



Union for the Mediterranean
Union pour la Méditerranée
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UFM WATER POLICY FRAMEWORK FOR ACTIONS 2030

Water Agenda Booklet
Water Division 2020

With financial support from



The UfM Secretariat
is co-funded by the
EUROPEAN UNION



UfM Water Policy Framework for Actions 2030



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Highlights

Thematic of Action # 1

WEFE NEXUS

Water, food, energy and ecosystems are essential for human well-being, poverty reduction and sustainable development.

The UfM Member States are well aware of water, energy, food and ecosystems challenges. Although cross-sectoral integration is a constant effort, related challenges have so far been addressed mostly within silos.

Thematic of Action # 2

WEM

Water Employment Migration scope is to assist UfM countries becoming more water-efficient economies thus enabling income generation and employment opportunities for their populations, including for youth and women, while tackling some of the root causes of migration.

Thematic of Action # 3

WASH

Water and Sanitation hygiene chapter scope is to contribute to the Global development agenda and to achieve universal water and sanitation access for all.

To highlight the economic value and water economies in general terms toward achieving a sustainable services and stable utility modules in the region aiming to enable private sector engagement.

Thematic of Action # 4

WCCA

Climate change play a major role to the alteration in time and space of the allocation of water resources, leading to economic, social and environmental impacts that are felt particularly strongly in the already water-stressed Mediterranean region.

Chapter 1: Chapter of UfM WEG Work Programme

Water-Energy-Food-Ecosystems Nexus

1. Content

Water, food, energy and ecosystems are essential for human well-being, poverty reduction and sustainable development, including by addressing climate change impacts. These are interlinked through a nexus of natural, institutional, economic and social frameworks. For example, water is used for agricultural production and is a keystone for the entire agro-food supply chain. Agriculture accounts for 70 % of total global freshwater withdrawals. Energy is required to produce, transport and distribute food. About 30 % of total global energy is used by the food sector. Water is used to produce energy, and energy is required to extract, pump, lift, collect, transport and treat water. Healthy ecosystems support the sustainability of the above and are negatively affected if water, energy or food are used in an unsustainable way. Demands for water, food and energy are increasing due to population growth and economic development. It is estimated that by year 2050, 50% more water, 60% more food and 80% more energy would be required globally; by 2030, the world is projected to face a 40% global water deficit under the business-as-usual climate scenario (2030 WRG, 2009). This is expected to have negative impacts on ecosystems. Making progress on these will substantially assist in achieving the human right to water and sanitation as well as the implementation of the 2030 Agenda, in particular 6, 11, 12 and 13.

Interactions between water-energy-food-environment sectors may result in synergies or trade-offs. For example, large-scale infrastructure projects, like hydro-energy, may have benefits across sectors or even across boundaries like for producing hydropower, providing water storage for irrigation and urban uses, mitigating flood and drought effects, etc. However, such interactions can also lead to unfavorable consequences, even of socio-economic nature, particularly if coupled with unwise use of water resources. For example, growing bioenergy crops in an irrigated agriculture scheme can help to improve the energy supply and it can generate new employment opportunities but it might also result in

increased competition for land and water resources with subsequent negative consequences for local food production. Desalination can pose similar benefits and challenges. Thus, trade-offs are a reality and should be taken into account when securing the needs of the three sectors. Each of the countries may take different decisions in terms of addressing tradeoffs according to their strategic priorities.

The UfM Member States are well aware of water, energy, food and ecosystems challenges. Although cross-sectoral integration is a constant effort, related challenges have so far been addressed mostly within silos. This is due to fragmentation of responsibilities, inadequate coordination, regulatory overlapping, etc. If the sustainability of our water, energy, food and ecosystems are to be simultaneously secured, decision-makers, including those responsible for only individual sectors, need to consider their choices' and decisions' broader cross-sectoral consequences.

The Water-Energy-Food-Ecosystems Nexus was introduced as an approach to facilitate enhancement of water, energy and food security while preserving ecosystems and their functions and increasing climate resilience, reducing trade-offs and shifting towards more sustainable consumption patterns, increasing efficiency and improving governance.

A Nexus approach to sectoral management, through enhanced technical assessment, policy dialogue, governance improvements, investment mobilization, replicable applications, collaboration and coordination, is necessary to ensure that co-benefits and trade-offs are not only considered but also that appropriate safeguards are put in place to prevent and/or mitigate their detrimental effects especially regarding on the availability of water resources, taking into account how these approaches can fit in with countries' national priorities.

Because of this multiplicity of conceptual expansions, the Nexus represents a promising vehicle for promoting considerations on cross-cutting issues (e.g. gender, stakeholder engagement, rights, poverty, transboundary cooperation, etc.). The Nexus can assist in the efforts to further mainstream these issues in addition to its pivotal role in promoting green job creation.

2. Aim and objective(s)

Aim: to enhance sustainable use of natural resources to achieve sustainable development goals under the Agenda 2030 in the UfM region.

Objective: to introduce and/or promote the Water-Energy-Food-Ecosystems Nexus approach, and to catalyse action for its mainstreaming, financing and implementation in UfM Member States, at the national and local (basin) levels as well as in the UfM region.

3. Outputs and possible types of interventions

AIMED OUTPUTS	MAIN TYPES OF INTERVENTIONS Suggested and non-binding examples of such interventions (short, medium, longer term)
Nexus-related challenges and solutions identified and prioritized , at different geographical scales, through multi-stakeholder consultation based Nexus analysis and assessments.	Build background for policy interventions and investment identification and prioritization <ul style="list-style-type: none"> • Nexus policy, economic and technical assessments elaborated, at different levels • Nexus multi-stakeholder policy dialogues facilitated, at different levels • Nexus dialogues with targeted groups (e.g. decision makers, users, private sector actors, etc.) facilitated on selected issues
Nexus governance settings strengthened, at difference geographical scales.	Provide tools for introducing and operationalizing Nexus approach in governance systems <ul style="list-style-type: none"> • Guidelines for designing and implementing multi-sector Nexus policy dialogues elaborated • Guidelines for mainstreaming gender considerations in the national Nexus agenda • Guidelines for introduction and utilization of Nexus analytical / assessment tools elaborated • Guidelines for developing national information systems for supporting Nexus analysis and decision making elaborated • Nexus strategies and action plans for the integration of sectoral policy making and planning elaborated
Planning and implementation of Nexus solutions enabled, at different geographical scales.	Coordinate, leverage and facilitate financing for Nexus interventions <ul style="list-style-type: none"> • Nexus infrastructure development coordinated through strategic planning, aligned with national development plans • Nexus investments preparation and financing facilitated • Market instruments for promoting Nexus-related entrepreneurship, including start-ups with emphasis on women and youth, assessed and promoted
Knowledge shared and capacity built on Nexus methodologies, policies and technologies.	Generate and disseminate Nexus knowledge <ul style="list-style-type: none"> • Knowledge on Nexus analytical methods shared • Knowledge on technical innovations shared • Knowledge on market based instruments (such as PPPs) for Nexus applications shared • Capacity building for sectoral decision makers, and key stakeholders (river basin authorities, irrigator cooperatives, energy sector planners, environmental managers, civil society) facilitated • Vocational training toolbox on Nexus-related jobs elaborated
Demonstration applications implemented as means for knowledge sharing.	Design and implement pilot interventions with replication potential at local level <ul style="list-style-type: none"> • State-of-art local Nexus pilot applications facilitated through a regional knowledge sharing approach, as means for demonstrating technology transfer options e.g. for water pumping and irrigation with renewable energy sources, desalination with sustainable energy options, multi-purpose dams, etc.

4. Outcomes

Aimed outcomes include:

- water security, energy security, food security, ecosystem protection fostered.
- protection of inland, coastal and marine habitats and biodiversity assisted.
- reduction of land based pollution and other pressures supported.
- climate change resilience fostered.



5. Partnerships

Activities will be designed and implemented with UfM's policy lead and facilitation. Countries that have expressed interest to contribute to and benefit from the Nexus work area of the UfM Water Agenda include Albania, Algeria, Bosnia and Herzegovina, Lebanon, Montenegro, Morocco and Tunisia. Financing partners with expressed interest include.

The Nexus work area will be technically coordinated by GWP-Med, with contributions by interested partners.

Examples of on-going and upcoming initiatives, programmes and projects that will operationally contribute to or their synergy will be sought for the Nexus work area include the GIZ 'Nexus Regional Dialogues' Programme supported by the EC; UNECE work on the Nexus at transboundary level; FAO work on the Nexus and Climate, supported by Sida; PRIMA supported by the EC; Nexus 'Child Project' of the GEF MAP UNEP MedProgramme; GWP-Med 'Nexus in Southeastern Europe' Project supported by ADA, Germany and GEF IW:LEARN; GWP-Med 'Making Water Cooperation Happen – Matchmaker' Project, including with emphasis on the North Western Sahara Aquifer, supported by Sida; MAVA Foundation projects on Ecosystems / Nexus.

Synergies with Nexus-related processes and activities in Africa, the EU and GCC partners would be promoted.

Chapter 2: Chapter of UfM WEG Work Programme

Water-Employment-Migration

1. Content

Taking the line that 'water security and growth are symbiotic',¹ there is scope to assist UfM countries **becoming more water-efficient economies thus enabling income generation and employment opportunities for their populations, including for youth and women, while tackling some of the root causes of migration.** That is essential in a region where 50 million jobs shall be created throughout the next decade to absorb the growing labour supply. At the same time, UfM countries that are transit and/or hosting refugees, should be assisted to assess impacts and respond to related challenges. Making progress on these will substantially assist the 2030 Agenda implementation, like for SDGs 1, 3, 5, 6, 8, 9, 10, 11, 12, 13, 15, 16, and 17.

Water stress, exacerbated by intensifying climate variability and change as well as subpar water governance, is a crucial factor and increasingly a threat multiplier hindering sustainable development. Limitations in water availability and poor water services are linked to food insecurity, threats to ecosystem services, lack of employment, social instability and possibly violent conflict.² These are among the manifold root causes of migration, which should be approached through inter-related political, economic, social and cultural circumstances. To a great extent, migration goals are development goals. According to the Global High - Level on Water and peace report³ it should be ensured, that migrating populations have water security and the human right to water, which ought to become an integral part of water governance. Good water governance represents an important instrument in the prevention of violent conflict.

Three out of four jobs worldwide are water-dependent⁴. From its collection, through various uses, to its ultimate return to the natural environment, **water is a key factor in jobs creation** and, in a wider sense, income generation opportunities. This is either directly related to its management (supply, infrastructure, wastewater treatment, etc.) or in economic sectors that are heavily water-dependent such as agriculture, fishing, power, industry as well as on the environment and health. For example, water-related challenges by 2050 are projected to lower the MENA-region's GDP by 6-14%,⁵ if a do-nothing approach is pursued. Employment trends in the MENA-region have already worsened, especially in rural areas where, according to some studies, income is plummeting due to higher supply variability, depletion of groundwater resources and water pollution⁶. Furthermore, good access to drinking water and sanitation promotes an educated and healthy workforce, constituting an essential factor for sustained economic growth.

Migration is a key challenge in the Mediterranean. Migration streams usually start off as rural-urban movements and, when the pressure in the cities is intensifying, turn transnational. Climate change impacts aggravate pressures. The migration impacts are multi-fold: loss of labour force for home countries, increased strain on resources during transit for food and water supply, pressures on receiving countries, also on water resources, for hosting and integration, etc. Over recent years, migration flows and related challenges, including due to war and political conflict, have been constantly increasing. Responses are already in place and more are in the making, while conditions in the transit and hosting countries are strenuous, for both the refugees and the hosting populations.

¹ Global Water Partnership (GWP), *Water in the Green Economy*, Perspectives Paper, (Stockholm: GWP, 2012).

² The World Bank Group (WB), *High and Dry: Climate Change, Water, and the Economy*, (Washington, DC: WB, 2016).

³ Titled: *A Matter of Survival*

⁴ 2016 UN World Water Development Report

⁵ WB, *High and Dry*, 2016

⁶ World Water Assessment Programme (WWAP), *The United Nations World Water Development Report 2016: Water and Jobs*, (Paris: UNESCO, 2016).

Youth is among age groups more affected by unemployment trends, ultimately leading to migration. Two key related challenges, particularly for MENA, are recognised: there is a pervasive lack of labour demand; and the youth is generally ascribed a low employability due to skills mismatches.⁷ The former derives from limited growth and the latter from education systems that do not respond to the changing needs of the labour markets. Consequentially, there is a labour surplus of both low-skilled individuals who lack hard and soft skills for vacant technical positions, as well as university graduates who suffer from fierce competition for very few jobs or whose skills are outdated. Besides youth generally, who comprise a disproportionate part of the un- and underemployed population, especially **young females** are broadly excluded from stable employment. More than 1/4 of the youth is willing to migrate elsewhere⁸ as the root causes of their plight are not adequately addressed.

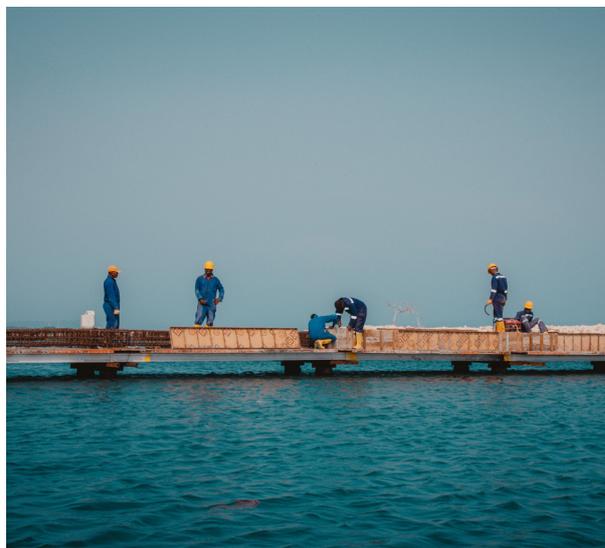
At the same time, **technology and innovation** in the water sector is advancing adding value to countries' efforts towards sustainable water management. If mainstreamed, supported by political will, planning tools, and investment, it can create opportunities for new markets, new skills and new job fields. Such job opportunities include, among others, various positions -from technical to managerial- in sustainable agriculture, integrated urban water management, industry including for sustainable production and consumption, tourism, ecosystem services, etc. Technologies for efficient water supply, waste water treatment and reuse, non-conventional water resources management techniques including based on water-food-energy-ecosystem nexus approaches, more sustainable desalination practices, nature-based solutions, etc. are among fields with potential for developing new markets and new skills.

In a similar approach, though adapted to realities and capacities, water-related jobs may become a contributor to **refugees'** income generation and, in the longer term, social inclusion. Furthermore, water solutions are important for improving refugees' livelihoods, including health.

2. Aim and objective(s)

Aim: to assist tackling water challenges as one of the potential root causes of unemployment leading to migration, taking into account as well the impact of migration and displacement on water resources, thus contributing towards a conducive environment for sustainable development and stability in the UfM region.

Objective: to mainstream water-employment-migration approaches and actions to increase water-related employability and entrepreneurship in countries of migration origin, transit and hosting, while promoting sustainable water management and gender equality and youth objectives.



⁷ International Labour Organization (ILO), *Global Employment Trends for Youth 2015: Scaling up investment in decent jobs for youth*, (Geneva: ILO, 2015)
⁸ ILO, *Global Employment Trends for Youth*, 2015.

3. Outputs and possible types of interventions

AIMED OUTPUTS	MAIN TYPES OF INTERVENTIONS <small>Suggested and non-binding examples of such interventions (short, medium, longer term)</small>	ADDED VALUE OF THE UFM WATER AGENDA
<p>Water-Employment-Migration (WEM) related challenges and solutions identified and prioritised, at different geographical scales, through analysis and multi-stakeholder consultation.</p>	<p>Build background for policy interventions and investment identification and prioritisation</p> <ul style="list-style-type: none"> • WEM policy, socio-economic and technical assessments elaborated, at different levels, focussing on needs / opportunities in the water sector • WEM multi-stakeholder policy dialogues facilitated, at different levels • WEM dialogues with targeted groups (e.g. decision makers, chambers of commerce, youth, women, private sector actors, international aid agencies, etc.) facilitated on selected issues • Role of the private sector in WEM agenda assessed 	<ul style="list-style-type: none"> - Mutual understanding towards action promoted, through establishing common background - Synergies facilitated, through developing joint approaches for concerted action - Stakeholders empowered, through engaging them in structured dialogue
<p>WEM governance settings strengthened, at different geographical scales.</p>	<p>Provide tools for promoting WEM focus in governance systems</p> <ul style="list-style-type: none"> • Guidelines for mainstreaming WEM considerations in national plans (e.g. for employment, migration, development, water, climate change), elaborated • WEM action plans elaborated at national level • Adaption of national governance settings to WEM agenda assisted • Guidelines for mainstreaming sustainable water management considerations in the National Migration Strategies and Plans elaborated • Guidelines for mainstreaming water & gender considerations in national action plans for migration elaborated 	<ul style="list-style-type: none"> - Water is recognized by line Ministries beyond the water sector as key for addressing current development challenges - National policy making and decision taking on complex agendas beyond the traditional water sector assisted, through state-of-art tools
<p>Planning and implementation of WEM solutions enabled.</p>	<p>Coordinate, leverage and facilitate financing for WEM interventions</p> <ul style="list-style-type: none"> • Screening of options for financing WEM objectives through available financing options facilitated • Mainstreaming WEM objectives and targets into upcoming regional and national financing frameworks facilitated • Market instruments for promoting WEM-related entrepreneurship, including start-ups with emphasis on youth and women, assessed • Market setting and/or transformation for innovative water solutions (e.g. of non-conventional water resources, water-energy-food-ecosystems technologies), assisted at national level • WEM investments preparation and other financing, with emphasis on SMEs and innovation start ups, facilitated 	<ul style="list-style-type: none"> - New financing and investments are mobilized, including through innovative approaches - The water sector benefits from non-water financing

AIMED OUTPUTS	MAIN TYPES OF INTERVENTIONS Suggested and non-binding examples of such interventions (short, medium, longer term)	ADDED VALUE OF THE UFM WATER AGENDA
<p>Knowledge shared, awareness raised and capacity built on WEM methodologies, policies and technologies.</p>	<p>Generate and disseminate WEM knowledge and innovation</p> <ul style="list-style-type: none"> • Capacity building of targeted groups (e.g. decision makers, parliamentarians, public administrators, etc) on selected WEM issues facilitated • Vocational education & training (VET) for youth and women on conventional and innovative fields facilitated • Youth platform for knowledge and technology exchange facilitated • Curricula, at different education levels, matching skills to current and future job demands and targeting employment options in the areas of water and land management designed and coordinated • Awareness campaigns on water sector as a 'job provider' implemented • National awareness campaigns on WEM issues designed and coordinated 	<p>- Stakeholders, including youth and women, are equipped to respond to complex developmental challenges within and beyond the water sector</p>
<p>Demonstration actions implemented as means for WEM knowledge sharing.</p>	<p>Design and implement pilot interventions with replication potential at local level</p> <ul style="list-style-type: none"> • Pilot actions, including mentoring and support to start ups, facilitated through a regional knowledge sharing approach, e.g. in the fields of water-energy-food-ecosystem nexus and non-conventional water resources 	<p>- The applicability potential of integrated and innovative solutions is practically demonstrated, as means for replication and concerted action</p>

4. Outcomes

Aimed outcomes include:

- water security as well as energy security, food security and protection of ecosystem services fostered.
- climate change resilience and adaptation strengthened.
- water related employability and entrepreneurship increased.
- financeability, including investment, environment for sustainable development enabled.
- migration challenges alleviated.
- social inclusion, particularly for youth and women, strengthened.
- institutional and technical knowledge strengthened.
- sustainable development enabled.

5. Partnerships

Activities will be designed and implemented with UfM's policy lead and facilitation. Countries that have expressed interest to contribute to and benefit from the WEM work area of the UfM Water Agenda include Italy, Jordan, Lebanon, Turkey, Morocco. Financing partners with expressed interest include Italy.

The WEM work area will be technically supported by the Global Water Partnership-Mediterranean and Contributing international and regional organizations. Contributing international and regional organizations include UNESCO-WWAP, CMI, CIHEAM, [Anna Lindh Foundation].

Examples of on-going and upcoming initiatives, programmes and projects that will operationally contribute to the WEM work area include the actions following the Valetta Summit on Migration (2015) and related Funds; UN, including UNDP and UNESCO WWAP, activities; UfM Med4Jobs-initiative to increase youth's employability and enable SMEs to grow; GIZ vocational training in MENA countries activities; SwitchMed; PRIMA; H2O Maghreb project by USAID/Morocco and UNIDO; AU/AfDB/GWP Water Africa Investment Programme. The upcoming regional WEM framework program, developed within the Sida-supported 'Making Water Cooperation Happen – Med Water Matchmaker' project by regional partners, is expected to assist synergies and development of further action.

Synergies with WEM-related processes and activities in Africa, and the EU countries, would be promoted.

Chapter 3: Chapter of UfM WEG Work Programme

Water and Sanitation Hygiene

1. Content

The majority of Mediterranean countries have made sustained efforts to improve the sanitary and hygiene conditions of urban and rural agglomerations, to protect the environment and to improve life condition of citizens through major projects in the field of sanitation; many of these countries have developed national strategies and programs to improve and set up sanitation infrastructures since the 80s of last century.

UFM water agenda is an instrument to contribute to the Global development agenda and to achieve universal water and sanitation coverage for all and to consider the economic value and water economies in general terms toward achieving a sustainable services and stable utility modules in the region aiming to enable private sector engagement and development of investment opportunities and building capacities for development of bankable projects.

To achieve such equation innovation and invention is needed and thus new technologies is needed or to create a sustainable mechanism to speed up their transfer and implementation. Addressing this at regional level in the UFM will enable the member state to build capacities in this sector and exchange knowledge at policy and operational level by creating a sustainable platform among water utilities and water operators and integrate these element on the national development Plans.

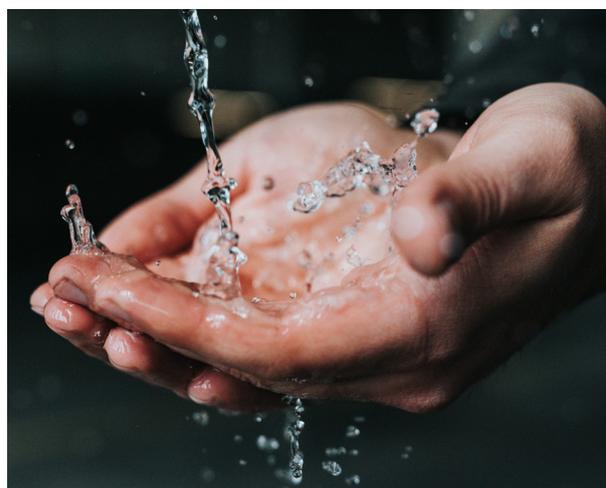
These efforts and strategies are implemented in line with SDG 6 «Ensure access to water and sanitation for all” and are currently directed towards general access to sanitation services, including rural areas, by sharing best and adapted practices from prior experiences. This includes the improvement of treated wastewater reuse as a nonconventional resource that can contribute to mitigating local water shortage.

North-South, but also South-South cooperation in the Mediterranean should be strengthened and structured. We must continue to value the know-how of some countries in the region, but also learn from the failures. It would be interesting to further structure the cooperation, notably through the launch of a specific Euro-Mediterranean call for projects to target innovative projects (on the use of sewage sludge, for example), of a scientific and/or normative nature (adaptation, generalization or harmonization of standards in force between countries). Emphasis should be placed on strengthening the capacity of local authorities, particularly for the implementation of IWRM.

2. Aim and objective(s)

Aim: to enhance sustainable and wise use of water resources to achieve sustainable development goals under the Agenda 2030 in the UfM region.

Objective: to introduce and/or promote integrated approach for achieving water and sanitation SDGs, and to catalyse action for its mainstreaming, financing and implementation in UfM Member States, at the national, local and regional levels.



3. Outputs and possible types of interventions

AIMED OUTPUTS	MAIN TYPES OF INTERVENTIONS Examples of such interventions
WASH challenges and innovative solutions identified and prioritized , at different geographical scales, through multi-stakeholder consultation based on SDGs and JMPs, EU framework water directive for EC countries.	Build background for policy interventions and investment identification and prioritization <ul style="list-style-type: none"> • WASH policy, economic and technical assessments elaborated, at different levels • WASH multi-stakeholder policy dialogues facilitated, at different levels • WASH dialogues with targeted groups (e.g. decision makers, users, private sector actors, etc.) facilitated on selected issues
WASH governance settings strengthened, at difference geographical scales.	Provide tools for introducing reforms needed in WASH sector governance systems <ul style="list-style-type: none"> • Guidelines for designing and implementing WASH policy dialogues elaborated • Guidelines for mainstreaming gender/vulnerable groups considerations in the national WASH agenda • Guidelines for introduction and utilization of WASH analytical / assessment tools elaborated • Guidelines for developing national information systems for supporting WASH analysis and decision making elaborated • WASH strategies and action plans for the integration of sectoral policy making and planning elaborated
Planning and implementation of WASH innovative solutions enabled, at different geographical scales.	Coordinate, leverage and facilitate financing for WASH interventions <ul style="list-style-type: none"> • WASH infrastructure development coordinated through strategic planning, aligned with national development plans • WASH investments preparation and financing facilitated • Market instruments for promoting WASH-related entrepreneurship, including start-ups with emphasis on women, children, and youth, assessed and promoted
Knowledge shared and capacity built on WASH, policies and technologies.	Generate and disseminate knowledge on Innovations and inventions in WASH sector <ul style="list-style-type: none"> • Knowledge on WASH sustainable provision bottlenecks, failures, success stories of applying innovative solutions shared • Knowledge on innovations and inventions in WASH sector including governance, finance, technology, etc. shared • Knowledge on market based instruments (such as PPPs) for WASH shared • Knowledge on innovative mechanisms to mainstream innovations implementation in the WASH sector at Policy level, IFIs, Communities at regional, national, and specifically local level • Capacity building for sectoral decision makers, and key stakeholders facilitated • Vocational training toolbox on WASH-related jobs elaborated
Demonstration applications implemented as means for knowledge sharing.	Design and implement pilot interventions with replication potential at local level <ul style="list-style-type: none"> • State-of-art local WASH pilot applications facilitated through a regional knowledge sharing approach, as means for demonstrating technology transfer options e.g. for leakage control, water purification and treatment, etc.

4. Outcomes

Aimed outcomes include:

- SDGs for water and sanitation fostered (i.e. WS service provision coverage increased).
- Protection of human health, habitats and biodiversity assisted.
- Reduction of water and land pollution and other pressures supported.
- Livelihood improved.

5. Partnerships

Activities will be designed and implemented with UfM’s policy lead and facilitation. Countries that have

expressed interest to contribute to and benefit from the Nexus work area of the UfM Water Agenda include. Financing partners with expressed interest include all member of the Financial task force.

Examples of on-going and upcoming initiatives, programmes and projects that will operationally contribute to the WASH work area include the H2020 initiative/ PRPI, etc.

Synergies with WASH-related processes and activities in Africa, the EU, H2020 Investment component, and GCC countries would be promoted.

Chapter 4: Chapter of UfM WEG Work Programme

Water and Climate Change Actions

1. Content

Climate change participates to the modification in time and space of the allocation of water resources, leading to economic, social and environmental impacts that are felt particularly strongly in the already water-stressed Mediterranean region. Indeed, IPCC tagged the region as one of the 25 “hotspots” affected by climate change.

The urgent need for implementing water resilient strategies, while scaling up the water sector within the global climate frameworks led to echoing loudly the voice for water and climate during the Water Action Day at COP22 in Marrakech. In this regard, Collaborative action of COP21 and COP22 Presidencies (France and Morocco) along with members of the global water community has enabled COP22 to become a landmark in the history of the UN Climate Conference, making Water much more visible within the Climate debate.

In April 2017, UfM Ministers of Water gathered in Malta took the measure of the threat of climate change, acknowledging that its impact “exacerbates pressures on existing water resources, in particular in the Mediterranean region”.

Ministers paved the way for the recognition of the linkages between the water sector and climate change adaptation and mitigation measures. In particular, they reaffirmed:

- their “commitment to implement the 2030 Agenda for Sustainable Development which provides, through the Sustainable Development Goals (SDGs), a framework for action towards sustainability, including on water and inter-linked sectors”.
- “that the Marrakesh partnership for global climate action provides a concrete framework and powerful willingness for global commitment of governments and non-governmental actors to accelerate and intensify urgent actions and improve access to finance to face the adverse impacts of climate change on water taking into account the international agenda of water and climate”.

They also showed awareness that:

- “The Paris Agreement (2015) provides a framework for developing Nationally Determined Contributions (NDCs) taking into consideration water as one of the sectors in which climate change adaptation and mitigation measures are essential and must be taken in a timely manner.
- “The major role that the agenda 2030, the Sustainable Development Goals and the Paris Agreement now occupy in the global agenda shape a broad development vision with a coherent approach to addressing the interconnections and cross-cutting elements across the Sustainable Development Goals”.

2. Background

Following up on the development of the UfM Water Agenda, during the 8th Meeting of the UfM Water Expert Group, held on 1 February 2018, Dead Sea, Jordan, it was agreed to consider as priority work area Climate Change Adaptation and Water (CCA). This thematic area could be considered as horizontal and span over the other thematic areas and could be developed in line with the UfM climate action strategy, Paris Agreement, Marrakesh Partnership and the NDCs.

Some Potential lines of action were acknowledged and recommended to be further elaborated in Future Task Force meetings of CCA as the following:

- National Laws and Legislations
- Adaptation and Mitigation measures
- Communication between the Water Community and the Climate Change Community, including the Energy Community towards developing co-benefits through CC action
- Technology transfer and exchange of modern flood frequency measurement tools are encouraged
- Awareness and behavioral change
- Desalination & Wastewater Reuse
- Cautious Groundwater Recharge
- Storm water harvesting
- Use of renewable energy in pumping and groundwater abstractions.
- Intensification of weather stations

As per its mandate on Climate change, on Environment and on Water, it must be noted that the UfM Secretariat is currently undertaking a number of initiatives directly relevant to climate change and water. The work of the UfMS in these sectors is reported to the UFM Working group on Environment and climate change. Some of the ongoing activities fall under the domain of the Climate Change Expert Group (CCEG) Work Program and the UfM Water Agenda, while other fall within the scope of the UfM Environment agenda. They can all be considered as contributions to the UfM Water agenda priority work area on Climate change and water.

In this regard, on the 13 of November 2018 the Water & Environment Division in coordination with Climate Action Division of Union for the Mediterranean Secretariat (UfMS) With Support of EU (DG Climate) and The Hashimite Kingdome of Jordan (MWI) Had organized at UfM premises in Barcelona, an Ad Hoc meeting of UfM CCEG on Adaptation in relation with the UfM Water agenda and the imminent establishment of the Water Climate Change Adaptation Task Force (W-CCA TF).

The objective of the Ad Hoc meeting was:

a- For the UfM Water CCA to be informed of the various activities undertaken by the secretariat in all areas relevant to the water adaptation issues, and in particular on the ongoing work to assist UfM member states in the implementation of their Nationally determined contributions, the work of the Mediterranean experts on environment and climate change (MEDECC), in association with UNEP-MAP, on land degradation with FAO and on drought with the UN Convention on desertification, as well as links with Climate finance

b- To present to the CCEG members the future Water CCA Task Force objectives, priorities and potential elements to be included in the road map of CCA TF's work program to be developed in 2019.

c- Start a discussion on how to ensure the best contribution of CCEG's, MedECC and other groups on-going initiatives to the water sector,

d- Obtain from this group a reinforced mandate to put greater efforts on the water relevant parts of already existing UfM actions, and discuss other suggestions for new initiatives.

3. Road map toward a Water CCA work program

The November 13 Ad Hoc meeting in Barcelona can be considered as a good start to create an enabling environment for cooperation and synergies with the UfM Energy and Climate Change Division and the work of the Climate Change Expert Group in particular. The meeting allowed for brainstorming on the opportunity to understand what are the main actions/initiatives that are undertaken and from that point look at ways to create synergies with the Water Agenda and the W-CCA road map to implement the TF's Work Programme. The lines for common understanding were discussed:

a) Ensuring Synergies with UFM's Working group on Environment and climate change;

b) Explore relevance for the Water Sector of current UfM actions and initiatives;

c) Ensure best contribution of on-going initiatives to the W-CCA TF workplan;

d) The CCEG's Regional Analysis of NDCs could be of great interest to the CCA specially if a "Second Phase" study focused on gap's in Water Resilience within the Context of CC is explored;

e) NAP's processes being the weakest link in the UNFCCC. It is an opportunity for CCA and EGCC to raise issues of Water adaptation.

f) Cooperate with MedECC in the elaboration of their assessment report on the situation and impact of CC on the Med Bassin

g) Raise the issue of costs for flood protection systems

h) Tackle the global issue related to metrics of adaptation and engage with SEMIDE/EMWIS a reflection about water adaptation indicators

i) Focus on Climate finance flows related to water adaptation through the CCEG assessment of Climate Financial flows in the SEMed-MENA countries.

4. Outputs and possible types of interventions

AIMED OUTPUTS	MAIN TYPES OF INTERVENTIONS Examples of such interventions
Water CCA challenges and innovative solutions identified and prioritized , at different geographical scales, through multi-stakeholder consultation based on NDCs, NAP's and SDGs.	<p>Build background for policy interventions and investment identification and prioritization</p> <ul style="list-style-type: none"> • Assessment of the GAPs and needs expressed in countries NDCs and NAP's versus Water CCA • Initiate multi-stakeholder policy dialogues facilitated, at different levels • Prioritize Water CCA within NAP's with focus on tailored local innovative / or ancestral water management technologies • Coordinate actions with the 5+5 Water Strategy in the Western Mediterranean specially insuring synergies with priority 9 of that strategy • Initiate constructive dialogues with other sub-regional initiatives.
Water CCA governance settings strengthened, at difference geographical scales.	<p>Provide tools for introducing and operationalizing Water CCA in Countries governance systems</p> <ul style="list-style-type: none"> • Guidelines for designing and implementing Water CCA policy dialogues elaborated • Guidelines for mainstreaming gender/vulnerable groups considerations in the national Water CCA agenda • Elaboration of a framework for assessing/tracking Water vulnerability and adaptation to CC: Establishment upon country request of Monitoring and Evaluation System for Water Adaptation (M&E National Systems) • As a consequence of the above point, help elaborate where needed national information systems and indicators to track water adaptation to CC and help decision making • Water CCA strategies (including legislation) and action plans for the integration of sectoral policy making and planning elaborated
Planning and implementation of Water CCA innovative solutions enabled, at different geographical scales.	<p>Coordinate, leverage and facilitate capacity building, technology transfer and financing for Water CCA interventions</p> <ul style="list-style-type: none"> • Infrastructure development coordinated through strategic planning, aligned with NDCs, SDGs, Sendai Framework for Disaster Risk Reduction, and national Adaptation plans • Investments preparation and green financing facilitated • Awareness raising about Water CCA cross-cutting specificities undergone
Capacity building on CCA methodologies, policies and technologies.	<p>Generate and disseminate CCA knowledge</p> <ul style="list-style-type: none"> • Knowledge on population resilience under water scarcity conditions shared • Knowledge on technical innovations shared • Capacity building for sectoral decision makers, and key stakeholders (river basin authorities, elected sub-national councils, irrigator cooperatives, private and energy sector planners, environmental managers, universities, civil society, etc.) facilitated • Training toolbox on Water CCA jobs elaborated • Strengthen Non-State Actors capabilities and role in the UfMs Water agenda implementation on the sub-national level
Knowledge sharing via success stories and demonstration applications implemented.	<p>Design and implement pilot adaptation projects with replication potential at local level</p> <ul style="list-style-type: none"> • State-of-art local water adaptation to climate change pilot applications facilitated through a regional knowledge sharing approach, as means for demonstrating technology transfer options e.g. for water pumping and irrigation with renewable energy sources, change of land use, desalination with sustainable energy options, etc.

Appendices

Biannual Work Plan for All Thematic Areas

App1: Water-Energy-Food-Ecosystems Nexus

1. Introduction

The UfM WEG Work Plan 2020-2022 on the theme of Water-Energy-Food-Ecosystems (WEFE) Nexus aims at translating into action objectives and contents of the related chapter of the long-term UfM WEG Work Programme.

As such, activities suggested for implementation in 2020-2022 correspond to related Outputs and Types of Interventions / Outcomes presented in the latter chapter of the UfM WEG Work Programme (attached for convenience in Annex). More specifically, these are:

AIMED OUTPUTS	AIMED OUTCOMES	ACTIVITIES 2020-2022
WEFE Nexus-related challenges and solutions identified and prioritized, at different geographical scales, through multi-stakeholder consultation based on Nexus analysis and assessments	Build background for policy interventions and investment identification and prioritization	In the final version of the document, these cells will reflect (through related numbering) Activities that will be listed in the detailed table of the WEFE Nexus Work Plan 2020-2022
WEFE Nexus governance settings strengthened, at different geographical scales	Provide tools for introducing and operationalising WEFE Nexus approach in governance systems	As above
Planning and implementation of WEFE Nexus solutions enabled, at different geographical scales.	Coordinate, leverage and facilitate financing for WEFE Nexus interventions	As above
Knowledge shared and capacity built on WEFE Nexus methodologies, policies and technologies	Generate and disseminate WEFE Nexus knowledge	As above
WEFE Nexus demonstration applications implemented as means for knowledge sharing	Design and implement pilot interventions with replication potential at local level	As above

Given the COVID-19 challenges, including the postponement of the 11 Meeting of the Water Expert Group (scheduled for late March 2020, in Athens), the elaboration of the WEG thematic Work Plans has been delayed while it is suggested these to cover the period 2020-2022, thus allowing more time for implementation. Despite these, certain activities have been already implemented in the first semester 2020.

The current Version Zero provides a preliminary approach. Among others, it echoes presentations and discussions at the 'Informal WEG Meeting' (9-10 June 2020, online). It will be briefly presented to the joint Meeting of the UfM Task Forces on WEFE Nexus and WEM (23 July 2020, online), and an updated version will become available and circulated for inputs by interested stakeholders and for guidance by the UfM Member States.

2. Activities 2020-2022

The following table presents suggested activities as well as an indicative timeframe for their implementation, suggested contributing partners and possibly engaged resources. Partners may be added in the course of time on the basis of interest demonstrated. The last column indicates intersections/synergies of WEF Nexus activities with those of other thematic Work Plans.

Activity	2020	2021	2022	Key implementing partners	Key resources	Thematic Synergies
A. Setting the stage						
<p>A1. Map key WEF Nexus partners and actions (on-going and planned) at regional and national levels</p> <p><i>Work is completed for SEE (GWP-Med/ADA) and could be enriched for MENA (GWP-Med/GEF MedProgramme)</i></p>	x	x		UfM, GWP-Med, UNEP/MAP [tbc]	ADA Nexus in SEE Project, GEF UNEP/MAP MedProgramme/ Nexus Project	
<p>A2. Assemble WEF Nexus compendium of references (challenges, needs, solutions, opportunities, etc)</p> <p><i>Publications/studies on WEF Nexus in Med have recently become available by partners. It is worthy gathering and sharing these (with regular updates)</i></p>		x	x	UfM, GWP-Med	Partners' capacities	
<p>A3. Facilitate multi-stakeholder regional/sub-regional policy dialogue on WEF Nexus for further identifying needs, solutions, initiatives and enabling resources, including for enriching the UfM WEF Nexus Framework Programme</p> <p>Indicative actions</p> <ul style="list-style-type: none"> - Regional (Med) and sub-regional (SEE, MENA) roundtables to advance policy dialogue organised - Meetings of the WEF Nexus UfM Task Force organised (also in combination with other TFs) - Progress presented and guidance received at WEG and SOM Meetings - Joint meetings of UfM countries' WEF Nexus Ministries organised (tbc) 	x	x	x	UfM, Countries, UNEP MAP, RCC, GWP-Med, EC WES Project [tbc], GIZ [tbc], IUCN [tbc], IWMI MENA [tbc], JRC [tbc], FAO [tbc], MedCities [tbc], UNESCO WWAP [tbc], INWARDAM [tbc], , (other partners)	Related projects and partners' capacities	WEM

Activity	2020	2021	2022	Key implementing partners	Key resources	Thematic Synergies
B. WEFE Nexus Framework Programme						
B1. Facilitate national & local Nexus action planning and investment prioritization for sustainability targets, through structured stakeholder engagement Indicative actions a. Nexus Assessments elaborated at national (Albania Lebanon) and local (Morocco) level b. Nexus Action Plans including investment identification elaborated through stakeholder dialogue at national (Albania, Lebanon), local (Morocco) and transboundary (Drin basin, Drina basin) level	x	x	x	a,b. Countries, GWP-Med, UNEP/MAP	a,b. ADA Nexus in SEE Project, GEF UNEP/MAP MedProgramme/ Nexus Project	
B2. Implement local (urban, rural, coastal) pilot Nexus interventions and upscale them for water security and climate resilience, through Youth engagement Indicative actions a. Small/medium scale WEFE Nexus/NCWR technical demos implemented showcasing multi-sectorial benefits and replicable solutions (Jordan-possibly Jordan/Palestine, Tunisia) b. Technical interventions on WEFE Nexus/NCWR fields screened and prioritized and financing options explored (Jordan-possibly Jordan/Palestine, Tunisia)	x	x	x	a,b. UfM, Countries, GWP-Med	a,b. Sida Matchmaker II Project	WEM
B3. Promote employability and entrepreneurship objectives for Youth and Women, in Nexus-related fields Indicative actions a. Youth and women improve their employability and entrepreneurship skills on WEFE Nexus/NCWR fields through training and/or mentoring (Jordan-possibly Jordan/Palestine, Tunisia) with regional cross-sharing		x	x	a. UfM, GWP-Med	a. Sida Matchmaker II Project	WEM
B4. Facilitate public, donor and private investments Indicative actions Investment prioritization and mobilization assisted through stakeholder dialogue – activities to be defined; some related already under B.1a						
B5. Promote knowledge sharing, including interlinking related regional & national projects: Indicative actions a. WEFE Nexus Getaway (Atlas) b. Knowledge products on WEFE Nexus technical solutions and employability/ entrepreneurship/gender/youth, developed c. Capacity building activities for targeted stakeholders, including with a gender focus	x	x	x	a. UfM, JRC, GWP-Med b. UfM, GWP-Med c. GWP-Med	a. Partners' capacities b. Sida Matchmaker II Project c. Sida Matchmaker I and II Projects, ADA Nexus in SEE Project, GEF UNEP/MAP MedProgramme/ Nexus Project	WEM
B6. Explore options for promoting a new generation of Nexus Wastewater Treatment Plants (water reuse, bio-energy production, fertilizers production, etc.), possibly with private investment mobilization	x	x	x	UfM, GWP-Med, UNEP/MAP [tbc]	Partners's capacities	

App2: Water-Employment-Migration

1. Introduction

The UfM WEG Work Plan 2020-2022 on the theme of Water-Employment-Migration (WEM) aims at translating into action objectives and contents of the related chapter of the long-term UfM WEG Work Programme.

As such, activities suggested for implementation in 2020-2022 correspond to related Outputs and Types of Interventions / Outcomes presented in the latter chapter of the UfM WEG Work Programme (attached for convenience in Annex). More specifically, these are:

AIMED OUTPUTS	AIMED OUTCOMES	ACTIVITIES 2020-2022
Water-Employment-Migration (WEM) related challenges and solutions identified and prioritised, at different geographical scales, through analysis and multi-stakeholder consultation	Build background for policy interventions and investment identification and prioritization	Activities to be selected in the detailed table of the WEM Work Plan 2020-2022 based on countries and institutions consultations.
WEM governance settings strengthened, at different geographical scales	Provide tools for promoting WEM focus in governance systems	As above
Planning and implementation of WEM solutions enabled	Coordinate, leverage and facilitate financing for WEM interventions	As above
Knowledge shared and capacity built on WEM methodologies, policies and technologies	Generate and disseminate WEM knowledge	As above
Demonstration actions implemented as means for WEM knowledge sharing	Design and implement pilot interventions with replication potential at local level	As above

Given the COVID-19 challenges, including the postponement of the 11 Meeting of the Water Expert Group (scheduled for late March 2020, in Athens), the elaboration of the WEG thematic Work Plans has been delayed while it is suggested these to cover the period 2020-2022, thus allowing more time for implementation. Despite these, certain activities have been already implemented in the first semester 2020.

The current Version Zero provides a preliminary approach. Among others, it echoes presentations and discussions at the 'Informal WEG Meeting' (9-10 June 2020, online). It will be briefly presented to the joint Meeting of the UfM Task Forces on WEF Nexus and WEM (23 July 2020, online), and an updated version will become available and circulated for inputs by interested stakeholders and for guidance by the UfM Member States.

2. Activities 2020-2022

The following table presents suggested activities as well as an indicative timeframe for their implementation, suggested contributing partners and possibly engaged resources. Partners may be added in the course of time on the basis of interest demonstrated. The last column indicates intersections/synergies of WEM activities with those of other thematic Work Plans.

Activity	2020	2021	2022	Key implementing partners	Key resources	Thematic Synergies
A. Setting the stage						
A1. Map key WEM partners and actions (on-going and planned) at regional and national levels	x	x		UfM, GWP-Med	Partners' capacities	
A2. Facilitate multi-stakeholder regional/sub-regional policy dialogue on WEM for further identifying needs, solutions, initiatives and enabling resources, including for enriching the UfM WEM Framework Programme Indicative actions - Meetings of the WEM UfM Task Force organised (also in combination with other TFs) - Multistakeholder dialogue on WEM priority issues, including on outputs of the WEM Framework Programme - Progress presented and guidance received at WEG and SOM Meetings	x	x	x	UfM, Countries, GWP-Med, UNESCO WWAP, CMI, ILO, Women for Water, UNIDO [tbc], CEWAS [tbc], MedCities [tbc], (other partners)	Partners' capacities	WEFE Nexus

Activity	2020	2021	2022	Key implementing partners	Key resources	Thematic Synergies
B. WEM Framework Programme						
B1. Facilitate national & local WEM action planning and investment prioritization for sustainability targets, through structured stakeholder engagement Indicative actions [Not defined yet]						
B2. Implement local (urban, rural, coastal) pilot WEM interventions and upscale them for water security and climate resilience, through Youth engagement Indicative actions a. Small/medium scale WEM/NCWR technical demos implemented showcasing multi-sectorial benefits and replicable solutions (Jordan-possibly Jordan/Palestine, Tunisia) b. Technical interventions on WEM/NCWR fields screened and prioritized and financing options explored (Jordan-possibly Jordan/Palestine, Tunisia)	 x x	 x x	 x x	a,b. UfM, Countries, GWP-Med	a,b. Sida Matchmaker II Project	WEFE Nexus
B3. Promote employability and entrepreneurship objectives for Youth and Women, in WEM-related fields Indicative actions a. Youth and women improve their employability and entrepreneurship skills on WEM/NCWR fields through training and/or mentoring (Jordan-possibly Jordan/Palestine, Tunisia) with regional cross-sharing b. Brief WEM/WEFE Nexus Market Analysis elaborated (possibly Jordan/Palestine, Tunisia)		 x x	 x x	a,b. UfM, GWP-Med	a,b. Sida Matchmaker II Project	WEFE Nexus
B4. Facilitate public, donor and private investments Indicative actions [Not defined yet]						
B5. Promote knowledge sharing, including interlinking related regional & national projects Indicative actions a. WEM contents enriched and priorities screened by beneficiaries and core partners through annotated contents/ToR of large-scale WEM Assessment for Africa/Asia-Med-EU b. Knowledge products on WEM technical solutions and employability/ entrepreneurship/gender/youth, developed c. Capacity building activities for targeted stakeholders, including with a gender focus	 x	 x	 x	a,b,c. UfM, GWP-Med	a,b,c. Sida Matchmaker II Project	WEFE Nexus

App3: Water and Sanitation Hygiene

1. Introduction

The UfM WASH Work Plan 2020-2022 on the theme of Water Supply, Sanitation and Hygiene (WASH) aims at translating into action objectives and contents of the related chapter of the long-term UfM WEG Work Programme.

As such, activities suggested for implementation in 2020-2022 correspond to related Outputs and Types of Interventions / Outcomes presented in the latter chapter of the UfM WEG Work Programme (attached for convenience in Annex). More specifically, these are:

AIMED OUTPUTS	AIMED OUTCOMES	ACTIVITIES 2020-2022
WASH challenges and innovative solutions identified and prioritized, at different geographical scales, through multi-stakeholder consultation based on SDGs and JMPs, EU framework water directive for EC countries.	Build background for policy interventions and investment identification and prioritization	1(1.1-1.3)
WASH governance settings strengthened, at difference geographical scales	Provide tools for introducing reforms needed in WASH sector governance systems	2.3
Planning and implementation of WASH innovative solutions enabled, at different geographical scales.	Coordinate, leverage and facilitate financing for WASH interventions	2.1, 2.2
Knowledge shared and capacity built on WASH , policies and technologies	Generate and disseminate knowledge on Innovations and inventions in WASH sector	2.4 sustainability/ bankability-exchanges Lesson learned approach-
Demonstration applications implemented as means for knowledge sharing	Design and implement pilot interventions with replication potential at local level	2.5

Given the COVID-19 challenges, including the postponement of the 11 Meeting of the Water Expert Group (scheduled for late March 2020, in Athens), the elaboration of the WEG thematic Work Plans has been delayed while it is suggested these to cover the period 2020-2022, thus allowing more time for implementation. Despite these, certain activities have been already implemented in the first semester 2020.

The current Version Zero provides a preliminary approach. Among others, it echoes presentations and discussions at the 'Informal WEG Meeting' (9-10 June 2020, online). It will be briefly presented to the joint Meeting of the UfM Task Forces on WASH (2020, online), and an updated version will become available and circulated for inputs by interested stakeholders and for guidance by the UfM Member States.

2. Activities 2020-2022

The following table presents suggested activities as well as an indicative timeframe for their implementation, suggested contributing partners and possibly engaged resources. Partners may be added in the course of time on the basis of interest demonstrated. The last column indicates intersections/synergies of WASH activities with those of other thematic Work Plans.

Activity	2020	2021	2022	Key implementing partners	Key resources	Thematic Synergies
A. Setting the stage - Formulation of Action						
A1. Technical "State of the Art" Report (identification of strengths and weakness, priority areas highlighted for information and knowledge cross sharing) - Using existing data (UNEP/MAP, UFM, others) - Additional data collected through a questionnaire	x	x		UFM, Countries, UNEP/ MAP, IME, others, League of Arab States TBC UNESCO WWAP, UN ESCWA		
A2. Assessment of healthy conditions related to sanitary aspects (Data WHO, etc)	x	x	x	UFM, Countries, UNEP/ MAP, IME, others TBC WHO, UN ESCWA		
A3. Elaboration of a policy "State of the Art" Report highlighting different approaches, dealing with policy, regulation and implementation	x	x	x	UFM, Countries, UNEP/ MAP, IME, others		
B. Action						
B1. Regional level - Organisation of two workshops to enable exchange aiming to setup a platform of dialogue, to further identify needs - Engagement with Euro-Mediterranean funding instruments and partners (i.e. WB)	x		x	UfM, CEDARE, IME, HCWW,		
B2. National and local levels - Based on 1.3, identification of - Activities (i.e. workshops) targeting cross-sectoral, intra-country coordination on WASH policies - innovative and adapted solutions - Organisation of a training workshop(s) on the application of WASH within an IWRM context		x	x	Turkey Tunisia, Morocco, Jordan, Palestine		
B3. UfM publications (and short leaflets) on the implementation of WASH principles			x			
B4. Establishment of a network collecting and disseminating examples of best and bad practices and examples of sustainability/ bankability from the region			x	UfM, IME		
B5. Dissemination of results of the process to be presented to policy makers (Ministerial or high-level officials meeting); the results from this initiative could be used in other fora.		x	x	UfM, IME, GWP-Med, more partners		
B6. Demonstration applications implemented as means for knowledge sharing	x	x	x	UfM, UNESCO		

App4: Water and Climate Change Actions

1. Introduction

The UfM WEG Work Plan 2020-2022 on the theme of Water and Climate Change Actions aims at translating into action objectives and contents of the related chapter of the long-term UfM WEG Work Programme.

The implementation of the biannual plan will be aligned to the action plan of the UfM working group on Climate Change.

As such, activities suggested for implementation in 2020-2022 correspond to related Outputs and Types of Interventions / Outcomes presented in the latter chapter of the UfM WEG Work Programme (attached for convenience in Annex). More specifically, these are:

AIMED OUTPUTS	AIMED OUTCOMES	ACTIVITIES 2020-2022
Water CCA challenges and innovative solutions identified and prioritized, at different geographical scales, through multi-stakeholder consultation based on NDCs, NAP's and SDGs.	Build background for policy interventions and investment identification and prioritization	Activities to be selected in the detailed table of the WCCA Work Plan 2020-2022 based on countries and institutions consultations.
Water CCA governance settings strengthened, at difference geographical scales.	Provide tools for introducing and operationalizing Water CCA in Countries governance systems	<ul style="list-style-type: none"> • Elaborate a framework for assessing/tracking Water vulnerability and adaptation intervention effectiveness: Establishment upon country request of Monitoring and Evaluation System for Water Adaptation (M&E National Systems) • Help elaborate where needed national information systems and indicators to track water adaptation to CC and help decision making
Planning and implementation of Water CCA innovative solutions enabled, at different geographical scales.	Coordinate, leverage and facilitate capacity building, technology transfer and financing for Water CCA interventions	As above
Knowledge sharing via success stories and demonstration applications implemented.	Design and implement pilot adaptation projects with replication potential at local level	As above

2. Activities 2020-2022

The following table presents suggested activities as well as an indicative timeframe for their implementation, suggested contributing partners and possibly engaged resources. Partners may be added in the course of time on the basis of interest demonstrated. The last column indicates intersections/synergies of WCCA activities with those of other thematic Work Plans.

Activity	2020	2021	2022	Key implementing partners	Key resources	Thematic Synergies
A. Setting the stage						
A1. Build background for policy interventions and investment identification and prioritization				UfM, GWP-Med DG Climate, DG Environment, DG NEAR, FAO, UNEP MAP, MedECC, SEMIDE/EMWIST, GlobalCAD		
a. Conduct an assessment of the GAPs and needs expressed in countries NDCs and NAP's versus Water CCA	x					
b. Prioritize Water CCA within NAP's with focus on tailored local innovative / or ancestral water management technologies	x					
A2. Facilitate a multistakeholders process and dialogue at different level focusing on the IFIs, private equities, GEF, GCF, etc.				UfM, GWP-Med DG Climate, DG Environment, DG NEAR, FAO, UNEP MAP, MedECC, SEMIDE/EMWIST, GlobalCAD		
a. Guidelines for designing and implementing Water CCA policy dialogues elaborated		x	x			
b. Guidelines for mainstreaming gender/vulnerable groups considerations in the national Water CCA agenda		x	x			
B. WCCA Framework Programme						
B1. Coordinate, leverage and facilitate capacity building, technology transfer and financing for Water CCA interventions - Infrastructure development coordinated through strategic planning, aligned with NDCs, SDGs and national Adaptation plans	x	x	x	UfM, GWP-Med DG Climate, DG Environment, DG NEAR, FAO, UNEP MAP, MedECC, SEMIDE/EMWIST, GlobalCAD		
B2. Prepare investments and green financing facilitated		x	x			
B3. Elaboration of State-of-art local water adaptation to climate change pilot applications facilitated through a regional knowledge sharing approach, as means for demonstrating technology transfer options.	x					
B4.						
a. Develop Water-Climate Change Adaptation (WCCA) projects presenting mitigation-adaptation focusing on GCF and water resilience co-benefits, including through the implementation of WEF E Nexus approaches and as a contribution of addressing Employment challenges	x	x	x			
b. Establish a Mediterranean framework to give attention to the safeguarding of ancestral know-how allowing the reinforcement of the resilience of the local populations in the face of climate change, especially in rural areas	x	x	x			
c. Support Youth Climate Initiatives around the Mediterranean	x	x	x			

1 The Desalination Facility for the Gaza Strip

The Desalination Facility for the Gaza Strip is expected to **supply drinking water to 2 million Palestinian inhabitants in Gaza**, where over 97% of the water is not drinkable. It is a landmark operation consisting of three integrated projects in this territory:

- Construction of a seawater desalination plant with an initial capacity of 55 million m³ and a final objective of an overall capacity of 100 million m³.
- Development of a North-South carrier conveyance system that allows the distribution of freshwater throughout the Gaza Strip and which will also dramatically reduce water losses.
- Implementation of a non-revenue water reduction component to enhance efficiency system-wide and reduce water losses.

The project will help **regenerate the only fresh water source** in Gaza, which is the coastal aquifer that also runs underneath neighbouring countries. The project is a step forward towards effective **reduction of pollution** in the Eastern Mediterranean, as a component of a broader water and wastewater programme including complimentary development of wastewater treatment facilities.

Location: Gaza, Palestine

Beneficiaries: The population living in the Gaza Strip, neighbouring countries and, the Eastern Mediterranean region.

Partners: European Commission (EC); European Investment Bank (EIB); Islamic Development Bank (IDB); World Bank (WB).



2 Integrated Programme for Protection of the Lake Bizerte against Pollution

The project will contribute to the **depollution of the Lake of Bizerte**, in northern Tunisia, and reduce indirect pollution impacting the Mediterranean Sea, through an integrated and concerted approach involving local stakeholders while investing in facilities to reduce liquid or solid waste and air emissions around the Lake.

The project, which is promoted and commissioned by the Ministry of Environment and Sustainable Development of Tunisia, will aim to **eliminate the main sources of all kinds of pollution** which are contaminating the Lake or the bordering populations in order to guarantee a **healthy environmental state**, to secure a level of quality of life and **sustainable urban and economic activities** such as agriculture, industry, tourism, aquaculture or fisheries.



The project will focus on **four priority areas** of investment:

- **Industrial pollution:** investments in the steel, cement and oil sectors to manage industrial or atmospheric pollution of water or air in compliance with Tunisian standards.
- **Urban wastewater:** extension and rehabilitation works will bring wastewater collection and treatment up to Tunisian standards.
- **Solid waste:** through remediation of landfills, securing storage areas, creation of a treatment plant and transfer centres in rural areas.
- **Coastal zone management:** cleaning and landscaping the lakeshore and extending fishing harbours.

📍 **Location:** Bizerte Lake, Tunisia

Beneficiaries: 400,000 inhabitants living in the region, public and private industrial actors.

Partners: International financing institutions, the European Investment Bank and the European Commission, the European Bank for Reconstruction and Development.

3 Governance & Financing for the Mediterranean Water Sector

The Regional Project “Governance & Financing for the Mediterranean Water Sector”, promoted by GWP-Med and designed jointly with the OECD, addressed the strong linkages between water governance and sustainable financing through a **diagnosis of the key bottlenecks and the identification of realistic actions** to overcome them and **attract investments to the water sector** of the Mediterranean region. The core objective was to promote action for the mobilisation of water financing, including through public private partnerships (PPP), and to support the development of consensual action plans based on international good practices. The Regional Project was implemented over four years (2013- 2017) through an interplay of regional and national activities; the latter implemented in four focus countries, namely Jordan, Lebanon, Palestine (with two phases of work) and Tunisia. It was designed around two distinct but closely interlinked components: Country Reviews developed through inclusive and multi-stakeholder

National Policy Dialogues, and Regional Interface through regular dialogues to share policy experiences, good/bad lessons learnt and enhance peer-to-peer learning.

Location: Mediterranean and MENA region; focus countries included Jordan, Lebanon, Tunisia and Palestine.

Beneficiaries: Ministries in charge of water, Ministries of Finance, PPP Units, Government and public bodies responsible for preparing, regulating and monitoring PPP projects and related activities, water utilities, private partners.

Implementing partners: Global Water Partnership-Mediterranean (GWP-Med), Organisation for Economic Cooperation and Development (OECD)

Strategic partners: Swedish International Development Cooperation Agency (Sida), the FEMIP Trust Fund (FTF) of the European Investment Bank (EIB), the GEF-UNEP/MAP MedPartnership Programme and the Mediterranean Component of the EU Water Initiative (MED EUWI).

4 Towards a Mediterranean Water Knowledge Platform

The project aims to facilitate the production, harmonisation and **sharing of water information** among key stakeholders in the Mediterranean, and will contribute to **improving dialogue and planning processes** and making information more easily available to involved stakeholders. The data infrastructure provided by the project (National Water Information Systems – NWIS) is likely to generate added-valued services and **contribute to sustainable growth in the Mediterranean countries** and promote investment in the region.

The project will define which data, information and expertise are needed to plan integrated water resources management (IWRM). It will also **reinforce water regulation, ensuring data availability** and ownership at local and national levels. The information provided by the project will allow for an evaluation of best practices, joint management of transboundary

resources and follow-up on regional and sub-regional projects/policies in the Mediterranean region, on a voluntary basis.

Location: Jordan, Lebanon, Monaco, Morocco, Spain and Tunisia

Beneficiaries: National and local water authorities, public and private actors involved in the water sector, ministries and respective agencies in charge of environment, agriculture, health and statistics.

Partners: The International Office for Water, The Mediterranean Water Institute, the Euro-Mediterranean Information System on know-how in the Water sector (EMWIS), the League of Arab States Centre of Water Studies and Arab Water Security (COFWS), Blue Plan (UNEP-MAP regional activities centre), the Mediterranean Network of Basin Organisations (MENBO), the Euro-Mediterranean Water Institute (IEA) and the AGBAR Foundation.

5 Life Project

The **LIFE Integrated Project** (IP) is planned to be implemented over the whole of the Malta River Basin District (RBD), and thus over the whole territory of interest to Malta's 2nd River Basin Management Plan. The actions of the IP will be implemented in the two main islands of **Malta and Gozo** as Malta faces challenges such as **water scarcity and drought** conditions, high population density, saline intrusion, contamination, **vulnerability of the coastal waters**.

The proposal includes several actions focusing on the **development of pilot actions** on a regional basis. Such actions include demonstration sites for wastewater reuse, managed aquifer recharge systems in the local water management context,

where these management practices will be tested through pilot sites established under LIFE IP actions and then replicated on a national perspective through the utilisation of EU Cohesion Funds CF and European Agricultural Fund for Rural Development (EAFRD) funded measures under the 2nd RBMP.

Location: Gozo and Malta

Beneficiaries: Maltese national and local Authorities; Maltese private sector; Maltese Academia; Maltese users associations; Non-EU UfM Member Countries administrations interested.

Partners: The Energy and Water Agency of Malta (EWA).

6 Water Integrity Capacity Building Programme in MENA

The Project was implemented over four years (2014-2017) by the Stockholm International Water Institute (SIWI) and GWP-Med. The project's overall objective is to help **improve quality of life in the MENA region** through the **implementation of integrated, equitable and sustainable water resource management**.

In particular, the project aims to:

- **Act on the regional level**, increasing dialogue and advocacy among 100 alumni on how integrity, transparency, accountability and corruption can be addressed in water resource management;
- **Act on the inter-governmental level**, raising awareness and fostering high-level political dialogue on water integrity among approximately 60 high-level officials;
- **Act on the national level**, increasing knowledge among 100 water officials about tools to improve information flow and communication channels between decision-makers.
- **Act on the operational level**, improving the capacity of 100 mid-level water managers and other professionals to ensure integrity within their organisations.

• **Act on the local level**, improving the capacity of 100 local civil society representatives to demand transparency.

Location: Jordan, Palestine, Lebanon, Morocco, Tunisia

Beneficiaries: 100 Alumni; 60 High-level decision makers; 100 Water officials in regulation, controlling and planning; 100 Mid-level water managers; 100 Farmers' organisations, water user associations, media, students, women's groups and other civil society actors; National partners, universities and research centres.

Partners: Stockholm International Water Institute (SIWI), Integrity Action, Global Water Partnership – Mediterranean (GWPMed), Arab Integrated Water Resources Management Network (AWARENET), International Union for Conservation of Nature – Regional Office for West Asia (IUCN-ROWA), Jordan University of Science and Technology, Issam Fares Institute for Public Policy and International Affairs at the American University of Beirut in Lebanon, Centre for Water Research and Technologies (CERTe) in Tunisia, Al-Quds University in Palestine, Al-Akhawayn University in Ifrane, Morocco.

7 Water and Environment Support

The **Water and Environment Support (WES)** is a regional project designed to contribute to the **implementation of an integrated approach to pollution reduction** and prevention. It focuses on strengthening the efficient use of water in urban and rural areas, the appropriate treatment of wastewater to allow for its use/re-use, as well as the cost-recovery and affordability of water services.

Activities will support the UfM agenda on Environment and Water and the objectives of the Barcelona Convention concerning the Mediterranean marine and coastal environmental protection:

- **Fight against the Mediterranean pollution** with a special focus on plastic pollution.
- **Support to the water sector:** providing technical assistance to national authorities to improve their policy framework on water, giving guidance to implement regional policies and initiatives focusing on efficient use of water.
- **Support to the UfM working groups** in the field of environment and water.



Location: Algeria, Egypt, Israel, Jordan, Lebanon, Libya, Morocco, Palestine and Tunisia

Beneficiaries: National, regional and local authorities, Civil Society Organizations, Academia, Educational and Research institutions, The private sector, Parliamentarians.

Partners: LDK Consultants Global EEIG, Regional Activity Centre for Sustainable Consumption and Production of UN Environment/Mediterranean Action Plan, Arab Network for Environment and Development, Association of Cities and Regions for Sustainable Resource Management, CIHEAM- Mediterranean Agronomic Institute of Bari, Gopa Infra GmbH, Mediterranean Information Office for Environment, Culture and Sustainable Development (MIO-ECSDE), Ramboll Danmark A/S, Royal HaskoningDHV.(EWA).

1 As-Samra Wastewater Treatment Plant, Jordan

Completed in 2008, the As-Samra Wastewater Treatment Plant replaced the old wastewater stabilization ponds (WSP), improving both the **quantity and the quality of water available** to the downstream agricultural areas up to the Jordan valley. However, the country's rapid population growth has pushed the capacity of the plant to its limits.

From 2012 to 2015, the Government of Jordan, through the leadership of the Ministry of Water and Irrigation (MWI), prioritized the **expansion of the treatment plant** in order to increase the capacity to treat wastewater from Amman and Zarqa Governorates, increase the volume of treated wastewater that is available as a substitute for freshwater for non-domestic use, and protect existing agriculture from the potential consequences of pollution from untreated wastewater.

The expansion included an addition of two more treatment lines, increasing the average daily capacity of As-Samra to treat wastewater from 267,000 to 365,000 m³ per day (over a one-third increase). The proportion of blended wastewater used for irrigation has grown from 61 percent to 83 per cent, freeing up **additional freshwater for domestic use** for an estimated 2,020,000 people.

Location: Amman and Zarqa, Jordan

Beneficiaries: Inhabitants of Amman, Zarqa and the surrounding region.

Partners: USAID, The Arab Bank, The Samra Plant Company (SPC), the Swedish International Development Agency (SIDA), Millennium Challenge Corporation (MCC).



2 Al Massira Dam Perforation

Al Massira dam was built between 1975 and 1979 in Settat Province in Morocco. Its role is to **provide sufficient water** for the greater Casablanca, Safi and greater Marrakech. The region is growing rapidly with a resulting increase in its need for water. Marrakech requires, on average, 2.5 cubic meters of water per second.

Until the perforation, there was no way to transport water from the Al Massira reservoir to the city. The project located 120 km from Marrakech, is part of a program to **strengthen access to water**. The perforation project ensures the **supply of drinking water to 2 million residents** of the Marrakech region. The African Development Bank (AfDB) described the project as a «real breakthrough» that can be duplicated for the benefit of other dams in Morocco and in other African countries.



Location: Morocco

Beneficiaries: Local population, the agricultural sector.

Partners: AfDB, ONEE, Ministry of Equipment.

3 El-Gabal El-Asfar wastewater treatment plant



Location: Cairo, Egypt

Beneficiaries: 2.5 million inhabitants in Cairo.

Partners: Japan International Cooperation Agency (Jica) and the African Development Bank (AfDB).

The extension of El-Gabal El Asfar wastewater treatment plant, located east of Cairo has been completed in 2018. The objective of the Project was to **increase the capacity of treatment** of El Gabal El Asfar Wastewater Treatment Plant and appropriately keep up with the increasing of wastewater flow through population growth, and contributing to **improving the environment of water and sanitation**.

The plant **provides sanitation and drinking water** services to about **2.5 million people** in the capital. The El-Gabal El Asfar wastewater treatment plant project is in line with the government's water management strategy based on Integrated Water Resources Management (IWRM), including demand management.

4 Valdelentisco Desalination Plant

Valdelentisco Desalination Plant is a seawater reverse osmosis (SWRO) **desalination facility**, located in Murcia, south-eastern Spain. Backed by the Spanish Ministry of Agriculture, Food and Environment, construction on the project started in January 2005 and was completed in early 2008.

The plant has an open seawater intake system and is designed to minimise the risk of variations in the sourced water quality. The resulting clean drinking water is piped to a storage tank, whereby it proceeds to be distributed for consumption. The plant's maximum production capacity of 145 000m³/day, expandable to 200 000m³/day, makes it **one of the largest desalination facilities** in Spain.

📍 **Location:** Murcia, Spain

Beneficiaries: Region of Murcia.

Partners: Acuamed, Cadagua, Ferrovial Agroman.



5 Benchmarking of Water and Sewerage Administrations in Turkey

The “Benchmarking of Water and Sewerage Administrations in Turkey” was initiated in 2016. This project aimed to benchmark the **performance indicators of the water and sewerage administrations** and identify the improvement areas. The Turkish Water Institute (SUEN) that is a national think tank conducted the project.

Various presentations and discussions were held to discuss the importance of benchmarking activities in the water sector and evaluate the performance of the water and sewerage administrations serving more than 70% of the country population.

📍 **Location:** Turkey

Beneficiaries: Water and sewerage administrations.

Partners: Under the authority of the Ministry of Agriculture and Forestry of Turkey.



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Palau de Pedralbes | Pere Duran Farell, 11 | 08034 Barcelona, Spain
Phone: 00 34 93 521 4100 | Fax: 00 34 93 521 4102