Shared Environmental Information System (SEIS): waste statistics for Horizon 2020 indicators

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European neighbourhood policy activities – Mediterranean Area cooperation
Overview

• Building knowledge base – SEIS and MDIAK chain
• Review of H2020 waste and industrial emissions Indicators,
• Methodology, specifications sheets,
Principles:
Information
1. Managed as close as possible to its source.
2. Collected once and shared with others for many purposes.
3. Readily available to easily fulfil reporting obligations.
4. Easily accessible to all users.
5. Accessible to enable comparisons at the appropriate geographical scale and the participation of citizens.
6. Fully available to the general public and at national level in the relevant national language(s).
7. Supported through common, free, open software standards.
How do we work across the MDIAK chain?

Source: EEA
## Indicators in use

<table>
<thead>
<tr>
<th>INDICATORS</th>
<th>Drivers</th>
<th>Pressures</th>
<th>State</th>
<th>Impacts</th>
<th>Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>IND 1 - Municipal waste generation</td>
<td></td>
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<tr>
<td>IND 1.A Municipal waste composition</td>
<td>X</td>
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<tr>
<td>IND 2 - Collected and treated municipal waste</td>
<td></td>
<td>X</td>
<td></td>
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<tr>
<td>IND 2.A Number, type and location of landfills</td>
<td>X</td>
<td>X</td>
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<tr>
<td>NAP 11: Proportion of urban SW regularly collected and with appropriate final discharge out of total urban waste generated by cities</td>
<td>X</td>
<td>X</td>
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<tr>
<td>NAP 12: Share of recycled, landfilled or incinerated municipal waste with respect to collected amount</td>
<td></td>
<td>X</td>
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<tr>
<td>NAP 13: Amounts/trends of marine litter washed ashore and or deposited in coastlines, including analysis of composition, spatial distribution and where possible, source</td>
<td>X</td>
<td>X</td>
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<tr>
<td>NAP 14: Index of coastal eutrophication and floating plastic debris density</td>
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<td>X</td>
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<tr>
<td>NAP 15: Share of existing illegal solid waste dumpsites on land that have been closed (in past 10 years) with respect to the total number</td>
<td></td>
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<td>X</td>
</tr>
</tbody>
</table>

*Based on available statistics*

*Barcelona Convention Country National Action Plan (NAP update 2015)*

*Limited data availability*

*Lack prevention dimension, Marine litter*
Wasteaware Indicators


Tourism as a driver

At least 1/3 of the ML comes from touristic activities

Mediterranean Sea
The largest global tourism destination
Receives 306 million out of 980 million tourists worldwide
Generates 190 out of 738 billion Euro worldwide

Source: MARLIN 2013

Source: MED-Zero Plastic action plan- Targeting the ML of the tourism industry in the Mediterranean Sea, January 2016
Waste management and marine litter indicators

- Refine indicator set in line with extension of H2020 (prevention dimension, marine litter)
- Allow for in-depth analysis in relation to previous assessments

IND 1. Municipal waste generation (Municipal waste composition)

IND 2. Collected and treated municipal waste (Number, type and location of landfills)

IND 1. Municipal waste generation
IND 2. “Hardware” of waste management
IND Q. “Software” of waste management

SEIS South Phase I
SEIS South Phase II
# Renewed set of indicators

| IND Q | “Software” of waste management | Q.A MARINE LITTER & WASTE MANAGEMENT FRAMEWORK  
Q.B RESOURCE RECOVERY  
Q.C SUSTAINABLE CONSUMPTION AND PRODUCTION |
|---|---|---|
| IND 2 | “Hardware” of waste management | IND 2.A Waste Collection  
  IND 2.A.1 Waste Collection Coverage  
  IND 2.A.2 Waste Captured by the formal waste sector  
IND 2.B Environmental Control  
  IND 2.B.1 % of waste to uncontrolled dumpsites  
  IND 2.B.2 Uncontrolled dumpsites in Coastal Areas  
  IND 2.B.3 Waste going to dumpsites in Coastal Areas  
IND 2.C Resource Recovery  
  IND 2.C.1 % of plastic waste generated that is recycled |
| IND 1 | Municipal Waste Generation | IND 1 Quantity of solid Municipal Waste generated  
IND 1.A Municipal solid waste composition;  
IND 1.B Plastic waste generation per capita;  
IND 1.C % of population living in Coastal Areas;  
IND 1.D % of Tourists in Coastal Areas |

- **Methodological guidance**
- **Technical assistance to ENI SEIS II South countries**
Definition and calculation methodology for the updated set of H2020 industrial emissions indicators
Set of updated H2020 industrial emissions indicators

1. Release of nutrients from industrial sectors
2. Release of toxic substances from industrial sectors
3. Management of hazardous wastes from industrial sectors
4. Measures or initiatives taken for the reduction and/or elimination of the amount of hazardous wastes generated by industrial sectors
Industrial emissions indicators

- UN environment Mediterranean Action Plan, Land Based Sources Protocol / MEDPOL program
- MEDPOL Monitoring program
- National Base Line Budget
- PRTR
- MEDPOL Infosystem
IND 6.1: Release of nutrients from industrial sectors

Three (3) sub-indicators:

• 6.1.1) Total BOD load discharged from industrial installations to the Mediterranean marine environment.

• 6.1.2) Total Nitrogen load discharged from industrial installations to the Mediterranean marine environment.

• 6.1.3) Total Phosphorus load discharged from industrial installations to the Mediterranean marine environment.
IND 6.2: Release of toxic substances from industrial sectors

Four (4) sub-indicators:

• 6.2.1) Total heavy metals load discharged from industrial installations to the Mediterranean marine environment.

• 6.2.2) Furans and dioxins load discharged from industrial installations to the Mediterranean marine environment.

• 6.2.3) Polycyclic aromatic hydrocarbons (PAH) load discharged from industrial installations to the Mediterranean marine environment.

• 6.2.4) Volatile organic compounds (VOC) load discharged from industrial installations to the Mediterranean marine environment.
Calculation of pollution load maybe by:

1) Emissions factors (EF) technique.
2) Field measurements.

Required data:

1) Relevant industrial sectors per administrative region.
2) Relevant industrial processes generating pollutant/ contaminant.
3) Unit production quantity.
4) Emission factors for relevant pollutant for each industrial process.
IND 6.3: Management of hazardous wastes from industrial sectors

Two (2) sub-indicators:

• 6.3.1) Total amount of hazardous industrial waste that is disposed in environmentally sound manner.

• 6.3.2) Total amount of hazardous industrial waste that is stockpiled in designated areas.
Calculation methodology and required data for indicator IND 6.3

Calculation of pollution load is based on:

• estimates of quantities of hazardous wastes disposed or stockpiled

Required data:

1) Amount of hazardous waste that has been disposed in sound environmental manner.
2) Amount of stockpiled hazardous waste.
IND 6.4: Measures or initiatives taken for the reduction and/or elimination of the amount of hazardous wastes generated by industrial sectors

Five (5) sub-indicators:

• 6.4.1) Number of issued permits setting requirements for BAT and BEP applications.

• 6.4.2) Number of industries reporting periodically loads of pollutants discharging directly and indirectly to marine and coastal environments.
IND 6.4: Measures or initiatives taken for the reduction and/or elimination of the amount of hazardous wastes generated by industrial sectors

- 6.4.3) Number of implemented economic instruments/initiatives or legal/administrative measures aiming at reducing/preventing toxic releases.
- 6.4.4) Number of controls and inspections carried out by environmental authorities of industries generating hazardous wastes or discharging toxic chemicals.
- 6.4.5) Number of eliminated hotspots in the updated NAP (2015).
Calculation methodology for indicator IND 6.4

Calculation methodology is based on determining the number of implemented measures or initiatives or instruments aiming at:

• reducing toxic releases and use of dangerous chemicals or
• encouraging the use of cleaner technology/best available technology.
Required data for calculation of indicator IND 6.4

- No. of permits issued for implementation of state of the art industrial processes or improved operation methods (BAT).
- No. of permits issued for application of the most appropriate combination of environmental control measures and strategies for remediating contaminated sites (BEP).
- No. of emission limit values.
Required data for calculation of indicator IND 6.4

- No. of regulations.
- No. of environmental taxes.
- No. of financial aid programmes.
- No. of subsidies; tax rebates; tax exemptions.
- No. of environmental awards.
- No. of inspections carried out by environmental agencies.
- No. of eliminated hotspots identified in the updated NAPs (2015).
Thank you for your attention!

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