

# ESPON seminar // Territorial perspective of green industrialization

Territorial evidence

SDG & green industrialization

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# The challenge of green industrialization in IT



**How Green Industrialization fits in the SDG?**

# The Italian background

- ✓ Italian economy is based on manufacturing, and it is very energy consuming due to relatively high-carbon sectors like tourism and manufacturing
- ✓ According to EUROSTAT (2023) Germany recorded the highest value of sold production, equivalent to 27 % of the EU total, followed by Italy (16 %), France (11 %), Spain (8 %), Poland (6 %) and the Netherlands (4 %). The other 21 EU Member States contributed with smaller shares (less than 4 %)
- ✓ awareness and appetite for greening the economy is strong

# Main Policy Acts

**2017** - National Sustainable Development Strategy 2017-2030 (NSDS)- Assuming the UN SDG2030

**2019** - the Integrated National Energy and Climate Plan with the target of a 33% reduction in greenhouse gases and a 30% share of renewables by 2030

**2021** - PNRR Italian Recovery Plan (Piano Nazionale di Ripresa e Resilienza) The Italian Next Generation EU Recovery Plan

# The Italian UN Agenda SDG 2030 (2017) is composed of 5Ps **core areas:** People, Planet, **Prosperity**, Peace and Partnership, with a set of National Strategic Choices

## Prosperity



# Integrated National Energy and Climate Plan (2019)

## key objectives

- 1) transition from traditional fuels to renewable sources by the gradual phasing out of coal for electricity generation in favour to electricity mix based on renewables;
- 2) Reducing greenhouse gases (phase out of coal, higher CO2 price, acceleration of renewables and energy efficiency in manufacturing process level)
- 3) mix of fiscal, economic, regulatory and policy instruments to ensure an energy efficiency
- 4) becoming less dependent on imports by increasing renewable sources and energy efficiency and diversifying sources of supply (natural gas, including liquefied natural gas (LNG))
- 5) ensuring market integration and development of processes, products and knowledge for the use of renewables, energy efficiency and network technology.



## Target Year 2030

- 1) Reduction in GHG for all non-ETS sectors by 33%
- 2) To increase the share of energy from RES in the gross final consumption of energy for heating and cooling by +1.3% per year (indicative)
- 3) To increase the share of energy from RES in the gross final consumption of energy in the transport sector by 22%
- 4) To increase the share of energy from RES in the gross final consumption of energy by 30%



# Italian Recovery Plan and green investments (2021)

## Circular Economy

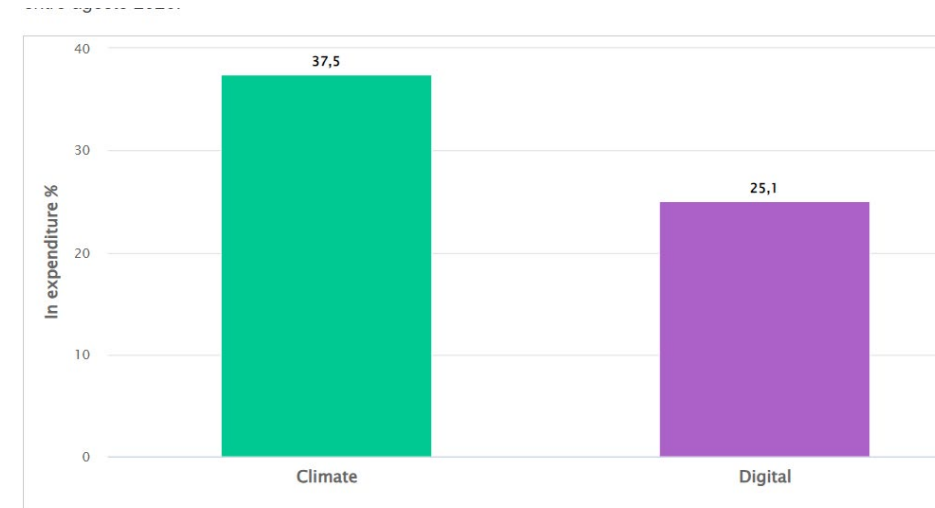
- **Recycling**
- Design for **durable** products
- **Lengthening plants life** (retrofitting o revamping)
- Promoting **Urban regeneration**
- **Ecodesign**

## Environment protection

- Protection of **Biodiversity**
- Riduction of **fertilizers and pesticides**
- **Carbon footprint** reduction
- Innovation and greening in **building sector**

## Efficiency

- Improving **production efficiency** to reduce emissions and energy consumption
- Increasing use of **renewable energy** sources
- Improving **electrification of urban mobility and logistic**

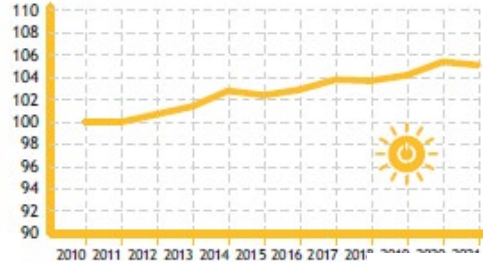




# SDGs Progress in Italy

## GOAL 7

Assicurare a tutti l'accesso a sistemi di energia economici, affidabili, sostenibili e moderni



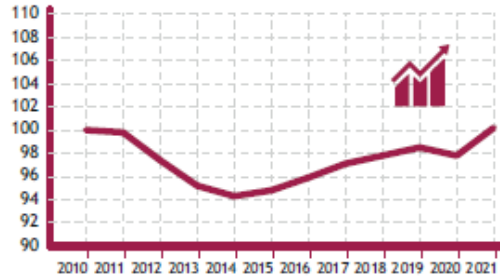
## GOAL 9

Costruire una infrastruttura resiliente e promuovere l'innovazione ed una industrializzazione equa, responsabile e sostenibile



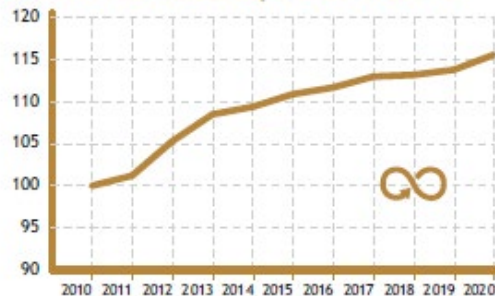
## GOAL 8

Incentivare una crescita economica duratura, inclusiva e sostenibile, un'occupazione piena e produttiva ed un lavoro dignitoso per tutti



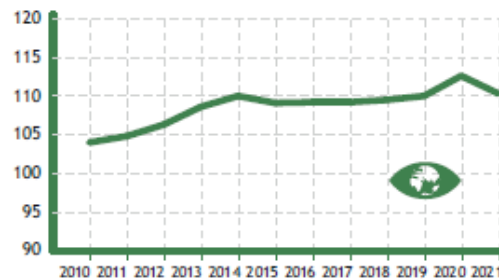
## GOAL 12

Garantire modelli sostenibili di produzione e di consumo



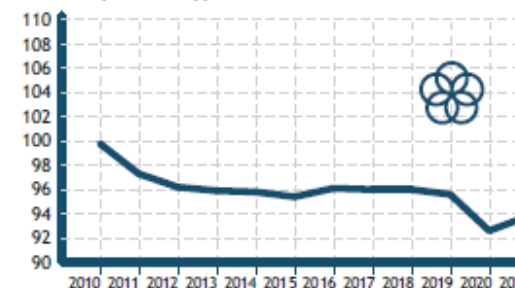
## GOAL 13

Adottare misure urgenti per combattere il cambiamento climatico e le sue conseguenze



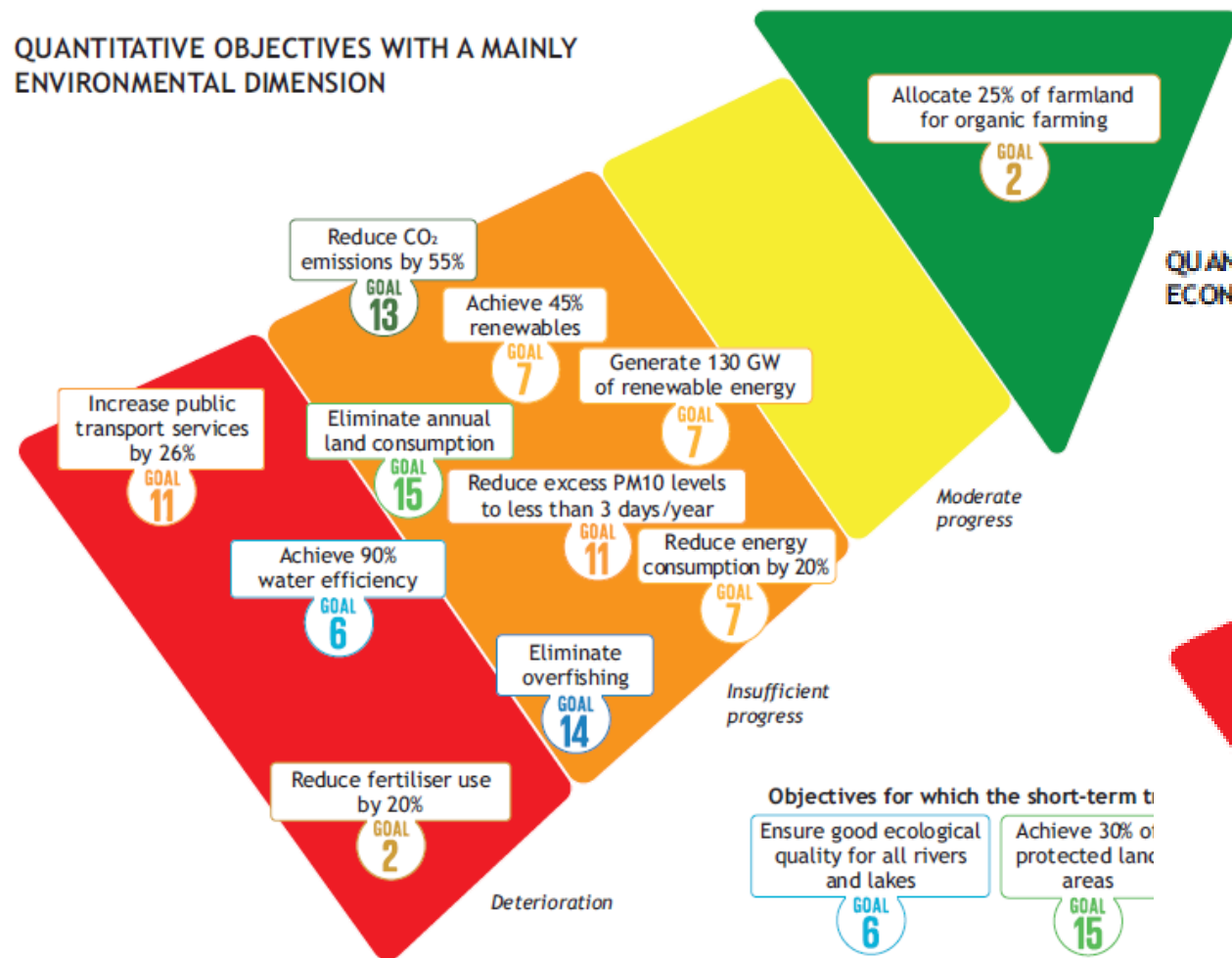
## GOAL 17

Rafforzare i mezzi di attuazione e rinnovare il partenariato mondiale per lo sviluppo sostenibile



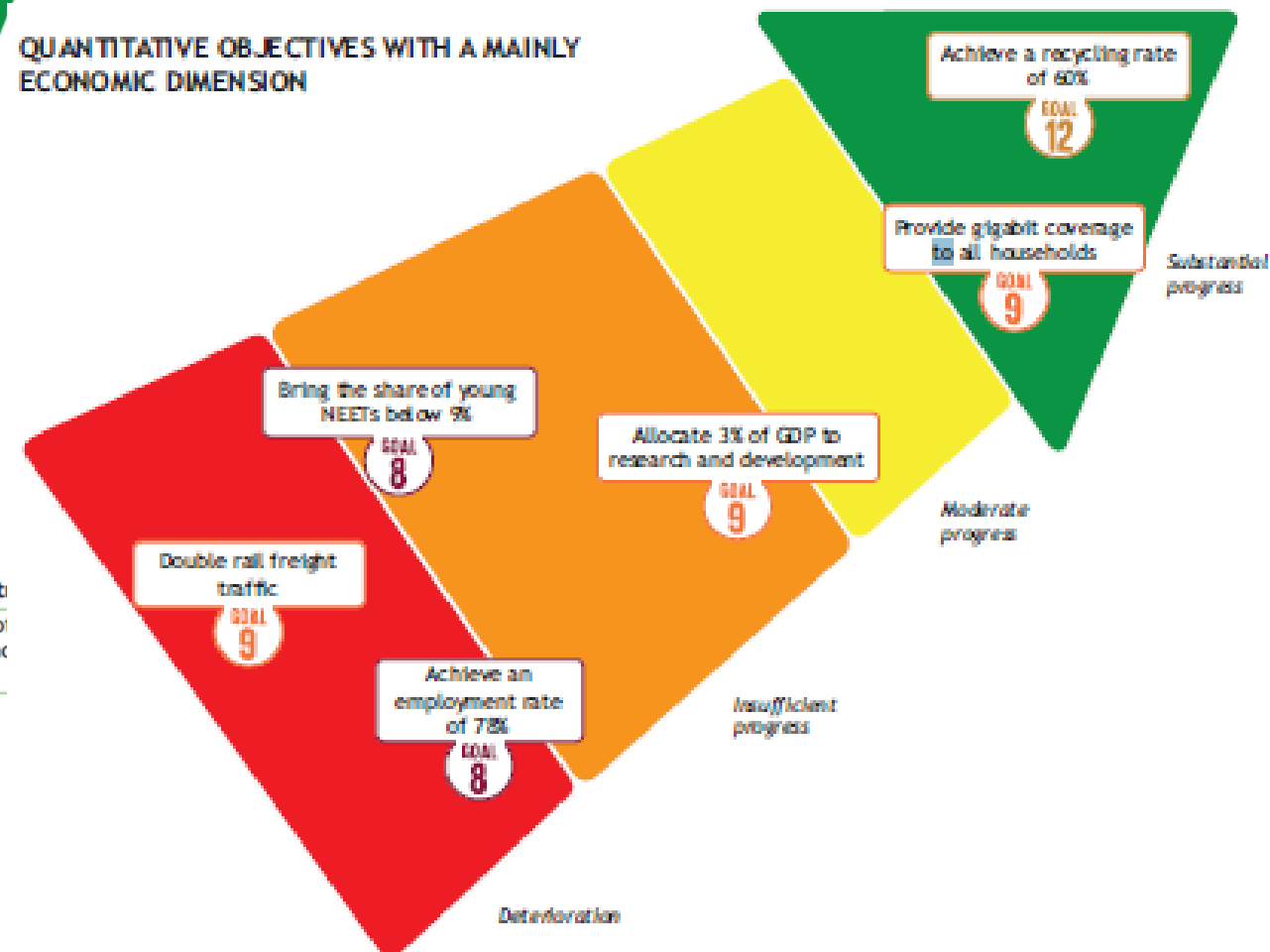
# SDGs Progress in Italy: Environmental dimension

QUANTITATIVE OBJECTIVES WITH A MAINLY ENVIRONMENTAL DIMENSION

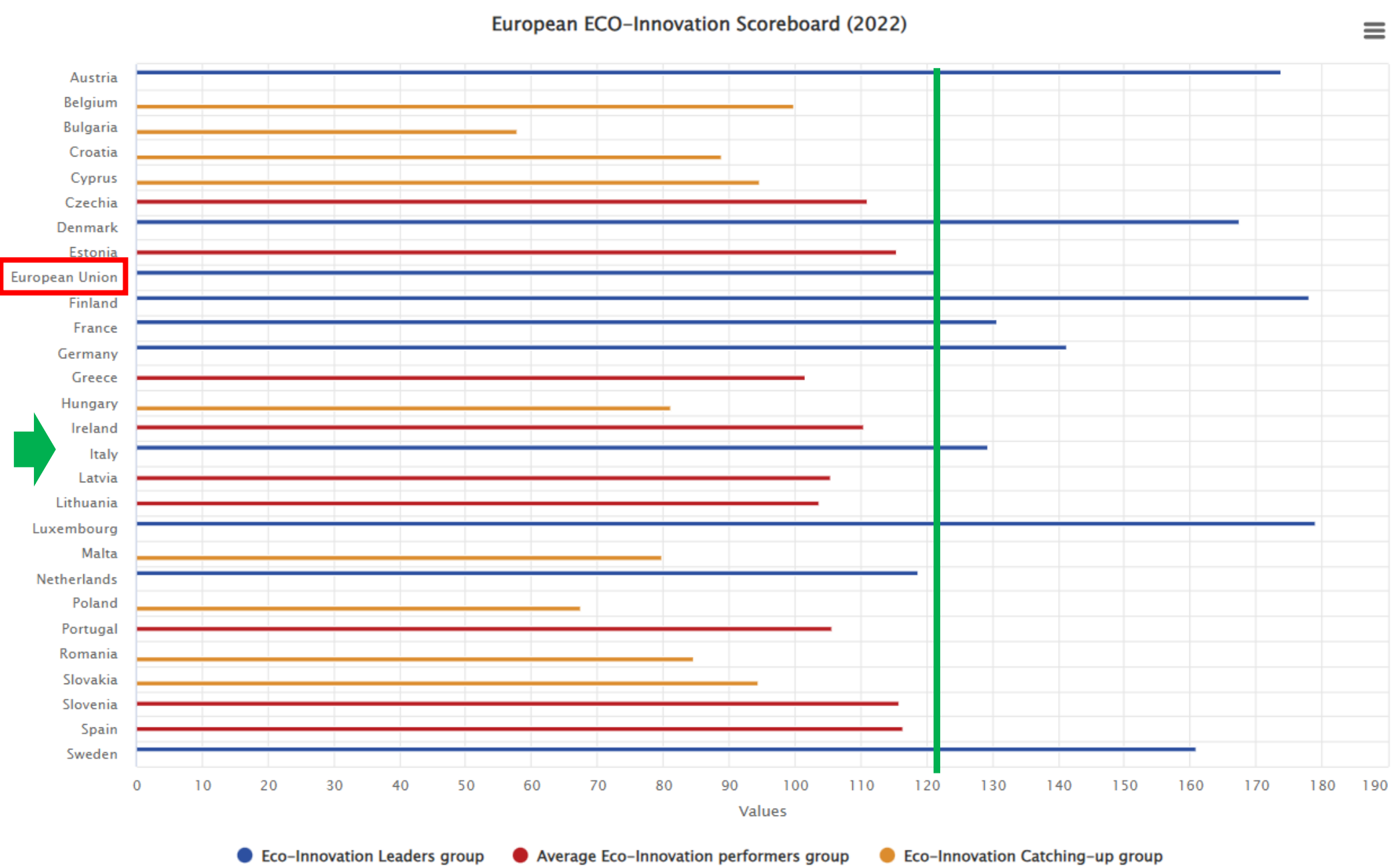


## Economic dimension

QUANTITATIVE OBJECTIVES WITH A MAINLY ECONOMIC DIMENSION



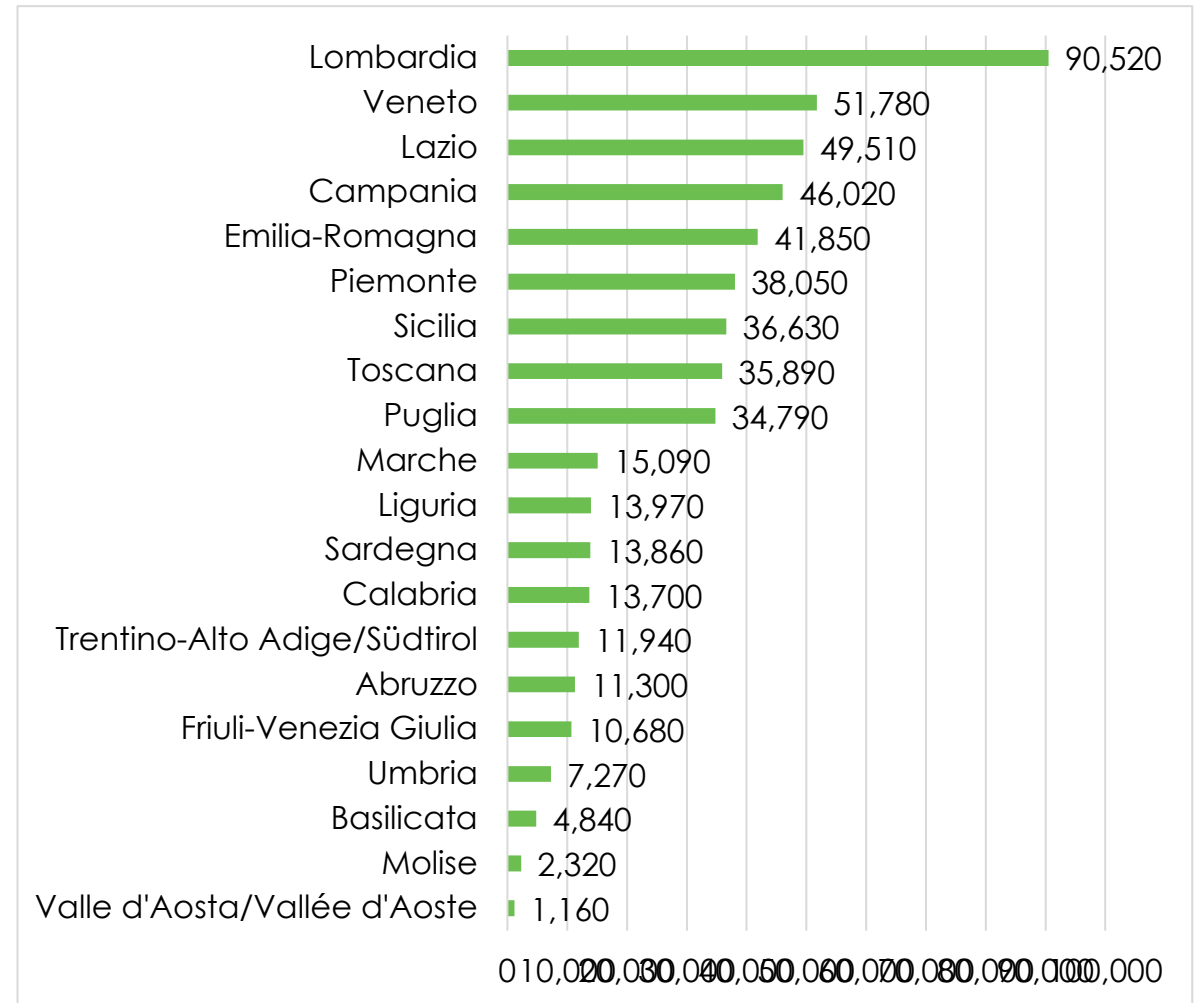
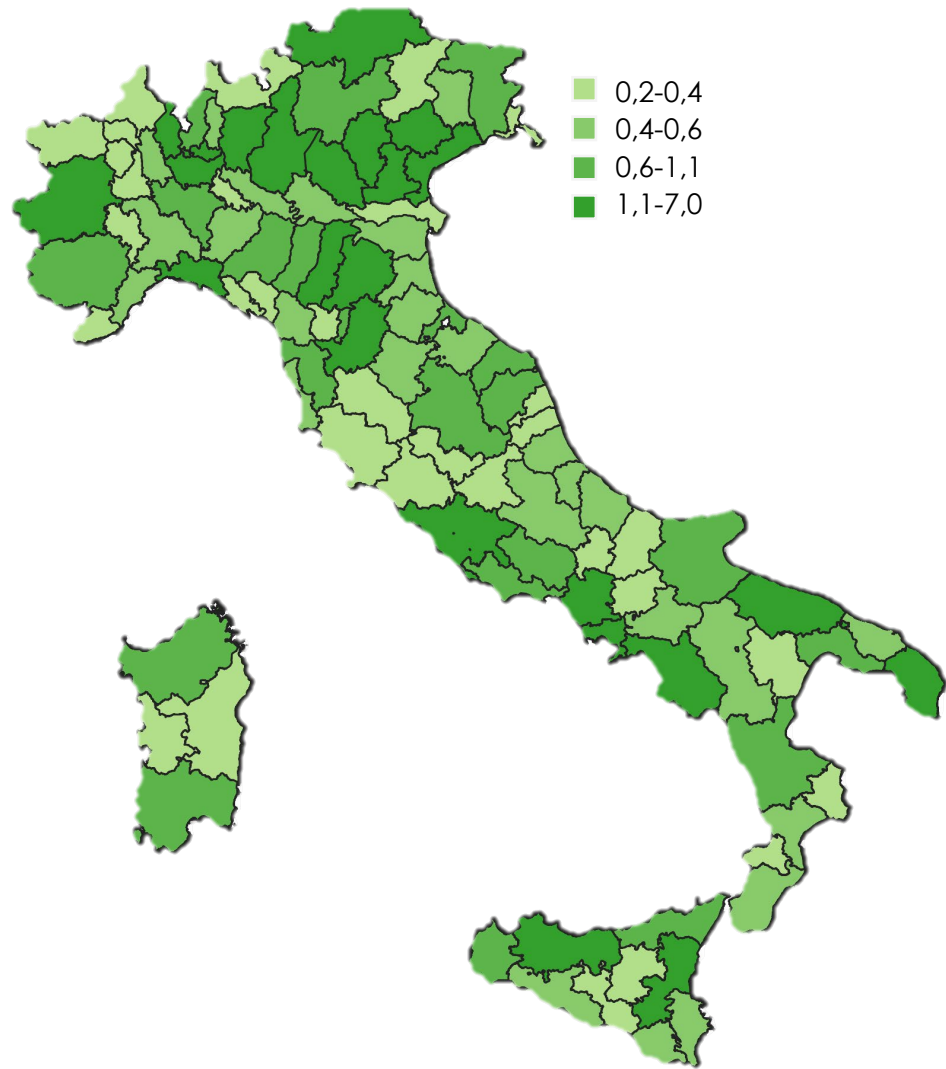
# Positioning of Italy according to the Eco-Innovation Index...



# Green Jobs in Italy

- ✓ Significant increase in green jobs in the last decade; at present there are around 3 million green jobs (13,4% of total jobs)
- ✓ A great support have been fostered by the government's incentives for eco-investments and youth employment addressing in particular the agro-business and renewable energy sectors of the recent years
- ✓ Many job platforms providing information on green jobs and green skills development (e.g.: [greenjobs.it](http://greenjobs.it), open innovation RL for enterprises)
- ✓ No national strategy addressing specifically green jobs creation, but there are estimates that Implementing the Integrated Energy and Climate plan will create 117.000 temporary jobs each year until 2030
- ✓ Green job creation and inequality issues (concerning gender, youth and the South) are mentioned in the PNRR (National Recovery and Resilience Plan), that includes a commitment on industrial conversion from brown to green.

# Geography of GREEN ENTERPRISES

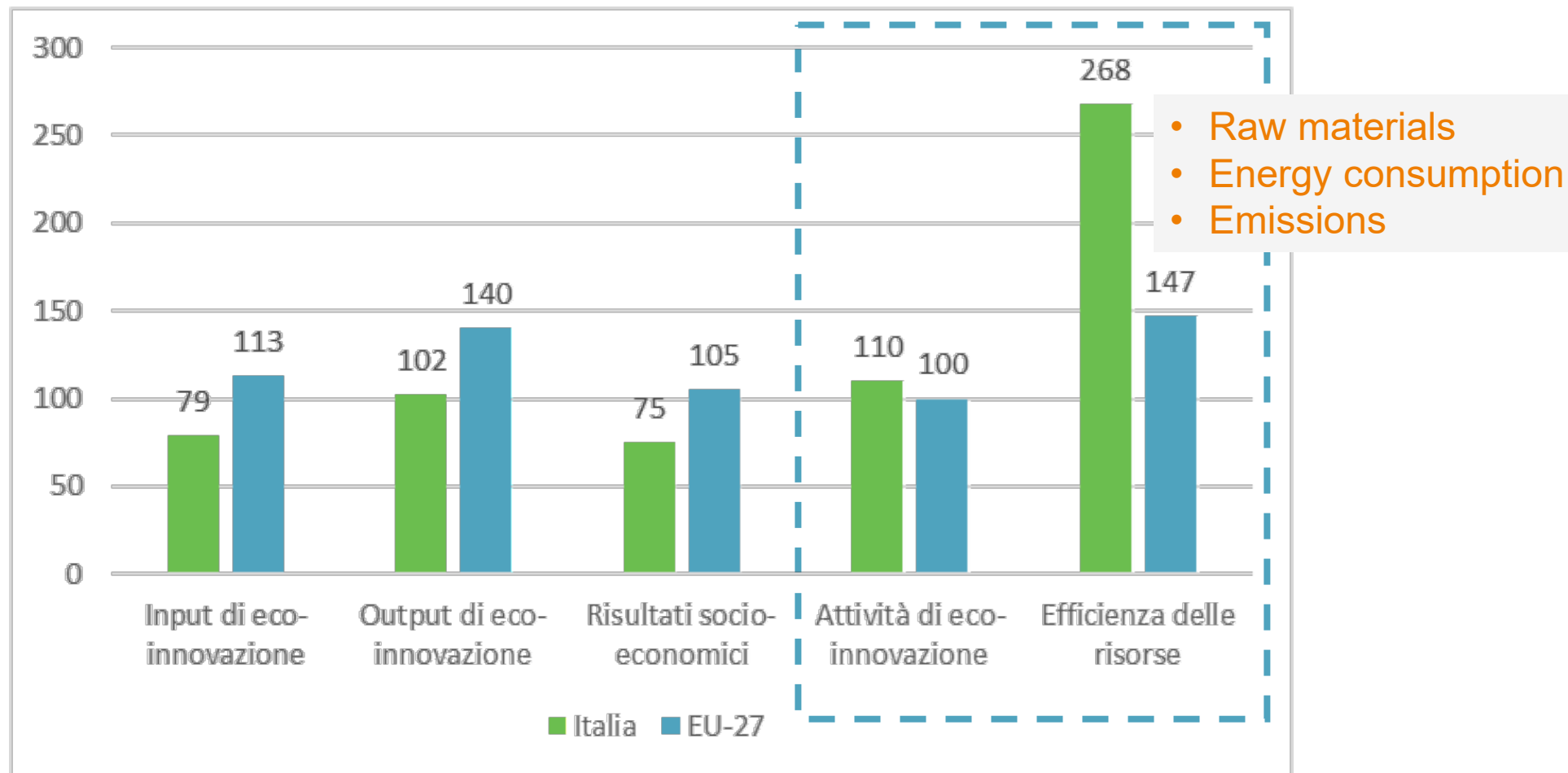


**GREEN ENTERPRISES IN ITALY**  
(2017-2021) tot. 531,170

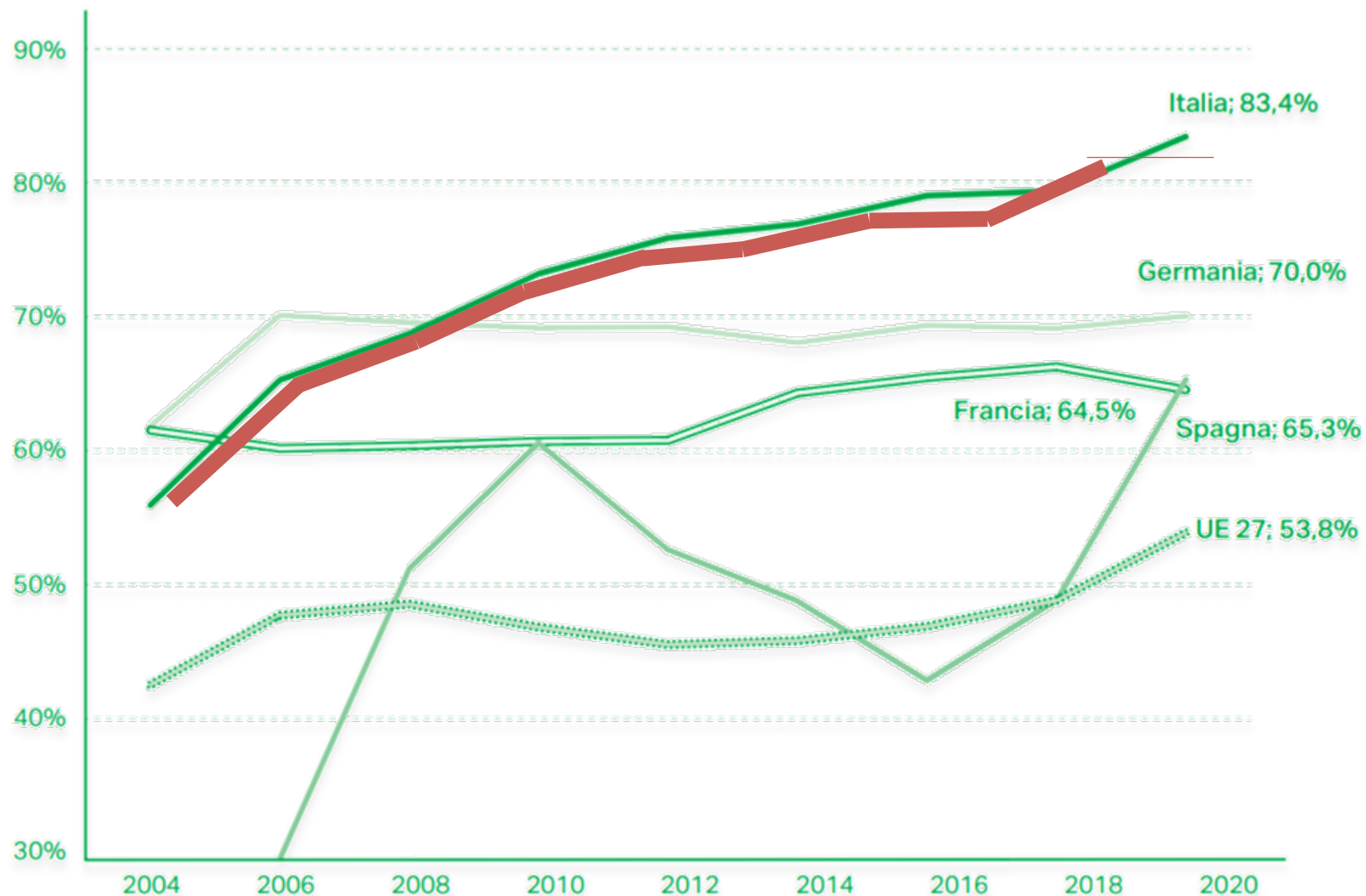
Source: Unioncamere – Fondazione  
Symbola – GreenItaly 2022

# ... The strength is resources efficiency

Five dimensions of eco-innovation index in IT and EU 27 - 2021



# Italy is leader in waste recycling: 83,4%





# Lombardy case

## Background

**Industrial sectors** with high emissions are responsible for **71% of total greenhouse gas emissions** in Lombardy and **involve 44% of the region's employees**. Workers employed in economic sectors mainly impacted in the decarbonization process are over 2.5 million, out of a total of 4.5 million. Three provinces (Milano, Brescia e Bergamo) imply about 60% of the total workers and are subject of 42% of the total emissions in Lombardy. In the metropolitan area of Milan about 700,000 people work in high-emitting and energy-intensive sectors. Other provinces, mainly involved in agricultural production with the highest unit emission intensity, represent a factor with a high level of vulnerability.

## Main policy Acts

- ✓ (2022) Regional Program for Energy, Environment and Climate PREAC Programma Regionale Energia, Ambiente e Clima
- ✓ (2021) Regional Strategy for Sustainable Development (17 UN SDGs) Strategia Regionale per lo Sviluppo Sostenibile
- ✓ (2019) Regional law for urban regeneration and rehabilitation (RL n. 18/2019)

# PREAC (2030-2050)



## Main target

It aims to **reduce climate gas emissions to 43.5 million tons by 2030, which means a 43.8% reduction compared to 2005 levels**. In addition to the target for reducing climate-changing emissions, the aim is to **reduce energy end-use consumption by 35.2% and to produce energy from renewables for 35.8%** of final energy consumption.

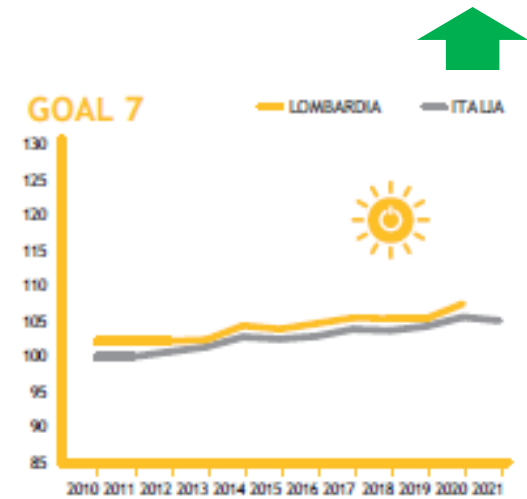
# Planning and land use



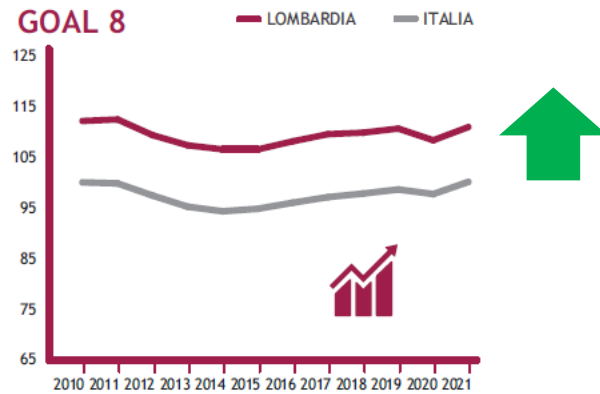
## Aims

Lombardy is the first region for derelict areas and brownfields in IT, mainly located in the metropolitan area of Milan and in Brescia province. **They amount is about 5,000 ha (underestimation)**. The Regional Law for urban regeneration and rehabilitation (RL n. 18/2019) supports recovering and reconversion of abandoned and derelict areas in **Urban plans as first choice to avoid new land taking for settlements**

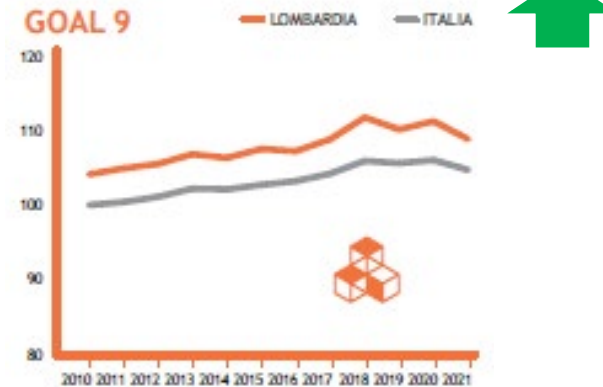
# SDGs Progress in Lombardy (eco-investment are 36% of IT)



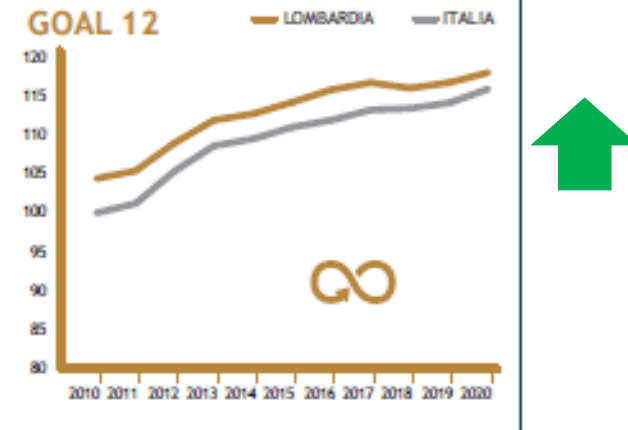
(Goal 7) between 2012 and 2020 increasing of renewable resource energy (+2,0%) and energy efficiency (+4,8%)



Increased GDP and decreased of on-the-job injuries (-3,3%), In 2021 increased jobs but less compared to 2019 (-2,9%). Increased of the NEET between 2019 and 2021 NEET (+3,7%);



Increased broadband territorial diffusion (+34,2%) and knowledge workers (+5,8%). Decreased commuters in the last two years (-36,9%);



Increased waste sorting in urban areas (2010-2020) (+24,8%) reduction of waste pro-capita production (-6,1%)

## **Green industrialization as part of the solution for global challenges. What could it mean?**



**Circular Economy is the must  
A Comprehensive and customized  
approach to Circular Economy is needed**



**Green industrialization as a “creative”  
issues  
Considering new parameters/indicators  
more qualitative oriented**





**Thank you for your attention!**

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