

# UNECE- Regional Training on the production and use of waste and circular economy statistics and indicators

## Reporting and use of waste indicators in Italy

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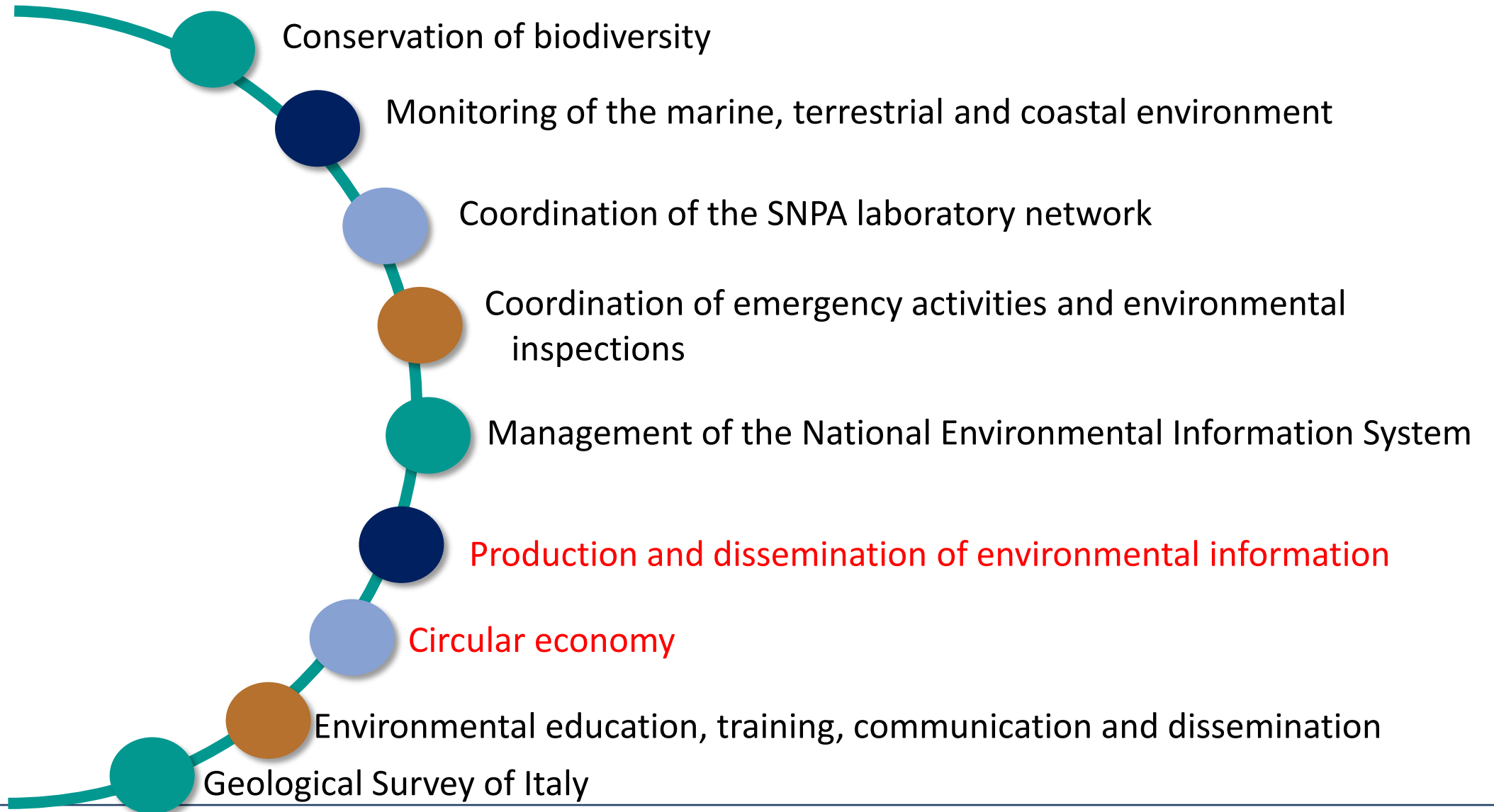
Vienna, 20-21 June 2024

# Italian Institute for Environmental Protection and Research



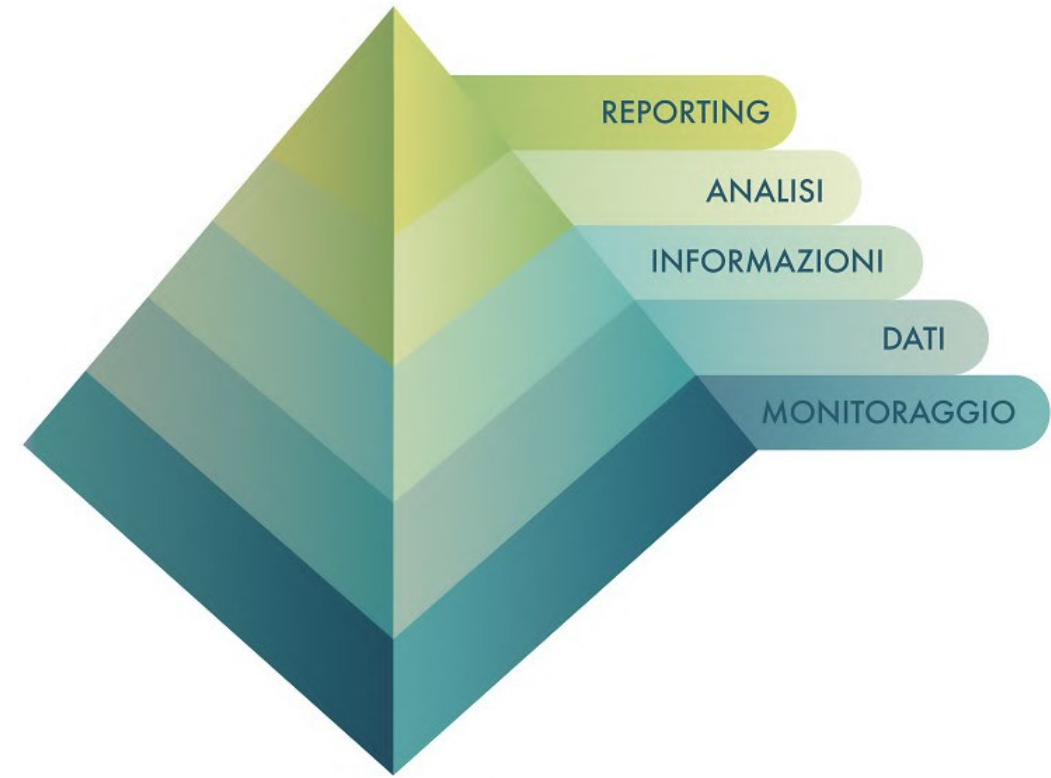
- Public research body enjoying technical-scientific and regulatory independence
- Its mission is to protect the environment through institutional tasks
- Receives general guidance from the Ministry of the Environment and Energy Security (MASE)
- Italian reference institution for technical-scientific and monitoring and control activities for environmental protection and sustainability

# The tasks of the Institute



# MDIAR Model

**MDIAR model:** Monitoring, collection and organization of environmental data and information (also through the development of indicators), environmental analysis and reporting or the structured publication of environmental data, information and assessments.



# Monitoring: Data Sources

The data information base is the ISPRA elaborations made on data provided by:

- ARPA/APPA (Regional/Provincial Agency for Environmental Protection);
- Regions;
- Provinces;
- Provincial Observers on waste;
- Annual databases of the Environmental Declaration Single Model (Modello Unico di Dichiarazione Ambientale, MUD).

The collected data on waste generation and on waste management are published on the waste register (Catasto Rifiuti)

# Waste register - Catasto rifiuti

<https://www.catasto-rifiuti.isprambiente.it/index.php?pg=>



**Catasto Rifiuti**  
**Sezione Nazionale**

| Home | | Elenco Autorizzazioni | | Rifiuti Urbani | | Rifiuti Speciali | | Questionari/Richieste Dati | | Pubblicazioni | | Link |

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**COS'È IL CATASTO DEI RIFIUTI** [leggi tutto...](#)

Il Catasto dei rifiuti è stato istituito dall'articolo 3 del decreto legge 9 settembre 1988, n. 397, convertito, con modificazioni, dalla legge 9 novembre 1988, n. 475. L'articolazione e le funzioni del Catasto sono individuate dall'articolo 189 del decreto legislativo 3 aprile 2006, n. 152.

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**QUALI BANCHE DATI CONTIENE IL CATASTO** [leggi tutto...](#)

**Vai direttamente alle banche dati ...** 

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**» IN PRIMO PIANO**

**Modello unico di dichiarazione ambientale (MUD)**  
Nella Gazzetta Ufficiale (Serie Generale) n. 52 del 2 marzo 2024 è pubblicato il Decreto del Presidente del Consiglio dei ministri 26 gennaio 2024 recante l'approvazione del Modello Unico di Dichiarazione ambientale per l'anno 2024, da utilizzarsi per le dichiarazioni riferite all'anno 2023. Gli allegati al Decreto del Presidente del Consiglio dei ministri sono pubblicati sul sito del MASE.

[Vai alla pagina MUD del sito ISPRA](#) 

# Monitoring tools



**Indicators, indices, models, forecasts,  
scenarios**

# Environmental Indicators Platform <https://indicatoriambientali.isprambiente.it/it>



## Database of environmental indicators

Show Attachments Revisions

With a view to improvement and development, in order to meet increasingly pressing environmental challenges and to meet new knowledge needs, including future scenarios, it is important to continue to acquire and process detailed statistical information characterized by high scientific solidity, to be disseminated in a dynamic and timely manner. The indicators in the Database of Environmental Indicators not only provide a snapshot of the state of the environment in Italy, which until now has been clearly reported by the Yearbook of Environmental Data, but also mark a further evolutionary step thanks to their peculiarity in supporting the effectiveness and quality of public action and in responding both to precise regulatory obligations and to requests from national and international bodies.

The Database of Environmental Indicators, organized into 38 [Environmental Themes](#), with over 300 indicators (ISPRRA core set), is the most complete collection of statistical data and information on the state of the environment in Italy created and edited by the Institute for Environmental Protection and Research (ISPRRA) in collaboration with regional and autonomous province agencies within the *National System for Environmental Protection* (SNPA).

The indicators, classified under [Environmental Themes](#), are structured in sheets containing descriptive information (metadata) such as, for example, the objectives to be achieved, the assessment of the status, the trend and data represented with graphs, tables and maps.

It is possible to consult the indicators with different aggregation methods ([Aggregation Catalogue](#)), designed to meet the information needs coming from national/European/international contexts: from priority frameworks to the main inter-thematic core sets currently in place for the monitoring of environmental policies.

### Framework

### Main core sets

- [Environmental Data Yearbook](#)
- [Climate change](#)
- [Circular Economy](#)
- [Zero pollution](#)
- Sustainable finance
- [Biodiversity and natural capital](#)
- [PON-Gov Project](#)

- [UN - Sustainable Development Goals \(UN-SDGs\)](#)
- [OECD - Environment at a Glance](#)
- [8th European Environment Action Programme \(8th EAP\)](#)
- [7th European Environment Action Programme \(7th EAP\) - Environmental data](#)
- [Key indicators European Green Deal](#)
- [EEA - Set Indicators](#)
- [National Sustainable Development Strategy \(SNSvS\)](#)
- [Partnership Agreement 2014-2020](#)

To meet the new objectives of the 8th Environmental Action Programme and the Green Deal, ISPRRA has created a [Dashboard](#) of the main environmental indicators which, through the exploration of interactive graphs, allows users to follow the trend over time of the main phenomena represented, verify the effectiveness of environmental performance as well as the progress made towards sustainable development.

The platform, with more than 300 environmental indicators, is the most complete collection of statistical data and information on the state of the environment in Italy.




































The indicators are structured in sheets containing descriptive information (metadata) such as, for example, the objectives to be achieved, the assessment of the status, the trend and data represented with graphs, tables and maps.



# Environmental Themes <https://indicatoriambientali.isprambiente.it/it/temi>

## Environmental issues

The indicators, classified into 38 environmental themes, are structured in sheets containing both descriptive information (metadata) such as, for example, the objectives to be achieved, the assessment of the status, the trend, and analytical (data) represented with graphs, tables and maps.

-  [Aquaculture](#) 3
-  [Protected areas](#) 9
-  [Environmental Certification](#) 3
-  [Emissions](#) 10
-  [Industry](#) 18
-  [Flood hazard](#) 3
-  [Volcanic hazard](#) 2
-  [Water Resources and Budget](#) 12
-  [Chemical substances or agents](#) 8
-  [Land use and consumption](#) 4
-  [Inland waters](#) 19
-  [Environmental Authorizations](#) 3
-  [Climate](#) 10
-  [Energy](#) 20
-  [Environmental information](#) 2
-  [Landslide hazard](#) 6
-  [Peach](#) 3
-  [Noise](#) 6
-  [Soil](#) 3
-  [Environmental Assessments](#) 7
-  [Coastal marine waters and transition](#) 24
-  [Biodiversity - status and threats](#) 12
-  [Coasts](#) 6
-  [Environmental Training](#) 1
-  [Venice Lagoon](#) 7
-  [Subsidence hazard and sinkholes](#) 3
-  [Air quality](#) 12
-  [Forestry](#) 2
-  [Transport](#) 15
-  [Agriculture](#) 14
-  [Electromagnetic Fields \(EMF\)](#) 6
-  [Economy and environment](#) 9
-  [Georesources](#) 7
-  [Forest heritage](#) 3
-  [Seismic hazard](#) 8
-  [Waste](#) 19
-  [Contaminated sites](#) 2
-  [Tourism](#) 13

# Waste indicators - ISPRA

- Export of waste from economic activities
- Import of waste from economic activities
- Percentage of preparation for re-use and recycling
- Municipal waste generation
- Generation of waste from economic activities
- Generation of total waste excluding major mineral waste
- Composting and anaerobic digestion of municipal waste
- Mechanical Biological Treatment of Municipal Waste
- Waste from economic activities incinerated
- Waste from economic activities recovered
- Waste from economic activities disposed in landfill
- Quantities of special waste used as a source of energy in production plants
- Municipal waste incinerated
- Municipal waste collected separately
- Municipal waste disposed in landfills
- Recycling/recovery of construction and demolition waste
- Recycling rate of packaging waste
- Recycling rate of waste excluding major mineral waste

# Waste data transmission

- DIRECTIVE 2008/98/EC (Art. 11.2) on achieving the objectives of the preparing for re-use and the recycling of waste materials;
- DIRECTIVE 1999/31/EC: Eurostat and OECD questionnaire;
- DIRECTIVE 2006/66/EC on batteries and accumulators and waste batteries and accumulators;
- DIRECTIVE 2000/53/EC on end-of life vehicles;
- DIRECTIVE 2012/19/EC on waste electrical and electronic equipment (WEEE);
- DIRECTIVE 94/62/EC on packaging and packaging waste;
- DIRECTIVE 2015/720/EC of 29 April 2015 amending Directive 94/62/EC as regards reducing the consumption of lightweight plastic carrier bags;
- DIRECTIVE 2008/98/EC (Art 11.2.b) on achieving the objectives of recovery and recycling of construction and demolition waste;
- DIRECTIVE 2008/98/EC on food waste;
- DIRECTIVE 2019/904/EC on the reduction of the impact of certain plastic products on the environment.

## Waste Statistics

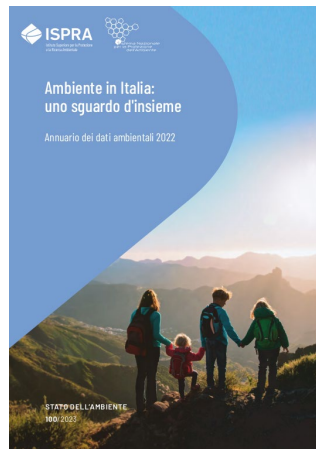
REGULATION (EC) No 2150/2002 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

# Waste and Environmental reports

ISPRA produces different kinds of environmental reports to provide information on the implementation of environmental measures (based on specific legislative or cooperative instruments) and to disseminate data and information on the waste, and on the state of the Environment such as:

“Municipal waste report”, “Report on Waste from Economic Activities”, “Environment in Italy”, the “SNPA Environment Report”, etc.

## Environmental Reports



## Waste Reports



The National Institute of Statistics is a public research institution and it is the main producer of official statistics to support citizens and public decision-makers

## MISSION:

- The mission of the National Institute of Statistics is to serve the community through the production and communication of high-quality statistical information, analyses and forecasts in the economic, social and environmental fields;
- The data produced are disseminated through the [istat.it](https://www.istat.it) website, where press releases and databases are available. The main access to the data is IstatData, the Institute's data warehouse, within which the information is organized by theme, presented in multidimensional tables and accompanied by metadata. Access to the data warehouse is free and open (<https://esploradati.istat.it/databrowser>).

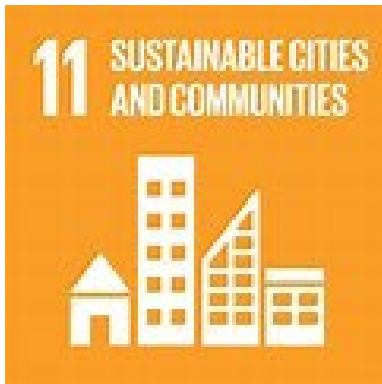
# SDGs - SUSTAINABLE DEVELOPMENT GOALS



The United Nations Statistics Division entrusted Istat, like other NSOs, with the task of coordinating the production of indicators for measuring sustainable development and monitoring its objectives.

Periodically, Istat presents an update and an extension of breakdowns of the set of statistical measures for monitoring Sustainable Development Goals of 2030 Agenda. Istat publishes yearly the [Report on SDGs](#).

# SDGs Waste indicators - Goal 11 - Make cities inclusive, safe, resilient and sustainable



11.6.1 - Proportion of municipal solid waste collected and managed in controlled facilities out of total municipal waste generated, by cities:

- Percentage of municipal waste sent to landfill on total municipal waste collected by regions
- Municipal waste generated by region and provincial capitals (Kg per capita)

*Data source: Ispra*

# SDGs Waste indicators - Goal 12: Ensure sustainable consumption and production patterns

12.4.2 - (a) Hazardous waste generated per capita; and (b) proportion of hazardous waste treated, by type of treatment:

- Hazardous waste generated by regions (tonne)
- Hazardous waste sent to the recovery operations by regions (tonne)
- Hazardous waste disposed of by regions (tonne)

12.5.1 - National recycling rate, tons of material recycled

- Recycling rate (national level)
- Municipal waste object of separate collection by regions and provinces (tonne)
- Separate collection of municipal waste by regions and provinces (percentage on total municipal waste)
- Municipal waste generated by region and provincial capitals (Kg per capita)
- Circular material use rate (national level – percentage - Eurostat)

*Data source: Ispra*





# Istat - Urban environmental data survey

Since 2000 Istat carries out a survey on urban environment, concerning eight themes: Water, Air, Eco-management, Energy, Urban mobility, Municipal waste, Noise, Urban green areas

Frequency: annual

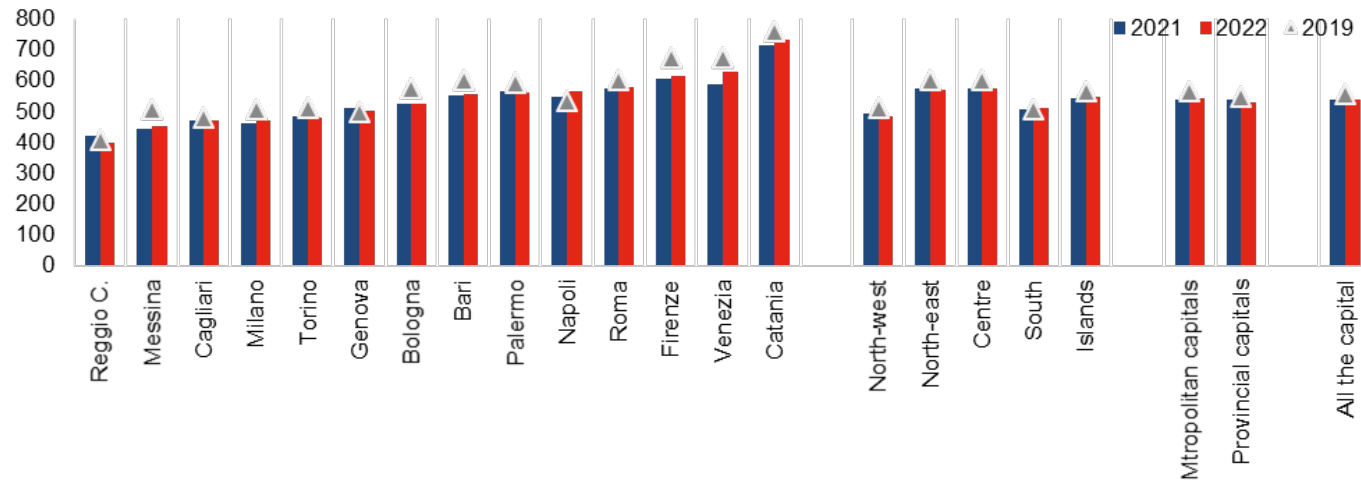
Units: Italian provincial capitals (109 Municipalities)

Dissemination of data: annual report, specific focus, e-book

Waste indicators:

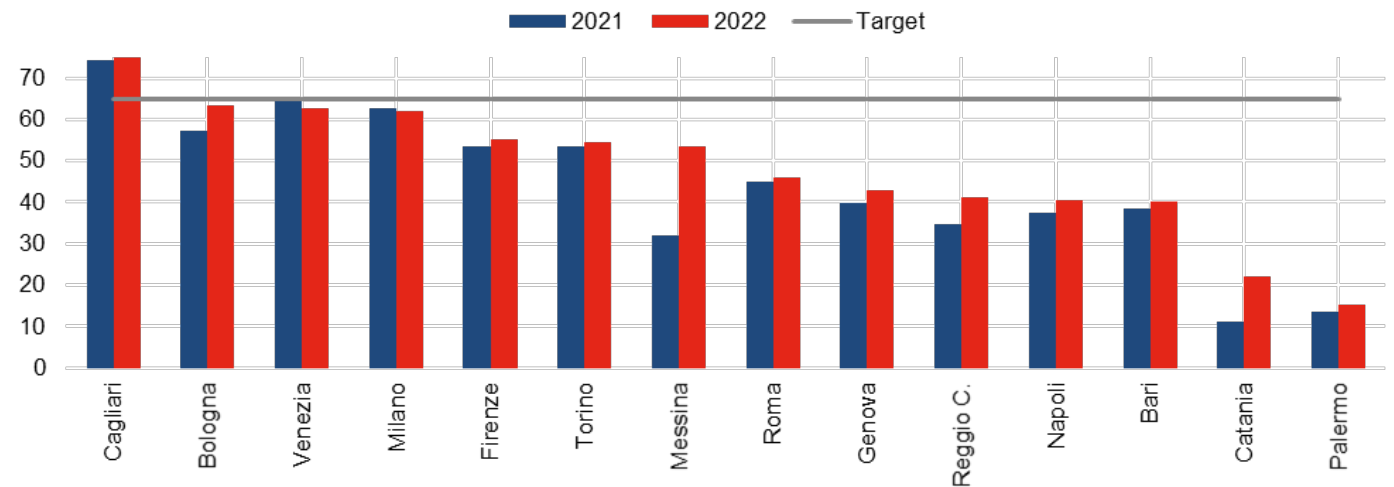
- Municipal waste generated (tonne, kg per capita)
- Separate collection of municipal waste (tonne, percentage, kg per capita)
- Separate collection of municipal waste by type of material (tonne, kg per capita e percentage composition)

# Istat - Urban environmental data survey – report 2024



Municipal waste generated in metropolitan and provincial capitals. Years 2019, 2021 e 2022, kg per capita

Separate collection of municipal waste in metropolitan capitals. Years 2021-2022, percentage



Data source: Istat processing on Ispra data

# Thank you for your attention!

[indicatoriambientali.isprambiente.it/it](http://indicatoriambientali.isprambiente.it/it)

[www.catasto-rifiuti.isprambiente.it/index.php?pg=](http://www.catasto-rifiuti.isprambiente.it/index.php?pg=)

[www.isprambiente.gov.it/it](http://www.isprambiente.gov.it/it)

<https://www.istat.it/it/>