



## Assessing the progress in depolluting the Mediterranean Sea



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### ABSTRACT

The depollution of the Mediterranean Sea by 2020 is the overarching goal of Horizon 2020 Initiative (H2020). The first phase (2007–2013) tackled the main land-based pollution sources; municipal waste, urban wastewater and industrial emissions. As part of the H2020 roadmap implementation, the ENPI-SEIS project focused on the first H2020 review mechanism that included a) establishing a process for regular environmental reporting in the European Neighbourhood Policy South countries, and b) generating the knowledge necessary to assess the progress in depolluting the Mediterranean Sea. This paper reviews the process in line with the “Shared Environmental Information System” principles and its three pillars (content, cooperation, infrastructure). The main outcomes of the thematic assessment, based on a set of regional H2020 indicators, are also presented. This assessment highlights the major drivers and their implications on marine protection. It also identifies areas that require further attention in the next phase of H2020 (2014–2020).

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### 1. Introduction

The Mediterranean region, home to around 480 million people living across three continents: Africa, Asia and Europe, has been undergoing intensive demographic, social, cultural, economic and environmental changes in the last decades. Since 1950s, the countries bordering the Mediterranean Sea have experienced a drastic increase in population, especially in the southern and eastern rim where further growth is still expected. Most of this urbanisation takes place in the coastal zone where people live in increasingly overcrowded coastal strips, exacerbating the pressures on the environment, such as through waste and wastewater generation. Such land-based sources of pollution constitute a major threat to the health of coastal and marine ecosystems.

In response, the countries bordering the Mediterranean Sea have been cooperating to protect the fragile and vulnerable marine ecosystem for 40 years. In 1976, the Mediterranean countries and the European Union (EU) strengthened their commitment to the Mediterranean Action Plan (MAP) by adopting the Convention for the Protection of the Mediterranean Sea against Pollution (Barcelona Convention) and the Mediterranean Strategy for Sustainable Development (MSSD) in 2005. This was followed by the adoption of seven associated Protocols that address the operational, legal and technical obligations of specific aspects of environmental protection and sustainable development in the Mediterranean. Since 2008,

UNEP/MAP has committed to applying the Ecosystem Approach (EcAp; UNEP/MAP, 2012) as an overarching principle of its policies and actions, with the view of achieving good environmental status according to an ambitious implementation roadmap and cyclic-based timetable. The Euro-Mediterranean Partnership (EUROMED), referred to as the Barcelona Process, was first launched in 1995. It was then re-launched in 2008 as the Union for the Mediterranean (UfM) to enhance further the partnership between the EU and its Mediterranean neighbours, providing a regional platform for political dialogue and acceleration of projects towards cooperation, security and sustainable development. The protection of the Mediterranean Sea from pollution is one of the first mandates given to the UfM in the field of environment and water.

In spite of all the measures taken to improve the marine environment and ecosystems in the Mediterranean region, pressures from the land-based sources remain high across a considerable part of the region. The measures taken do not operate effectively in all areas due to legislative gaps, lack of proper enforcement, limited human and technical capacities, financial constraints as well as population growth and development paths. As a consequence, there is little evidence of tangible progress in the depollution of the Mediterranean Sea and for most Mediterranean countries pollution control and monitoring still constitute a major challenge.

### 2. The Horizon 2020 Initiative (H2020)

In an effort to rectify environmental deterioration in the region, during the 10th Anniversary Summit of the Barcelona Process in 2005, the

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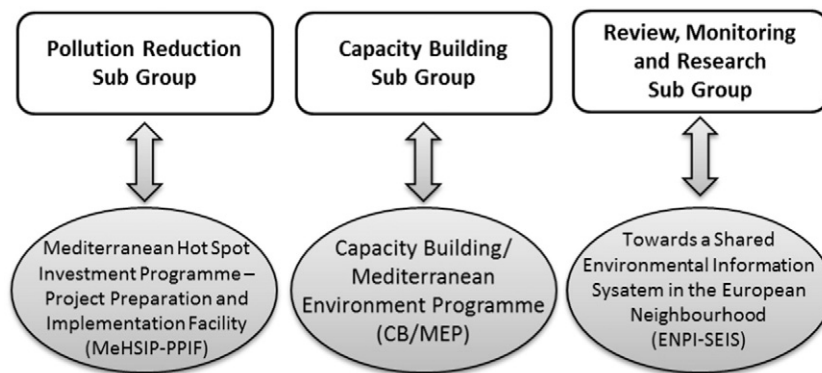


Fig. 1. The three components of the Horizon 2020 Initiative and corresponding implementation projects.

Euro-Mediterranean Partners committed themselves to substantially reduce land-based pollution to the Mediterranean by 2020 – the “Horizon 2020 Initiative” (H2020). H2020 is established under the former Barcelona Process and current UfM, and is financially supported by the European Commission as part of the European Neighbourhood Policy Instrument. The overarching objective is to depollute the Mediterranean by 2020, focusing on three priority areas: a) municipal waste, b) urban wastewater and c) industrial emissions. H2020 builds on the work carried out by other institutions and operates within the framework of existing and developing environmental policy instruments. It supports the implementation of the pollution reduction commitments undertaken in the framework of MAP and its Barcelona Convention. A roadmap for the first phase of implementation (2007–2013) of H2020 was adopted by the environment ministers, marking an important milestone for regional environmental cooperation and commitment. The roadmap focused on addressing the primary question: *What is the progress in depolluting the Mediterranean?* by tackling the following aspects:

- The identification of projects to reduce the most significant sources of pollution;
- The identification of capacity building measures to help neighbouring countries to create national environmental administrations that are able to develop and police environmental laws;
- The use of the EU research budget to develop and share knowledge of environmental issues relevant to the Mediterranean;
- The development of indicators to monitor the success of H2020.

To implement and monitor these actions, three thematic subgroups were established (Fig. 1): Pollution reduction (PR), Capacity building (CB) and Review, Monitoring and Research (RMR). The latter, the RMR subgroup chaired by the European Environment Agency (EEA), was mandated to monitor the progress of the implementation of H2020 through the development of common indicators and shared information systems that support a mechanism for regular reporting on environmental issues.

This paper presents the results of the work of RMR subgroup and its corresponding implementation project – Towards a Shared Environmental Information System in the European Neighbourhood (ENPI-SEIS) on the implementation of a pilot review mechanism in the 9 European Neighbourhood Policy Instrument (ENPI) South countries,<sup>1</sup> following the experience of establishing Shared Environment Information System (SEIS) in European countries. Throughout the ENPI-SEIS project, a distinction is made between putting in place the ‘process’ for regular reporting, based on setting up and maintaining the infrastructure and cooperation needed to allow for the exchange of data and

information; from generating the ‘content’ or knowledge required to assess progress on H2020 issues. In the first section, a brief description of how the ‘process’ supports the generation of the ‘content’ is provided. More detailed information and the key messages drawn from the first reporting exercise and indicator-based assessment of the three H2020 thematic areas are presented in the second section, aimed at addressing the question *“What is the progress in depolluting the Mediterranean?”*.

### 3. Setting up the process

#### 3.1. Implementation of SEIS

The concrete implementation of the proposed review mechanism was fully embedded into the activities of the EU-funded ENPI SEIS project,<sup>2</sup> which aimed at progressively developing the SEIS principles (EC, 2008) in the ENP partner countries. The conceptual framework of SEIS, built on three pillars – content, cooperation and infrastructure (Fig. 2), was used to design and implement of a coherent indicator process for regular indicator-based analyses, fulfilling the mandate of the RMR subgroup.

The work on the content pillar was organised around the priority areas identified under H2020: municipal waste, urban wastewater and industrial emissions. These land-based sources of pollution account for ~80% of the overall pollution to the Mediterranean Sea. Following an initial consultation with the ENP South countries, the scope of the water thematic area was enlarged to also include fresh and marine water, both in terms of quality and quantity. The review process was based on the different level of aggregation and analysis of environmental information: monitoring, data, indicators, assessment and knowledge (MDIAK). This MDIAK reporting chain has been developed by the EEA to support the provision of observations, data processing and the production of indicators that underpin thematic assessments that can later support policy-making. Data on the priority areas was processed and aggregated based on common definitions, harmonised methods and standards, to produce regionally-coherent indicators and indicator-based assessments, as described in more details below.

Under the cooperation pillar, focus was given to setting up and maintaining strong and long-term (human) networks between providers and users of data ensuring that the necessary data, information and knowledge were exchanged at every level; local, national and regional. This strong inter-institutional cooperation is essential for streamlining dataflows and network infrastructures. The institutional cooperation at national level is ensured by the appointed two National Focal Points (NFPs), representing the environmental and statistical organisations leading in the field of environmental information in each of the ENP South countries.

<sup>1</sup> The 9 ENP South countries are Algeria (DZ), Egypt (EG), Israel (IL), Jordan (JO), Lebanon (LB), Morocco (MA), Palestinian Authority (PS), Syria (SY) and Tunisia (TN). Due to the political situation, Syria is currently not part of the process.

<sup>2</sup> <http://enpi-seis.ew.eea.europa.eu/workplan/south>.

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