

H2020 Review and Monitoring (RM) workshop on Assessment
10th meeting of the Horizon 2020 Review and Monitoring (RM) Group
23-24 September 2019 in Athens, Greece

State of Palestine

PCBS & EQA



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European Environment Agency

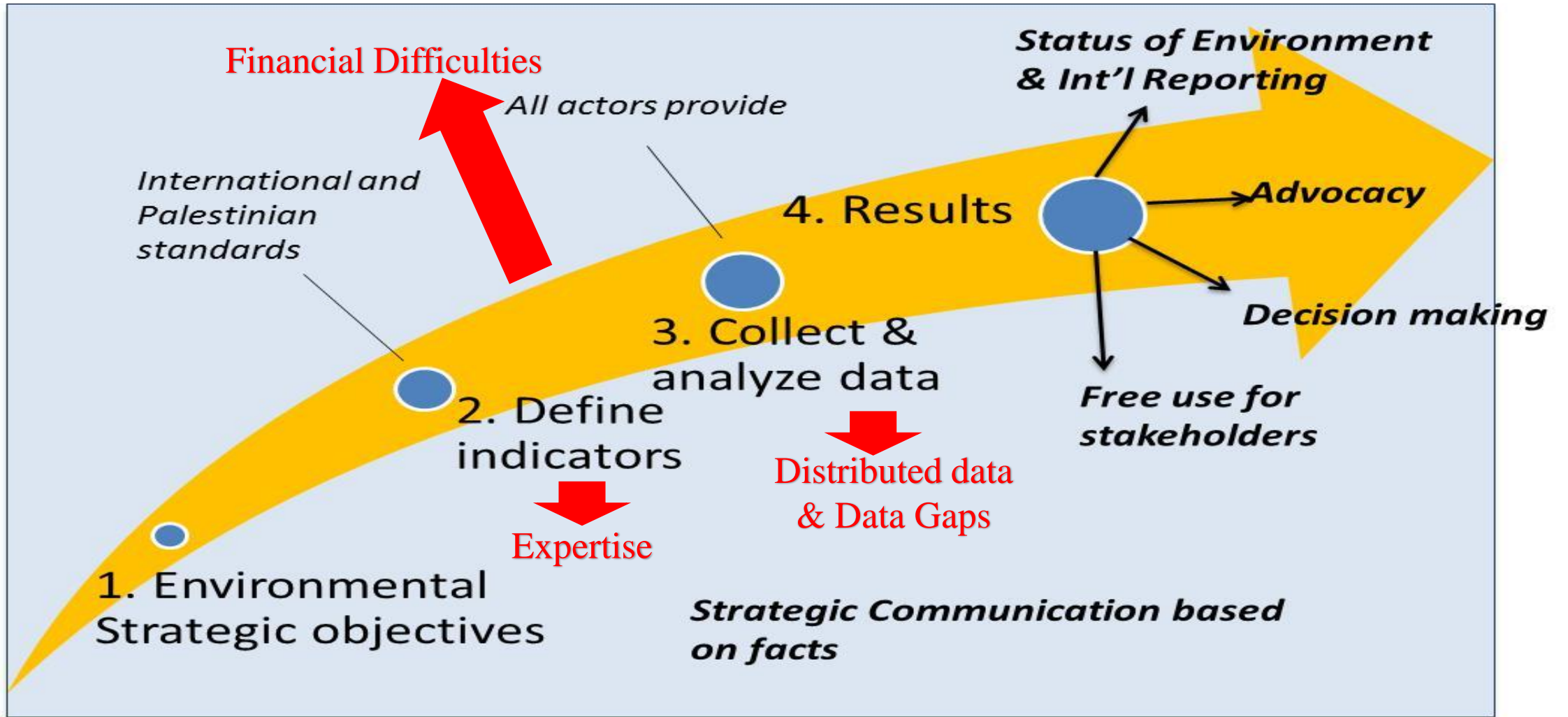


“ The Importance of Availability of Environmental information System and continuity of data flows , for the benefit of Protection of Environment and Policy Development “

“Enhancing the National Capacities & Effective Environmental Monitoring Systems to ensure Environmental Sustainability”

Country Contribution:

Thematic Analysis



Country Contribution:

Data Gaps Example

#	Theme Indicator	Description	sub indicator	Definition	measurement method	Frequency	Unit	Availability of data Yes or NO	Source of data/ indicator
	Theme: Atmosphere								
25	Subtheme: Air quality	Ambient Air Quality							
			25.1 PM _{2.5} and PM ₁₀	Particulate matter of 2.5 and 10 µm diameter as air pollutants	Sensors		µg/m ³	NO	EQA
			25.2 NO _x	Nitrogen oxides (gases) concentration as air pollutants	Sensors		µg/m ³	NO	EQA
			25.3 SO _x	Sulfur oxides concentration as air pollutants	Sensors		µg/m ³	NO	EQA

Country contribution:

Progress

H2020 Thematic Area	Indicator nr/Title	Availability
WASTE	1. Municipal Waste Generation	Available
	1.A Municipal waste composition	Available
	1.B Plastic waste generation per capita	Available
	1.C % of population living in Coastal Area	Available
	1.D % of Tourists in Coastal Areas	Available for West Bank
	2.A Waste Collection	available
	2.A.1 Waste Collection Coverage	Available
	2.A.2 Waste Captured by the system	Available
	2.B Environmental Control	Partially available
	2.B.1 % of waste to uncontrolled dumpsites	Partially available
	2.B.2 Uncontrolled dumpsites in Coastal Areas	Partially available
	2.B.3 Waste going to dumpsites in Coastal Areas	Partially available
	2.C Resource Recovery	Not available
	2.C.1 % of plastic waste generated that is recycled	Not available

Country contribution:

Progress

H2020 Thematic Area	Indicator nr/Title		Availability
WATER	3.1	Share of total, urban and rural population with access to an improved sanitation system (ISS)	Available at urban/rural level and at Hydrological Basin/catchment level
	3.2	Proportion of population using safely managed sanitation services (SMSS)	Partially Available
	4.1	Municipal wastewater collected and wastewater treated	Partially Available at National level and Not Available at Hydrological Basin/catchment level
	4.2	Direct use of treated municipal wastewater	Partially Available at National level
	4.3	Release of nutrients from municipal effluents	Not Available
	5.1	Nutrient concentrations in transitional, coastal and marine waters	Not Available
	5.2	Bathing water quality	Not Available

Country contribution:

Progress

H2020 Thematic Area	Indicator nr/Title		Availability
INDUSTRIAL EMISSIONS	6.1	Release of nutrients from industrial sectors	Not Available
	6.2	Release of toxic substances from industrial sectors	
	6.3	Industrial hazardous waste disposed in environmentally sound manner	
	6.4	Compliance measures aiming at the reduction and/or elimination of pollutants generated by industrial sectors	

Thematic Analysis – Water management

Water consumption and use:

- According to PWA data for 2017, the total amount of water available for use by Palestinians was 375.2 MCM (193.3 MCM for Gaza and 181.9 MCM for the West Bank).
- PWA statistics indicate that consumption rate across Palestine 88.3 liters/capita/day (l/c/d), although earlier years and other sources tend to show lower l/c/d figures for the population of the West Bank.
- PWA data for 2017 show that for domestic use: some 50.6 m³/capita/year should be available to inhabitants of Gaza , and 44.8 m³ to West Bank inhabitants. However, due to the large water losses that occur, the actual number of cubic meters per year available is 32.2 per inhabitant of Gaza and 32.3 per inhabitant in the West Bank.



Thematic Analysis – Water management

Quantity of Water Supply for Domestic and Agricultural/Industrial Sectors (in MCM)

Sector/Region	2017	2016	2015	2014	2013	2012	2011	2010
Domestic	213.2	210.2	214.9	191.3	205.7	199.9	185.5	178.0
Gaza	96.4	94.2	95.3	88.5	104.8	106.0	97.2	93.0
West Bank	116.8	116.0	119.6	102.8	100.9	93.9	88.3	85.0
Agric + Ind.	162.0	153.4	150.4	151.4	160.0	149.3	138.4	153.1
Gaza	96.9	87.0	82.2	90.4	97.8	87.0	87.0	84.3
West Bank	65.1	66.4	68.2	61.0	62.2	62.3	51.4	68.8
Totals	375.2	363.6	365.3	342.7	365.7	349.2	323.9	331.1



Wastewater Management

- According to PWA data published in 2018, which was collected only with reference to the West Bank: only about 30 per cent (or 21 MCM) of the 69 MCM of wastewater is collected and only 9.5 MCM is treated.
- In Gaza, the wastewater collected by sewage networks is approximately 41.3 mcm/year from which 37.6 mcm/year is partially treated before being discharged into the Mediterranean Sea.
- The wastewater treatment plants (WWTP) are: North Gaza - Beit Lahia WWTP, Gaza Central WWTP, Khan Younis WWTP, Rafah WWTP and Wadi Gaza WWTP (PWA, 2012).
- For a sustained period, the wastewater treatment plants in Gaza have been overloaded, and barely functioning due to a lack of proper operation and maintenance, unreliable electric supply, and difficulties in obtaining spare parts (*ARIJ, 2015*).



Solid waste management

- **Municipalities bear responsibility for the collection and disposal of solid waste, although, in some localities, private contractors or other entities deal with the collection and disposal process (ARIJ, 2015).**
- **90% of all Palestinian communities have access to solid waste collection services, only about half of these communities are actually disposing of collected waste in approved dumping sites (MoLG, 2016).**
- **The major component of solid waste is organic matter (60-80 %), along with cardboard, glass, metals, paper and plastics.**
- **Most solid waste comes from major cities, with the average Palestinian household yielding around 4.6 kg per day of solid waste (or per capita 0.94 kg/day, below the world average of 1.2 kg/day).**
- **The total amount of waste generated in Palestine in 2012 was estimated at 1.387 million tons (GIZ, 2014).**



Solid waste management - continue

- **There are two operating Palestinian sanitary landfills in the West Bank: Al Menya in Bethlehem governorate and Zahrit al-Finjan in Jenin governorate , and one controlled landfill in Jericho in the Jordan Valley .**
- **Gaza has three sanitary landfills at Deir el Balah, Jahr al Deek and Rafah, which are currently beyond their operational capacity. The Jahr al Deek and Rafah landfill sites are to be replaced in the near future by a new site at Al Fukhari in South Gaza.**



Industrial emissions management

- **Industrial pollution is a major contributor to the increasing emissions in West Bank.**
- **Additionally, there are several Transboundary pollution sources whose airborne emissions further contribute to the deterioration of air quality within the region (PCBS, 2010).**
- **For instance, a study of 600 industrial facilities in the West Bank showed that emission of Total Suspended Particles (TSP), the most predominant pollutant, was 6,341 tonnes/year. Other pollutants include PM10 at 3,749 tonnes/year, NO_x at 317 tonnes/year, SO₂ at 18 tonnes/year and Volatile Organic Compounds (VOC) at 2,395 tonnes/year (EQA, 2015).**



Industrial emissions management - continue

Emission due to transport :

The current use of transport is a major source of environmental pollution, due to gas emissions from fuel combustion in vehicles, such as sulphur oxides, nitrogen oxides, carbon monoxide, suspension materials and others (EQA, 2010).

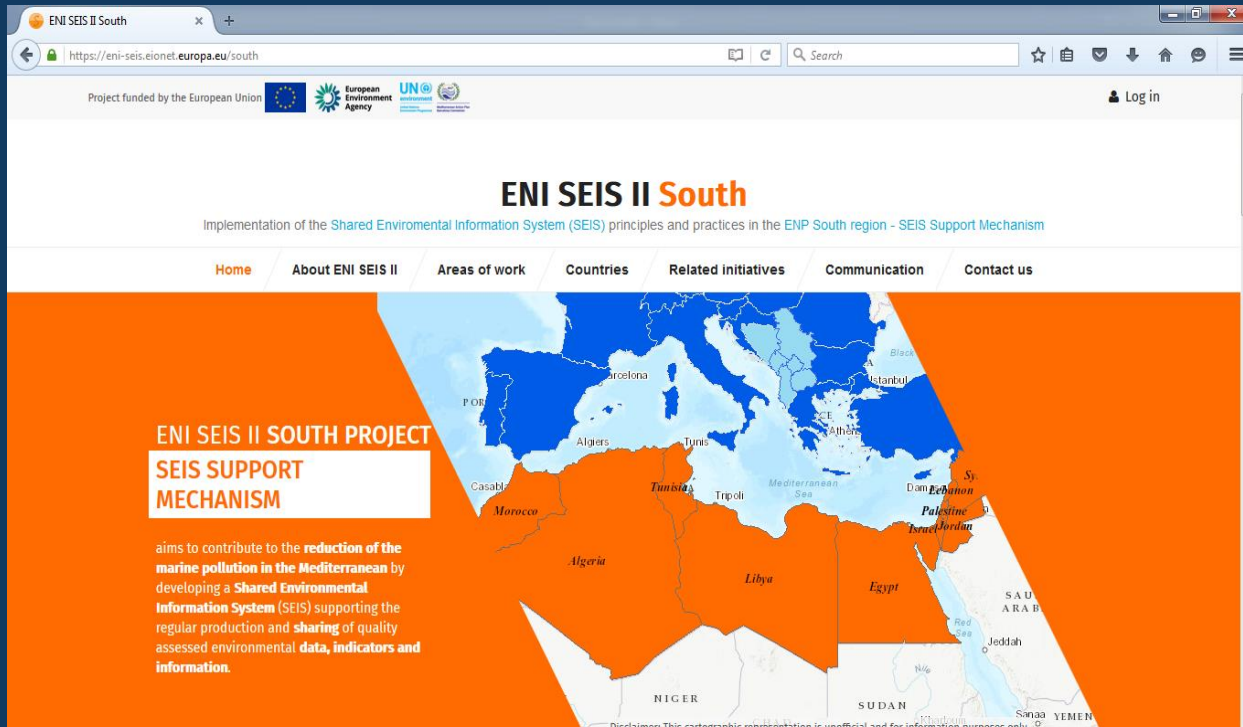
The total emissions from the transportation sector make up more than 50 per cent of the total national emissions.

Pollution from dust :

Dust also contributes to pollution. The changing climate is thought to be one of the causes of these dust storms (Parolari, Li, Bou-Zeid, Katul, & Assouline, 2016). Stone quarries in the West Bank also generate massive amounts of dust, damaging nearby agricultural land and adversely affecting biodiversity in local ecosystems (ARIJ, 2015).



Thank you for your attention!



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