



Union for the Mediterranean
Union pour la Méditerranée
الاتحاد من أجل المتوسط



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CONCEPT NOTE

SESSION 1 “WATER FOR HUMANS AND NATURE: WEF NEXUS”

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As the effects of Global Change become more intense in the Mediterranean Region, other external factors such as the Covid-19 pandemic and the war in Ukraine are putting the endemic problems of water scarcity under major stress, as well as inflating conflicts in water use. In this complex and challenging context, both the SDGs and the Ecological Transition policies demand specific and immediate actions to reach the globally accepted goals and objectives in terms of decarbonization and clean energy production, universal access to water and sanitation, drastic reduction of poverty and hunger and sustainable use of natural resources. Achieving these objectives requires a holistic and integrated approach, as the interactions between the different sectors are becoming more intense. For this reason, the analysis of the WEF (Water – Energy – Food – Environment) Nexus is no longer an analytical tool to further understand the complex interconnections, but a mandatory instrument to develop sustainable and efficient solutions that tackle the mentioned global challenges.

The WEF Nexus is becoming increasingly important in the development of water policies in the Mediterranean region. The Med region is particularly vulnerable to the interrelated challenges of water scarcity, food security and climate change, and the WEF Nexus approach offers a holistic framework for addressing these challenges. A clear example of this is the importance of the WEF Nexus in the Union for the Mediterranean’s (UfM) Water Agenda, as it recognizes the interdependence of water, energy and food systems and highlights the importance of the WEF Nexus approach in addressing the region’s water challenges.

This session wants to go beyond the theoretical framework of the WEF Nexus approach to identify the real barriers that are jeopardizing the implementation of the necessary solutions that must be deployed urgently. Specifically, the following aspects will be analyzed and discussed:

- As the availability of Conventional Water Resources (continental surface water and underground water) is being reduced by Global Change, the access to non-conventional water resources is an urgent need in most Mediterranean countries. Desalination and water reuse are of paramount importance in the water policies and development plans of most of the Mediterranean states, especially in the south-west. While technological gaps are rapidly being overcome, the focus is now put on ensuring the sustainability of desalination as a global solution. Aspects such as coastal ecosystems impact, energy consumption, valorization of waste and sub-products, and limitations of its use in irrigation (a key factor in the Mediterranean) are some of the main topics that should be addressed under an obvious WEF Nexus.

SESSION 1

- An ecological transition based on decarbonization demands of further development of renewable sources of energy, such as solar and wind. The Mediterranean region is a privileged area in terms of accessibility to both forms of clean energy, but they lack adequate regulation. Hydropower pump – storage facilities emerge as a key element to complete a fully decarbonized energy mix. Tackling investment costs, long implementation periods and obsolete regulation are the major drawbacks for the development of new projects. How to overcome these challenges will be one of the objectives of the session.
- Irrigation and food production are still the major water consumers in the Mediterranean region. Irregular distribution of rainfall and water has been traditionally solved developing ingenious hydraulic works, including water transfers, dams, etc. The pressing environmental constraints and an increased competition for water uses are questioning the adequacy of “traditional” solutions. In this context, water diplomacy emerges as a necessary tool to avoid tensions among territories and users, that should be implemented under a WEF Nexus umbrella.

In the preparation process for the Med Forum, additional topics have been raised in the webinars and technical seminars organized by the IME that completes the aforementioned aspects. The most relevant one has been included as part of this Concept Note:

- Governance should be a main aspect to consider within the Nexus context, in this sense the different sectoral plans should be coordinated and cannot be contradictions in the strategic policies to be developed by each one. This especially relevant in the case of the water resources management plans.
- Special emphasis should be put in water-demand driven policies as conventional policies based on infrastructures become less efficient. Additionally, control of leakage and water loses in large water convey systems and urban networks, saves in energy consumption in desalination and water treatment (reuse), and other actions that reduces water demand without increasing the pressure in the water resources should be also prioritized.
- Development and/or update of the indicators related to the efficient integration of the different sectors, especially water and energy, extended to the entire water cycle.
- The cost of energy in the non-conventional water resources (especially desalination) is a common matter of concern. Experiences of how to reduce it promoting the use of renewable energy should be taken as a priority.
- The relevance of the Environment and especially of the freshwater ecosystems should be emphasized as there is a real risk to underestimate it when urgent measures referred to water scarcity and satisfying water demands are considered. The reduction of pressure on overexploited or polluted water resources should be always a priority.
- The NEXUS approach should be applied to choose the best added value crops, considering water and energy costs and impacts in the environment as a cost of opportunity.

In this context, the objectives of the session on the WEF Nexus will be to highlight the need for the adoption of Nexus in the management of water resources, both in terms of governance and in terms of seeking appropriate funding and improvement of knowledge and to present specific solutions that could be brought to the Bali World Water Forum as examples of how difficulties in the WEF Nexus implementation could be overcome and practically adopted to archive the objectives of sustainable development.