



Co-funded by  
the European Union

# TOWARDS A CIRCULAR ECONOMY ROADMAP OF NORTH MACEDONIA

Prioritisation meeting, Skopje, 26 September 2023



# Main features

**Support for design** of circular economy (CE) roadmaps as a basis for CE transition.

**Support for implementation** of CE roadmaps for WB economies, through different capacity building activities.

**Consultation process with key stakeholders**, including the government, private sector, civil society, academia and IOs **throughout the CE roadmap development** to obtain insight into their views, experiences, challenges, needs and concerns regarding the circular transition.

## **1. Diagnostics: state of play of circular economy in North Macedonia**

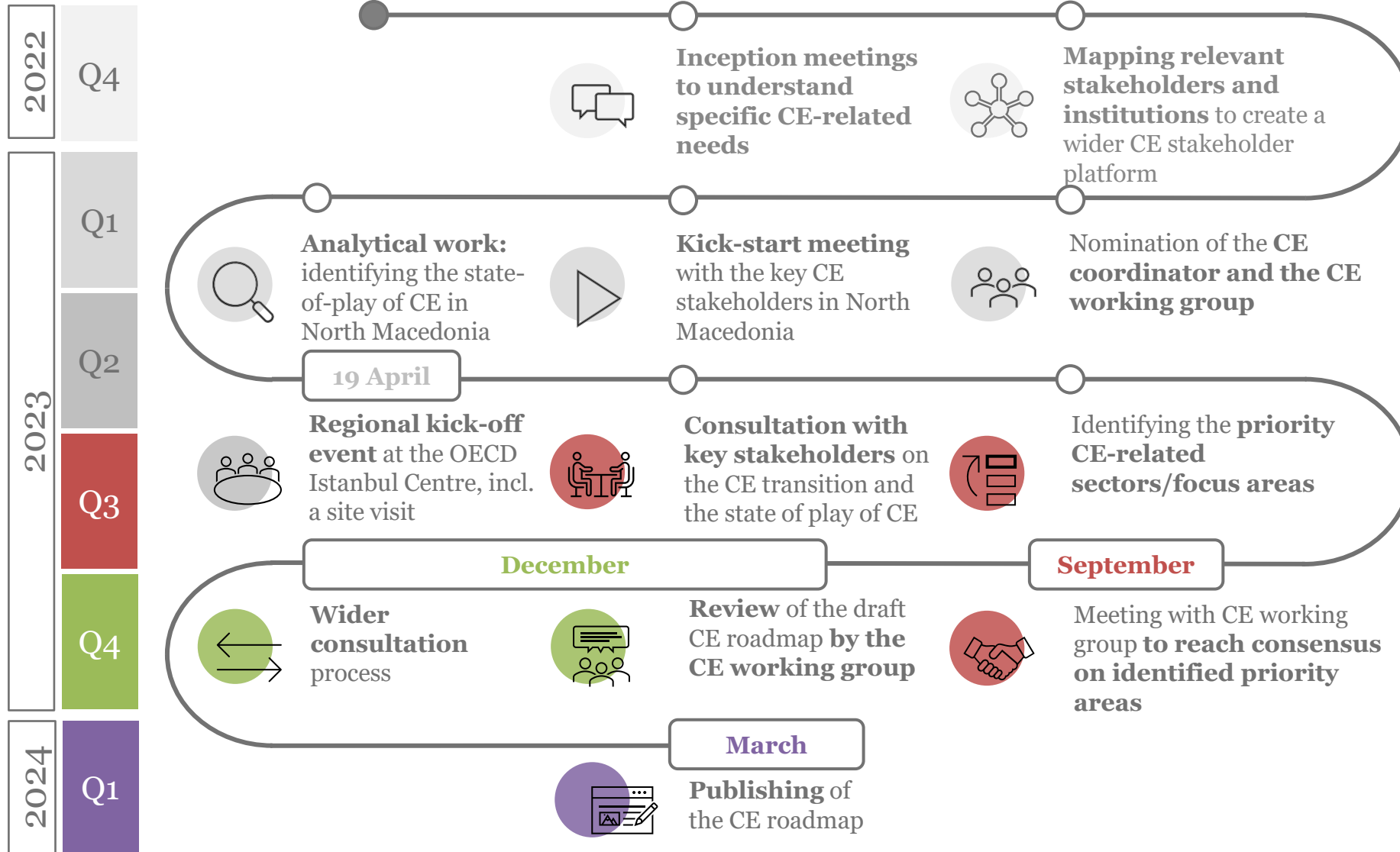
- **Sectoral analysis and comprehensive review of the policy and regulatory frameworks**

## **2. Prioritisation: identification of priority sectors/focus areas key to CE transition**

- **Assessment to identify key economic sectors to be involved in the circular economy transformation**
- **Identification of good practices that can be transferred to the economy**



# Timeline and key milestones





# Main circular economy stakeholders in North Macedonia



## Government

**Leading Ministry:** Ministry of Economy

- Ministry of Environment and Physical Planning
- Ministry of Agriculture, Forestry and Water Management
- Ministry of Education and Sciences
- Ministry of Finance
- Office of the Deputy Prime Minister



## Private Sector

- Business representatives and associations of exporting industries, manufacturers, e-commerce, non-profits, etc.
- Chambers of Commerce



## Academia and Civil Society

- Ss. Cyril and Methodius University Skopje
- Goce Delcev University Štip
- Various research centres and institutes
- NGOs



## International Community

- EU Delegation
- GIZ
- UNDP
- World Bank



# RECAP OF DIAGNOSTICS OF CIRCULAR ECONOMY IN NORTH MACEDONIA



# North Macedonia's key economic features relevant to circular economy

## AGRICULTURE

- Dominated by **subsistence farming** on small and fragmented holdings with low-skilled jobs.
- Important share of exports (10%), but productivity remains low.
- Food waste is a critical issue (45% of municipal waste was organic in 2021).

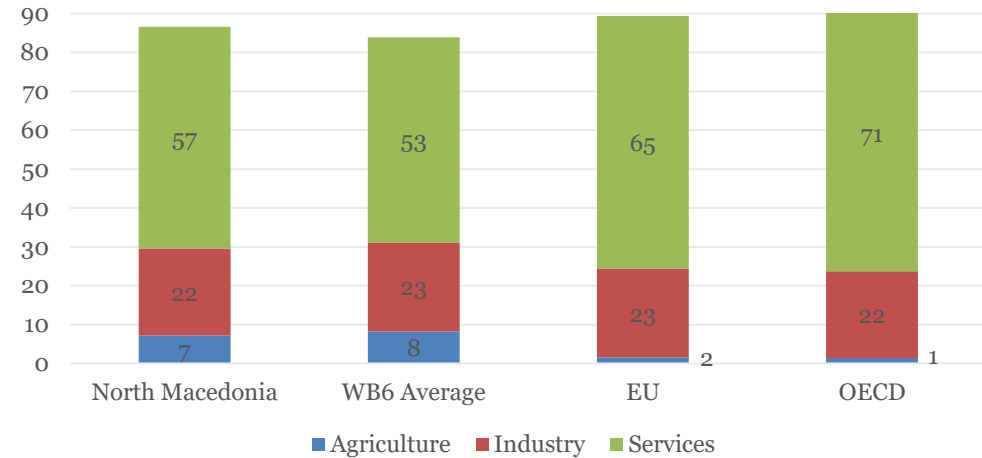
## INDUSTRY

- **Special economic zones** helped **expand** industry sector.
- One of the largest ind. sectors: energy and carbon intense **metallurgy**.
- Untapped CE potential in the **construction sector**.
- **Automotive** is a key economic driver with great potential for circular innovation.
- **Textile industry** the 2<sup>nd</sup> biggest industry sector, but causes resource pressure through low reuse and recycling rates.

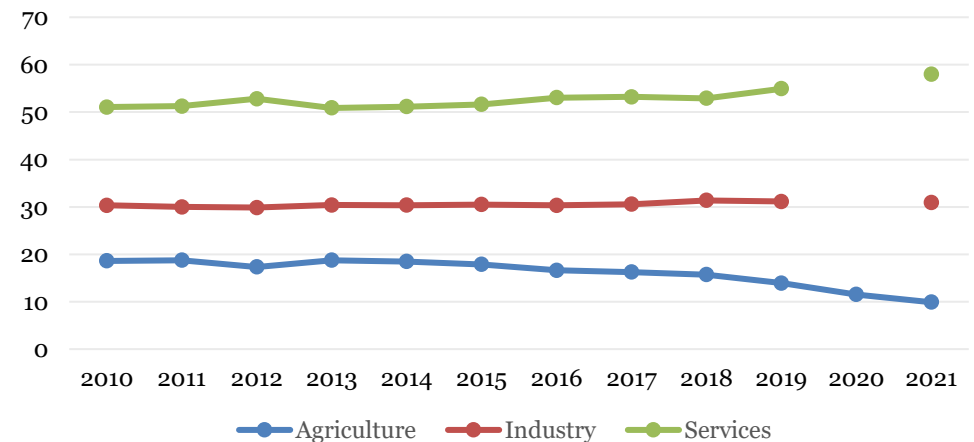
## SERVICES

- **Wholesale and retail trade** account for largest share of service-oriented economy.
- **Exports of services** grew substantially but still account for 25% of total exports.
- **Large share of SMEs** can be a key driver in achieving circular objectives.

Value added by grouped activity in North Macedonia (% of GDP), 2021



Employment by grouped activity in North Macedonia (% of GDP), 2012-21





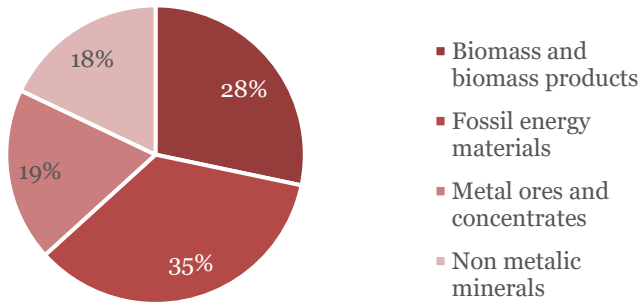
# Environmental trends relevant to circular economy – Energy and emissions, materials, and waste

## EMISSIONS

Coal-derived **electricity and heat generation** emit over half of total CO<sub>2</sub>.

Dependency on **oil and coal energy** undermine **long-term energy security** and climate commitments.

Structure of DMC in North Macedonia (% of total DMC), 2021



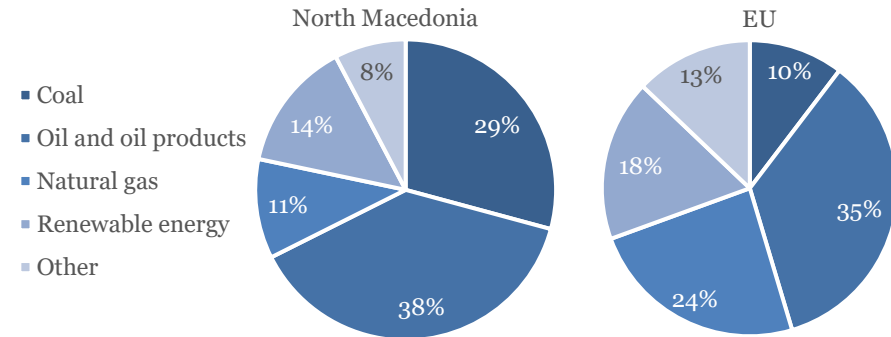
## MATERIALS

**Resource productivity** is improving, reached an all-time high value in 2018.

**Agriculture** and the use of **firewood** for heating drive the DMC of biomass.

**Metallurgy and automotive sectors** drive a strong demand for **metal ores** (highest import dependency and 3 times higher DMC than in the EU).

Energy Mix (% of total energy), 2021



## WASTE

Municipal and industrial **waste management** is a challenge:

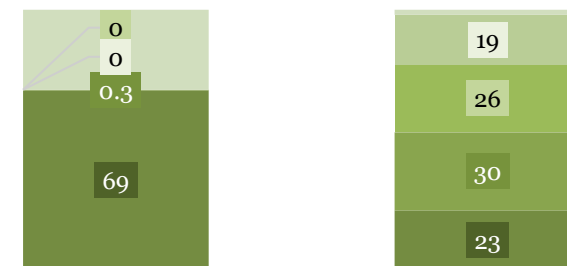
- Inadequate **waste separation** (69% landfilled);
- Recycling mainly conducted by **informal waste pickers**.

**Waste collection services** covered 80 % of the population in 2020 (98% in the EU)

**EPR schemes** regulate bring systems for packaging waste.

Municipal waste treatment (%), 2020

■ Landfill ■ Recycling ■ Incineration ■ Composting

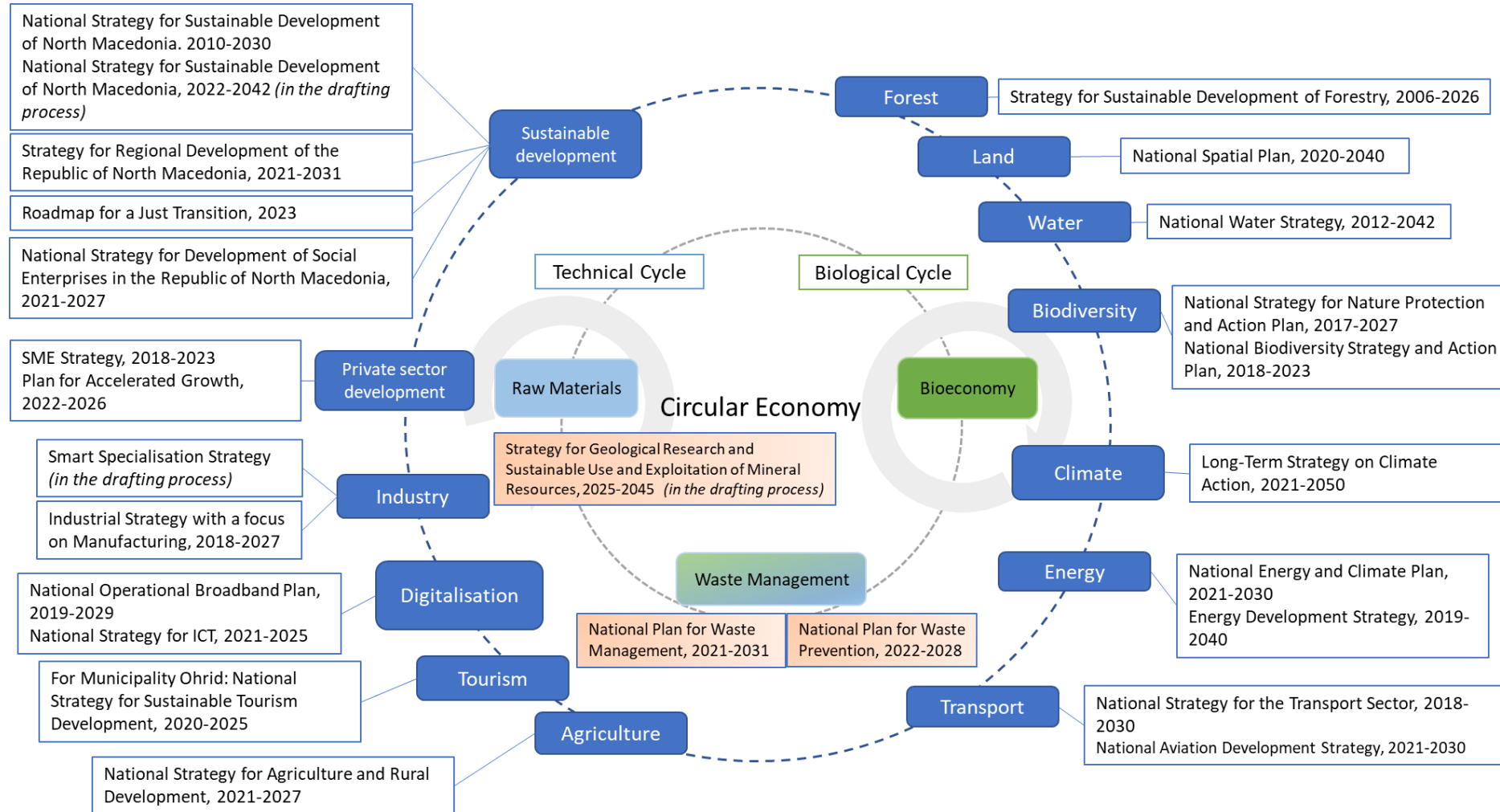


NORTH MACEDONIA

EU



# Existing policy landscape relevant to circular economy



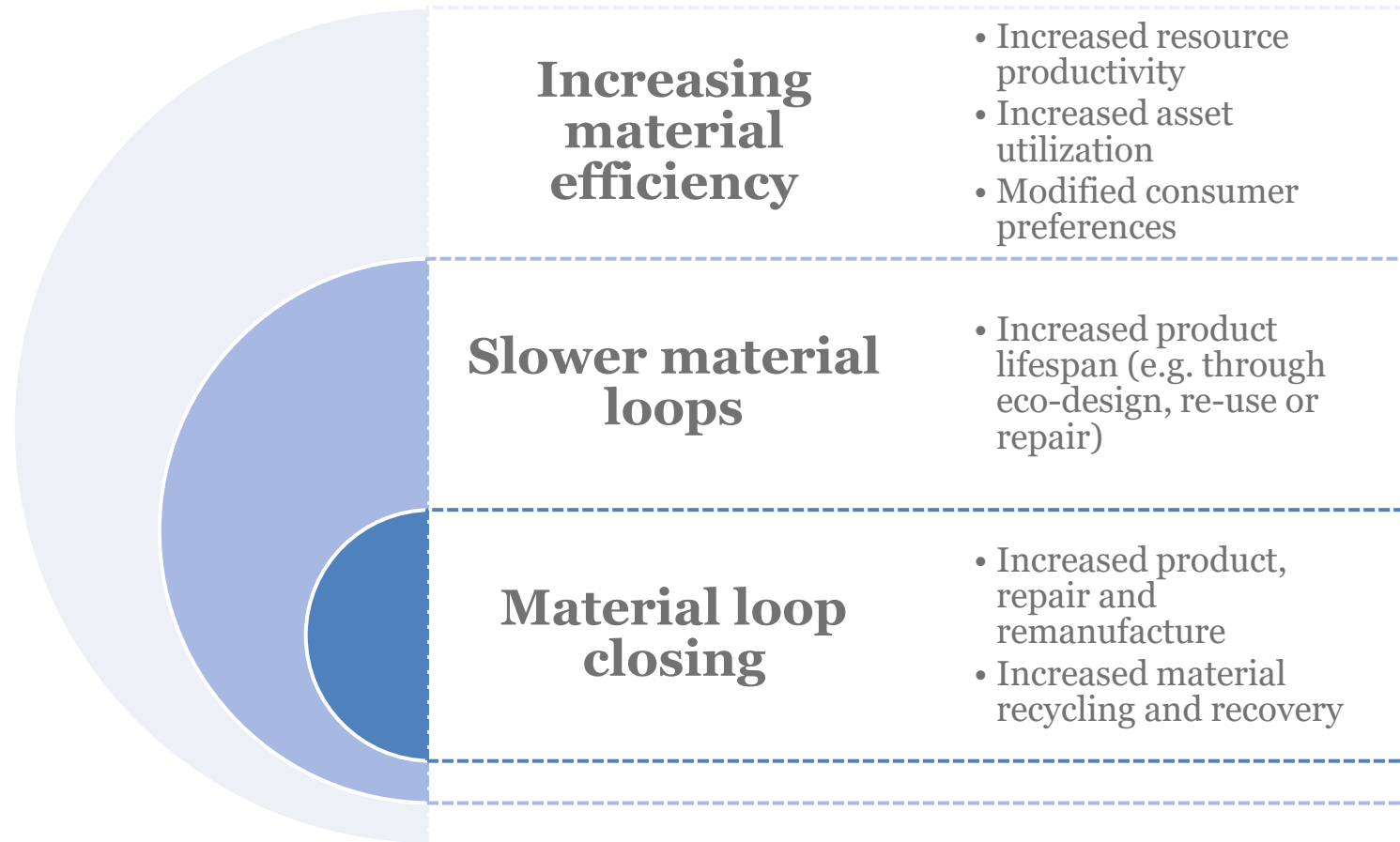




# CIRCULAR ECONOMY ROADMAP DEVELOPMENT – LESSONS LEARNED FROM OTHER COUNTRIES



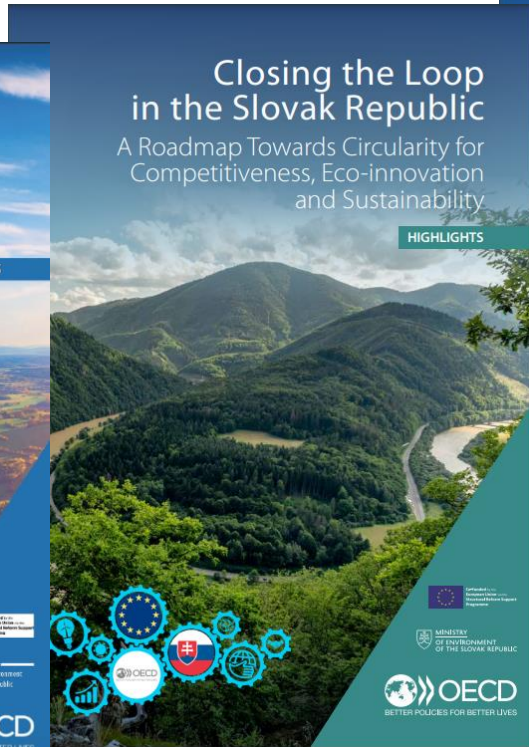
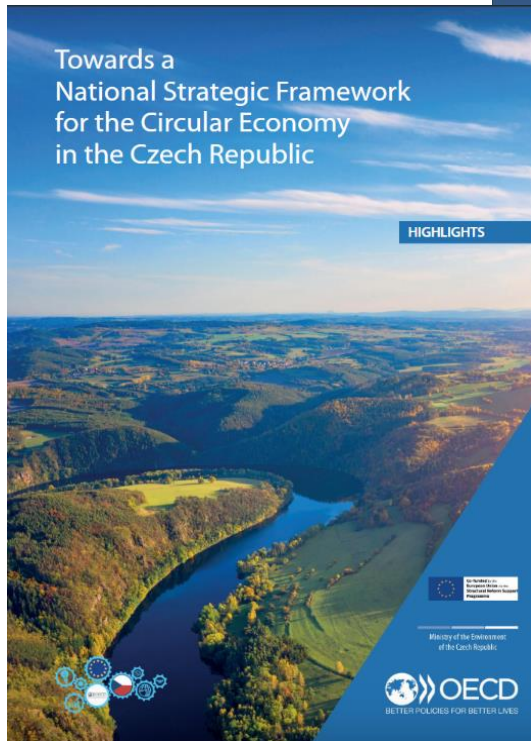
# Why a circular economy roadmap or strategy?



Source: McCarthy, A., R. Dellink and R. Bibas (2018), The Macroeconomics of the Circular Economy Transition: A Critical Review of Modelling Approaches, <https://doi.org/10.1787/af983f9a-en>.



# OECD in-country support work – Circular economy strategies, roadmaps and other technical assistance



• **Objective:** Development of guidance on advanced policy instruments to accelerate the circular economy, with focus on economic instruments, indicators and the monitoring framework, and behavioural interventions.

**Technical support for Italy**



Funded by the European Union





# Key ingredients for national circular economy roadmaps and strategies: our experience



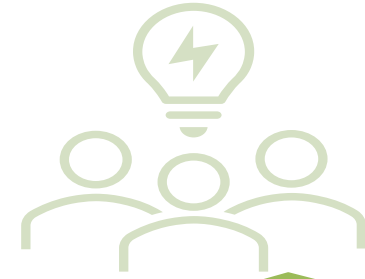
Develop clear vision



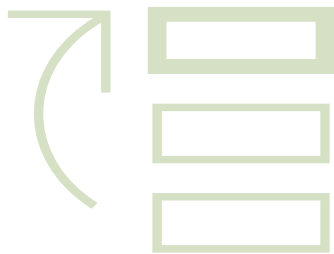
Include quantitative targets



Tailor strategy to local context



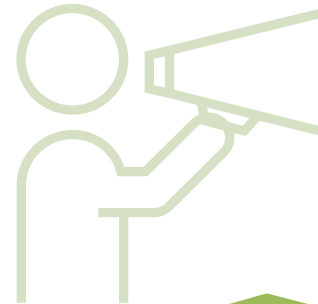
Promote shared ownership



Select priority areas



Develop implementation plan



Communicate



Monitor progress



# ENSURING FOCUS AND OPERATIONALISATION – SELECTING PRIORITY AREAS



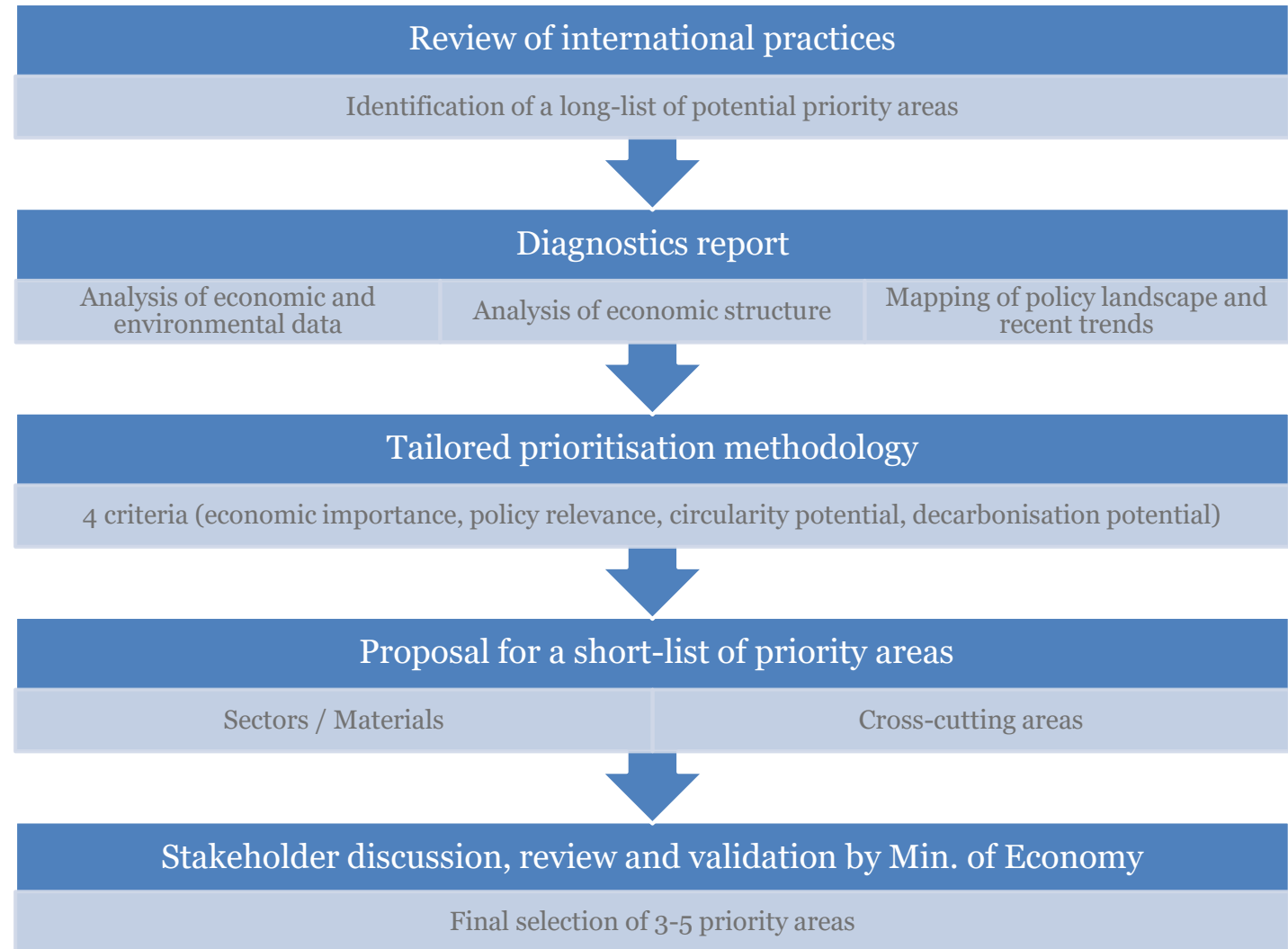
# Why and how should we prioritise only certain areas / sectors in a circular economy roadmap?

## Need

Circular economy a holistic concept that requires focus to become concrete and actionable

Review of international practices → best practice to focus on a limited set of priority areas

## Proposed approach





# Review of international practices – long-list of potential priority areas

	<b>Sectors / Materials</b>		<b>Cross-cutting areas</b>
Biomass and food	Automotive	Financial sector	Circular business models
Building materials	Chemicals	Logistics	Digital tools
Glass	Construction	Retail	Economic instruments
Metals	Electronics	Tourism & hospitality	Education
Paper	Packaging	Waste management	Public procurement
Plastics	Textiles		Research
<b>Other materials, sectors and tools</b>			



# Prioritisation methodology - key criteria and relevant indicators to inform the choice of priority areas

## Economic importance

- Value added of sectors (million EUR)
- Employment in sectors (number of jobs)
- Trade in sectors (million EUR)
- Position in the global value chain

## Policy relevance

- Inclusion of an area in national (and EU) strategic documents
- An area with an identified policy gap

## Circularity potential

- Municipal waste composition (tonnes or %)
- Waste treatment (incl. recycling) by waste streams (tonnes or %)
- Circularity potential of sectors and materials based on literature and national context

## Decarbonisation potential

- GHG emissions by UNFCCC category (tonnes CO<sub>2</sub> eq.)
- Decarbonisation potential by sector based on literature

**Importance of stakeholder consultation in the selection process!**





# KEY FINDINGS – PROPOSED SHORT- LIST OF PRIORITY AREAS FOR NORTH MACEDONIA



# Proposed short-list of priority areas for North Macedonia (aim to select 3-5 priorities)





# 1<sup>st</sup> priority



## Construction

- High economic importance (value added, trade, link with a strong metallurgy sector),
- High policy relevance (incl. EU obligations and targets but on CE little done nationally; CBAM relevance),
- High circularity potential (primary materials consumption reduction, use of secondary materials, waste reduction and management),
- High decarbonisation potential (emissions intensive sector, CE measures potential to significantly reduce those emissions)



## Municipal waste management

- Medium/low economic importance (only a share of total waste)
- High policy relevance (incl. EU obligations and targets, sector lagging behind peers)
- Waste management an essential part of circular economy
- Some decarbonization potential
- Can include several waste streams (bio-waste, plastics, mixed waste, etc.)



## Circular business models for SMEs

- High economic importance (SMEs are key to economic development),
- High policy relevance,
- High circularity potential as different types of circular business models exist,
- The area requires enabling regulatory framework, without which circular business models cannot be competitive.
- Can focus on five types of circular business models in key sectors.



## 2<sup>nd</sup> priority



### Textiles

- Medium/ high economic importance (trade),
- High policy relevance (incl. EU obligations, a policy gap),
- Medium circularity potential (increased reuse and recycling, circular design),
- Medium decarbonisation potential



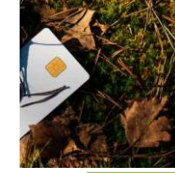
### Mining and metallurgy

- High economic importance (GDP contribution, trade and input to economic sectors),
- Policy relevant but less policy on CE (high EU policy relevance around critical raw materials),
- Low/medium circularity potential (material recovery and recycling mostly, ESG standards),
- Metallurgy decarbonisation potential



### Plastics

- Low economic importance (but plastics a strategic material to several economic sectors),
- High policy relevance (incl. EU obligations and targets),
- High circularity potential (single-use plastics reduction, increased recycling of plastics packaging),
- Low/medium decarbonisation potential.



### Economic instruments

- Help achieve environmental outcomes in a cost-effective manner through price signals, which provide incentives for consumers and businesses to change their behaviour.
- Incentivise innovation.
- Potentially revenue generating.
- They provide an enabling framework for circular business models.



# INITIAL SET OF POTENTIAL RECOMMENDATIONS FOR EACH SHORT-LISTED PRIORITY AREA



# Construction – potential recommendations

## Short-term

- Establish a working group on circular construction
- Implement awareness raising and capacity building on production of sustainable construction materials (also relevant for mining and metallurgy industries)
- Scale up and ensure funding for innovative circular construction and renovation projects (initially through donor funding, link with smart specialisation strategy)
- Improve measurement and monitoring of CDW flows
- Improve waste logistics and processing of CDW

## Medium-term

- Launch circular construction and renovation pilots
- Introduce (mandatory) selective demolition in combination with a gradually increasing landfill tax for CDW
- Introduce quality standards for recycled construction materials
- Strengthen GPP of construction works for all public entities

## Long-term

- Introduce end-of-waste criteria for certain construction materials
- Consider implementing digital tools
- Consider new tax incentives (tax credits, reduced VAT) to promote the use of secondary raw and renewable materials in new construction and renovation
- Develop and apply advanced GPP tools to evaluate bids on green criteria



# Municipal waste management – potential recommendations

## Short-term

- Implement additional information campaigns and education tools on waste prevention, separation of waste at source and recycling for households and municipalities
- Introduce and scale up infrastructure for separate collection of waste (initially through donor funding)
- Support investment into recycling capacities, incl. composting and pre-treatment before landfilling
- Provide specific focus to bio-waste and paper waste

## Medium-term

- Improve measurement of municipal waste (data collection and reporting)
- Develop a regulatory framework with waste reporting obligations and better enforce environmentally sound management of waste treatment facilities
- Enforce waste trade regime for municipal waste
- Develop supporting economic instruments for municipal waste management (landfill taxes, EPR, recycling/ reuse credits)
- Support reuse and repair centres

## Long-term

- Strengthen the use of household waste charges to provide incentives for better sorting by households (e.g. PAYT)
- Close non-compliant landfills



# Circular business models for SMEs – potential recommendations

## Short-term

- Provide awareness raising campaigns and training programmes on CE for SMEs, including showcasing of good practices, and five types of circular business models
- Introduce calls for circular business models projects within existing funding programmes
- Provide technical and financial assistance to SMEs (business support, access to finance support)
- Support collaboration between SMEs and academia, as well as regional and international collaboration

## Medium-term

- Implement supporting regulatory framework (legislation, economic instruments) for resource recovery and product life extension models
- Consider establishing a dedicated funding programme for SMEs to scale up circular business models
- Provide support to SMEs on environmental legislation and obligations to ease their administrative burden
- Promote technological disciplines and STEM skills in schools

## Long-term

- Implement supporting regulatory framework for circular supply of materials and service models
- Consider additional investment support for SMEs (e.g. accelerated depreciation rate, guarantee schemes, tax incentives)
- Organise investor-entrepreneur matchmaking events





# Textiles – potential recommendations

## Short-term

- Adopt a national strategy on sustainable textiles and footwear
- Raise awareness and educate on CE in textiles and footwear for entrepreneurs and households to increase their awareness
- Introduce mandatory separate collection of textile waste
- Implement a subsidy scheme for textiles reuse, repair and recycling (initially funded through donor funding)
- Promote circular business models for textiles and footwear (e.g. sharing and renting platforms, the use of secondary and organic materials in production)

## Medium-term

- Financially support circular design and cut patterns development (initially through donor funding)
- Provide financial and technical support for the production of and research into innovative materials
- Support investment into recycling infrastructure for textiles

## Long-term

- Consider introducing an EPR take-back scheme for textiles
- Develop measurement of textile waste across the supply chain
- Consider implementing digital tools
- Consider setting eco-design requirements for textiles to make them last longer, easier to repair and recycle, as well as requirements on minimum recycled content



# Mining and metallurgy – potential recommendations

## Short-term

- Develop a study to understand the circular economy potential in the mining and metal processing value chains in North Macedonia
- Develop a raw materials strategy that takes into account circularity principles
- Support the development of infrastructure to recycle mining waste and dispose of hazardous waste properly
- Support innovative metal production techniques
- Establish a database of extractive waste facilities and require operators to submit waste management plans

## Medium-term

- Develop measurement of industrial waste
- Consider introducing a requirement to recover a share of raw materials from mining waste
- Promote and support ESG standards across the mining and metal processing value chains
- Introduce mandatory requirements to rehabilitate a mine site to eliminate contamination on-site and off-site

## Long-term

- Consider introducing a tax on extracted raw materials (on top of royalty payments)
- Support recycling and off-site repurposing of end-of-life items (e.g. through regulation or incentives)
- Consider tax incentives for innovation in the mining and metallurgy sectors



# Plastics – potential recommendations

## Short-term

- Improve separate collection of plastic waste and other packaging
- Raise awareness and educate businesses, public authorities and households on plastic waste prevention, circular design and littering
- Implement an EPR for packaging (including plastic packaging)
- Improve multi-stakeholder collaboration also at regional and international level

## Medium-term

- Introduce taxes and/or bans on certain single-use plastics
- Introduce eco-modulated fees for plastic packaging
- Use GPP to favour reusable and recycled plastics
- Consider a DRS for plastic bottles

## Long-term

- Support and scale up innovation into more recyclable plastic materials, plastics recycling technologies and processes as well as plastics reuse and reduction
- Introduce minimum recycled content requirements for specific plastic waste streams
- Introduce eco-design requirements to curb microplastics pollution (e.g. for textiles)
- Consider taxes on primary and non-recycled plastics



# Economic instruments – potential recommendations

## Short-term

- Effectively implement EPR take-back schemes
- Reform household waste charges (introduce a gradual increase of waste charges with discounts for good waste management practices, promote low-cost PAYT schemes, and improve enforcement)
- Introduce GPP, with a focus on priority sectors (capacity building, methodology guidelines)
- Introduce reuse and recycling credit schemes that would offer payments for removal of items from the municipal waste for recycling and reuse

## Medium-term

- Implement landfill taxes with discounts for good sorting/high recycling
- Consider incineration taxes
- Gradually increase the (mandatory) use of green criteria as award criteria in public procurement

## Long-term

- Introduce EPR take-back schemes for new products (e.g. textiles)
- Consider introducing material taxes on extracted materials / plastics
- Introduce minimum recycled content requirements within GPP (paper, plastics)
- Strengthen the use of tax reliefs for a circular economy (e.g. reduced VAT for repair, tax credits for food donations)



WHAT ARE YOUR VIEWS?



## Question to the audience

Join at [menti.com](https://menti.com) use code 3368 700

Please select five priority areas you consider as the most important from the below list:



GO TO  
**menti.com**

ENTER THE CODE  
**3368 7005**

0



# Thank you for your attention!

**Jovana PAVLOVIC DJUKIC**

*Team Lead – Green Economy and Sustainability  
OECD South East Europe Division*

e-mail: [jovana.pavlovicdjukic@oecd.org](mailto:jovana.pavlovicdjukic@oecd.org)

**Anita RICHTER**

*Deputy Head of Division  
OECD South East Europe Division*

e-mail: [anita.richter@oecd.org](mailto:anita.richter@oecd.org)

**Katarina SVATIKOVA**

*Policy Analyst  
OECD Environment Directorate*

e-mail: [katarina.svatikova@oecd.org](mailto:katarina.svatikova@oecd.org)

**Clémence GIRIN**

*Policy Analyst  
OECD South East Europe Division*

e-mail: [clemence.girin@oecd.org](mailto:clemence.girin@oecd.org)

**<https://www.oecd.org/south-east-europe/programme/>**

Access OECD/ENV in-country reports from:

<https://www.oecd.org/environment/waste/circular-economy-country-studies.htm>

<https://www.oecd.org/ctp/environmental-tax-policy-review-of-andalusia-fe6d8b45-en.htm>