



ADDRESSING PRIORITIES WHILE ENABLING ENVIRONMENTAL SECURITY, RESILIENCE AND SUSTAINABILITY OF KEY RESOURCES

A note for the joint activities of the MedProgramme projects 2.1 and 2.2 in Lebanon

The **Mediterranean Sea Programme (MedProgramme)** funded by the Global Environment Facility (GEF)¹ and implemented by the Mediterranean Action Plan of the United Nations Environment Programme (UNEP/MAP) carries out priority actions to:

- reduce major environmental stresses in the Mediterranean coastal areas;
- strengthen climate resilience and water security and;
- improve the health and livelihoods of coastal populations.

The MedProgramme is implemented by various Executing Partners² in nine beneficiary countries sharing the Mediterranean basin: Albania, Algeria, Bosnia and Herzegovina, Egypt, **Lebanon**, Libya, Montenegro, Morocco and Tunisia.

Its eight sub-projects, called “**Child Projects**” cut across four different Focal Areas of the Global Environment Facility, namely International Waters, Biodiversity, Chemicals and Waste and Climate Change and support related actions.

Four of the International Organisations executing MedProgramme activities, namely the **Global Water Partnership-Mediterranean** (GWP-Med), the **Priority Actions Programme Regional Activity Centre** (PAP/RAC), **Plan Bleu Regional Activity Centre** (Plan Bleu/RAC) and **UNESCO Intergovernmental Hydrological Programme** (UNESCO IHP) have joined forces to assist **Lebanon** in finding solutions to priority challenges related to securing key life resources and protecting its environment.

¹ The Global Environment Facility (GEF) supports developing countries to address pressing environmental issues particularly related to: biodiversity loss, chemicals and waste, climate change, international waters, and land degradation.

² GEF Lead Implementing Agency: UN Environment. Other GEF Implementing Agency: European Bank for Reconstruction and Development (EBRD). Leading Executing Agency: UN Environment/MAP. Executing partners: UNESCO International Hydrological Programme (IHP), European Investment Bank (EIB), Global Water Partnership – Mediterranean (GWP-Med), WWF Mediterranean Programme Office (WWF MedPO), IUCN, Priority Actions Programme Regional Activity Centre (PAP/RAC), Plan Bleu Regional Activity Centre (Plan Bleu), Specially Protected Areas Regional Activity Centre (SPA/RAC) and the Sustainable Consumption and Production Regional Activity Centre (SCP/RAC).

The Water-Energy-Food-Ecosystems (WEFE) Nexus approach

The **Water-Energy-Food-Ecosystems (WEFE) Nexus** approach carried out by **GWP-Med** in Lebanon focuses on increasing the efficiency and productivity of resources, building synergies and improving governance and coordination among four crucial and strongly inter-dependent sectors, namely the water, energy, agriculture and environment sectors. The aim of the WEFE Nexus activities is to assist the country in identifying priority actions and solutions that will enhance security of supply and efficiency in the use of these resources, while reducing impacts and risks on ecosystems, including under conditions of climate variability and change.

Integrated Coastal Zone Management (ICZM) Planning

The coastal area is the place where interlinkages between upstream and downstream flows of resources become strongly evident and need to be carefully considered, especially in countries such as Lebanon, in which 70%-80% of the population lives in this area. Specific pressures produced upstream, e.g land-based pollution deriving from various economic activities, reduced quantity and quality of water resources, etc. have important impacts on the life of the population living on the coast. Vice-versa, development patterns in this area, including land use, urbanisation and specific economic activities, e.g tourism, industry and others, can influence the availability and quality of resources upstream.

Integrated Coastal Zone Management (ICZM) is a process that simultaneously takes into account the fragility of coastal ecosystems and landscapes, the diversity of activities and uses and their interactions and impacts on the marine and land parts. It facilitates the path towards the sustainability and resilience of the coastal zone.

In this context, the WEFE Nexus approach in Lebanon will be carried out in synergy with activities undertaken in the country towards the preparation of an Integrated Coastal Zone Management (ICZM) Strategy and climate change adaptation approaches in ICZM planning. Therefore, the WEFE Nexus will assist coastal zone management planning activities.

The latter are carried out by **PAP/RAC** and aim at supporting the country with the preparation of an implementable ICZM Strategy. Moreover, **climate change adaptation and resilience efforts** are integrated in the process through the support of **Plan Bleu/RAC**, aiming at enhancing coastal zone management planning by taking into account possible future scenarios of vulnerability and adaptation paths in the coastal area, elaborated together with national and local stakeholders in a participatory fashion, based on the Climagine³ foresight methodology.

³ Climagine engages stakeholders in coastal hotspots to engage in a common reflection on what a sustainable future for their region would resemble, and what it would take to achieve this vision, combining participatory workshops and expert-led technical work to provide a context-specific, monitoring and action tool for ICZM. Climagine has previously been applied in support of the elaboration by PAP/RAC of Coastal Plans for Sibenik-Knin County (Croatia) and the Kerkennah Archipelago (Tunisia), and is currently being implemented in two of the MedProgramme's coastal hotspots: the Tangier-Tetouan-Al Hoceima region (Morocco) and the Bay of Kotor (Montenegro).

Coastal aquifers protection and dialogue on conjunctive water management

As high urbanisation of the coast has a particularly strong impact on the quantity and quality of water resources of coastal aquifers, ICZM and water resource management in the coastal zone must include **aquifers in management plans**. In this respect, conjunctive surface water and groundwater management efforts are being undertaken by **UNESCO IHP** in Lebanon, aiming to improve water supply reliability and sustainability, reduce groundwater over-extraction and land subsidence, improve or protect groundwater quality and environmental conditions. In this context, UNESCO IHP has carried out an assessment of the Damour coastal aquifer and related coastal ecosystems, including submarine groundwater discharges. This assessment will be used to initiate the Integrated Management Plan for Damour, which all involved organizations are to develop in the framework of MedProgramme.

All of the above-mentioned activities support the effective implementation of laws and planning documents of the Lebanese Government, by addressing challenges that are geographically extending to the **source-to-sea area** and applying to the maximum possible extent the **Integrative Methodological Framework**, a comprehensive methodology for the sustainable management of the Mediterranean ecosystems constituted by the coastal zones, river basins and coastal aquifers.

As such, the aim of these joint efforts are to achieve a better integration of hydrological, geological and environmental sciences with land use and water resources planning; monitoring with policy making and education with capacity building, to the benefit of local and national authorities and other stakeholders, and in line with the country's strategic planning and decisions.

In this context, the **WEFE Nexus inter-Ministerial Group** recently set-up in the framework of the Nexus activities is formed of technical experts from relevant institutions who guide the Nexus process in the country and mainstream the outcomes of this collaborative endeavour in their organisations, while building synergies with all processes described in this Note (ICZM planning, Conjunctive surface and groundwater management, climate change adaptation).