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Mediterranean
Action Plan
Barcelona
Convention



OUTLINE OF THE

Strategy for the Water-Energy-Food-Ecosystems Nexus in the Mediterranean Source to Sea continuum

Draft, January 2024

NOTE:

The present brief document provides an initial outline of the Strategy contents and limits to its related key elements.
It aims at providing a basis for consultation with and for receiving initial feedback by interested stakeholders

Draft prepared by:



In the framework of:



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Mediterranean Coastal Zones:
Managing the Water-Food-Energy
and Ecosystem NEXUS

“Mediterranean Coastal Zones: Managing the Water-Energy-Food and Ecosystems Nexus”, led by GWP-Med and financed by GEF UNEP/MAP

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PRIMA Partnership for Research & Innovation in the Mediterranean area

1 Context

Water, energy, food and ecosystems are essential resources for human livelihoods and socio-economic development. Agriculture is the largest freshwater consumer in the region. Energy generation is dependent on water for extraction of fossil fuels, hydropower, cooling thermal power plants, biofuel crops, etc. Both the food and water sectors are energy intensive.

The sustainable management of all four Water-Energy-Food-Ecosystems (WEFE) components is fundamental for peace, security, health and prosperity. However, because these sectors are heavily cross dependent such management cannot be effectively obtained unless it is done, from the design phase, in an integrated way allowing each one of the four sectors/components to become, on equal footing, an “entry point” into a WEFE Nexus.

The WEFE Nexus approach in the Mediterranean region could be better understood and implemented, given the additional fact that the water flows from all different sources end to the same sea, providing a unique spatial Source to Sea (S2S) continuum. Combined pressures of all sectors’ demands are exerted on ecosystems and the critical services they provide. These exacerbate in the coast, including aquifers, wetlands, and other fragile systems, also affecting the marine environment and economy.

The twin climate change and biodiversity loss crisis enhance risks to the sustainable supply of water, energy, food and the functioning of terrestrial and marine ecosystems, threatening nature and human livelihoods, social and political stability and development. Such risks are influenced by governance failures and socio-economic challenges, such as population growth, urbanization, economic activities that are concentrated at large at the coastal zone, unsustainable economic growth and consumption patterns, migration, and war. The disruption of supply chains has been an extra factor of pressure over last years. These challenges influence the availability and quality of natural resources and enhance risks when unilateral attempts to reduce these in one WEFE sector may stimulate risks on others.

Sectoral governance and lack of adequate policy, management and implementation tools for integrated approaches among WEFE sectors and the spatial areas where the activities are implemented, constitute an unsuitable framework for effective risk response.

At the same time, new powerful tools, like digitalization and better use of space technology, become available and widely used by all sectors. The proper design of action addressing the challenges of WEFE components should also take into consideration the socio-economic and cultural continuum of the North-South, East-West interface, which the Mediterranean represents. In this regard, coordinated action at national and Mediterranean levels is needed to reduce risks and increase combined benefits.

There is a growing recognition that system-thinking using the combined WEFE Nexus and S2S management approach, enables sectoral and spatial integration for policy development and implementation, and management of natural resources and socio-economic activities, away from the “silo” sectoral approach in an innovative and effective way. This has the potential to provide multiple benefits to society, by supporting: (a) adoption of sustainable socio-economic practices, contributing in reducing environmental footprint and reversing biodiversity loss; (b) increase of resilience and enhance adaptation to climate change; (c) achievement of global policy goals, such as Sustainable Development Goals (SDGs), and goals related to green energy transition, circular economy, and healthy living; (c) regional cooperation, social cohesion, conflict prevention and peace building; and (d) economic development, by supporting job creation, enabling investments opportunities and investment risk management, while fostering regional economic integration, among others by promoting Circular and Blue Economy.

In that context, this Strategy aims to enable the mainstreaming of system-thinking and the application of the WEFE Nexus approach in the Mediterranean Source to Sea continuum within governance structures at different levels. Enabling a shift from 'Nexus thinking' to 'Nexus doing', the Strategy should assist countries and stakeholders in improving the integration of policy and management frameworks and instruments across WEFE sectors and spatial components, thereby increasing capacity to minimise risks and maximise benefits related to human livelihoods and socio-economic development in the Mediterranean S2S continuum.

2. Goals, objectives, and directions for action

Three Goals, supported by a set of seven Objectives, are set to achieve the Strategy aim. To this end, leadership and political will are fundamental. For implementing the needed effective governance, all the tools should be employed, including policy formulation and enforcement, investment, proper utilisation of science and technology as well as encouragement of ownership by and engagement of non-state actors, the contribution of whom is fundamental. The Goals and Objectives are complemented with examples of directions for action.

Goal 1: Appropriate institutional arrangements, policies, and cooperation frameworks are established at country and regional levels.

Implementing the Nexus approach requires, and leads to, institutional and policy frameworks that provide for coordination between different levels of governance and integrated action across the Nexus sectors as well as segments and actors in spatial management domains in the S2S continuum, and effective cooperation between all stakeholders.

Objective 1.1: Develop and/or accordingly adapt appropriate governance structures at all levels to implement the Nexus approach in the S2S continuum.

Objective 1.2: Mainstreaming WEFE Nexus approach in the S2S continuum into policies and strategies.

Goal 2: Efficient and effective planning, financing and implementation of management and technical solutions.

Enabling the identification, mainstreaming, financing and implementation of innovative WEFE Nexus managerial and technical solutions, including Nature-based Solutions, across the S2S continuum is critical. Piloting and replicating of such solutions are key for proofing Nexus benefits and fostering upscaling. Digitalisation, including space-related technologies, provide tools for moving into a new era. Fragile areas, such as nature reserves, biodiversity hotspots, heritage sites, river deltas, etc, are among the key WEFE Nexus application sites.

Objective 2.1: Shifting demo Nexus applications to mainstreamed implementation, through investments and market mechanisms.

Objective 2.2: Increasing capacities and financing for planning and implementation of Nexus interventions.

Goal 3: Informed decision making based on enhanced science-based knowledge, engagement of capacitated stakeholders, and increased public awareness.

Bridging gaps at the science-policy interface, enabling stakeholder leadership, ownership and engagement as well as raising public awareness are key for effective policy development, decision-making and implementation of the WEFE Nexus approach in the S2S continuum. The role of academic and

research institutions as well as of the private sector and civil society is important in this regard. The development, collection and exchange of reliable information and data, knowledge and experience among stakeholders at all levels is an important prerequisite, as is capacity building of stakeholders.

Objective 3.1: Promoting scientific research on WEFE Nexus and S2S aspects.

Objective 3.2: Ensuring data availability, harmonisation and sharing across sectors and borders.

Objective 3.3: Developing capacity of stakeholders to implement WEFE Nexus at the S2S continuum.

Objective 3.4: Raising awareness and improving understanding concerning the WEFE Nexus at the S2S continuum, and stimulating stakeholder's engagement for their implementation.

3 Implementation and monitoring framework, and synergies

4 Types of financial means and capacities to achieve the objectives