Shared Environmental Information System
SEIS Support Mechanism (ENI-SEIS II South

Review of progress of SEIS implementation- Palestine-Country Factsheet

Palestine has been making significant progress in establishing SEIS while implementing SEIS principles and the three pillars: Content, Infrastructure and Cooperation

Palestine collaborates in the process for establishing a regular review and reporting mechanism in the Mediterranean region for more efficient policy-making. The national focal points and thematic experts participate actively in different meetings organized by European Environment Agency.

Palestine cooperates closely with the European Environment Agency and UNEP MAP who supports the Southern Neighborhood countries towards establishing SEIS and regular reporting system to measure countries efforts towards a healthy Mediterranean. The present document provides an overview of the state of implementation of SEIS Palestine, offers recommendations on how to improve data gaps in particular in view of producing future integrated thematic assessments, and identifies areas of cooperation beyond 2020

YOU ONLY MANAGE WHAT YOU MEASURE

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Key messages

Content

Palestine has achieved progress in establishing a regular data flow and in the stabilisation of the production of H2020-SEIS indicators.

Environmental Quality Authority is in the process of receiving support from SIDA - Swedish International Development Cooperation Agency, for establishment of process enabling EQA the regular production of a State of Environment Report.

Infrastructure

One common national platform was established recently through EU SEIS funded Project for easier accessibility to environmental information, the platform is designed to host environmental data and indicators. In addition the Palestinian Water Authority has been making significant progress in further developing the water information system.

Cooperation

Palestine shows a very good level of cooperation between national institutions in charge of management of environmental Information. For the smooth implementation of the SEIS project, a national team was established and different sharing Systems such as Geospatial portal "GeoMOLG" , Geospatial Water information System "MAWARED" , PCBS portal "Indicators " were built .

Palestinian Central Bureau of Statistics
umweltbundesamt ENVIRONMENT AGENCY AUSTRIA
European Environment Agency

Management of Environmental Information
Thematic relevant to H2020

Organizations responsible for Monitoring collecting, producing, managing and sharing environmental data and information	***Environment Quality Authority (EQA)*** hazardous and solid waste, , waste water and industrial emission https://environment.pna.ps/ar/ ***Palestinian Central Bureau of Statistics (PCBS)*** waste and water resources and waste water http://www.pcbs.gov.ps/default.aspx ***The Applied Research Institute Jerusalem (ARIJ)*** building the environmental information system for the West Bank and production of SoER http://www.arij.org/ ***Palestinian Water Authority (PWA)***hydrological data, level of aquifers and water quality, and waste water quality http://www.pwa.ps/ ***Ministry of Health*** : Monitoring drinking water quality and its health impact http://www.moh.ps ***Ministry of Local Government (MOLG)***waste and geospatial information http://www.molg.pna.ps
Accessibility and availability of environmental information, data and indicators	**Where** : http://www.pcbs.gov.ps/SDGs.aspx?pageId=6 ***Which formats*** *reports and tables* ***Language*** *Arabic English*
Environmental indicators in use	In State of environment reports (Maps and graphs) http://arij.org/component/content/article/126-latest/779-the-status-of-env-2015-2016.html

Content and infrastructure

The The challenge is providing clear insight for assessing the state of the marine environment of the mediterranean sea based on information that is generated at local, and national level in all ENI countries. This requires the production and management of regular information flows and means that all data on the environment that is collected, processed and reported must be accessible and disseminated to inform the various user groups, including public authorities and the general public, but also accessible to fulfill reporting obligation. At present, some countries have made significant progress in development of environmental information systems (EIS).

In terms of content and in order to access the degree of appropriation and implementation of the H2020 indicators and SEIS principles such as data accessiblity and availability the countries websites were harvested. Almost all countries have produced a State of Environment report. The SoERs were analysed and the usability of H2020 indicators checked as follows:

A - Accessibility of data sets: online, in reports (SoER or indicators data trends reports). If not accessible red smiley

R - Indication of the responsible authority for the production of an indicator (source): the responsible organization are indicated; **green smiley** – only the responsible organisation is indicated; **orange** smiley – none is indicated red smiley .

T - Time of update: green smiley – if the date is updated and the datasets from 2015 if date indicated but data older than 2016 Orange smiley the time of the update is not indicated red smiley

V - Availability of graphs, diagrams, maps: green smiley – available, – not available red smiley

InfoMAP- indication if the data for the assessment were provided using InfoMAP: if yes green smiley, if partially **orange smiley**, if not red smiley

Indicator factsheet: if produced green smiley if not red smiley

SEIS –H2020 INDICATORS	A SoER ARIJ 2015	R	T	V	Reported to INFOMAp	Indicator factsheet	Comments/ data producer
1.1 Municipal solid waste generation							Status of the Environment report produced by ARIJ in 2015 provides data on waste generation rural and urban in both Westbank and GAZA
1.a Municipal waste composition							Status of the Environment report produced by ARIJ in 2015 doesn't provide any data on waste composition
1.b Plastic waste generation per capita							Status of the Environment report produced by ARIJ in 2015 doesn't provide any information
1.C % of population living in Costal Areas							The status of the Environment report 2015 includes only data on population living in Westbank
1.D % of tourists in coastal Areas/ population in coastal areas							The report mentions number of tourists (but no time series) and doesn't include any graphs
2 a.1 Waste Collection coverage							Some data on waste collection coverage is mentioned in the report
d2.a 2 Waste covered by the formal sector							No information is found in 2015 report
D2b Environmental control							The SoER mentions that central sanitary landfills has reduced the random dumping sites. For example, there were 18 random

							dumping sites in Bethlehem and Hebron governorates; 17 of which were closed and rehabilitated by the Joint Service council for solid waste management
D2c Resource Recovery							The report doesnt use any indicator no time series on recycling- just some description

H2020-SEIS NDICATORS	A (SoER ARIJ 2015)	R	T	V	Reported to INFOMAp	Indicator factsheet	Comments
3.1.1 Share of national population with access to an improved sanitation system (ISS)							Status of the Environment report produced by ARIJ in 2015 provides data on sanitation
3.1.2 Share of population in the catchment/hydrological basin at the coastal area with access to an improved sanitation system (ISS)							Status of the Environment report produced by ARIJ in 2015 provides data on sanitation
3.2.1 Proportion of national population using safely managed sanitation services (SMSS)							This indicator is not published in the SoER 2015. Some data was provided for the compilation of the H2020 Regional report and indicator factsheet
3.2.2 Proportion of population in the catchement/hydrological basin at the coastal area using safely managed sanitation services (SMSS)							This indicator is not published in the SoER 2015. Some data was provided for the compilation of the H2020 Regional report and indicator factsheet
4.1.1 Municipal wastewater collected							This indicator is not used in the the status of enviornment report 2015

and wastewater treated at national level							
4.1.2 Municipal waste water collected and wastewater treated per catchment/ hydrological basin at the coastal area							This indicator is not used in the the status of enviornment report 2015
4.2 Direct use of treated municipal wastewater at the national level							*The report 2015 mentions the necessity of reuse of waste water but doesn't provide any data or graphs*
4.3 Release of nutrients from municipal effluents per catchment/hydrological basin at the coastal area							This indicator is not used in the the status of enviornment report 2015
5.1.1 Nutrient concentrations in transitional, coastal and marine waters (station)							This indicator is not used in the the status of enviornment report 2015
5.1.2 Nutrient concentrations in transitional, coastal and marine waters (parameters)							This indicator is not used in the the status of enviornment report 2015
5.2 Bathing Water quality							This indicator is not used in the the status of enviornment report 2015

H2020-SEIS INDICATORS	A (SoER-ARIJ 2015)	R	T	V	Reported to INFOMAp	Indicator factsheet	Comments
6.1.1 Total BOD load discharged from industrial installations to Mediterranean marine environment							Status of the Environment report produced by ARIJ in 2015 provides data on estimated ranges of BOD loads discharged by different industries
6.1.2 Total Nitrogen load discharged from industrial installations to the mediterranean marine environment							The status of the environment report 2015 provides data on Nitrogen emissions release to air but not to the marine environment
6.1.3 Total phosphorus load discharged from industrial installations to the mediterranean marine environment							Status of the Environment report produced by ARIJ in 2015 provides data on estimated ranges of Phosphorus loads discharged by different industries
6.2.1 Total heavy metals load released from industrial installations to							No information in the stautus environment report

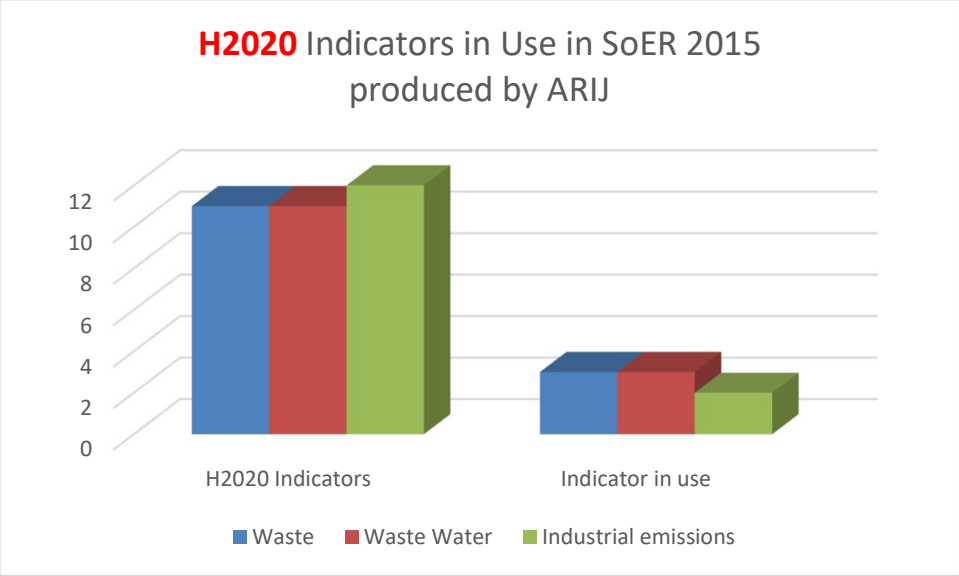
the Mediterranean marine environment							
6.2.2 Furans and dioxins load released from industrial installations to the Mediterranean marine environment							Dioxins and Furans are metioned in relation to waste open burning but doesn't provide any data.
6.2.3 Polycyclic aromatic hydrocarbons (PAH) load released from industrial installation in the Mediterranean marine environment							No Information is foud
6.2.4 Volatile Organic compounds (VOC) load released from industrial installations to the Mediterranean marine environment							No information found
6.3.1 Total quantity of generated hazardous waste from industrial installations							Status of the Environment report produced by ARIJ in 2015 provides some data on the amount of industrial waste produced in Palestine with the types of waste (Hazardous and non hazardous)

6.3.2 Quantity of industrial hazardous waste disposed in environmentally sound manner relative to total quantity of generated hazardous waste from industrial installations							No information is published at the national level
6.4.1 Number of industrial installations reporting periodically loads of pollutants discharged to the marine and coastal environments relative to the total number of industrial installations							*No information is published at the national level*
6.4.2 Number of environmental inspections carried out by enforcement authorities in which industrial installations were found to be in breach of laws and regulations relative to the total number of executed							No information is published at the national level

6.4.3 Number of eliminated hotspots identified in the updated NAPs relative to the 2001 and 2015 baseline							Status of the Environment report produced by ARIJ in 2015 mentions that the hotspot analysis results showed that a large number of facilities (131) have hotspot grades of 0 with more than 71% having hotspot grades less than 10. This indicates that the majority of Palestinian industries surveyed have little or no measurable environmental impacts. Which might explain why there is no indicator.

H2020 indicators in use in the production of Status of the Environment report 2015 (by ARIJ)

The indicator indicated not fully implemented but the report contain some data and information for further development.



Use of SEIS- H2020 indicators in Statistical reports

Data	*Link*	*SEIS-H2020 Indicator*
Proportion of population using safely managed sanitation services, including a hand-washing facility with soap and water	http://www.pcbs.gov.ps/SDGs.aspx?pageId=6	*3.2.1*
Percentage Distribution of Households in Palestine by the Solid Waste Disposal Doer and Region, 2015	http://www.pcbs.gov.ps/Portals/_Rainbow/Documents/HHE%202015%20e%204.htm	
Waste water treated according to waste water treatment Total Quantities of Treated Wastewater and Allocated Areas for Reuse	Arabic English	4.1.1 4.2
Quantity of Generated Hazardous Waste	Arabic	6.3.1

at Governorate Level (Ton / Year) From 2011 to 2016	English	

Potential use of H2020 indicators for monitoring SDGs

SDG	*SDG goal*	*H2020 indicators*
	6.2 By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations 6.3 By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally 6.4 By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity 6.5 By 2030, implement integrated water resources management at all levels, including through transboundary cooperation as appropriate	*3.1.1,* *3.1.2,* *3.2.1,* *3.2.2*
	14.1 By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution 14.2 By 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience, and take action for their restoration in order to achieve healthy and productive oceans	*All SEIS-h2020 indicators*
	11.6 By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management	1.1, 1.a, 1.b, 2.a.1, 2.a.2, d.2.b, 6.3.1, 6.3.2
	12.2 By 2030, achieve the sustainable management and efficient use of natural resources 12.4 By 2020, achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil in order to minimize their adverse impacts on human health and the environment 12.5 By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse **Waste management (recycling reuse**	*1.1, D2b,* *4.1.1, 4.1.2,* *4.2*

	Wastewater treated	
	9.4 By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities	*Link to type of treatment of waste, waste water and best available techniques*

Existing Information systems and SEIS Principles
National Infrastructure

Palestinian Environmental Information System

The Environment Quality Authority has established recently an environmental information system. The system is designed to host environmental data and indicators (Core set of environmental indicators) defined throughout the Small Scale Financing Agreement. The system funded through SEIS (Small Scale Financing Agreement with UNEP/MAP) and based on open software standards.

The system is flexible and designed to gather the data /indicators from all stakeholders: Ministry of Agriculture, Palestinian Water Authority, Ministry of Local Government , Metrological Dept. etc .

Data is gathered by different means as follows:

1. Stakeholders are designated privilieges to enter data through a web interface.

2. Some extensive data (Metrological,Water Quality,….) are to be exchanged in automatic manner (machine to machine) through a web API .

3. Possibility of importing from other formats (Excel, xml,) is explored. After the data is received, it is held in a approval queue which must be reviewed and approved by PCBS before being available for public

The Beta testing web portal is available at the following link: www.entities.ps/eqa

Currently EQA is working on acquiring up-to-date infrastructure equipment to host VMware environment were all services of EQA to be hosted including the Industrial Pollution Inventory IS and Palestinian Environmental Information System.

SEIS principles PEIS	
Managed as close as possible to its source	●
Collected once, and shared with others for many purposes	●
Readily available to easily fulfill reporting obligations	●
Easily accessible to all users	●
Accessible to enable comparisons at the appropriate geographical scale and citizen participation	
Fully available to the general public at the national level in the relevant national language(s)	●
Supported through common free open software standards	●

Shortcomings and Recommendations

Content, infrastructure Shortcomings	*Recommendations*
Despite the efforts and progress in producing SEIS environmental indicators, Palestine encounterd problems to collect data due to data availability mainly for the thematic waste, industrial emission and waste water	Continue advancing in putting in place a regular data flows for the priority areas of H2020 for the monitoring of depollution of the Mediterranean sea and reporting to EEA and ensure that all indicators are produced on regular basis. Maintain the excellent cooperation and interaction between environmental information producers to achieve full SEIS implementation;
The implementation of some waste H2020-SEIS indicators was not possible due to data unavailability	Establishment and implementation of shared Waste Information System as well as a definition of legal requirements, and clear responsibilities of the MoLG, Municipalities, Joint service councils and PCBS) will be a big step to enhance the data availability and exchange on waste
Industrial emission data is collected through surveys and inspectors. Pollution inventory system exists –the system is being modernized and enhanced and will contain datasets/ times series. The system is not open to the public as it contains some sensitive data, but EQA can provide a password to the relevant institutions to access the system. EQA goal is to further develop the system and make it partly accessible to the public (aggregated data and indicators). The environmental inspectors are responsible of collecting the data during their field visit. The data is then entered manually in the system. The inspection are done in case of complains or problems in addition to regular checks. During the inspection some emissions are measured.	Assessment and upgrading of Pollution inventory system, to allow for example the access to industries and enable them to enter data and information. Explore possibility if help can be obtained and experience exchanged with the European counterparts.
For the implementation of the industrial emissions indicators SEIS-H2020 indicators a calculation is needed to convert the concentrations into quantities	Capacity building needs: methodology of calculation of indicators e.g use of concentration to calculate quantities of emissions etc. methodology of calculation of indicators using internationally recognized modules & conversion and correction factors specific to Palestine , e.g use of concentration to calculate quantities of emissions…etc. specifically in the fields of liquid waste & air emissions.

Training and experience exchange	Experience exchange and Capacity building on Data Flows (for example between the Possible Waste information System and the Palestinian Environmental Information System) . .Sampling and it's SOPs (Standard Operating Procedures). Training on important environmental themes such as: "Environment Impact Assessment EIA " , " Monitoring and inspection of specific major Industries : Stone and marble sector, tanneries , aluminium coating, e-waste recycling,….etc

Acknowledgment

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Sources: to measure progress in the appropriation of methodologies and SEIS principles the State of Environment report 2015, statistical report 2017 and indicator assessment factsheets produced 2019-2020.

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