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Environmental indicator report 2017

In support to the monitoring of the Seventh Environment Action Programme

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Online briefings that underpin the Environmental indicator report 2017

In support to monitoring aspects of the Seventh Environment Action Programme

	Priority objective 1	Priority objective 2	Priority objective 3
	To protect, conserve and enhance the Union's natural capital	To turn the Union into a resource-efficient, green and competitive low-carbon economy	To safeguard the Union's citizens from environment-related pressures and risks to health and well-being
	Euthrophication of terrestrial ecosystems due to air pollution	Resource efficiency	Outdoor air quality in urban areas
	Agricultural land: nitrogen balance	Waste generation	Air pollutant emissions
	Urban land take	Recycling of municipal waste	Quality of bathing waters
	Forest utilisation	Freshwater use	Number of countries that have adopted a climate change adaptation strategy/plan
	Marine fish stocks	Greenhouse gas emissions	Environmental noise
	Common birds and butterflies	Renewable energy sources	Consumption of hazardous chemicals
	EU protected species	Energy efficiency	Pesticide sales
	EU protected habitats	Household energy consumption	
	Surface waters	Transport greenhouse gas emissions	
		Food consumption – animal based protein	
		Environmental and labour taxation	
		Environmental goods and services sector: employment and value added	
		Environmental protection expenditure	

www.eea.europa.eu/airs/2017

Summary

This is the second edition of the annual European Environment Agency (EEA) Environmental Indicator Report in support to the monitoring of the European Union Seventh Environment Action Programme (7th EAP).

The 7th EAP came into force in January 2014. The programme contains nine priority objectives, of which three thematic priority objectives are considered central:

1. 'To protect, conserve and enhance the Union's natural capital';
2. 'To turn the Union into a resource-efficient, green, and competitive low-carbon economy';
3. 'To safeguard the Union's citizens from environment-related pressures and risks to health and well-being'.

Table S.1 Indicator scoreboard by 7th EAP thematic priority objectives

Indicator	EU indicator past trend (a)	Outlook for meeting the selected objective by 2020
Priority objective 1: 'To protect, conserve and enhance the Union's natural capital'		
(!) Exposure of terrestrial ecosystems to eutrophication due to air pollution (*)	▲	●
Gross nutrient balance in agricultural land: nitrogen	▲	●
(!) Land take (*)	▲	●
(!) Forest: growing stock, increment and fellings	▲	●
Status of marine fish stocks	▲	●
Abundance and distribution of selected species (common birds (*) and grassland butterflies)	▲	●
(!) Species of European interest	▲	●
(!) Habitats of European interest	▲	●
(!) Status of surface waters	N.A.	●
Priority objective 2: 'To turn the Union into a resource-efficient, green, and competitive low-carbon economy'		
Resource productivity	▲	●
Waste generation in Europe (excluding major mineral wastes) — absolute and per capita	▲	●
Recycling of municipal waste (*)	▲	●
Use of freshwater resources	▲	●
Total greenhouse gas emission trends and projections	▲	●
Share of renewable energy in gross final energy consumption	▲	●
Progress on energy efficiency in Europe	▲	●
Energy consumption by households	▲	●
Greenhouse gas emissions from transport	▲	●
Animal product consumption (animal protein)	▲	●
Share of environmental and labour taxes in total tax revenues	▲	●
Employment and value added in the environmental goods and services sector	▲	●
Environmental protection expenditure in Europe	▲	●
Priority objective 3: 'To safeguard the Union's citizens from environment-related pressures and risks to health and well-being'		
Exceedance of air quality standards in urban areas (nitrogen dioxide: NO_2; coarse dust particles: PM_{10}; ozone: O_3; fine particulate matter: $PM_{2.5}$)	▲ NO_2, PM_{10}, $PM_{2.5}$ ▲ O_3	●
Emissions of the main air pollutants in Europe (sulphur oxides: SO_2; nitrogen oxides: NO_x; ammonia: NH_3; non-methane volatile organic compounds: NMVOCs; fine particulate matter:$PM_{2.5}$) (*)	▲ SO_2, NO_x, NMVOCs, $PM_{2.5}$ ▲ NH_3	● SO_2, NO_x, NMVOCs, $PM_{2.5}$ ● NH_3
Bathing water quality	▲	●
Number of countries that have adopted a climate change adaptation strategy and/or plan	N.A.	●
Population exposure to environmental noise	▲	●
Consumption of chemicals, by hazard class	▲	●
Total sales of pesticides	▲	●

EU indicator past trend		Outlook for meeting the selected objective by 2020	
▲	Improving trend	●	It is likely that the objective will be met by 2020
▲	Stable or unclear trend	●	It is uncertain whether or not the objective will be met by 2020
▲	Deteriorating trend	●	It is unlikely that the objective will be met by 2020

Notes: (a) The examined past trend period is unique to each indicator and is specified in Annex 2.

(*) The indicator past trend is also available at EEA member country aggregate level and not just at EU aggregate level. The colour assessment remains the same for the EU and the EEA member country (including the EU) indicator past trend.

(!) The indicator has not been updated with more recent data in this year's report.

N.A. Non applicable.

As with the first edition in 2016, this report examines — with the help of 29 indicators — whether or not the EU is on the right path to achieve, by 2020, the 7th EAP's three thematic priority objectives. The report updates last year's results with latest data (mostly from 2015) and information.

Table S.1 summarises the indicator results across the three priority objectives in a scoreboard. For each indicator, more detailed assessments are available online ([1]). The table shows long term indicator past trends as well as the outlook for meeting selected objectives relevant to the achievement of the thematic priority objectives by 2020 ([2]). A full description of the scoreboard methodology including a graphical illustration is available in Box I.3 (see page 11).

The scoreboard results confirm the overall assessment provided in 2016, namely:

- For priority objective 1: the EU's natural capital is not yet being protected, maintained and enhanced in line with the ambitions of the 7th EAP. The 2020 outlook remains bleak overall for the selected set of objectives related to this priority objective.

- For priority objective 2: the 2020 outlook continues to show mixed progress. The EU is on track to meet climate and energy related targets. There have also been some resource efficiency improvements, while efforts so far to reduce the overall environmental impact of production and consumption (i.e. in the food, housing and mobility sectors) vary considerably in their success rates.

- For priority objective 3: the 2020 outlook for this objective also continues to be mixed. On the one hand, there have been substantial reductions in emissions of air and water pollutants in recent decades. On the other, key concerns persist around air quality and noise pollution in urban areas and chronic exposure of the population to complex mixtures of chemicals in products.

In addition to these overall results, recent trends for several indicators are worth highlighting including the implications they have on the prospects of meeting related 2020 objectives.

Ammonia emissions increased in 2014 and 2015, thereby changing from positive to uncertain the prospects of meeting the EU and international commitment to reduce by 2020 ammonia emissions by 6 % compared with 2005 levels.

The outlook for meeting the land take milestone — keeping the average rate of land take below 800 km^2 per year between 2000 and 2020 — is revised from 'uncertain' to 'unlikely to be met'. Achieving this objective requires significant further reductions in the rate of land take up to 2020. Currently, there are no policies promoting such drastic reductions and new, complementary land take data point to a recent acceleration of land take.

Primary energy consumption and greenhouse gas emissions from transport increased in recent years. The 2020 outlooks for, respectively, meeting the energy efficiency target and reducing the overall environmental impact of the mobility sector remain, nevertheless, unchanged. However, additional efforts are necessary to stay on track to meet the energy efficiency target, while there is an increasing risk that the EU will miss its objective of reducing the overall environmental impact from the mobility sector.

In 2015, total greenhouse gas emissions and energy consumption in households increased, and the rate of increase in the share of renewable energy in gross final energy consumption slowed. Also, the growth rate of the environmental goods and services sector slowed between 2011and 2015. Nonetheless, these developments do not translate to increased risks that the EU will miss its respective objectives by 2020. This is because previous progress has been more than enough to keep the EU well on track and/or the resumption of positive developments is anticipated.

In 2015, population exposure to exceedances of air quality standards in urban areas for nitrogen dioxides, dust particles and ozone increased while nitrogen losses from agricultural land did not decrease further between 2010 and 2014. This strengthens last year's assessment that the related objectives will not be met by 2020.

([1]) https://www.eea.europa.eu/airs/2017

([2]) The table shows that in some cases although there have been improvements in the past it is unlikely that the related objectives will be met by 2020. This is because the improvements and any expected improvements up to 2020 will not suffice to meet the objectives.

Finally, the lower economic activity level in the EU following the 2008 financial crisis, contributed to several of the positive past trends shown in the scoreboard. As EU economic growth is returning, increased efforts are likely to be necessary in the coming years in order to maintain progress. Two key actions would be to implement better existing environmental legislation as well as to mainstream further environmental objectives into socio-economic policies such as energy, agriculture and transport.

Looking beyond 2020, the EU and its neighbours will need to accelerate progress in coming decades on climate change mitigation and adaptation, air pollution and other environmental problems in order to achieve the 7th EAP's 2050 vision of 'living well, within the limits of our planet'. Such accelerated efforts will, at the same time, contribute to meeting the many related EU commitments under the 2015 Paris Agreement on climate change and the United Nations' 2030 Agenda for Sustainable Development.

Overall, the EU can most effectively make progress through ambitious policies and targets, alongside sizeable sustainable financial investments. Together these can transform the key systems of production and consumption that most contribute to environmental and climate pressures, and impacts on human well-being — e.g. food, energy, mobility — across Europe and the rest of the world.

Introduction

This is the second edition of the EEA Environmental Indicator Report — in support to the monitoring of the Seventh Environment Action Programme (EEA, 2016).

The Seventh Environment Action Programme or 7th EAP (EU, 2013), provides an overarching framework for EU environment policy planning and implementation to be achieved by 2020, guided by a vision for 2050 of 'living well, within the limits of our planet'.

Like the first edition in 2016, this report examines whether or not the EU is on the right path to achieve, by 2020, the 7th EAP's three thematic priority objectives.

The thematic priority objectives aim to:

1. protect nature and strengthen ecological resilience;
2. boost sustainable, resource-efficient, low-carbon growth;
3. effectively address environment-related threats to health and well-being.

Box I.1 gives the thematic priority objectives and includes information on the long-term vision of the 7th EAP and the other six priority objectives (see also EC, 2017).

Box I.1 The Seventh Environment Action Programme — long term vision and priority objectives

The General Union Action Programme to 2020 'Living well, within the limits of our planet' also known as 7th EAP provides a strategic direction to environment and climate policy planning to 2020, while helping to implement the environment and climate change objectives and targets already agreed by the EU. It contains nine priority objectives to be achieved by 2020 and is guided by a vision for 2050:

'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 safe and sustainable global society.'

It identifies three key priority objectives:

- 'To protect, conserve and enhance the Union's natural capital';
- 'To turn the Union into a resource-efficient, green, and competitive low-carbon economy';
- 'To safeguard the Union's citizens from environment-related pressures and risks to health and well-being'.

In order to support the achievement of these goals, the 7th EAP sets out a framework of four additional priority objectives that aim to deliver:

- better implementation of legislation;
- better information by improving the knowledge base;
- more and wiser investment for environment and climate policy;
- full integration of environmental requirements and considerations into other policies.

Two additional horizontal priority objectives complete the programme:

- to make the Union's cities more sustainable;
- to help the Union address international environmental and climate challenges more effectively.

This report uses a set of 29 indicators to track past progress and to provide an outlook to 2020 for meeting objectives relevant to the achievement of the thematic priority objectives. Box I.2 details the origin and scope of the EEA Environmental Indicator Reports — in support to the monitoring of the Seventh Environment Action Programme.

The indicator set remained by and large the same as in the previous report — there were two modifications that are explained in footnotes 8 and 11. The scoreboard methodology also remained the same, thus allowing for comparison with the results of last year's scoreboard. Box I.3 outlines the scoreboard methodology.

Online indicator briefings ([3]) provide more detail by scoreboard indicator, including underlying reasons for past trends, future challenges and opportunities for meeting related objectives, and country-level data. Annex 1 includes the list of scoreboard indicators and corresponding briefings, while Annex 2 presents the time periods examined, expected updates in the coming years and sources by scoreboard indicator.

In the 2016 report, the latest available year for most of the indicators was 2014, the first year in which the 7th EAP was in force. It therefore acted as a baseline for tracking progress towards the achievement of the three thematic priority objectives. The report discussed the approach and the 7th EAP thematic priority objectives, presented the scoreboard results and the reasons behind the underlying trends, reflected on their systemic and interlinked nature and pointed to other relevant knowledge as well as to data, indicator and knowledge gaps.

This year's report focuses on the scoreboard results as such. The scoreboard indicators and corresponding briefings were updated with the latest data (mostly from 2015) and information. The report presents and discusses the results and places additional attention on developments over more recent years.

The thematic priority objectives of the 7th EAP are wide-ranging, diverse and complex, reflecting today's environmental and societal challenges and those Europe can expect to face in the coming decades. It is not feasible to measure every possible variable within each objective; the data are not always available, while in some instances, ancilliary data were used as proxies. Indicators are therefore used here as simple measurements to enhance understanding of what is happening.

It should also be kept in mind that meeting the selected objectives by 2020 is not a guarantee that the environment has been protected enough as objective setting is often the result of political compromises that balance the differing interests of various societal stakeholders.

Box I.2 Origin and scope of the EEA annual Environmental indicator report — in support to the monitoring of the Seventh Environment Action Programme

The establishment of this EEA Annual Indicator Report Series (AIRS): Environmental indicator report — in support to the monitoring of the Seventh Environment Action Programme was inspired by Article 4.1 of the 7th EAP. This requires that the European Commission monitors the 7th EAP in the context of the regular monitoring process of the Europe 2020 Strategy (EC, 2010) and it stipulates that:

'This process shall be informed by the European Environment Agency's indicators on the state of the environment as well as indicators used to monitor progress in achieving existing environment and climate-related legislation and targets such as the climate and energy targets, biodiversity targets and resource efficiency milestones.'

The vast majority of the indicators referred to in Article 4.1 of the 7th EAP correspond to aspects of the three thematic priority objectives of the 7th EAP. In addition, indicator availability outside these three priority objectives is fairly limited across the relevant bodies and institutions in Europe.

The scope of this indicator report series, therefore, covers the three thematic priority objectives of the 7th EAP.

([3]) https://www.eea.europa.eu/airs/2017

Box I.3 7th EAP thematic priority objectives scoreboard methodology

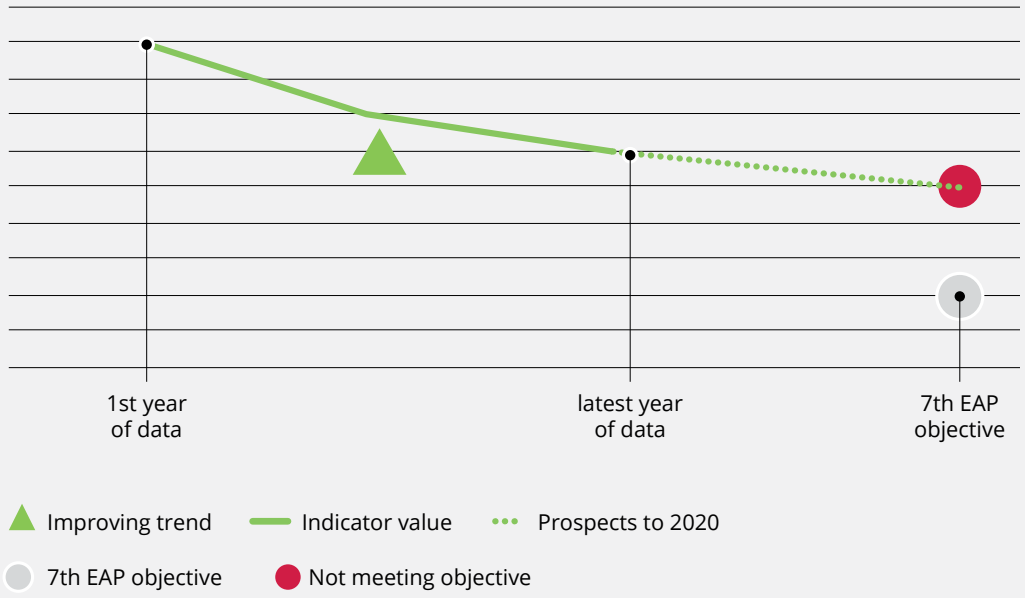
The scoreboard is a compilation of individual scoreboard lines. Each line is substantiated in a dedicated online briefing (https://www.eea.europa.eu/airs/2017). The same methodology applies across the scoreboard. Each scoreboard line presents the following information:

- **EU indicator past trend**: This indicates whether the value measured by the indicator between the base year and the latest available year shows an improving trend (▲), a deteriorating trend (▲), or a stable (change of less than 3 %) or uncertain (because of a high level of inter-annual variation (▲) trend. The time series is unique to each of the indicators and reflects data availability and base-year requirements associated with the chosen selected objective. The scoreboard presents trends and outlooks at the EU level. In cases for which aggregated information on non-EU EEA member countries (Iceland, Liechtenstein, Norway, Switzerland and Turkey) is available, this is reflected in the indicator past trend and explained further in the scoreboard on a case-by-case basis.

- **Selected objective to be met by 2020**: The 7th EAP thematic priority objectives contain specific directional objectives to be met by 2020 — these are outlined in the first parts of paragraphs 28, 43 and 54 of the 7th EAP Decision (EU, 2013). These objectives, by their nature, are often qualitative and broad in scope and so it is not always easy to measure progress against them. The 2020 targets and other quantitative thresholds from the EU environmental legislation and policy that relate to key aspects of specific directional objectives were chosen rather as objectives to be met by 2020. In the absence of targets and other quantitative thresholds, specific (or parts of specific) directional objectives were selected instead if these were measurable and the indicators were readily available.

- **Indicative outlook of the EU meeting the selected objective by 2020**: This shows the indicative prospect of meeting the selected objective by 2020, using a traffic light system. The traffic light is green (●) if it is likely that the objective will be met, yellow (●) if this is uncertain and red (●) if it is unlikely that the objective will be met. The colours have been assigned on the basis of the available information specific to each indicator and to the corresponding selected objective. Overall, the colours were based on some combination of (1) the indicator-based trends observed over previous years; (2) the distance to target assessments (if available); (3) modelled estimates of future developments (if available); and (4) expert consideration.

A graphical example of the scoreboard methodology applied to an indicator is provided below:



1 Key messages

1.1 Seventh Environment Action Programme priority objective 1: To protect, conserve and enhance the Union's natural capital

For priority objective 1, similarly to the first edition of the scoreboard, it can be discerned that the EU's natural capital is not yet being protected, maintained and enhanced in line with the ambitions of the 7th EAP. Natural capital continues to be degraded and depleted, and it is under a cumulative threat from the distributed impacts of habitat change, climate change ([4]), pollution, overexploitation of natural resources and invasive alien species (EEA, 2016).

Although several of the indicators examined in this priority objective show an improving past trend, the EU is mainly not on path to reach the associated 2020 objectives ([5]).

Several pressures on natural capital have decreased. For example, when comparing with the early 2000s, nitrogen losses to the environment from agricultural land ([6]) (see Indicator 2 in Table 1.1), air pollutant emissions causing eutrophication (see Indicator 1) and the rate of loss of land to artificial surfaces (e.g. buildings, roads) (see Indicator 3) have all decreased. Nevertheless, these pressures continue to exert a considerable negative impact on natural capital. For instance, there is still substantial loss of land, such as arable land and land with permanent crops (see EEA AIRS briefing PO1.3, 2017). In addition, since 2010 nitrogen losses from agricultural land have not decreased further and continue to be at an unacceptably high level (PO1.2, 2017), while over the period 2014-2015, emissions from ammonia (one of the air pollutants causing eutrophication) increased (PO2.2, 2017).

In 2015, the mid-term review of the EU Biodiversity Strategy (EC, 2015a) showed that the EU is not on track to meet the objective of halting biodiversity loss by 2020 and restoring the potential of ecosystems to deliver services. The indicators on common birds and on grassland butterflies show a declining trend (see Indicator 6). There is also a high proportion of assessments of protected species (60 %) and of habitats (77 %) whose conservation status is unfavourable (see Indicators 7 and 8) (PO1.7 and PO1.8, 2017).

The EU's surface waters are also unlikely to meet the objective of achieving good status of waters by 2020 (see Indicator 9). This is because of pressures such as pollution, morphological changes, over-abstraction and hydrological changes affecting water flow (PO1.9, 2017). The use of Europe's seas is not sustainable, and the EU 2020 objective of healthy commercial fish populations is unlikely to be met for all marine waters (see Indicator 5) (PO1.5, 2017).

In several of the areas covered by this priority objective, the frequency of data reporting required by policy and legislation extends to some years. This means that several of the indicators related to this priority objective are updated less frequently ([7]) compared with the other two thematic priority objectives, where indicators are more typically updated every year.

([4]) For example, because of climate change, species are changing their life cycles and are migrating northwards and to higher altitudes, various invasive alien species have established themselves or have expanded their range and interaction between species that depend on each other is being affected (EEA, 2017a).

([5]) The only case where the selected objective is reached is in the area of sustainable forest management (see Indicator 4 in Table 1.1). In this case, overall forest harvesting is expected to remain below overall forest growth up to 2020. This is, nevertheless, only in relation to the rate of use of forest resources. Other aspects of forest status captured through other indicators give cause for concern. For example, climate change, pollution and encroaching human development are posing an increased threat to the long-term stability and health of Europe's, forests and the conservation status of a high proportion of forest species and habitats assessments remains unfavourable (EEA, 2016 and PO1.4, 2017).

([6]) The use of fertilisers is the main factor determining the nitrogen balance and the surplus of nitrogen released from agricultural land to the environment.

([7]) This is the case for the indicators on land take, forest, species and habitats of European interest, and the status of surface waters that are updated every 4-6 years depending on the indicator. The status of surface waters indicator will be updated next year following publication of the European Commission's Water Framework Directive implementation report and the EEA's State of water report.

Table 1.1 Scoreboard. Seventh Environment Action Programme priority objective 1

Indicator	EU indicator past trend ([a])	Selected objective to be met by 2020	Outlook for the EU meeting the selected objective by 2020
(!) 1. Exposure of terrestrial ecosystems to eutrophication due to air pollution (*)	▲	Reduce areas of critical load exceedance with respect to eutrophication by 43 % from 2000 levels — Air Pollution Strategy (EC, 2005)	●
The area where ecosystems are exposed to eutrophication because of excess atmospheric nitrogen deposition has decreased. According to a scenario assuming that current legislation is fully implemented, it will, nevertheless, fall short of the 2020 objective			
2. Gross nutrient balance in agricultural land: nitrogen	▲	Manage the nutrient cycle in a more sustainable way (nitrogen) — 7th EAP	●
Overall, the past trend in agricultural nitrogen balance was improving from 2000 to 2014, although since 2010 it has flattened out. The EU, on average, still has an unacceptable level of nitrogen losses from agricultural land to the environment and further efforts are needed to manage the nutrient cycle for nitrogen sustainably in the EU			
(!) 3. Land take (*)	▲	Keep the rate of land take below 800 km^2 on average per year from 2000-2020 in order to keep on track to achieve the aim of no net land take by 2050 — Roadmap to a resource efficient Europe (EC, 2011a)	●
Although the EU average annual land take over the 2000-2012 period declined, it remained above the 800-km^2 milestone. Key land take drivers and complementary data sources point to an increase in land take since 2012, making it unlikely that the objective will be met			
(!) 4. Forest: growing stock, increment and fellings	▲	Forest management is sustainable — 7th EAP (focus solely on forest resources)	●
Since 1990, EU forests overall have been harvested at a lower rate than they have grown (at around 60-70 %), indicating sustainable forest management in relation to the forest utilisation rate. Despite expected increased harvesting of forests, the overall forest utilisation is expected to remain sustainable up to 2020			
5. Status of marine fish stocks	▲	Ensure healthy fish stocks — Common Fisheries Policy and Marine Strategy Framework Directive (EC, 2008a)	●
The EU is only improving the state of its commercial fish and shellfish species in the North-east Atlantic and Baltic waters. As the objective of healthy commercial fish and shellfish populations applies to all marine waters, it is unlikely that it will be met by 2020			
6. Abundance and distribution of selected species (common birds and grassland butterflies)	▲	Meet the headline target of the EU Biodiversity Strategy (EC, 2011b): to halt the loss of biodiversity and the degradation of ecosystem services and restore them in so far as is feasible	●
It is highly unlikely that the objective will be achieved by 2020 given the continuing declining trends apparent for certain groups, such as grassland butterflies and farmland birds			
(!) 7. Species of European interest	▲	Ensure that 34.5 % of species assessments under the Habitats Directive are in a favourable or improved conservation status, and that 78 % of species assessments under the Birds Directive show a secure or improved status — EU Biodiversity Strategy	●
The EU has shown limited progress in improving the conservation status of EU protected species and the pressures on species remain. It is therefore unlikely that the 2020 target will be met			
(!) 8. Habitats of European interest	▲	Ensure that 34 % of habitat assessments under the Habitats Directive are in a favourable or improved conservation status — EU Biodiversity Strategy	●
The EU has shown limited progress in improving the conservation status of EU protected habitats and the pressures on these habitats remain. It is therefore unlikely that the 2020 target will be met			
(!) 9. Status of surface waters	N.A.	Achieve good status of transitional and coastal waters and freshwaters — Water Framework Directive (EU, 2000) ([b])	●
Considering the large proportion of surface waters failing to meet 'good' ecological status, it is unlikely that the objective of achieving good status of waters will be met by 2020			

EU indicator past trend	Outlook for the EU meeting the selected objective by 2020
▲ Improving trend	● It is likely that the objective will be met by 2020
▲ Stable or unclear trend	● It is uncertain whether or not the objective will be met by 2020
▲ Deteriorating trend	● It is unlikely that the objective will be met by 2020

Notes: ([a]) The examined past trend period is unique to each indicator and it is specified in Annex 2.

([b]) Good status will also contribute to achieving good environmental status of the Marine Framework Strategy Directive.

(*) The indicator past trend is also available at EEA member country aggregate level and not just at EU aggregate level. The colour assessment remains the same for the EU and the EEA member country (including the EU) indicator past trend.

(!) The indicator has not been updated with more recent data in this edition.

N.A. Non applicable.

Despite this, analysis in the briefings relating to this priority objective shows there is little expectation of significant positive developments in the areas examined under this priority objective that could improve the prospects of meeting the selected objectives by 2020. In fact, although the past trend for the land take indicator has not been updated with more recent data this year, the outlook of meeting, by 2020, the milestone of keeping the rate of land take below 800 km^2 on average per year from 2000-2020 was revised in this edition from uncertain to unlikely to be met. This is because meeting this objective requires significant further reductions to the rate of land loss up to 2020. Currently there are no policies in place promoting such drastic reductions and urban population, economic activity and transport activity — all key drivers of land take — have been increasing. Moreover, evidence from complementary land take data sets points to a recent acceleration in land take between 2009 and 2012, and again between 2012 and 2015 (PO1.3, 2017).

This makes the outlook of meeting the ambitions of this priority objective by 2020 rather bleak. The state and prospects of natural capital provide an indication of the environmental sustainability of our economy and society (EEA, 2016); this bleak outlook also provides cause for concern for the outlook of the EU meeting the overall ambitions of the 7th EAP by 2020.

1.2 Seventh Environment Action Programme priority objective 2: To turn the Union into a resource-efficient, green and competitive low-carbon economy

For priority objective 2, the overall picture of indicator past trends in the EU and of the EU outlook towards meeting the selected objectives by 2020 remains mixed, as it was last year. The EU is still on track to meet climate and energy related targets and there have been some resource efficiency improvements. However, efforts to reduce the overall environmental impact of production and consumption vary considerably in their success rates.

However, in more recent years, slower positive progress or developments in the wrong direction have begun in some areas.

The EU remains on track to meet its 2020 climate and energy targets (see Indicators 5, 6 and 7 in Table 1.2). Nevertheless, compared with 2014, greenhouse gas emissions increased slightly in 2015 (see EEA AIRS briefing PO2.5, 2017) and the rate of increase of the share of renewable energy in gross final energy consumption slowed (PO2.6, 2017). Furthermore, primary energy consumption in the EU (used to measure progress on energy efficiency) increased in 2015, as well as in 2016 according to preliminary estimates (PO2.7, 2017). Current efforts therefore need to be stepped up to meet the energy efficiency target. The increased levels of energy consumption affected not only progress towards the energy efficiency target, but also the increase in greenhouse gas emissions and the slowing of the increase in the share of renewable energy in gross final energy consumption. Increased economic activity levels most likely played a role in the recent trends of all three indicators.

Turning the EU into a resource efficient economy is another important element of this 7th EAP priority objective.

Resource productivity — the indicator that measures resource efficiency in terms of economic output per unit of material use — is improving (see Indicator 1). This is, in part, because of the 2008 economic recession, which slowed the construction sector for several years, causing a decline in the use of non-metallic minerals. It is also, in part, thanks to improving energy efficiency and the continuing implementation of climate and energy policies, which resulted in fossil fuels being replaced in energy production by renewable energy sources. Resource productivity is projected to continue improving, albeit at just under 1 % per year, a rather low rate compared with recent years (PO2.1, 2017). Currently, there are no quantitative targets for improvements in resource productivity at EU level, although the 7th EAP has recognised the need for such targets.

Increasing resource efficiency is only an indication that economic output is growing more than resource use and emissions. It does not guarantee a reduction in environmental pressures or impacts in absolute terms; this often requires absolute reductions in resource use (EEA, 2015). The 7th EAP stresses the need for a reduction in the overall environmental impact of production and consumption in key socio-economic sectors. The production and consumption of food, housing and mobility are responsible for almost 80 % of all environmental impacts (EU, 2013). The indicators available to track the overall environmental impact of these areas are limited and selected aspects (energy consumption in houses, greenhouse gas emissions from transport and animal product consumption) have been used instead as a proxy for overall environmental impact.

The energy consumption in houses (see Indicator 8) increased in 2015 compared with 2014, mainly because of the relatively cold winter in 2015. It is expected,

nevertheless, to continue to decline up to 2020 thanks to energy efficiency policies (PO2.8, 2017). Transport greenhouse gas emissions (see Indicator 9) increased both in 2014 and 2015. The increases in transport greenhouse gas emissions are in line with increases over the same period in the level of economic activity as measured by gross domestic product, as well as increases in the demand for transport (PO2.9, 2017). Preliminary estimates indicate a further increase in transport greenhouse gas emissions in 2016. This is cause for concern and increases the likelihood that the objective of reducing the environmental impact of the mobility sector will not be met by 2020. Animal based product consumption (see Indicator 10) is expected to increase over the 2014-2020 period for the vast majority of animal product (sub-)categories. This confirms last years' negative outlook for the environmental impact of the food sector ([8]).

A circular economy in which nothing is wasted, as envisaged in the European Commission circular economy package (EC, 2015b), is also central to efforts to improve resource efficiency.

The prospects of waste generation being in decline by 2020 remain uncertain (see Indicator 2). In fact, waste generation has risen slightly since 2010 as economies have recovered (PO2.2, 2017). Similarly, despite high levels of municipal waste recycling (see Indicator 3) in some countries and strong improvement in many others, the low and slow progress rates in some countries continue. This suggests that not every country will achieve the 2020 municipal waste target (PO2.3, 2017).

Freshwater resources (see Indicator 4) are relatively abundant in Europe, albeit very unevenly distributed. Water stress hotspots are likely to remain primarily in southern Europe as well as in a number of highly densely populated areas across Europe. This is because of ongoing and projected pressures from climate change — such as increasing droughts in several parts of Europe — urbanisation and agricultural activities (PO2.4, 2017). It therefore remains uncertain whether or not water stress can be prevented or significantly reduced across the EU.

Environmental legislation has already played a key role in the process of turning the EU into a resource-efficient, circular and low-carbon economy. This can also be seen through the growth in value added and in employment of the environmental goods and services sector of the EU economy (see Indicator 12). Nevertheless, since 2011, growth in value added in the sector has slowed while employment creation has stagnated (PO2.12, 2017). Environmental protection expenditure (see Indicator 13) is expected to continue to increase up to 2020. This positive outlook is strengthened by the EU's decision that at least 20 % of its 2014-2020 budget should be spent on mitigating and adapting to climate change (PO2.13, 2017). This may have a positive impact in the environmental goods and services sector. However, global competition and recent reductions in domestic investments in the renewables sector continue to make prospects of growth in the sector uncertain (PO2.12, 2017).

Finally, as Indicator 11 shows, there is wide scope for moving taxation away from labour and towards the environment (resource use and pollution). Such a shift has the potential to encourage job creation while incentivising resource efficiency improvements and low carbon solutions. The prospect of shifting taxation away from labour and towards the environment by 2020 remains poor since there has hardly been any shift at the EU level over the period examined (2003-2015) (PO2.11, 2017).

([8]) In this year's scoreboard, the indicator on food consumption tracks the kilogramme (kg) consumption of the protein in animal based products instead of the kg consumption of animal based products, per se. This way the dominance of the high water content of milk was cleaned out of the trend, i.e. when measuring based on kg consumption of animal based products, the trend is dominated by milk because of its very high water content. This indicator change and corresponding scoreboard improvement align fully with the recommended indicator in the EC Staff Working Document Analysis associated with the roadmap to a Resource Efficient Europe Part II (SEC(2011); 1067 final) for 'making food consumption healthier and more sustainable'.

Table 1.2 Scoreboard. Seventh Environment Action Programme priority objective 2

Indicator	EU indicator past trend	Selected objective to be met by 2020	Outlook for the EU meeting the selected objective by 2020
1. Resource productivity	▲	Improve economic performance while reducing pressure on natural resources — Roadmap to a resource efficient Europe	●
There was a decline in the use of materials and a rapid rate of increase in resource productivity following the economic downturn of 2007/2008. The rate of increase in resource productivity has been projected to return to the more gradual rate seen prior to the economic downturn of just below 1 % per year			
2. Waste generation in Europe (excluding major mineral wastes) absolute (*) and per capita	▲	Reduce absolute and per capita waste generation — 7th EAP	●
The past trend (2010-2014) is relatively stable and shows variation in waste generation among sectors, with reductions in some, little change in others and some increases. This mixed picture, as well as methodological uncertainties, suggest that the outlook to 2020 is unclear			
3. Recycling of municipal waste (*)	▲	50 % of selected materials in household and similar waste to be recycled by each EU Member State — Waste Framework Directive (EU, 2008b)	●
The amount of municipal waste being recycled has been steadily increasing. The outlook for all Member States meeting the 2020 target is mixed, with the above level of recycling already achieved by some Member States and others on course to do so. However, the target is some way off for others			
4. Use of freshwater resources	▲	Water abstraction should stay below 20 % of available renewable freshwater resources — Roadmap to a resource efficient Europe	●
While the area in the EU that was affected by water stress decreased, hotspots for water stress conditions are likely to remain given continued pressures such as climate change, increasing population and urbanisation			
5. Total greenhouse gas emission trends and projections	▲	Reduce greenhouse gas emissions by 20 % compared with 1990 levels — 2020 Climate and Energy Package (Council, 2007)	●
The decreasing trend of greenhouse gases and the future evolution as projected by EU Member States indicate that the 2020 greenhouse gas reduction target will be met			
6. Share of renewable energy in gross final energy consumption	▲	Reach a 20 % share of renewable energy in gross final energy consumption — Renewable Energy Directive (EU, 2009)	●
The EU has steadily increased the share of renewable energy in its gross final energy consumption. If the current pace of growth is maintained, the 2020 renewable energy target will be met			
7. Progress on energy efficiency in Europe	▲	Improve energy efficiency by 20 % (compared with a business-as-usual scenario) — Energy Efficiency Directive (EU, 2012)	●
Primary energy consumption decreased between 2005 and 2015. However, energy consumption increased in 2015 compared with 2014 and preliminary estimates indicate that it will increase also in 2016. Greater efforts are needed to keep the EU on track to meet its energy efficiency target			
8. Energy consumption by households	▲	Reduce the overall environmental impact of production and consumption in the housing sector — 7th EAP	●
The energy consumption of households in the EU decreased in the period examined (2005-2015). Policies already in place and the targets set for energy consumption under the Energy Union process should help to maintain this trend up to 2020 and beyond			
9. Greenhouse gas emissions from transport	▲	Reduce the overall environmental impact of production and consumption in the mobility sector — 7th EAP	●
Past transport greenhouse gas emissions increased from 1990 to 2015 despite a decline between 2008 and 2013 following the economic downturn. It is uncertain if emissions will decrease during the 7th EAP (2014-2020); emissions in 2014 and 2015, as well as preliminary estimated emissions for 2016 increased while, according to projections by the EU Member States, emissions are foreseen to decrease slightly between 2015 and 2020			

Table 1.2 Scoreboard. Seventh Environment Action Programme priority objective 2 (cont.)

Indicator	EU indicator past trend	Selected objective to be met by 2020	Outlook for the EU meeting the selected objective by 2020
10. Animal product consumption (animal protein)	▲	Reduce the overall environmental impact of production and consumption in the food sector — 7th EAP	●
Per capita consumption of total protein from animal products (meat, dairy, eggs, and fish and seafood) remained relatively stable in the EU over the period examined (2000-2013). Per capita animal based product consumption is expected to increase over the 2014-2020 period for the vast majority of animal product categories and sub-categories			
11. Share of environmental and labour taxes in total tax revenues	▲	Shift taxation from labour towards the environment — 7th EAP	●
For the EU as a whole, there has been no positive progress over the examined period and there are no indications of any change in the coming years			
12. Employment and value added in the environmental goods and services sector	▲	Promote a larger market share of green technologies in the Union and enhance the competitiveness of the European eco-industry — 7th EAP	●
Overall employment and value added increased in the sector between 2003 and 2014, although since 2011, growth in value added slowed and employment creation stagnated. The 2020 prospects of continued growth and employment creation in the sector are uncertain and dependent on the sector competing with equivalent sectors in China and the USA, and continuing ambitious renewable energy and green growth policies in Europe			
13. Environmental protection expenditure in Europe	▲	Increase in public and private sector funding for environment- and climate-related expenditure — 7th EAP	●
Environmental protection expenditure has increased over the years and this seems likely to continue to 2020, strengthened by the EU's decision that at least 20 % of its 2014–2020 budget should be used on climate change activities			

EU indicator past trend		Outlook for the EU meeting the selected objective by 2020	
▲	Improving trend	●	It is likely that the objective will be met by 2020
▲	Stable or unclear trend	●	It is uncertain whether or not the objective will be met by 2020
▲	Deteriorating trend	●	It is unlikely that the objective will be met by 2020

Notes: (a) The examined past trend period is unique to each indicator and is specified in Annex 2.

(*) The indicator past trend is also available at EEA member country aggregate level and not just at EU aggregate level. The colour assessment remains the same for the EU and the EEA member country (including the EU) indicator past trend.

1.3 Seventh Environment Action Programme priority objective 3: To safeguard the Union's citizens from environment-related pressures and risks to health and well-being

For priority objective 3, as with last year, EU progress continues to be mixed. Despite substantial reductions in emissions of air and water pollutants in recent decades, key current preoccupations include air quality and noise pollution in urban areas, especially from transport sources, as well as chronic exposure of the population to complex mixtures of chemicals contained in products. The overall 2020 outlook for this priority objective also remains unclear because of a lack of appropriate data on reducing the risks posed by chemicals and climate change.

Bathing water is of high quality across the EU (see Indicator 3 in Table 1.3). This is the result of decades of effort and investment. Ongoing efforts to address pollution sources — through improvements in the sewerage system and the reduction of pollution from farms — are expected to continue to further increase the proportion of bathing waters that meet excellent and good quality standards by 2020 (see EEA AIRS briefing PO3.3, 2017).

Indicator 2 shows air pollutant emissions, which represent a key driver of air quality and ecosystem health. The EU as a whole is still on target to meet the 2020 EU and international air pollutant emission reduction commitments for all pollutants with the exception of ammonia. Ammonia emissions are dominated by agriculture, namely the decomposition of animal manure and fertiliser application. These emissions increased the past two years (2014 and 2015) (PO3.2, 2017) and as a result, the outlook of meeting the ammonia emission reduction commitment was revised from likely to uncertain to be met by 2020 ([9]).

Air quality (see Indicator 1) and noise pollution (see Indicator 5) are important concerns in the progress towards priority objective 3. The transport sector (primarily road traffic), together with residential combustion in urban areas remain the main causes for the expected non-attainment in several urban areas of the outdoor air quality standards examined in the scoreboard (PO3.1, 2017). More of the urban population was exposed to exceedances of air quality standards for ozone, nitrogen dioxides and dust particles in 2015, compared with 2014. However, between 2000 and 2015 urban population exposure to exceedances of nitrogen dioxides and dust particles decreased, while the trend for ozone remained unclear due to significant inter-annual variations triggered by changes in climatic conditions ([10]) (PO3.1, 2017). The transport sector (mainly road traffic but also increasingly aviation), together with an expected continuing increase in people living in urban agglomerations, remain the main reasons that environmental noise pollution (see Indicator 5) will not significantly decrease by 2020 (PO3.5, 2017).

Another key concern is exposure to chemicals. Indicators 6 and 7 on the consumption of hazardous chemicals and on total sales of pesticides provide an incomplete picture. This is because data on the volumes of chemicals consumed and pesticides sold are only an imperfect proxy for exposure ([11]), which is why the 2020 outlooks of meeting the selected objectives in these two cases have been, at present, assessed as unclear. EU wide data (such as human and environmental bio-monitoring data) are not available to support a more targeted analysis of actual exposure to hazardous chemicals, or mixtures of chemicals via multiple exposure pathways. Such data would need to be developed. The proposal in the 7th EAP for the development of an EU strategy for a non-toxic environment provides the opportunity to set down a holistic approach, whereby the management of risks to ecosystem and human health is guided by consideration of actual exposure.

Regarding the data and knowledge gaps in the area of chemicals, there have been some noteworthy developments. The overall consumption of hazardous chemicals decreased over the period examined (2006-2015). However, there is some cause for concern as consumption has more or less stabilised since 2011 (PO3.6, 2017). Similarly, it is disconcerting that total reported pesticides sales — including the shares of the main pesticide types — remained relatively stable over the period examined (2001-2015) (PO3.7, 2017).

([9]) This also explains the change in this years' scoreboard in the assessment of the ammonia emissions past trend from improving to stable, i.e. neither improving nor deteriorating. Last year's scoreboard assessment was improving since there was a 4 % decrease in emissions between 2005 and 2014. This year's scoreboard assessed the trend as stable since the decrease between 2005 and 2015 was 3 %. According to the scoreboard methodology, a difference of up to 3 % in the indicator value from the base year to the latest available year is not considered significant enough to qualify a trend as improving or deteriorating.

([10]) This year with an additional year of data, the time series for fine particulate matter exceedances (2006-2015) was considered sufficiently long to judge the trend as improving, while last year's scoreboard assessed this trend as unclear.

([11]) In this year's scoreboard, the indicator on hazardous chemicals has been improved. It now tracks consumption instead of production and does that for chemicals that are hazardous both to health and to the environment. The change to consumption was possible thanks to Eurostat's new data set on consumption of hazardous chemicals. This change enables better tracking of progress towards the selected objective, thus improving the scoreboard's relevance.

Table 1.3 Scoreboard Seventh Environment Action Programme priority objective 3

Indicator	EU indicator past trend (a)	Selected objective to be met by 2020	Outlook for the EU meeting the selected objective by 2020
1. Exceedance of air quality standards in urban areas (nitrogen dioxide: NO_2; dust particles: PM_{10}; ozone: O_3; fine particulate matter: $PM_{2.5}$)	▲ NO_2, PM_{10}, $PM_{2.5}$ ▲ O_3	Meet Air Quality Directive standards for the protection of human health — Air Quality Directive (EU, 2008c)	●
There have been reductions in urban population exposure to exceedances of air quality standards for particles and nitrogen dioxide, while the trend for the ozone standard is unclear. Because of their widespread exceedance levels in urban areas, it is unlikely that the air quality standards for these pollutants will be met by 2020			
2. Emissions of the main air pollutants in Europe (sulphur oxides: SO_2; nitrogen oxides: NO_x; ammonia: NH_3; non-methane volatile organic compounds: NMVOCs; fine particulate matter: $PM_{2.5}$) (*)	▲ SO_2, NO_x, NMVOCs, $PM_{2.5}$ ▲ NH_3	Reduce air pollutant emissions in accordance with the requirements of the amended Gothenburg Protocol and of the new EU National Emission Ceilings Directive by the following percentages: SO_2 59 %, NO_x 42 %, NH_3 6 %, NMVOCs 28 %, $PM_{2.5}$ 22 % compared with 2005 levels (UNECE, 2012 and EU, 2016)	● SO_2, NO_x, NMVOCs, $PM_{2.5}$ ● NH_3
Air pollutant emissions have declined and current projections suggest that the EU is on target to meet its 2020 EU and international air pollutant emission reduction commitments. However, since ammonia emissions increased the past two years (2014 and 2015), it has become uncertain if the ammonia reduction commitment will be met by 2020			
3. Bathing water quality	▲	Increase the number of bathing waters classified as 'excellent' or 'good' under the Bathing Water Directive (EU, 2006)	●
The share of bathing waters that meet excellent and good quality standards are likely to increase further due to implementation of the Bathing Water Directive, in particular the effect of measures on poor quality waters			
4. Number of countries that have adopted a national climate change adaptation strategy and/or plan	N.A.	Make decisive progress in adapting to the impact of climate change — 7th EAP	●
There has been an increase in the number of countries that have adopted a national adaptation strategy and/or plan and this is expected to continue. However, information on the 'decisive progress' of these policies towards reducing vulnerability and enhancing resilience to climate change is limited, preventing firm conclusions with respect to the 2020 outlook from being made			
5. Population exposure to environmental noise	▲	Significantly decrease noise pollution — 7th EAP	●
Efforts to reduce environmental noise tend to be offset by an increase in the number of people being exposed to high noise levels, in particular due to increasing road and aviation traffic and an increase in the number of city inhabitants			
6. Consumption of chemicals, by hazard class	▲	Risks for the environment and health associated with the use of hazardous substances, including chemicals in products, are assessed and minimised — 7th EAP	●
While the consumption of chemicals that are hazardous to health and environment has declined over the years, it is not possible to equate this to a reduction in the risks to environment and health and the outlook towards 2020 is therefore unclear			
7. Total sales of pesticides	▲	The use of plant protection products does not have any harmful effects on human health or unacceptable influence on the environment, and such products are used sustainably — 7th EAP	●
The selected indicator does not afford for an evaluation of progress towards the 2020 objective. Rather, the analysis serves to highlight gaps in the knowledge base for assessing progress towards this objective			

EU indicator past trend		Outlook for the EU meeting the selected objective by 2020	
▲	Improving trend	●	It is likely that the objective will be met by 2020
▲	Stable or unclear trend	●	It is uncertain whether or not the objective will be met by 2020
▲	Deteriorating trend	●	It is unlikely that the objective will be met by 2020

Notes: (a) The examined past trend period is unique to each indicator and is specified in Annex 2.

(*) The indicator past trend is also available at EEA member country aggregate level and not just at the EU aggregate level. The colour assessment remains the same for the EU and the EEA member country (including the EU) indicator past trend.

N.A. Non applicable.

Finally, climate change presents major threats to the environment, the economy (including infrastructure) and people's health and well-being. It comes with significant damages, for example from weather and climate related extreme events and requires sizeable adaptation by society, the economy and infrastructure, including substantial investment in climate mitigation and adaptation actions (EEA, 2017a, 2017b).

Climate change threats to health (the focus of this priority objective) manifest themselves through impacts from extreme weather events, such as flooding and heatwaves, and changing patterns in the prevalence of infectious diseases. A key step towards making Europe resilient to the impact of climate change (including in the area of health) involves the adoption of effective national adaptation strategies and follow-up adaptation plans (see Indicator 4). It is expected that more countries will be adopting strategies and plans. However, information on progress of these policies in reducing vulnerability and enhancing resilience is limited. It is, therefore, uncertain whether Europe is making decisive progress in adapting to the impact of climate change (PO3.4, 2017).

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Annex 1 List of indicators and corresponding Annual Indicator Report Series (AIRS) 2017 briefings by 7th EAP thematic priority objective

Indicators	Briefings
Priority objective 1: To protect, conserve and enhance the Union's natural capital	
Exposure of terrestrial ecosystems to eutrophication due to air pollution	Eutrophication of terrestrial ecosystems due to air pollution
Gross nutrient balance in agricultural land: nitrogen	Agricultural land: nitrogen balance
Land take	Urban land take
Forest: growing stock, increment and fellings	Forest utilisation
Status of marine fish stocks	Marine fish stocks
Abundance and distribution of selected species (common birds and grassland butterflies)	Common birds and butterflies
Species of European interest	EU protected species
Habitats of European interest	EU protected habitats
Status of surface waters	Surface waters
Priority objective 2: To turn the Union into a resource-efficient, green and competitive low-carbon economy	
Resource productivity	Resource efficiency
Waste generation in Europe (excluding major mineral wastes) absolute and per capita levels	Waste generation
Recycling of municipal waste	Recycling of municipal waste
Use of freshwater resources	Freshwater use
Total greenhouse gas emission trends and projections	Greenhouse gas emissions
Share of renewable energy in gross final energy consumption	Renewable energy sources
Progress on energy efficiency in Europe	Energy efficiency
Energy consumption by households	Household energy consumption
Greenhouse gas emissions from transport	Transport greenhouse gas emissions
Animal product consumption (animal protein)	Food consumption — animal based protein
Share of environmental and labour taxes in total tax revenues	Environmental and labour taxation
Employment and value added in the environmental goods and services sector	Environmental goods and services sector: employment and value added
Environmental protection expenditure in Europe	Environmental protection expenditure
Priority objective 3: To safeguard the Union's citizens from environment-related pressures and risks to health and well-being	
Exceedance of air quality standards in urban areas (nitrogen dioxide: NO_2; dust particles: PM_{10}; ozone: O_3; fine particulate matter: $PM_{2.5}$)	Outdoor air quality in urban areas
Emissions of the main air pollutants in Europe (sulphur oxides SO_2; nitrogen oxides: NO_x; ammonia: NH_3; non-methane volatile organic compounds: NMVOCs; fine particulate matter: $PM_{2.5}$)	Air pollutant emissions
Bathing water quality	Quality of bathing waters
Number of countries that have adopted a climate change adaptation strategy and/or plan	Number of countries that have adopted a climate change adaptation strategy/plan
Population exposure to environmental noise	Environmental noise
Consumption of chemicals, by hazard class	Consumption of hazardous chemicals
Total sales of pesticides	Pesticide sales

Annex 2 Scoreboard indicators: examined time periods, expected updates and sources

Scoreboard component	Time period examined	Update frequency	Expected update with data from more recent years	Source ([a])
7th EAP priority objective 1				
Exposure of terrestrial ecosystems to eutrophication due to air pollution	2000-2020	Not known	Not known	EEA indicator CSI 005
Gross nutrient balance in agricultural land: nitrogen	2000-2014	Annually	2018 to include 2015 data	Eurostat aei_pr_gnb
Land take	2000-2012	Every 6 years	2021 to include 2012-2018 data	EEA indicator CSI 014/LSI 001
Forest: growing stock, increment and fellings	1990-2010	Every 4-5 years	2018 to include 2015 data	EEA indicator SEBI 017 UNECE report ([b])
Status of marine fish stocks	Status: combination of various sources covering information from 2008-2016, trend 2003-2012	Annually	2018 to include 2017 information	EEA indicator CSI 032/MAR 007
Abundance and distribution of selected species (common birds and grassland butterflies)	Common birds: 1990-2014 Grassland butterflies: 1990-2015	Annually	2018 to include 2015 data for common birds	EEA indicator CSI 050/SEBI/001
Species of European interest	2007-2012	Every 6 years	2020 to include 2013-2018 data	EEA indicator CSI/007/SEBI 003
Habitats of European interest	2007-2012	Every 6 years	2020 to include 2013–2018 data	EEA indicator SEBI 005
Status of surface waters	By 2009	Every 6 years	2018 to include 2010-2015 data	EEA report ([c])
7th EAP priority objective 2				
Resource productivity	2000-2016	Annually	2018 to include 2017 data	Eurostat data set tsdpc100
Waste generation in Europe (excluding major mineral wastes)	2010-2014	Every 2 years	2018 or 2019 to include 2016 data	Eurostat data set env_wasgen and EEA forthcoming indicator CSI 041/WST 004
Recycling of municipal waste	2004-2015	Annually	2018 to include 2016 data	Eurostat data set env_wasmun and EEA forthcoming indicator CSI 052/WST 005
Use of freshwater resources	2002-2014	Annually	2018 to include 2015 data	EEA indicator CSI 018/WAT 001
Total greenhouse gas emission trends and projections	1990-2016 Data for 2016 are approximated estimates	Annually	2018 to include 2016 data and 2017 estimates	EEA report ([d]) and EEA indicator CSI 010/CLIM 050

Scoreboard component	Time period examined	Update frequency	Expected update with data from more recent years	Source ([a])
Share of renewable energy in gross final energy consumption	2005-2016 Data for 2016 are approximated estimates	Annually	2018 to include 2016 data and 2017 estimates	EEA indicator CSI 048/ENER 028
Progress on energy efficiency in Europe	2005-2016 Data for 2016 are approximated estimates	Annually	2018 to include 2016 data and 2017 estimates	EEA report ([d])
Energy consumption by households	2005-2015	Annually	2018 to include 2016 data	Eurostat data set tsdpc320
Greenhouse gas emissions from transport	1990-2015	Annually	2018 to include 2016 data	EEA indicator TERM 002
Animal product consumption (animal protein)	2000-2013	Every 2-3 years	2018/2019 to include 2015/2016 data	EEA indicator SCP 020
Share of environmental and labour taxes in total tax revenues	2003-2015	Annually	2018 to include 2016 data	Eurostat data set tsdgo410 and DG ECFIN ([e])
Employment and value added in the environmental goods and services sector	2003-2014	Annually	2018 to include 2015 data	Eurostat data sets: env_acegss2, env_ac_egss1
Environmental protection expenditure in Europe	2006-2014	Annually	2018 to include 2015 data	Eurostat data sets: env_ac_pepsgg, env_ac_pepsnsp, env_ac_pepssp, nama_10_gdp
7th EAP priority objective 3				
Exceedance of air quality standard values in urban areas (nitrogen dioxide: NO_2; dust particles: PM_{10}; ozone: O_3; fine particulate matter: $PM_{2.5}$)	2000-2015	Annually	2018 to include 2016 data	EEA indicator CSI 004
Emissions of the main air pollutants in Europe (sulphur oxides: SO_2; nitrogen oxides: NO_x; ammonia: NH_3; non-methane volatile organic compounds: NMVOCs; fine particulate matter: $PM_{2.5}$)	2005-2015	Annually	2018 to include 2016 data	EEA indicator CSI 040/APE 010
Bathing water quality	2011-2016	Annually	2018 to include 2017 data	EEA report ([f])
Number of countries that have adopted a climate change adaptation strategy and/or plan	2005-2017 Data for 2017 cover up to September 2017	Annually	2018 to include 2018 data	Climate adapt ([g])
Population exposure to environmental noise	2007-2012	Annually but without data for more recent years	2018 or 2019 to include 2017 data	EEA indicator CSI 051/TERM 005
Consumption of chemicals, by hazard class	2005-2015	Annually	2018 to include 2016 data	Eurostat data set env_chmhaz
Total sales of pesticides	2011-2015	Annually	2018 to include 2016 data	Eurostat data set aei_fm_salpest09

Notes: ([a]) All EEA indicators, including their underpinning data sets as well as all Eurostat data sets, are accessible through the EEA (www.eea.europa) and the Eurostat (www.ec.europa.eu/Eurostat) websites respectively.

([b]) UNECE report ECE/TIM/SP/37, Forests in the UNECE region.

([c]) EEA Report No 8/2012, *European waters — assessment of status and pressures*.

([d]) EEA Report No 17/2017, *Trends and projections in Europe 2017 - Tracking progress towards Europe's climate and energy targets*, European Environment Agency.

([e]) https://ec.europa.eu/taxation_customs/sites/taxation/files/taxation_trends_report_2017.pdf

([f]) https://ec.europa.eu/taxation_customs/business/economic-analysis-taxation/data-taxation_en.

([g]) EEA Report No 5/2017, *European bathing water quality in 2016*.

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