

This project is co-funded by
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Technical Assistance for Assessment of Turkey's Potential on Transition to Circular Economy

EuropeAid/140562/IH/SER/TR

EU Member State policies and measures to advance the CE: Development of a Circular Economy Strategy in Italy

Romano Ruggeri - Sardinian Regional Environmental Protection Agency (ITALY)

Activity 1.2.1. Circular Economy Training
11th May - Antalya, Türkiye

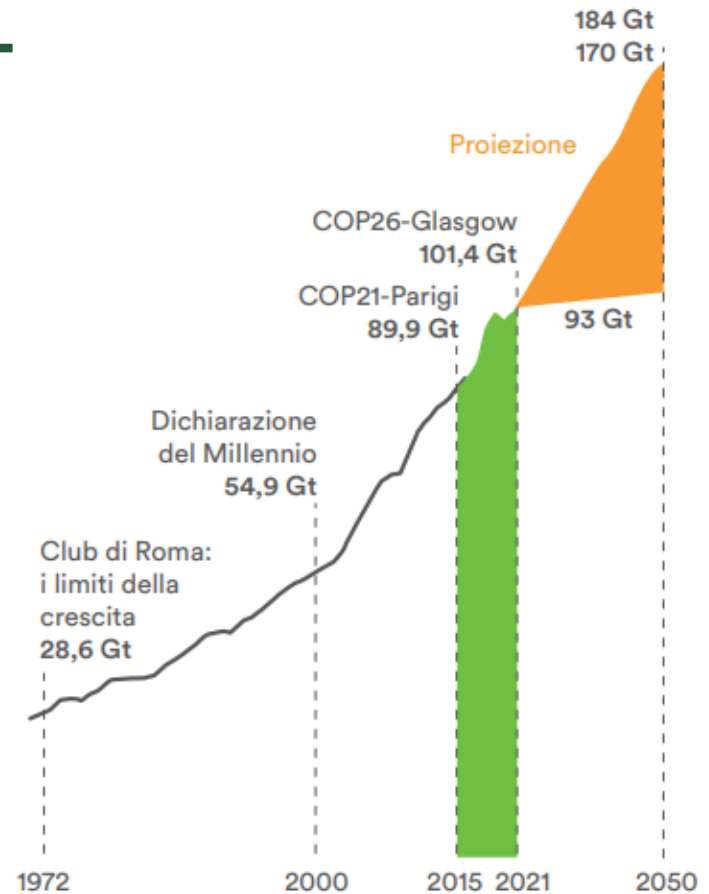
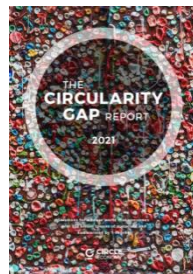
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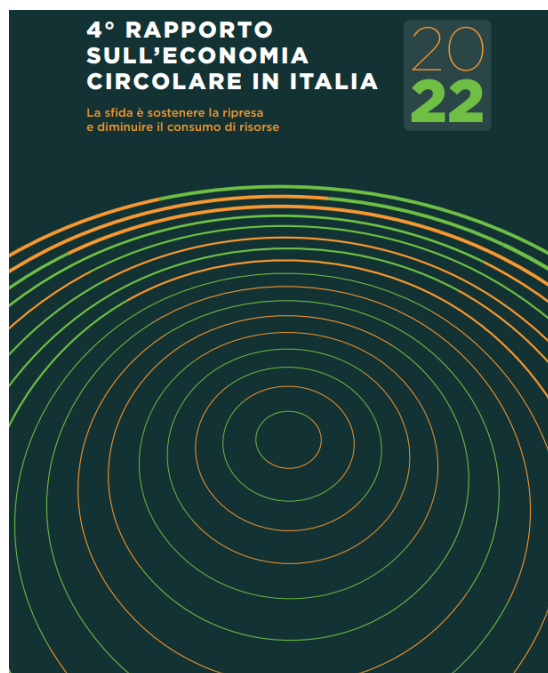
BACKGROUND

CIRCULARITY GAP REPORT

- ❑ From 2015 to 2021, the consumption of materials grew by about 13%, more than the population growth and just under the annual growth of World GDP.
- ❑ Between 2018 and 2020 the global circularity rate is dropped from 9.1% to 8.6%.
- ❑ In the business as usual scenario, by 2050 we will consume between 170 and 184 Gt of materials every year.



REPORT ON CIRCULAR ECONOMY IN ITALY



The Report 2022 presents the trend of the circular economy through the innovative application of indicators on the Bellagio Charter, a system of European monitoring of the circular economy.

This measurement contributes to objectives of the European circular economy action plan as it requires precise assessments of the progress of the circular economy.

IMPORT OF RESOURCES IN ITALY



Metals (+76% compared to 2020)

Imports in Italy are **consistent** and follow the trend of GDP, without decoupling.



Fossil fuel (72,6% of total imported material)



Biomass (negligible difference with 2020)

IMPORT OF MATERIAL IN ITALY (MT)

	2019	2020	2021
Minerals	-0.7	-0.8	-1.3
Metals	14	9.6	16.9
Fossil fuel	123.8	108.6	117
Biomass	32.3	28.1	28.4

THE EU CIRCULAR ECONOMY ACTION PLAN

The EU's transition to a circular economy will reduce pressure on natural resources and will create sustainable growth and jobs. It is also a prerequisite to achieve the EU's 2050 climate neutrality target and to halt biodiversity loss.



5 April 2022



European Commission adopted proposals for revised EU measures to address pollution from large industrial installations

- Revision of the Industrial Emissions Directive - [find out more](#)
- Revision of the European Pollutant Release and Transfer Register (E-PRTR) - [find out more](#)

30 March 2022

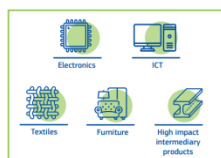


European Commission adopted package of measures proposed in the circular economy action plan

- Sustainable Products Initiative, including the proposal for the Ecodesign for Sustainable Products Regulation – [find out more](#)
- EU strategy for sustainable and circular textiles - [find out more](#)
- proposal for a revised Construction products Regulation - [find out more](#)
- proposal for empowering consumers in the green transition - [find out more](#)

Find out more about the package in the [press release](#).

EU CIRCULAR ECONOMY ACTION PLAN GOALS



Make **sustainable products** the norm in the EU (sustainable product policy initiative, IED recast, ecc)



Empower **consumers** and **public** buyers (right to repair, GPP ecc)



Focus on the **sectors** that use most resources and where the potential for circularity is high such as: electronics and ICT, batteries and vehicles, packaging, plastics, textiles, construction and buildings, food, water and nutrients



Less waste more value (EU-wide end-of-waste and by-product criteria, Revision of the rules on waste shipments, Targets)



Make circularity work for people, regions and cities

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THE ITALIAN STRATEGY

THE ITALIAN OVERALL STRATEGY TO PROMOTE CIRCULARITY



Green revolution and ecological transition - 59.47 billion

National strategy for circular economy

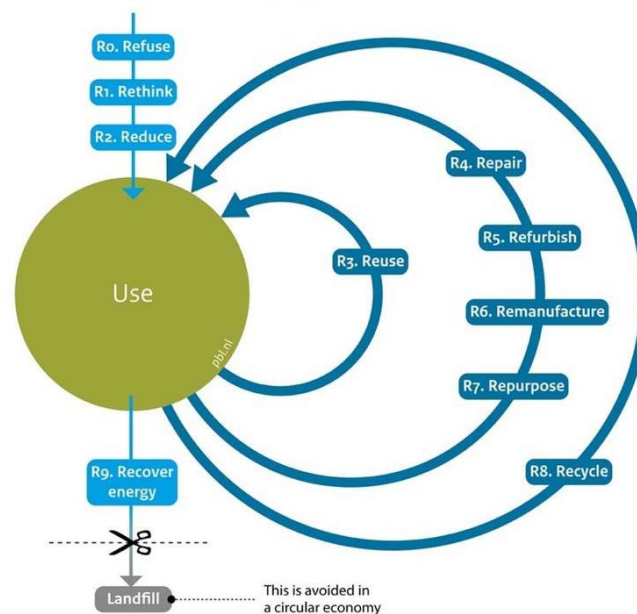
National Programme for waste management

National Programme for waste prevention



- Business support measures
- Waste legislation measures

RECOVERY AND RESILIENCE PLAN



RECOVERY AND RESILIENCE PLAN

INVESTMENTS

- Construction of new waste management plants and modernization of existing plants
- “Flagship” projects of circular economy

REFORMS

- National strategy for circular economy
- National Programme for waste management
- Technical support to Local Authorities

Mission 1



2,1 Bilions

RECOVERY AND RESILIENCE PLAN

Investments



- ❑ The Italian waste management system still **lacks** an adequate network of collection and treatment plants.
- ❑ Investments aim at improving the urban waste **separate collection** network, at the construction of new treatment / **recycling plants** for organic, multi-material, glass, paper packaging and at the construction of innovative plants for particular waste flows.
- ❑ Make up the **waste management gaps** relating to plant capacity and quality standards existing between the various regions and areas of the national territory, with the aim of catching up with the current and new objectives set by European and national legislation
- ❑ **No Landfills, MBT's, Waste incinerators !!!**

RECOVERY AND RESILIENCE PLAN

Flagship projects

Strengthen the separate collection network and treatment / recycling plants, contributing to the achievement of the following targets:



55 percent recycling of WEEE



85 percent of recycling in the paper and cardboard industry



65 percent recycling of plastic waste ("Plastic Hubs");



100 percent recovery in the textile sector through "Textile Hubs".

To support the measure and to achieve the objectives, a monitoring system will be developed which will make it possible to address issues of "illegal discharges" through the use of satellites, drones and Artificial Intelligence technologies.

RECOVERY AND RESILIENCE PLAN

Biomethane

Maximizing the energy recovery of organic residues. relevant element for achieving the European decarbonisation targets



Mission: Renewable energy. Actions for Biometahne

- i) converting and improving the efficiency of existing agricultural biogas plants towards the total or partial production of biomethane (to be used both in the industrial and residential heating and cooling sector and in the tertiary and transport sectors)
- ii) support the construction of **new plants** for the production of biomethane (contribution of **40 percent of the investment**);
- iii) promote the spread of **ecological practices** in the biogas production phase (centralized treatment of digestates and effluents with the production of fertilizers of organic origin);
- iv) promoting the replacement of obsolete and low-efficiency mechanical vehicles with methane / **biomethane-fueled vehicles**;
- v) improve efficiency in terms of heat use and reduction of emissions of existing small-scale agricultural plants

RECOVERY AND RESILIENCE PLAN



4,114
financing applications

for a total project
value of over
12 billion





**Beneficiaries:
Local Authorities**



RECOVERY AND RESILIENCE PLAN: TRANSIZIONE 4.0

INCENTIVE PROCEDURES: TAX CREDIT



**PROJECTS RELATING TO THE
TRANSFORMATION OF BUSINESS
PROCESSES ACCORDING TO THE
PRINCIPLES OF CIRCULAR ECONOMY**

- Sustainable products (reused, repaired, recycled)
- Industrial symbiosis (by-products, water cycle, thermal energy ecc)
- Recycling technologies: secondary raw materials
- Disassembly and / or remanufacturing technologies
- Technologies to monitor the product life cycle
- Product as a service business models

NATIONAL CIRCULAR ECONOMY STRATEGY

Strategia nazionale per l'economia circolare

Linee Programmatiche per l'aggiornamento

Documento per la consultazione

30 Settembre 2021



**INTERVENTION
AREAS**



MEASURES



To ensuring the widest participation in the definition of the new "National Strategy for the Circular Economy", the Ministry of Ecological Transition promoted a **consultation** on the programmatic contents of the strategy.

June 2002: Final approval

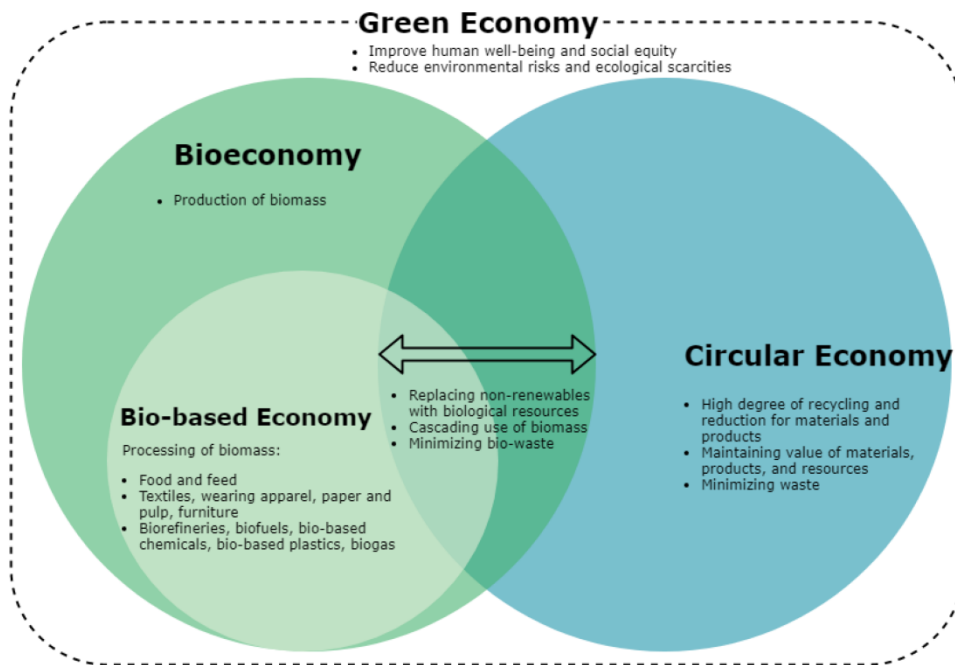
INTERVENTION AREA 1: ECODESIGN



It is necessary that in the conception and design phase appropriate preliminary assessments are carried out configuring possible market scenarios in order to evaluate the environmental and economic sustainability

Rely on **Life Cycle Thinking** approaches, applying standardized methodologies, which take into account the impacts generated throughout the entire life cycle of the product and not just focusing attention on the end of life.

INTERVENTION AREA 2: BIOECONOMY



Valorisation of organic waste generated by agriculture, forests, cities and industry (in particular the agri-food industry), through the production of innovative bio-based products such as bio-based chemicals, plastics and fertilizers.

Reuse of waste water for irrigation purposes.

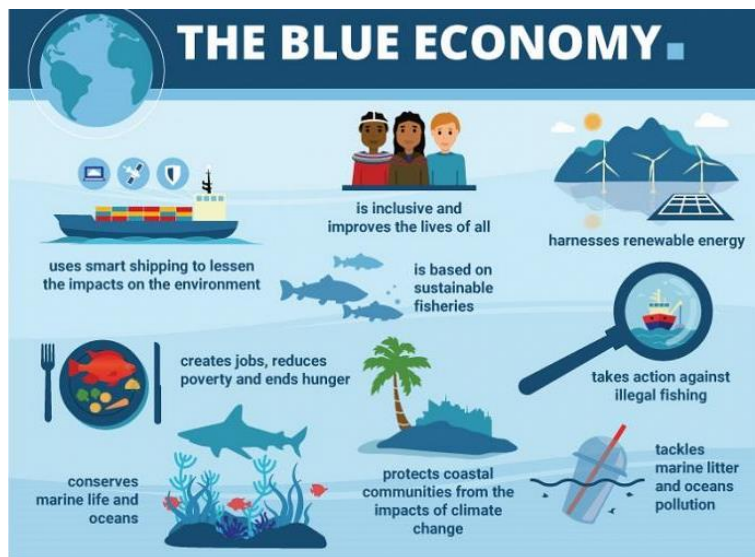
INTERVENTION AREA 2: BIOECONOMY



Production of energy and biofuels from biogas produced by the anaerobic digestion of by-products in plants integrated into the production cycle of an agricultural and / or livestock company or made by several entities organized in consortium form.

Composting to enrich the soils of lost nutrients and organic matter.

INTERVENTION AREA 3: BLUE ECONOMY



The blue economy counts over 880,000 employees, equal to 3.5% of the total national employment.

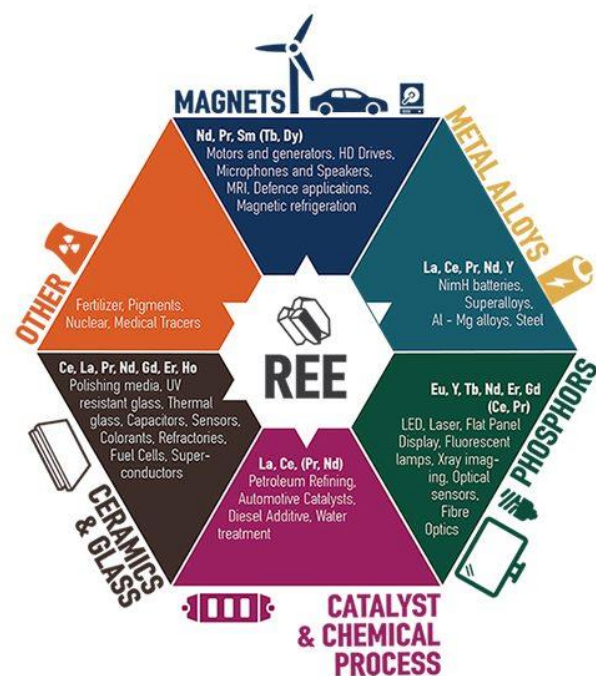
- ❑ **Ship-building** produces 7 billion euros;
- ❑ **Maritime transport** 8 billion euros;
- ❑ **Tourism** linked to the sea produces over 13 billion euros

- ❑ Intervene on the ports seabed without causing water pollution, but creating a real synergy between coastal and port tourism development, through the reuse of the excavated sediments to tackle the coastal erosion issue and enhance the revitalization of bathing activities.

INTERVENTION AREA 4: CRITICAL ROW MATERIALS

- ❑ Safe and sustainable supply of raw materials is an essential condition for a resilient economy, but also for promoting an ecological transition.
- ❑ Waste management increasingly focused on high-tech recovery and recycling.

1. Diversification,
2. Recycling
3. Internal supply

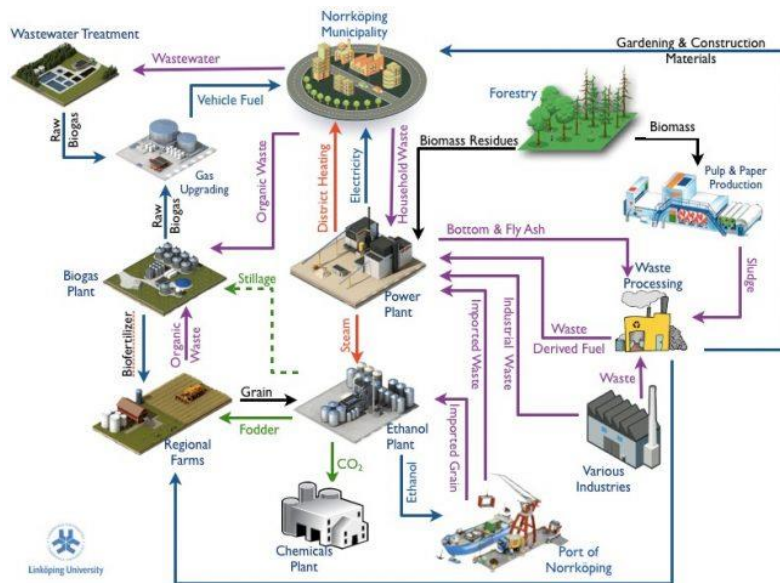


NATIONAL CIRCULAR ECONOMY STRATEGY

MAIN POINTS/MEASURES OF THE STRATEGY TO BE TARGETED BY 2030



INDUSTRIAL SYMBIOSIS



Industrial symbiosis: waste and other unused resources generated by industrial processes are **recovered to be used by another company**, generating a mutual benefit or symbiosis. The approach can lead to the optimization of industrial processes, including the creation of "**industrial districts**".

Companies are more competitive by taking advantage of access to cheaper resources, avoiding disposal costs and / or obtaining additional revenues from the sale of by-products.

Eco-industrial reconversion of the production areas and **tax incentives** (and disincentives) that can favor these paths.

INDUSTRIAL SYMBIOSIS ADVANTAGES



ECONOMIC ADVANTAGES: reduction of costs for the procurement of raw materials. Reduction of landfilling costs. Creation of new market opportunities.



ENVIRONMENTAL ADVANTAGES: optimization of the use of resources; mitigation of the pressure on the environment, resulting from the lower demand for raw materials and water, and emissions; avoid dispose of waste in landfills.



SOCIAL ADVANTAGES : increased employment ("green" jobs) and cultural change (sharing economy).

INDUSTRIAL SYMBIOSIS PLATFORM



The Symbiosis Platform, developed by **ENEA**, aims to bring together supply and demand for resources, energy, by-products, water, services and skills, and to activate the transfers between companies. The goal is to identify and relate, according to the principles of Industrial Symbiosis, the companies and operators present in the area



EXTENDED PRODUCER RESPONSIBILITY



Extension of the responsibility of the producer of the products to take charge of the product once it has reached the end of life.

Product producers have the financial or **financial and operational responsibility** for managing the phase of the life cycle in which the product becomes waste, including separate collection, sorting and treatment operations.

Developing EPR schemes for those types of products not yet subject to EPR.

A critical aspect is related to the **return / collection** of waste after the use of the products

NEW CONSUMPTION MODELS

Set up a "National Environmental Education and Communication Plan "

- ❑ Environmental communication /education: aware and informed citizens capable of consciously influencing their choices on the various economic-productive and social mechanisms of the country.
- ❑ Promote the knowledge of recognized labels (social and environmental, e.g. Ecolabel)
- ❑ Incentivize, including fiscally, repair activities and those that share products and services.



GREEN PUBLIC PROCUREMENT



In Italy, the public purchasing market is worth about 10% of GDP.

AUTHORITY



Decree no. 50/20216: obligation was introduced, for public tenders of any amount to apply “contractual clauses” contained in the **Minimum Environmental Criteria (CAM)**.



Prescribe e.g. a minimum content of recycled material for different types of products or materials, or a reduction in the use of hazardous chemicals or, again, a reduction in waste production.

GREEN PUBLIC PROCUREMENT



18 CAM product categories -
Decreets of the Ministry of
Ecological Transition (e.g.:
Furniture, construction and
renovation of buildings, textile
products, catering ecc).



- Accelerate the **CAM updating procedures** to take into account the technological evolution of the sector;
- Strengthen the **technical capacity** of public contracting authorities;
- Encourage investments by businesses (especially **SMEs**) to improve the environmental performance of their products and services;
- Strengthen **training initiatives** aimed at businesses.

TRACEABILITY OF MATERIALS AND WASTE



Guidelines on environmental labeling of **packaging**



RECER: Database for End of Waste permits



R.E.N.T.Ri
Registro Elettronico Nazionale
sulla Tracciabilità dei Rifiuti

RENTRI: National Electronic Register for the Traceability of Waste. Digitization of all paper documents relating to the handling and transport of waste



RECer and RENTRI meeting point between ecological and digital transition. They are also the meeting point between the needs of the **public administration** (control, traceability, legality) and **businesses** (simplification, streamlining of procedures and certainty of regulations).

ACTIONS PROPOSALS



GENERAL OBJECTIVE A.
Closing cycles along the value chain of
products and materials



GENERAL OBJECTIVE B.
Efficient use and management of resources in
urban, industrial and local areas

ACTIONS PROPOSALS: OBJECTIVE A



A.1 Provide **tools and services** to support businesses, in the implementation of technologies, methodologies and approaches aimed at the circular transition (technologies and methods for the use and efficient management of resources, product eco-innovation)



A.2 Implementation of tools for sustainable consumption (including **communication** and awareness tools)



A.3 Support for the industrial symbiosis project through adequate **regulatory and financial** instruments



A.4 Provide **tax incentives** to support recycling activities and the use of secondary raw materials (review of the environmental taxation system for waste in order to make recycling more convenient than landfilling)



A.5 Reform of the EPR system in order to support the objectives of the EU (promotion of EPR systems for non-packaging materials - **plastics, textiles, bulky**)



A.6 Actions **training** for enterprises

ACTIONS PROPOSALS: OBJECTIVE B



B.1 Improve waste management and implement the circular economy paradigm in cities

- B1.1 "Construction of new treatment and **recycling plants** and technical improvement of existing ones"
- B1.2 "**Digitalization** and improvement of the separate waste collection system"
- B1.3 Support new "**pilot projects**" for the collection, treatment and recycling with high innovative content in the WEEE, paper and cardboard, plastic waste, textile sectors



B.2 Achieving a sustainable **agri-food chain**, improving the competitiveness of farms and their climate-environmental performance, strengthening the logistic infrastructure of the sector, reducing greenhouse gas emissions and supporting the spread of precision agriculture

NATIONAL WASTE MANAGEMENT PROGRAMME



Sets the macro-objectives, defines the criteria and strategic lines to which Regions will have to follow in the preparation of waste management plans. A national update of the waste installations is also offered.

NATIONAL WASTE MANAGEMENT PROGRAMME



- 1) Reduce the **gap in waste infrastructure** among different regions, socio-economic rebalancing, principles of self-sufficiency and proximity;
- 2) Ensure the **achievement of the objectives** of prevention, preparation for reuse, recycling and recovery of waste and reduction of disposal, also taking into account the extended producer responsibility (EPR) regimes for the waste produced;
- 3) Optimize the infrastructural system through regional planning based on the complete traceability of waste;
- 4) Promote waste cycle management that substantially contributes to the achievement of **climate neutrality** objectives.

OTHER FINANCING MEASURES: FUND FOR SUSTAINABLE GROWTH



Research and development projects in the context of the circular economy, in order to promote the conversion of production activities towards a circular economy model.



- Smart packaging
- Industrial symbiosis
- Waste treatment and transformation
- Innovative technological tools able to increase the life time of the products
- Systems for the rational use and sanitation of water
- Selection of the multi-light material



Financial concessions and non-repayable contributions

RECYCLED OR REUSED PRODUCTS



Contribution of **25%**, in the form of a **tax credit**, in relation to the purchase of semi-finished and finished products deriving for at least **75%** of their composition from the **recycling** of waste or scrap, as well as the quality compost deriving from the organic fraction of the waste.

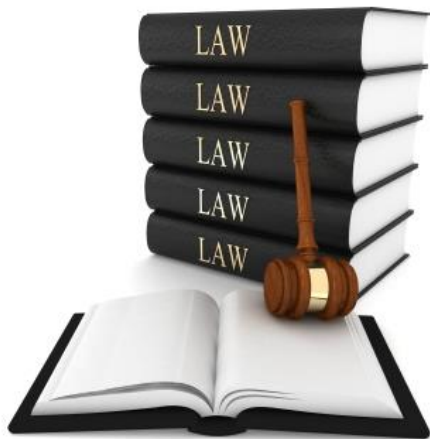
Contribution of **36%**, in the form of credit tax, of the costs incurred for the purchase of **recycled products** and **packaging**.

TEXTILE SECTOR



Non-repayable contributes for businesses in order to carry out projects inspired by the principles of the circular economy aimed at the recycling of materials used or the use of fabrics derived from renewable sources.

OTHER LEGISLATIVE MEASURES



- ❑ Directive on single-use plastics transposed
- ❑ Fee of 0.45 euros per kilogram of plastic (excluding that generated by recycling and compostable bioplastics) used for containers and packaging with single use (postponed to 2023)
- ❑ Return with deposit systems as well as systems for the reuse of packaging
- ❑ End of waste decrees in place

THANK YOU

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