



Horizon 2020 Capacity Building/Mediterranean Environment Programme

“Urban wastewater: Integrated Management of Wastewater Collection and Treatment Systems”

18-21 April, Montenegro, 2011

Introduction - The Horizon 2020 Initiative

The “**Horizon 2020 Initiative**” aims to de-pollute the Mediterranean by the year 2020 by tackling the sources of pollution that account for around 80% of the overall pollution of the Mediterranean Sea: municipal waste, urban wastewater and industrial pollution.

Horizon 2020 was endorsed during the Environment Ministerial Conference held in Cairo in November 2006 and is one of the key initiatives run under the Union for the Mediterranean (UfM). The H2020 2007-2013 Road-Map focuses on the following four pillars:

- Identification of projects to reduce the most significant sources of pollution.
- Identification of capacity-building measures to help neighbouring countries create national environmental administrations that are able to develop and police environmental laws.
- Use of the EC’s research budget to develop greater knowledge of environmental issues relevant to the Mediterranean and ensure this is shared.
- Develop indicators to monitor the success of Horizon 2020.

H2020 is made up of the following components: monitoring, reporting and research (RMR); investment; and capacity building. Under each component, a project is currently being run. H2020 Capacity Building/Mediterranean Environment Programme (H2020 CB/MEP) is the project aiming at enhancing the capacities to address pollution problems at institutional and society level. In addition, through the H2020 MEP, a Hot Spot Investment Programme (HSIP) for the West Balkans and Turkey - as complementary to the Mediterranean HSIP (MeHSIP) – is being elaborated. The other two projects currently being carried out under the investment and RMR H2020 components are respectively the MeHSIP and the Mediterranean Shared Environmental Information System (Med SEIS).

The framework - Horizon 2020 Capacity Building/Mediterranean Environment Programme

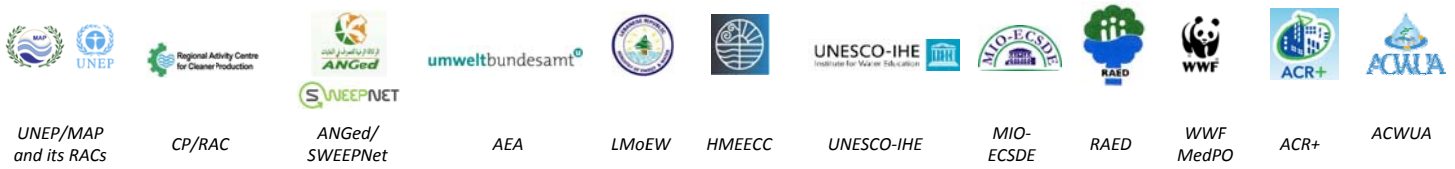
Obviously pollution is expected to be substantially reduced through the installation and proper functioning of major infrastructures (e.g. sewage treatment plants), installing pollution reduction technologies in industries, etc. However, this won’t work if institutional and individual capacities are not in place. This is what the H2020 CB/MEP aims to enhance by operating within the existing and developing policy instruments, and supporting the implementation of the commitments undertaken in the framework of the ENP as well as other regional agreements e.g. of the Barcelona Convention, while cooperating, coordinating and synergising with all relevant (EU and other) programmes.

Aims and objectives

The main objective of this project is to support the implementation of Horizon 2020 with a special focus on environmental mainstreaming. It aims to address the following problems:

- low political priority given to the environment;
- insufficient integration of environment in the different sector policies (agriculture, tourism, transport or energy) and lack of inclusion of the different actors from local to international level;
- Insufficient capacities and resources at institutional and civil society level.

More specifically, the purpose is to support the implementation of the Horizon 2020 Initiative Road Map and Work Plan through capacity building and awareness raising activities, and to promote integration of environment issues in other sectors policies.





Partners

This project is funded by the European Union and implemented by the National and Kapodistrian University of Athens (NKUA) in consortium with: Mediterranean Action Plan of the United Nations Environment Programme and its Regional Activity Centres and Programmes (UNEP/MAP and its RACs), National Waste Management Agency (ANGed)/ Regional Solid Waste Exchange of Information and Expertise Network in Mashreq and Maghreb Countries (SWEEPNet), Umweltbundesamt GmbH – Austrian Environment Agency (AEA), Lebanese Ministry of Energy and Water - the General Directorate of Hydraulic and Electrical Resources (LMoEW), Hellenic Ministry for Environment, Energy and Climate Change, UNESCO-IHE Institute for Water Education (UNESCO-IHE), Mediterranean Information Office for Environment, Culture and Sustainable Development (MIO-ECSDE), Arab Network for Environment and Development (RAED), WWF Mediterranean Programme Office (WWF MedPO), Association of Cities and Regions for Recycling and Sustainable Resource Management (ACR+), Arab Countries Water Utilities Association (ACWUA).

Partner Countries

The Partner countries are: Albania, Algeria, Bosnia- Herzegovina, Croatia, Egypt, Israel, Jordan, Lebanon, Montenegro, Morocco, occupied Palestinian territory, Tunisia, Turkey, Syria.

Course Description - Wastewater treatment and reuse

Introduction to the training course

The training course is organized within the framework of the Horizon 2020 CB/MEP project and in response to the capacity building needs identified earlier in the project. The course is organized by the UNESCO-IHE Institute for Water Education with the support of the Arab Countries Water Utilities Association (ACWUA).

Its duration is 4 days; the language of the course is Montenegrin and English.

Sixteen (16) participants from Montenegro attended the meeting.

Target group

The capacity building activity is of an intermediate/advanced level and is targeted to mid-career engineers, managers and decision-makers in fields related to wastewater treatment from:

- Water and wastewater management competent authorities
- Municipalities
- Water and sewerage associations
- Universities
- Consultancy firms

Learning objectives

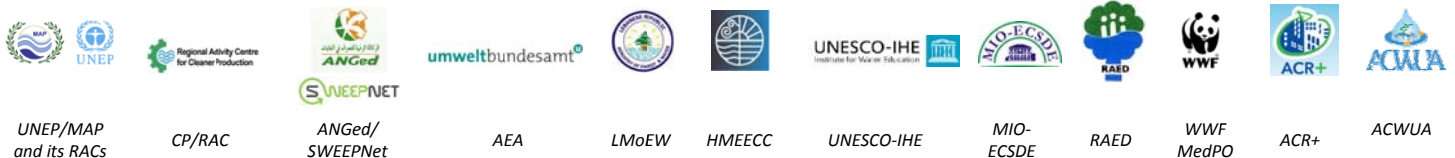
The principal objective of the course is to bring professionals from different backgrounds and positions together to provide up-to-date knowledge on wastewater management in line with the aims of the H2020. Cross-fertilization of the participants will be encouraged. Furthermore, the course is designed in a way to:

- promote integral thinking in coastal wastewater management practice;
- update participants with the latest developments in the field of wastewater collection and treatment;
- demonstrate benefits of model-based decision making in the urban wastewater management;
- promote model-based asset management and optimization.

Methodology and Structure

The general structure of the course will be:

- Lectures
- Group and plenary discussions
- Learning-by-doing exercises





- Case study exercises
- Participant presentations
- Modeling exercises
- Workshops

Resources for participants

Resources that are intended to be provided to participants are:

- PPTs, reference documents
- Case study material
- Demo software

Learning outcomes of the training course

After completion of the course the participants will:

1. To be familiarized with the EU approach as well as the main EU directives and with regard to sanitation within the context of coastal zones;
2. Get updated with the present of state-of-the-art overview and new and global developments concerning the wastewater-related challenges and their management;
3. Become familiar with a set of tools to properly address the identified challenges in the sanitation sector, not only in situations where sufficient resources are available, but also under the more challenging conditions usually prevailing in the Balkans/Mediterranean;
4. Be exposed to the latest technical and managerial knowledge in the fields of wastewater and stormwater collection and treatment;
5. Get familiar with real life practical case studies from the region;
6. Increase their awareness on the importance of profound strategic planning, sound project management and implementation, selection of appropriate technologies, and proper operation and maintenance of the facilities;
7. Exchange information between themselves and strengthen their network in the country;
8. Initiate new joint project or research ideas to contribute to a de-pollution of Mediterranean by 2020.

Preliminary course schedule/curriculum

The following possible subsequent modules will be addressed:

- EU acquis and approaches with regard to sanitation / linkages with sanitation related legislation as well as projects in the country
- Introduction to wastewater treatment
- Presentation of participants on the wastewater sector of Montenegro
- Integrated urban wastewater management in the coastal zones
- Novel concepts in integrated urban coastal management
- Model-based management of urban drainage and sewage systems
- Model-based management of wastewater treatment plants
- State-of-the-art wastewater technologies
- Asset management and optimization
- Financing wastewater infrastructure



UNEP/Map and its RACs



CP/RAC



ANGed/SWEEPNet



AEA



LMoEW



HMECC



UNESCO-IHE



MIO-ECSDE



RAED



WWF MedPO



ACR+



ACWUA



Provisional Course schedule/curriculum
“Urban wastewater: Integrated Management of Wastewater Collection and Treatment Systems”
Hotel Maestral, Budva, Montenegro
18-21 April 2011

Course schedule/ curriculum		
18.04.2011 (Monday)		
Time	Topic	Trainer
8:00-9:00	Registration	
9:00-9:15	Opening and introduction to the course	D. Brdjanovic (UNESCO-IHE)
9:15-9:45	EU acquis and approach with regard to sanitation	K. Quteishat (ACWUA)
9:45-10:15	Introduction of participants	Participants
10:15-10:30	Coffee break	
10:30-11:30	Presentation of participants on the wastewater sector of Montenegro	Participants
11:30-12:00	Discussion	
12:00-13:00	Lunch	
13:00-14:00	Integrated urban wastewater management in the coastal zone: Introduction	Z. Vojinovic (UNESCO-IHE)
14:00-14:15	Coffee break	
14:15-15:00	Novel concepts in integrated urban coastal management	D. Brdjanovic
15:00-16:00	Discussion	
19.04.2011 (Tuesday)		
Time	Topic	Trainer
9:00-10:30	Technologies for Integrated urban water management	Z. Vojinovic
10:30-10:45	Coffee break	
10:45-12:00	Technologies for Integrated urban water management and discussion	Z. Vojinovic
12:00-13:00	Lunch	
13:00-14:30	Exercise case study SXM GIS-based coastal pollution assessment	Z. Vojinovic
14:30-14:45	Coffee break	
14:45-16:00	Exercise case study SXM GIS-based coastal pollution assessment	Z. Vojinovic
20.04.2011 (Wednesday)		
Time	Topic	Trainer
9:00-10:30	State-of-the-art wastewater technologies	D. Brdjanovic
10:30-10:45	Coffee break	
10:45-12:00	State-of-the-art wastewater technologies	D. Brdjanovic
12:00-13:00	Lunch	
13:00-14:30	Model-based management of wastewater treatment plants	D. Brdjanovic
14:30-14:45	Coffee break	
14:45-16:00	Modeling demonstration/workshop	D. Brdjanovic
21.04.2011 (Thursday)		
Time	Topic	Trainer
9:00-10:30	Exercise case study SXM GIS-based coastal pollution assessment	Z. Vojinovic
10:30-10:45	Coffee break	
10:45-12:00	Exercise case study SXM GIS-based coastal pollution assessment	Z. Vojinovic
12:00-13:00	Lunch	
13:00-14:30	Financing wastewater infrastructure	K. Quteishat
14:30-14:45	Coffee break	
14:45-16:00	Financing wastewater infrastructure	K. Quteishat
16:00-17:30	Course evaluation and closing remarks/Certificates/Awards/Departure	

