

## IHP/IC-XTR-IV/Ref.4

### Draft Concept note «ECO-MED» ACADEMY

#### “Environmental Coastal coOperation for Metropolitan Eco-sustainable Development” - Mediterranean Region -

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##### **I. Mediterranean Context & Governance Challenges**

Facing the ever-growing climate change impact on the water stress and on ecosystems sustainability in the Mediterranean coastal region, which has become, along with regional conflicts, one of the major global drivers for today's massive population displacement, world-wide, metropolitan governments of the MENA region have been increasingly challenged with ever-rising shortage of water resources, lack of marine pre-disposal wastewater treatment infrastructure, inadequate urban sewerage systems and insufficient sanitation. The COVID -19 Pandemic Crisis has demonstrated the severe risks and catastrophic public health consequences of the lack of sanitation infrastructure, societal education, insufficient governance capacity and critical lack of regional coordination to face such global extreme events. The critical water and sanitation infrastructure regional needs and the substantial lack and deficiencies of local governance capacity to face these metropolitan challenges result in a fast-growing pollution of the trans-boundary ecosystem(s), infiltration of raw wastewater to the coastal aquifer(s) and severe impacts on public health risks, marine bio-degradation, environmental hazards, societal survivability issues, food security and economic decay. The sea flow patterns along the coastal regions, accelerate the fast-growing environmental risks to the coastal multi-cultural and greatly over-dense metropolitan cities generated by the trans-boundary pollution of the ecosystem(s) and the infiltration of polluted sea water to coastal aquifer(s).

Within this context, the coastal ecosystems continuously experience growing pollution loads and are unable to meet the vital human needs. Facing ever-rising water stress, underground water overdrawn in the coastal region generates increasing seepage of the polluted seawater and infiltration of untreated raw wastewater into the aquifer(s) raising severe public health hazards. Furthermore, climate change effects accelerate the increasing water stress. For example, the annual discharge of the Jordan River in 1960 was 1,300 m<sup>3</sup>, compared to highs of only about 200 m<sup>3</sup> today, while societal consumption levels increase at a rapid pace. Depleting rate of water resources in many coastal regions has been accelerated and deficient infrastructure management, yielding a water loss of up to 50% in the municipal water distribution systems, accentuates the rising water stress.

This rapidly degrading state of the coastal ecosystem(s), which is a common challenge to many of the MENA states, was at the origin of the strategy elaborated in the framework of the Union for the Mediterranean (UfM) to meet the objectives of the Horizon 2020 Initiative to de-pollute the Mediterranean ecosystem, which increasingly accumulates the wide variety of effluents from both heavily industrialized and less developed countries. The UfM strategy recommends implementation of prioritized programs for establishing minimum quality requirements for wastewater treatment effluents and securing adequate treatment of wastewaters to avoid downstream pollution. It follows the provisions of the Barcelona Convention – whereby all agglomerations have to ensure treatment of their urban wastewaters before discharging to the environment. Furthermore, with increasing agricultural water reuse effluent quality control has become a prevailing factor in the economic viability of the regional eco-sustainable development of the agricultural states. Within this context it is mutually recognized by all the IHP Mediterranean member states that the challenges faced by the MENA metropolitan governments will have most significant environmental, societal and economic impacts on the sustainable development of the Mediterranean Region and must be addressed through *Environmental Coastal coOperation for Metropolitan Eco-sustainable Development (“ECO-MED”)* strategies to be jointly embraced and implemented by all the regional member states.

The **COP21 ‘Declaration of Paris’** called for Mediterranean Dialogue on climate change adaptation strategies facing severe impacts on fast depleting water resources, environmental hazards and growing public health risks. **The Beirut Declaration**, which was adopted in 2016 by the COP22, recognized the critical needs for sustainable development strategies to promote consensus among all MENA communities and support local governance capacity building for responding to the priority regional Eco-Sustainable Development Goals (Eco-SDGs). The goal of hydro-diplomacy is to create dynamics of trans-boundary basin economic development through integrated water resources management and regional cooperation (Comair, 2011)<sup>5</sup>.

Within this context, **the Beirut Declaration** (2016) called for establishing common standards for measuring water flow and quality, setting goals for sustainable management of water resources, adapting regional strategies to face climate change impacts and drought effects, and undertaking depollution and preservation measures of the coastal ecosystems. More specifically, it called for promoting and sharing Mediterranean knowledge/databases and creating environmental coastal observatories with trans-boundary monitoring systems to support local governance capacity building for condition assessment and mapping of the state of the ecosystem pollution, monitoring its disastrous impacts on environmental hazards, public health risks and societal sustainability, and engaging feasibility assessment of undertaking and co-financing the necessary measures for securing adequate pre-disposal treatment of wastewaters to avoid coastal ecosystem pollution, integrating trans-boundary water resources management and providing sustainable sanitation for achieving the shared regional Eco-SDGs.

## **II. The “ECO-MED” ACADEMY Goals, Agenda & Scope of Programs**

**The Prime Goal** of the Metropolitan “ECO-MED” Academy is to support local governance capacity building of the fast growing Mediterranean metropolitan cities in order to effectively meet the regional SDGs of i) establishing common standards for monitoring water flow and quality, ii) setting goals for sustainable management of trans-boundary water resources, iii) adapting regional eco-development strategies to face climate change impacts and extreme drought effects, iv) providing sustainable sanitation, and v) undertaking depollution projects and preservation measures of the Mediterranean coastal ecosystems.

More specifically, the agenda of the *Metropolitan “ECO-MED” Academy* is focused on providing the interested stakeholders of the Mediterranean member states, local governments, public service operators, the local and global financial sectors, UN Organizations concerned, hydrological institutes, universities, municipalities, technical experts, local communities and other interested stakeholders with: i) locally adapted professional development programs; ii) trans-boundary coastal ecosystem monitoring systems for pollution mapping and risks assessment; iii) regional knowledge/databases on the state of the coastal ecosystems and their aquifers ; iv) Media support for public education at all levels;; v) academic research and development capabilities, and vi) shared information system(s). Its prime goal is to effectively support metropolitan governance capacity building and promote corporate’s development of innovative solutions for: i) upgrading the state of environmental ecosystems management practice, ii) accelerating public education to stimulate societal awareness raising, adaptation capacity and resilience building to extreme conditions; iii) engaging trans-boundary planning and feasibility assessment of implementing the necessary measures for securing adequate pre-disposal treatment of wastewaters to avoid coastal ecosystem pollution, vi) promoting trans-boundary integration of water resources, agricultural water reuse, and sustainable sanitation management to reduce public health risks and ensure food security, and v) undertaking pilot projects and promoting co-financing partnerships for ecosystem depollution projects responding to the regional SDGs, consistently with Barcelona Convention, UfM Strategy and the COPs’ regional recommendations.

To accomplish these goals, the Academy’s programs will focus on:

- **Ecosystem pollution monitoring and impacts assessment** - providing a continuous monitoring, data based mapping and situation analysis for preemptive eco-risk assessment and ecosystems management, including evaluation of the severe impacts of rising water stress, insufficient sanitation, deficiency of marine pre-disposal wastewater treatment, lack of effluent quality control and growing societal demand on the ecosystem pollution, wastewater infiltration to the ground water resources, depletion rate of water resources, public health risks, marine bio-degradation and environmental hazards

- **Promoting trans-boundary consensus building among local governments, Water and Energy Utilities, Consumer-Societies and other Metropolitan stakeholders** for cooperative planning of Mediterranean eco-sustainable development strategies and a mutual understanding towards a roadmap for de-polluting and preserving the coastal ecosystem(s), implementing continuous trans-boundary pollution monitoring, engaging efficient marine pre-disposal wastewater treatment measures and effluent quality control, protecting the ground water and integrating renewable water resources, and undertaking other necessary measures to meet the regional Eco-SDGs.
- **Creating Regional Planning Support Centers** to provide with the leadership of UNESCO-IHP experts and strategic partners international expertise for feasibility assessment of trans-boundary regional development plans, integrated water resources management, ecosystems preservation measures and sanitation infrastructure, as proposed by the member-states concerned and promote global and local partnerships with stakeholders, the financial sector, UN agencies, international aid organizations and other potential partners for their project co-financing.
- **Conducting Feasibility assessment and pilot demonstration projects to support regional planning and strategic partnerships** of the local governments and corporate industry with regional and/or global stakeholders, the financial sector, international aid organizations and others for coastal eco-sustainable development projects including marine pre-disposal wastewater treatment and sanitation infrastructure, de-pollution projects for coastal economic development, implementation of ecosystems preservation measures, trans-boundary integration strategies of agricultural water reuse and renewable resources, sanitation infrastructure and other regional projects along with their impacts assessment.
- **Providing the international community with accessibility to a Mediterranean digital platform of regional knowledge/databases, information sharing and trans-boundary monitoring systems** to support interested global and local stakeholders, including the Financial sector, UN agencies, international and National Aid Organizations and other potential strategic partners in undertaking feasibility assessment of the coastal ecosystems protection and depollution measures, promoting economic development partnerships, and co-financing infrastructure projects promoted by the local governments concerned.
- **Establishing Professional Education & Development Programs** for water professionals, technical experts and public service managers of the local governments concerned and a continuous life-long training towards integration of new technology solutions, scientific developments and smart monitoring systems in adaptation strategies for eco-risks assessment and ecosystems management, responding to the increasing water stress, sanitation and eco-security challenges and facing rising climate change impacts and growing societal needs.
- **Promoting Innovative Research & Development Partnerships** with local universities, research institutes the academic community and High-Tech industry for the development, assessment, pilot field demonstration and early deployment monitoring of innovative technology solutions, their impacts monitoring and adaptation strategies for ecosystem depollution and sustainable preservation, efficient integration of wastewater reclamation and renewable water recovery for sustainable food security, pre-disposal effluent quality control and other socio-technical challenges by providing accessibility to regional databases and field monitoring systems and promoting scientific cooperation towards shared SDGs.
- **Providing Media Support and Creating Community Awareness Centers** for promoting public education initiatives, school programs, media sponsored socio-cultural activities and corporate awareness building towards shared regional priority Eco-SDGs and promoting an all-inclusive Mediterranean Dialogue for public education at all levels of local governance officials, water operators, professionals, financial sector, youth and communities on emerging trans-boundary challenges and adaptation strategies of eco-sustainable coastal development.

### **III. The ACADEMY's Network of "ECO-MED" Centers for Local Governance Capacity Building**

The **Metropolitan "ECO-MED" Academy** will constitute a Network of Local Governance Capacity Building & Environmental Monitoring Centers, which are expected to be established at the initiative of the interested Local Governments of the

Mediterranean member states concerned with the support of UNESCO-IHP experts and other UN agencies and International Organizations. These centers will involve local, regional and global partnerships with the coastal metropolitan stakeholders, including national agencies, municipalities, universities, corporate industry, water and sanitation utilities, civil society organizations, financial partners, and other stakeholders, in establishing their goals, resources, priority programs, info-systems, knowledges bases and strategic development roadmaps for meeting the regional SDGs of the Mediterranean coastal region, consistently with the Barcelona Convention, COPs regional recommendations and mutually agreed coastal eco-development strategies by the IHP member states.

**The Terms of Reference** for the ECO-MED Academy and its Network of Local Governance Capacity Building (LoG) Centers will be mutually defined by UNESCO-IHP Mediterranean member states involved, other sponsoring UN organizations, strategic partners, the metropolitan governments, water and sanitation utilities and other local, regional or global stakeholders. They are expected to include the Academy's institutional governance principles, mission, scope of programs, resources, co-financing strategies, strategic partnerships, organizational structure, performance measures, and other institutional issues and program development challenges for the Academy and its "LoG" Centers. The Academy's performance and regional impacts, as well as the quality of programs undertaken by the "LoG" Centers will be evaluated annually as part of the Academy's International Oversight & Performance Review Process by the UNESCO-IHP member states and the strategic partners, as well as the eligibility requirements for participation of "LoG" Centers in the ECO-MED Academy's Network. The goal is to continuously promote the mutual commitment of the Metropolitan ECO-MED Academy's Stakeholders to embrace and comply with the principles of existing Mediterranean environmental protection conventions, the COPs coastal security recommendations and mutually agreed ecosystems preservation measures and metropolitan eco-development strategies, as agreed by the Mediterranean member states, consistently with UNESCO constitutional principles and practices.

#### **"ECO-MED» ACADEMY's Strategic Development & Planning Colloquium**

**The purpose** of the Academy's Strategic Development & Planning Colloquium is to provide a Mediterranean forum for bringing together the local governments concerned, water utilities, financial sector, UN Organizations, hydrological institutes, universities, municipalities, technical experts, and other interested stakeholders in order to:

- **Create a Stakeholders' Mediterranean Dialogue** on the critical regional Eco-SDGs, review current eco-risks assessment and coastal ecosystems management strategies and promote consensus building among local governments, water operators, industry, and other metropolitan stakeholders for sustainable coastal eco-development strategies, facing growing ecosystem pollution and climate change impacts;
- **Promote a mutual understanding based consensus towards a Mediterranean roadmap** consistent with the UfM strategy, Barcelona Convention, Beirut Declaration and COP22 recommendations for undertaking de-pollution and implementing preservation measures of the coastal ecosystem(s), engaging a trans-boundary pre-disposal waste treatment control, protecting underground water resources from raw wastewater infiltration, and promoting integration of agricultural water reuse and renewable resources, as well as other locally adapted measures for sustainable regional development and food security;
- **Provide a UNESCO-IHP global forum of international expertise** to support the IHP interested member states and local metropolitan governments in creating the Metropolitan ECO-MED Academy and its Network of "LoG" Centers, identifying their global mission and local goals, scoping their work plans to support local governance capacity building for implementing ecosystem pollution control and sustainable protection measures, framing the objectives and performance measures for the environmental, societal and economic impacts assessment of the identified priority programs, and identifying strategic partnerships for co-financing their implementation.
- **Establish Terms of Reference for the Academy and its Network of "LoG" Centers in the member states concerned** to be mutually defined by UNESCO, other UN sponsoring organizations, the local governments of the member-states concerned, other local or regional stakeholders, including institutional Governance principles, scoping the ACADEMY's priority programs and support the constitution of the local "LoG" Centers, while identifying the terms of reference for their participation eligibility, accessibility to trans-boundary ecosystem pollution monitoring systems and shared knowledge/data bases, and other issues.

- **Identify the Academy’s strategic development milestones and the best way forward to:**
  - Support local governance capacity building programs to meet the regional priority Eco-SDGs;
  - Effectively implement monitoring and mapping of the ecosystem pollution and its impacts on ground water quality and create shared knowledge/data bases to support eco-risks assessment and ecosystem management for sustainable metropolitan eco-development;
  - Provide international expertise for feasibility assessment of trans-boundary development plans, ecosystem protection measures and infrastructure projects proposed by the local governments;
  - Initiate local professional education programs and R&D partnerships with local universities, research institutes and High-tech industry for innovative solutions and their field demonstration;
  - Promote public awareness initiatives towards shared Mediterranean Eco-SDGs including educational school programs, socio-cultural activities, corporate awareness building as well as
  - Specialized education centers and socio-cultural programs for underprivileged communities, mentally disabled and/or otherwise exceptionally challenged youth, geared towards adaptation, learning and expressing, through arts and science, their vision of sustainable development issues,
  - Evaluate the impacts of mutually identified measures on the growing public health risks and environmental hazards, which increasingly menace the regional societal sustainability.
  
- **Establish stakeholders’ mutual understanding** with regard to the constitution, mission and scope of programs of the ECO-MED Academy and its Network of “LoG” Centers and plan the agenda for the ECOMED Network Colloquium, spring 2022.

**The expected deliverables** will include minutes of Pre-Colloquium meetings with the interested member states, their delegations and experts, and other local and global stakeholders in order to explore their interest and priority objectives for developing an Academy’s “LoG” Center, as well as Post-colloquium Proceedings to be published by UNESCO in collaboration with the strategic partners and sponsoring organizations, summarizing:

- i **Situation analysis of the state of the coastal ecosystem and water eco-security challenges** with a diagnostic risk assessment of its continuous pollution impacts on public health and environmental hazards, as key elements in governance capacity building and regional sustainable development planning;
- ii **Stakeholders’ recommendations** for the way forward, including the Academy’s goals, governance principles, scoping the Academy’s work-plans of the Metropolitan ECOMED Academy and identifying its global mission and local goals, strategic partnerships for their implementation, milestones and performance measures for impacts assessment
- iii **Mutually agreed Terms of Reference** for the Academy’s institutional governance, mission and scope of support to the Network of the “LoG” Centers in the member states concerned, including the deployment of international expertise for feasibility assessment of their priority programs, trans-boundary development plans proposed by local governments, eligibility requirements and program oversight;
- iv **International support raising strategy** to support the creation of the Metropolitan “ECO-MED” Academy and its Network of “LoG” centers in the member states, implement its work plans at the local and regional levels, promote strategic partnerships for their development and assessment of their impacts, engage the deployment of trans-boundary monitoring systems, and establish regional knowledge bases and info-sharing systems to support local governance capacity building for achieving shared regional Eco-SDGs.
- v **Engaging with Media support public awareness initiatives** towards societal adaptation and resilience building to extreme events and climate change impacts at all levels through dedicated K to 12 programs, professional education and life-long continuing learning programs towards shared Mediterranean Eco-SDGs, including youth involvement and engagement in the Academy’s programs through the Network of “LoG” Centers in order to

consolidate their knowledge and diffuse the information to future generations, policy makers and professional experts.

- **Pre-Colloquium development of the Academy's programs, its terms of reference** and budget proposals for an initial pilot period of 3 years, including exploratory discussions with several interested member states and potential stakeholders for feasibility assessment of creating pilot "LoG" Centers. The Academy's preliminary scope of program and terms of reference will be presented to the UNESCO-IHP for review in its Board meeting of 2022.
- **Planning the 2022 Academy's Colloquium** and its detailed preparation with the local governments concerned. This will include pre-Colloquium meetings with the member states and potential stakeholders for feasibility assessment of creating pilot "LoG" Centers in the interested member states, setting up their initial terms of reference for governance, support, resources, scope of programs and assessment measures, as well as exploratory discussions with the UN sponsoring organizations and other strategic partners for feasibility assessment of potential co-financing strategic partnerships, and planning activities to meet the colloquium goal of launching the "ECO-MED" ACADEMY.