



An Italy-Algeria partnership: company presentations  
**Mario Dogliani, SDG4MED**



**10 infographics**  
to understand the state of the environment  
and development in the Mediterranean in  
**2020**



**National Workshop**  
**on Desalination and Re-use of Treated Waters**



# European Missions



**Restore our Ocean  
and Waters by 2030**

**Implementation Plan**

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Research and  
Innovation



Ocean (182), **water (92)**, biodiversity (63), plastic (29), fisheries (16), transport (7), ship (7), SDG (6)

**Pag 7** Within a decade, this Mission will help the EU to reach its ambitious 2030 targets for restoring the ocean, seas and waters, and to lead by example the global efforts towards ocean and **water** sustainability.

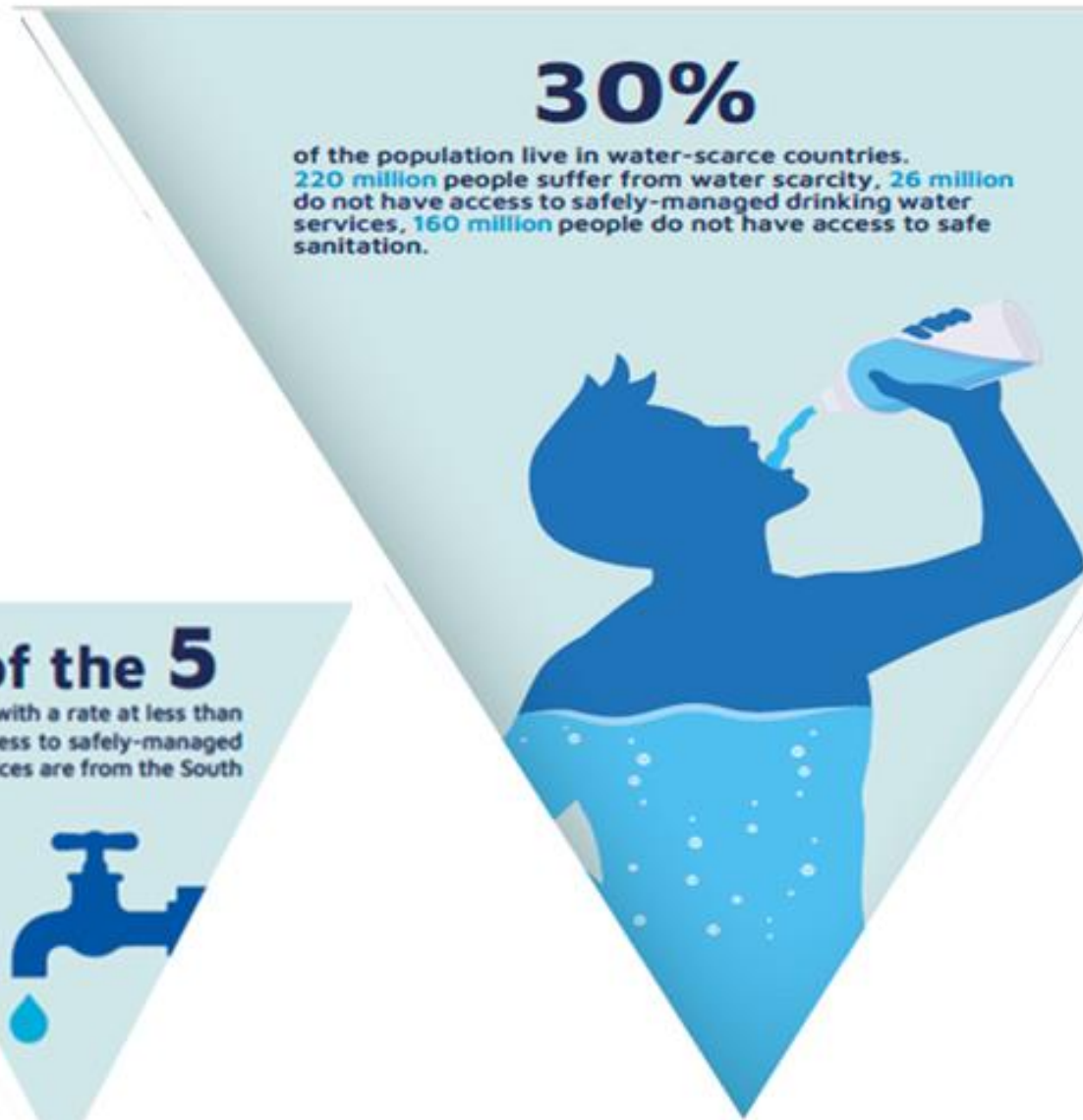
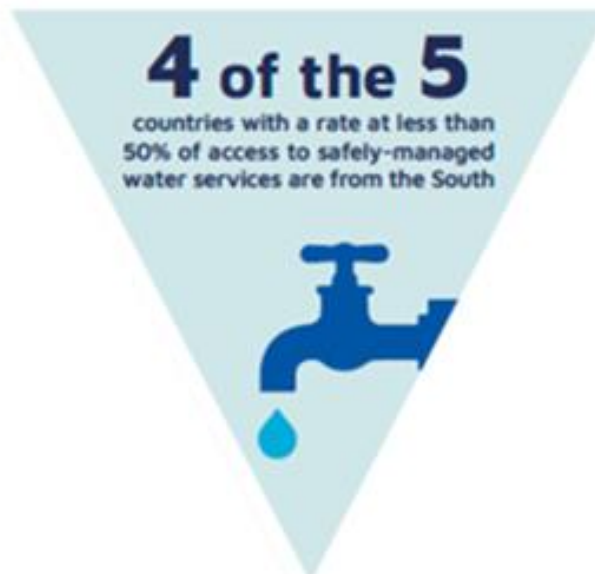
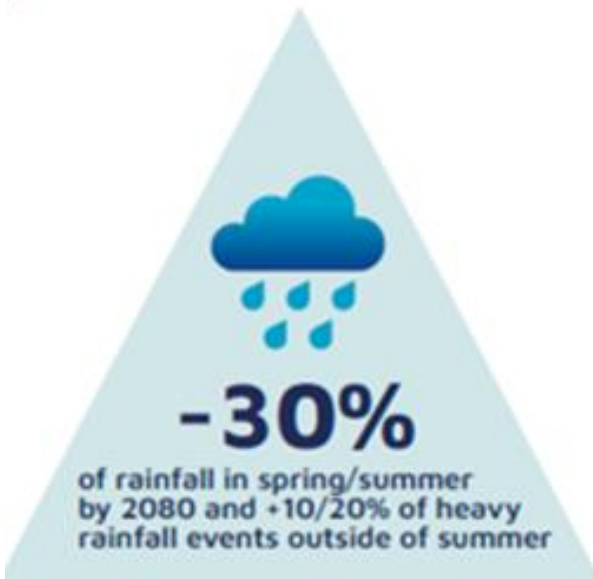
**Pag 9** Longer drought periods, as experienced in recent years, as well as more frequent heavy rainfall events, pose new challenges to freshwater management with competition for available **water** resources increasing.

**Pag 15** the Mission will support many Sustainable Development Goals. Restoring our ocean and waters will directly contribute to SDG 14 Life below **water** and SDG 6 Clean **water** and sanitation.

# SOED

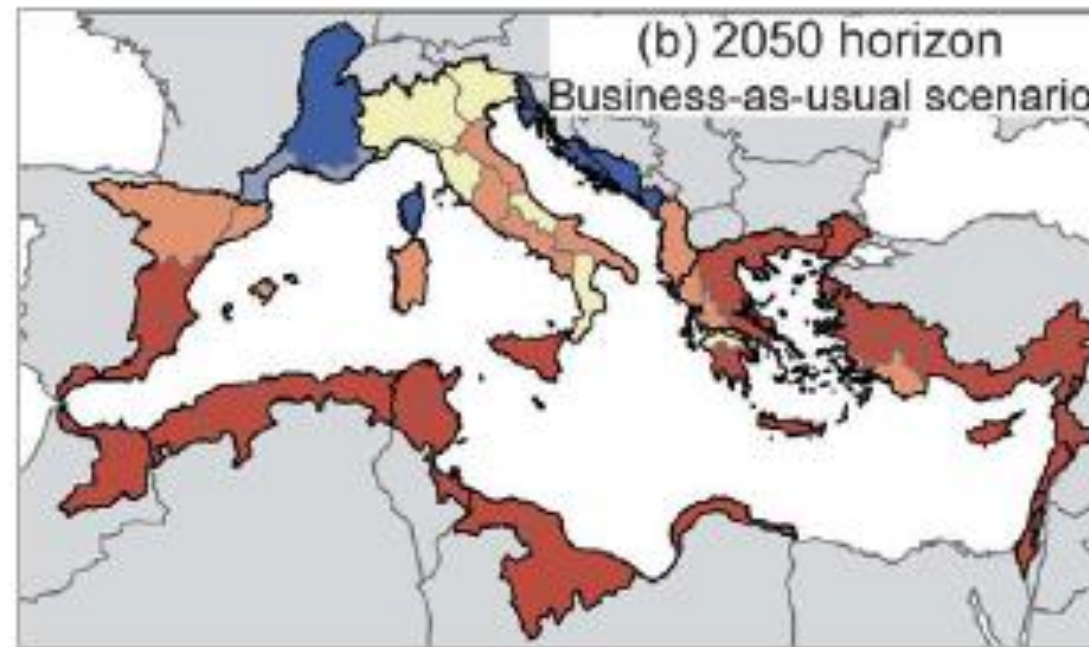
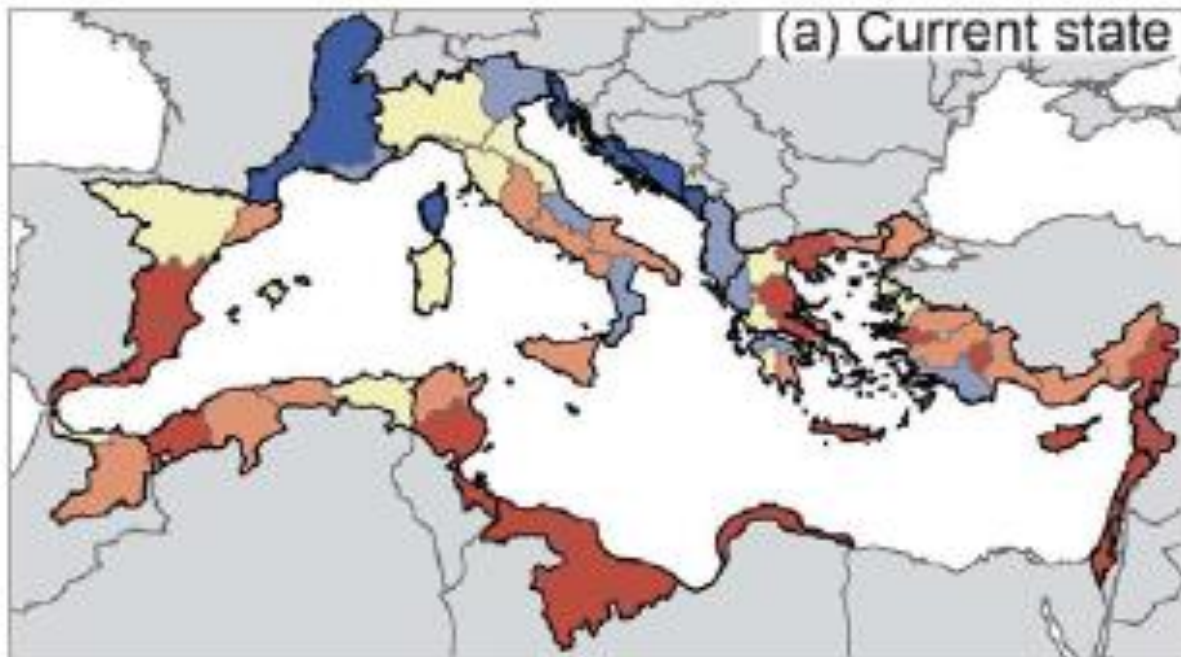
2020

State of the Environment and  
 Development in the Mediterranean



**National Workshop  
 on Desalination and Re-use of Treated Waters**





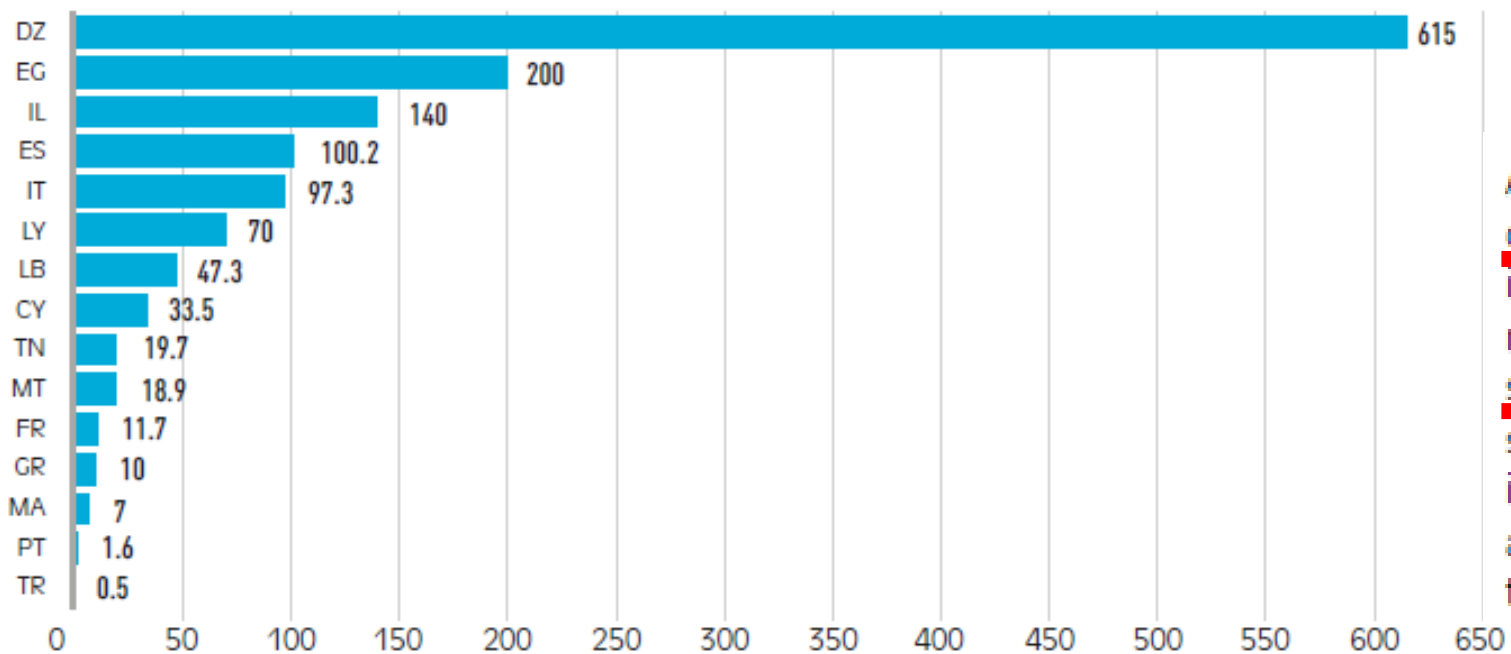
**Water stress index**

- <10% (No water stress)
- 10%-20% (Low water stress)
- 20%-40% (Moderate water stress)
- 40%-80% (High water stress)
- >80% (Very high water stress)

**Water stress** occurs when the demand for water exceeds the available amount during a certain period or when poor quality restricts its use

Non-conventional water resources such as wastewater recycling and reuse, rainwater and storm water capture, and **desalination**, are expected to be increasingly used in the forthcoming decades to meet growing demands. **Desalination** is a key Nexus interlinkage with energy consumed to increase water supply. The production of desalinated seawater in the Middle East and North Africa (MENA) region is projected to be thirteen times higher in 2040 than 2014.

Positive experiences in the region show that **wastewater** can be safely recycled to be used in irrigation and managed aquifer recharge, especially in coastal aquifers, to prevent salt water intrusion. Water recycling is a typical example of a Nexus interlinkage. Water recycling not only contributes to water and food security goals, it can also be achieved at zero-net energy use by capturing and reusing wastewater treatment by-products, such as biogas and sludge for energy generation, thus reducing emissions from the water sector and overall energy demand. However, around 80% of the MENA region's wastewater is still being discharged into the environment without being reused (World Bank, 2018).



Desalinated water produced (million m<sup>3</sup>/year)

A limiting factor for desalination plants can be the quality of the sea water or brackish water used. In fact, cases of intermittent closures of desalination plants have been reported in the Mediterranean due to contamination of seawater by land-based sewage, including discharges into streams that flow into the sea. The proximity of seawater inlets to infrastructure, such as oil terminals and ports, can also potentially lead to closures, when oil is released into the Mediterranean (Tal, 2018).

Mediterranean's largest producers of freshwater through desalination are Algeria (615 million m<sup>3</sup>/year), Egypt (200 million m<sup>3</sup>/year), Israel (140 million m<sup>3</sup>/year), and Italy and Spain (both 100 million m<sup>3</sup>/year) (FAO, 2016b). In relative terms, Malta is the desalination leader, with more than half of its drinking water supply produced via desalination.