

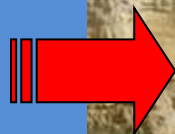
THE POLITICAL CONTEXT OF IWRM IN THE EURO-MEDITERRANEAN AREA AND THE LONG TERM STRATEGY. MOBILISING NON-CONVENTIONAL WATER RESOURCES

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SOCIOECONOMIC FRAME IN MED AREA

- Demographic growth
- Rise on the standard of living
- Urban area extension
- Increase on irrigation
- Industry and tourism development
- Climate change



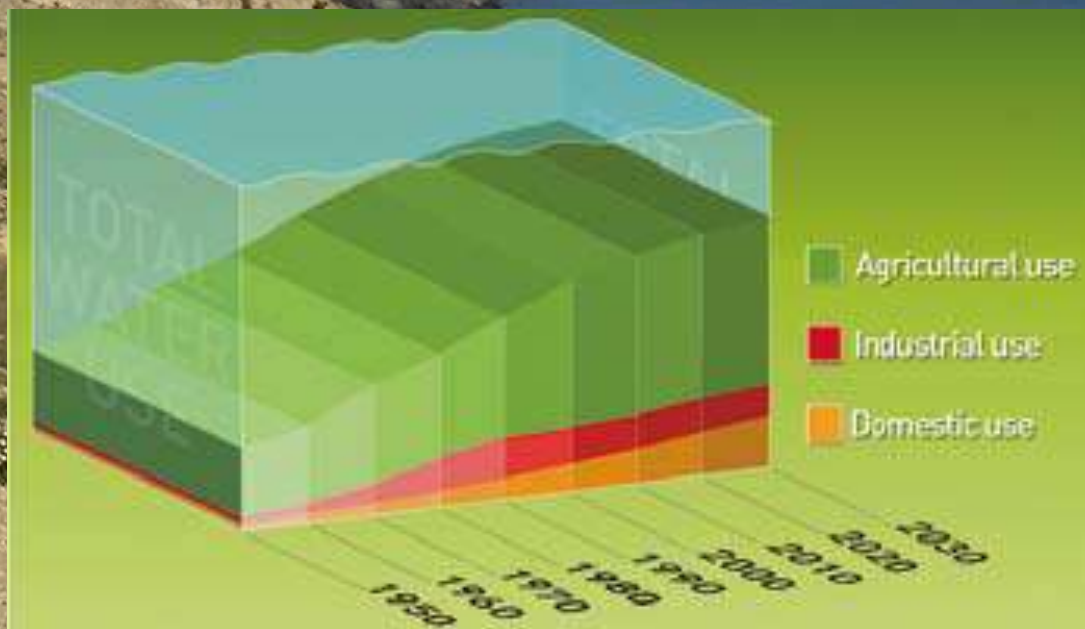
WARNING!!!!

Water resources pressure!!!





Water use per sector: future prospects



Source: "Facts and Trends – Water", World Business Council for Sustainable Development (WBCSD), 2006



Water use by sector in the Mediterranean

North

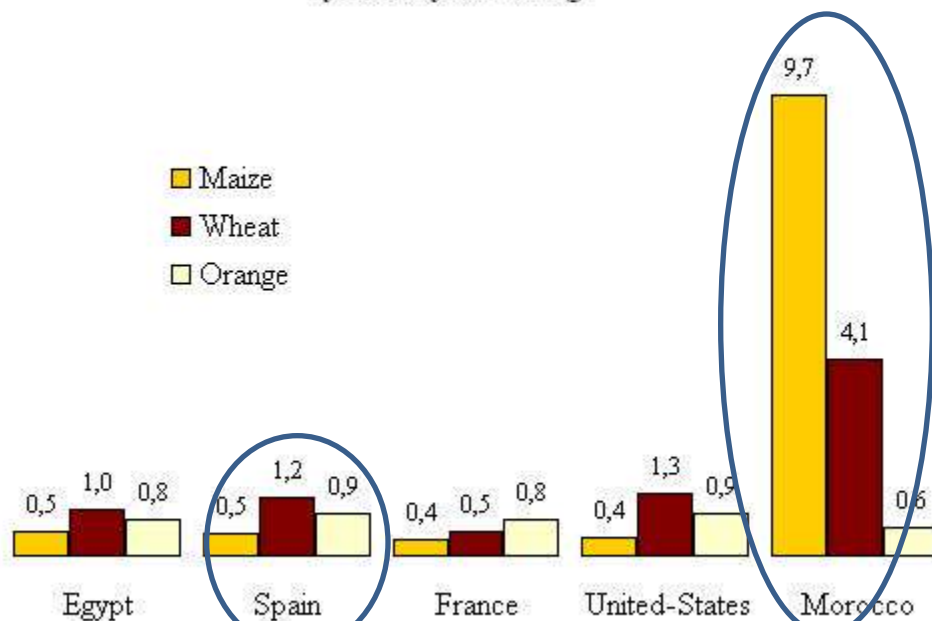
- ❖ Domestic and urban = 15%
- ❖ Industry = 35%
- ❖ Agriculture = 50%

South

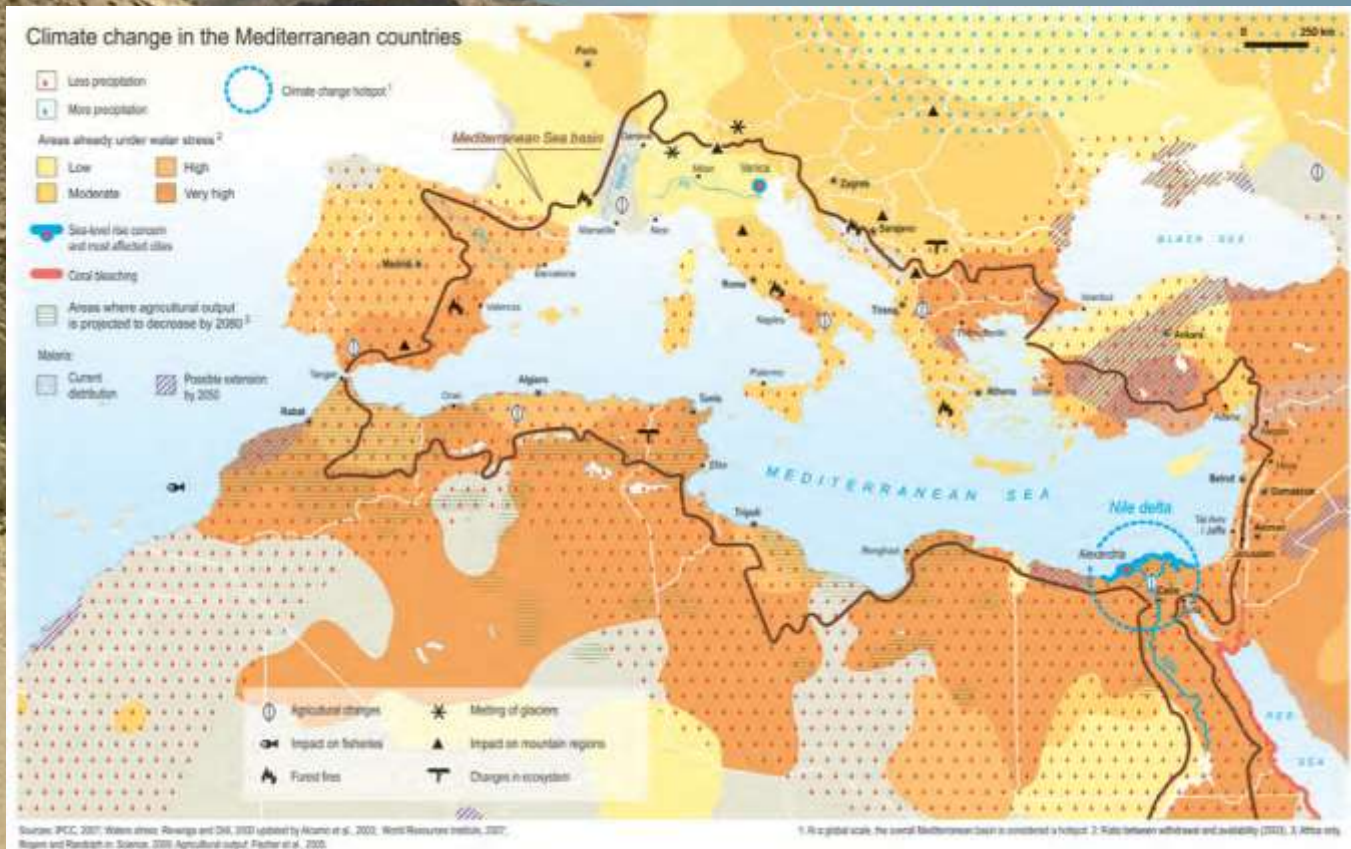
- ❖ Domestic and urban = 15%
- ❖ Industry = 10%
- ❖ Agriculture = 75%

Irrigated land increased by 3 M hectares in 15 years and growth seems to stabilise around 200.000 hectares per year, implying a supplementary demand in the order of 2 Bm³/y of water only for agriculture in South Mediterranean (source: CIHEAM)

**Table 2: Specific Water Demands: Maize, Wheat and orange
by country in m³/kg**



Sources: FAO, Aquastat, CropWat



Source: UNEP/MAP-Plan Bleu, Athens, 2009

Economic and physic global trends affecting water resources



Actual scenario



≠

Future Scenarios

WATER DEMAND

Public
Domestic
Commerce & Industry
Irrigation & Agriculture
Electric Power

IWRM

WATER SUPPLY

River Basins
Aquifers
Groundwaters
Used water

IWRM is necessary to combat increasing water scarcity and pollution. Methods include water conservation and reuse, water harvesting, and waste management. An appropriate mix of legislation, dialogue and transfer of experiences, pricing policies and enforcement measures is essential to optimize water conservation and protection



“IWRM is a process which promotes the co-ordinated development and management of water, land and related resources, in order to maximise the resultant economic and social welfare in an equitable manner without compromising the sustainability of vital ecosystems”
(Global Water Partnership, Technical Committee).

Successful integrated water management strategies include:

- capturing society's views,
- reshaping planning processes, coordinating land and water resources management, including adaptation to climate change.
- stressing water quantity and quality linkages,
- conjunctive use of surface water and groundwater,
- protecting and restoring natural systems,
- ensuring public participation flow of information.

THE IWRM PARTNERSHIP



global level



country level



regional level



real stakeholders



HISTORICAL APPROACH TO THE EUROPEAN WATER POLICY TOWARDS THE MEDITERRANEAN

- 
- 1975** Barcelona Convention was adopted on 16 February 1976 and entered into force on 12 February 1978. the “Barcelona Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean”
 - 1995** Revision of Barcelona Convention and the MAP, and launching the Euro-Mediterranean partnership
 - 2003** Development of the European Neighborhood Policy
 - 2008** Launching of the Union for the Mediterranean Initiative. UfM Water Ministerial conference, Jordan. Long Term Water Strategy initiated
 - 2010** Barcelona Ministerial Conference. Failed

THE STRATEGY FOR WATER IN THE MEDITERRANEAN

- ❖ The SWM should facilitate and formalize a political dialogue on water resources management, related policies, and sector performance.
- ❖ The SWM should promote synergies and transfer of experiences.
- ❖ A lining up with existing strategic documents and initiatives should be secured e.g.
 - Millennium Development Goals (MDGs), World Summit on Sustainable Development (WSSD) Targets.
 - The Horizon 2020 Initiative to De-pollute the Mediterranean,
 - United Nations Environment Programme/Mediterranean Action Plan (UNEP MAP) for the Barcelona Convention, and Protocols,
 - Mediterranean Strategy for Sustainable Development
 - EU Water Framework Directive, EU Marine Directive, EU Neighborhood Policy etc.
- ❖ Coordination with the wider water sector, partners and civil society should be promoted throughout the process.

KEY THEMES OF THE STRATEGY FOR WATER IN THE MEDITERRANEAN: Jordan's Ministerial Conference Declaration

- ❖ Integrated water resources management (IWRM), with emphasis on planning of national & transboundary bodies;
- ❖ Water supply & sanitation, with emphasis on the poorest part of the societies (small communities);
- ❖ Water, food, environment interaction, with emphasis on fragile ecosystems;
- ❖ Non-conventional water resources;
- ❖ Transfer of technology & know-how & training;
- ❖ Education



CURRENT STATUS OF TREATED WASTEWATER REUSE

- ❖ WW reuse is an accepted practice in Europe but not completely in the Mediterranean Countries.
- ❖ Majority of Med countries pretend to reuse treated wastewater for agriculture and environmental enhancement
- ❖ However, few countries have developed comprehensive standards for reuse and/or encourage reuse applications.

FACTS

- ❖ Domestic WWTR is one tool to address the food and water insecurity facing many countries in the East and South Mediterranean region. In coming years, most vegetables in arid countries will have to be grown increasingly, according to the objective of saving water avoiding the export of “virtual water”, and eventually using the most of treated wastewater.
- ❖ Regulations/standards in some countries but not at EU level,
- ❖ Economics: more work needed to assess the right economic instruments which will make wastewater a viable option towards WFD objectives.
- ❖ To help the gradual and coherent introduction of such a policy, which protects the environment and public health, governments shall have to adapt an. Integrated Water Management approach, facilitate public participation and awareness, disseminate existing knowledge, and generate new knowledge, and monitor and enforce standards



LEGISLATION AT EU LEVEL

- ❖ The legislation at EU level addresses the topic of sanitation and wastewater treatment through two directives, the Urban Waste Water Treatment (UWWTD) and the Water Framework Directive (WFD).
- ❖ The Water Framework Directive (2000/60/EC of 23 October 2000) combines protection of ecological status with long-term water use and sustainable development. Demand management and reduced water consumption, through the use of water charging and other economic incentives as well as the use of less water consuming technology, re-use of waste waters, changes in crop choices and development of efficient irrigation systems must be explored.
- ❖ The Water Framework Directive should be seen as an incentive for finding solutions, which build on a genuinely better balanced between exploitation of available resources and protection and improvement of the natural resources and natural ecology.

LEGISLATION AT EU LEVEL

- ❖ The UWWTD obliges the new member states to collect wastewater and install treatment plants in agglomerations with more than 2,000 people equivalent (PE).
- ❖ According to the UWWTD, agglomerations with 2,000-10,000 PE must set up appropriate treatment (biological treatment without nutrient removal), as well as the agglomerations with less than 2,000 PE which already have a sewerage network (Article 7 of the UWWTD). For agglomerations with less than 2,000 PE not having any sewerage network, there are no standards to meet.
- ❖ For these smaller agglomerations, a guide has been published by the European Commission in 2001, which illustrates examples of extensive and cost-effective wastewater treatment processes for smaller communities.

RECOMMENDATIONS

- Governments shall have to adapt an Integrated Water Management approach, facilitate public participation and awareness, disseminate existing knowledge, and generate new knowledge, transfer of experiences and monitor and enforce standards.
- Development of a cheap and user friendly wastewater treatment infrastructure, which guarantees the sustainability, and is adapted to the context, the financial capacity and the educational level.
- The law needs to implement control, vigilance and follow-up mechanisms creating penalty regulations, for it to be effectively carried out.
- Civic education and awareness about the risks related to a bad planning of the water use, and the necessity of the water re-use in guaranteed conditions.
- Water resources are overexploited, and some changes in the agricultural model have to be introduced: produce products that consume less water and the use treated wastewaters for agricultural purposes.

Water Culture for:

Saving water

Water re-using in guaranteed conditions

<http://www.meliaproject.eu>

Thank you for your attention