H2020/NAP indicator assessment

Waste

Israel

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Organisation: EEA

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H2020 / NAPs Indicators	
Thematic area Waste	**Date:** 10/07/2020 **Author(s):** Dr. Daniel Madar, Dr. Moshe Yanai, Dr. Orna Matzner
Policy theme 1. Municipal Waste Generation	
Indicators: 1.1 Total Municipal Solid Waste (MSW) generation 1.A Municipal waste composition 1.B Plastic waste generation per capita 1.C % of population living in Coastal Areas 1.D % of Time of Tourist visitors in Coastal Areas / Population in Coastal Areas	

Key policy question:
IND1*: What is the status of municipal waste generation in your country?*

Key messages

- The average annual MSW generated per capita is slowly (but constantly) increasing by ~0.3% per year to reach 6,668 thousand tonnes, equal to 760 kg/capita/year, in 2017. The key drivers of MSW generation, including plastic waste, are high population growth rate and steady growth of standard of living, reflected inter alia by an increase in the use of packaging material.
- In the period 2003-2017, the organic fraction of MSW decreased from 41% to 31%, while the fraction of plastic waste increased from 12% to 21%).
- Israel's annual MSW plastic generation per capita almost doubled in the period 2003-2017, from 85 to 156 kg per capita/year.
- These data challenge decision makers. It is necessary to bring a change in our lifestyle that will include reduction in the amount of waste generated (reduction at source), as well as a decrease in the use of disposable plastic products.
- The Ministry of Environmental Protection and local authorities have set regulation and plans to decrease plastic use in order to protect the terrestrial and marine environment. The NGO's have also initiatives in this area. Examples include the Plastic Bag Law, the Clean coast program, and Awareness Raising Campaigns.

Key figures/Tables

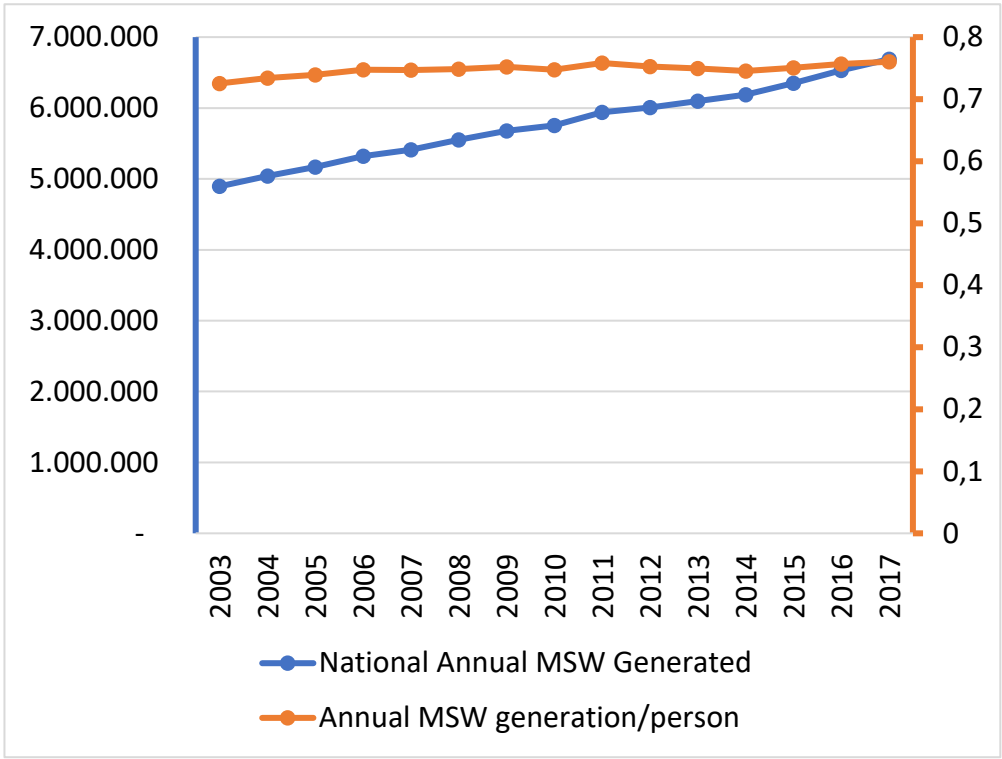


Figure 1. Total Municipal Solid Waste (MSW) Generation (tonnes/year and tonnes per capita/year), 2003-2017.

Key assessment text

Between 2003-2017, Israel's MSW generation has increased at an average of 2.3% per year, to reach over 6,668,000 tonnes/year. This increase is similar to the population growth rate, of 1.9% per year. The average annual MSW generated per capita is slowly (but constantly) increasing by ~0.3% per year to 760 kg/capita/year (

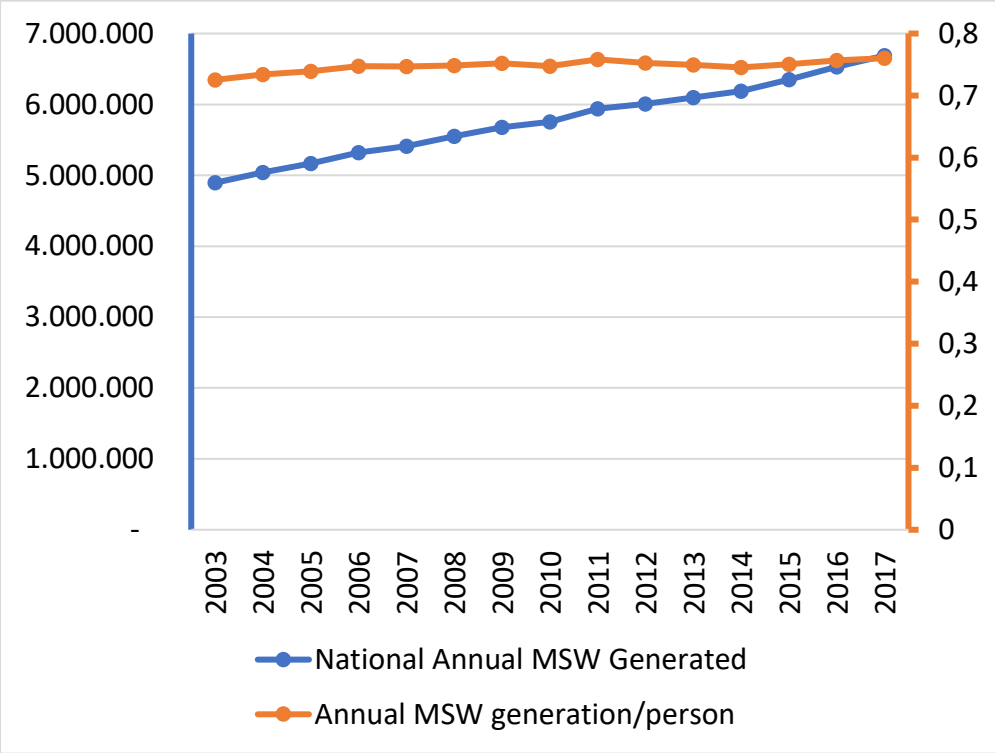


Figure 1). These trends are affected by a high population growth rate and a steady growth in the standard of living.

References in key assessment text

Domestic and commercial MSW data were taken from the ICBS inventory for waste collection (coverage of waste collection is assumed to be full). Industrial MSW data were calculated by the ICBS for 2010, 2012 and 2014 and were estimated for the rest of the years. Uncollected MSW quantities were estimated by the ICBS.

Methodology for indicators calculation

The methodology followed for indicator calculation is described in the H2020 indicator specification sheets:
https://eni-seis.eionet.europa.eu/south/areas-of-work/indicators-and-assessment

Data issues

Data on MSW collection and generation are assumed to be equal.

Specific policy questions:

***IND1.A**: What is the composition of municipal solid waste in your country?*

Specific figure(s)

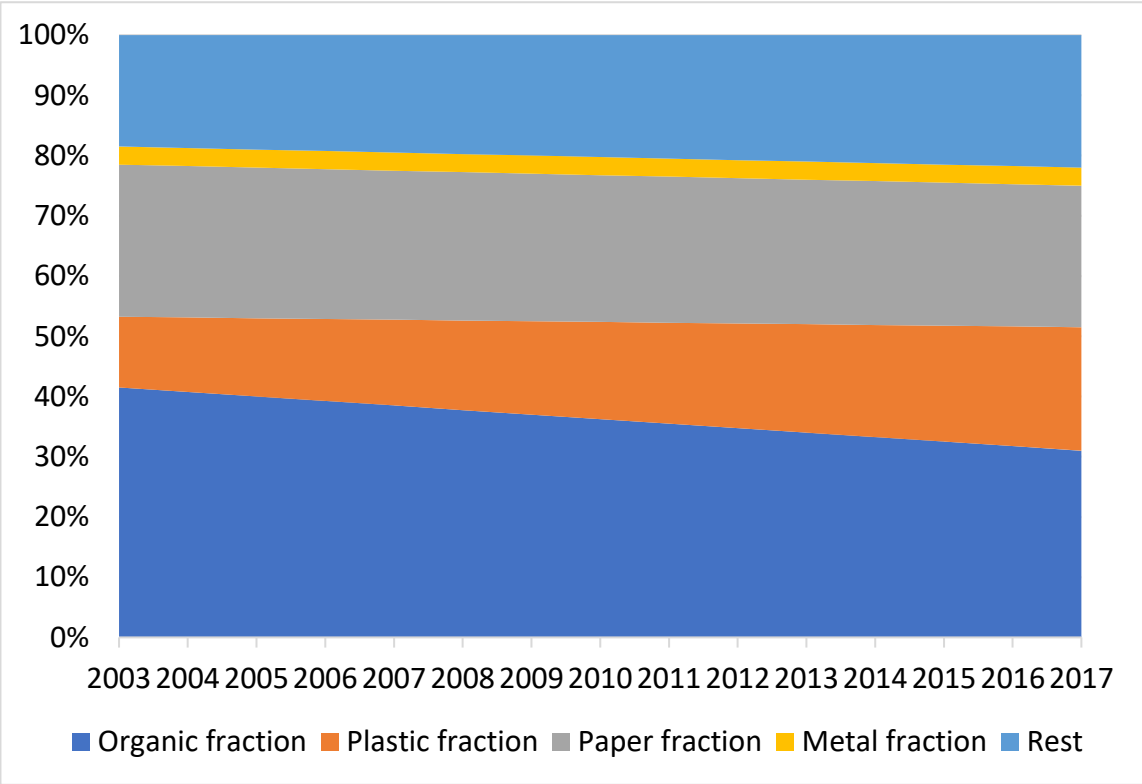


Figure 2. MSW composition (%), 2003-2017.

Specific assessment text

Between 2003-2017, MSW composition has changed in Israel from an organic fraction of 41% to 31%, and vice-versa for plastic, from 12% to 21% (Figure 2). The Ministry of Environmental Protection (MoEP), local authorities, and NGO have in place initiatives and plans and to decrease plastic use in order to protect the terrestrial and marine environment. The data were calculated for 2 years (2005, 2013) within that time period, and estimated for the rest of the years.

References in specific assessment text

MSW composition in "State of the Environment in Israel" reports (2010, 2017).

Methodology for indicators calculation

The methodology followed for indicator calculation is described in the H2020 indicator specification sheets:
https://eni-seis.eionet.europa.eu/south/areas-of-work/indicators-and-assessment

Data issues

Data were based on MoEP surveys and estimated for the years between surveys.

Specific policy questions:

***IND1.B**: Is generation of plastic waste per Capita decreasing?*

Specific figure(s)

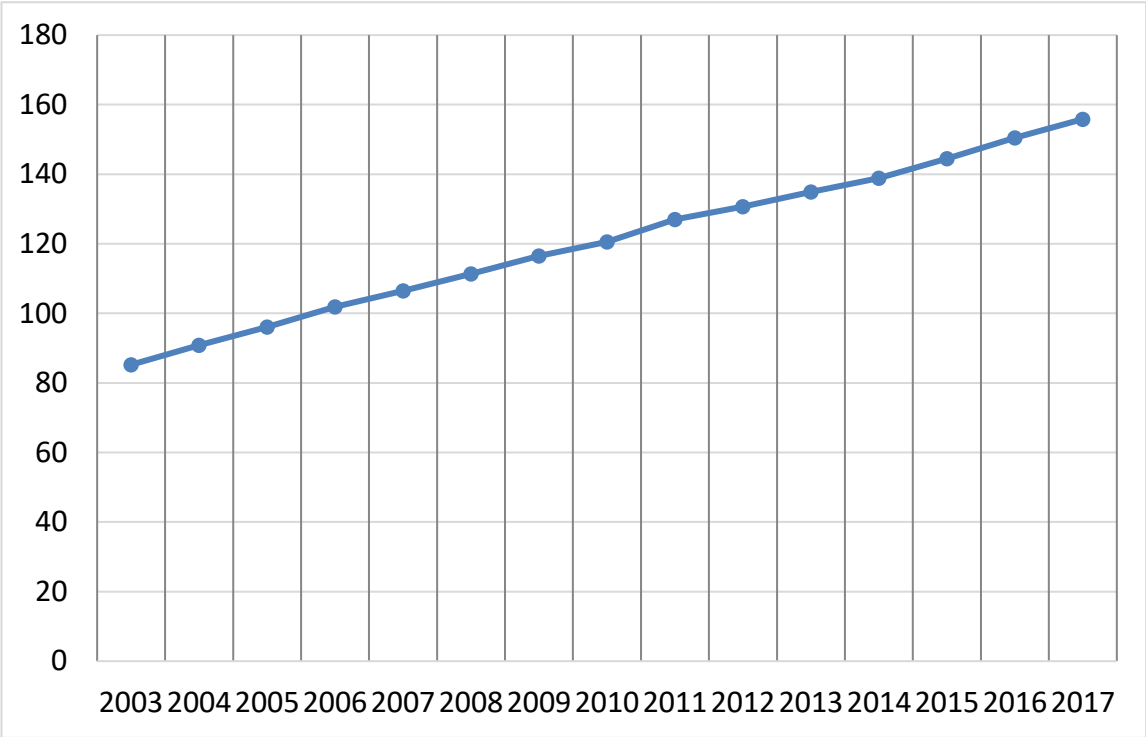
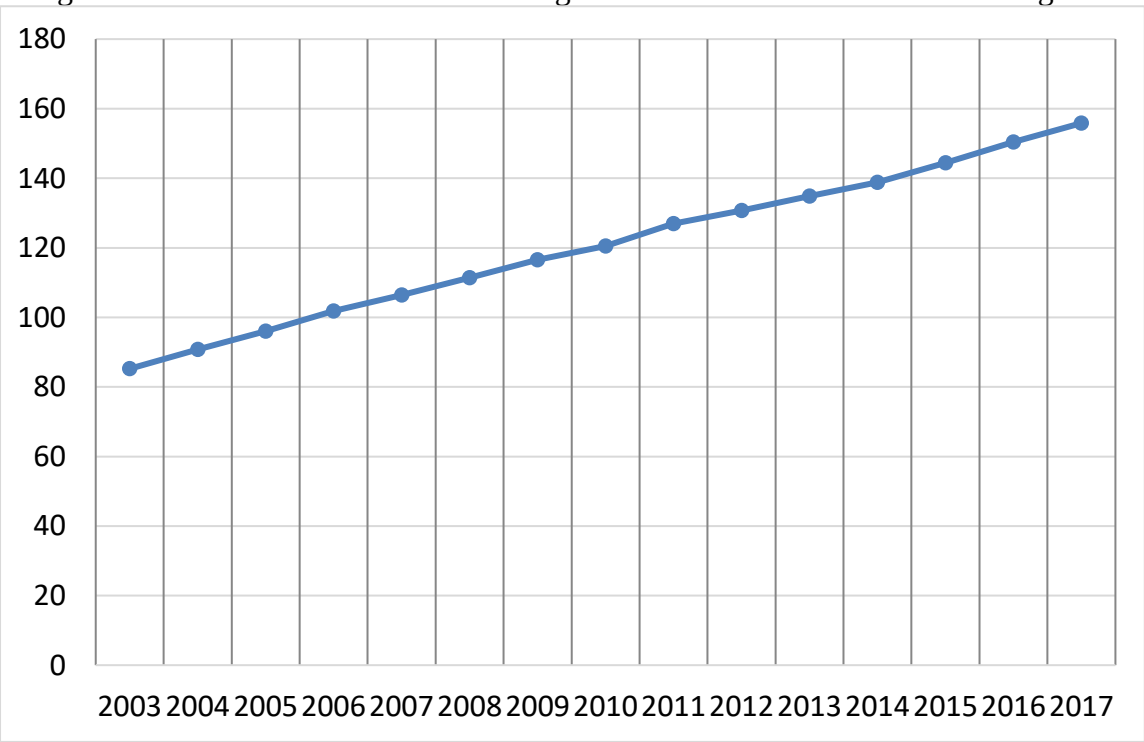


Figure 3. Plastic waste generation per capita in 2003-2017 (kg per capita/year).

Specific assessment text

Between 2003-2017, Israel's annual MSW plastic generation per capita almost doubled, rising from 85 kg to 156 Kg (



).

Nevethless, thanks to the implementation of policy measures, the public awareness to plastic waste damage is increasing. The data were calculated for 2 years (2005, 2013) within that time period, and estimated for the rest of the years.

References in specific assessment text
MSW composition in "State of the Environment in Israel" reports (2010, 2017). ICBS population inventory.
Methodology for indicators calculation
The methodology followed for indicator calculation is described in the H2020 indicator specification sheets: https://eni-seis.eionet.europa.eu/south/areas-of-work/indicators-and-assessment
Data issues

Specific policy questions: ***IND1.C**: What is the percentage of people living by the coast? Vs total population.*
Specific figure(s)
Specific assessment text
For the purpose of this report, Israel was considered as a single coastal Mediterranean area. Therefore, the fraction of the population within the coast buffer zone is constant at a 100%.
References in specific assessment text ICBS population inventory.
Methodology for indicators calculation
Data issues

Specific policy questions: ***IND1.D**: Is the number of tourists increasing?*
Specific figure(s)

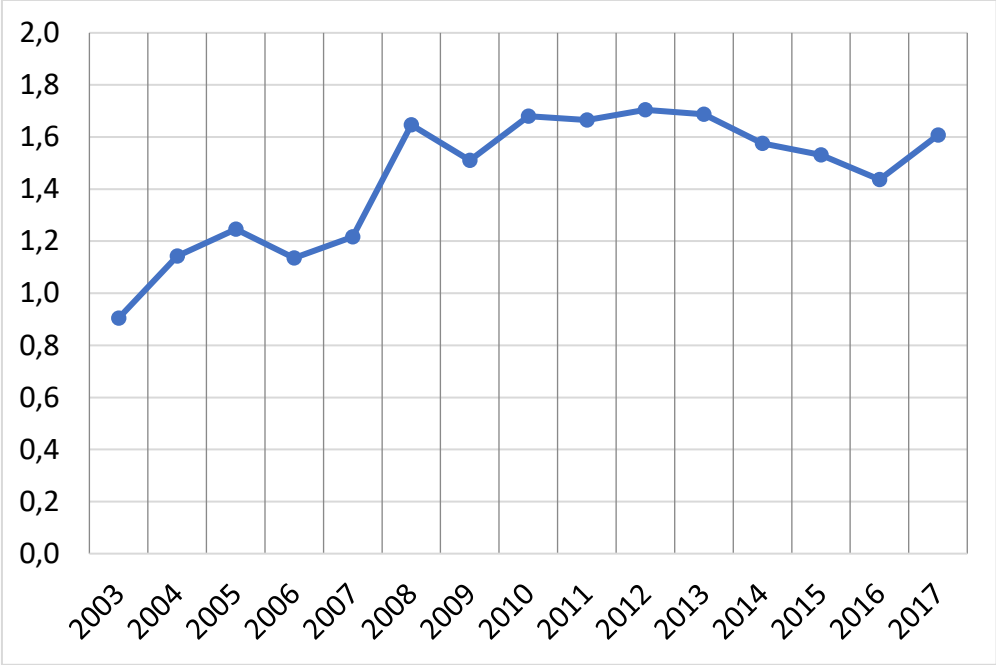


Figure 4. Share of time of tourist visitors in coastal areas to total coastal population (fraction of total population time, %)

Specific assessment text
The share of tourist visitor's time in coastal areas to total coastal population has risen almost twofold in the period 2003-2008, from 0.9% to 1.6%, after which it remained constant (**Errore. L'origine riferimento non è stata trovata.**). These results present an increase in the burden of tourist visitors on the Israeli coast.
References in specific assessment text ICBS population and tourist visitors' inventory.
Methodology for indicators calculation
The methodology followed for indicator calculation is described in the H2020 indicator specification sheets: https://eni-seis.eionet.europa.eu/south/areas-of-work/indicators-and-assessment
Data issues

H2020 / NAPs Indicators	
Thematic area WASTE	**Date:** 10/07/2020 **Author(s):** Dr. Daniel Madar, Dr. Moshe Yanai, Dr. Orna Matzner
Policy theme 2. "Hardware" of waste management	
Indicators: **2**.A Waste collection 2.A.1 Waste Collection Coverage 2.A.2 Waste Captured by the system 2.B Environmental control 2.B.1 % of waste to uncontrolled dumpsites 2.B.2 Uncontrolled dumpsites in Coastal Areas 2.B.3 Waste going to dumpsites in Coastal Areas 2.C Resource recovery 2.C.1 % of plastic waste generated that is recycled	

Key policy question:
IND2*: Is municipal solid waste management improving?*

Key messages

- MSW collection coverage in Israel has been very high in the last decades, serving over 99% of the total population, and over 99.74% of the generated MSW. All the MSW collected is delivered to official facilities for treatment.
- There are no officially uncontrolled dumpsites in Israel's coastal area since 2003. No waste was dumped in uncontrolled dumpsites. Measures for the prevention of illegal waste dumping are being implemented.
- Between 2003-2017, the fraction of MSW recycled and reused doubled to reach 24% of all MSW captured, while the total amount of annual MSW recycling and reuse more than tripled to reach 1,680,000 tonnes in 2017. This fraction is expected to increase in the future, as in late 2017 Israel's 1st Refuse-Derived Fuel (RDF) facility was inaugurated, new MSW incineration facilities are promoted, and circular economy projects are being implemented.
- The Ministry of the Environmental Protection developed a national strategy in order to increase recycling and decrease landfilling. This stategy includes investment in infrastructure, as well as in establishing incinerations plants.
- Even though the amount of plastic that is recycled has tripled between 2003-2017, the fraction of recycled plastics has remained virtually the same throughout this period, at ~4.4%. Israel is facing growing challenges in this area as the international plastic recycling market is currently shrinking.

Specific policy questions:
IND2.A.1*: What is the progress of municipal solid waste collection? How much solid waste is collected?*

Specific figure(s)

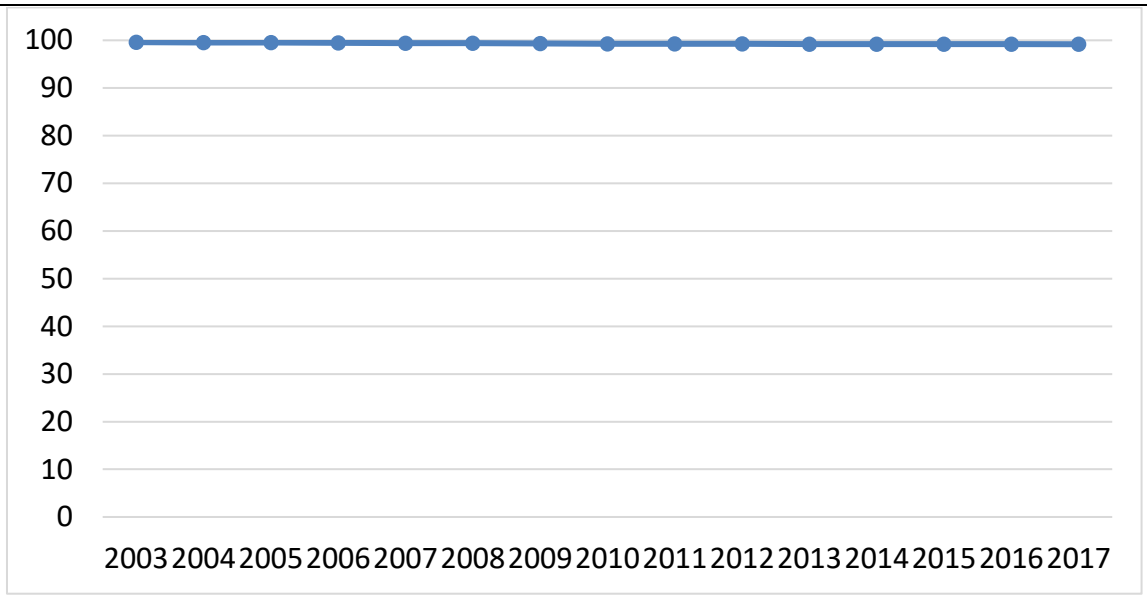


Figure 5. Waste collection coverage as percentage of total national population.

Specific assessment text

MSW collection coverage in Israel has been almost full for decades; it currently stands at over 99% of the population (**Errore. L'origine riferimento non è stata trovata.**).

In the period 2003-2017, MSW collection coverage dropped slightly from 99.61% to 99.17%. The main reason for this drop is the relative growth of the population living outside localities, where collection services are poor, compared with the growth of the population within localities.

References in specific assessment text

ICBS population and MSW inventory

Methodology for indicators calculation

The methodology followed for indicator calculation is described in the H2020 indicator specification sheets:
https://eni-seis.eionet.europa.eu/south/areas-of-work/indicators-and-assessment

Data issues

Uncollected MSW data were estimated based on the share of waste generated by population living outside localities.

Specific policy questions:

***IND2.A.2**: Amount of municipal solid waste captured by the management system and delivered to an official facility for treatment.*

Specific figure(s)

Specific assessment text

All the collected MSW captured by the management system is delivered to official facilities for treatment; therefore, the data for MSW delivered are identical to the data presented in Figure 5. The Ministry of Environmental Protection is responsible to enforce waste treatment.

References in specific assessment text

Ministry of Environmental Protection.

Methodology for indicators calculation
The methodology followed for indicator calculation is described in the H2020 indicator specification sheets: https://eni-seis.eionet.europa.eu/south/areas-of-work/indicators-and-assessment
Data issues

Specific policy questions: ***IND2.B.1.****: What are the quantities of municipal solid waste going to uncontrolled dumpsites?*
Specific figure(s)
Specific assessment text
In the period 2003-2017, no waste was sent to uncontrolled dumpsites, as these dumpsites had been closed before this period. The Ministry of Environmental Protection is responsible to enforce MSW treatment.
References in specific assessment text Ministry of Environmental Protection.
Methodology for indicators calculation
Data issues

Specific policy questions: ***IND2.B.2.****: How many uncontrolled dumpsites in the coastal area-relevant to Mediterranean?*
Specific figure(s)
Specific assessment text
There are no uncontrolled dumpsites in Israel. The last uncontrolled dumpsite was closed in 2003.
References in specific assessment text Ministry of Environmental Protection.
Methodology for indicators calculation
Data issues

Specific policy questions: ***IND2.B.3.****: How much MSW is dumped in uncontrolled dumpsites in the coastal area-relevant to the Mediterranean Sea?*
Specific figure(s)

Specific assessment text
No waste is dumped in uncontrolled dumpsites in the coastal area-relevant to the Mediterranean Sea.
References in specific assessment text Ministry of Environmental Protection
Methodology for indicators calculation
Data issues

Specific policy questions: ***IND2.C.**: Are recycling rates of municipal solid waste in your country increasing?*
Specific figure(s)

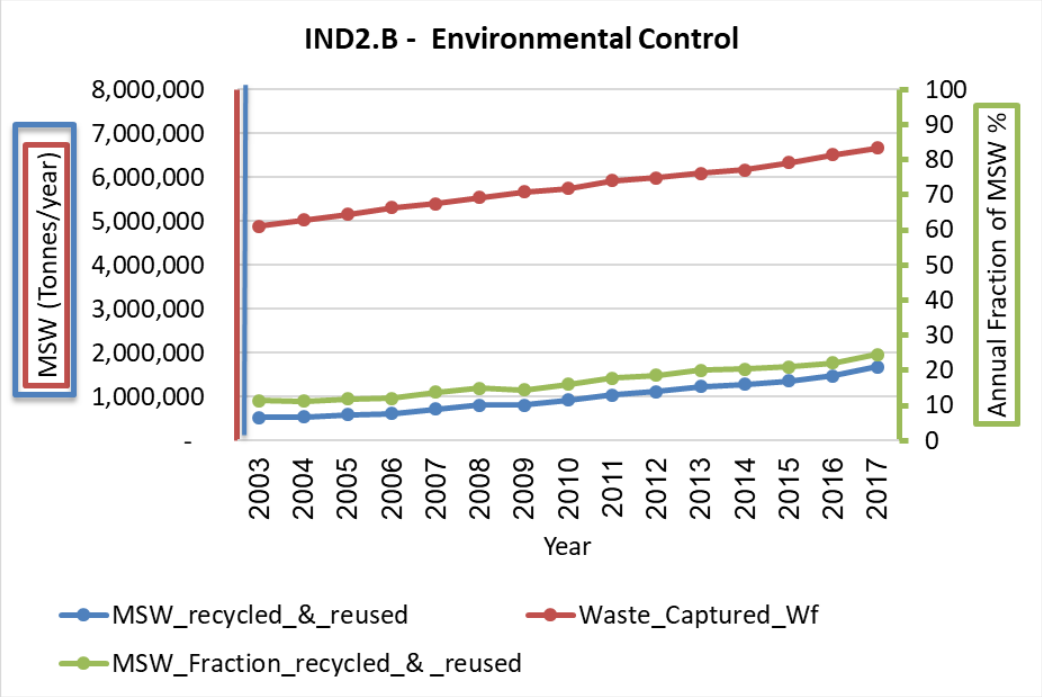


Figure 5. Quantity and fraction of MSW recycled and reused over total MSW captured in the period 2003-2017.

Specific assessment text

As shown before in

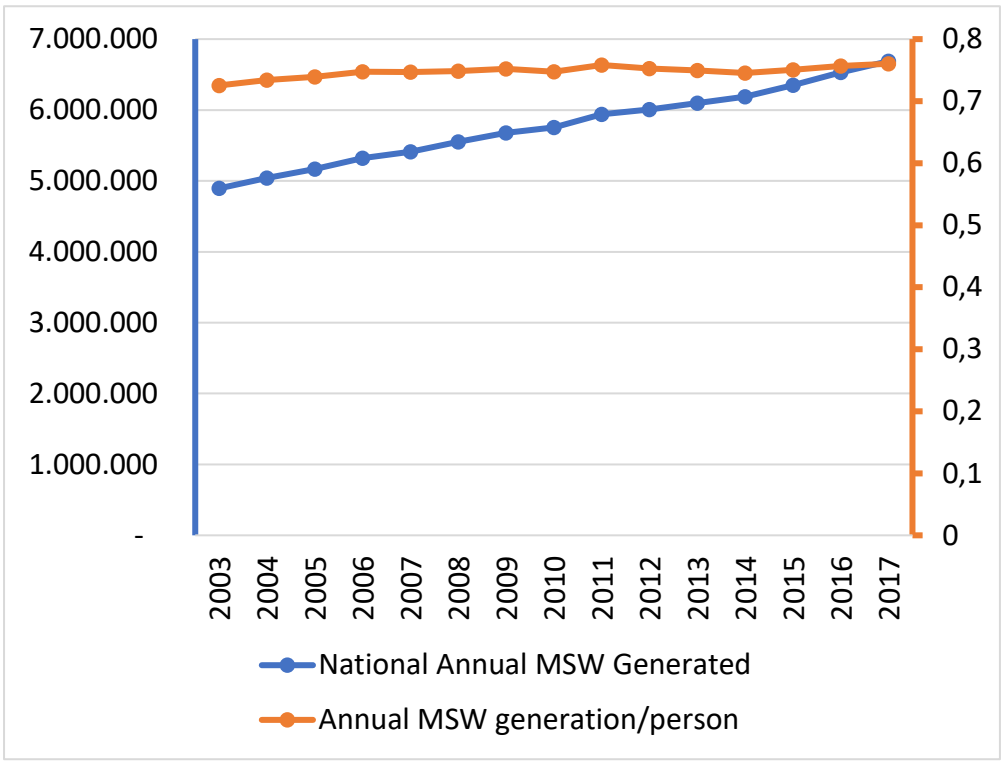
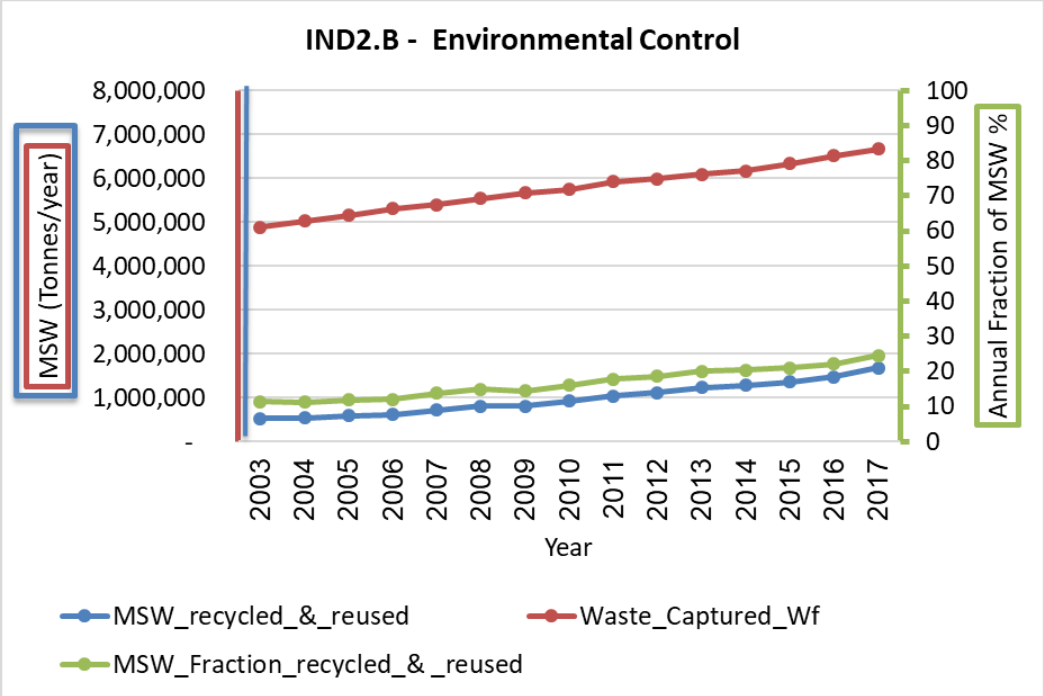
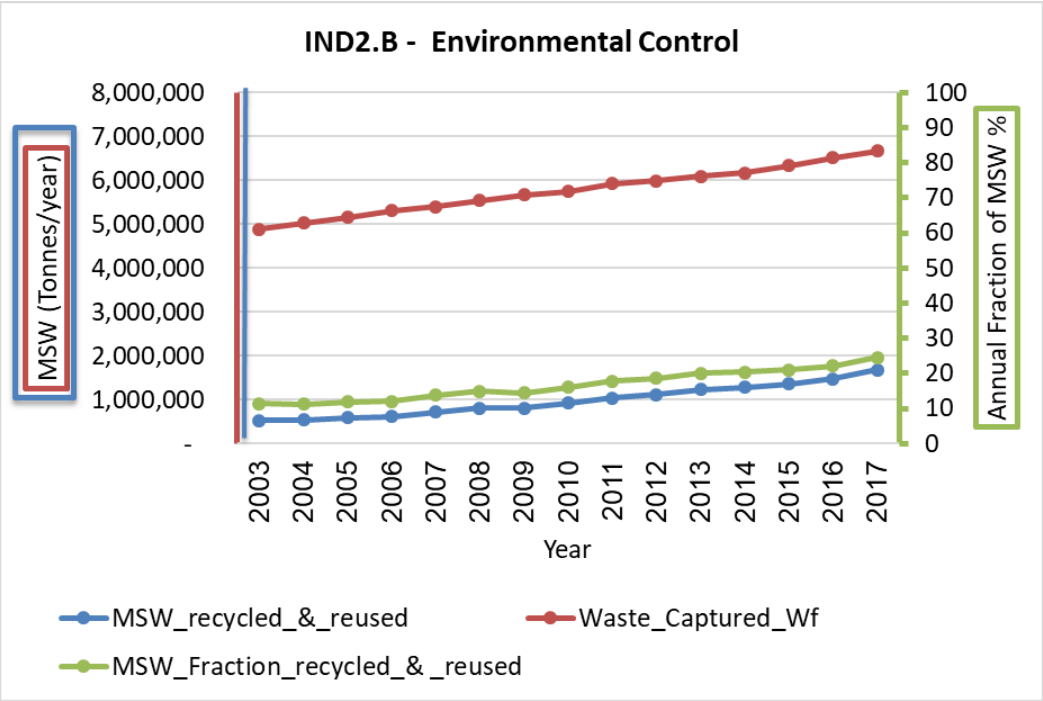


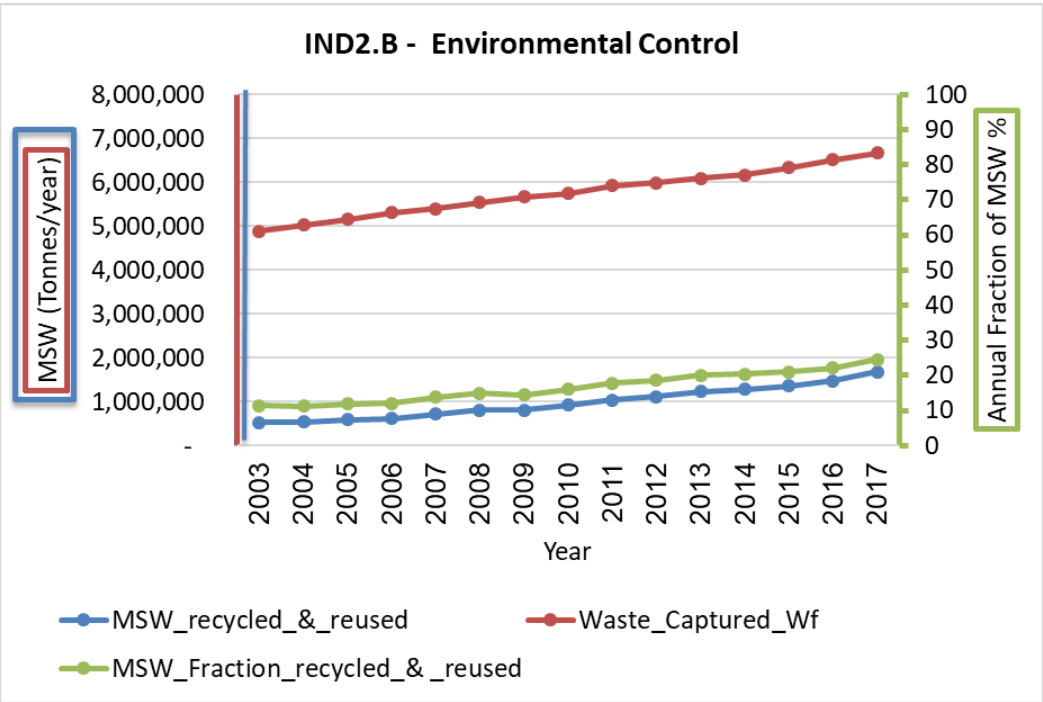
Figure 1, in the period 2003-2017 Israel's MSW generation has increased from 4,895,000 to over 6,668,000 tonnes/year (see the red line in



). During this period, there was a significant increase in MSW recycling and reuse, from 11% to 24% of all MSW captured by the MSW collection system (see the green line in



). The total amount of annual MSW recycling and reuse rose from 525,000 to 1,680,000 tons (see the blue line in



). This fraction is expected to increase in the future, as in late 2017 Israel's 1st Refuse-Derived Fuel (RDF) facility was inaugurated, new MSW incineration facilities are promoted, and circular economy projects are being implemented.

References in specific assessment text

MSW recycle and reuse data- from ICBS data.

Methodology for indicators calculation

The methodology followed for indicator calculation is described in the H2020 indicator specification sheets:
https://eni-seis.eionet.europa.eu/south/areas-of-work/indicators-and-assessment

Data issues

Specific policy questions:
***IND2.C.**: What is the progress in plastic waste generated and that is recycled (formal and informal)?*

Specific figure(s)

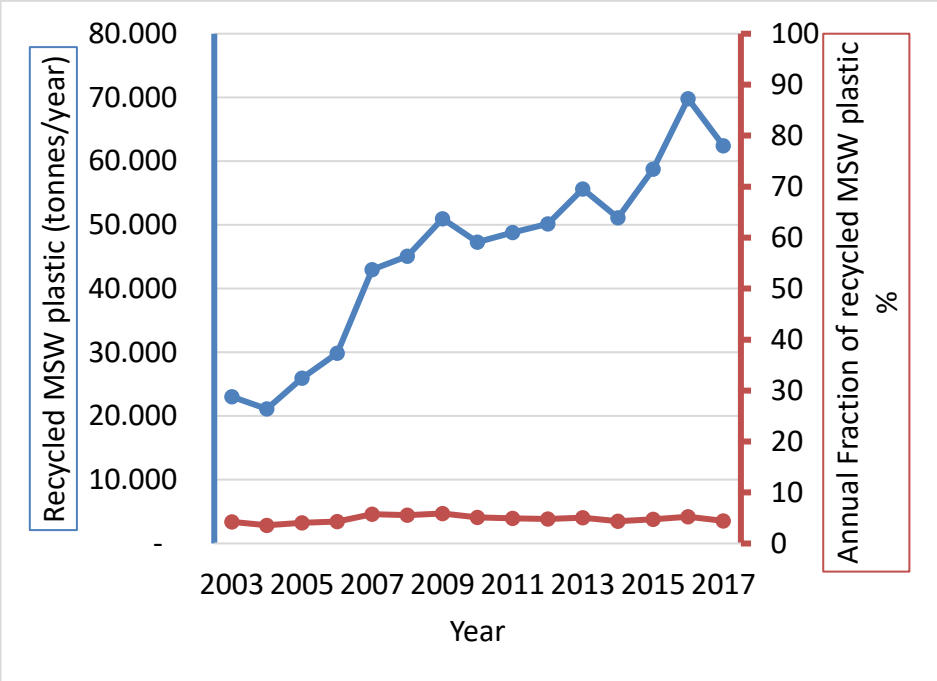
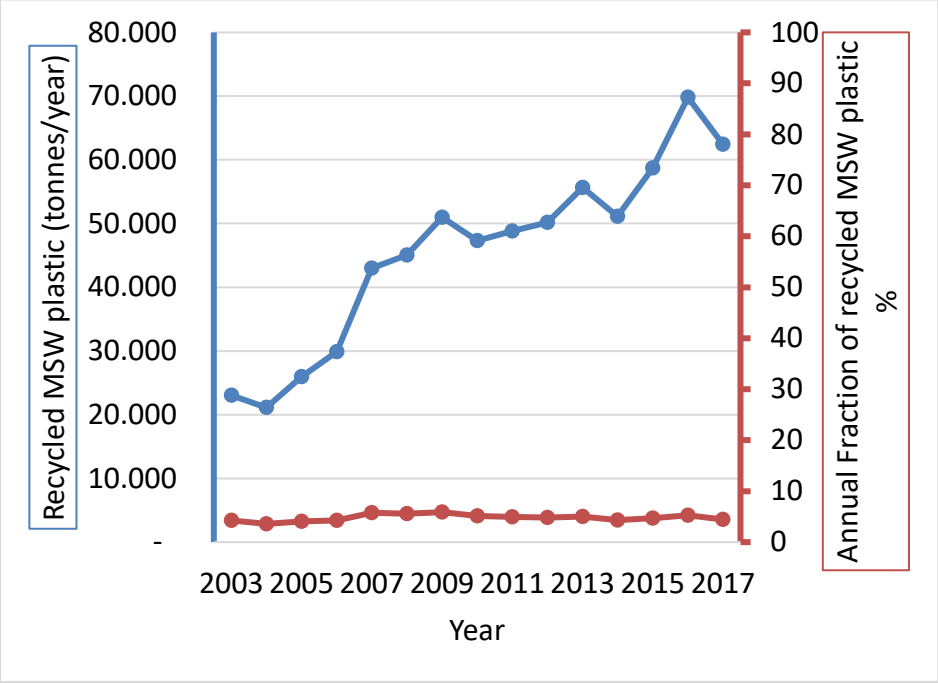


Figure 6. Quantity and share of recycled plastics over total plastic waste generated in the period 2003-2017.

Specific assessment text

The amount of plastic that is recycled tripled between 2003-2017 (see the blue line in



), from ~20,000 to ~65,000 tonnes/year. However, because the national annual MSW generation grew by 37% during this period (see

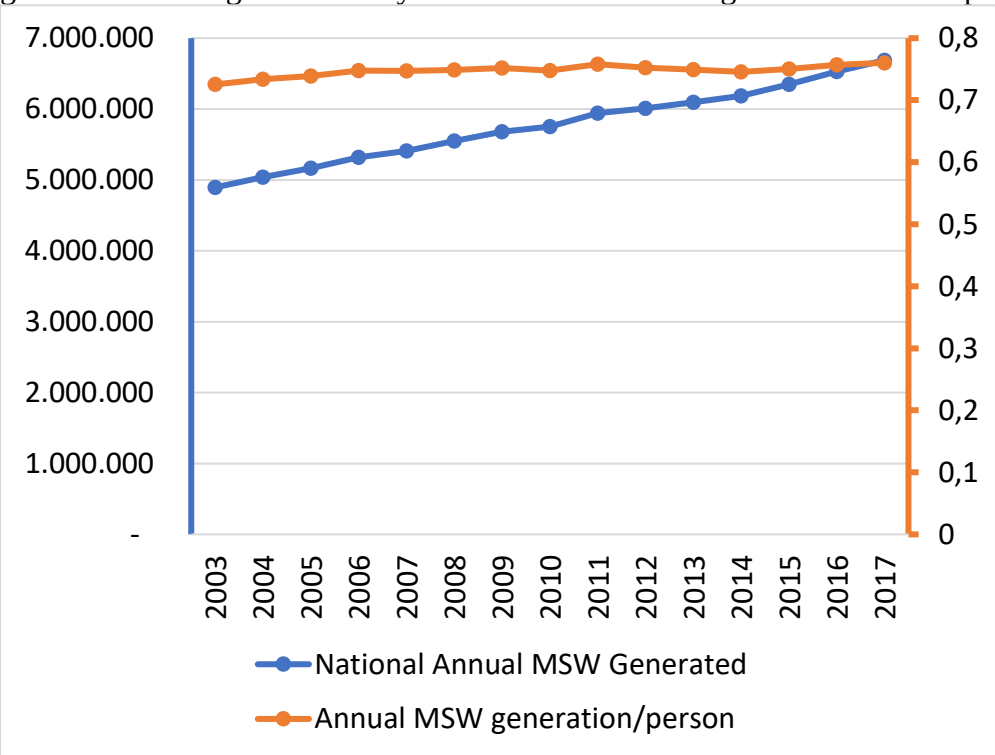


Figure 1), and because of the doubling of the MSW plastic fraction (see

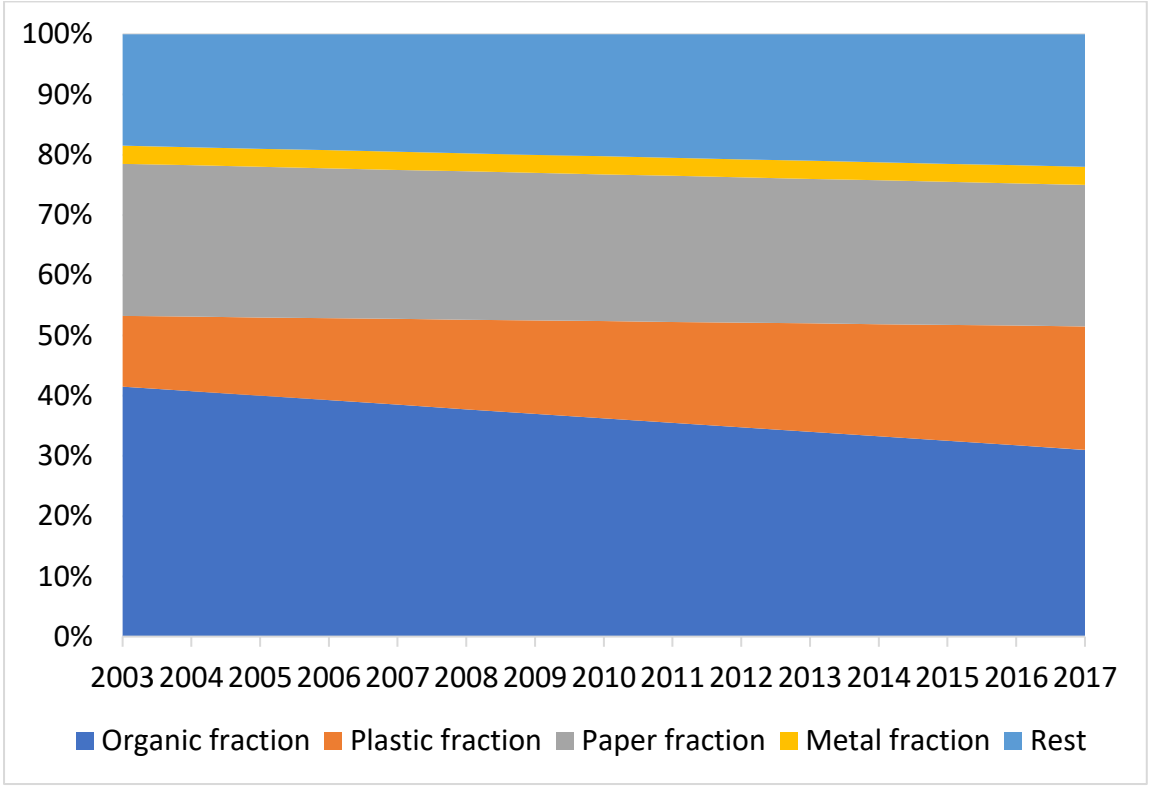
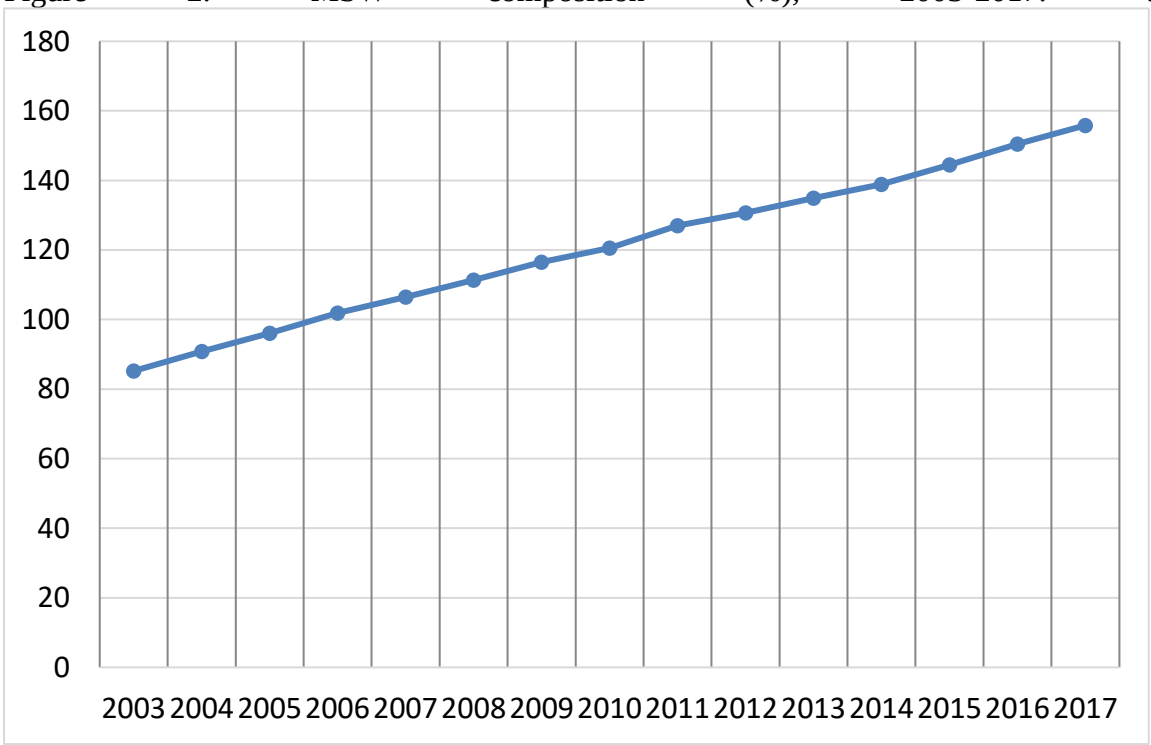
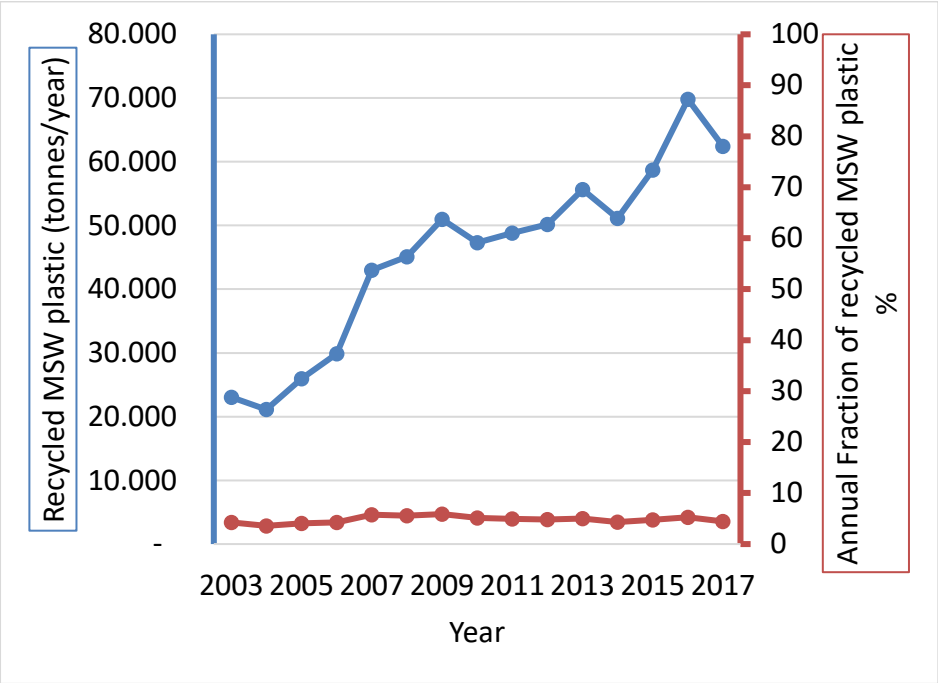


Figure 2. MSW composition (%), 2003-2017.

and



), the fraction of recycled MSW plastic has remained virtually the same throughout this period, at ~4.4% (see the red line in



).

References in specific assessment text

MSW amounts and MSW plastic recycling- ICBS inventory.

Methodology for indicators calculation

The methodology followed for indicator calculation is described in the H2020 indicator specification sheets:
https://eni-seis.eionet.europa.eu/south/areas-of-work/indicators-and-assessment

Data issues

H2020 / NAPs Indicators	
Thematic area **WASTE**	**Date:** 10/07/2020 **Author(s):** Daniel Madar, Emanuele Bigagli
Policy theme IND Q "Software of waste management" (Policies)	
Questions: IND Q.A Marine Litter and Waste Management Framework IND Q.B Resource Recovery IND Q.C Sustainable Consumption and Production	

IND Q.A MARINE LITTER & WASTE MANAGEMENT FRAMEWORK	
Question	**Answer (Yes / No)**
***IND Q.A.1.**: Is there a National Assessment for ML and its impacts?*	YES
Comments: Under the Mediterranean Sea monitoring program. https://www.sviva.gov.il/English/env_topics/marineandcoastalenvironment/Pages/MarineMonitoringProgram.aspx#GovXParagraphTitle1	
***IND Q.A.2.**: Is there a National plan or strategy for ML?*	YES
Comments: Under the Clean Coast program. https://www.sviva.gov.il/English/env_topics/marineandcoastalenvironment/Protecting-the-Coast/Pages/CleanCoastProgram.aspx	
***IND Q.A.3.**: Is there a National plan or strategy for waste management?*	YES
Comments: See (in Hebrew): https://www.gov.il/he/departments/policies/strategic_plan_for_waste_treatment_by_2030	
***IND Q.A.4.**: Is there a National law on waste?*	YES
Comments: See: https://www.sviva.gov.il/English/Legislation/Pages/WasteAndRecycling.aspx	
***IND Q.A.5.**: Is there a National plan or target to close the dumpsites before 2030?*	NO
Comments: There are no illegal dumpsites	
***IND Q.A.6.**: Is there a National information system for waste management in place?*	YES
Comments: See: https://www.gov.il/he/departments/guides/waste_facts_and_figures?chapterIndex=4 (in Hebrew)	
IND Q.B RESOURCE RECOVERY	

***IND Q.B.1.**: Is there a National plan or strategy for waste prevention?*	NO
***IND Q.B.2.**: Are there mandatory targets for recycling-recovery of packaging waste?*	YES
Comments: Mandatory targets for recovery of packaging waste https://www.sviva.gov.il/English/env_topics/Solid_Waste/Extended-Producer-Responsibility/Packaging-Waste/Pages/PackagingWaste.aspx	
***IND Q.B.3.**: Are there EPR or deposit-return schemes for packaging waste?*	YES
Comments: See: https://www.gov.il/en/departments/guides/extended_producer_responsibility https://www.sviva.gov.il/English/env_topics/Solid_Waste/Extended-Producer-Responsibility/Pages/default.aspx#GovXParagraphTitle4	
***IND Q.B.4.**: Are there national policies to eliminate or reduce single-use plastics?*	YES
Comments: Beverage containers & Single-use carrier bags reduction law: https://www.gov.il/en/departments/guides/extended_producer_responsibility https://www.sviva.gov.il/English/env_topics/Solid_Waste/Pages/Supermarket-Bags.aspx	
***IND Q.B.5.**: Are there financial recovery activities?*	YES
Comments: deposit on beverage containers https://www.sviva.gov.il/English/env_topics/Solid_Waste/Extended-Producer-Responsibility/Pages/default.aspx	
IND Q.C SUSTAINABLE CONSUMPTION AND PRODUCTION	
***IND Q.C.1.**: Are there sustainable consumption and production plans or strategies?*	YES
Comments: Program plan for circular economy in the industrial sector https://www.gov.il/he/departments/news/circular-economy-plan-30062019 (in Hebrew)	
***IND Q.C.2.**: Are there green procurement rules for the public sector in place?*	YES
Comments: See: https://www.sviva.gov.il/English/env_topics/Sustainable%20Development/Sustainability-in-the-Public-Sector/Pages/Green-Procurement.aspx	
***IND Q.C.3.**: Are there policies to support sustainable tourism?*	YES
Comments: In Hebrew: https://www.gov.il/he/departments/policies/sustainable_tourism	
***IND Q.C.4.**: Are there policies to support eco-labelling and eco-design?*	YES
Methodology for indicators calculation	

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Data issues