

THE EUROPEAN ENVIRONMENT STATE AND OUTLOOK 2015



European Environment Agency



SOER 2015

SYNTHESIS
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MEGATRENDSEUROPEAN
BRIEFINGSCOUNTRY
COMPARISONSCOUNTRIES &
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The EEA is mandated in its governing regulation to publish a State of the Environment Report (SOER) every five years, to assess the European environment's state, trends and prospects.

- The suite of SOER 2015 products – 2 reports and 87 briefings – provide a baseline to assess where Europe is making progress against the 7th EAP objectives.
- The SOER 2015 synthesis report signals opportunities to recalibrate policies and knowledge in line with the 2050 vision.

SOER 2015 Synthesis report

SOER 2015 Assessment of global megatrends

**Global
megatrends**

11 briefings

**European
briefings**

25 briefings

**Cross-country
comparisons**

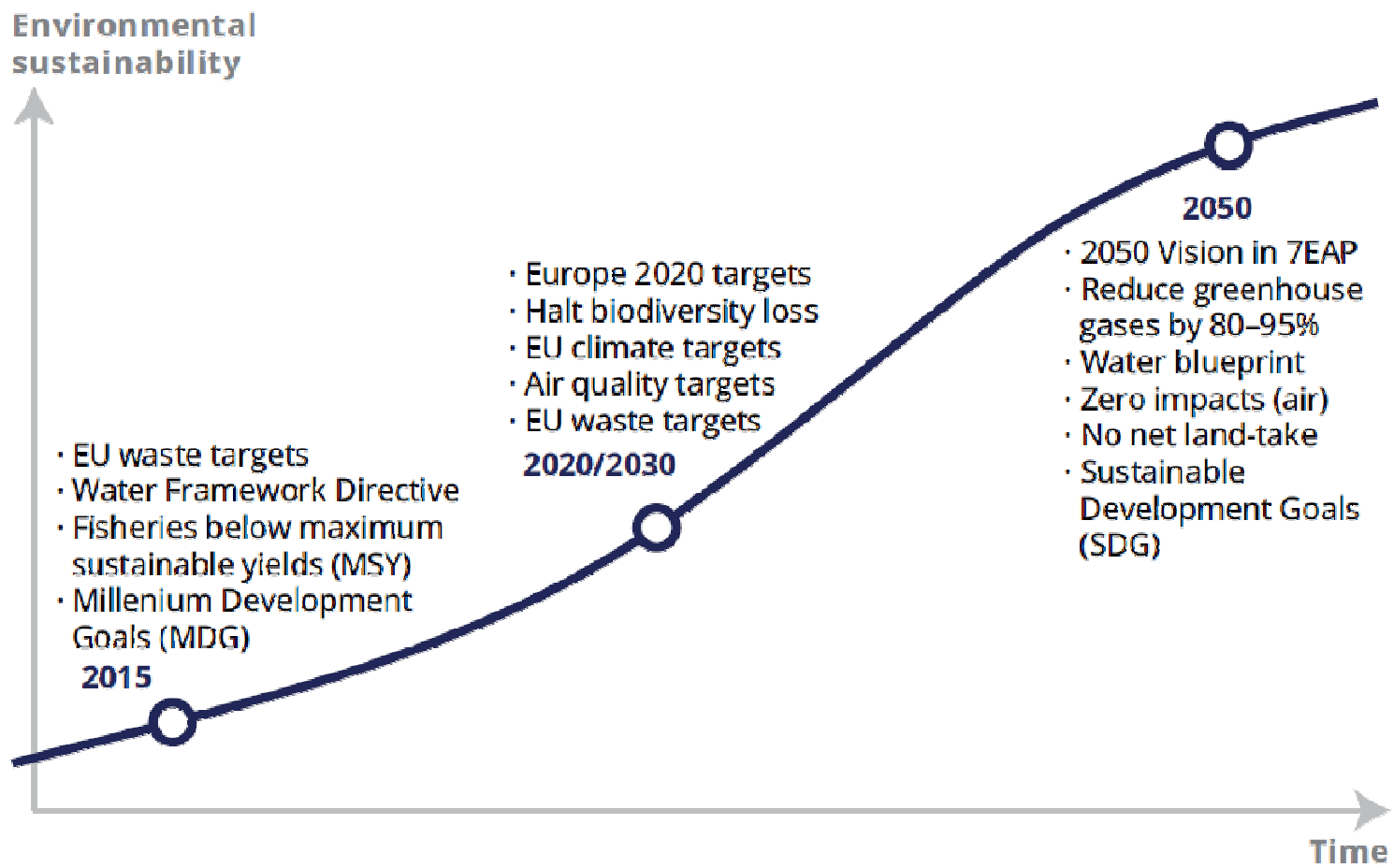
9 briefings

**Countries and
regions**

39+3 briefings



The policy context has evolved over that time



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

Source: EEA Multiannual Work Programme 2014–2018

Goals of the 7th Environment Action Programme

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‘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

01

Integrated assessment of environmental trends

- Part 1 – Setting the scene: The context for European environmental policy, and the global megatrends that directly and indirectly affect Europe’s environment.
- Part 2 – Assessing European trends: The trends and outlook for 20 environmental issues grouped under the 3 priority objectives of the 7th Environment Action Programme.
- Part 3 – Looking ahead: The overall picture of the European environment’s state and outlook, and opportunities to support the transition to a more sustainable society.

Protecting, conserving and enhancing natural capital

- Terrestrial and freshwater biodiversity
- Land use and soil functions
- 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

Resource efficiency and the low-carbon economy

- Material resource efficiency and material use
- Waste management
- Greenhouse gas emissions and climate change mitigation
- Energy consumption and fossil fuel use
- Transport demand and related environmental impacts
- Industrial pollution to air, soil and water
- Water use and water quantity stress

Safeguarding from environmental risks to health

- Water pollution and related environmental health risks
- Air pollution and related environmental health risks
- Noise pollution (especially in urban areas)
- Urban systems and grey infrastructure
- Climate change and related environmental health risks
- Chemicals and related environmental health risks

Key messages

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- Implementation of environment and climate policies has delivered substantial benefits for the functioning of Europe's ecosystems and for the health and living standards of its citizens.
- Environmental policies are also creating economic opportunities and thereby contributing to the Europe 2020 Strategy, aimed at making the EU into a smart, sustainable and inclusive economy by 2020.
- However, there is a disparity between the many positive short terms trends and the less encouraging, long term outlooks for Europe's environment.

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Overall
summary table



Key messages

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- Environmental drivers, trends and impacts are increasingly globalised: a variety of long-term megatrends today affect Europe's environment, consumption patterns and living standards.
- Policies are working. However, the level of ambition of existing environmental policy may be inadequate to achieve Europe's long-term environmental goals.
- Recalibrating existing policy approaches can make an essential contribution to such transitions along four key approaches: mitigating; adapting; avoiding and restoring.
- Neither environmental policies alone nor economic and technology-driven efficiency gains will be sufficient to achieve the 2050 vision.

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Key messages

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- Living well within ecological limits requires fundamental transitions in the systems of production and consumption that are the root cause of environmental and climate pressures.
- Achieving this commitment can put Europe at the frontier of science and technology but calls for a greater sense of urgency and more courageous actions.
- Such transitions require profound changes in dominant institutions, practices, technologies, policies, lifestyles and thinking.

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Synthesis report

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Protecting, conserving and enhancing natural capital

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	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.

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Despite cuts in air emissions, ecosystems still suffer from eutrophication, acidification and ozone

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Air pollution and its ecosystem impacts

5-10 year trends:

Lower emissions of air pollutants have contributed to fewer exceedances of acidification and eutrophication limits.

20+ year outlook:

Long-term problems from eutrophication are forecast to persist in some areas, although adverse impacts caused by acidification will be greatly improved.

Progress to policy targets:

There has been mixed progress in meeting the EU's 2010 interim environmental objectives for eutrophication and acidification.

Source: EEA, SOER 2015 Synthesis report.

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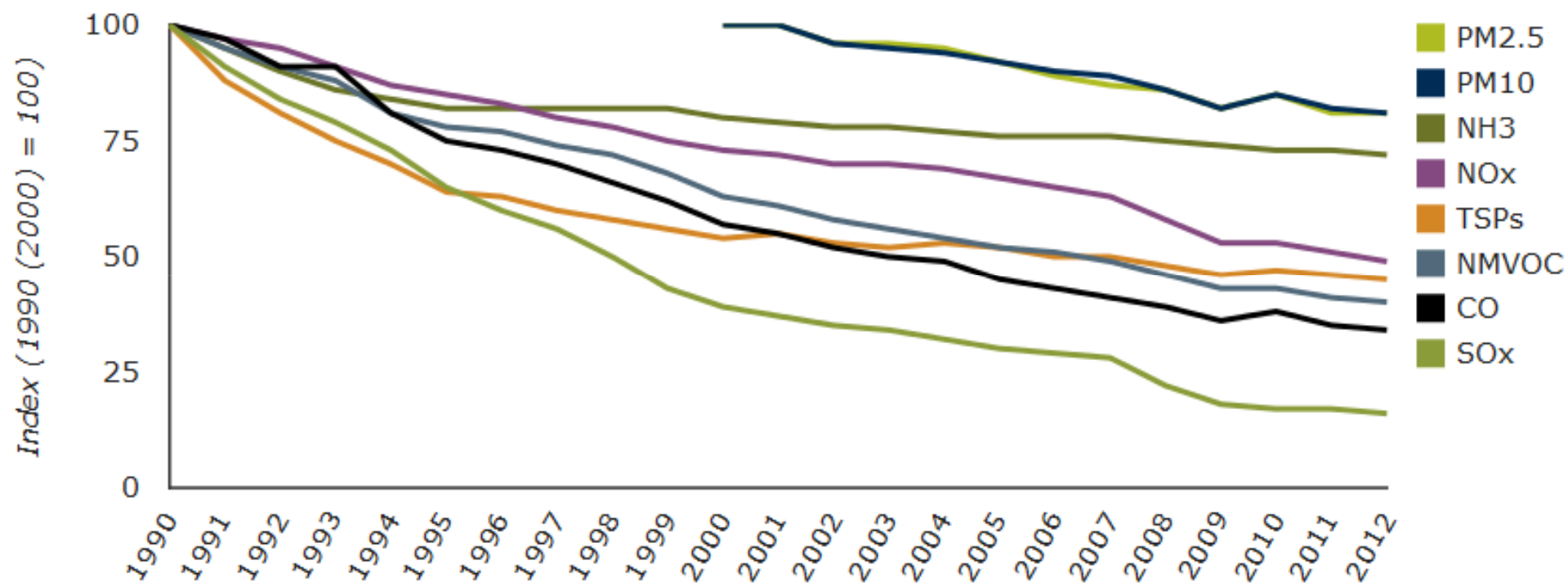
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Air pollution

Air pollution



EU-28 emission trends for the main air pollutants



Data sources: EEA. National emissions reported to the Convention on Long-range Transboundary Air Pollution (LRTAP Convention)
 Note: Parties to the Convention on Long-range Transboundary Air Pollution (LRTAP) are formally requested to report emissions of PM only for the year 2000 and onwards. Hence emission trends for these years only are shown. PM10: particulate matter with a diameter of 10 µm or less; PM2.5: particulate matter with a diameter of 2.5 µm or less; TSP: Total suspended particulate; NMVOC: Non-methane volatile organic compounds; NH3: ammonia; NOx: nitrogen oxides; CO: carbon monoxide; SOx: sulphur oxides.

Related content

- Air pollution & its ecosystem impacts
- Industrial pollution to air, soil and water
- Air pollution & related envi. health risks
- Urban systems and grey infrastructure
- Air pollution

Resource efficiency and the low-carbon economy

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

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Industrial pollutant emissions have declined but still cause considerable damage each year

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Industrial pollution to air, soil and water

5-10 year trends:

Industrial emissions are decoupling from industrial output in absolute terms.

20+ year outlook:

Industrial emissions are expected to decrease further, but harm to the environment and human health remains considerable.

Progress to policy targets:

Good progress in implementation of Best Available Techniques. Policy has been strengthened through the Industrial Emissions Directive, which remains to be fully implemented.

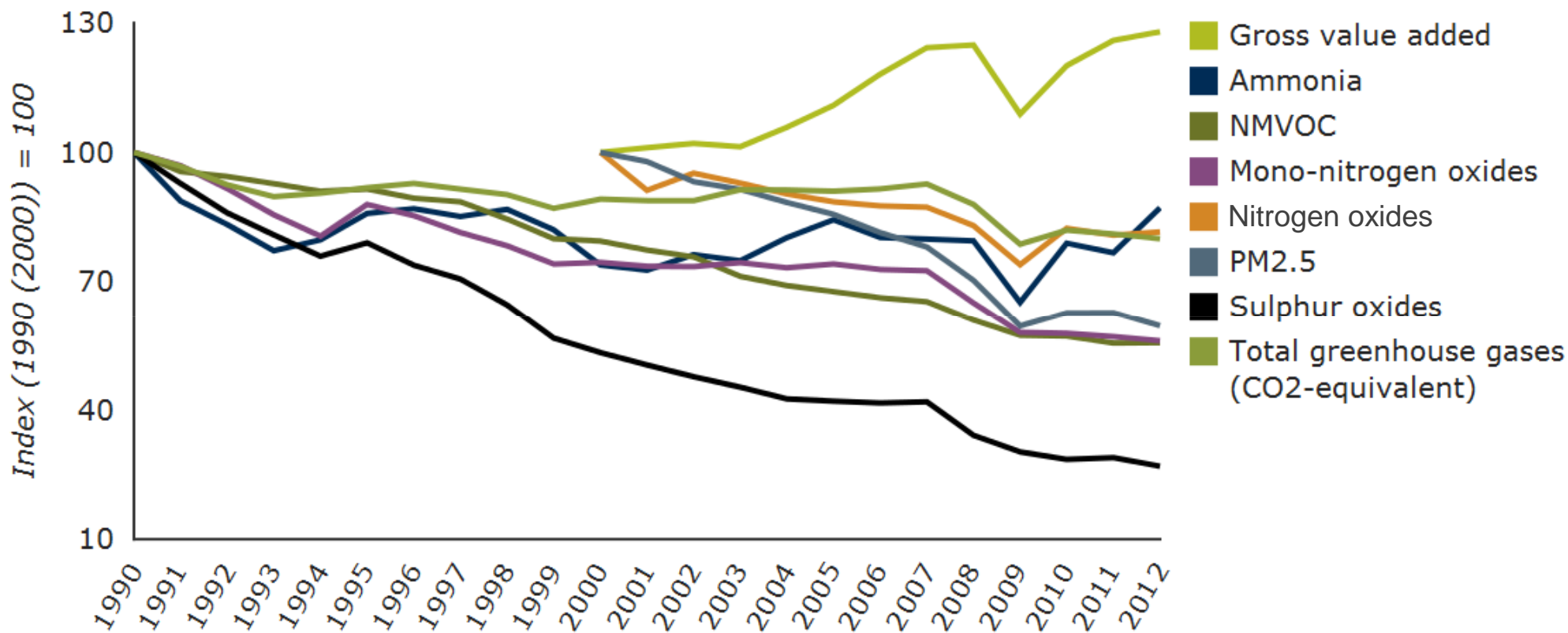


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Source: EEA. SOER 2015 Synthesis report.

Emissions of air pollutants and greenhouse gases and gross value added (GVA) from European industry (EEA-33)



Data sources: Eurostat. National Accounts by 10 branches - aggregates at current prices; EEA. National emissions reported to the UNFCCC and to the EU Greenhouse Gas Monitoring Mechanism
 Note: Emissions included are from the energy production and distribution, energy use by industry, and industrial processes sectors. NMVOC: Non-methane volatile organic compounds; PM10: particulate matter with a diameter of 10 µm or less; PM2.5: particulate matter with a diameter of 2.5 µm or less.

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Industrial pollution to air, soil and water

Safeguarding from environmental risks to health

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	5–10 year trends	20+ years outlook	Progress to policy targets
➤ Water pollution and related environmental health risks			☑ / ☐
➤ Air pollution and related environmental health risks			☐
➤ Noise pollution (especially in urban areas)		n.a.	☐
➤ Urban systems and grey infrastructure			No target
➤ Climate change and related environmental health risks			No target
➤ Chemicals and related environmental health risks			☐ / ☒

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.

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Ambient air quality has improved but many citizens are still exposed to dangerous pollutants

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Air pollution and related environmental health risks

5-10 year trends:

Europe's air quality is slowly improving, but fine particulate matter (PM2.5) and ground-level ozone in particular continue to cause serious impacts on health.

20+ year outlook:

Air quality is expected to further improve in the years to 2030, but harmful levels of air pollution will persist.

Progress to policy targets:

The number of countries meeting existing EU air quality standards is slowly increasing, but a large number are still not in compliance.

Source: EEA. SOER 2015 Synthesis report.

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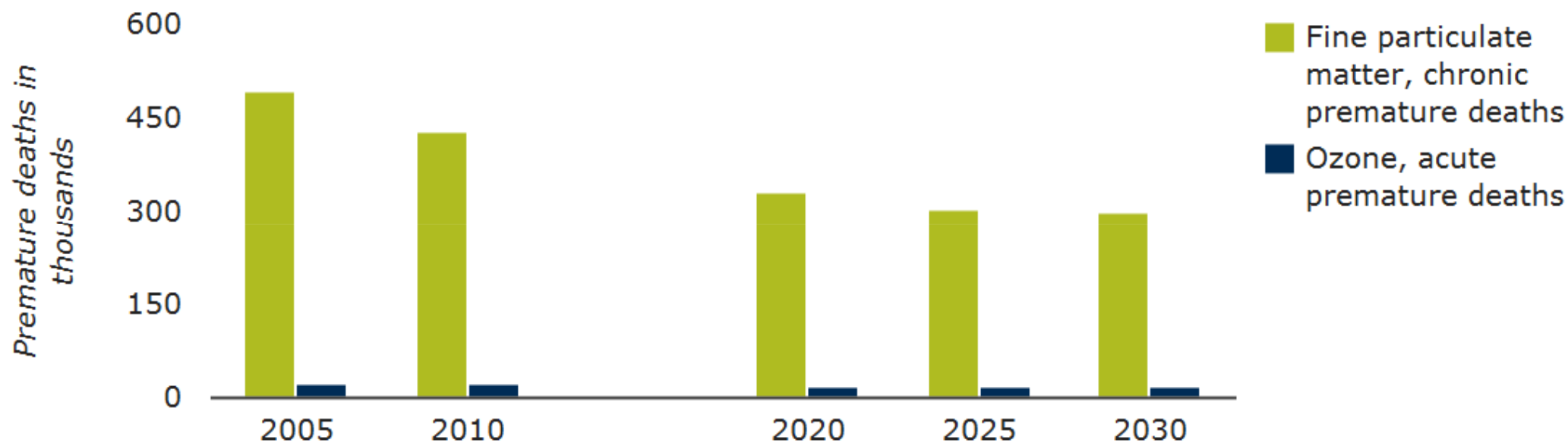
Air pollution

Air pollution

Health &
environment



Estimated future air pollution health impacts of fine particulate matter and ozone under a current legislation scenario



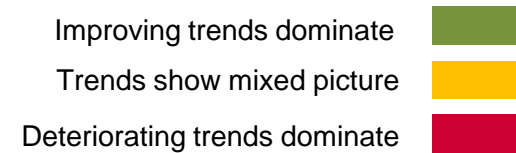
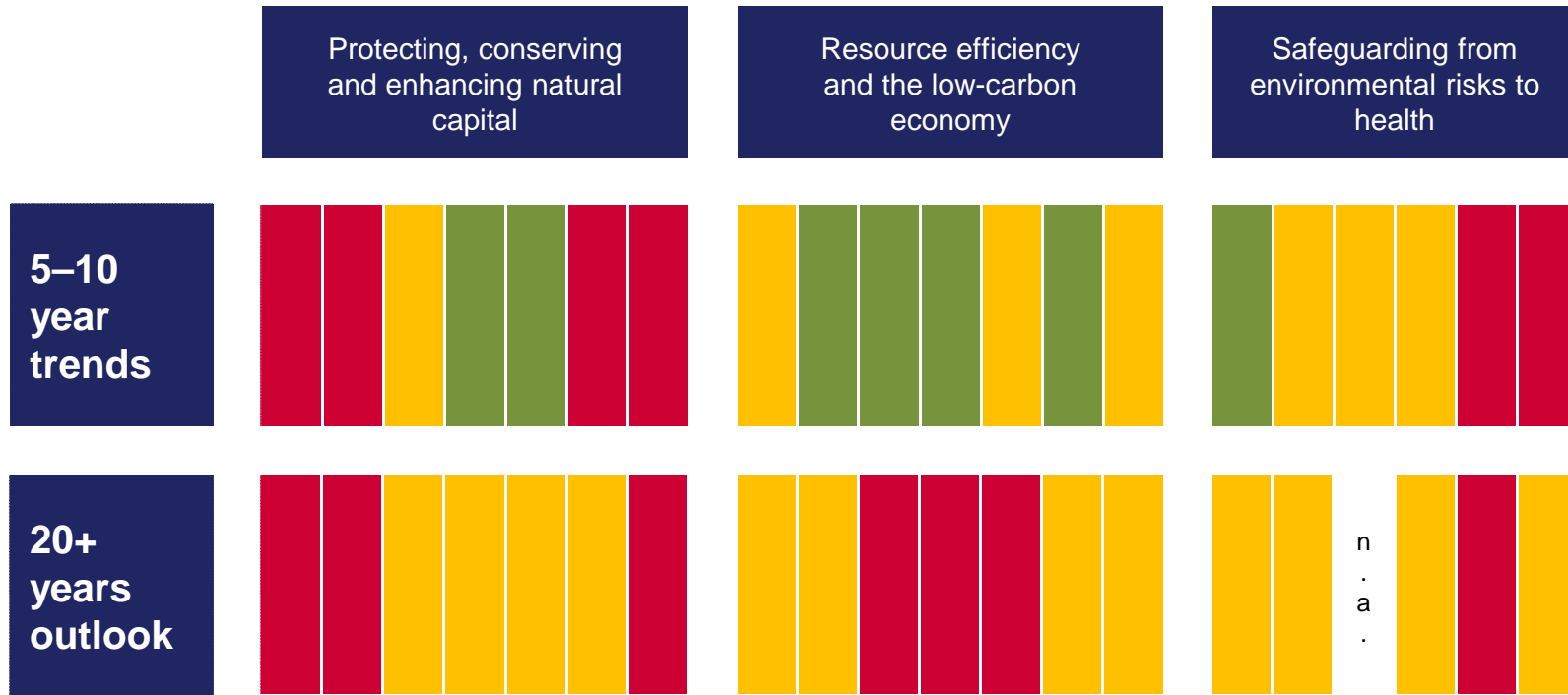
Data sources: EC. A Clean Air Programme for Europe

Note: The current legislation or 'baseline' scenario assumes full implementation of current air-related policies. It is based on recent energy projections used as a reference for climate, energy and transport policy analysis as well as on agricultural projections.

Related content

- [Air pollution & its ecosystem impacts](#)
- [Industrial pollution to air, soil and water](#)
- [Air pollution & related envi. health risks](#)
- [Urban systems and grey infrastructure](#)
- [Air pollution](#)

Summary assessment of environmental trends



Source: EEA. SOER 2015 Synthesis report.

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