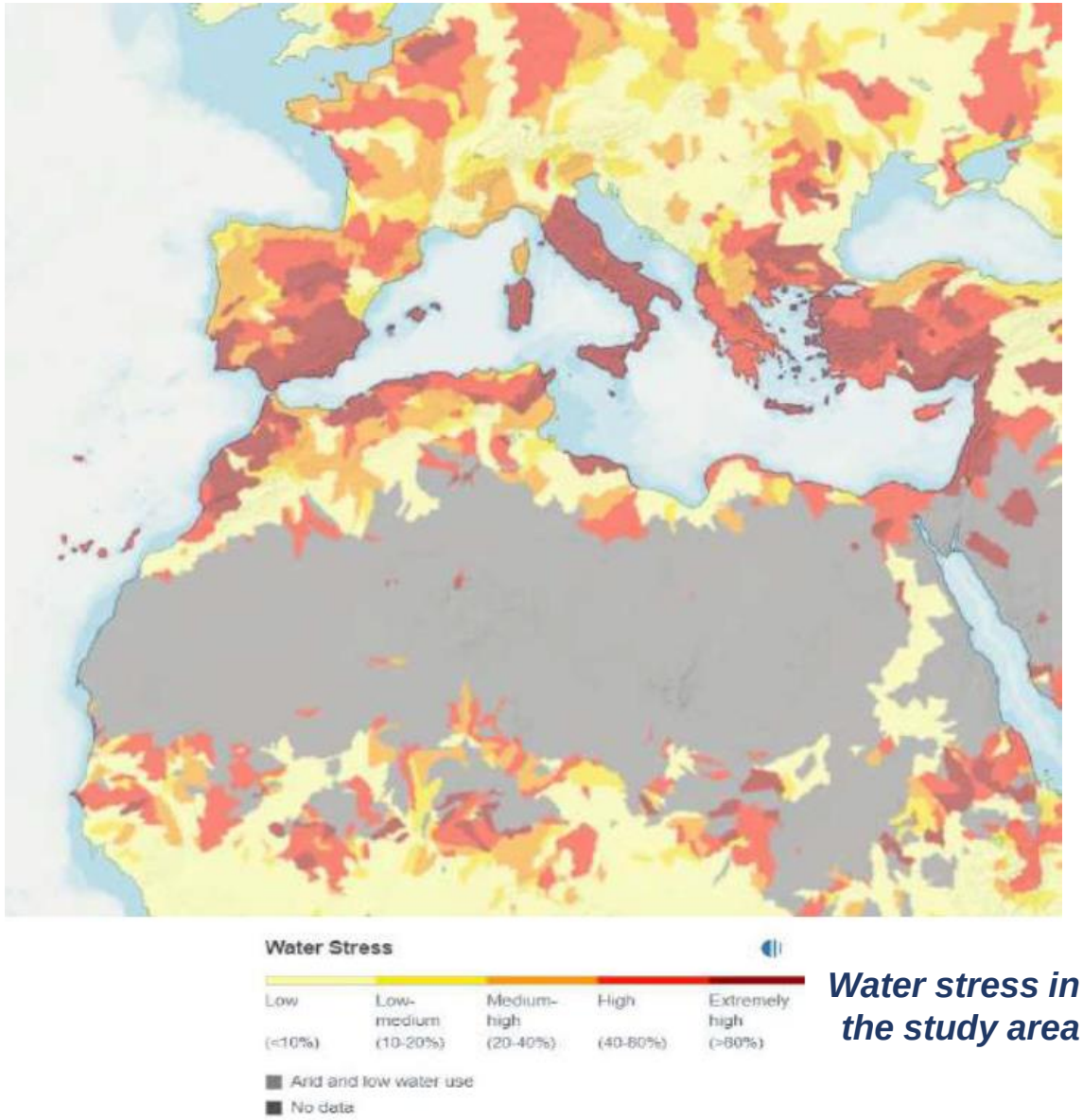


Worldwide evolution of water withdrawals and energy consumption by the Water Sector

Source: IEA, World energy outlook 2016

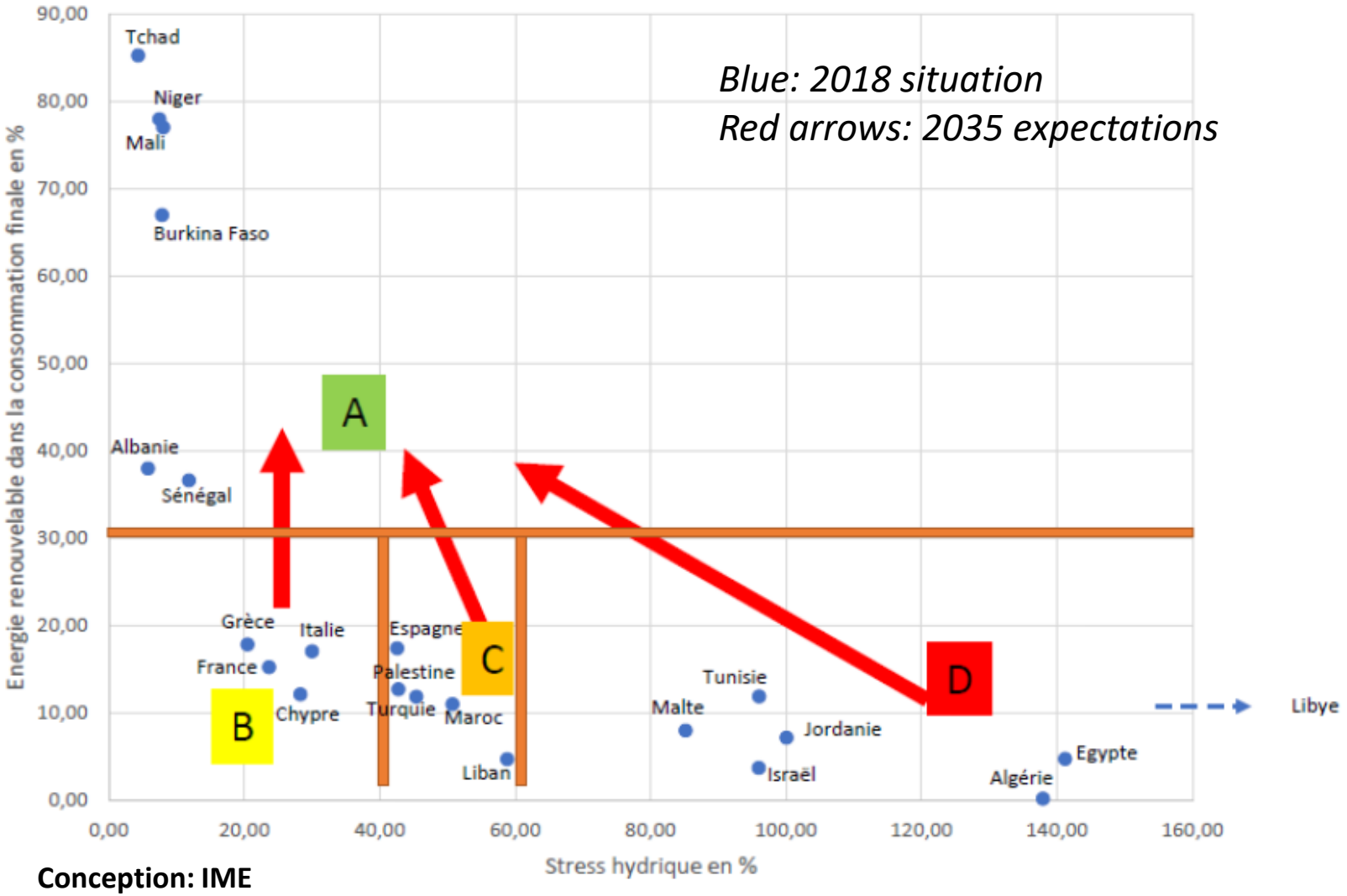
Feasibility study: main results

1. The joint issue of water & energy is of utmost importance in the Mediterranean & Sahel area
2. Nevertheless, the seriousness of the situation is not the same regarding NCWRs & Ren Energy or in all countries (see next slide)



Water stress in the study area

Share of renewable energy in final consumption vs water stress

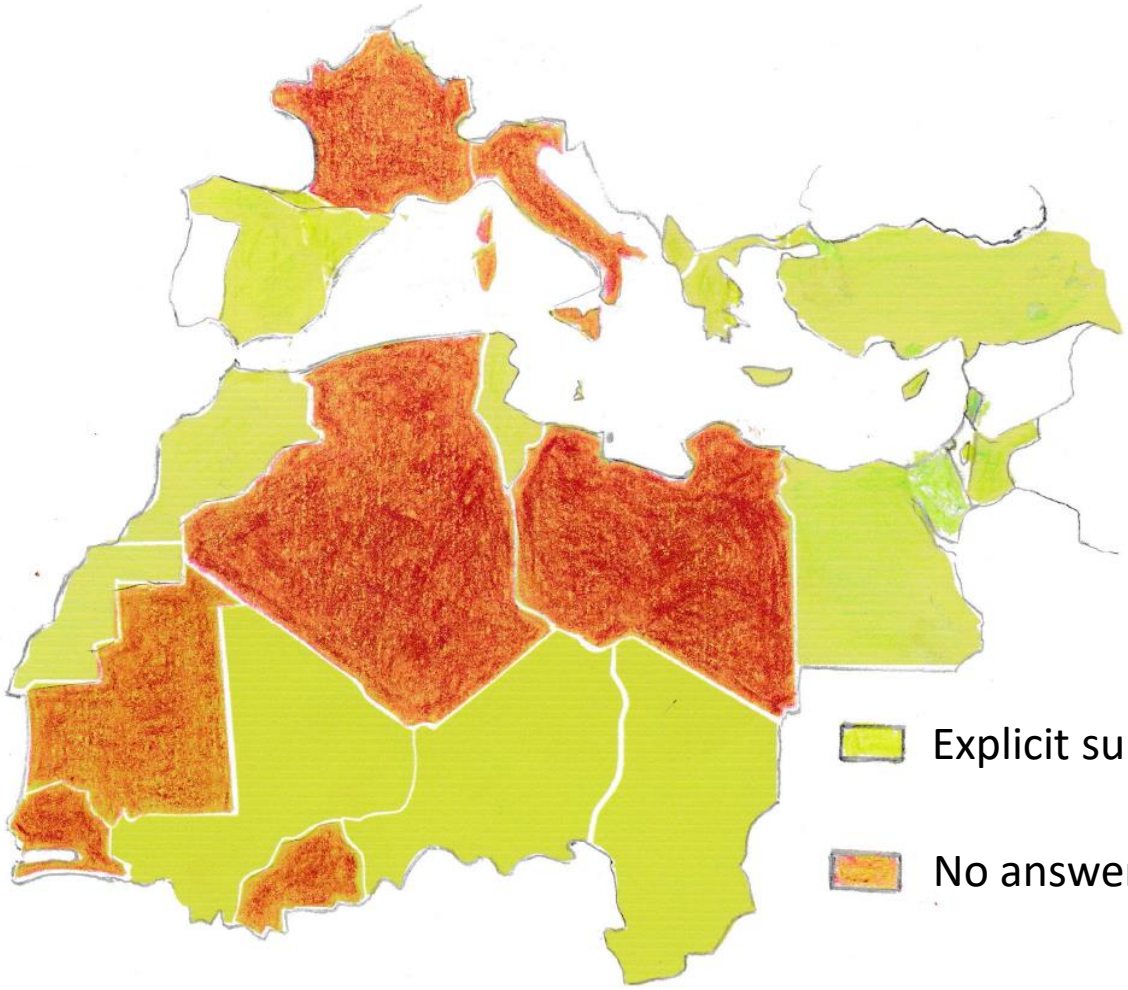


Conception: IME

Sources: UN SDGs & NDCs 2018

Feasibility study: main results

3. Official support received from 15 countries' authorities



4. Start with a two-year pilot project in the Sahel & Mediterranean zone with voluntary countries and stakeholders, rather than continuing the feasibility study of the Observatory at the global level

Pilot project: expected activities

- *International exchanges, independent and objective facts :*
  - *sharing feedback on desalination or REUSE facilities and their energy supply,*
  - *promoting joint R&D projects or positive cooperation with centers of excellence, international organizations or networks,*
  - *contributing to national and regional policies or plans, upon consultation by the authorities,*
  - *supporting technical and professional training programs and capacity building,*
  - *facilitating public awareness.*
- *Access to quality data (on a voluntary basis):*
  - *water resources, the environment,*
  - *energy (GHG and carbon footprint),*
  - *NCWR facilities and renewable energy grid (existing or planned)*
  - *contacts*

Pilot project: potential users

- *National authorities in charge of Water and/or Sustainable Development including Energy (planning and regulation)*
- *Owners and users of NCWR and renewable Energy installations*
- *Public and private companies involved in designing, buiding or operating such utilities*
- *Research and training institutions*
- *International and regional donors*
- *International and regional cooperation organisations*

Regional Center for Renewable Energy and Energy Efficiency
المركز الإقليمي للطاقة المتجددة وكفاءة الطاقة

International Energy Agency

International Desalination Association

Observatoire du Sahara et du Sahel
Sahara and Sahel Observatory

HotspotReuse by ecofilae

ONU programme pour l'environnement

Plan d'action pour la Méditerranée
Convention de Barcelone

Plan Bleu

masen

CEDEX
Centro de Estudios y Experimentación de Obras Públicas

DESALDATA

The Cyprus Institute

WORLD BANK GROUP

COSTEA
Pour une irrigation durable

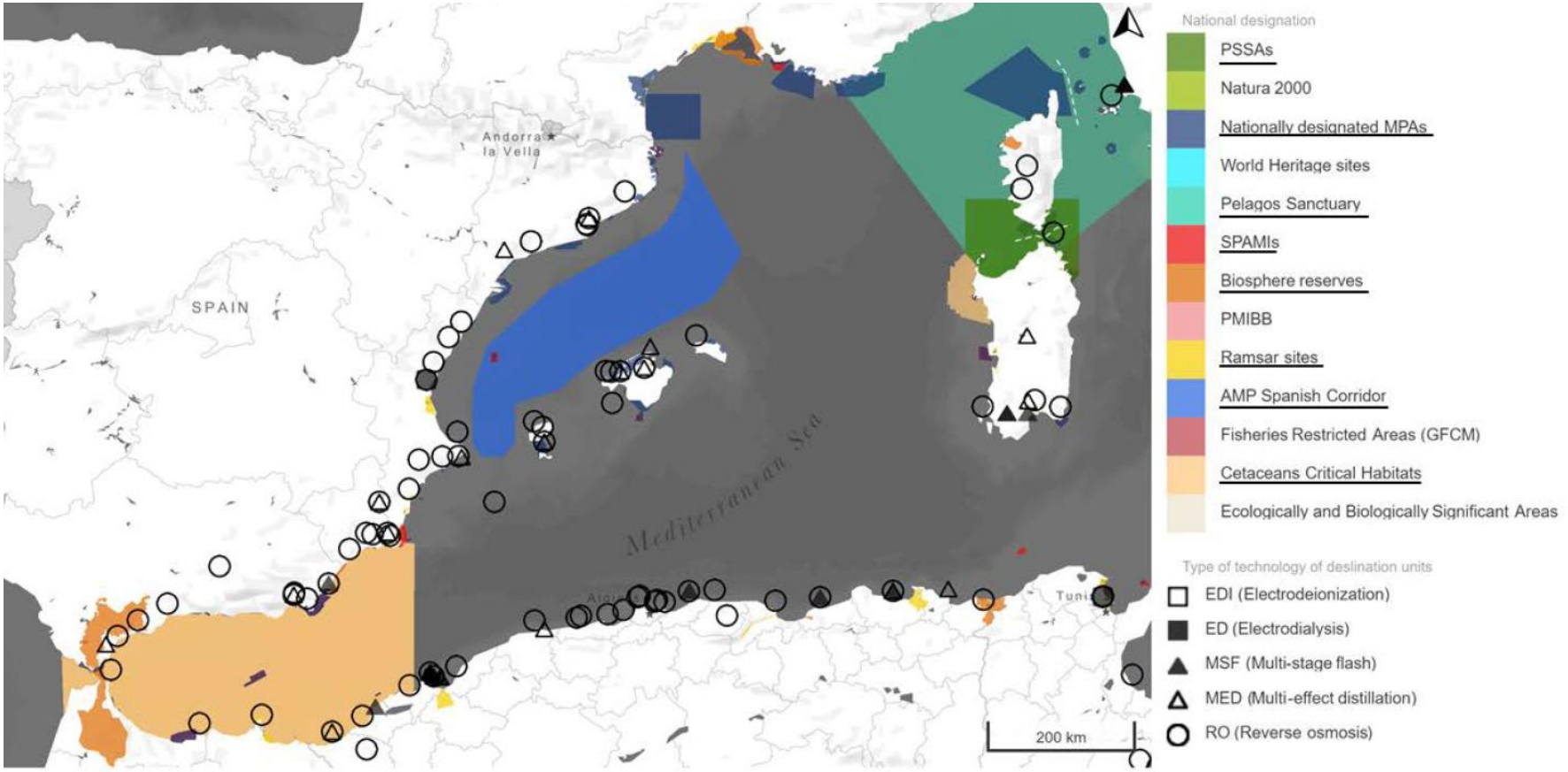
Pilot project implementation

IME will set in place:

- ***A Steering Committee***
- ***A project team of 2 young professionals kean on Water, Energy and Data management, with occasional experts as needed***
- ***A website and use of existing IS facilities with partners***
- ***Mobilization of countries' authorities through a formal membership***
- ***Consultation of stakeholders towards various contributions (financial, technical or in-kind) to the project***

On-going activities

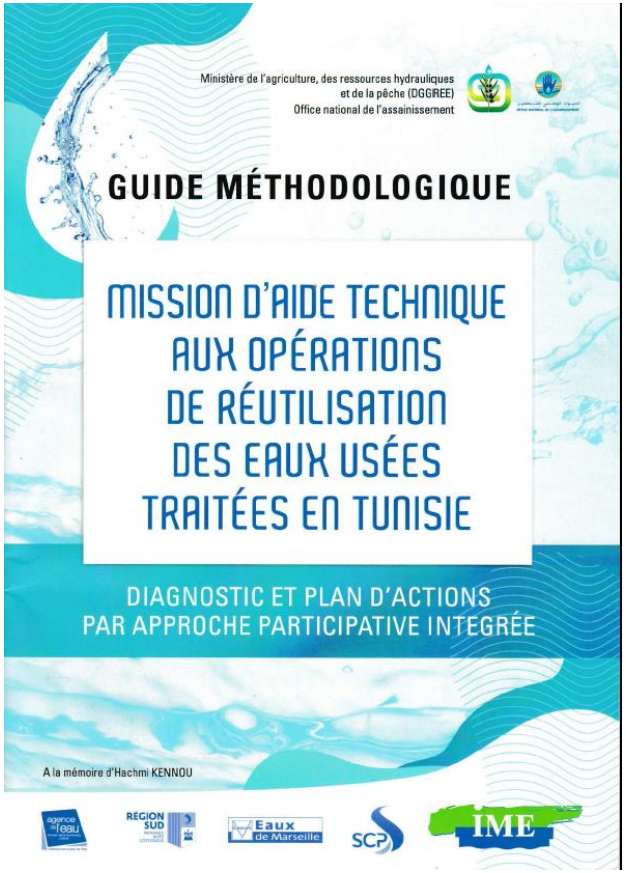
Brine discharges and Marine areas, zoom on West Mediterranean



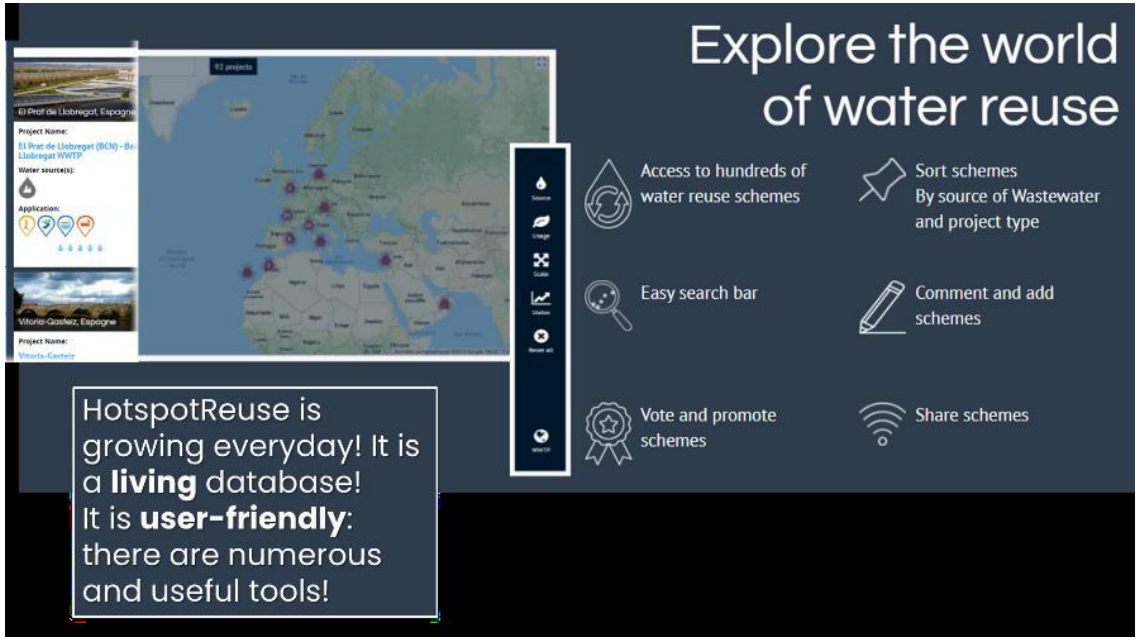
Desalination plants (in 2013) and MPAs (in 2017) in the Mediterranean

Source : DesalData and MAPAMED

On-going activities



Technical support to treated wastewaters reuse in Tunisia



HotspotReuse database

Available support for the project

Concrete contributions from stakeholders:

- *National authorities in charge of water: technical and financial contributions by Spain, principle agreement by 10 other Mediterranean countries*
- *Financial institutions: support by PRIMA Foundation*
- *Water or Energy stakeholders: sharing of on-going experience, by Malta – EWA on joint planning of energy and water sectors and on capacity building for desalination plants' management, by SCP on Reuse of treated wastewaters for irrigation, by Blue Plan on desalination brine impacts, etc.*
- *International Observatory managers: possible provision of IT tools by OSS*

Thank you for your attention

Contact

www.ime-eau.org

info@ime-eau.org