

# THE EUROPEAN ENVIRONMENT STATE AND OUTLOOK 2015



11 June 2015 – SOER 2015 launch event Sofia  
Presentation by Dr. Hans Bruyninckx, Executive Director, EEA

European Environment Agency



# The European Environment Agency

SYNTHESIS  
REPORT

GLOBAL  
MEGATRENDS

EUROPEAN  
BRIEFINGS

COUNTRY  
COMPARISONS

COUNTRIES &  
REGIONS

The European Environment Agency (EEA) is an agency of the European Union. The EEA aims to support sustainable development and to help achieve significant and measurable improvement in Europe's environment, through the provision of **timely, targeted, relevant and reliable information** to policymaking agents and the public.



# SOER 2015

SYNTHESIS  
REPORT

GLOBAL  
MEGATRENDS

EUROPEAN  
BRIEFINGS

COUNTRY  
COMPARISONS

COUNTRIES &  
REGIONS

A comprehensive assessment of past trends and future outlooks and of opportunities to recalibrate policies, knowledge, investments and innovations in line with the long-term vision of the 7<sup>th</sup> EAP.

## SOER 2015 Synthesis report

## SOER 2015 Assessment of global megatrends

### Global megatrends

11 briefings

### European briefings

25 briefings

### Cross-country comparisons

9 briefings

### Countries and regions

39+3 briefings



# The policy context

SYNTHESIS  
REPORT

GLOBAL  
MEGATRENDS

EUROPEAN  
BRIEFINGS

COUNTRY  
COMPARISONS

COUNTRIES &  
REGIONS

Environmental  
sustainability



2015 Thematic policies, timelines and deadlines

2020/2030 Comprehensive policies (Europe 2020, 7th Environment Action Programme), or specific target

2050 Long-term visions and targets with a societal transition perspective

European Environment Agency



# Vision of the 7th Environment Action Programme

SYNTHESIS  
REPORT

GLOBAL  
MEGATRENDS

EUROPEAN  
BRIEFINGS

COUNTRY  
COMPARISONS

COUNTRIES &  
REGIONS

**‘In 2050, we live well, within the planet's ecological limits.**

Our prosperity and healthy environment stem from an innovative, **circular economy** where nothing is wasted and where natural resources are managed sustainably, and **biodiversity** is protected, valued and restored in ways that enhance our **society's resilience**. Our **low-carbon** growth has long been decoupled from resource use, setting the pace for a global safe and sustainable society.’

Source: 7th EU Environment Action Programme

# Synthesis report

---

## **Part 1: Setting the scene**

Sets out the evolving context for European environmental policy, and the global megatrends that directly and indirectly affect Europe's environment.

## **Part 2: Assessing European trends**

Provides summary assessments of the trends and outlook for 20 environmental issues, grouped under the three priority thematic objectives of the 7th Environment Action Programme.

## **Part 3: Looking ahead**

Reflects on the overall picture of the European environment's state and outlook. Signals opportunities to adjust environmental policy to support the transition to a more sustainable society.



# Key messages from SOER 2015

SYNTHESIS  
REPORT

GLOBAL  
MEGATRENDS

EUROPEAN  
BRIEFINGS

COUNTRY  
COMPARISONS

COUNTRIES &  
REGIONS

- **Policies** have delivered substantial benefits for the environment, economy and people's well-being; major challenges remain
- Europe faces persistent and emerging challenges linked to production and consumption **systems**, and the rapidly changing **global** context
- Achieving the 2050 vision requires system **transitions**, driven by more ambitious actions on policy, knowledge, investments and innovation
- Doing so presents major **opportunities** to boost Europe's economy and employment and put Europe at the frontier of science and innovation



# Eco-industries have prospered despite the recession in Europe

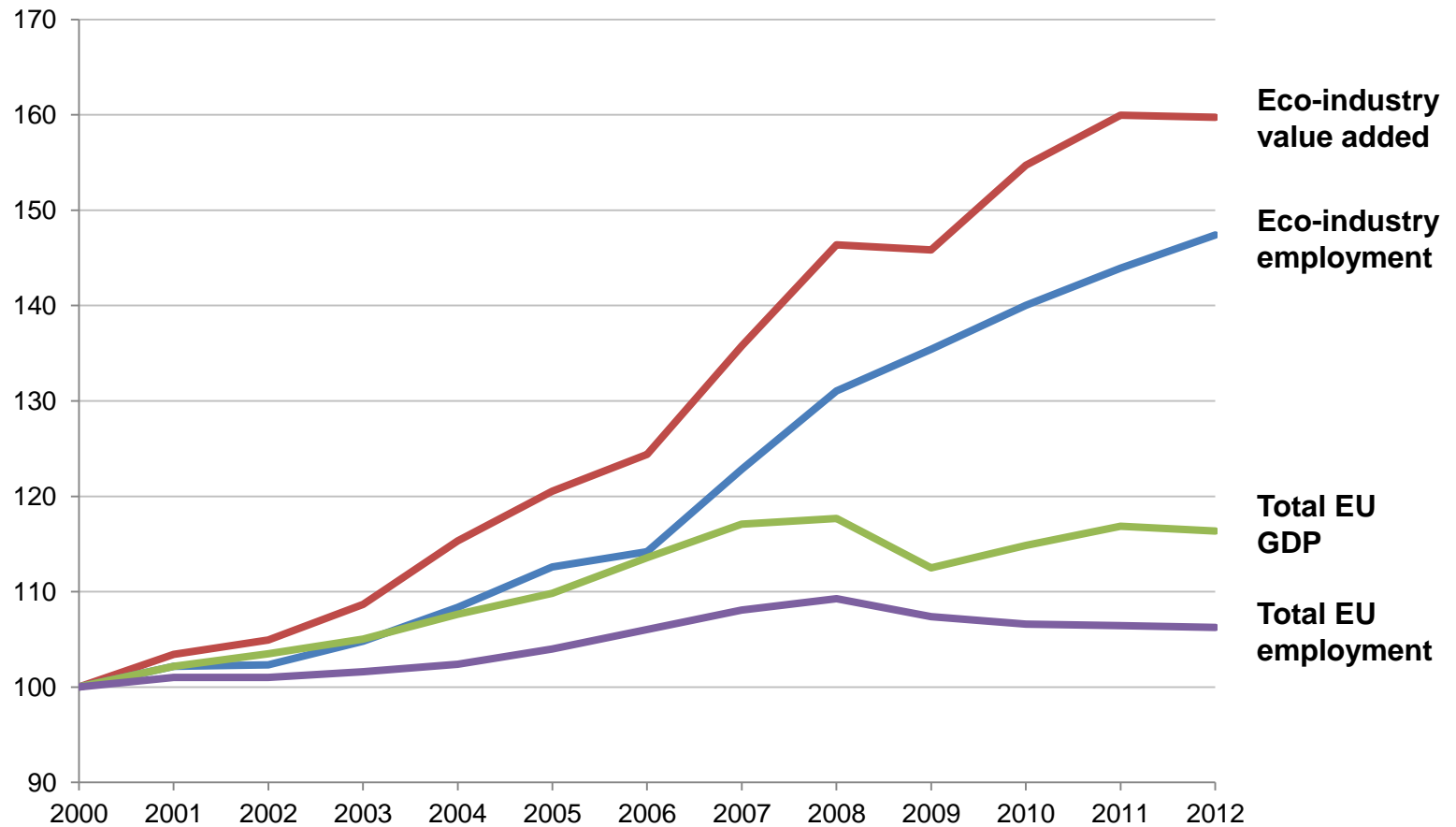
SYNTHESIS  
REPORT

GLOBAL  
MEGATRENDS

EUROPEAN  
BRIEFINGS

COUNTRY  
COMPARISONS

COUNTRIES &  
REGIONS



Source: Eurostat, 2014.



# Assessing past trends and future outlooks

SYNTHESIS  
REPORT

GLOBAL  
MEGATRENDS

EUROPEAN  
BRIEFINGS

COUNTRY  
COMPARISONS

COUNTRIES &  
REGIONS

The Synthesis report addresses the three thematic priority objectives of the 7<sup>th</sup> EAP:

1. Protecting, conserving and enhancing natural capital
2. Resource efficiency and the low-carbon economy
3. Safeguarding from environmental risks to health

Two overall patterns emerge:

- Resource efficiency improvements have been notable but have not translated into increased ecosystem and social resilience
- The long-term outlook is often less positive than recent trends

# Thematic priority objective 1: Protecting, conserving and enhancing natural capital

SYNTHESIS  
REPORT






GLOBAL  
MEGATRENDS

EUROPEAN  
BRIEFINGS

COUNTRY  
COMPARISONS

COUNTRIES &  
REGIONS

	Past (5–10 year) trends	20+ years outlook	Progress to policy targets
➤ Terrestrial and freshwater biodiversity			☐
➤ Land use and soil functions			No target
➤ Ecological status of freshwater bodies			☒
➤ Water quality and nutrient loading			☐
➤ Air pollution and its ecosystem impacts			☐
➤ Marine and coastal biodiversity			☒
➤ Climate change impacts on ecosystems			No target

Improving trends dominate		Largely on track	
Trends show mixed picture		Partially on track	
Deteriorating trends dominate		Largely not on track	

Source: EEA. SOER 2015 Synthesis report.

# Thematic priority objective 2: Resource efficiency and the low-carbon economy

SYNTHESIS  
REPORT







GLOBAL  
MEGATRENDS

EUROPEAN  
BRIEFINGS

COUNTRY  
COMPARISONS

COUNTRIES &  
REGIONS

	Past (5–10 year) trends	20+ years outlook	Progress to policy targets
➤ <b>Material resource efficiency and material use</b>	Yellow	Yellow	No target
➤ <b>Waste management</b>	Green	Yellow	□
➤ <b>Greenhouse gas emissions and climate change mitigation</b>	Green	Red	✓ / ✗
➤ <b>Energy consumption and fossil fuel use</b>	Green	Red	✓
➤ <b>Transport demand and related environmental impacts</b>	Yellow	Red	□
➤ <b>Industrial pollution to air, soil and water</b>	Green	Yellow	□
➤ <b>Water use and water quantity stress</b>	Yellow	Yellow	✗

Improving trends dominate		Largely on track	
Trends show mixed picture		Partially on track	
Deteriorating trends dominate		Largely not on track	

Source: EEA. SOER 2015 Synthesis report.



# Thematic priority objective 3: Safeguarding from environmental risks to health

SYNTHESIS  
REPORT

GLOBAL  
MEGATRENDS

EUROPEAN  
BRIEFINGS

COUNTRY  
COMPARISONS

COUNTRIES &  
REGIONS

	Past (5–10 year) trends	20+ years outlook	Progress to policy targets
➤ Water pollution and related environmental health risks	Improving trends dominate	Trends show mixed picture	Largely on track / Partially on track
➤ Air pollution and related environmental health risks	Trends show mixed picture	Trends show mixed picture	Partially on track
➤ Noise pollution (especially in urban areas)	Trends show mixed picture	/	Partially on track
➤ Urban systems and grey infrastructure	Trends show mixed picture	Trends show mixed picture	No target
➤ Climate change and related environmental health risks	Deteriorating trends dominate	Deteriorating trends dominate	No target
➤ Chemicals and related environmental health risks	Deteriorating trends dominate	Trends show mixed picture	Partially on track / Largely not on track

Improving trends dominate  
Trends show mixed picture  
Deteriorating trends dominate



Largely on track  
Partially on track  
Largely not on track



Source: EEA. SOER 2015 Synthesis report.



# The overall picture: Efficiency improvements have not secured long-term resilience

SYNTHESIS  
REPORT

GLOBAL  
MEGATRENDS

EUROPEAN  
BRIEFINGS

COUNTRY  
COMPARISONS

COUNTRIES &  
REGIONS



Source: EEA. SOER 2015 Synthesis report.

# Understanding past trends and future outlooks

SYNTHESIS  
REPORT

GLOBAL  
MEGATRENDS

EUROPEAN  
BRIEFINGS

COUNTRY  
COMPARISONS

COUNTRIES &  
REGIONS

Two major factors explain the uneven progress and prospects:

## The changing global context

- Competition for resources
- Pressures from outside Europe
- Planetary boundaries

## Systemic characteristics of environmental challenges

- Complexity
- Uncertainty
- Environmental, social and economic interdependencies

# Looking ahead: Systemic challenges require systemic solutions

SYNTHESIS  
REPORT

GLOBAL  
MEGATRENDS

EUROPEAN  
BRIEFINGS

COUNTRY  
COMPARISONS

COUNTRIES &  
REGIONS

Not just incremental efficiency gains



Source: EEA.

but fundamental transitions in food, energy, mobility, finance and fiscal systems  
through profound changes in dominant practices, policies and thinking.

# Looking ahead: Building on 40 years of European and national policies

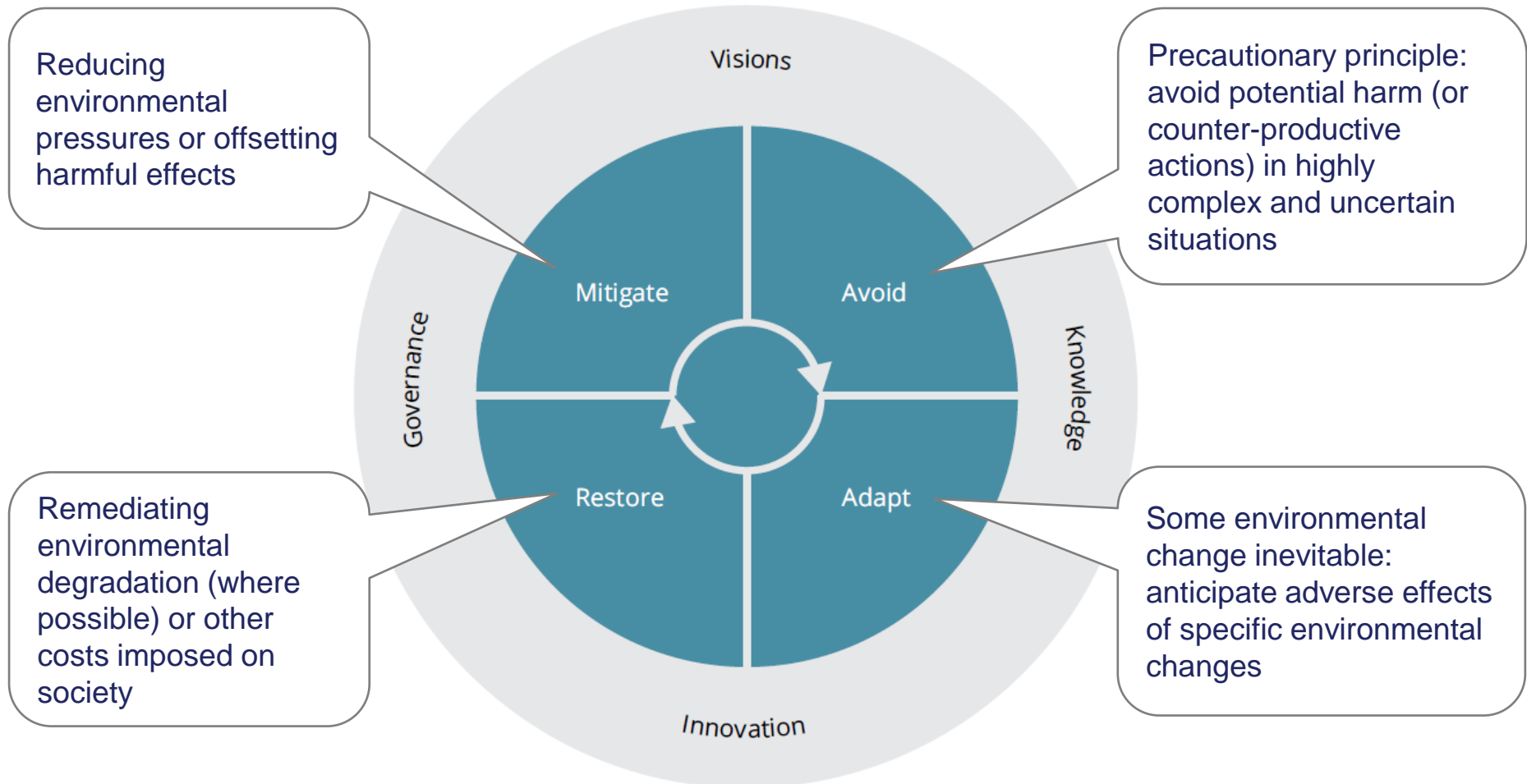
SYNTHESIS  
REPORT

GLOBAL  
MEGATRENDS

EUROPEAN  
BRIEFINGS

COUNTRY  
COMPARISONS

COUNTRIES &  
REGIONS



Source: EEA.

European Environment Agency





# Looking ahead: Innovation

SYNTHESIS  
REPORT

GLOBAL  
MEGATRENDS

EUROPEAN  
BRIEFINGS

COUNTRY  
COMPARISONS

COUNTRIES &  
REGIONS

- Technological, economic, and social innovations can support long-term transitions to a green economy
- This requires upscaling niche innovations
- Publicly funded research has fostered many of the most important and commercially successful innovations

# Looking ahead: Investing today for the long term

SYNTHESIS  
REPORT

GLOBAL  
MEGATRENDS

EUROPEAN  
BRIEFINGS

COUNTRY  
COMPARISONS

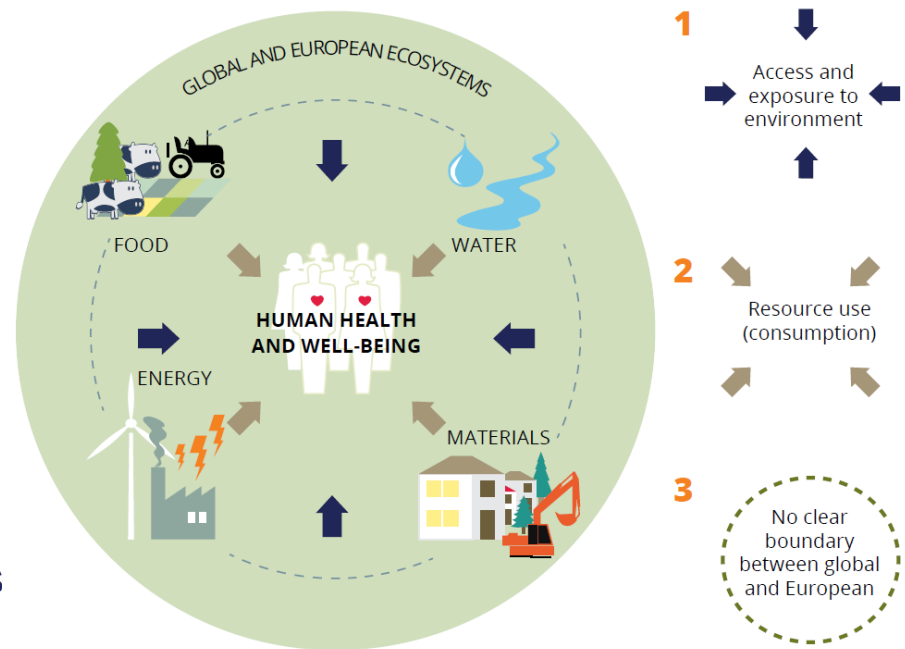
COUNTRIES &  
REGIONS

- European investment needs are huge and today's choices will have long-term implications
- Key criteria for future investments in a green economy:
  - decarbonisation of society
  - circular economy jobs
  - ecosystem services and planetary limits
  - human health and well-being
- Market signals distort investment and innovation. We need to shift taxation and phase out environmentally harmful subsidies



# Looking ahead: Living well within the limits of the planet by 2050

- Achieving the 2050 vision is possible but it depends on our actions and investments today.
- Systemic change must deliver decent employment, opportunities and fairness, as well as respecting environmental limits.
- SOER 2015 illustrates the success of European policy. We should be confident in entering a new stage of environmental governance.



Source: EEA, Signals 2014

# Cross-country comparisons

---



Agriculture – organic farming



Air pollution – emissions of selected pollutants



Energy – energy consumption and share of renewable energy



Freshwater quality – nutrients in rivers



Mitigating climate change – greenhouse gas emissions



Resource efficiency – material resource efficiency and productivity



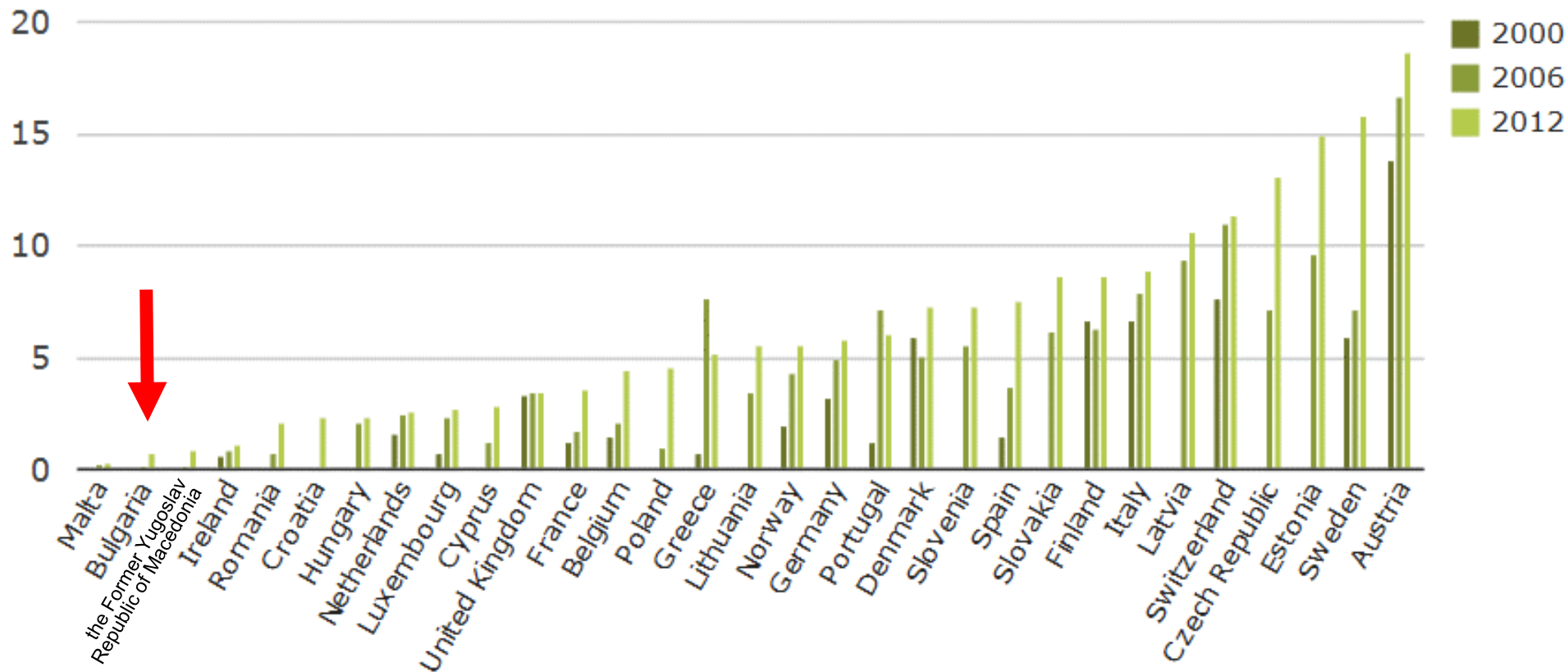
Transport – passenger transport demand and modal split



Waste – municipal solid waste generation and management

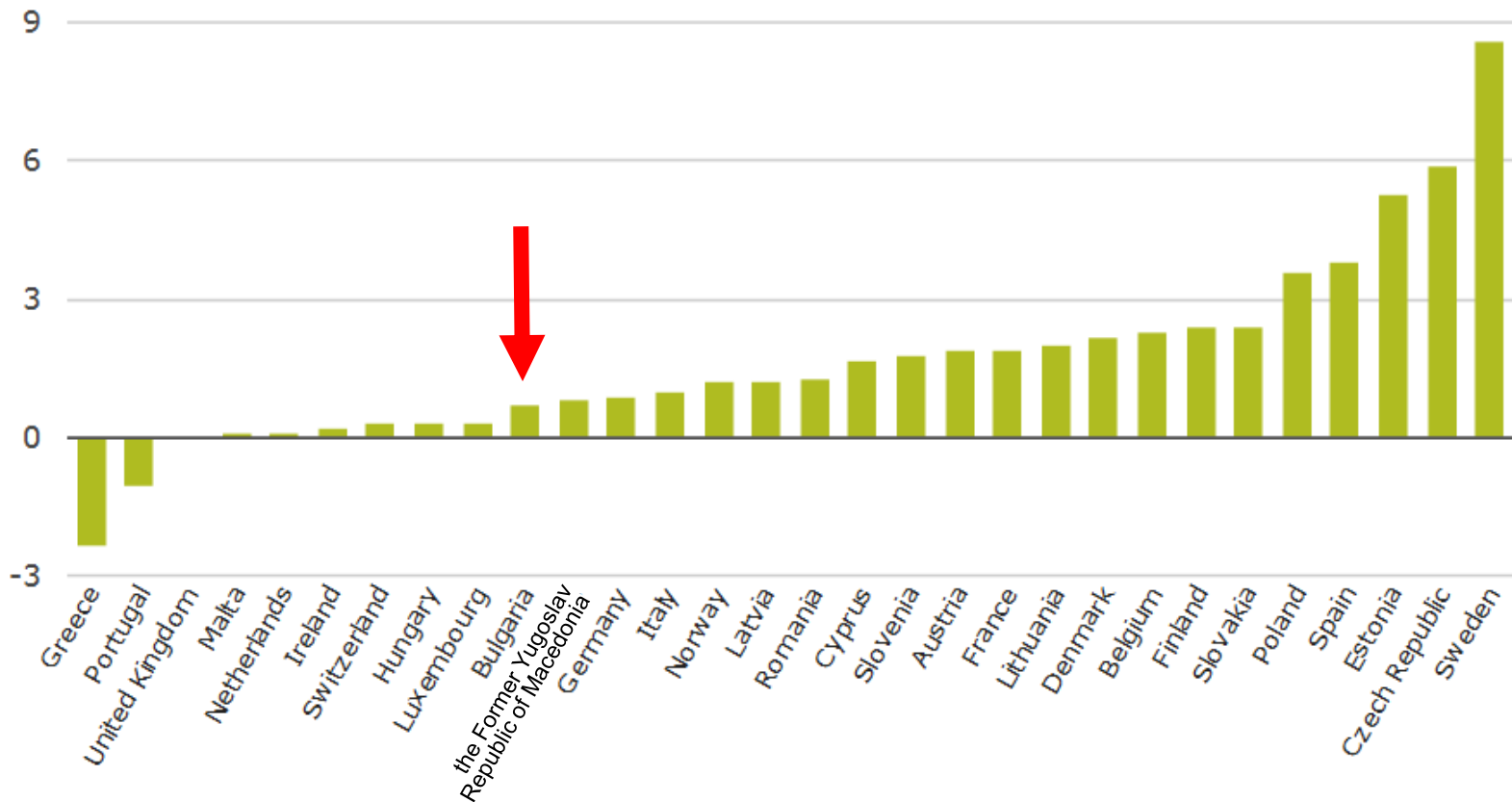


## Total organic crop area as a share of total utilised agricultural area in 31 European countries (2000, 2006 and 2012)



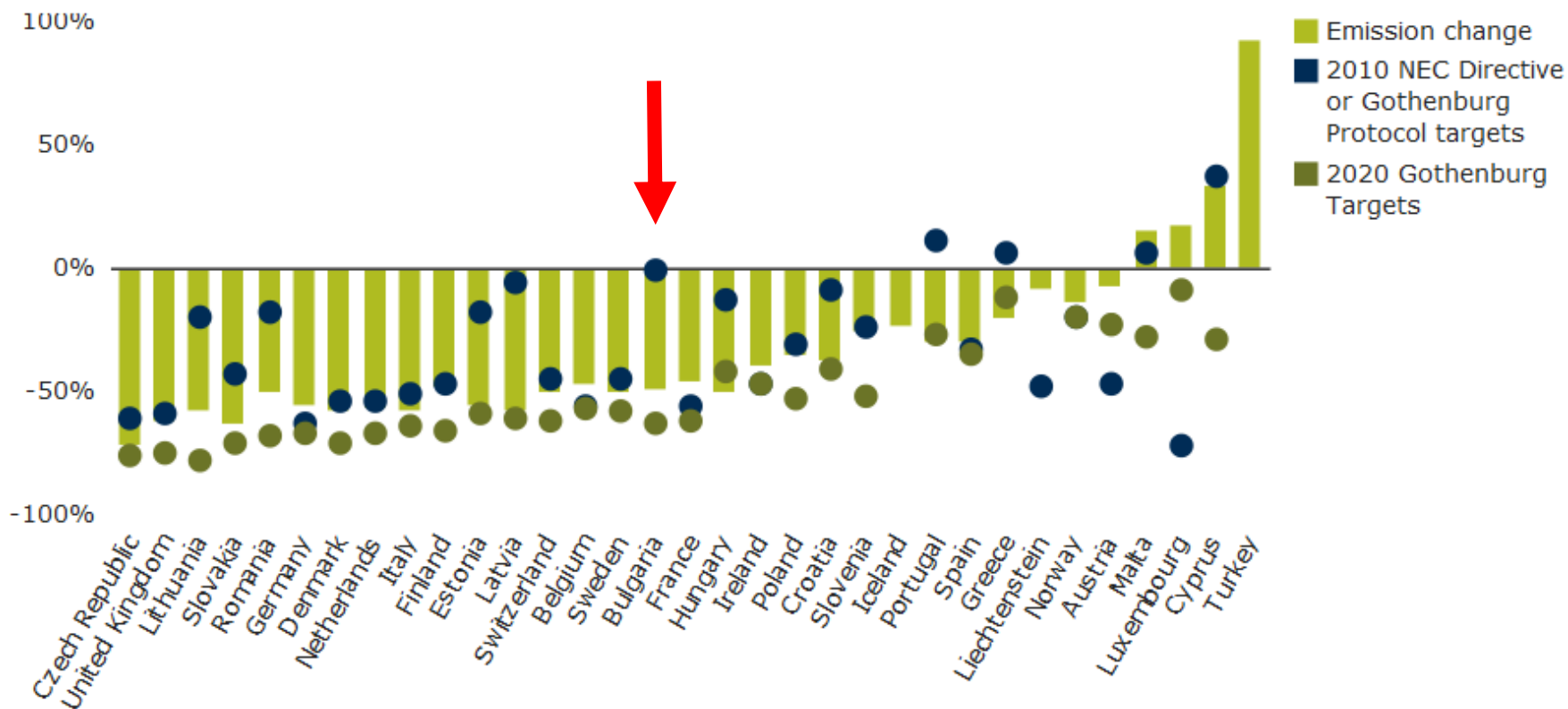
Data sources: Eurostat. Certified organic crop area by crops products, FOEN. Indicator on organic farming, EEA – Indicator SEBI020  
 Note: Due to lack of data: Greece, 2011 instead of 2012; Cyprus, 2011 instead of 2012; Norway, 2009 instead of 2012.

## Percentage change in the share of organic agriculture from 2006-2012 in 30 European countries



Data sources: Eurostat. Certified organic crop area by crops products; Areas under organic agricultural production as % of cultivable area and total agricultural area, p4 FOEN; Indicator on organic farming, EEA – Indicator SEB1020

## Change in emissions of NOX (nitrogen oxides) in 33 European countries (1990 to 2012) and comparison with the 2010 NEC Directive and Gothenburg Protocol targets



Data sources: EEA. National emissions reported to the Convention on Long-range Transboundary Air Pollution (LRTAP Convention)  
 Note: 2020 Gothenburg targets scaled from 2005 base year to show percentage reduction from 1990.

## Percentage share of renewable energies in gross inland energy consumption in 34 European countries

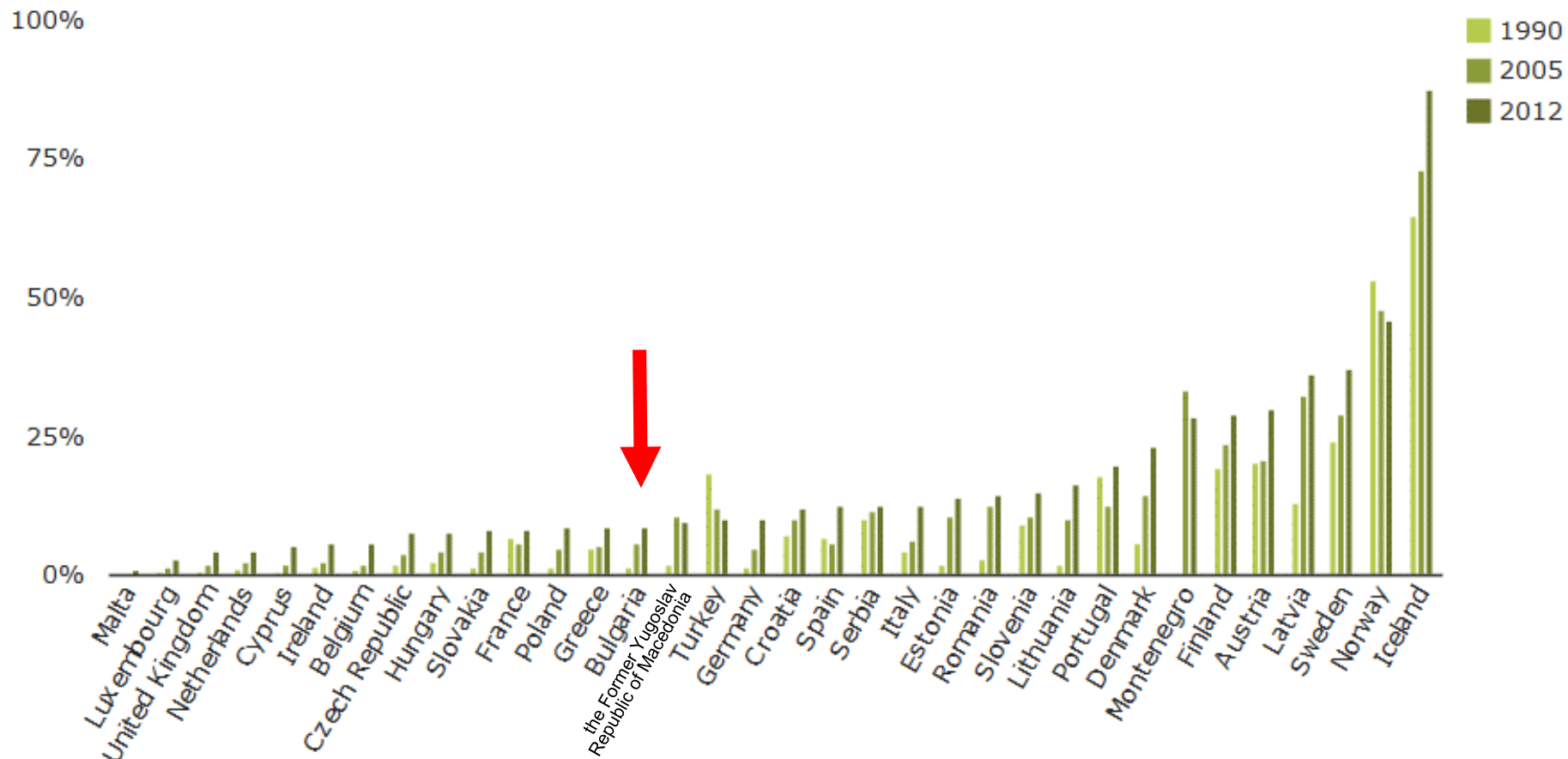
SYNTHESIS  
REPORT

GLOBAL  
MEGATRENDS

EUROPEAN  
BRIEFINGS

COUNTRY  
COMPARISONS

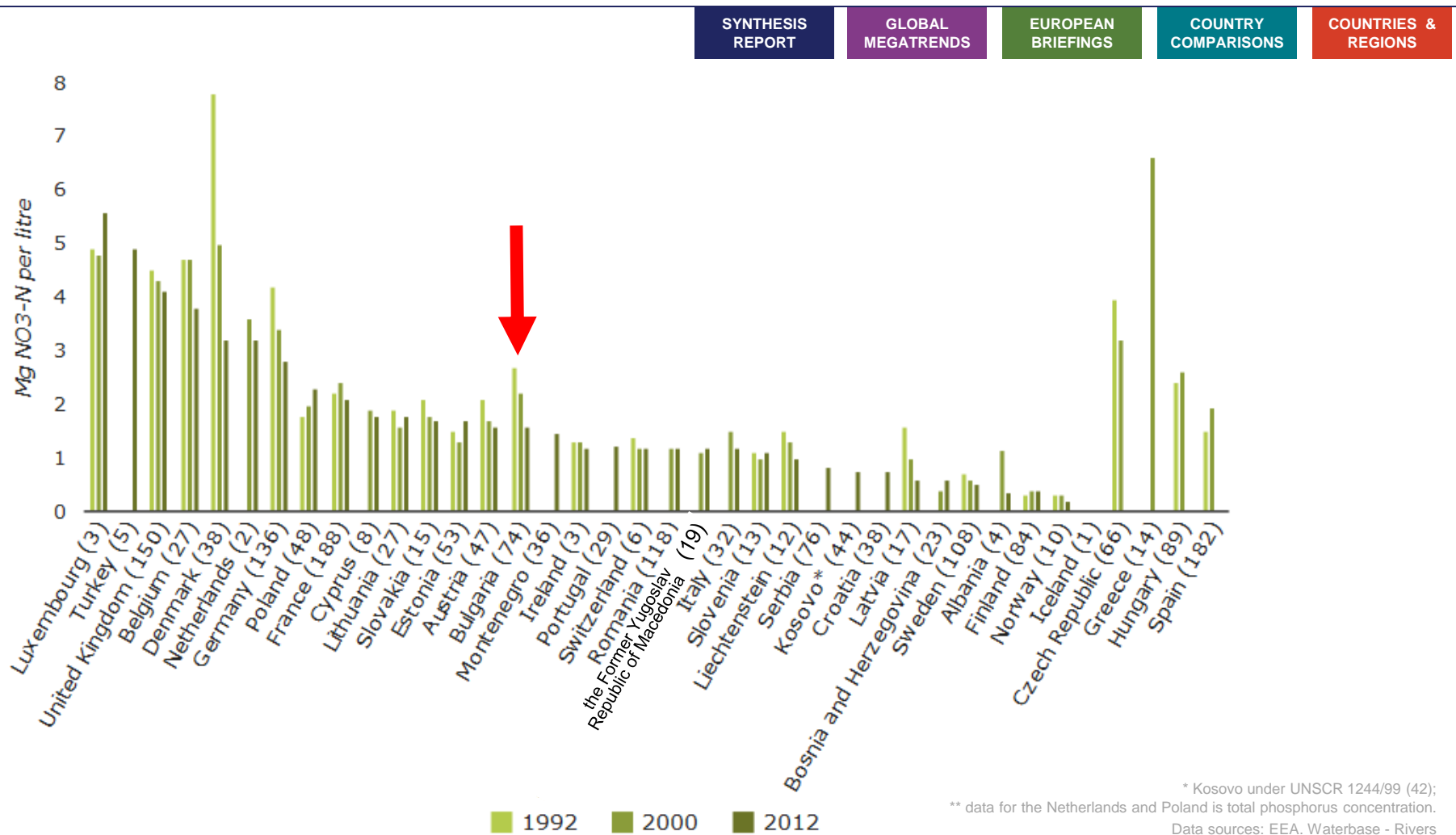
COUNTRIES &  
REGIONS



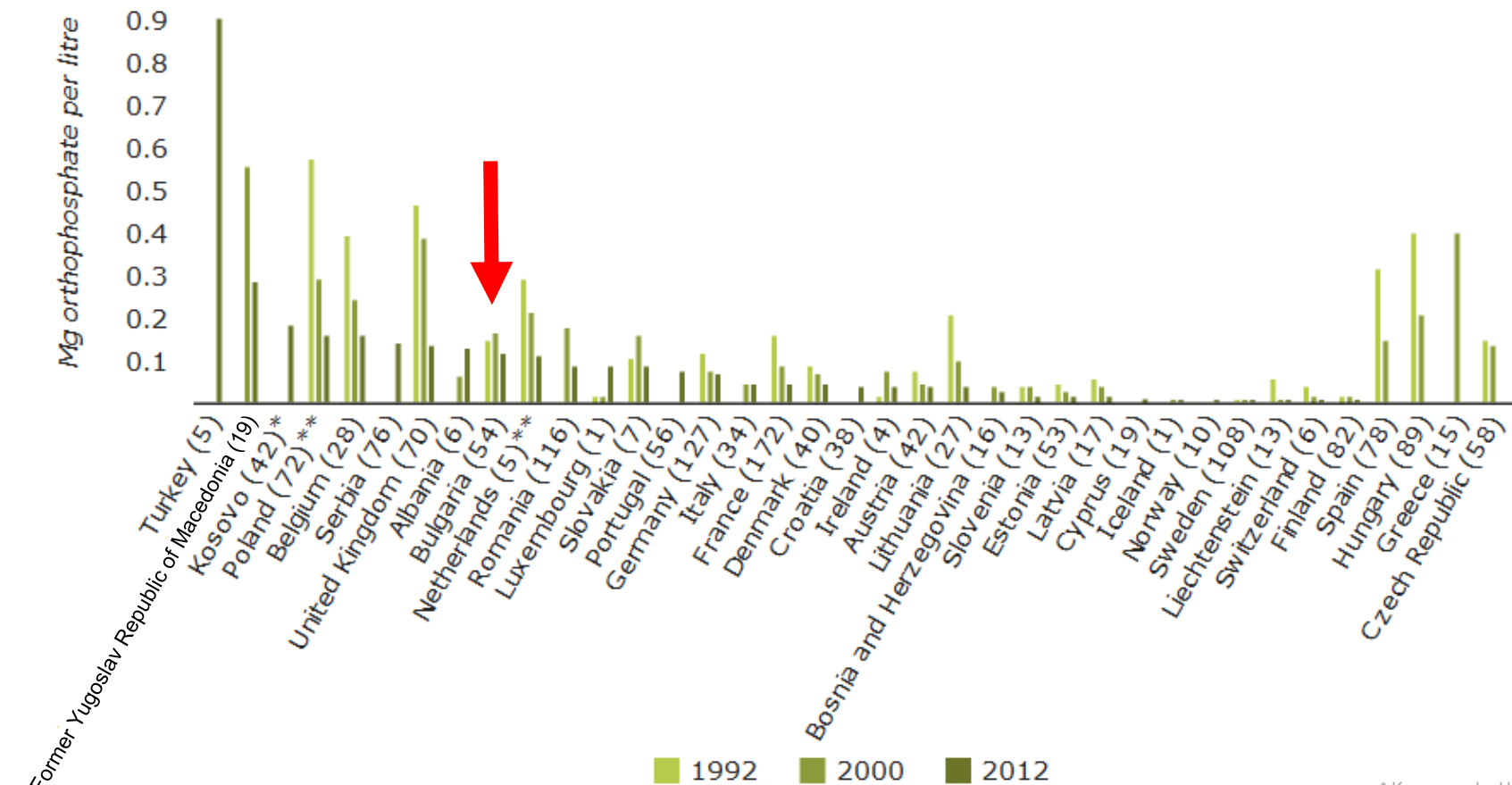
Data sources: Eurostat. Gross inland energy consumption, by fuel; EEA – Indicator ENER029



## Average concentration of nitrate-nitrogen in rivers in 38 European countries (1992, 2000 and 2012)

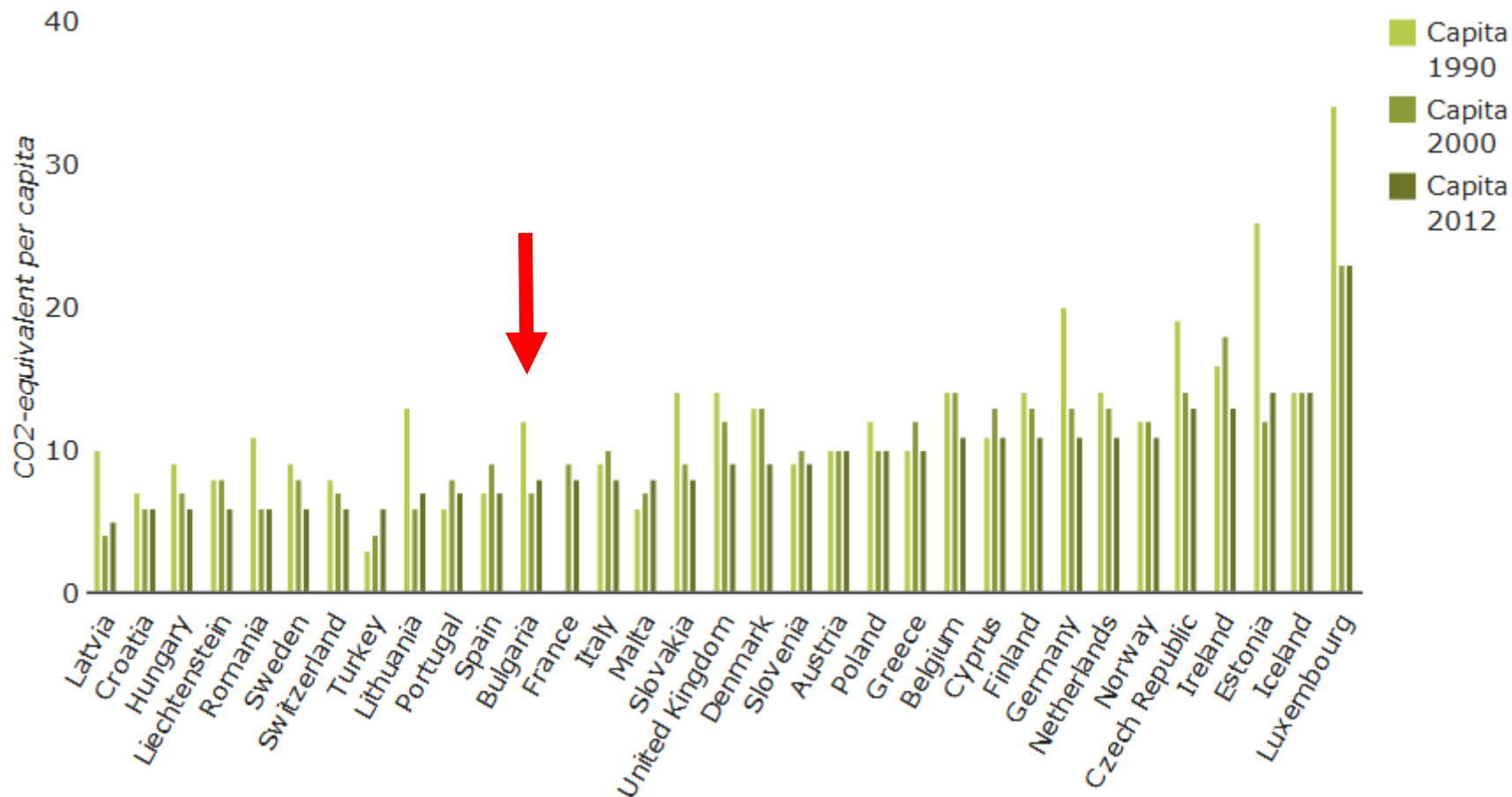


## Average concentration of orthophosphate in rivers in 37 European countries (1992, 2000 and 2012)



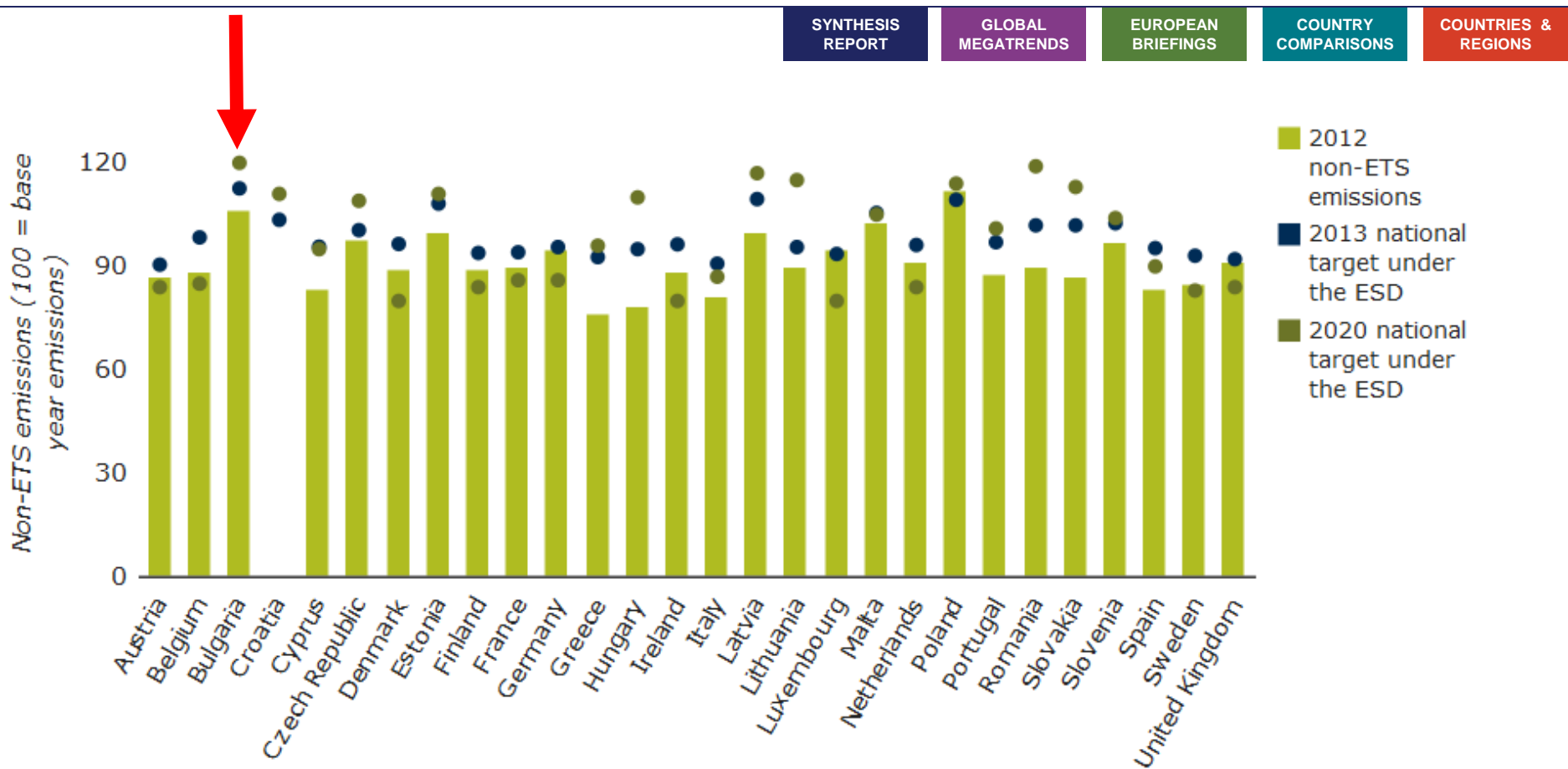
\* Kosovo under UNSCR 1244/99 (42);  
 \*\* data for the Netherlands and Poland is total phosphorus concentration.  
 Data sources: EEA. Waterbase - Rivers

## Greenhouse gas emissions per capita in EEA countries (1990, 2000 and 2012)



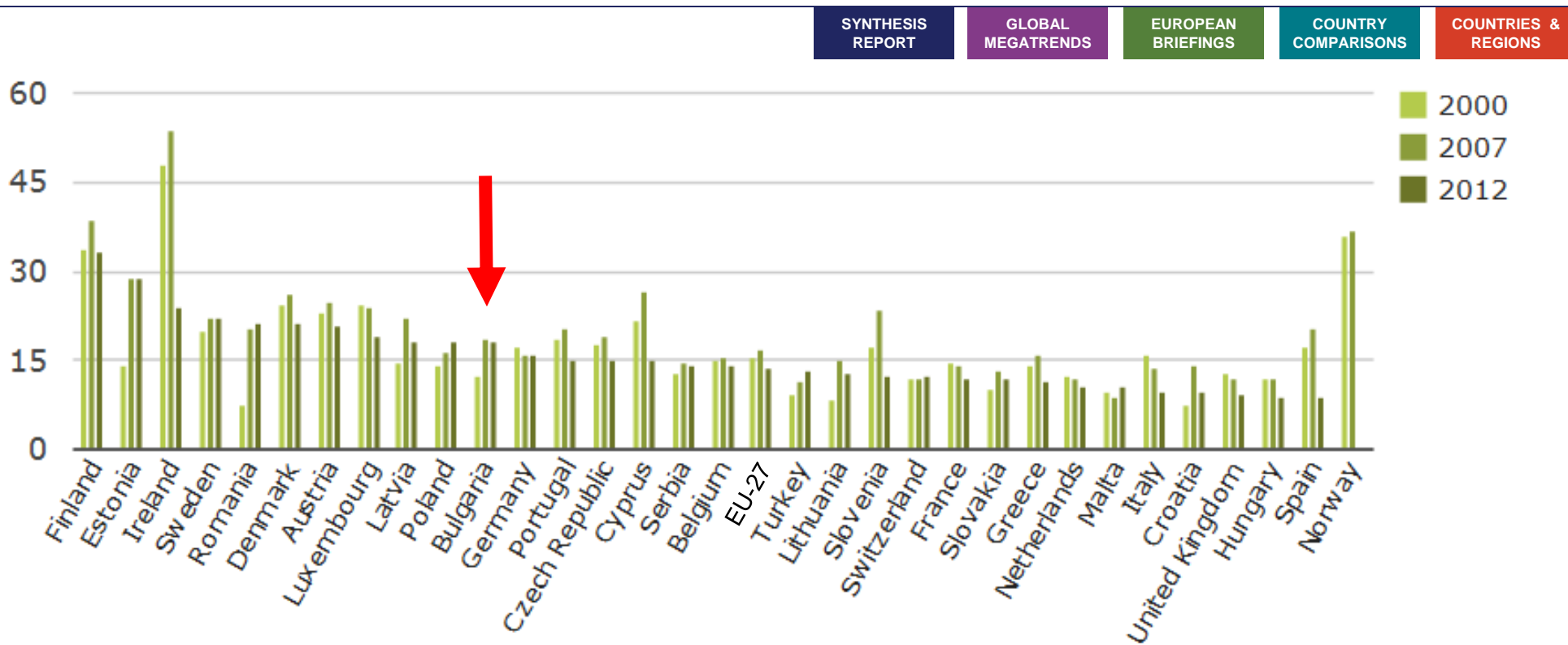
Data sources: EEA. National emissions reported to the UNFCCC and to the EU Greenhouse Gas Monitoring Mechanism; Eurostat. Population on 1 January by age and sex.

## Progress towards 2013 and 2020 targets for EU Member States under the Effort Sharing Decision



Data sources: EEA. National emissions reported to the UNFCCC and to the EU Greenhouse Gas Monitoring Mechanism EEA. CITL v16; EEA. Annual European Community greenhouse gas inventory 1990–2012 and inventory report 2013; EC. Decision No 406/2009/EC  
 Note: ESD — Effort Sharing Decision. ETS — Emissions Trading Scheme.

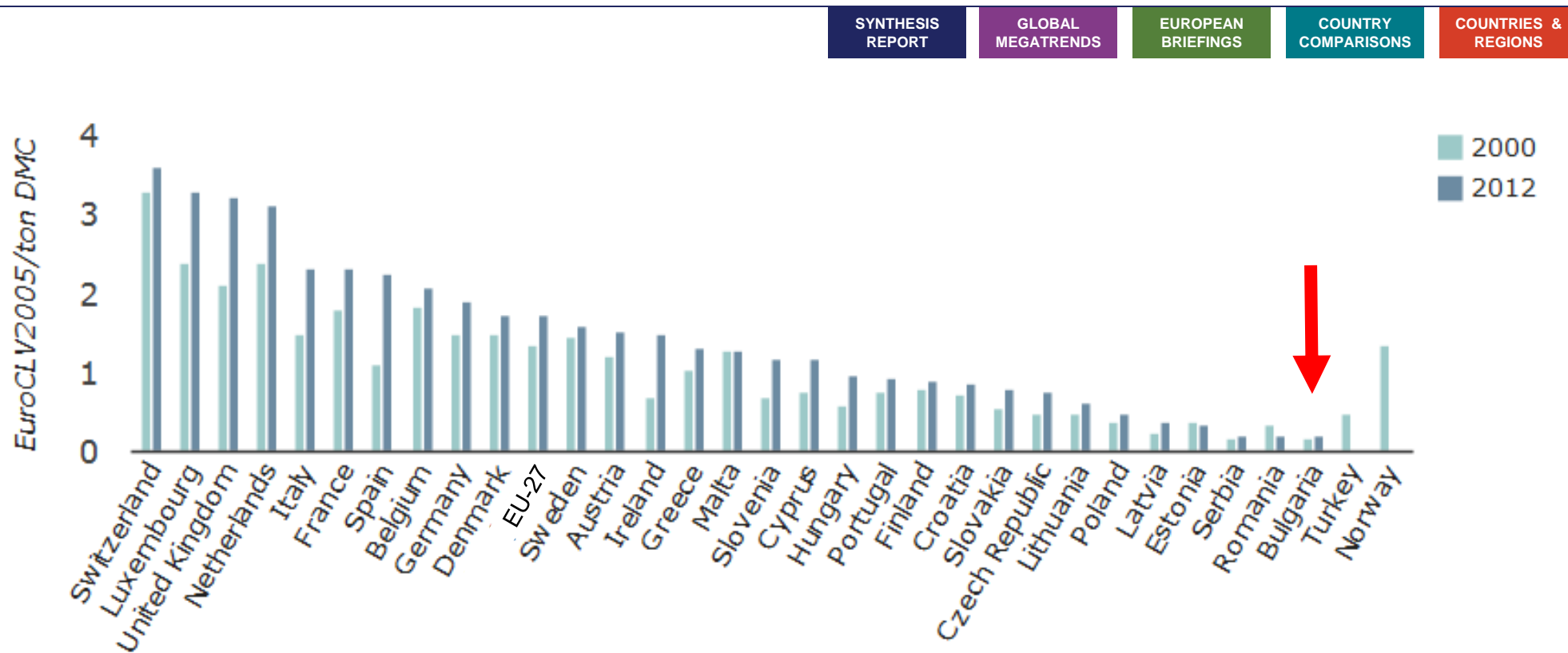
## Material resource use (DMC) per capita in 32 European countries (2000, 2007 and 2012)



Data sources: Eurostat. Material Flow Accounts

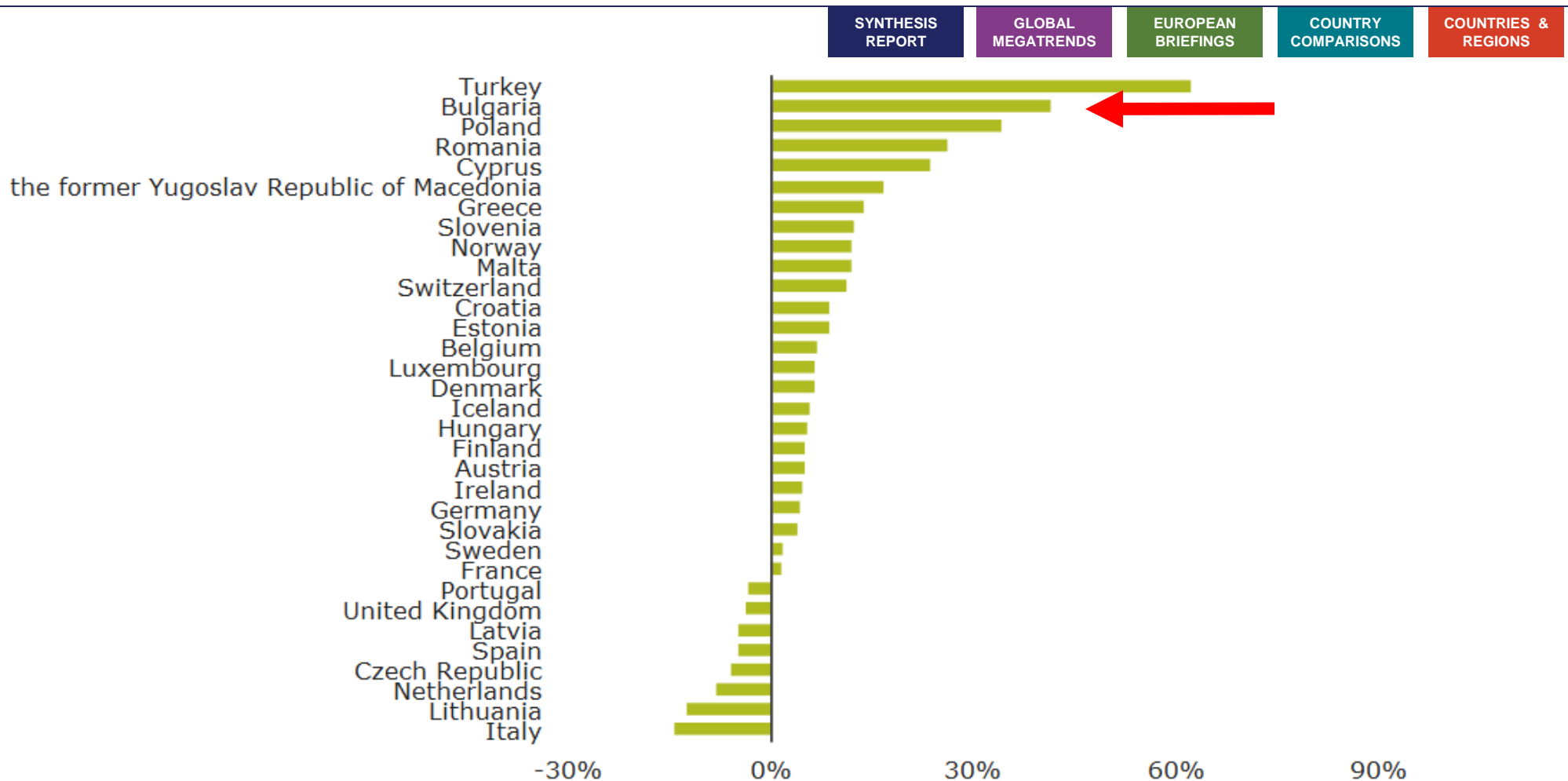
Note: A time series was available for 32 countries, but for four countries the full time series was not available: 2000 not available for Serbia so 2001 data are shown; latest data year for Norway was 2008; 2012 data not available for Switzerland and Turkey so 2011 data shown.

## Resource productivity (GDP/DMC) in 32 European countries (2000 and 2012)



Note: A time series was available for 32 countries but for four countries the full 2000-2012 time series was not available (2000 not available for Serbia so 2001 is shown; 2011 shown for Switzerland and latest data available for Norway was 2008 and Turkey was 2010). For the calculation of resource productivity Eurostat uses the GDP in units of Euros in chain-linked volumes to the reference year 2005 at 2005 exchange rates (code: EUR\_CLV05\_KG).  
Data sources: Eurostat. Resource productivity

## Percentage change in car passenger transport demand in 33 European countries (2005 – 2012)



Data sources: DG Mobility and Transport. Performance of passenger transport (pkm)

## Municipal waste generated per capita in 36 European countries (2004 to 2012)

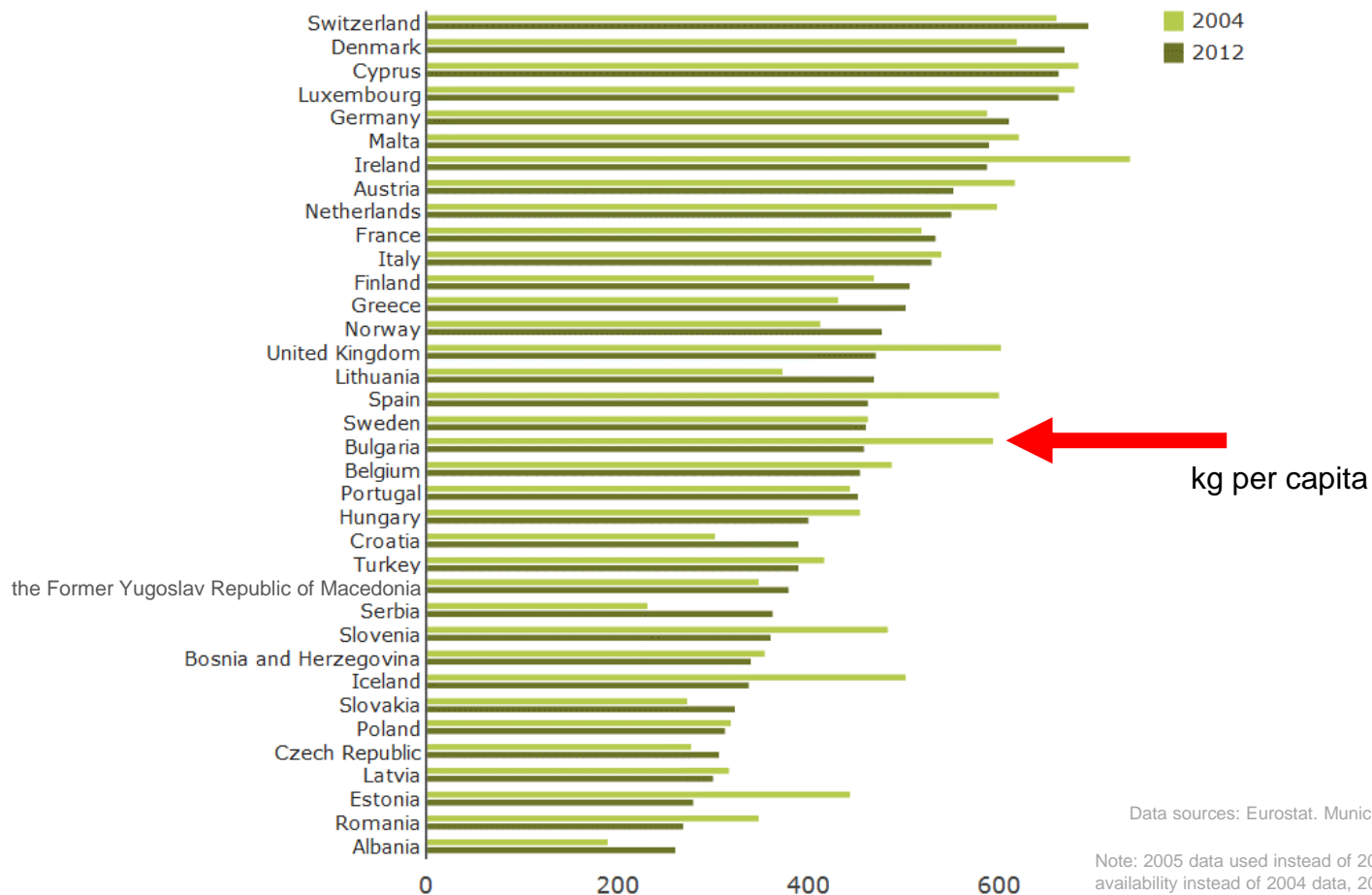
SYNTHESIS REPORT

GLOBAL MEGATRENDS

EUROPEAN BRIEFINGS

COUNTRY COMPARISONS

COUNTRIES & REGIONS



Data sources: Eurostat. Municipality waste statistics; Eurostat. Demography national data population. Population on 1 January by age and sex.

Note: 2005 data used instead of 2004 for Poland due to changes in methodology. Due to data availability instead of 2004 data, 2008 data were used for Bosnia and Herzegovina; 2006 data used for Serbia; and 2008 data used for the Former Yugoslav Republic of Macedonia..



## Municipal waste recycling in 35 European countries (2004 and 2012)

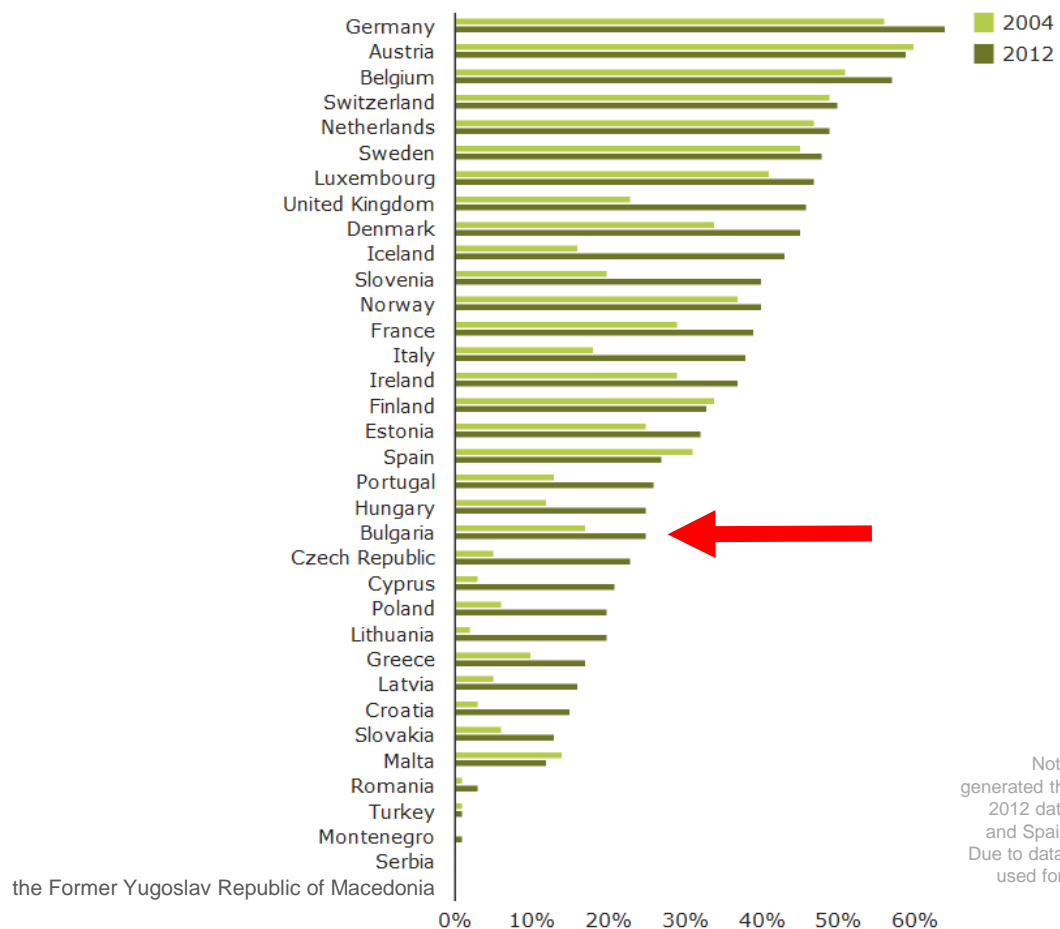
SYNTHESIS REPORT

GLOBAL MEGATRENDS

EUROPEAN BRIEFINGS

COUNTRY COMPARISONS

COUNTRIES & REGIONS



Note: Note: The recycling rate is calculated as the percentage of municipal waste generated that is recycled and composted. Changes in reporting methodology means that 2012 data are not fully comparable with 2004 data for Austria, Cyprus, Malta, Slovakia and Spain. 2005 data used instead of 2004 for Poland due to changes in methodology. Due to data availability instead of 2004 data, 2003 data were used for Iceland; 2007 data used for Croatia; and 2006 data used for Serbia. For the former Yugoslav Republic of Macedonia, 2008 data were used for 2004, and 2011 used for 2012.

Data sources: Eurostat. Municipality waste statistics

# Explore SOER 2015 online: [eea.europa.eu/soer](http://eea.europa.eu/soer)

## SOER 2015 — The European environment — state and outlook 2015

A comprehensive assessment of the European environment's state, trends and prospects, in a global context.



Synthesis report



Global megatrends



European briefings



Cross-country  
comparisons



Countries  
and regions

The synthesis report informs future European environmental policy in general and its implementation between 2015 and 2020 in particular. It includes a reflection on the European environment in a global context, as well as chapters summarising the state of, trends in, and prospects for the environment in Europe.

- [Table of contents](#)
- [Foreword](#)
- [Executive summary](#)
- [1. The changing context of European environmental policy](#)
- [2. The European environment in a wider perspective](#)
- [3. Protecting, conserving and enhancing natural capital](#)
- [4. Resource efficiency and the low-carbon economy](#)
- [5. Safeguarding people from environmental risks to health](#)
- [6. Understanding the systemic challenges facing Europe](#)
- [7. Responding to systemic challenges: from vision to transition](#)
- [References and bibliography](#)

Synthesis report in several languages  

## Explore SOER 2015



 Presentation of key facts and figures.

 Online search among all figures.

### Key messages

[Waste — municipal solid waste generation and management](#): The large differences in performance indicate room for further improvement and actions to meet the 2020 target to recycle 50% of municipal waste. [See briefing](#)

[About SOER 2015](#)

[For journalists](#)

[Events](#)

[Feedback](#)

[Photos and videos](#)



Stay informed about SOER 2015 and receive our products – sign up at:

**<http://eea-subscriptions.eu/subscribe>**

Thank you!

