

**Conclusions and follow-up actions  
defined in the RMR meeting,  
including a description of the  
development and status of indicator**

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**Title**

Conclusions and follow-up actions defined in the RMR meeting, including a description of the development and status of indicator implementation at national level

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**Summary**

This report gives an overview of the status of the indicator development process in the ENP South countries in the frame of the ENPI-SEIS South project commissioned by EEA, based on the outcome and actions defined during the RMR meeting held on 4–5 June 2012 at the EEA premises in Copenhagen.

**References**

<http://coordination.h2020.net/rmr/meetings/2012-06-04-rmr-meeting>

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V1.0	Dec. 2012	Claudette Spiteri	CS	Cecile Roddier Quefelec	CRQ	Cecile Roddier Quefelec	CRQ
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## 1 Introduction

The third meeting of the Horizon 2020 Initiative (H2020) Review, Monitoring and Research (RMR) Sub-Group took place on 4–5 June 2012 at the EEA premises in Copenhagen. The aims of the meeting were to:

1. discuss the outcome of the 1<sup>st</sup> Working Group meeting on Environmental Indicators and subsequent steps in the indicator development process
2. articulate the country-specific developments to build a road-map for linking regional development with country pilots
3. discuss the outline of the H2020 indicator-based regional assessment

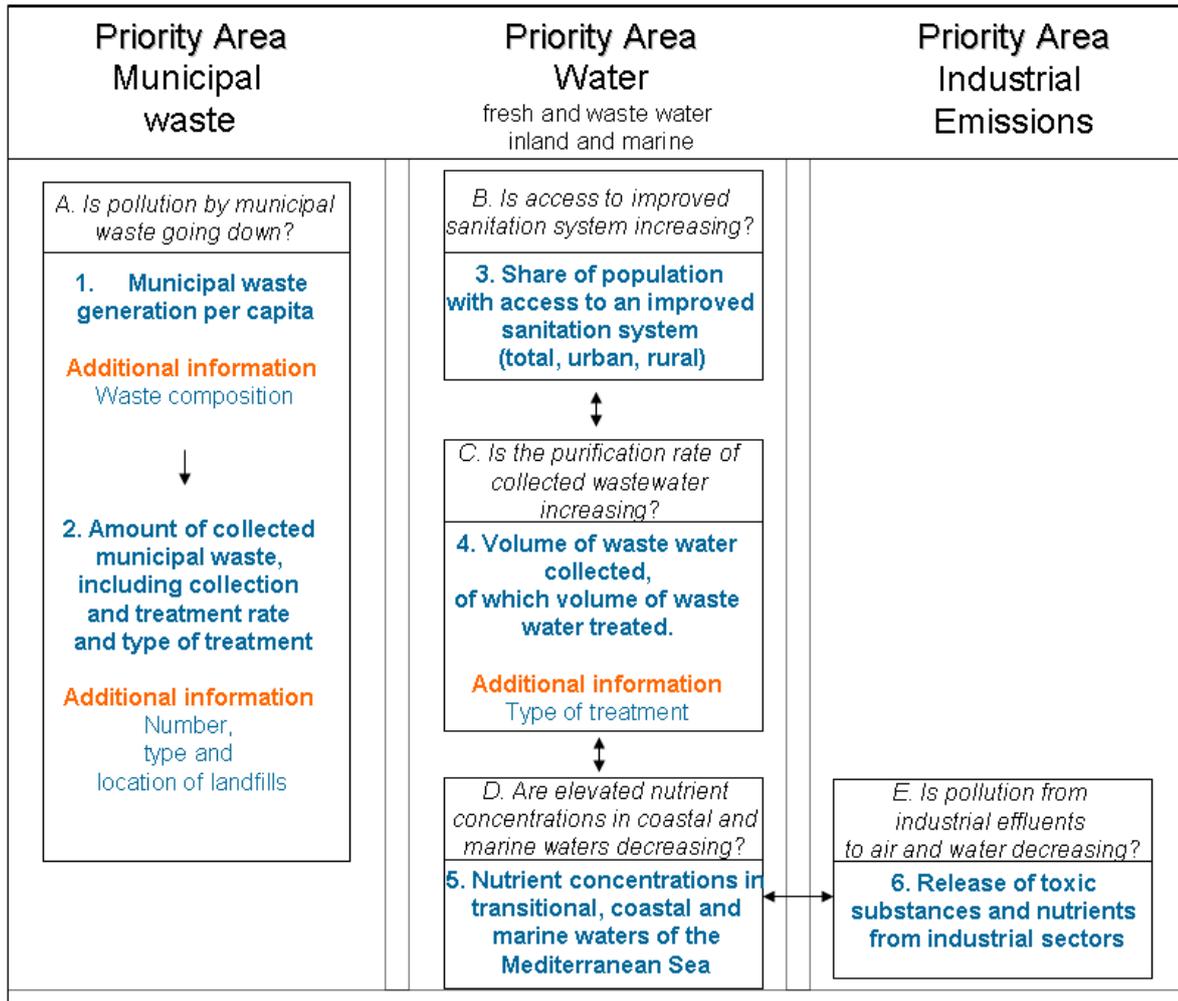
### 1.1 Main outcomes on the Indicator Development Process

During the Working Group meeting on Environmental Indicators in Barcelona in April 2012, a set of priority indicators has been proposed and approved following a problem-oriented approach. The 6 indicators and additional associated information are presented below, together with the policy questions they are intended to answer.

Taking into account the different data production processes in the countries, it was emphasized that more training is needed in order to develop further the indicators at national level. It was decided that the indicator factsheets will be developed in close cooperation with the partner countries and will be presented during the 2<sup>nd</sup> meeting of the Working Group on Environmental Indicators in October. In support to the ENPI-SEIS project, UNEP/MAP will implement specific country support in the form of workshops and expert missions on indicator development.

Aspects related to the indicator specification, methodological guidance and harmonization were discussed during the follow-up 3<sup>rd</sup> RMR Sub-Group meeting. A simple meta-data questionnaire was proposed as a way to support the development of the indicator factsheets and compile an inventory of available data and methodological aspects. This questionnaire also contributed to a preliminary comparative analysis of the data available in the countries.

As shown by the non-exhaustive overview of the results of the metadata questionnaire (presented during the 2<sup>nd</sup> meeting of the Working Group meeting on Environmental Indicators, October 2012, Copenhagen), the selected priority indicators are generally available in all countries. However, some fields still need to be harmonized to achieve regional coherence. Only information on Indicators 1 to 4 is provided, since data for Indicator 5 has been collected for a long time by UNEP/MAP as part of the MEDPOL programme, whereas Indicator 6 is considered in the PRTR pilots currently implemented by UNEP/MAP.



**Indicator 1: Municipal waste generation per capita**

	<b>DZ</b>	<b>EG</b>	<b>IL</b>	<b>JO</b>	<b>LB</b>	<b>MA</b>	<b>PS</b>	<b>TN</b>
<b>Type of waste</b>	municipal household	municipal	municipal	municipal	municipal	household	household	other
<b>Units</b>	kg/capita	tonnes/yr	kg/capita	kg/capita	kg/capita	kg/capita tonnes/yr	kg/capita	tonnes
<b>Geographical units</b>	Hydrological basin coastal city	governorates	municipality	coastal city	coastal areas	coastal town/region or province	hydrological basin	national
<b>Frequency</b>	yearly	yearly	yearly	yearly	yearly	yearly	biennial	irregular
<b>Temporal coverage</b>	1966; 1977; 1987; 1998; 2008	2004 - 2011	2000-2011	2006-2010	1998 - 2011	2003; 2007; 2011	1999-2011	

**Indicator 2: Amount of collected municipal waste, including collection and treatment rate and type of treatment**

	<b>DZ</b>	<b>EG</b>	<b>IL</b>	<b>JO</b>	<b>LB</b>	<b>MA</b>	<b>PS</b>	<b>TN</b>
<b>Type of waste</b>	municipal household	municipal	municipal	municipal	municipal	household	household	other
<b>Units</b>	tonnes/yr %	%	1000 tonnes	%	%	%	%	%
<b>Geographical units</b>	hydrological basin coastal cities	governorates	municipality	coastal cities	coastal areas	coastal town/region or province	hydrological basin	national
<b>Frequency</b>	yearly	yearly	yearly		yearly	yearly	2 years	irregular
<b>Temporal coverage</b>		2007 - 2011	2000-2011		1998 - 2011	2003; 2007; 2011	1999-2011	

### Indicator 3: Share of population with access to an improved sanitation system

	DZ	EG	IL	JO	LB	MA	PS	TN
<b>Units</b>	% of population	% of population	% of population	% of population	% of population	% of population	% of households	% of population
<b>Geographical units</b>	national & wilayas	23 governorates	all areas	total		cities, regions, country	regions	national & governorates
<b>Frequency</b>	yearly	yearly	yearly	biennial		yearly	biennial	yearly
<b>Temporal coverage</b>	1966; 1977; 1987; 1998; 2008	2007-2010	1980-2009	2000-2010		2005; 2010	1999-2011	1974-2011

### Indicator 4: Volume of wastewater collected, of which volume of wastewater treated

	DZ	EG	IL	JO	LB	MA	PS	TN
<b>Units</b>	% million m <sup>3</sup>	%	million m <sup>3</sup>	million m <sup>3</sup>				
<b>Geographical units</b>	by town national	23 governorates	all areas	country level		cities, regions, country	regions	national
<b>Frequency</b>	yearly	daily	yearly	yearly		yearly	yearly	yearly
<b>Temporal coverage</b>		2010	1980-2009	2000-2010		2005; 2010	2010	1974-2011

## Notes on the discussion points related to selected on indicators as part of the indicator development process

During the various discussions on the selection and development of the priority indicators, the following issues were raised:

-Indicator definition: For instance, what kind of waste should be considered, household or municipal? In the end, it was agreed to focus on municipal waste. This decision was mainly based on the outcome of the metadata questionnaire and the comparability to other existing indicators, such as EEA CSI016 and OECD indicator on municipal waste generation. It also implies that some countries that currently collect information on household waste, e.g. Palestinian Authority need to derive information on the municipal fraction.

-Geographical unit: Considering that the focus of H2020 is the depollution of the Mediterranean Sea, the delineation of the geographical unit for each indicator based on the impact of the priority issue on the receiving coastal and marine systems. For instance, for waste indicators, it was advocated that the geographical unit should be coastal cities and coastal units whereas water indicators should consider the hydrological basins as upstream pollution sources, such as wastewater outfalls, will eventually discharge into the Mediterranean Sea. However, these indicators are generally available at the national and regional levels and therefore will have to be recalculated for coastal cities/units or hydrological basins. It has been agreed that all countries will make reference to the 2012 Plan Bleu map showing coastal regions and Mediterranean watersheds/coastal hydrological basins. A list and map showing coastal cities with > 10 000 inhabitants still needs to be compiled.



-Temporal reference: The reference year was chosen to be 2003, the year when Mediterranean countries established their National Action Plans (NAPs). However, if data is available for earlier years, it should also be taken into consideration.

- Other issues: During the discussions on indicator selection, it also was noted that the following issues are not currently being considered:

- freshwater availability in coastal hydrological basins
- inland water bodies in coastal hydrological basins
- sludge production from wastewater treatment
- effects of climate change

## 1.2 Main outcomes on the Country pilots

The link between the regional production of key indicators and the country-specific pilot actions was discussed during the 3<sup>rd</sup> RMR meeting. Other linkages with the infrastructure component of ENPI-SEIS project and particularly with the Working Group on Information Technology (WG IT) were also highlighted. A set of recommendations made by the WG IT to best support the indicator development and production were presented:

- As common metadata and common structure have to be developed, clear specification of the required data and indicators is needed and the Indicator fact sheets should be shared with the WG on IT.
- Pilot exercise in using Reportnet (EEA tool) is needed to test and demonstrate a trial data flows
- Need for an establishment of coordinating group at national level including National Focal Points, Indicator Working Group members and Information Technology Working Group members - with clear sharing of responsibilities.

The discussion was also aimed towards building an integrated roadmap, in which a detailed plan of action for the development of the national information systems for supporting the regular reporting of the State of Environment will be elaborated. This is fully in line with the declaration of the Euro-Mediterranean Ministers of Environment and other heads of delegation at the Cairo Ministerial Conference which states that *steps will be taken to develop national integrated environmental information systems to produce reliable, comparable and timely statistical data and information to support Horizon 2020 aims.*

## 1.3 Main outcomes on the Regional Report

A preliminary discussion of the regional assessment report was also held at the 3<sup>rd</sup> RMR meeting. Most of the participants agreed that an analysis of existing situation will be of utmost importance. However, the assessment report itself should be a concise document relevant to the general public and policy-makers on whether the Mediterranean is depolluting or not. This report will indirectly be an update of the 2006 EEA report on *Priority Issues in the Mediterranean* but will be based on a more effective working method through the implementation of SEIS, in which all three components – content, cooperation and infrastructure – are equally important building blocks for sharing information and the successful publication of the report.

The discussions held during the 3<sup>rd</sup> RMR meeting led to the consolidation of a preliminary outline of the *Regional Report*, presented in the subsequent 2<sup>nd</sup> Working Group meeting on

Environmental Indicators. The preliminary outline of the *Regional Report* is divided into 3 parts:

**Part 1: Synthesis**

- Summary of the H2020 thematic challenges, performances, cross-cutting issues, and reflections on policy implications, as well as overarching conclusions

**Part 2: An indicator-based thematic assessment**

- Regional assessment of the H2020 issues, using the selected H2020 indicators (based on available data)
- Use of Pilot Studies to illuminate specific issues

**Part 3: Country level**

- Short summary of country SoER on common H2020 issues, and specific countries circumstances based on the country profiles

Although the *Regional Report* will cover a narrower scope than the EEA 2010 State and Outlook report, the same principles will be adopted for the country assessments. This approach allows for co-ownership of the H2020 assessment by highlighting the common elements between the countries and the diversity in the country situations. The possibility to extend the assessment to other emerging issues (e.g. marine litter) will be also taken into account. It is envisaged that Part 1 will be published on paper; Parts 2 and 3 will be published electronically.

## 2 Status of the indicator implementation process at the national level

The current status of the indicator implementation at the national level is briefly described below. In compiling this synthesis, reference to the following sources of information and project documents was made:

- ENPI-SEIS Country reports, as a follow-up to a number of country visits to ENP South countries during 2011, as part of the EEA-UNEP /ENPI-SEIS project
- ENPI-SEIS Regional Work Plan 2012-2014 (Draft)
- Metadata questionnaires
- Country overviews presented during the 3<sup>rd</sup> RMR meeting (June 2012) and 2<sup>nd</sup> meeting of the Working Group meeting on Environmental Indicators (October 2012)
- UNEP/MAP Report on the State of Play and specific needs of ENP South countries with regard to main SEIS components focusing on Horizon 2020 priorities

This overview is structured in line with the three components of SEIS- content, cooperation and infrastructure- covering all aspects of the indicator implementation process.

### 2.1 Content development

Based on the findings of the country visits, the generation of the necessary data and indicators is generally limited by human capacity, financial resources and in some cases knowledge gaps. In a number of cases, data collection is based on project-based funding with a limited duration, leading to fragmented datasets and inconsistent historical data series. Although data related to H2020 priority areas; waste, water and industrial emissions, are generally available in the countries, the availability, quality and completeness vary from country to country depending on the level of development of the environmental monitoring infrastructure, monitoring programmes and statistical surveys. Even in countries where data and information is available, a common communication and cooperation platform is still missing.

With respect to “content”, most countries have *some* data on water quantity and use, water quality and pollution, air pollution and air quality. Data on air emissions are not always available due to weak permitting systems and the lack of legal basis for monitoring and reporting. The existing data is usually collected through the NSI via industry surveys. Waste data is generally based on data from surveys and estimates.

The status of “content development” in each country related to environmental indicators in general and the H2020 priority indicators more specifically is summarized below.

Country	Status of the development of Environmental Indicators*
<b>Algeria</b>	A list of environment and sustainable development indicators is available at ONEDD; some indicators are feasible to develop in the short term, others are at a very preliminary stage, or even non-existent and their calculation requires a relatively longer time.
<b>Egypt</b>	A list of 86 Priority indicators for Sustainable development in the Arab region has been finalized and the Environmental Indicators Index including 84 indicators on, among others, coastal water, coastal & marine zones, waste etc) has been produced according to the DPSIR framework. According to the implementation plan, next actions include the development of a complete list of main environmental indicators, consistent with international environmental organizations and programmes, using international standards and classification schemes, ensuring accessibility and inter-compatibility.
<b>Israel</b>	A set of indicators have been developed by both the Ministry of Environmental Protection (MoEP) and the Central Bureau of Statistics (CBS), based on accumulated knowledge of international organizations, such as the UN, OECD and Eurostat. The CBS collects and publishes data, inter alia, on the environment and environmental indicators. These data include information on air pollution, greenhouse gases, waste, and water resources and water quality, biodiversity and environmental expense.
<b>Jordan</b>	The Department of Statistics (DOS) manages the Jordan Info Database, which includes 222 indicators covering 16 sectors including environment. Environmental data published by DOS includes data sets on the quantity of municipal solid waste from the economic enterprises sector, industry and households, water supply for household and municipal purposes. Data are the results of annual surveys and are available annually at the beginning of the year following the surveyed year.
<b>Lebanon</b>	The Ministry of Environment (MoE) has a list of indicators which are periodically updated and reviewed by the department of environmental monitoring and statistics, in order to be published on its newly designed website. A total of 90 indicators have been devised for Lebanon, divided into 4 categories: Population (30), Economic Activity (17), Environment (30) and Sustainable Development (13). However, one conclusion of the Lebanese country report is that environmental indicators appear to be quite dispersed and unorganized.
<b>Morocco</b>	Among the 65 selected national indicators for sustainable development, 18 indicators represent the social field, 13 indicators the territorial area, 18 indicators relate to economic activity and 18 indicators are specific to the environment.
<b>Palestinian Authority</b>	The "National Team for Environmental Information System" committee established in 2008 and composed of representatives from 13 institutions representing government, academia and NGOs has approved a list of thematic groups of indicators and an agreed list of indicators.
<b>Tunisia</b>	The Observatoire Tunisien de l'Environnement et du Développement Durable (OTEDD) database (Gestion des Indicateurs de l'Environnement et du Développement Durable "GIED") includes data on about 125 indicators (environmental, social and economic) defined at national and subnational level. An environmental database covering 7 environmental themes (inland waters, soil, waste, air, biodiversity, sustainable development and forests) was set up based on the 2692 variables of the Eurostat-OECD questionnaire (of which 548 are filled). The list of variables exchanged with Eurostat on an annual basis relate to 5 Themes: air, water, waste, soil and forest.
*main source of information : ENPI-SEIS Country reports and Country presentations	

Priority Area	Status/comments of priority indicators on WASTE*	
	Indicator 1 <i>Municipal waste generation per capita</i>	Indicator 2 <i>Amount of collected municipal waste, including collection and treatment rate and type of treatment</i>
<b>Algeria</b>	Lack of homogeneity of the data; data are not available for the same years for all wilayas	Lack of homogeneity of the data; data are not available for the same years for all wilayas  Assistance needed in identifying the methodology
<b>Egypt</b>	Long data time series available	Data time series available for five years. Yet, no data is available on the level of coastal cities
<b>Israel</b>	Time series available, indicator well developed, collected on a regular basis and at a detailed geographical resolution. Some municipalities do not report their yearly waste amounts. Data is then estimated based on the nearest neighbor imputation method	Time series available, indicator well - developed, collected on a regular basis and at a detailed geographical resolution. Some municipalities do not report their yearly waste amounts. Data is then estimated based on the nearest neighbor imputation method
<b>Jordan</b>	Time series available on administrative level. Data is approximate	--
<b>Lebanon</b>	Periodic reports are published. Good knowledge is available. Yet, no comprehensive data validation and information exchange	Periodic reports are published. Good knowledge is available. Yet, no comprehensive data validation and information exchange
<b>Morocco</b>	Representation is partial Frequency of production and communication indicator is irregular	Representation is partial Frequency of production and communication indicator is irregular
<b>Palestinian Authority</b>	Data are based on household estimations. Data are available for the period 1999-2011. Data are trusted; when compared to other sources, values were acceptable	Data are available for the period 1999-2011. Data are trusted; when compared to other sources, values were acceptable
<b>Tunisia</b>	Data is unavailable  Assistance to rebuild information on waste is required	Data is unavailable and geographic coverage is limited  Assistance to rebuild information on waste is required
* main source of information: Metadata questionnaire		

Priority Area	Status/comments of priority indicators on WATER*	
	Indicator 3 <i>Share of population with access to an improved sanitation system</i>	Indicator 4 <i>Volume of wastewater collected, of which volume of wastewater treated</i>
<b>Algeria</b>	Indicator regularly calculated Availability of annual data Significant national coverage  Training in the identification and study of indicators is needed	Indicator calculated regularly Availability of annual data  Training in the identification and study of indicators is needed. Help needed in defining the methodology
<b>Egypt</b>	Data available annually for 2007-2010 Indicator is approximate, derived from multiple data sources	All data related to the quality and quantity of wastewater are reliable since it reviewed by different sectors for long time. Yet, data is very limited in certain locations where no companies are established, like Qalubia governorate and Suez canal zone
<b>Israel</b>	Time series available; indicator well developed	Time series available; indicator well developed
<b>Jordan</b>	Time series available, indicator well developed. However not available on rural and urban basis	Long time series Data available on treatment plant basis
<b>Lebanon</b>	--	--
<b>Morocco</b>	Indicator not well known, especially in rural areas	--
<b>Palestinian Authority</b>	Data of the indicator are available for the period 1999-2011 Data are trusted; when compared to other sources, values were acceptable	Data are trusted; when compared to other sources, values were acceptable Yet, data subject to estimations and calculations
<b>Tunisia</b>	Time series available Time series for septic tanks available every 10 years The sample selected for the population and employment survey is not significant for this indicator  Help for a better synergy between the producers of data for this indicator is needed. Assistance in defining the methodology is needed	Time series available Data not available for governorates Assistance in defining the methodology is needed
* main source of information: Metadata questionnaire		

## 2.2 Inter-institutional cooperation

Generally, inter-institutional cooperation is on an ad-hoc basis, while formal cooperation is mainly in the context of specific projects. The exchange of data between institutes is mainly through paper reports and information posted on websites. In some cases, inter-institutional committees are set up and convene as needed. Yet, a systematic exchange of environmental information is currently not a priority issue of such committees.

An overview of the status of inter-institutional cooperation based on the ENPI-SEIS Country reports is presented below.

## 2.3 Infrastructure

One important objective of the 2011 Country visits was to assess the existing infrastructure in each country for collecting and sharing environmental information. As one of the pillars of SEIS, data infrastructure is an asset for public authorities facilitating institutional cooperation and legal reporting obligations. Several information systems are already established in each country. However, these systems are usually 'stand-alone' and not interconnected, restricting the accessibility and exchange of data.

As part of the national action plans, Lebanon, Morocco, Palestine and Jordan aim to establish national water information systems. Jordan has submitted a project fiche to the EC Delegation in Jordan. Tunisia already started the implementation of such a system (SINEAU) with the financial support of the African Water Facility. A regional project is also under preparation led by EMWIS in the framework of the Union for the Mediterranean. Other countries, for example Jordan, also aim to build a waste management information system but they are still looking for funds. Some aspects of the existing infrastructural systems highlighted by the countries in their ENPI-SEIS Country Reports are presented below.

Country	Inter-institutional cooperation	Infrastructure
<b>Algeria</b>	Generally, departments and agencies have their own indicators and information systems that meet their particular needs. However, inter-institutional cooperation, including data exchange, is subject to a protocol in the form of a formal application form, for exchange between institutions and organizations in the same department. This approach guarantees the reliability of the data as well as the responsibility of the supplier. However, it is also a cumbersome process due to the lack of a common platform for the sharing and exchange of information between different producers and / or data users.	Several sectors e.g. waste have their own information system. In 2010, ONEDD launched a project to develop an overall environmental information system (Système Global d'Information Environnementale; SGIE) based on GIS technology for data produced by the observatory and / or collected from data producing agencies (environmental and socioeconomic). SGIE aims to gather and organize coherently data from all socio-economic sectors through a national network of environmental information.
<b>Egypt</b>	Environmental data are shared among many institutions in Egypt. The Central Agency for Public Mobilization and Statistics (CAPMAS) receives data from the Ministry of Health, Ministry of Water Resources, Ministry of Local Development and the Egyptian Environmental Affair Agency (EEAA). The EEAA collects data from Governorates and Ministries of health, Water Resources, Housing and Local Development for developing environmental indicators and state of the environment reports. However, there is an urgent need for full cooperation among participating parties (ministries, authorities, organisations, and stakeholders) and protocols of cooperation for better coordination and integration.	The Egyptian Environmental Information System (EEIS) encompasses the collection, processing, production and distribution of environmental information. A number of information systems are available under EEIS, including Environmental Common Information System (ECIS), Executive Environmental Information System (Exec EIS), Industrial Pollution Information System (IPIS), Egyptian Hazardous Substances Information and Management System (EHSIMS) and others. A national environmental database network has to be developed and roles have to be identified to comply with International standards. Such a network should include all data providers and it should specify information they collect and publish.
<b>Israel</b>	The institutions dealing with environmental data protection, including the Ministry of Environmental Protection (MoEP), Central Bureau of Statistics (CBS) and others work together in the elaboration of environmental information. The institutions disseminate data and information on their websites and various publications. Current inter-institutional cooperation is mainly based on ad-hoc or routine requests coming from the ministry or an institution, without a common information system. The MoEP is planning to establish a shared environmental information system in order to improve data sharing and availability, both for the institutions and the public.	In the relevant agencies, some databases do exist and some are under construction. Although there is no central water information system in Israel, many extensive water quality datasets exist in the Israel Water Authority and the Ministry of Health; some available online. Data/Information is kept in scattered uncoordinated systems and there is no systematic unified environmental system that combines all the data and indicators from the different sources. The environmental data and indicators are routinely presented to the stakeholders and to the public via the Internet as well as a series of professional publications.
<b>Jordan</b>	Coordination committees have been established for each sector to coordinate	The MoEnv is currently developing its own environmental information management

	<p>efforts and establish an information sub-network that links key institutions dealing with similar types of information. Environmental information is collected, processed and handled by different institutions. As for data sharing, the system of cooperation is an ad-hoc system, based on individual requests from one minister to another. Despite the efforts of the Ministry of Environment (MoEnv) to coordinate better the activities between the different institutions, there is still room for improvements.</p>	<p>system - JEIMS - based on open-source and trial data, of which one objective is to build an environmental database to track the state of the environment in Jordan.</p> <p>The Ministry of Water and Irrigation (MWI) is managing an integrated Water Information System –WIS - interfaced with all the existing information systems in the other “water sector” entities.</p> <p>Despite some progress in the past years, the different monitoring networks and information systems are still poorly coordinated and a common e-government platform would greatly facilitate the exchange of information between the relevant institutions and organizations.</p>
<p><b>Lebanon</b></p>	<p>Institutional cooperation is often based on ad-hoc requests. Environmental information is reported to be poorly consolidated, as research institutions and/or government agencies collect data for specific use, if at all. Yet, on some priority issues such as water monitoring, inter-institutional cooperation is more active than on other priorities.</p> <p>The management of solid waste in Lebanon testifies, perhaps, the best case of institutional cooperation related to data collection and data reporting. A number of institutions, namely MoE, CDR, MoIM, MoF, OMSAR, and MoPH, are involved in the planning and management of waste.</p>	<p>Most of the environmental data produced in Lebanon is designed to support investment donor-funded projects, research guided by the agendas of public and academic research institutions and private sector firm. Data collected is often unpublished and unshared, in the absence of appropriate sharing processes and dissemination activities. The coordination among stakeholders in the water sector, as in the case of other priority environmental issues, is very limited. Following up on water issues is done on an as-needed basis and information can only be accessed upon official requests to data holders. The current waste data collection infrastructure does not allow for automated centralization and/or sharing on a waste management database.</p> <p>Support is needed in designing a data and information sharing mechanism.</p>
<p><b>Morocco</b></p>	<p>L’Observatoire National de l’Environnement au Maroc (ONEM) and the Observatoires Régionaux de l’Environnement et du Développement Durable (OREDD) rely on quality data and an information system for their role in the management of environment. Eleven OREDD observatories have already been set up and ten regional partner networks have been established. Network members are responsible for the collection of data and indicators and population of regional databases. The various national partners and stakeholders contribute actively in the production of environmental information, but there is currently no established</p>	<p>The information system of the Department of Water consists of several components such as: Badre21 management (water resources), GRE, MECEP (management of dams), GIS ... One of the ambitions of the Environment Directorate is to establish a National Information System on the Environment (SINE) and its regional variations based on the principles of SEIS.</p>

	system for the flow and exchange of information from the partners to the Department of Environment.	
<b>Palestinian Authority</b>	With respect to data sharing, cooperation needs to be improved. The current cooperation is based on ad-hoc requests from one Ministry to another. Inter-institutional communication is assured by regular committees meetings, e.g. "National Team for Environmental Information System".	<p>Water information and water-related data are fragmented among different departments inside Palestinian Water Authority (PWA) and other related water bodies. The development of a water information system is currently in progress. This system will include available historical data and will assure continuity in data collection through the availability of a suitable monitoring network and defined sources of information.</p> <p>There is no waste monitoring system in Palestine and data on waste are collected by the Palestinian Central Bureau of Statistics (PCBS) through administrative records and surveys, such as household, environmental, health care, economic.</p> <p>Assess to the existing information system and development of a suitable information system (local, regional, international) is part of the 2012-2014 Implementation Plan.</p>
<b>Tunisia</b>	There is cooperation between the different ministries and institutions, for instance OTEDD collects contributions from different departments and / or agencies for the preparation national state of the environment. In this context certain agreements related to the provision of data are established. However, there is no common platform for the sharing and exchange of information. A strategy for the development of e-government has been established and its realization will facilitate the exchange of information between institutions and departments.	<p>The OTEDD database (Gestion des Indicateurs de l'Environnement et du Développement Durable "GIED") includes data on about 125 environmental, social and economic indicators covering seven environmental themes: inland waters, soil, waste, air, biodiversity, sustainable development and forests. The Tunisian National Water Information System, SINEAU, and its subsystems, are currently in development and implementation. Another information system on polluting activities, with data collected by experts/inspectors assigned to the Direction de Contrôle des Activités Polluantes (DCAP) is hosted by ANPE.</p> <p>Different data management systems exist that are built to meet the specific needs and international reporting obligations of institutions. The systems are not connected and interconnection through a national network of environmental information is necessary.</p>

### 3 Summary of follow-up actions

Based on the above analysis of the status of the indicator development process at the country level, the following actions have been defined:

#### 3.1 Content development

The next step in the support to the development of the priority indicators is the development of methodological guidelines, which will serve as a basis for populating the selected H2020 indicators. This task will be carried out together with the working group on Environmental Indicators with representatives from partner country.

The indicator-based regional assessment will build on the data collected and delivered by the countries following harmonized specifications. Other actions include thematic support to the countries in the form of national workshops/trainings.

#### 3.2 Cooperation development

With respect to cooperation, a plan of action will be elaborated for each country, detailing the steps in the implementation of SEIS, including strengthening the inter-institutional cooperation.

#### 3.3 Infrastructure development

Together with the WG IT, the reporting mechanism/infrastructure will be set up based on the metadata description of the H2020 indicators, data structure definition and design, including QA/QC procedures. This will be then followed by the delivery and processing of data based on the agreed structure and specifications, establishing a tight link to the content development.