



WES-BCA Regional Workshop

**Advancing WEFE Nexus integration in the
Mediterranean: Towards a framework for
action**

19 January 2026,

09:00-14:00 CET

Online



Welcome & Introduction

Moderator: Prof. Michael SCOULLOS, WES-BCA Team Leader

Speakers:

Mr. Atila URAS, UNEP/MAP

Mr. Frederic DE DINECHIN, UfM, Senior Policy Advisor

Dr. Antonella AUTINO, PRIMA, Coordinator



PART I: Mediterranean WEFE Strategy & WES-BCA WEFE NEXUS GOVERNANCE KEY FINDINGS

WES-BCA Regional Workshop

Advancing WEFE Nexus integration in the Mediterranean: Towards a framework for action

19 January 2026, Online

Introduction to WES-BCA

Presented by:

Ms Suzan TAHA, Water Key Expert, WES-BCA



WES-BCA

Water and Environment Support -
Biodiversity and Climate Action
in the Neighbourhood South region

WES-BCA in a snapshot



- The EU funded “Water and Environment Support-Biodiversity and Climate Action (WES-BCA) in the Neighbourhood South region” project aims to improve the protection of the environment, the restoration of biodiversity and the management of scarce water resources, while enhancing the resilience to climate change in the Mediterranean region, strengthening the formulation and enforcement of the relevant policies of the Partner Countries and the two regional political frameworks, namely the Union for the Mediterranean (UfM) and the Barcelona Convention.
- It strives to enhance the capacity of relevant stakeholders to support them in formulating and or implementing policies in the issues mentioned above.
- It is meant to raise awareness, increase knowledge and improve public understanding, stimulating behavioural changes needed for appropriate climate action and environmental protection.
- WES-BCA is the continuation of the WES project and therefore capitalises on the experience of previous successful EU funded regional projects (WES, SWIM-H2020 SM, SWIM SM, Horizon 2020 CB/MEP).

WES-BCA Identity



Partner Countries: 8 Countries in North Africa and the Middle East



Duration: November 2024 - November 2027



Budget: 7.000.000 Euros



Team Leader: Professor Michael Scoulllos, scoulllos@wes-med.eu

Environment Expert: Mr Anis Ismail, a.ismail@wes-med.eu

Water Expert: Ms Suzan Taha, taha@wes-med.eu

Communication Expert: Ms Lisa Papadogeorgaki, lpa@ldk.gr

Stakeholders Engagement Expert: Dr Emad Adly, wes.gc@raednetwork.org

WES-BCA Consortium



LDK CONSULTANTS S.A. (Leader)



Arab Network for Environment and Development (RAED)



Association of Cities and Regions for Sustainable Resource Management (ACR+)



Mediterranean Agronomic Institute of Bari (CIHEAM Bari)



Mediterranean Information Office for Environment, Culture and Sustainable Development (MIO-ECSDE)



MedWaves, the Regional Activity Centre of UNEP/Map for Sustainable Consumption and Production

WES-BCA Components

The project will be implemented through **two** complementary, closely related and mutually supportive **Components**:

- **Component I - focusing on Water, Biodiversity and Environment. Topics Addressed**

Topic 1: Prevention & reduction of pollution (urban and industrial solid waste)

Topic 2: Curbing Plastic Pollution & Marine Litter

Topic 3: Promoting the Water-Energy-Food-Ecosystems (WEFE) Nexus approach

Topic 4: Water Efficiency

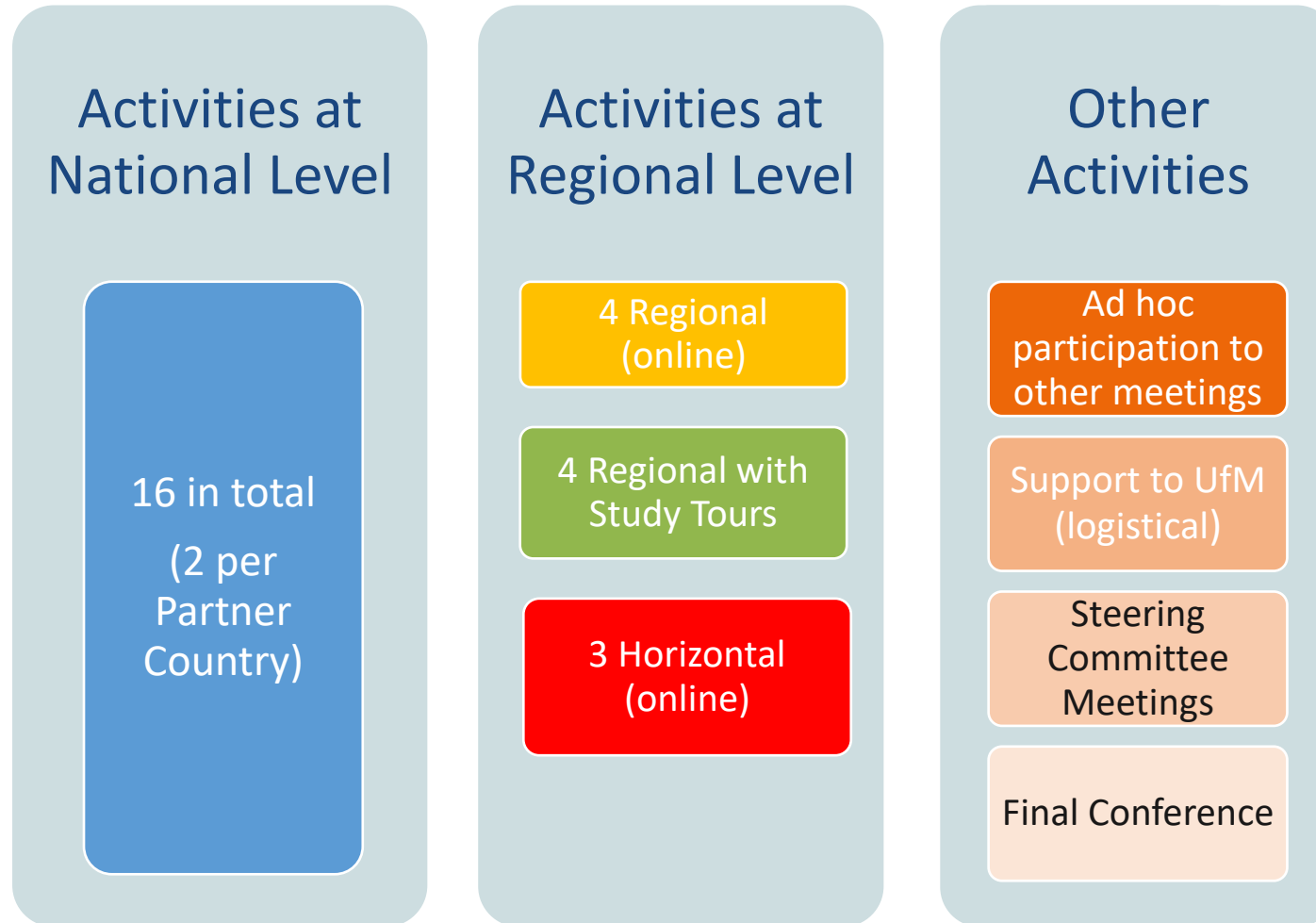
Topic 5: Climate Change mitigation and adaptation actions

Component II - focusing on Communication and Outreach

Under **Component II**:

The project aims to raise awareness and improve understanding by the general public (and specific segments of the population), including youth and women, stimulating adoption of appropriate behaviours and attitudes towards improved **Climate Action** and effective **Environmental Protection**.

Expected outputs of Component I on capacity building and technical assistance on water, biodiversity and environment



Workplan for activities under Topics 3, 4 and 5

Regional and Horizontal Activities



Country	Code	Topic	Activity
Regional (Training & Study Tour)	C1_REG/ST-5	Topic 3: WEF Nexus	WEFE Nexus BPs in Agriculture - Learning from practical approaches of Northern Mediterranean countries
Regional (Training & Study Tour)	C1_REG/ST-6	Topic 5: Climate Change mitigation and adaptation actions	Adaptation measures for floods and storms management
Regional (online)	C1_REG-7	Topic 5: Climate Change mitigation and adaptation actions	Assess BAT for WWTR incl. evaluating the feasibility of integrating different RE options with various WWT technologies & providing guidelines for integrating RE with WWTPs
Regional (online)	C1_REG-8	Topic 5: Climate Change mitigation and adaptation	Climate-resilient planning and practices in agriculture including efficient water management techniques to help equip irrigation managers/ extension officers/WUAs with the knowledge and skills to adapt to CC impacts
Horizontal (online)	C1_HOR-1	Topic 3: WEF Nexus	Demonstrating the implementation of the WEF strategy at national level
Horizontal (online)	C1_HOR-2	Topic 5: Climate Change mitigation and adaptation	Climate Change adaptation in the Mediterranean coastal area: catalysing financing/the role of the private sector

Introducing the Activity – Demonstrating WEFE Nexus Policy Advancements at National Level (C1_HOR-1)

- Horizontal Regional activity under WES-BCA, Topic 3: WEFE Nexus
- Focus countries: Jordan, Lebanon, Morocco
- Contributes to the Mediterranean WEFE Nexus Strategy (Source-to-Sea) Action Framework by assessing national-level progress and challenges in **WEFE Nexus Governance in the 3 countries**
- Implemented in synergy with regional initiatives:
 - **GEF MedProgramme (Child Project 2.2)** – implemented by UNEP/MAP & GWP-Med under the Global Environment Facility MedProgramme; supporting national WEFE policy dialogues and action plans in Lebanon and Morocco.
 - **PRIMA WEF4Med** – funded by PRIMA/Horizon 2020; hosting the Med. WEFE Nexus Community of Practice and promoting regional knowledge exchange.
 - **GWP-Med & UfM** – co-lead of the drafting of the Mediterranean WEFE Nexus Strategy under the Barcelona Convention framework, providing the political umbrella for regional endorsement

Overview of the activity

- Pilot study conducted in Jordan, Lebanon, and Morocco, assessing institutional frameworks, governance and cross-sectoral challenges, and identifying lessons learned and good practices on WEFE Nexus integration.
- Findings consolidated in a Background Document:
 - ✓ analysing alignment of national WEFE policies with the draft Mediterranean WEFE Strategy
 - ✓ highlighting priority areas, knowledge gaps, and preliminary capacity-building needs.
- An initial online consultation with WES-BCA Focal Points from the three countries was held on 3 September 2025 to review the draft findings and identify common challenges.
- Organisation of this regional online workshop (19 January 2026) titled “Advancing WEFE Nexus integration in the Mediterranean: Towards a framework for action” will build on this process to validate findings, refine priority areas, and identify follow-up steps to advance WEFE integration at national and regional levels.

Objectives of the workshop

- Validate the WEFE institutional and policy challenges identified in Jordan, Lebanon, and Morocco — including cross-sectoral coordination, governance mechanisms, policy coherence, and inter-ministerial cooperation — while **extending the dialogue** to all WES-BCA Partner Countries **to reflect their national contexts**.
- Facilitate knowledge exchange and cross-learning by showcasing WEFE policy advances, lessons learned, best practices, and institutional and policy enablers from the focus countries, with relevance across the Mediterranean region.
- Discuss the alignment of national WEFE policy advancements with the Mediterranean WEFE Strategy and inform its forthcoming Action Plan in supporting national implementation, policy alignment, institutional coordination, and inter-sectorial governance;
- Identify and refine priority capacity-building needs for WEFE Nexus implementation by gathering stakeholder input on policy integration, institutional gaps, and inter-sectoral challenges, helping to map regional needs across different governance settings.
- Review key findings and recommendations for strengthening WEFE governance and implementation at regional level, providing inputs to the future Action Plan of the Mediterranean WEFE Nexus Strategy.



WES-BCA
Water and Environment Support -
Biodiversity and Climate Action
in the Neighbourhood South region

Thank you for your attention!

WES-BCA Regional Workshop

Advancing WEFE Nexus integration in the Mediterranean: Towards a framework for action

**The Strategy
for the Water-Energy-Food-Ecosystems (WEFE) Nexus
in the Mediterranean Source to Sea Continuum**

19 January 2026, Online

**Presented by: Vangelis CONSTANTIANOS, Regional Coordinator,
GWP-Med**



WES-BCA

**Water and Environment Support -
Biodiversity and Climate Action**
in the Neighbourhood South region

WES-BCA Regional Workshop

Advancing WEFE Nexus integration in the Mediterranean: Towards a framework for action

19 January 2026, Online

**The Strategy for the Water-Energy-Food-Ecosystems (WEFE) Nexus
in the Mediterranean Source to Sea Continuum**

Presented by: Vangelis Constantianos, Regional Coordinator,
GWP-Med



Key background for developing the Strategy

- **WEFE Nexus increasingly accepted as framework for sustainable management of natural resources**
- **WEFE Nexus should essentially assist for:**
 - reconciling conflicting interests that may compete for the same scarce natural resources
 - moving from sectoral/fragmented thinking -> cross-sectoral synergies and tangible efficiencies
- **Lack of connectivity at spatial-level creates an additional layer of management failures. Integration is also required at the spatial level → need to apply WEFE Nexus in a Source to Sea approach**
- **WEFE Nexus Application status:**
 - enough technical demos proofing the value, but limited coordinated replication and upscaling
 - countries aligning to the approach
- **Need to move from Nexus Thinking to Nexus Doing. For that, among key enablers are:**
 - establishing further understanding of contents
 - suitable governance and institutional settings key for coordinated & effective responses
 - design and mobilization of sustainable financing and investments

How the process for developing the Strategy started

- **1st Regional WEFE Nexus Roundtable in the Mediterranean (6-7 June 2023, Rabat, Morocco)**
 - Aimed to enhance capacities on the WEFE Nexus and promote experience sharing
 - Organised in the framework of the GEF / UNEP-MAP MedProgramme and UfM, in synergy with EU WES Project, Sida/UfM GWP-Med Matchmaker 2 Project, and PRIMA WEFE4Med Project
 - Participants recommended the development of a WEFE Nexus Strategy in the Mediterranean Source to Sea Continuum
- **Overall objective:**
 - Enhance the integration of policy and management frameworks and instruments across sectors and spatial domains in the Mediterranean Region to address WEFE related security risks
 - Promote leveraging of necessary funding
- **Political frameworks:**
 - Anchored to appropriate regional political frameworks: UfM and Barcelona Convention
 - Aligned with the EU acquis

Drafting, regional consultations, and adoption (1)

- Elaboration made **under the auspices of** UfM, UNEP-MAP, and EU



Mediterranean
Action Plan
Barcelona
Convention



- The **technical drafting** was led by GWP-Med, EU WES Project, PRIMA



WES-BCA
Water and Environment Support -
Biodiversity and Climate Action
in the Neighbourhood South region



Funded by
the European Union



- **The Strategy aims to** enable the mainstreaming of system-thinking and the application of the WEF Nexus approach in the Mediterranean Source to Sea continuum within improved and integrated governance structures at different levels
- **1st draft** of the WEF Nexus Strategy was discussed at the **2nd Regional WEF Nexus Roundtable in the Mediterranean (February 2024, Tunis, in the margins of the 5th Med Water Forum)**

Drafting, regional consultations, and adoption (2)

- **Updated draft discussed at UfM's Regional Platform on Water (Lisbon, June 2024 / Malta, February 2025 / Barcelona, November 2025)**
 - Feedback received from countries
 - Updated version disseminated following the Malta Ad-Hoc Meeting of the Drafting Group of the Ministerial Declaration on Water in the Mediterranean
 - The Strategy was approved by UfM Regional Platform on Water (5-6 Nov 2025, Barcelona) and would be endorsed at the UfM Ministerial Conference (24-25 March 2026, Rome)
- **Updated draft discussed under the MSSD 2026-2035 process**
 - The WEF Nexus Strategy to be a Flagship Initiative of the MSSD
 - Discussed at the ad-hoc MCSD Meeting (February 2025, Istanbul), adopted at the MCSD Meeting (June 2025, Corinth)
 - The Strategy was approved by the COP of the Barcelona Convention (2-5 Dec 2025, Cairo) as part of the MSSD 2026-2035, and is mentioned in the COP Declaration

Med WEFE Nexus Strategy in S2S: Structure

- **The Strategy is structured around 3 Goals:**
 1. Appropriate **institutional arrangements, policies, and cooperation frameworks** are established at country and regional levels
 2. Efficient and effective **planning, financing and implementation of management and technical solutions**
 3. **Informed decision-making** based on enhanced **science-based knowledge**, engagement of **capacitated stakeholders**, and increased **public awareness**
- In service of the 3 Goals, **the Strategy unfolds in 8 Objectives and 27 Directions for Action**

Goal 1 on institutional, policy and cooperation settings

- **Objective 1.1: Develop and/or accordingly adapt appropriate governance structures at all levels to implement the WEFE Nexus approach in the Mediterranean S2S continuum**
 - 1.1.1. Encouraging regional and transboundary **cooperation**
 - 1.1.2. Enhancing **national coordination** mechanisms
 - 1.1.3. Enhancing the **capacities** of relevant bodies
 - 1.1.4. Ensuring effective **decentralization**, engaging **local actors**, ensuring a fair transition
 - 1.1.5. **Creating frameworks and processes** for planning, financing and implementing WEFE Nexus interventions
 - 1.1.6. Facilitating **Regional dialogue** processes and forums for exchange of knowledge and experience
- **Objective 1.2: Mainstreaming WEFE Nexus approach in the Mediterranean S2S continuum into policies and strategies.**
 - 1.2.1. Updating **strategic documents and action plans** for implementing the WEFE Nexus approach
 - 1.2.2. **Screening major Regional sectoral initiatives** from a WEFE Nexus perspective
 - 1.2.3. Ensuring harmonization across sectoral and spatial “chapters” of **national strategies and plans**
 - 1.2.4. Developing processes, requirements, guidelines for increasing **horizontal and vertical integration** in policy making, implementation and monitoring.
 - 1.2.5. Benefiting from the **use of integrated management approaches** (IWRM, ICZM, EbA etc)

Goal 2 on planning, financing and implementing solutions

○ **Objective 2.1: Upscaling demo applications to mainstreamed implementation**

- 2.1.1. **Mapping and brokering** opportunities for multipurpose, integrated, and innovative interventions & investments.
- 2.1.2. **Developing standardized methods** to assess the feasibility, cost-efficiency and effectiveness of solutions
- 2.1.3. **Piloting and mainstreaming** no-regret and cost-efficient solutions and innovative technologies
- 2.1.4. **Replicating and upscaling** cost-efficient and effective solutions
- 2.1.5. Improving **cross-sectoral investment** planning

○ **Objective 2.2: Attracting and coordinating increased financing**

- 2.2.1. Developing a **strategic finance framework** for WEFE Nexus implementation
- 2.2.2. Prioritizing public spending and mobilizing **national sources of finance**
- 2.2.3. Mainstreaming funding through existing cross-sectoral **international funding sources**
- 2.2.4. Using **blended finance (including guarantees)** to help de-risk WEFE projects and attract private investment
- 2.2.5. Strengthening **PPPS** by integrating financial mechanisms dedicated to biodiversity conservation
- 2.2.6 Supporting capacities to **prepare proposals** to effectively access and manage available financing

Goal 3 on informed decision-making (1)

- **Objective 3.1: Promoting Science and Education on WEFE Nexus and S2S aspects**
 - 3.1.1. Incorporating WEFE related topics in **University curricula**
 - 3.1.2. Encouraging related **cooperation across academic institutes, and linking them with market economy**
 - 3.1.3. Supporting R&D on emerging and **innovative technologies**
 - 3.1.4. Promoting cross-sectoral **research collaborations on climate-related challenges** in the Mediterranean region.

- **Objective 3.2: Ensuring data availability, harmonisation and sharing across sectors and borders.**
 - 3.2.1 Modernizing, standardizing and harmonizing **monitoring systems and databases** across sectors
 - 3.2.2 Promoting synergies for the application of **new technologies** for cost-efficient, advanced monitoring systems.
 - 3.2.3 Increasing the engagement and responsibilities of **stakeholders in gathering reliable data.**

Goal 3 on informed decision-making (2)

- **Objective 3.3: Developing capacities and tools to implement WEF Nexus in the Mediterranean S2S continuum**
 - 3.3.1. Identifying **capacity building needs** and preparing related strategies
 - 3.3.2. Organizing **capacity building and training programs**
 - 3.3.3. Promoting sharing of related **knowledge, experience, skill development** and expertise
 - 3.3.4. Developing capacities to identify WEF Nexus interventions and **prepare funding proposals**
 - 3.3.5. Developing localized **WEF Nexus Assessments** and related tools
- **Objective 3.4: Raising awareness, improving understanding, stimulating engagement and empowerment**
 - 3.4.1. Developing and conducting **awareness campaigns** for targeted groups
 - 3.4.2. Supporting engagement, empowerment and decision-making roles of **women and youth**
 - 3.4.3. Ensuring that **gender considerations** and the needs of vulnerable communities are fully considered
 - 3.4.4. Identifying, developing and communicating successful **cases of practice**
 - 3.4.5. Establishing regional **Communities of Practice**
 - 3.4.6. Supporting **behavioral change in consumption patterns**

The WEFE Nexus Strategy in S2S: Next Steps

- **Institutional:** endorsement at the **UfM Ministerial Meeting on Water (24-25 March 2026, Rome)**
- **Operational:** Elaborate a **Framework of Actions for the Strategy's operationalization**
 - Link to the mandates and workplans of UfM and Barcelona Convention
 - Enhance engagement of Agriculture and Energy sectors
 - Reach out to and engage contributions by range of partners
 - Shape logframe and identify KPIs
 - Focus on means of implementation, including financing instruments
- **Launching of regional consultation for the preparation of Framework for Actions:**
 - Regional WEFE Nexus Conference: From Strategy to Action**
 - 24-26 February 2026, Nicosia**
 - Within the Cyprus EU Presidency
 - In the framework of Barcelona Convention and UfM
 - Organised by GWP-Med and the Cyprus Institute, in synergy with EU WES BCA
 - Within and supported by GEF UNEP MAP MedProgramme and PRIMA WEF4Med

Regional technical contributions to the Action Framework

○ **WEFE Nexus Governance:**

- Rapid Assessment of WEFE Nexus in Med (13 countries) | GWP-Med in GEF MedProgramme
- Detailed Assessment for Jordan, Lebanon, Morocco (Prep Regional Webinar, Sept 2025; Regional Webinar, Jan 2026) | EU WES-BCA, GWP-Med, PRIMA WEFE4Med
- Online Course on WEFE Nexus for national policy-makers and experts | GWP-Med in GEF MedProgramme

○ **WEFE Nexus Financing:**

- Regional Training Workshop (Athens, Dec 2025) | UfM, EU DG MENA, Sida, GWP-Med
- Follow ups at country level: Egypt as pilot, led by EU Delegation
- Possible follow up Regional Training Workshop (Cairo, early summer 2026) | EU, UfM

○ **WEFE Nexus & Digital Transformation:**

- Regional Consultation (Lisbon, Jun 2024; Malta, Feb 2025; online, June 2025; Upcoming: online, Feb 2026; Rome, 23-24 March 2025 | 3 PRIMA project (led by AQUAOUNT-CMCC), GWP-Med, UfM, Malta, Italy

○ **WEFE Nexus & Desalination:**

- Regional Consultation (Nicosia, Nov 2025; EU Joint Research Center Assessment; follow ups) | EU JRC, PRIMA WEFE4Med

Utilise the PRIMA WEFE4Med Nexus Community of Practice for regional consultations on thematic areas (1)

PRIORITY AREAS ADDRESSED BY THE COMMUNITY

Policy & Governance

How to promote the uptake of WEFE solutions in the Mediterranean, by policy makers.

Implementation

How to support end-users uptake WEFE solutions in the Mediterranean.

Finance

How to demonstrate the financial attractiveness and ensure the sustainability of WEFE solutions in the Mediterranean.

SERVICES TO MEMBERS



Visibility & Recognition



Access to Knowledge & Resources



Networking & Collaboration

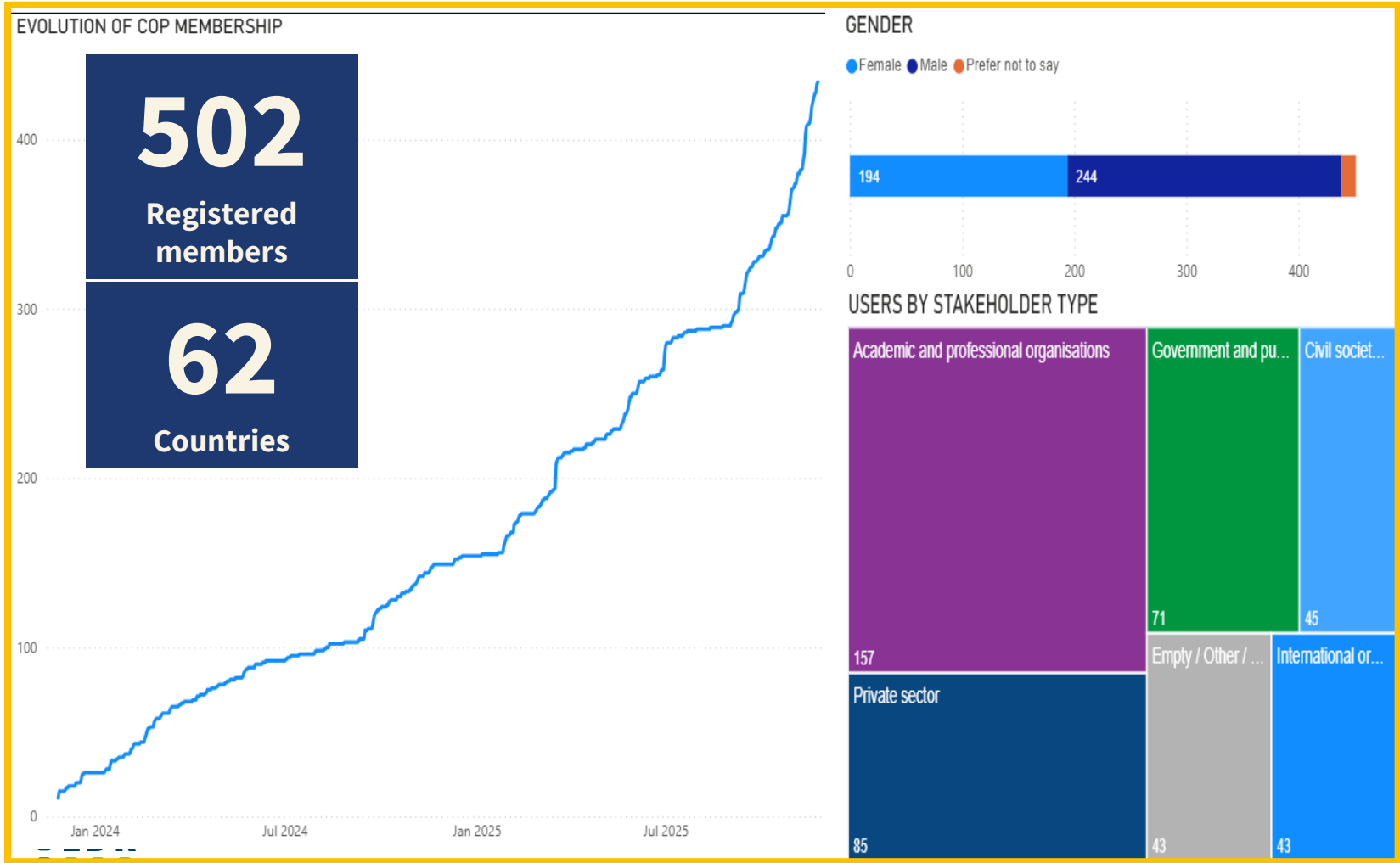


Capacity Building & Growth



Policy Influence & Advocacy

Utilise the PRIMA WEFE4Med Nexus Community of Practice for regional consultations on thematic areas (2)



Demonstration cases showcasing real-world WEFE applications



SCAN ME

<https://wefe4med.eu/>



Funded by
the European Union

For more info
Vangelis Constantianos
vangelis@gwpmed.org
www.gwpmed.org



Thank you
for your kind attention

مع خالص شكري
وامتناني

WES-BCA Regional Workshop

Advancing WEF E Nexus integration in the Mediterranean: Towards a framework for action

19 January 2026, Online

WEFE Nexus Governance Key Findings

Presented by: Ger BERGKAMP, WES-BCA Non-Key Expert



Common Challenges

Theme	Description
Institutional fragmentation	Ministries and agencies operate in silos; limited inter-ministerial coordination; overlapping mandates; lack of intersectoral planning frameworks.
Weak policy coherence and regulatory misalignment	Policies often address individual WEFE sectors in isolation; laws do not support integration; unclear responsibilities.
Limited local-level implementation capacity	Centralised governance dominates; basin-level or decentralized mechanisms exist but are under-resourced or disempowered.
Data fragmentation and lack of interoperability	Poor-quality, outdated, or inaccessible data across sectors; no integrated systems for WEFE decision-making.
Stakeholder exclusion and low participation	Local communities, private sector, and civil society are underrepresented in planning processes; limited transparency.
Political instability and governance weakness	Institutional fragility, lack of transparency, and ad hoc planning undermine strategic coherence (especially acute in Lebanon).
Chronic underinvestment and financing constraints	Budget limitations, poor cost recovery, limited access to international finance; few incentives for integrated projects.
Capacity gaps in integrated planning and technology use	Lack of technical skills, planning tools, and know-how to design or implement WEFE Nexus strategies across sectors.

Common SWOT Analysis

Weaknesses

- Institutional Silos
- Lack of Capacities
- Limited Data Sharing, Systems and Monitoring
- Financial Constraints

Opportunities

- Technological Advancements
- International Support and Partnerships
- Public Awareness and Stakeholder Engagement

Threats

- Over-abstraction and Pollution of Natural Resources
- Impacts from Climate Change
- Political Instability
- Competing Priorities

Strengths

- Awareness of Integrated Policy Frameworks
- Commitment to Sustainable Development and Climate Resilience
- Mediterranean Regional Cooperation

Preliminary findings

Governance and Policies

- **Limited understanding** and, thus, lack of impulse as well as limited know-how to develop and implement governance frameworks that can effectively coordinate across WEFE sectors and their spatial dimensions from Source-to-Sea.
- **Existing multi-sector coordination mechanisms** (e.g., sustainable development, climate change) are often overlooked when creating WEFE Nexus-specific frameworks, and vice-versa, thus limiting opportunities for policy coherence and institutional efficiency.
- **Gaps in adapting sector-specific policies** and regulatory frameworks that incorporate WEFE Nexus principles in a Source-to-Sea approach. This often leads to disjointed or conflicting strategies between sectors.
- **Insufficient knowledge on decentralization processes** and how to empower local authorities within the WEFE Nexus Action Plan. This results in weak local-level governance structures and limited engagement in WEFE Nexus issues.

Preliminary findings

Planning and Financing

- **Absence of coherent and cohesive frameworks** that fully integrate the WEF Nexus approach including its Source to Sea dimensions into national and sub-national planning and financing.
- **Inadequate tools** for assessing the economic and financial impacts of WEF Nexus plans and projects, inhibiting investment and the implementation of market-based solutions.
- **Knowledge gaps** regarding the development and deployment of innovative financial instruments and incentives that can support WEF Nexus-related projects.
- **Lack of practical guidance** and successful models of WEF Nexus implementation and monitoring that truly work across sectors and scales.
- **Challenges in executing multi-sectoral projects** that effectively balance water, energy, food, and ecosystems needs considering also the spatial dimensions from Source to Sea.

Preliminary findings

Data, Knowledge, and Stakeholder Engagement



- Persistent challenges in accessing or obtaining reliable, consistent and **comprehensive data across WEFE sectors** and synthesizing these to support evidence-based WEFE Nexus planning and decision making.
- **Limited documented experiences** or case studies demonstrating successful cross-sector collaboration, hindering the development and implementation of cross-sectoral initiatives.
- **Limited dissemination**, thus awareness, of related best practices and mechanisms, including their achieved benefits as well as the obstacles encountered, for fostering effective multi-sectoral communication, joint planning, and coordinated implementation.
- **Limited stakeholder involvement** and insufficient capacity-building initiatives undermining the understanding and implementation of the WEFE Nexus approach, and leading to insufficient stakeholder coordination and empowerment.
- **A scarcity of interdisciplinary research initiatives** and educational programs that address WEFE issues and solutions, particularly in a Source to Sea approach.
- **Insufficient emphasis on the interlinkages among WEFE challenges and solutions**, leading to a lack of accelerating the development, adoption and use of new technologies and innovations relevant for WEFE Nexus planning and implementation

Recommendations

Governance and Policies



- **Strengthen WEFE Coordination Mechanisms:** Reinforce and formalize cross-sectoral coordination platforms by defining clear mandates, agendas, and timetables for both their meetings and mandated activities.
- **Review and Update WEFE Sector Policies:** Systematically review and update existing sector policies and strategies to incorporate WEFE Nexus interlinkages, cross sectoral synergies and shared-priorities and opportunities, while ensuring alignment with national and regional processes' goals and objectives.
- **Align Sub-National Strategies:** Review mandates, composition, policies, and strategies on natural resources of sub-national authorities to ensure they reflect an integrated multi-sectoral WEFE Nexus approach, including in planning, budgeting, and project implementation.
- **Promote Integrated Governance Frameworks Training:** Provide training to policymakers, planners, and sector regulators on frameworks for WEFE cross-sectoral coordination in a Source-to-Sea approach, and build skills in designing inclusive, adaptive, participatory governance structures that enable multi-level stakeholder engagement.

Recommendations

Planning and Financing



- **Undertake WEFE Multi-Sector Integrated Assessments:** Conduct integrated assessments at national and sub-national levels to support WEFE Nexus planning and cross-sectoral prioritization.
- **Incorporate WEFE Priorities into natural resources and development Plans at appropriate level:** Explicitly incorporate WEFE Nexus priorities into plans like for river and groundwater basin management, coastal zone management, local climate resilience, etc. including provisions for water allocation and efficiency, energy efficiency, food security, ecosystem services and, overall, multi-sector approaches to manage trade-offs among WEFE sectors fairly and efficiently, applying a Source-to-Sea approach and using WEFE Nexus Roundtables to strengthen participatory and multi-stakeholder governance
- **Define Specific Scaling Mechanisms:** Define scaling mechanisms for targeted WEFE Nexus solutions that address critical interlinked issues sustainably (e.g., solar powered irrigation with enforced water abstraction limits or solar powered desalination with advanced brine management or treated wastewater reuse with crop quality controls).

Recommendations

Planning and Financing



- **Develop a Project Pipeline of Investment-Grade Initiatives:** Create a project pipeline of WEFE Nexus interventions in a Source-to-Sea approach, utilizing screening tools for incorporating socio-economic benefits, that can attract public and private investment, including through PPPs, and align them with national financing frameworks, domestic financing partners requirements, development assistance partners' criteria, such as the EU NDICI/EFSD+ mechanism, GCF, etc.
- **Engage Private Partners and Domestic Financial Institutions:** Explore opportunities for innovative private investment in WEFE Nexus projects, including facilitated by domestic and international financial institutions, so as to close the investment gap in Nexus related solutions, and promote private investment in WEFE Nexus-related projects, potentially using blended finance, PPPs, support to start-ups and SMEs, public co-financing, tax breaks or subsidies.
- **Mobilize International Support:** Seek additional financial support from international development partners, including the EU, for WEFE Nexus approach implementation, including infrastructure retrofitting, technology adoption, capacity building, etc.

Recommendations

Data, Knowledge, and Stakeholder Engagement



- **Analyse Training Needs:** Conduct a thorough training needs assessment to identify gaps in WEFE Nexus in a Source-to-Sea approach knowledge and skills.
- **Enhance WEFE Nexus Capacity Building for the range of stakeholders:** Develop and further advance capacity-building initiatives, based on the identified needs, including with support by regional partners and projects like EU WES BCA, GEF UNEP MAP MedProgramme, etc
- **Support WEFE Nexus Community of Practice (NCoP) :** Develop and facilitate, at appropriate levels, WEFE Nexus NCoP to share information and knowledge, assist stakeholders networking, facilitate co-creation of solutions, utilise structured results of demo projects and initiatives, identify ‘champions’, etc., including at Mediterranean level the WEFE Nexus CoP facilitated by the PRIMA WEFE4Med Project (www.wefe4med.org).
- **Build Capacity to Use Digital Tools:** Building capacity in the use of digital tools (e.g., GIS, remote sensing, modelling software, AI, digital twins, etc) for integrated natural resource management (planning, monitoring, and decision-making) towards advancing digital transformation, that can highlight synergistic solutions across water, energy, food, and ecosystems. In this context, WEFE Nexus models such as Q-Nexus can be used to support scenario-based planning, helping stakeholders explore and compare trade-offs and synergies across water, energy, food and ecosystems in a structured way; such tools have already been applied in the MENA region.

Recommendations

Data, Knowledge, and Stakeholder Engagement



- **Support Cross-Sectoral Data Standardization:** Train data collectors and managers operating in different sectors on data standardization and digital information platforms for interoperable data and information systems across WEFE sectors that capture both trade-offs and synergies.
- **Enhance Cross-Sectoral Communication Skills:** Developing communication and facilitation skills amongst government officials to foster inclusive stakeholder participation across WEFE sectors and regions.
- **Adequately Inform Policy and Decision makers:** Improve skills in data analysis and visualization to support cross-sectoral evidence-based decisions in relation to the WEFE Nexus.
- **Train Mediators:** Offer training in conflict resolution, negotiations, and consensus-building with a specific focus on WEFE Nexus conflicts and solutions.
- **Promote Public Awareness:** Increase public awareness of WEFE Nexus issues, approaches and solutions to encourage initiatives with the private sector and communities.
- **Disseminate the WEFE Nexus Strategy** and engage in shaping and implementing its Action Plan towards shifting from WEFE Nexus thinking to WEFE Nexus doing.

A [regional dialogue on 'Digital Transformation for WEFE Nexus'](#) is ongoing, facilitated by the PRIMA projects ACQUAOUNT and TALANOA-WATER as well as the H2020 TRANSCEND projects and UfM



WES-BCA
Water and Environment Support -
Biodiversity and Climate Action
in the Neighbourhood South region

Thank you for your attention!



WEFE Nexus highlights, challenges, and opportunities in the 3 countries

Facilitator: Mr. Frederic DE DINECHIN, UfM, Senior
Policy Advisor

Speakers from Jordan, Lebanon, Morocco

WES-BCA Regional Workshop

Advancing WEF E Nexus integration in the Mediterranean: Towards a framework for action

19 January 2026, Online

WEFE Nexus highlights, challenges, and opportunities in Jordan

Presented by: Ahmad BALI, Head of Planning of Water Demand Department, Ministry of Water and Irrigation (MWI)





Jordan

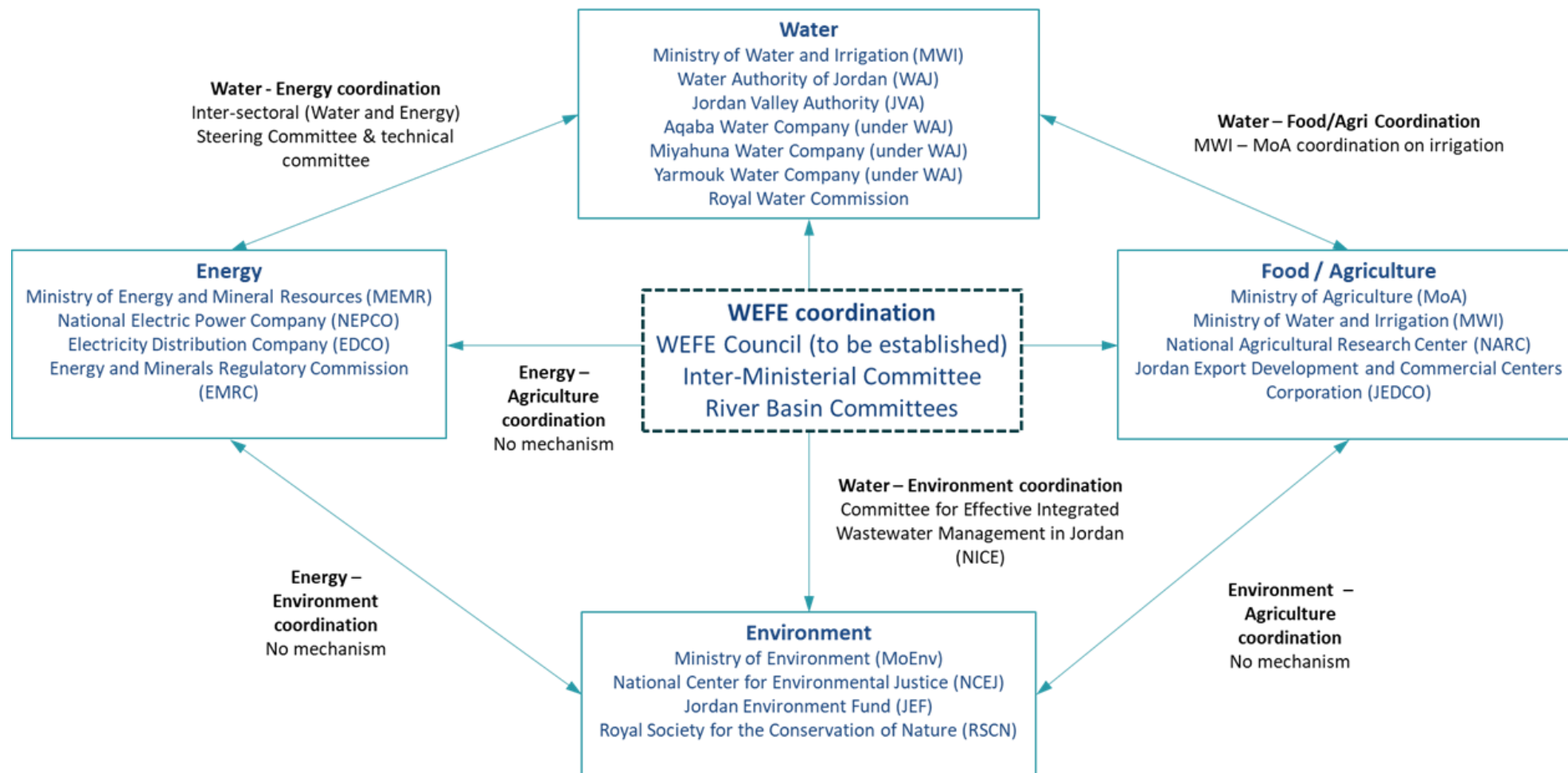
Nexus related Institutions and Organisations



WES-BCA
Water and Environment Support -
Biodiversity and Climate Action
in the Neighbourhood South region

Ministry of Water
and Irrigation

Jordan's experience confirms that the challenge today is not the lack of WEFE strategies, but how to operationalize them through governance, financing, and data.



Jordan Policies and Strategies

➤ **Jordan Water Strategy (2023-2030)**

- Prioritizes WEFE Nexus
- Integrated cross-sector planning
- Establishing of the Nexus Council

➤ **National Energy Strategy (2021–2030)**

- +15% water sector efficiency by 2025
- Expand renewables & storage
- Joint water–energy projects

➤ **Green Growth Action Plan (2021–2025)**

- Efficient irrigation systems
- Reduce water losses
- Support farmers' productivity

➤ **Environment Strategy Plan (2023–2025)**

- Nexus as priority initiative
- Climate-responsive, green output
- Pollution control & biodiversity

Jordan

Programmes and Initiatives

- **Nexus Regional Dialogues Programme (GIZ)**
 - Mainstreamed WEFE Nexus in national policies
 - Built capacity and facilitated policy dialogues
 - Developed tools and promoted Nexus in planning

- **World Bank – Water Sector Efficiency Project**
 - Improves efficiency through long-term investments
 - Strengthens institutions and coordination
 - Applies WEFE Nexus principles across sectors

- **Energy Efficient Water Sector (EEWS, GIZ)**
 - Enhances energy efficiency and renewable use in water sector
 - Anchors standardized Energy Management System
 - Promotes Nexus dialogue via energy sector entry point

- Strong policy commitment to WEFE
- Practical water–energy synergies
- Experience in cross-sector dialogue
- Existing coordination platforms

- WEFE reflected in strategies but not fully in budgets
- Coordination mechanisms exist but with weak mandates
- Fragmented data and limited interoperability
- Limited scaling of pilot initiatives

Jordan Next Steps (contributing to Mediterranean WEFE Action Plan)

- Institutionalizing WEFE coordination mechanisms
- Strengthening planning–financing linkages
- Developing WEFE project pipelines
- Enhancing data systems, modelling, and capacities

For Jordan, the Mediterranean WEFE Action Plan represents a practical opportunity to move from coordination to implementation, and from pilots to scale.



WES-BCA
Water and Environment Support -
Biodiversity and Climate Action
in the Neighbourhood South region

Thank you for your attention!

WES-BCA Regional Workshop

Advancing WEF E Nexus integration in the Mediterranean: Towards a framework for action

19 January 2026, Online

WEFE Nexus highlights, challenges, and opportunities in Lebanon

Presented by: Mona FAKIH, Director of Water, General Directorate of Hydraulic and Electric Resources, Ministry of Energy and Water



WES-BCA

Water and Environment Support -
Biodiversity and Climate Action
in the Neighbourhood South region

WEFE Coordinated governance - challenges

The 4 WEFE sectors share the same governance challenges/issues, to various degrees

Effectiveness

Efficiency

Accountability & Public Engagement

Gaps and inconsistencies in legal frameworks

Overlapping of Stakeholder Roles

Poor performance of services and facilities

Gaps in Human Resources and Inadequate Staffing

Political Interference (staffing, decision making, ...)

Lack of systematic M&E (performance & gov.)

Lack of mechanisms to coordinate and review roles

Poor cross/intra-sectoral cooperation & coordination

Gaps in data and poor data management

Lack of financial capacity and inefficiencies in financial
recovery

Lack of transparency & data sharing

Poor enforcement of laws and regulations

Lack of effective stakeholder engagement protocol

Lack of gender and diversity mainstreaming guidelines

Barriers Limiting Lebanon's Capacity to Address Interlinkages



- Gaps in legal framework and lack of implementation/enforcement (including the establishment of needed entities that allow coordination and sectoral transparency)
- Lack of human resources at national authorities permitting efficient management of sectors
- Lack of efficient monitoring, data collection and information systems
- Lack of efficient system for sharing and exchange of information and expertise
- Shifting of sectoral management to short-term emergencies rather than long-term plans
- Lack of funds to implement existing strategies and national plans
- Political interference impeding cooperation among various stakeholders
- Weakness of scientific principles and sciences in decision making

Lebanon

Policies and Strategies



➤ Lebanon Water Strategy 2024–2030

- Universal safe/affordable services and sectoral allocation.
- Cut energy costs in water utilities and introduce renewables.
- Drought management & food security via coordinated crop/resource planning.

➤ Lebanon Energy Policy Statement 2022

- Highlights water sector electricity debts.
- Calls for water–energy coordination.
- Focus on sustainability of service provision.

➤ National Energy Efficiency Plan

- Drip irrigation, VSDs, efficient pumps.
- Cross-sector water–energy–agriculture savings.
- Promotes resource-efficient technologies.

➤ National Agriculture Strategy 2020–25 (NAS)

- Evidence-based agri-food decisions across sectors.
- Sustainable resources & irrigation efficiency.
- Climate adaptation & renewable energy in agri-food.

➤ Biodiversity Strategy & Action Plan

- Mainstream biodiversity into policies.
- Links with agriculture, forestry, fisheries.
- Supports ecosystem integration in WEFE.

Lebanon

Programmes and Initiatives



➤ **Saving Water – Growing Crops Project (WES)**

- Installed smart irrigation systems (drip, sensors, weather stations) on 29 ha
- Restored lakes and developed stormwater-based silt removal
- Created Water Committee for long-term support and sustainability

➤ **Water, Sanitation and Conservation Project**

- Established sludge management system for WWTPs in Barouk watershed
- Combines sludge drying with composting of organic/agricultural by-products
- Produces biosolids compliant with Lebanese standards for safe use

➤ **MINARET I Project**

- Installed solar-powered water pumping and gravity-fed irrigation for 60+ farmers
- Reduced energy costs with PV for filtration, municipal building, and street lighting
- Created revolving fund (with local women's group) to finance green energy tech

➤ **GEF MedProgramme Child Project 2.2 (UNEP/MAP & GWP-Med)**

- Promotes WEFE Nexus through inter-ministerial groups and policy dialogues
- Develops Nexus action plans and investment project proposals
- Enhances sustainable development and resilience in Lebanon

The WEF E Nexus Policy Dialogue in Lebanon (2022 and ongoing)



- Key Objective: Support decision-makers and key stakeholders in identifying actions for coordinated governance and facilitate progress through implementing concrete solutions that promote integrated planning and management of water and other natural resources essential to the WEF E sectors.
- In particular, the WEF E Nexus Policy Dialogues supports Lebanon with:
- Assessing through analytical tools trade-offs and identifying opportunities for synergies among WEF E sectors
- Promoting inter-sectoral coordination through the WEF E Inter-Ministerial Group, established in 2023.
- Facilitating WEF E Nexus investments.
- Demonstrating the opportunities deriving from the WEF E Nexus application through pilots.
- Technical support for these is provided to the Ministry of Energy & Water by GWP-Med within the GEF UNEP/MAP MedProgramme

The WEFE Nexus Policy Dialogue in Lebanon: analytical work and stakeholders' engagement

WEFE Nexus Assessment carried out in two Phases:

1- Phase I at the National level (2022-2024), which is (scoping assessment) leading to the development of a WEFE Nexus Policy and Investment Action Framework for Lebanon

2- Phase II: in depth assessment and quantification of selected Nexus linkages through a modeling exercise.

- **Bilateral and multi-lateral consultations with key stakeholders and the WEFE Inter-Ministerial Group members along the entire process**



- Aim: assist decision-makers and stakeholders to assess options for the optimization of water allocation between competing uses at the river basin level, to improve food security and advise related policies and prioritize support for priority crops for food security through specific policy measures (such as incentives etc.) and practices.
- Focus: five (5) “agricultural” river basins (Abou Ali, Ibrahim, Beirut, Damour, and Litani) , which are crucial for food security and are currently facing significant challenges.
- Approach: WEFE Nexus in the Source-to-Sea continuum, combining sectoral and spatial integration.
- Modalities: the assessment relies on strategic foresight tools, including modelling and scenarios planning.

Inter-sectoral coordination through the WEFE Inter-Ministerial Group

- **Objective:** move beyond the 'silos' approach in planning and managing natural resources and promote dialogue and coordinated governance and prioritize interventions that are key for various sectors.
- **Set-up:** led by MoEW and technically facilitated by GWP-Med, meeting regularly (6th meeting took place in October 2025). It represents the governance body of the WEFE Nexus Policy Dialogue and related activities.
- **Participants:** MoEW, MoE (ecosystems and climate departments), MoA, M. of Tourism, M. of Industry, M. of Public Works and Transportation (including meteorological department/Civil Aviation), CNRS, LARI, Regional Water Establishments, LRA, Council of Ministers.
- **Focus of discussions:** hydrological and hydrogeological data availability and prioritization of data collection to fill gaps and achieve a more effective and coordinated planning among the WEFE sectors and related institutions and administrations. The discussions are leading to the preparation of a WEFE Nexus Action Plan including the identification of projects jointly agreed upon by the Group's members.

WEFE Nexus investments mobilisation for Lebanon's priority projects

“Enhancing water security and farmers resilience in Assi River Basin through Water-Energy-Food-Ecosystems (WEFE) solutions”: This initiative aims to enhance efficient water use, expand surface water supply for irrigation, and promote renewable energy in water systems, alongside improving wastewater treatment to enable its reuse for irrigation in the Assi River Basin.

Key objective: Facilitate the Lebanese Government's access to **Green Climate Fund (GCF)** for the Project Preparation Facility (PPF), and explore interest of other interested development partners

Key activities:

- **GCF Concept Note (CN)** and project pre-feasibility studies, including preliminary environmental and social risk assessment and preliminary gender analysis
- **Road Map for the full project preparation**, including a detailed description of required studies, related budget and implementation arrangements.
- **Inclusive consultation process and engagement of a GCF-accredited entity** that will develop the full project in close consultation with the Lebanese Government.

Piloting the WEF Nexus approach through concrete projects: demonstration activity on precision agriculture

Objectives:

- **Enhance farm productivity and reduce production costs for farmers**, through precise application of water and chemical inputs hereby lowering consumption of chemicals, water, and energy and reducing groundwater and surface water depletion, as well as environmental and water pollution.
- **Support agro-businesses providing affordable services to farmers** to widespread innovative precision farming technologies and their benefits.
- **Demonstrate the opportunities of innovative technologies and tools** integrating cutting-edge drone technology and precision agriculture tools, such as smart agro-meteorological stations and soil moisture sensors.
- **Set-up an innovative partnership** that can contribute to the activity's replication and upscaling in Lebanon

Piloting the WEFE Nexus approach through concrete projects: concept notes

- Two (2) projects concept notes prepared by GWP-Med in collaboration with the Litani River Authority
- **Concept note 1: Increase the availability of irrigation water in Quasmieh Scheme through harvesting and storing Ras el Ain Springs water:**
 - **WEFE Nexus benefits:**
 - Water:
 - Provide additional water resource for irrigation
 - Relieve the stress on water supply
 - Raise the equality in water supply
 - Energy: Use of renewable energy source (solar power) for irrigation
 - Food: increase the irrigated agricultural area thus increase food productivity and security
 - Ecosystems: The supply of water for irrigation at low tariffs will discourage farmers from pumping from private wells in the coastal strip, thus contributing to the preservation of underground water and reduce saline water intrusion from the sea.

Concept note 2: Sewage treatment for Kleyaa Village community and water reuse for irrigation-constructed wetland

▪ WEFE Nexus benefits:

- Water: The reuse of treated wastewater as a sustainable resource for agriculture will reduce water stress. Sustainable and resilient water management will bring benefits to the national economy as a whole, in the medium term.
- Energy: The use of solar energy to benefit irrigation.
- Food: the project will contribute effectively to the improvement of water quality of Litani River with direct positive effect on irrigated crop safety and pumped potable water.
- Ecosystems: Harvesting natural and abundant resources, such as treated wastewater and the sun, will make it possible to increase agriculture in a sustainable way. Zero carbon footprint agriculture is indeed the sustainable solution for the future generations, safe for the people and respectful for the Planet.

Lebanon's contribution to key Regional WEFE Nexus initiatives

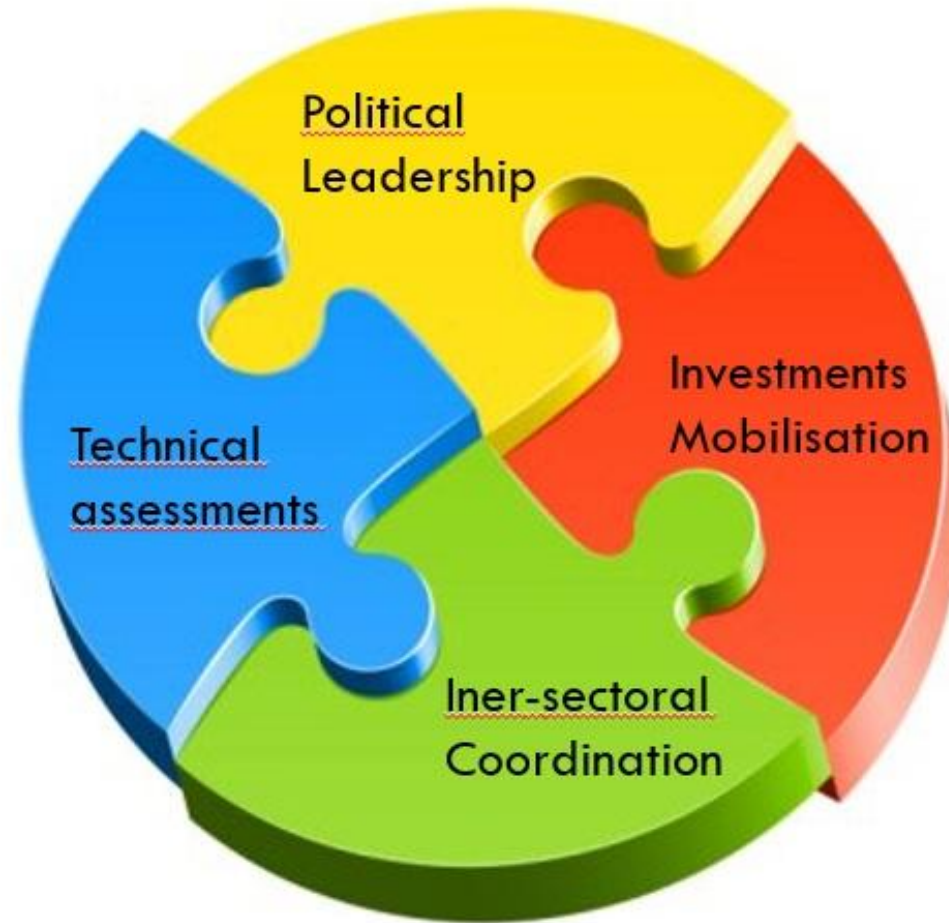
- **The UfM Task Force on the WEFE Nexus**

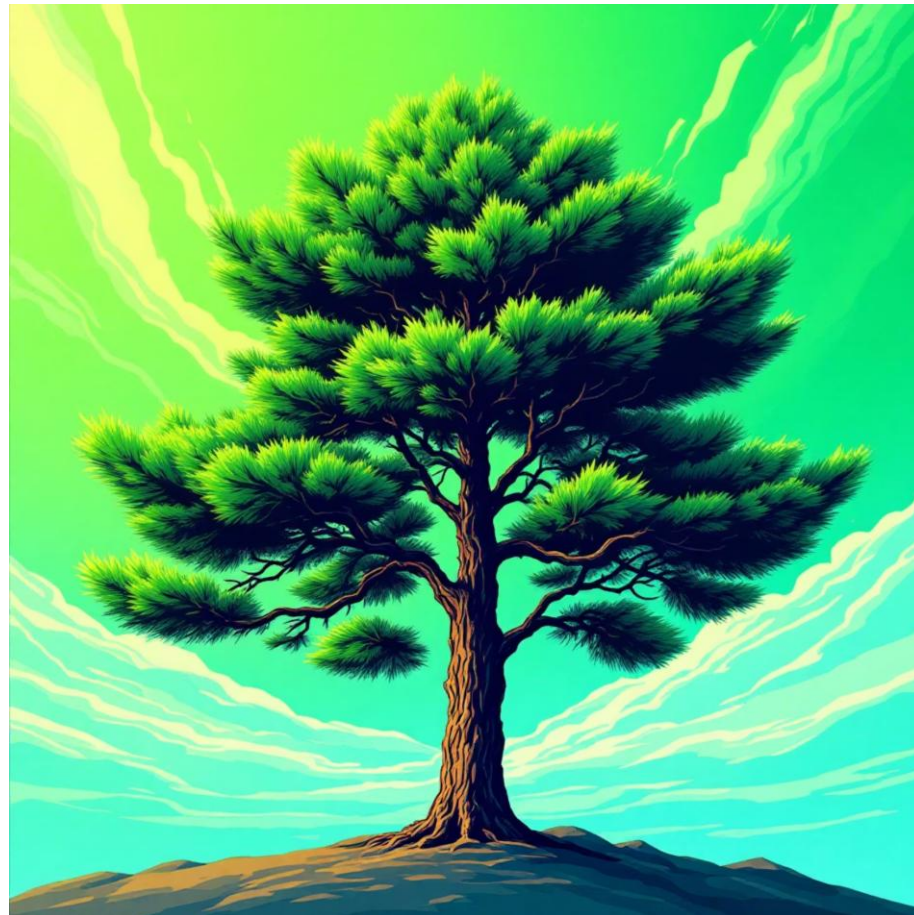
- One of the four thematic task forces mandated to support the implementation of the UfM Water agenda. It is led by Lebanon (Ministry of Energy and Water) since 2018 . The initiative has the potential to introduce the WEFE Nexus approach and to catalyze action at the Mediterranean level for its mainstreaming, financing and implementation.

- **The WEFE Nexus Strategy in the Mediterranean Source to Sea continuum**

Lebanon has been contributing to the process for developing the Strategy, that aims to catalyze the shift from 'Nexus thinking' to 'Nexus doing' in the Mediterranean Source to Sea continuum, within improved and integrated governance structures.

What is needed to advance the implementation of WEFE Nexus solutions





Thank you

WES-BCA Regional Workshop

Advancing WEF E Nexus integration in the Mediterranean: Towards a framework for action

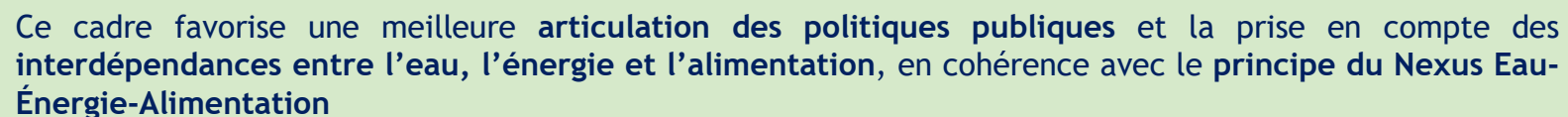
19 January 2026, Online

WEFE Nexus highlights, challenges, and opportunities in Morocco

Presented by: Rachid RAJEL, Head of the Water Pacification Division General Directorate of Hydraulics, Ministry of Water and Equipment (MEE)



**Water and Environment Support -
Biodiversity and Climate Action**
in the Neighbourhood South region



Cadre juridique contemporain : *la Loi 10-95 et Loi 36-15 sur l'eau* et ses textes d'application promulguée en 2016 :

- L'adoption d'une approche participative entre les différents acteurs et secteurs concernés dans l'élaboration des documents de planification, notamment le Plan National de l'Eau (PNE), les Plans Directeurs d'Aménagement Intégré des Ressources en Eau (PDAIRE) et les Plans de Gestion de l'Eau Locale (PGEL).
- Introduction du concept du contrat de gestion participative comme un outil opérationnel de gouvernance locale visant à associer les usagers et les acteurs territoriaux à la gestion durable des ressources en eau, en particulier des eaux souterraines.
- Le renforcement de la gouvernance, et de la planification à long terme (*passant de 20 ans à 30 ans*) des projets de mobilisation des ressources en eau *dans un contexte caractérisé par le changement climatique*.
- Introduction des modalités de développement des ressources en eau non conventionnelles *comme le dessalement de l'eau de mer, la réutilisation des eaux usées épurées et la collecte des eaux pluviales pour tout type d'usage (agricole, alimentation en eau potable..)*.

➤ **Stratégie nationale de développement durable**

- Améliorer la valorisation et la productivité de l'eau dans l'agriculture et moderniser l'irrigation.
- Promouvoir les énergies renouvelables dans l'irrigation et le pompage, et lier le dessalement aux énergies renouvelables.
- Renforcer la résilience agricole grâce à des contrats d'exploitation des eaux souterraines, au déploiement du dessalement et à des plans de gestion de la sécheresse.

➤ **Stratégie énergétique nationale 2030**

- Développer les énergies renouvelables et explorer le nucléaire pour le dessalement.
- Promouvoir le chauffage solaire photovoltaïque de l'eau.

➤ **Stratégie nationale de l'eau/ Plan National de l'eau**

- Documents de planification et feuille de route du secteur de l'eau pour un horizon de 30 ans.

➤ **Plan national pour le climat 2030**

- Promouvoir les économies d'eau et l'efficacité de l'irrigation.
- Renforcer la résilience des secteurs dépendants de l'eau face aux impacts climatiques.

➤ **Le plan Maroc vert, Génération Green 2020-2030**

- Efficience économique, équité sociale et préservation des ressources naturelles
- Pérennité du développement agricole

2009

2020

2030

2050

Stratégie Nationale de l'Eau

Plan National de l'Eau 50

A L'ÉCHELLE NATIONALE

A L'ÉCHELLE RÉGIONALE

Les plans directeurs d'Aménagements Intégrées des Ressources en Eau (PDAIREs)



Le Plan National de l'Eau 2050 constitue selon la Loi 36-15 sur l'eau le document de référence de la politique nationale de l'eau et la feuille de route du secteur de l'eau pour un horizon de 30 ans, et qui est révisable tout les 10 ans ou avant ce terme si des circonstances exceptionnelles exige sa modification avant terme.

LES AXES



- Gestion de la demande en eau et valorisation de l'eau
- Développement de l'offre en eau
- Protection des ressources en eau et du milieu naturel et des zones fragiles
- Adaptation aux changements climatiques
- Poursuite des réformes réglementaires et institutionnelles
- Modernisation des systèmes d'information et renforcement des moyens et des compétences
- Sensibilisation et changement de comportement

DIALOGUE POLITIQUE SUR LE LIEN WEFE

Le dialogue politique qui eu lieu à Tanger en 2025 vise à transformer les enjeux climatiques en opportunités de développement durable grâce à une gouvernance intégrée et une action coordonnée, marquant un tournant vers l'action concrète pour le Nexus WEFE au Maroc.



CONVENTION CADRE SIGNÉE



Objectif de la convention

- Explorer et tirer partie des synergies intersectorielles, en mettant l'accent sur la promotion de l'énergie renouvelable, l'utilisation judicieuse et efficace de l'eau, ainsi que le renforcement de la résilience agricole face au changement climatique, tout en préservant les écosystèmes naturels.
- L'accélération d'identification des besoins et d'investissements pour la mise en œuvre des projets NEXUS WEFE.



Parties contractuelles

- Ministère de l'Équipement et de l'Eau
- Ministère d'Intérieur
- Ministère de la transition Énergétique et du Développement Durable
- Ministère de l'Agriculture, de la Pêche Maritime et de Développement Rural et Eaux et Forêt
- L'Université Abdelmalek Essaadi



PROJET DE L'IMPLANTATION DU PARC PHOTOVOLTAÏQUE FLOTTANT DU BARRAGE TANGER MED

- ❖ Projet situé au niveau de la retenue du barrage Tanger Med alimentant le port en eau potable ;
- ❖ Projet vise à exploiter les ressources solaires en minimisant l'occupation du sol de la zone d'étude et en préservant la réserve du barrage contre l'évaporation ;
- ❖ Superficie permet d'installer une puissance d'environ 25 MW de solaire PV Flottant.
- ❖ L'alimentation électrique du port Tanger Med à partir de l'énergie produite par le parc photovoltaïque.



PROJET DE L'IMPLANTATION DU PARC PHOTOVOLTAÏQUE FLOTTANT DU BARRAGE OUED EL MAKHAZINE





17

Stations de dessalement de l'eau de mer
350 Mm³ d'eau dessalée/An

4

Stations de dessalement en cours
567 Mm³ d'eau dessalée/An

11

Stations de dessalement programmées
1,7 Milliards de m³ d'eau dessalée/An

Toutes les stations de dessalement de l'eau de mer programmées sont objets de couplage avec des projets de production des énergies renouvelables

STATION DE DESSALEMENT DE L'EAU DE MER DE DAKHLA



Description du projet

- ❖ Station de dessalement d'une capacité de 37 Mm³/an, dont 7 Mm³/an destinés à l'alimentation en eau potable et 30 Mm³/an à l'irrigation ;
- ❖ Station en cours de construction (état d'avancement > 78%) et la mise en service prévue en 2026 ;
- ❖ Alimentation à 100 % par des énergies renouvelables, assurée par un parc éolien à Dakhla d'une puissance installée de 40 MW, extensible à 60 MW



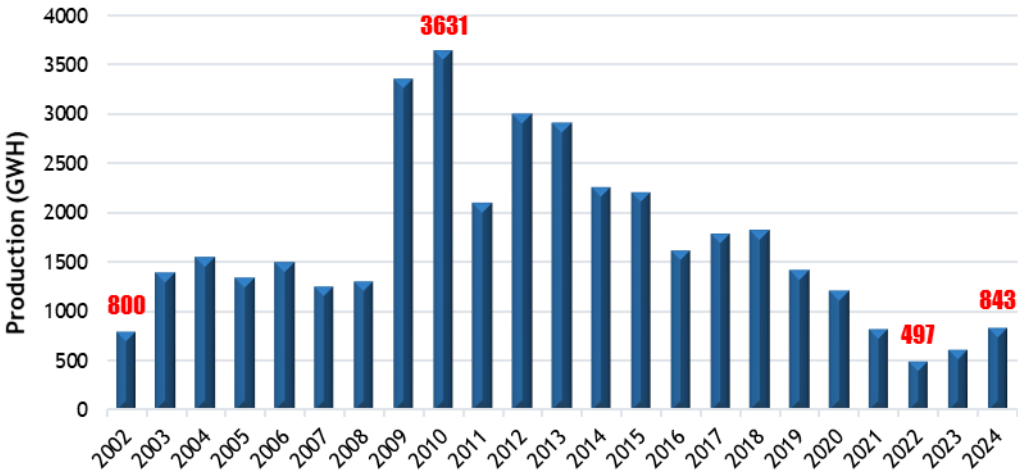
Caractéristiques du projet

- ❖ Coût compétitif de l'eau ;
- ❖ Réduction des émissions directes de CO₂ liées à l'énergie ;
- ❖ Intégration dans la stratégie nationale de transition énergétique

PRODUCTION DE L'ÉNERGIE HYDROÉLECTRIQUE PAR LES BARRAGES

Barrage	Capacité Installée [GWh]	Production Hydraulique Annuelle [GWh]
STEP AFOURER TURBINAGE	464.000	229.680
STEP ABDELMOUMEN TURBINAGE	350.000	135.156
AHMED EL HANSALI	92.000	-
AÏT MESSAOUD	6.400	6.625
BINE EL OUIDANE	135.000	14.450
AFOURER	93.600	31.850
HASSAN 1er	67.000	24.498
MOULAY YOUSSEF	24.000	8.097
AL MASSIRA	128.000	-
IMFOUT	31.200	2.652
DAOURAT	17.000	0.561
SIDI SAID MAACHOU	20.800	-
KASBA ZIDANIA	7.100	-
LALLA TAKERKOUST	12.000	0.987
MANSOUR ED DAHBI	10.000	2.725
TANAFNIT	18.000	25.019
EL BORJ	22.000	32.270
Micro-central source oum Er-bia	0.239	-
EL KANSERA	14.400	-
AL WAHDA	240.000	89.196
IDRISS 1er	40.600	3.935
ALLAL EL FASSI	240.000	41.636
OUED EL MAKHAZINE	36.000	15.291
MOHAMMED EL KHAMIS	23.200	9.816
BOU AREG	6.400	0.115
LAU	14.100	11.295
TAURART	2.000	-
FES AMONT	1.200	-
FES AVAL	1.900	-
MEKNES	0.600	-
TAZA	0.600	0.150
SEFROU A.	0.600	0.046

32 unités de production de l'hydroélectricité dont les deux tiers sont liés aux barrages construits à but multiples assurant à la fois la production hydroélectrique / l'approvisionnement en eau potable/ l'irrigation / l'abreuvement des cheptels.



PRODUCTION HYDROÉLECTRIQUE ANNUELLE (GWH).

NOUVEAU CONSORTIUM ENTRE LE MAROC ET LES EMIRATS

Un consortium composé du Fonds Mohammed VI pour l'Investissement, de TAQA Morocco et de Nareva ont signé un protocole d'accord avec le Gouvernement marocain pour le développement de nouvelles infrastructures stratégiques liées à l'eau potable, irrigation, et à l'énergie, portant notamment sur :

- **Transfert d'eau** : 800 millions de m³ par an transférés du bassin du Sebou vers le bassin de l'Oum Er-Rbia ;
- **Dessalement de l'eau de mer** : capacité additionnelle de 900 millions de m³ par an, produite entièrement à partir d'énergies renouvelables ;
- **Transport d'électricité** : ligne électrique de 1 400 km d'une capacité de 3 000 MW ;
- **Électricité renouvelable** : capacité additionnelle de 1 200 MW ;
- **Électricité thermique** : capacité globale de 1 500 MW.

Rejet direct dans les cours d'eau



Effet de l'érosion en amont du bassin Lakhdar



Inondations de la plaine du Gharb 2009



Pollution des eaux de surface et souterraines d'origine domestique, agricole et minière

Erosion des sols et perte de capacité des barrages par envasement (une perte de capacité de stockage cumulée de l'ordre de 2.5 Milliards de m³)

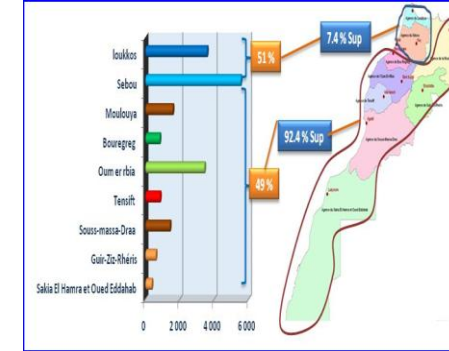
Irrégularité de la répartition des ressources en eau dans le temps et l'espace

Impact des CC et accentuation des phénomènes climatiques extrêmes. (Le volume global des apports d'eau enregistrés au niveau de l'ensemble des grands barrages du Royaume, au cours de l'année hydrologique 2022-2023, est évalué à 3,9 Milliards de m³ déficitaires de 66 % par rapport à l'apport moyen annuel)

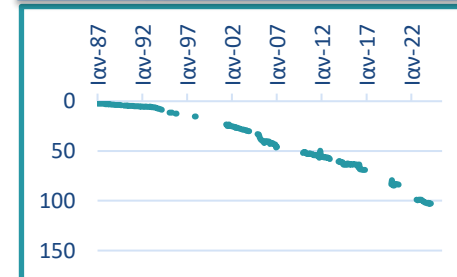
Demande en eau et en énergie en croissance (de 12 Milliards de m³ en 2020 à 16 Milliards de m³ à l'horizon 2050)

Surexploitation des ressources en eau souterraines (une surexploitation de plus de 1.1 Milliard de m³)

Contraintes

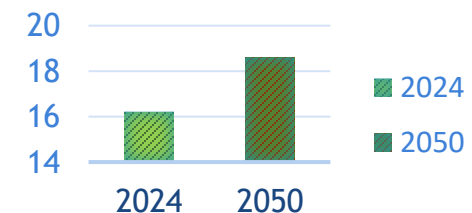


Surexploitation de la Nappe Jbel Hamra

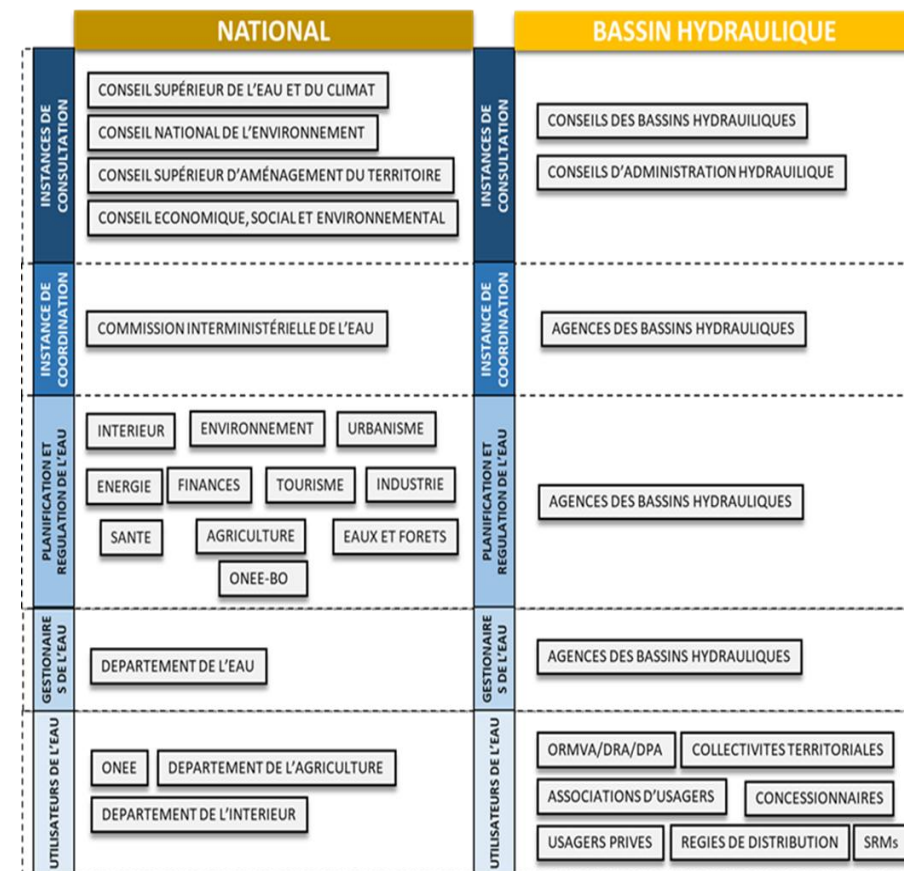


Évolution de la demande en eau agricole

Evolution de la demande en eau globale (en MMm³)



- Malgré l'existence de plusieurs organes de consultation et de coordination : Absence d'une entité responsable dédiée à la gouvernance et au suivi de la mise en œuvre du Nexus WEFE
- Manque d'un cadre réglementaire explicite définissant clairement les rôles, responsabilités et mécanismes de coordination entre les secteurs
- Insuffisance d'outils de planification intégrée spécifiques au Nexus WEFE



- ✓ **Opérationnaliser l'approche Nexus Eau-Énergie-Alimentation** prévue par les Plans sectorielles, en l'intégrant de manière transversale et explicite dans les politiques à adoptés, les documents de planification et les programmes d'investissement, afin d'assurer une gestion intégrée, cohérente et durable des ressources naturelles ;
- ✓ **Renforcer la coordination intersectorielle entre les acteurs de l'eau, de l'énergie et de l'agriculture**, à travers des mécanismes de **co-planification**, permettant d'optimiser les synergies et à maximiser les bénéfices pour l'ensemble des usages;
- ✓ **Assurer la continuité et la capitalisation des projets Nexus réussis** (dupliquer la convention de la région de TTAH, généraliser le projet d'installation de parcs photovoltaïques flottant; ,,) ;
- ✓ **Renforcer les capacités des acteurs**, à travers la formation, l'assistance technique et le développement d'outils d'aide à la décision adaptés à l'approche Nexus



WES-BCA

Water and Environment Support -
Biodiversity and Climate Action
in the Neighbourhood South region

MERCI DE VOTRE ATTENTION



WES-BCA

Water and Environment Support -
Biodiversity and Climate Action
in the Neighbourhood South region

COFFEE BREAK



Feedback Session Key findings – WEF E Institutional arrangements and policies, Effective and efficient planning and financing, Informed decision making

Facilitator: Mr. Dimitris Faloutsos, GWP-Med, Deputy Regional Coordinator

Speaker: Ger BERGKAMP, WES-BCA Non-Key Expert



PART II. RELATED RECOMMENDATIONS TOWARDS AN ACTION PLAN FOR THE MEDITERRANEAN WEFE NEXUS STRATEGY

WES-BCA Regional Workshop

Advancing WEF E Nexus integration in the Mediterranean: Towards a framework for action

19 January 2026, Online

Introduction: WES-BCA WEF E Nexus Governance recommendations as input to Mediterranean WEF E Nexus Action Plan

Presented by: Professor Michael SCOULLOS, Team Leader, WES-BCA

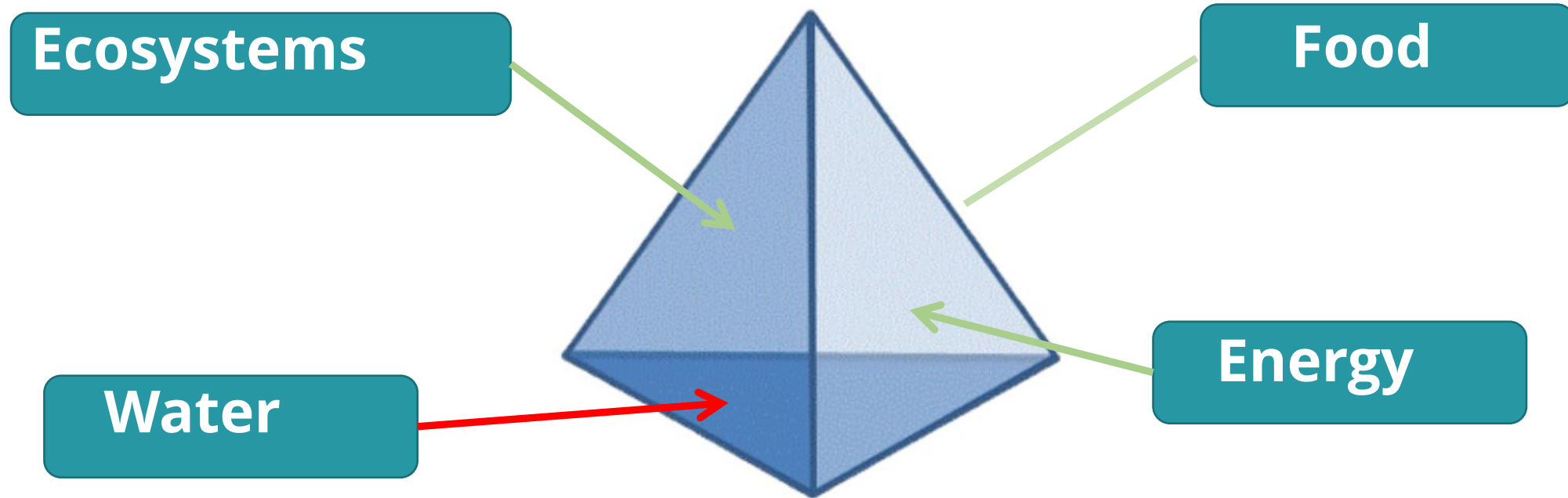


WES-BCA

Water and Environment Support -
Biodiversity and Climate Action
in the Neighbourhood South region

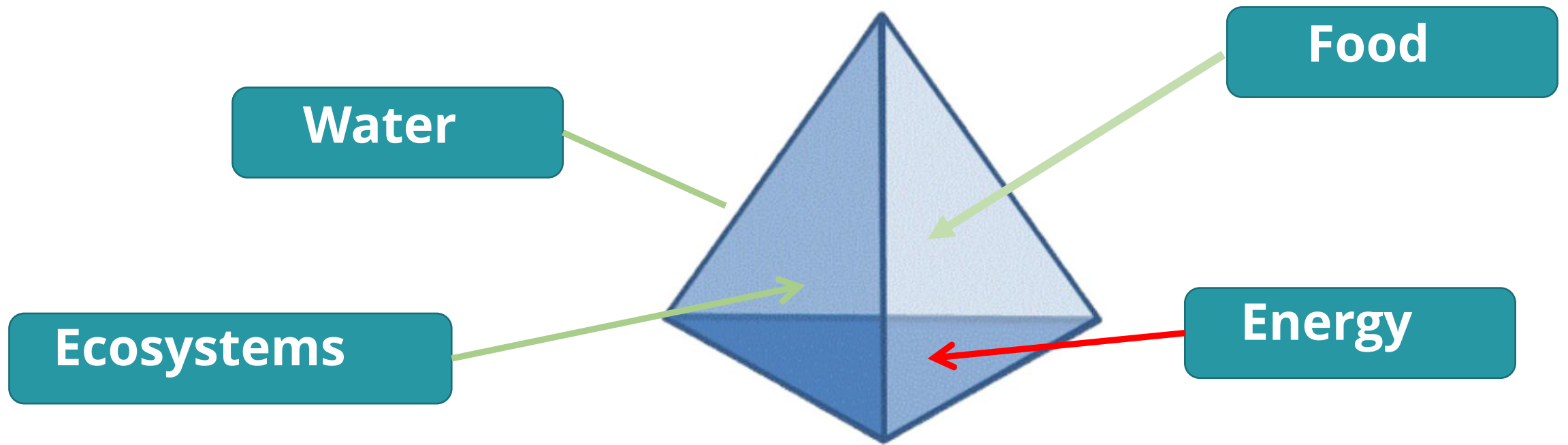
WEFE Nexus Governance

WEFE Nexus with Water as main entry point/driver



The “W” in the WEFE Nexus is justified not only because of the initiative of the Water sector towards this approach, but also because of the WEFE connection to the Source-to-Sea (S2S) approach.

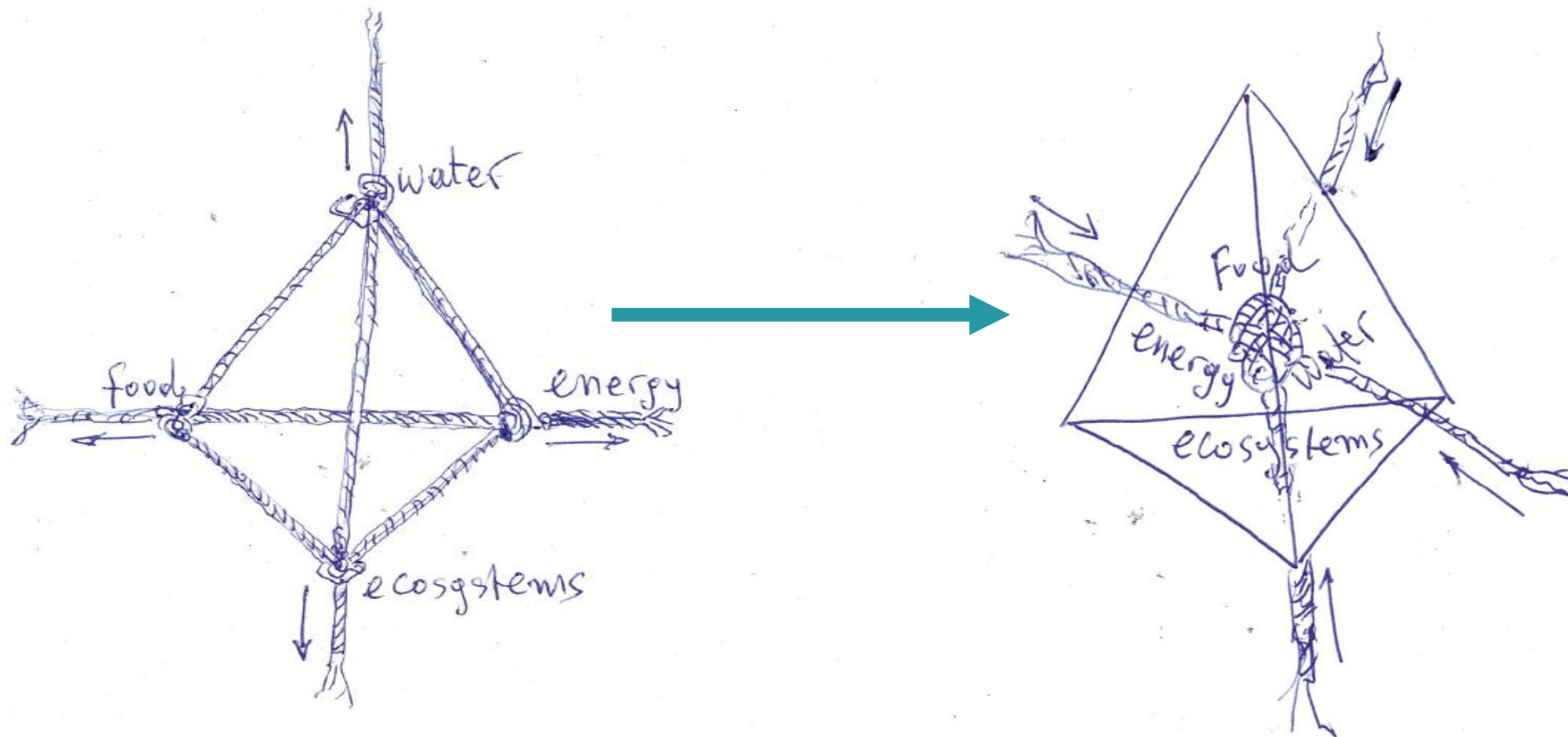
WEFE Nexus with Energy as main entry point/driver



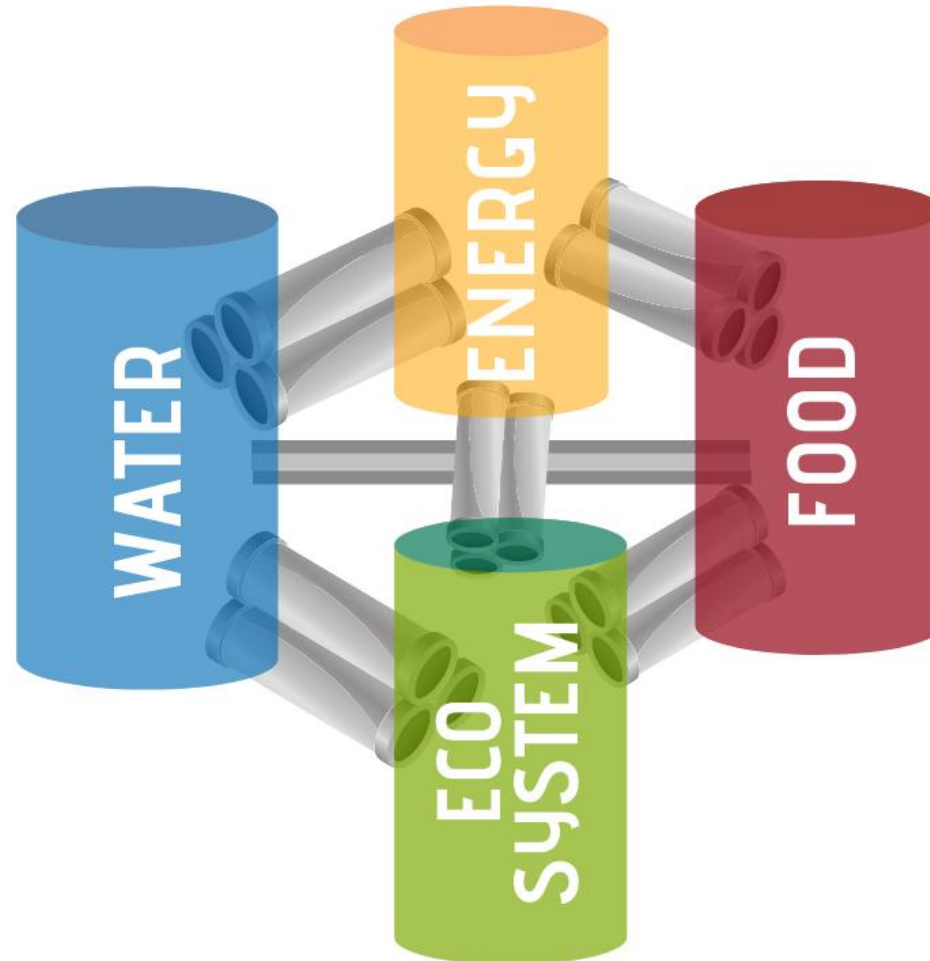
Energy, Food, or Ecosystems may also be entry points/drivers

Water-Energy-Food Ecosystem (WEFE) Nexus Governance

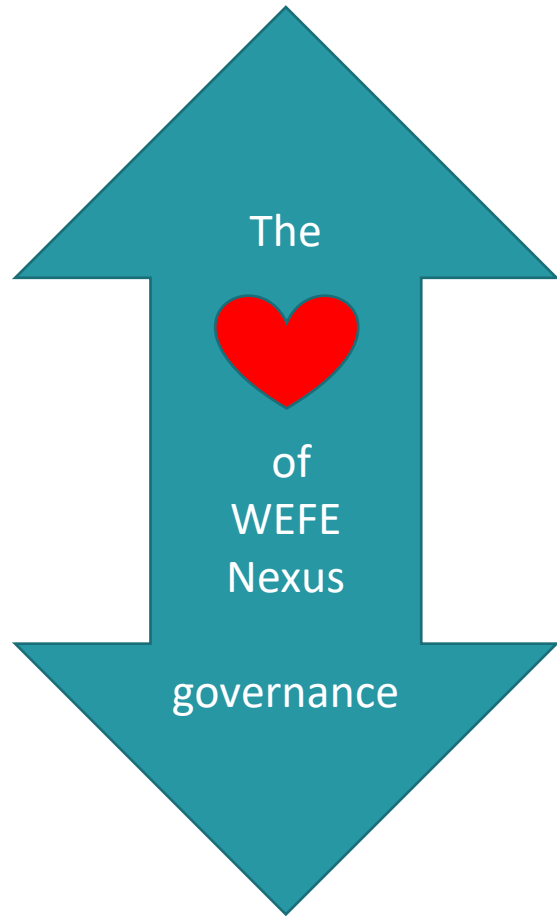
All four have developed traditional governance structures and management tools. Despite recognition of the need for cooperation, the diversity and frequently difference of scale of projects undertaken by each sector, result to tensions and antagonisms. The objective of the **Nexus governance approach** is to enhance effective implementation through meaningful integration, **turning tensions into synergies**.



For WEF Nexus Governance, demolition of the sectoral governance “silos” is not absolutely necessary, if wide connecting channels are created among them



Integration



Implementation

Importance of the key driver

Involvement

Inclusiveness

Innovation

Investment

Information

International Cooperation



**Nine I's
for the WEFE
Governance**



WES-BCA
Water and Environment Support -
Biodiversity and Climate Action
in the Neighbourhood South region

Thank you for your attention!

WES-BCA Regional Workshop

Advancing WEF E Nexus integration in the Mediterranean: Towards a framework for action

19 January 2026, Online

Presentation of the Analysis of WES-BCA WEF E Nexus recommendations as input towards the Action Plan

Presented by: Mr. Ger BERGKAMP, WES-BCA Non-Key Expert



Water and Environment Support -
Biodiversity and Climate Action
in the Neighbourhood South region

Mediterranean WEFE Strategy - Recommendations



Goal 1: Appropriate institutional arrangements, policies, and cooperation frameworks are established at country and regional levels.	Directions for action	Governance and Policies
Objective 1.1: Develop and/or accordingly adapt appropriate governance structures at all levels to implement the WEFE Nexus approach in the S2S continuum.	1.1.1. Encouraging regional as well as transboundary cooperation governance settings in implementing the WEFE Nexus approach in the S2S continuum.	
	1.1.2. Establishing and/or enhancing country-level cross-sectoral and inter-spatial coordination mechanisms or structures.	1. Strengthen WEFE Coordination Mechanisms: Reinforce and formalize cross-sectoral coordination platforms by defining clear mandates, agendas, and timetables for both their meetings and mandated activities.
	1.1.3. Enhancing the capacities of relevant bodies, for implementing the WEFE Nexus approach in the S2S continuum.	
	1.1.4. Ensuring effective decentralization in decision-making and that sub-regional and/or cultural distinctive features are taken into account, engaging and empowering local actors and ensuring a fair transition that leaves no-one behind.	
	1.1.5. Creating the necessary institutional and legal framework and processes for planning, financing and implementing WEFE Nexus interventions at scale and monitoring their impact.	4. Promote Integrated Governance Frameworks Training: Provide training to policymakers, planners, and sector regulators on frameworks for WEFE cross-sectoral coordination in a Source-to-Sea approach, and build skills in designing inclusive, adaptive, participatory governance structures that enable multi-level stakeholder engagement.
	1.1.6. Facilitate regional dialogue processes and forums for exchange of knowledge and experience.	

Mediterranean WEFE Strategy - Recommendations



Goal 1: Appropriate institutional arrangements, policies, and cooperation frameworks are established at country and regional levels.	Directions for action	Governance and Policies
Objective 1.2: Mainstreaming WEFE Nexus approach in the S2S continuum into policies and strategies.	1.2.1. Developing new, or updating existing, regional strategic documents and action plans for implementing the WEFE Nexus approach in the S2S continuum, including as contribution to achieving agreed regional and global policy goals (e.g. SDGs, climate action).	
	1.2.2. Screening major regional sectoral initiatives from a WEFE Nexus perspective and ensuring that they do not affect in a negative way the key needs and considerations of the other (three) sectors.	
	1.2.3. Ensuring harmonization across sectoral and spatial “chapters” of national strategies and plans to avoid inconsistencies with sectoral and spatial planning, assisted by WEFE Nexus assessments including governance analysis, scenarios development and modelling supported by multi-stakeholder dialogue.	3. Align Sub-National Strategies: Review mandates, composition, policies, and strategies on natural resources of sub-national authorities to ensure they reflect an integrated multi-sectoral WEFE Nexus approach, including in planning, budgeting, and project implementation.
	1.2.4. Developing or adjusting existing instruments, processes, requirements, guidelines for increasing horizontal and vertical integration in policy making, implementation and monitoring.	2. Review and Update WEFE Sector Policies: Systematically review and update existing sector policies and strategies to incorporate WEFE Nexus interlinkages, cross sectoral synergies and shared- priorities and opportunities, while ensuring alignment with national and regional processes’ goals and objectives.
	1.2.5. Benefiting from the use of integrated management approaches (IWRM, Integrated Costal Zone Management (ICZM), Ecosystem Based Adaptation (EBA), etc.) to speed up implementation of WEFE Nexus across sectors and spaces within the S2S continuum.	6. Incorporate WEFE Priorities into natural resources and development Plans at appropriate level: Explicitly incorporate WEFE Nexus priorities into plans like for river and groundwater basin management, coastal zone management, local climate resilience, etc. including provisions for water allocation and efficiency, energy efficiency, food security, ecosystem services and, overall, multi-sector approaches to manage trade-offs among WEFE sectors fairly and efficiently, applying a Source-to-Sea approach and using WEFE Nexus Roundtables to strengthen participatory and multi-stakeholder governance

Mediterranean WEFE Strategy - Recommendations



Goal 2: Efficient and effective planning, financing and implementation of management and technical solutions.	Directions for action	Planning and Financing
Objective 2.1: Upscaling demonstration WEFE Nexus applications to mainstreamed implementation, through appropriate investments and market mechanisms.	2.1.1. Mapping and brokering opportunities for multipurpose, integrated, and innovative WEFE Nexus interventions and investments.	5. Undertake WEFE Multi-Sector Integrated Assessments: Conduct integrated assessments at national and sub-national levels to support WEFE Nexus planning and cross-sectoral prioritization.
	2.1.2. Developing standardized methods to assess the feasibility, cost-efficiency and effectiveness of WEFE Nexus solutions, including their business models, and evaluate their results and benefits potentially through indicators for a benchmark of successful experiences.	
	2.1.3. Piloting and mainstreaming no-regret and cost-efficient solutions and innovative technologies, including Nature-based Solutions and those related to digital transformation, artificial intelligence, space technologies, etc., engaging all appropriate partners, including research partners and the private sector and addressing the digital divide by ensuring that the benefits of digital technology are equitably distributed.	
	2.1.4. Replicating and upscaling of cost-efficient and effective solutions, including by developing an appropriate incentives and financing frameworks, creating enabling legislation, and engaging the private sector, and SMEs in particular, through market approaches.	7. Define Specific Scaling Mechanisms: Define scaling mechanisms for targeted WEFE Nexus solutions that address critical interlinked issues sustainably (e.g., solar powered irrigation with enforced water abstraction limits or solar powered desalination with advanced brine management or treated wastewater reuse with crop quality controls).
	2.1.5. Improving cross-sectoral investment planning to progressively move to cross-sectoral portfolios of large investment projects.	8. Develop a Project Pipeline of Investment-Grade Initiatives: Create a project pipeline of WEFE Nexus interventions in a Source-to-Sea approach, utilizing screening tools for incorporating socio-economic benefits, that can attract public and private investment, including through PPPs, and align them with national financing frameworks, domestic financing partners requirements, development assistance partners' criteria, such as the EU NDICI/EFSD+ mechanism, GCF, etc.

Mediterranean WEFE Strategy - Recommendations



WES-BCA
Water and Environment Support -
Biodiversity and Climate Action
in the Neighbourhood South region

Goal 2: Efficient and effective planning, financing and implementation of management and technical solutions.	Directions for action	Planning and Financing
Objective 2.2: Attracting and coordinating increased financing for implementation of WEFE Nexus interventions.	2.2.1. Developing a strategic finance framework for WEFE Nexus implementation – including targets for public and private contributions, cost recovery models, available and emerging financing instruments, role of international development partners, use of blended finance.	9. Engage Private Partners and Domestic Financial Institutions: Explore opportunities for innovative private investment in WEFE Nexus projects, including facilitated by domestic and international financial institutions, so as to close the investment gap in Nexus related solutions, and promote private investment in WEFE Nexus-related projects, potentially using blended finance, PPPs, support to start-ups and SMEs, public co-financing, tax breaks or subsidies.
	2.2.2. Prioritizing public spending and mobilizing national sources of finance for WEFE Nexus interventions; reforming harmful subsidies and providing incentives to promote such interventions.	
	2.2.3. Mainstreaming the funding for WEFE Nexus projects through existing cross-sectoral international funding sources, such as climate finance.	10. Mobilize International Support: Seek additional financial support from international development partners, including the EU, for WEFE Nexus approach implementation, including infrastructure retrofitting, technology adoption, capacity building, etc.
	2.2.4. Using blended finance (including guarantees) to help de-risk WEFE projects in order to attract private sector investment.	
	2.2.5. Strengthen Public-Private Partnerships by integrating financial mechanisms specifically dedicated to biodiversity conservation (e.g. Green Funds).	
	2.2.6. Supporting national, local and regional capacities to prepare schemes and proposals to effectively access and manage domestic and international funding for WEFE Nexus implementation.	

Mediterranean WEFE Strategy - Recommendations



Goal 3: Informed decision making based on enhanced science-based knowledge, engagement of capacitated stakeholders, and increased public awareness.	Directions for action	Data, Knowledge, and Stakeholder Engagement
Objective 3.1: Promoting Science and Education on WEFE Nexus and S2S aspects.	3.1.1. Incorporating WEFE related topics in University curricula	
	3.1.2. Encouraging related cooperation across academic institutes, and linking them with market economy to increase understanding of the interlinkages across the various WEFE components	13. Support WEFE Nexus Community of Practice (NCoP) : Develop and facilitate, at appropriate levels, WEFE Nexus NCoP to share information and knowledge, assist stakeholders networking, facilitate co-creation of solutions, utilise structured results of demo projects and initiatives, identify ‘champions’, etc., including at Mediterranean level the WEFE Nexus CoP facilitated by the PRIMA WEFE4Med Project (www.wefe4med.org).
	3.1.3. Supporting R&D on emerging and innovative technologies such as Artificial Intelligence and space monitoring. Encourage the use of digital twins in WEFE Nexus	
	3.1.4. Promote cross-sectoral research collaborations on climate-related challenges in the Mediterranean region.	7. Define Specific Scaling Mechanisms: Define scaling mechanisms for targeted WEFE Nexus solutions that address critical interlinked issues sustainably (e.g., solar powered irrigation with enforced water abstraction limits or solar powered desalination with advanced brine management or treated wastewater reuse with crop quality controls).

Mediterranean WEFE Strategy - Recommendations



Goal 3: Informed decision making based on enhanced science-based knowledge, engagement of capacitated stakeholders, and increased public awareness.	Directions for action	Data, Knowledge, and Stakeholder Engagement
Objective 3.2: Ensuring data availability, harmonisation and sharing across sectors and borders.	3.2.1 Modernizing, standardizing and harmonizing monitoring systems and databases across the WEFE Nexus sectors including for systematic integration of ecological monitoring and biodiversity indicators.	15. Support Cross-Sectoral Data Standardization: Train data collectors and managers operating in different sectors on data standardization and digital information platforms for interoperable data and information systems across WEFE sectors that capture both trade-offs and synergies.
	3.2.2 Promoting synergies for the application of new technologies for cost-efficient, advanced monitoring systems.	

Mediterranean WEFE Strategy - Recommendations



WES-BCA
Water and Environment Support -
Biodiversity and Climate Action
in the Neighbourhood South region

Goal 3: Informed decision making based on enhanced science-based knowledge, engagement of capacitated stakeholders, and increased public awareness.	Directions for action	Data, Knowledge, and Stakeholder Engagement
Objective 3.3: Developing capacities of stakeholders and related tools to implement WEFE Nexus at the S2S continuum.	3.3.1 Identifying capacity building needs for government officials and other national and local authorities, agencies and other stakeholders including private/economic sector, CSOs, NGOs, etc., and prepare capacity building strategies for the aforementioned.	11. Analyse Training Needs: Conduct a thorough training needs assessment to identify gaps in WEFE Nexus in a Source-to-Sea approach knowledge and skills.
	3.3.2 Organizing capacity building and training programs including e-learning and massive open online courses, mentoring and peer-to-peer learning, vocational training, etc., for government officials and all stakeholders on priority aspects of the WEFE Nexus at the S2S continuum.	14. Build Capacity to Use Digital Tools: Building capacity in the use of digital tools (e.g., GIS, remote sensing, modeling software, AI, digital twins, etc) for integrated natural resource management (planning, monitoring, and decision-making) towards advancing digital transformation[1], that can highlight synergistic solutions across water, energy, food, and ecosystems, WEFE Nexus models such as Q-Nexus can be used to support scenario-based planning, helping stakeholders explore and compare trade-offs and synergies across water, energy, food and ecosystems in a structured way; such tools have already been applied in the MENA region. 12. Enhance WEFE Nexus Capacity Building for the range of stakeholders: Develop and further advance capacity-building initiatives, based on the identified needs, including with support by regional partners and projects like EU WES BCA, GEF UNEP MAP MedProgramme, etc
	3.3.3 Promoting sharing of WEFE Nexus-related knowledge, experience, skill development and expertise among stakeholders to strengthen evidence-based decision-making and policy formulation.	18. Train Mediators: Offer training in conflict resolution, negotiations, and consensus-building with a specific focus on WEFE Nexus conflicts and solutions.
	3.3.4 Supporting authorities and other stakeholders by development of competencies, building capacities to identify WEFE Nexus interventions, prepare proposals to access and manage international and regional funding to implement these.	17. Adequately Inform Policy and Decision makers: Improve skills in data analysis and visualization to support cross-sectoral evidence-based decisions in relation to the WEFE Nexus.
	3.3.5 Developing localized WEFE Nexus Assessments and related tools that identify interlinkages and quantify the benefits of joint cross-sectoral actions that reduce trade-offs and enhance synergies.	

Mediterranean WEFE Strategy - Recommendations



Goal 3: Informed decision making based on enhanced science-based knowledge, engagement of capacitated stakeholders, and increased public awareness.	Directions for action	Data, Knowledge, and Stakeholder Engagement
Objective 3.4: Raising awareness and improving understanding concerning the WEFE Nexus at the S2S continuum, stimulating stakeholder's engagement and empowering them for their implementation.	3.4.1. Developing and conducting awareness campaigns for targeted groups and on tailored made priority elements of the WEFE Nexus at the S2S continuum.	19. Promote Public Awareness: Increase public awareness of WEFE Nexus issues, approaches and solutions to encourage initiatives with the private sector and communities.
	3.4.2. Supporting engagement, empowerment and decision-making roles of women and youth in WEFE Nexus implementation, enhancing the opportunities for their involvement, employment and entrepreneurship.	
	3.4.3. Ensuring that gender considerations and the needs of vulnerable communities are fully taken into account in policy-making and implementation of interventions.	
	3.4.4. Identifying, developing and communicating successful cases of practice into regional, national and local planning processes.	16. Enhance Cross-Sectoral Communication Skills: Developing communication and facilitation skills amongst government officials to foster inclusive stakeholder participation across WEFE sectors and regions.
	3.4.5. Establishing regional Communities of Practice on the WEFE Nexus at the S2S continuum.	20. Disseminate the WEFE Nexus Strategy and engage in shaping and implementing its Action Plan towards shifting from WEFE Nexus thinking to WEFE Nexus doing
	3.4.6. Support behavioral change in consumption patterns, including also in terms of shifting to healthier diets and reducing food loss and waste.	



Thank you for your
attention!



Feedback Session - Mediterranean WEFE Strategy: towards an Action Plan - Priority areas, Questions, Answers and Recommendations

Facilitator:

Mr. Vangelis CONSTANTIANOS, GWP- Med,
Regional Coordinator



Next Steps towards the Action Plan for the implementation of the WEF Nexus Strategy in the Mediterranean Source-to-Sea continuum

Facilitator: Prof. Michael Scoulllos, WES-BCA Team Leader

Panelists:

Ms Patrizia BUSOLINI, UNEP/MAP, Programme Management Officer

Mr. Frederic DE DINECHIN, UfM, Senior Policy Advisor

Dr. Antonella AUTINO, PRIMA, Coordinator

Mr. Vangelis CONSTANTIANOS, GWP- Med, Regional Coordinator



Closing Remarks

Speaker: Prof. Michael Scoulllos, WES-BCA
Team Leader



WES-BCA
Water and Environment Support -
Biodiversity and Climate Action
in the Neighbourhood South region

**Thank you for your attention
and keep up with our latest news!**

WES-BCA.EU

