

# Good practices of Collaboration within the EG Circular Economy

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- ISPRA National Centre for Waste and Circular Economy Key activities for circular economy
- ENEA Key activities for circular economy
- Joint ISPRA and ENEA activities
- The new structure of the Eionet Group and the integration of skills and knowledge to meet information needs
- The institutional involvement process
- Work carried out on the CE country profile

## ISPRA National Centre for Waste and Circular Economy key activities

**ISPRA National Centre for Waste and Circular Economy** carries out activities for the realisation of a comprehensive accounting system for waste. It also supports the national government and local authorities in the regulatory activities for planning actions to improve circular economy.

The **technical support** provided to the **Ministry of Environment (MASE)** includes:

- implementation and harmonization of **national and EU waste legislation** (i.e., End-of-Waste status, participation in EU Technical Adaptation Committee and Expert Groups on waste);
- monitoring of the **National Waste Management Programme** and implementation of the **National Strategy on Circular Economy**
- technical support for the **legal recognition of Extended Producer Responsibility systems**;
- support the Ministry in carrying out **supervision and inspection** duties of waste management facilities;
- provide support to central administrations and direct participation in the **implementation of the National Recovery and Resilience Plan (NRP)** and its complementary National Plan (NCP)
- support public administrations through **technical opinions** on waste matters and provide technical support to the Ministry in environmental **hearing procedures**.

## ISPRA National Centre for Waste and Circular Economy key activities

### Data analysis of waste management and generation;

- Population of **waste generation and management indicators both for municipal and non- municipal waste** , published annually in the “ Report on Municipal Waste” and “Report on waste from economic activities”. These indicators are also used to assess the achievement of recycling/recovery and disposal targets set at EU and national level.
- mapping of existing management plants;
- assessment of the **need for waste management facilities** in order to improve circular economy;
- annual monitoring **of the municipal management service costs and tax systems;**
- assessment of innovative **technologies for waste management;**
- technical support for the correct **classification and characterisation of waste;**

Head office and management of the online **National Waste Data Repository** established by law in 1988. It is organised in a **National Section**, at ISPRA, and in **Regional Sections** at the Regional and Autonomous Province Environmental Protection Agencies.

**ISPRA provided the National Section with a responsive website.** The Repository aims to provide a complete, constantly updated and easily accessible knowledge framework on waste. It contains comprehensive, freely searchable and downloadable databases, indicators on **municipal waste**, and **waste from economic /industrial activities** and the national list of companies authorized to manage waste. The **National Waste Data Repository** can be consulted online at the website: [www.catasto-rifiuti.isprambiente.it](http://www.catasto-rifiuti.isprambiente.it)

## ISPRA National Centre for Waste and Circular Economy key activities

Every year, the National Centre for Waste and Circular Economy publishes two reports that provide a detailed and up-to-date picture of the generation and management of municipal waste and waste from industry and economic activities in Italy. The aim of these reports is to promote the dissemination of reliable information relevant to making informed national and territorial policy choices on waste and the circular economy.



### The Municipal Waste report provides data on:

- ❖ municipal waste generation
- ❖ separate collection and management at national, regional and provincial level
- ❖ import/export
- ❖ packaging waste management
- ❖ municipal waste management service costs and tax system.

### The Waste from Economic Activities report provides data on:

- ❖ generation and management of non-hazardous and hazardous waste, at national and regional level;
- ❖ import/export;
- ❖ monitoring of specific waste flows (end-of-life vehicles, WEEE, end-of-life tyres, construction and demolition waste, waste treatment sludge, wastes from human or animal health care, asbestos waste)



## Reporting to the European Commission

EU waste legislation requires Member States to submit data to the European Commission. ISPRA, directly or in support of the Ministry, provides the required data, according to Eurostat methodologies, using data collected and processed annually, monitoring recovery and recycling targets for different waste streams.

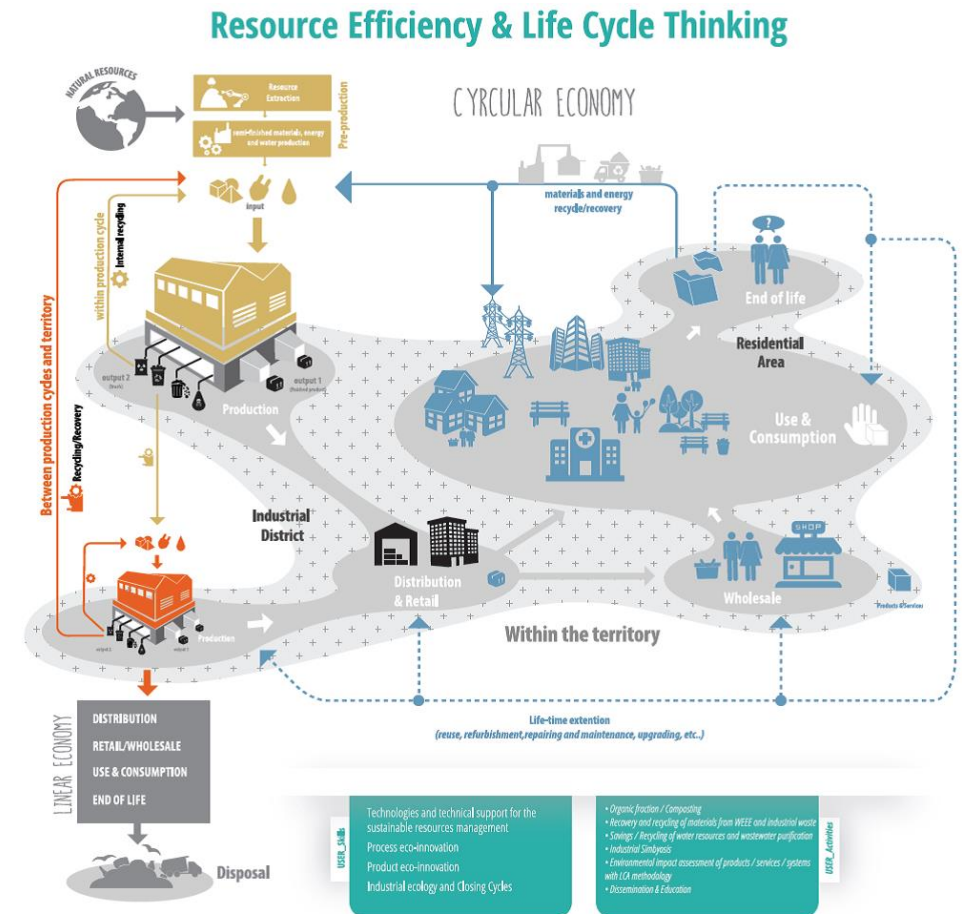
- ✓ **Waste statistics** in compliance to Regulation 2002/2150/CE (every two years)
- ✓ **Key waste streams annual reports** on:  
Packaging and packaging waste, End-of-life vehicles; Waste from Electric and Electronic Equipment (WEEE), Waste batteries and accumulators, Food waste and prevention, Waste oils, Municipal waste, Construction and demolition waste.
- ✓ More recently, some reporting obligations are also towards the EEA. ISPRA is in charge of transmitting data on **SUPD and Reuse reporting obligations**.

## ENEA Department for Sustainability and Climate Change adaptation Circular Economy key activities

ENEA supports Italy in the **transition towards new production and consumption models** based on sustainable supply and use of resources and on reduction of industrial emissions and social impacts.

**Closing the loops** is a mandatory goal to move towards a circular economy at different levels: production processes, industrial, urban and extra-urban areas.

The SSPT Department activities are part of the flagship initiative for a **resource-efficient Europe**, which promotes the shift towards a resource efficient and low-carbon economy to achieve a sustainable growth that creates economic opportunities, improves productivity, reduces costs and enhances competitiveness.



## ENEA Department for Sustainability and Climate Change adaptation Circular Economy key activities

### Product Eco-Innovation

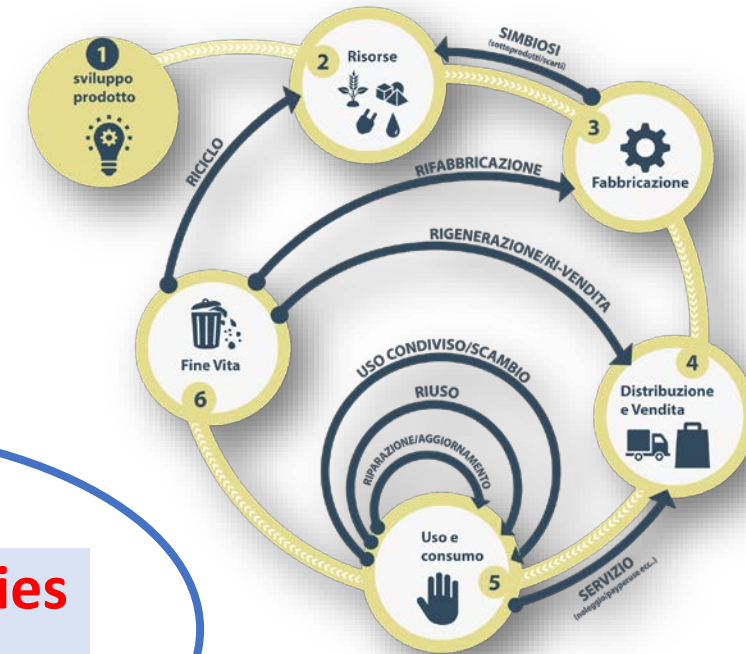
- Eco-design
- Life Cycle Thinking (LCT, LCA,...)
- Recyclability, durability, easy disassembly
- Raw Materials: nanomaterials, biomaterial, recycled materials, critical and hazardous raw materials substitution

### Process Eco-Innovation

- Low resource consumption
- Low energy consumption
- Low emissions
- Clean technologies

### System Eco-Innovation

- Industrial symbiosis
- Sharing economy (Remanufacturing, second hand products, from goods posses to services)
- Waste management
- Urban mining/landfill mining
- Reuse/Remanufacture/Recycling



**Many technologies  
One approach**



## ENEA Department for Sustainability and Climate Change adaptation Circular Economy key activities

### FOCUS ON CIRCULARITY INDICATORS/LCA

#### NATIONAL INITIATIVES AND PROJECTS

Indicators for circular economy measurement – [www.minambiente.it/notizie/documento-economia-circolare-ed-uso-efficiente-delle-risorse-indicatori-la-misurazione](http://www.minambiente.it/notizie/documento-economia-circolare-ed-uso-efficiente-delle-risorse-indicatori-la-misurazione) (Ministry of Environment and Ministry for Enterprises with ENEA support, 2018)



- Italian Life Cycle Assessment Database (BDI-LCA) (funded by PON GOV 2014-2020 in the framework of ARCADIA project)
- RECiProCo – ‘Realizzazione di strumenti e iniziative sull’Economia Circolare a vantaggio dei (Pro) Consumatori’ (2020-2022, funded by Ministry for Enterprises and Made in Italy)
- ICESP – WG3 ‘Instruments for circular economy measurement’
- UNI/CT057 – GL3 (TS 11820); ISO/TC 323 WG3 (ISO 59020)

## ENEA Department for Sustainability and Climate Change adaptation Circular Economy key activities

### FOCUS ON CRMs/SRMs

#### ONGOING RESEARCH ACTIVITIES

- Development of technologies for product innovation to CRM substitution
- Development of Additive Manufacturing technologies for CRM consumption reduction
- Development of process technologies for recovery/recycling of CRM from:
  - *end-of-life batteries*
  - *end-of-life photovoltaic panels*
  - *mobile phones*
- Development and implementation of pilot plants:
  - *ROME0 prototype for treatment of WEEE (i.e printed circuits boards)*
  - *PROTE0 prototype plant for treatment of end-of-life photovoltaic panels*

#### *Ongoing projects:*

- Acrobat (MUR, 2022-2024)
- Mission Innovation IEMAP (MASE, 2021-2024)
- EVERPV (Horizon Europe, 2023-2026)
- PORTENT (Lazio Region, 2021-2023)

## ENEA Department for Sustainability and Climate Change adaptation Circular Economy key activities

### FOCUS ON CRMs/SRMs

#### INTERNATIONAL INITIATIVES

EIT RawMaterials:

*ENEA founding member*

*ENEA coordinator of the EIT HUB created in the Puglia Region 'Regional Center Southern Italy – RCSI'*

European Raw Materials Alliance (ERMA)

European Battery Alliance (EBA)

#### NATIONAL INITIATIVES

National Working Table on Critical Raw Materials (initiative of Italian Minister for Enterprises and Made in Italy and Italian Minister for Environment and Energy Security):

*ENEA coordinator of WG3 'Ecodesign' and WG4 'Urban mining'*

National Phosphorus Platform (founded by Italian Minister for Environment and Energy Security):

*ENEA manager*

## Joint activities ISPRA and ENEA on circular economy

The Italian Circular Economy Stakeholder Platform (ICESP)

In May 2018, public institutions (ministries, municipalities), private associations and firms, research centers signed the charter to join the Italian Circular Economy Stakeholder Platform ([www.icesp.it](http://www.icesp.it))

### WORKING GROUPS (WGs)



ENEA and ISPRA on good practices



Exploitation in EIONET

The Italian Circular Economy Stakeholder Platform (ICESP)  
Good practices database (WG6)



The **aim** is to consolidate, also at a European level, the role of Italy as a key country for the promotion, implementation and dissemination of the high added value **circular strategies**, while increasing the **weight and representativeness** of our country in the **international community**.



The Good Practices Review aims to create a common, widespread and shared knowledge on the prospects and real application implications that the circular economy offers.

Thanks to the examples of companies that have created paths aimed at closing cycles and at prevention and enhancement of resources, it is possible to achieve a profitable replicability of successful cases already numerous in our Country



The **CRBP** took office in **May 2020**, held 3 meetings and started setting up the operational procedure and GP evaluation grid.

**Participants:** CDCA, Chimica Verde Bionet, CNA, ENEA, ENEL, **ISPRA**, IUAV, PVC Forum Italia, Radici Group



The **goal** is to **strengthen the current ICESP database** in terms of: **truthfulness; compliance** with ECESP criteria; completeness of information and good quality in terms of **usability and replicability**.



The **GPRC** verifies **compliance** with defined criteria, compiles checklist to request any additions to organizations to make the publication on ICESP/ECESP possible.

GP Revised (2024): 380

GP Published/in the process of publishing on ICESP: 240






GP Published/in the process of publishing on ECESP: 57

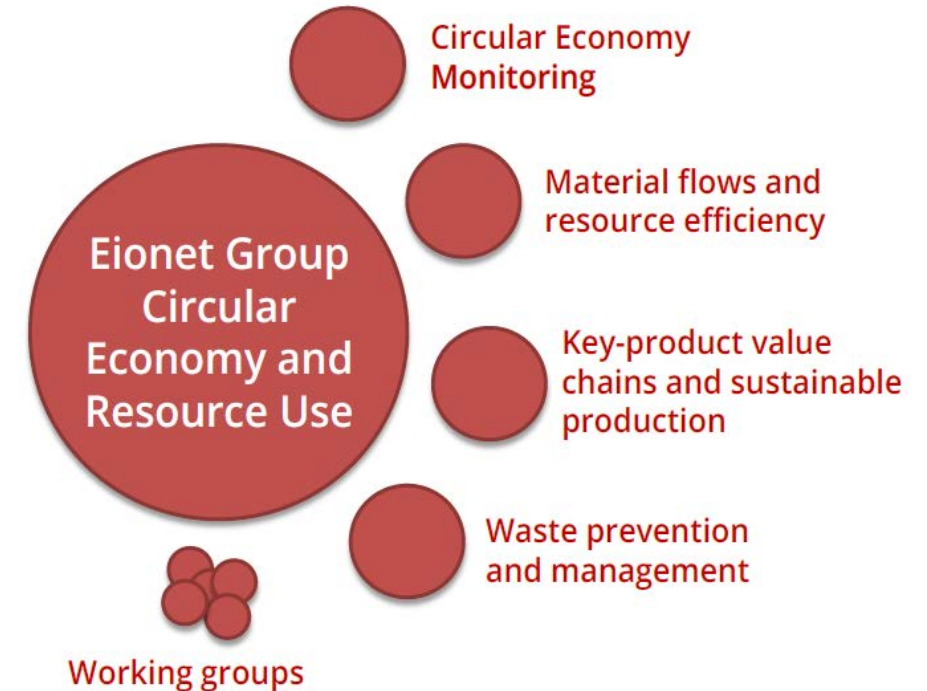
Requirements considered as basic principles:

- *Relevance for the circular economy;*
- *Completeness and clarity of information;*
- *Concreteness of the expected results;*
- *Educational and behavioral contribution / added value;*
- *Compliance with European publication rules.*

## The new structure of the Eionet Group and the integration of skills and knowledge to meet information needs

From the start of the new structure of the Eionet Group on Circular Economy and Resource Use, and its subgroups, the **intrinsic complexity** of the subject and the **vast scope of required knowledge** has highlighted the **need and opportunity** to broaden the collaboration to experts with **complementary expertise**.

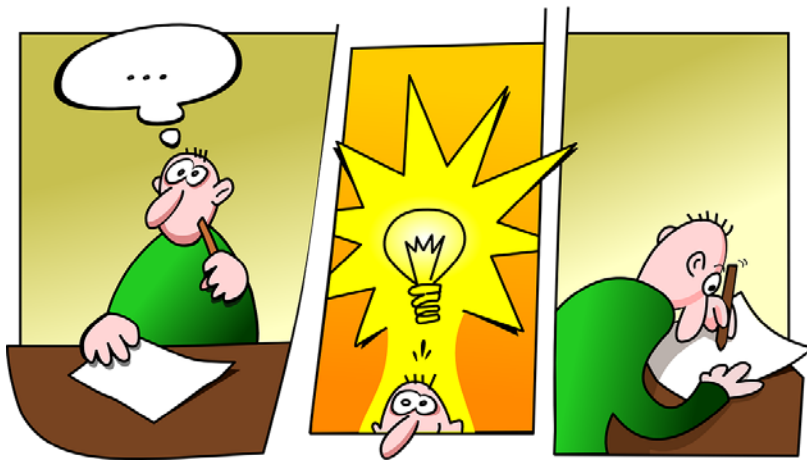
	<b>Circular economy monitoring</b>	For example, circular economy indicators and indicator systems, innovation in monitoring, circular economy related environmental, social and economic impacts
	<b>Key product supply chains</b>	For example, barriers and opportunities, technological and social innovation, circular business models, behavioural and consumption change, industrial transformation in selected key product value chains such as plastics, textiles, construction
	<b>Consumption</b>	For example, assessing environmental, economic and social benefits of reducing societal consumption, sustainable product policy, enabling circular business models, life-cycle thinking, innovation, enabling behavioural and consumption change
	<b>Waste</b>	For example, assessing progress towards waste prevention and waste management, including opportunities and barriers, and related economic and social benefits
	<b>Resource use</b>	For example, assessing environmental and climate impacts of resource use/materials, opportunities and barriers for reducing resource use, material footprints and consumption-based accounts



## The institutional involvement process

In choosing the right partner for the job, ENEA's **expertise that matched the needs** as well as **previous fruitful experiences of collaboration** between the two organisations were very important.

To establish **an active and stable collaboration**, the proper institutional levels were involved to make the collaboration official.







The collaborative work covered two CE country profiles 2022 – 2024

- First approach has been to create a **Teams group** for meeting and sharing documents between the EG Circular Economy working groups participants
- A **shared folder** has been created for the specific work to be done on the Country profile to facilitate **working in sync**
- **Tasks** to meet information needs were **assigned** to the various participants in the working groups after opinions sharing and mutual agreement.
- **A first revision** done by the EG Circular Economy Lead, to harmonise contributions sent to Ministry offices for **first approval**
- Subsequent revisions received from EEA teams are shared among all WG participants for review and approval.
- Final revision sent to Ministry offices for **final approval**.



**ISPRA**

Istituto Superiore per la Protezione  
e la Ricerca Ambientale



**ENEA**

Thank you!