



MEDITERRANEAN PROCESS OF THE 10TH WORLD WATER FORUM REPORT



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1 The regional process

The Mediterranean preparatory process for the 10th World Water Forum, involving the main actors of the Mediterranean water community, was launched in Valencia, Spain on September 19-20, 2022, on the occasion of the 40th anniversary of the Mediterranean Water Institute (IME) under the slogan "*Our Mediterranean: water challenges and regional priorities for 2050*".



IME, coordinating the Mediterranean process, is an NGO that aims to facilitate and initiate regional cooperation actions in the field of water management and associated services between public and private institutions and operators in the Mediterranean region through its wide network of partners (water and sanitation managers, local authorities, specialized organizations, donors, engineers, technicians, and academics-researchers).



This 5th Mediterranean Water Forum entitled "Together for shared water sobriety" was held in Tunisia on February 5-7, 2024, at the invitation of the Ministry of Agriculture, Water Resources and Fisheries, under the patronage of the World Water Council, and was coordinated by IME with the support of the Secretariat of the Union for the Mediterranean.

This event was characterized by:

- More than 2800 participants during the 3 days of the Forum
- 35 countries represented, including 22 from the Mediterranean
- Ministerial meeting to draft the Tunis Declaration
- 21 side events
- 6 thematic sessions
- 2 technical visits

The fifth Mediterranean Water Forum put the lights on the worrying situation characterizing many parts of the Mediterranean rim, worsening with climate change and economic development. Many findings lead to the guiding principle worded as follows: "together for shared water sobriety". Successful experiences exist, and there is need now to multiply and accelerate them in a particularly hot regional context.



Mrs. Leila Chikhaoui Mahdaoui, Minister of the Environment and Mr. Abdelmonaam Belaati, Minister of Agriculture, Water Resources and Fisheries of Tunisia, when inaugurating the stands of the 5th Mediterranean Water Forum (Feb. 2024).

Side events and plenary sessions helped to collectively identify the most relevant solutions and recommendations for our region. They were conveyed to the World Water Forum in Bali, held on May 18-24, 2024, compared with those from other world regions and amended or enriched then summarized in this document, including key messages contained in the conclusions.



Mr. Basuki Hadilmujono, Minister of Public Works and Housing of Indonesia in Tunis inviting participants to go to Bali.

The experience and specificity of the Mediterranean region were valued in numerous events during which solutions and innovations were presented to the rest of the world: 3 high-level panels, 6 thematic sessions, 1 special session, 3 side events, 3 synthesis sessions and 5 pavilions set up by Mediterranean countries.

The Bali Forum brought together more than 20,000 participants representing more than 160 countries from around the world.

2 Introduction

"*We kill to get water*" is the title of an article published in a magazine reporting that in northeastern Kenya several clans regularly clash over the use of water; but the latest clash was deadly: armed men, the article reported, attacked a rival village to take control of watering holes, an attack that resulted in the death of seventy people, mostly women and children.

"*To govern is to rain*" (Alain Meyssonier),

"Regional cooperation must provide the same opportunities to all riparian countries and leave no one behind" (Almotaz Abadi),

"The right to water must never be compromised even in the case of armed conflicts, as currently in Ukraine or Palestine"

"Water is under attack, and so is the planet... Water is a political issue after having been technical and financial" (Loïc Fauchon)

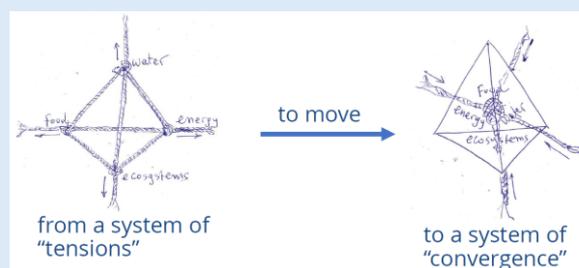
These quotes illustrate the fact that access to water is facing problems for which it is fundamental and urgent to find solutions, of a technical, economic and political nature.



3 Topics covered

3.1 Theme One: the water, energy, food and environment approach

The concept of "water, energy, food, ecosystems nexus" highlights the fact that these four areas, which require high investment or operating expenses but at the same time bring great benefits, are "under pressure", in the sense that a field that seeks to maximize its own productivity risks reducing that of others. On the contrary, the deployment of jointly designed projects between these fields leads to different but overall more efficient solutions. This is why the World Water Council also uses the term "alliance".

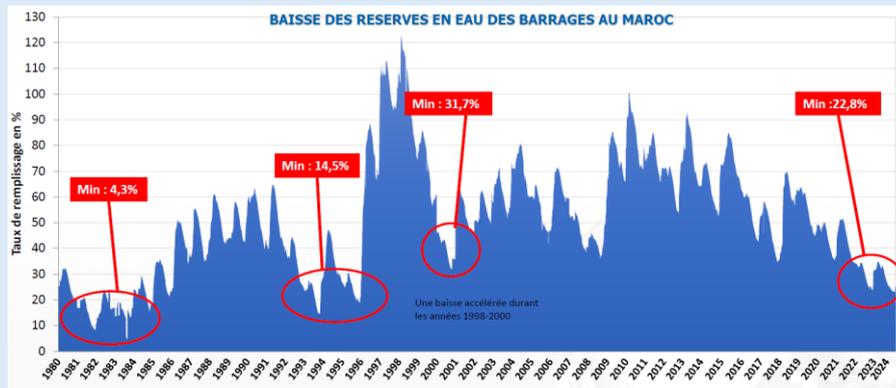


All this is particularly present in the Mediterranean where water, energy, food and the quality of natural environments are already under constraint and will be much more so in the future due to climate change, in the face of sharply increasing needs for demographic or economic development reasons: the equipment of dams has been developed almost to its maximum possible but with filling difficulties in some areas¹, irrigation is restricted by the availability of resources and limits exports or sometimes even food self-sufficiency², some groundwater tables are being polluted or depleted,³ etc.

¹ Morocco, Corsica, ...

² Tunisia, Catalonia, ...

³ northern Sahara, Jordan, ...



The nexus approach is already proving useful to analyze local situations. But moving from analysis to the implementation of joint projects or maintaining an intersectoral dialogue is not frequent. Integrated water resources management (IWRM), when practiced in a comprehensive manner, already provides a nexus-type approach when institutional, regulatory and fiscal provisions favor participatory approaches that include the different types of actors (drinking water and sanitation authorities, energy producers and distributors, farmers and environmental protection associations, fishermen).⁴

However, expanding IWRM with more extensive and permanent consultations between the water, energy, food and environment sectors makes it possible to achieve real and sustainable synergies on the economic, social or environmental levels. This is what has been observed in the more cross-sectoral approaches to adaptation to climate change⁵.

The Mediterranean process therefore recommends the following orientations:

- CONSIDER the environment (and therefore the quality of the environment and biodiversity) not as a constraint but as a sector in its own right with the right to water like other uses, to satisfy its needs and provide benefits.
- STRENGTHEN inter-ministerial coordination and permanent dialogue between sectors, which can be facilitated by regional bodies⁶, integrated water resources planning in synergy with the planning of other sectors (particularly with a view to adapting to climate change⁷), the involvement of women or research and training⁸
- MULTIPLY, in number and in financial support, projects that build a real synergy between water, energy, food and the environment, in particular in the following areas:
 - Desalination of marine or brackish water powered by renewable energies with control of the impact of discharges and intended for uses capable of supporting production costs
 - Transformation of the tasks of the sanitation services into a multi-service mission (wastewater for reuse, positive energy, fertilizers, pandemic monitoring)
 - Agriculture with a sustainable water footprint, i.e. based on the choice of crops that are better adapted to the climate, less export of virtual water or irrigated by less water-consuming systems, on the reuse of drainage water and on the preservation of soils
 - Preservation of wetlands while maintaining livestock, fishing or tourism activities
 - Hydropower that takes into account the needs of aquatic fauna and aims to provide

⁴ The case of the Basin Committees in France

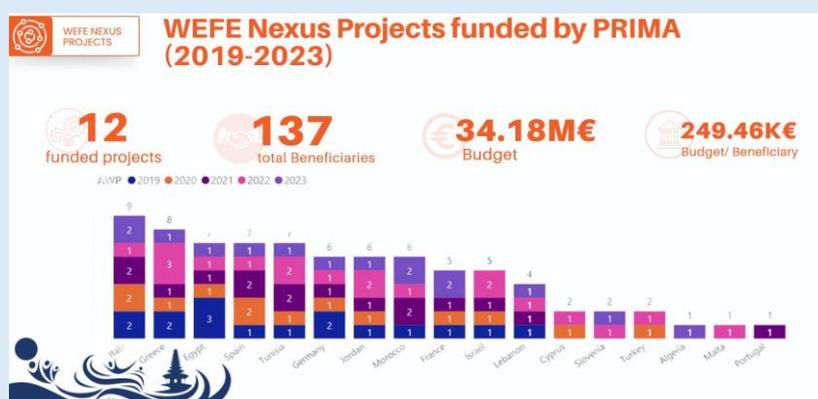
⁵ Tunisia, Rhône-Mediterranean and Corsica basins, ...

⁶ Water, Energy, Food and Environment Strategy under development by the UfM

⁷ IME Webinar Series on Sustainable Water Resources Planning

⁸ Interreg Next Med Program

the necessary regularity for intermittent renewable energies⁹



3.2 Theme Two: water mix and new vision of water demand by 2050

Many observations are shared by the countries bordering the Mediterranean:

- Pressures that are already exerted on water resources in a very strong way, such as on certain overexploited groundwater tables in many countries¹⁰, or on coastal wetlands that are disappearing. These pressures will increase further, particularly in the south due to demographic development, with water stress forecasts well above the sustainability threshold.
- Volumes of mobilized natural water are on a downward trend due to climate change, sometimes very clearly (probably by more than 30%) as indicated by the forecasts of inflows that have been made¹¹. In addition, there is the lack of minimum quality resources caused by poorly treated discharges.
- Investments to mobilize these water resources seem to have reached their limits, with the construction of less and less efficient reservoirs (lack of suitable locations, reduced rainfall, or siltation¹²), or with transfers that do not have the sufficient resources originally planned¹³.

Specific reference was made to the terrible situation in Palestine as a result of the conflict, in total disregard of fundamental human rights and in which water is used as a weapon of war and not of peace.

Faced with these observations, corrective or anticipatory actions are multiplying and, in line with this, they would allow the Mediterranean Region process to put forward the following recommendations:

- Continuing efforts to reduce water demand is essential, but by going beyond traditional actions to reduce irrigation or urban water losses and recycling, in particular by changing water uses more profoundly; for example when agriculture evolves towards new cultivating practices that consume less water and are better adapted to the future climate, when domestic water consumption is reduced as a result of consumer awareness campaigns or when ecosystems are considered as users with the same rights as others.
- In this regard, user communities, mainly farmers, play a fundamental role, which can contribute very effectively to the implementation of these national policies in the region's most water-intensive

⁹ The case of wastewater treatment plants in Spain

¹⁰ in Egypt or Tunisia for example

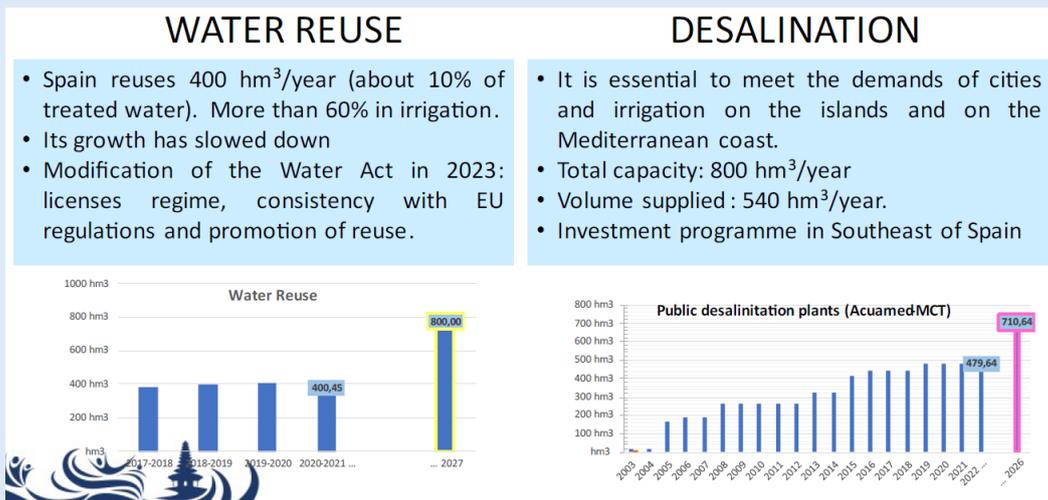
¹¹ as indicated by the flow forecasts of the Rhône or the Medjerda,

¹² As is the case in Algeria and Morocco for example

¹³ Such as the internal water transfers in Spain which are satisfactory but whose capacity can no longer be increased

sector.

- Non-conventional resources can offer great benefits by securing supply in times of drought. But their use must take into account the redistribution of the costs of these more expensive resources, the promotion of the use of renewable energies (both for cost and environmental impact reasons). Desalination will play an important role in some countries because of the large volumes of water it is likely to mobilize, and the promotion of reuse is particularly appropriate, as it helps to develop the collection and treatment of wastewater.



- Information systems and public control of all water withdrawals are essential.
- All actors and national authorities must review their water strategies, if only to anticipate medium-term situations that have changed. It is therefore time to strengthen water planning and management processes which, even if they seem to be based on IWRM principles, can take these principles into account in a more or broader way with more involvement of local actors, and coordination between sectors (in particular water, energy, food, ecosystems, public health, land use planning, gender and financing mechanisms).
- The development of experience exchange between actors, including from different countries, as well as professional capacity building programs is particularly relevant in this period of paradigm shift and the necessary acceleration of adaptation. This international cooperation should promote, by involving financial institutions, decision-making support mechanisms that take into account virtual water exchanges, carbon footprint, by-product recovery and non-market benefits.



3.3 Theme Three: New Sources of Water Financing, Performance Monitoring and Blended Finance

Projects in the field of water, and the development of renewable energies that must be associated with them, do exist both in terms of number and quality. But the possibilities of financing them are not up to the needs in all countries, in particular because of the guarantees (debt limitations) that are required of States when it comes to water resources development projects carried out by public structures. Renewable energy projects are hampered by a lack of suitable land, especially near the coast, and the inability to store energy unless there is a hydraulic system for energy transfer by pumping.

Projects involving private companies offer more financing opportunities, for example for the African Development Bank, or when it comes to public-private partnerships. But here too, it is not always easy to meet the necessary conditions, such as sufficiently long contracts with operators or an upward adjustment of water tariffs.

However, development banks have taken various initiatives to facilitate the financing of projects, such as periodic consultations between them or the agreement between the World Bank and the IFC to divide up the different components (commercial or non-commercial part) of large projects. On the other hand, globalized companies are becoming aware of the strategic importance of adapting to climate change and anticipating water-related risks for themselves and their customers¹⁴.

The Mediterranean process recommends going further by preparing the creation of an alliance for water projects between international financing agencies and public and private companies that are aware of the "water risk", ¹⁵drawing on the recommendations resulting from exchanges with a view to adapting to the specific needs of the region, namely:

- Firstly, develop subsidies to prepare projects according to the criteria of donors or support them with cross-cutting actions (training, data, involvement of stakeholders, exchange of experiences, evaluation) and secondly, imaginative financial arrangements are necessary so as not to disadvantage the rural environment, as well as for adaptation projects that will simultaneously include water components, agriculture and energy and for which local authorities or regional agencies will be able to provide guarantees in addition to State guarantees.
- Base blended finance¹⁶ on the virtuous chain of "*performance, > trust, > finance*", which can only result from preliminary work carried out jointly by public and private bodies, such as the field fight against water losses, the generalization of access to water and sanitation, and pricing that is sufficient to cover operating and maintenance expenses (even if subsidies are necessary for some types of consumers, contracts judiciously sharing the risks between the authorities organizing the service and operators, the establishment of regulatory functions within the State.
- Integrate into funding agencies' criteria for evaluating projects positive externalities provided by nature-based solutions, the protection of common goods such as wetlands, groundwater or agricultural and forest soils, and changes in consumption with a positive impact on water and carbon footprints.

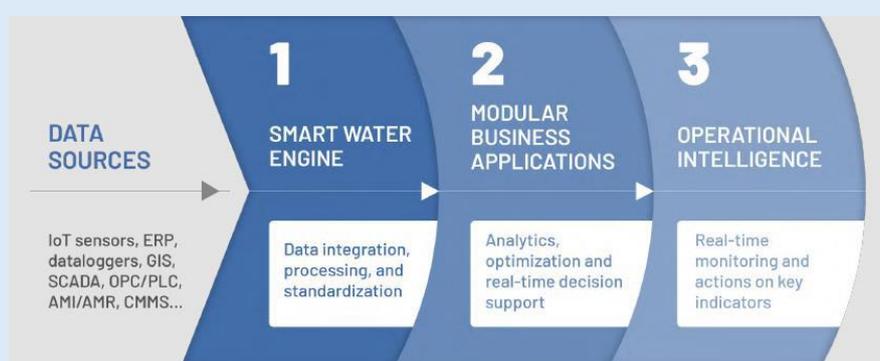
¹⁴ This is how the Danone group acknowledges that 95% of the water it uses is intended for agriculture, which will supply its factories and is the number one limiting factor of its activity. Danone therefore supports regenerative soil agriculture and the transition to drip irrigation as a priority. Similarly, the Office Chérifien des Phosphates group plans to reduce its fertilizer production but to develop its water production activity - by desalination and associated renewable energy - beyond its own needs to satisfy the water supply of its entire region.

¹⁵ For example, Michelin, which plans to reduce its consumption by 33% by 2030 worldwide, or AXA for the insurance world in the face of droughts and floods challenges

¹⁶ Background movement of blended finance

3.4 Theme Four: Digitalization and new solutions dedicated to the rational use of water resources

The problem of the management of conventional and non-conventional water resources is a vital issue for humanity and the environment, but it is above all particularly complex to address because of (i) the specificity of each territory, (ii) the needs from both a qualitative and quantitative point of view of each use, whether domestic, urban, agricultural, (iii) the often suffered spatial-temporal variability of the availability of resources that often does not much the needs of the different uses, particularly in periods of drought, and (iv) the absolute necessity to preserve and restore all ecosystems, if only to preserve the ecosystem services they provide us. Therefore, knowledge, monitoring and control of all the water used is essential, whether this water comes from inside or outside the country.



To meet these challenges, innovative solutions such as digitalization, AI, new technological solutions and the contribution of human and behavioral sciences will play an essential role in the rational management and preservation of water resources.

The digitalization of solutions is increasingly present but requires development and integration into countries' water information systems: as such, we aim to (i) collect in real time all monitoring and surveillance data from all water systems and public water domains in terms of quantity and quality, (ii) the systematic use of smart water distribution networks, (iii) decision-making tools for irrigation in agriculture, especially for the so-called "rain-fed" sector which will need water, using GIS and satellites, (iv) innovative systems for the management of water demand and more specifically of the water footprint, i.e. systems to reduce all forms of water loss and waste, but also food, (v) wastewater treatment systems that allow the safe reuse but also the return to nature of water of an adequate quality for biodiversity.



Precision irrigation

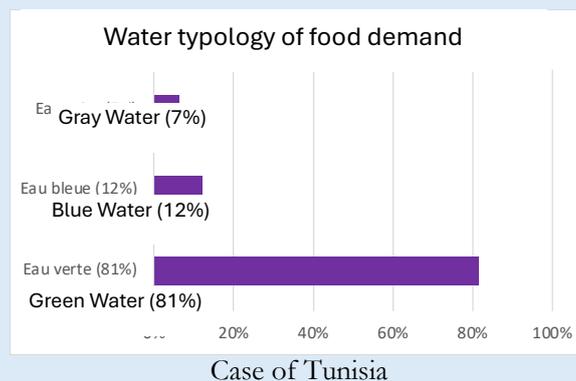
All these sub-themes were addressed in an interdisciplinary and intersectoral approach to ensure a smooth integration of these technologies with strong governance, increased awareness and collaboration among

stakeholders to maximize the benefits and address the challenges related to water management in a digital context.

The issue of water is no longer exclusively technical because the technologies exist to solve the majority of the problems raised. Water has a political dimension and water represents power. This is why the control of access to the resource must be organized by a very high authority on the basis of the best technologies and innovations that exist.

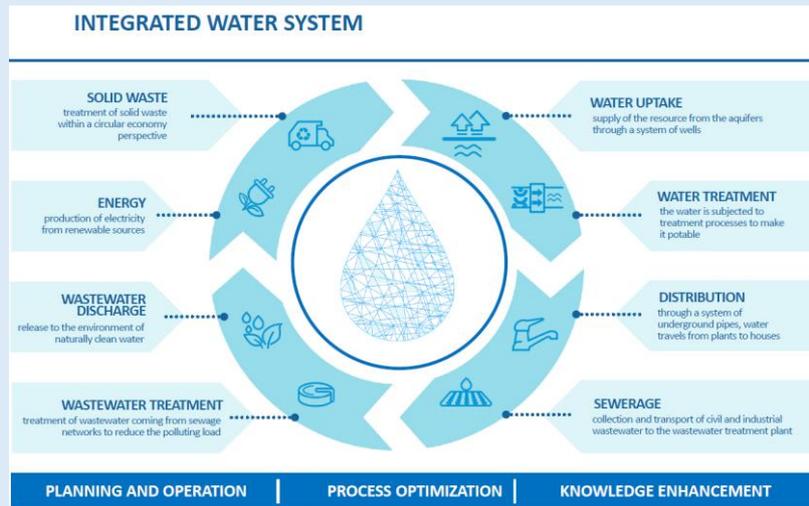
Based on concrete examples on all these aspects, the Mediterranean Region process makes the following recommendations:

- Solutions exist but politicians must seize them; *think tanks* such as IME are important to make this link. Water has a very strong political dimension and a regional, even global, dimension given the dependence of countries on each other expressed in their water footprint.



This is why public authorities have a key role to play in organizing and accrediting information systems that cover all water resources and their uses, in an integrated approach to water cycles, including in terms of water footprint. These information systems should be accessible to users so that they can take advantage of them (farmers, industrialists, residents, associations, scientists, journalists) and deploy their own digitalization on a common basis.

- These water information systems must also be fed by a variety of users, which requires the definition of shared data repositories. These systems are often unified at the national level, but they also have to communicate with those of other countries or sectors other than water, such as energy, agriculture, etc. The "all-in-one" is not realistic, hence the importance of digitally sustainable solutions.
- We must support the operators who have a crucial job because they are the ones who implement solutions by providing them with cutting-edge technical and technological support; Their digital solutions must be accessible to users at all times and not be limited to water bills.



- Ensure enhanced scientific and technological knowledge exchange and collaboration to harness the benefits of emerging technologies hence optimize the use and management of water resources through the use of digitalization. But let's be careful: it is necessary to create close collaboration between water and IT professionals to find a common language and understand each other when carrying out digitalization projects, in order to achieve the desired results.

				
WATER	WASTEWATER	AGRICULTURE	IRRIGATION	WATER RESOURCES
Optimisation the processes of water collection, purification, distribution and commercial cycle.	Optimisation of sewerage networks (wastewater and stormwater) and wastewater treatment plants (WWTP) to prevent problematic events.	Innovation and automation of irrigation infrastructure and operation through technological solutions.	Technological solutions for the integrated control of irrigation in landscaped areas and optimisation of resource consumption.	Early Warning System with integration of hydrometeorological information, simulation and forecasting, alarm management and dashboards for event and water resources management.

3.5 Theme Five: Prevention and Management of Drought and Flood



The Mediterranean is hit hard by the development of extreme weather events, with droughts and floods having catastrophic consequences for people living around the Mediterranean, and climate scientists predict that these events will worsen. The Mediterranean region is considered a "hot spot" of water scarcity, exacerbated by the effects of climate change.

As a result, "the increase in the frequency and intensity of droughts and floods in the region poses a significant threat to water security and livelihoods. These recurrent phenomena “considerably increase the costs of water security in the Mediterranean” as indicated by the declaration of the ministers and heads of delegation meeting in Tunisia.

The consequences go beyond the Mediterranean countries via the various food exchanges with other countries of the world, which implies that the consequences of increasingly important economic losses and remediation costs going beyond the capacities of the countries.

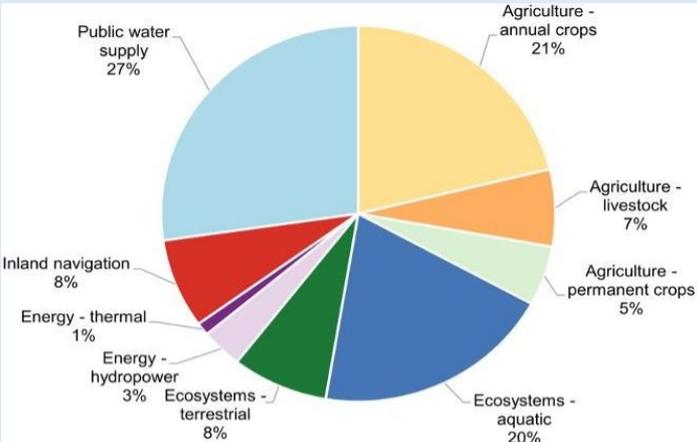
The massive use of seawater desalination risks compromising the biodiversity of the Mediterranean, a semi-enclosed sea, which requires "a transition to a sustainable blue economy that will be of paramount importance in the Mediterranean region" as specified by the Tunis Declaration of Ministers.

The discussion focused on the analysis of experiences developed around the Mediterranean, in Europe, North Africa or the Eastern Mediterranean, to adapt to climate change by identifying guidelines that can be applied on a large scale in the field of adaptation to extreme events related to climate change. Priority was given to measures and actions that were both innovative and operational, but also to soft and hard solutions (early warning systems, planning, changes in practices, nature-based solutions, regional and global collaboration, etc.).

A common observation: the Mediterranean is being hit hard by the evolution of extreme weather events, droughts and flash floods that generate catastrophic consequences for the populations around the Mediterranean. Climate forecasts predict that these events will worsen. Coupled with a much greater temperature change than the global average and a sharp degradation of natural ecosystems, the water crisis management situation is likely to become a permanent situation in the region. Also, external shocks can amplify the impacts of intensifying extreme events by producing cascading impacts, which countries alone cannot bear. Residual or even irreversible impacts will have to be identified in order to access the Loss and Damage Fund set up by the Paris Agreement.

As a result, the Mediterranean Region process has the following main recommendations:

- Improve knowledge of these risks and create shared information systems;
- Implement preparedness operations to deal with crisis management, especially in a world shaken by an unprecedented number of crises of all kinds, creating cascading impacts with the effects of climate change making the management of the water crisis even more complex;



Drought Impacts Database (JRC 2023)

- Support countries' efforts to set up early warning systems for both floods and droughts by 2027 at the latest;

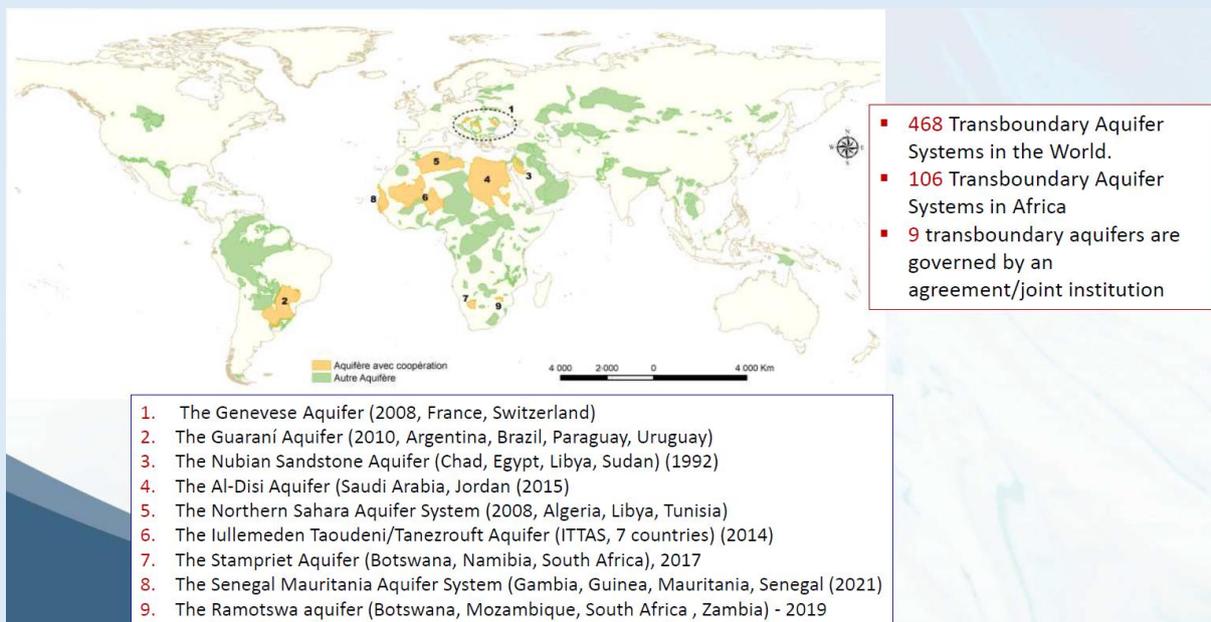
- Adopt disruptive approaches in development or management to adapt to new phenomena;
- Insist on the need to strengthen and simplify investment and operating financing in favor of systems essential to the resilience of populations;

3.6 Theme Six: Regulation, Right for Water and Water Laws, conflict prevention/resolution



"Water is a common good, the opposite of a commodity or a weapon" (*Fadi Comair, Director of the Cyprus Institute*)

As soon as the water resource becomes insufficient in quantity or quality, conflicts easily arise because each water use has an impact on other stakeholders: conflicts between different types of nearby users taking from the same resource, or between users who are distant but located upstream and downstream of a river. Fauna and flora (biodiversity) are to be considered as water users in the same way as others (domestic, industrial and agricultural). Conflicts between countries exist and are similar in nature to conflicts that occur between two regions or between different types of users within the same country, but they are more difficult to resolve in the absence of common reference frameworks for several countries.



Very few groundwater tables are the subject of international agreements. Source: OSS

The need to organize the protection of water and its distribution among the various potential users has been taken up by public authorities from the outset; they manage this regulatory function according to a variety of methods: legislation (authorizations, controls, court decisions, taxes), institutions (authorities organizing public services, basin bodies, professional or associative organizations) and cooperation (partnership agreements, consultation, information, pricing, training).



The Mediterranean region has experienced both the negative consequences of water-related conflicts – and how dramatic they are still today – in terms of droughts or uncontrolled pollution, with their impact on agricultural or energy production, on wetlands or forest fires, on health or migration, but also the benefits that can be derived from "win-win" type of cooperation. between actors from different countries as well as between regions or users of the same country.

Various tools based on experience are available: the WASHREG method to strengthen the regulation of the water sector¹⁷, citizen participation with the involvement of women in particular¹⁸, management practices of surface or underground transboundary water resources (production of shared technical and socio-economic data, consultation mechanisms, capacity building or model conventions), ¹⁹or in terms of training²⁰.



The Mediterranean Process therefore submits the following recommendations:

- To avoid conflicts, regulation is an essential pillar of the governance of the water and sanitation sector. Indeed, it is necessary to start by formulating common "rules of the game" in terms of regulations and controls, data and reports, public opinion and financing (fees, aid, pricing). This governance must apply not only to water and sanitation services but also, more broadly, to IWRM actors and the issue of the water, energy, food and ecosystems nexus.

¹⁷ applied to the case of Iraq

¹⁸ applied for example in Tunisia to resolve the conflicts between SONEDE and farmers, sources of nitrate pollution of aquifers, or in France for sub-basins with a quantitative water deficit

¹⁹ with examples on the aquifer of the north of the Sahara or on the Jordan basin

²⁰ on IWRM or desalination by Spain and Malta

- To this end, decision-makers and other stakeholders in the water and sanitation sectors are invited to take advantage of the development tools, capacities and technical assistance made available to them by international organizations and their partners to strengthen their skills in the field of regulation.
- It should be noted that, for effective regulation, it is necessary to establish transparent, relevant and timely information, the accountability of the various stakeholders and the independence of the regulator.
- The participation of local communities in decision-making related to the management of water resources and sanitation must be promoted.
- Good management of transboundary water resources, or water-diplomacy, is possible with adequate representation of local actors, especially women, joint planning based on shared data, and consultation based on mechanisms and not on rigid water quotas. This is in accordance with the applicable principles of international law, in particular the "non-damage" and "prior notification" principles.
- Sustainable and water-efficient agricultural practices must be promoted to prevent the risks associated with the overexploitation of water resources. Once this is done, the use of non-conventional water, pending reinforcement of renewable energies in parallel, appears to be one of the few cards to deal with the phenomenon of "scissors" (decreasing resources facing an increasing demand) during the transition period to a sustainable future. The water exploitation index (SDG 6.4.2) should also be completed to include non-conventional waters.
- International cooperation must be developed not only between governments but also between basin bodies, regions, local authorities or public and private organizations with tools such as decentralized cooperation, multi-site experimentation projects, international research and training programs as well as exchange platforms and professional networks.

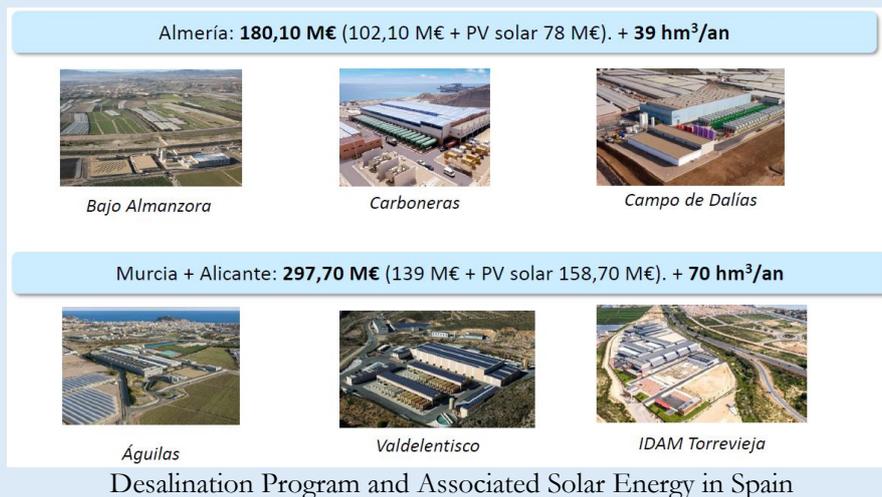
3.7 High-level panel on the Observatory of Non-conventional Water Resources and Associated Renewable Energy

For four years now, the World Water Council has been stressing that water and energy are fighting the same battle. Today, thanks to the considerable results in reducing energy consumption and costs, desalination and recycling have spread rapidly, helping to reduce the overexploitation of traditional water resources, especially groundwater. But there is a common understanding that the use of these new resources cannot be developed without relying on renewable energies, in order to be in line with global greenhouse gas emission reduction targets.

The time has come to disseminate this concept through an Observatory, which is not simply a tool but with the broader ambition of a Centre of Excellence aimed at sharing experiences for decision-makers.

The mobilization of non-conventional water resources must meet certain conditions.

Technological developments and the acquisition of experience now make it possible to design and carry out desalination or water recycling projects in good technical and economic conditions.



However, these projects remain more expensive and complex than conventional water projects: they must therefore be genuinely positioned in the set of measures to be taken towards a balance between water demand and supply and they must call on best practices.

This means that on the one hand the priority remains water savings and the establishment of a real culture of performance, the sobriety of uses and the recovery of the costs of existing water services; then come the collection of rainwater and runoff, the recycling and reuse of wastewater and finally desalination. At the same time, project design must integrate proven solutions for renewable energy supply and energy efficiency, environmental impact control and recovery of sanitation by-products.

In the field of water, countries all face challenges, but of different natures, and non-conventional waters are often part of the solutions capable of meeting these challenges.

The countries represented at the high level (Ministers, Secretaries of State) are facing significant water stress that will deteriorate in the future; they have already mobilized non-conventional waters or will have to make extensive use of them. But some insist on the priority to be given to the search for efficiency, recycling or energy savings in existing systems (Egypt, Turkey, Tunisia) with the addition of respect for the right to water (Palestine). Others stress that the reuse of wastewater should be pushed to the limit (Chile, Egypt) but will be complemented by renewable energies or the development of desalination for agricultural projects (Saudi Arabia). Others insist on informing the population, the proper preparation of projects and the case of small and isolated installations (Italy, Malta). Finally, some insist on the importance of a long-term strategic vision that can mobilize different sectors, research and the private sector (Morocco, Spain).

International organizations and private companies, also represented at the highest level (DGs), express their various needs such as the dissemination of research results (Prima, IDRA), security in the face of water risks (OCP, World Bank, IsDB, AfDB), the definition of the right conditions for desalination to contribute to solving agricultural challenges (FAO), the sound design of projects, including for islands (World Bank, CAF), the support that public authorities can provide to ensure the long-term viability of projects and the full exploitation of resources that can be provided by sanitation systems (Almar, Aquafed).

National authorities, private companies and international organizations are very supportive of an Observatory and are outlining its objectives.

The countries, including the most advanced in this area, are all interested in an Observatory that allows the dissemination of good practices and the sharing of experience, and they are ready to contribute their know-how. They wish to direct its activities towards advice or support open to all types of actors but at the level of decision-makers.

Topics such as wastewater reuse standards, intersectoral planning, new financing modalities including public/private partnerships, capacity building, job creation are already mentioned.

The Observatory initiated on the Mediterranean region will have no obstacle or difficulty in expanding to the Middle East or gradually welcoming other interested countries in the world.

The Union for the Mediterranean sees this as an opportunity to broaden the reflection of the WASH interregional working group to this theme.

Funding agencies and other participating international bodies believe that the Observatory would be useful in their own work of assisting and evaluating infrastructure projects. Many do not see any difficulty in raising the necessary funding for the Observatory, especially if long-term financial support is put in place.

4 Conclusion: Key messages from the Med Process

These key messages are:

- Ensure integrated and participatory management of all types of water resources and associated demands with a realistic hydrological pre-planning framework.
- The use of non-conventional water, which is costly and energy-intensive, is not recommended in the absence of considerable efforts to reduce water and energy consumption, prior and in parallel, on the part of water and energy consumers to reduce water losses and consumption as well as greenhouse gas emissions. That being said, marine or brackish water, wastewater and rainwater or runoff are new water resources that need to be mobilized, through desalination or recycling, to move towards sustainable management of water resources. An international platform for the exchange of experiences on this subject, called the "Observatory", seems very timely.
- Wastewater and stormwater management, once considered only an expense, is now becoming a significant resource in terms of water, energy and fertilizers, which also plays a role in public health.
- Implement in each country modern tools (Early Warning System) for knowledge and prediction of the impacts of climate change on water management (floods and droughts) allowing adaptation and risk management.
- Prioritize innovations, technological and regulatory solutions, adapted to produce more and consume less, protect resources and improve the performance of services.
- Develop cross-border water-diplomacy actions and apply the same method to solidarity between basins in the same country as well as to conflicts of use between sectors of activity in the same sub-basin.

5 Annexes

5.1 List of speakers in the Tunis and Bali sessions with their names and positions

Forum Méditerranéen de l'Eau, Tunis 2024

BZIOUI Mokhtar, Scientific and Technical Council of IME
COMAIR Fadi, The Cyprus Institute
MARTINEZ Ramiro, REMOC
MEYSSONNIER Alain, Mediterranean Water Institute
OJEDA COUCHOUD Juan, TYPASA
PHILIP Jean-Marc, Société Canal de Provence
ROCHE Nicolas, Professor at Aix-Marseille University
ROUMAGNAC Alix, PREDICT SERVICES

Forum Mondial de l'Eau, Bali 2024

ABADI Almotaz, Union for the Mediterranean
ABIS Pier Paolo, Acquedotto Pugliese
ABU ZEID Khaled, CEDARE
BEN KHATRA Nabil, Observatory of Sahara and Sahel
BEN RABEH Wiem, National Company of Water Exploitation and Distribution (SONEDE)
BISTAGNE Valérie, World Water Council
BURAK Selmin, International Expert (IME Member)
CIFRES Enrique, eWater
DARRIET Jean-Pascal, Lydec
DI PIERRO Alessandro, Acquedotto Pugliese
DODO Abdelkader, Observatory of Sahara and Sahel
EL HAFIDI Abderrahim, National Electricity and Water Board (ONEE)
EL KASMI Lalla Asma, National Electricity and Water Board (ONEE)
EL RHERARI Aissam, Ministry of Equipment and Water (Morocco)
ESTRADA LORENZO Federico, Center for studies and experimentation of public works in Spain (CEDEX)
FAUCHON Loic, World Water Council
FERRERO Thomas, MEOSS
GAFREJ Raoudha, International Expert (IME Member)
GARCIA MANZANA Marc, Jucar Hydrographic Confederation
GLATRE Léa, Prince Albert II of Monaco Foundation
GONZALO Mirian, Union for the Mediterranean
GUARDIOLA Joan, Xylem
GUERBER François, Scientific and Technical Council of IME
ILLA GARCIA Oriol, Area Metropolitana de Barcelona
KHEMIRI Mariem, World Water Council
LAGARDE Catherine, World Water Council
LARONDE Stéphanie, International Office for Water (OiEau)
MARCUELLO OLONA Concepcion, MITECO
MARTINEZ COSTA Ramiro, REMOC
MEYSSONNIER Alain, Mediterranean Water Institute
MONDIELLI Philippe, Prince Albert II of Monaco Foundation
MORANTE Johana, World Water Council
NEBOT Chema, IDRICA
OJEDA COUCHOUD Juan, TYPASA
PASQUIER Frédéric, DANONE
PERUCHO MARTINEZ Aurea, Center for studies and experimentation of public works in Spain (CEDEX)
PHILIP Jean-Marc, Société Canal de Provence
REVUELTA PEREZ Juan Manuel, FINNOVA

RIGAL Sébastien, WATURA
ROUMAGNAC Alix, PREDICT SERVICES
SAPIANO Manuel, Energy and Water Agency (EWA)
SEWILAM Hani, Ministry of Water Resources and Irrigation (MWRI)
SOULA Ahmed, National Company of Water Exploitation and Distribution (SONEDE)
SUAREZ Alejandra, Suez
TARDIEU Eric, International Office for Water (OiEau)
TAZI SADEQ Houria, COALMA
URREA MALLEBRERA Mario Andres, Hydrographic Confederation of Segura
VALERO DE PALMA Juan, FENACORE
VERCAMBRE Marie-Laure, French Partnership for Water
VIDENINA Yunona, BRL Ingénierie
YARD Laurène, World Water Council
ZEROUALI Abdelaziz, Ministry of Equipment and Water (Morocco)
ZIYAD Abdeslam, Ministry of Equipment and Water (Morocco)

5.2 List of participants of the High-Level Panel

Ministers and official delegate

H.E. Prof. Hani Sewilam, Minister of Water Resources and Irrigation of Egypt
HE Mr. Ebubekir Gizligider, Deputy Minister of Agriculture and Forestry of Turkey
HE Prof. Francesco Corvaro, Special Envoy for Climate Change of Italy
Mr. Carlos Estevez, Minister of Public Works of Chile

Presidents, CEOs of international organizations or private companies

Mr. Loïc Fauchon, President of the World Water Council (WWC)
Mr. Lifeng Li, Director of the Land and Water Division of the Food and Agriculture Organization of the United Nations (FAO)
Mr. Abderrahim El Hafidi, Director General and Mrs. Asma Elkasmi of the National Office of Electricity and Drinking Water (ONEE Morocco)
Mr. Almotaz Abadi, Deputy Secretary General of the Union for the Mediterranean (UfM) in charge of Blue Economy and Environment
Ms. Concepcion Marcuello, Deputy Director of Water of Spain
Ms. Mona Fakhri, Director of Water of Lebanon
Mr. Manuel Sapiano, Director of the Energy and Water Agency of Malta
Mr. Cyril Courjaret, AQUAFED
Mr. Mohamed Abuhaid, Saudi Irrigation Organization, Saudi Arabia
Mr. Mohamed Znibar, OCP Morocco
Mrs Shannon McCarthy, IDRA Italy
Mr. Carlos Cosin, Almar Water Spain
Eng. Hala Barhoumi, Palestinian Water Authority, Palestine
Mr. Octavi Quintana, PRIMA European Union

Representatives of international donors

Mrs. Sumila Gulyani, World Bank
Mr. Franz Rojas, Development Bank of Latin America (CAF)
Mrs. Yasmin S. Siddiqi, Asian Development Bank (AsDB)
Mr. Belgacem Ben Sassi, African Development Bank (AfDB)
Mrs. Victoria Delmon, International Finance Corporation (IFC)
Mr. Nizar Zaied, Islamic Development Bank (IsDB)

Moderation of the High-Level Panel, 10th World Water Forum in Bali, Indonesia 2024: Alain Meyssonier, President of the Mediterranean Water Institute (IME) & François Guerber, Vice-President of the Scientific and Technical Council of IME.

5.3 List of Tunis side events with organizers

Organiser(s)		Side event title
	Coopération suisse en Tunisie	<i>Cross-border water management: Towards shared stability, security and prosperity</i>
	GWPMed	<i>Using system thinking to enhance Water Quality, Sustainability and Climate Resilience in the Mediterranean source-to-sea continuum – The MedProgramme</i>
	Agence de l'Eau Rhône Méditerranée Corse	<i>A basin plan to adapt to climate change</i>
	UfMs/GWPMed AECID/CAWTAR	<i>The links between gender and the WEF E Nexus in the Mediterranean</i>
	El Kanaouet	<i>Transporting drinking water using prestressed concrete pressure pipes</i>
	Ministère de l'Environnement Tunisie	<i>National Strategy for Ecological Transition</i>
	Business France	<i>Actions for Water and Climate</i>
	GVA Interred Next Med	<i>Funding opportunities for water management through Mediterranean cooperation: The Interreg NEXT MED Programme</i>
	UfM/GwpMed (1)	<i>2nd WEF E Nexus Regional Roundtable in the Mediterranean</i>
	Euro mediterranean Center on climate change	<i>Transformative management of water resources in the Mediterranean region</i>
	Coopération italienne	<i>New technologies, research and sustainable innovation in the water sector in Tunisia and Italy</i>
	Ministère Agriculture, des ressources hydrauliques et de la Pêche de Tunisie/GIZ Programme Eau	<i>Stratégic tools for water management</i>
	Office National de l'Assainissement	<i>Treated wastewater reuse strategy 2050</i>
	Organisation Internationale du Travail	<i>Water and community resilience: the experience of the International Labour Organisation in the governorates of Jendouba and Kébili</i>
	Société du Canal de Provence	<i>Agritech and remote sensing for sustainable irrigation</i>
	IUCN-Med/WWF Afrique du Nord	<i>Opportunities and solutions to reinforce the governance of the Medjerda basin</i>
	AECID/Direction Générale de l'Eau, Ministère espagnol	<i>Bridging Water Capacity Gaps in the Mediterranean</i>
	Agence de Protection et d'Aménagement du Littoral	<i>Vulnerability and adaptation of the Tunisian coastline to marine submersion</i>
	SONEDE	<i>SONEDE's strategy for supplying drinking water in a difficult climate change context</i>
	Organisation des Nations Unies pour l'alimentation et l'agriculture	<i>The national adaptation plan to climate change in the agriculture and food security sector</i>



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