Resource efficiency and low carbon economy

Environmental protection expenditure

Indicator	EU indicator past trend	Selected objective to be met by 2020	Indicative outlook of the EU meeting the selected objective by 2020
Environmental protection expenditure in Europe	(% of GDP) (absolute value at fixed prices)	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

The Seventh Environment Action Programme (7th EAP) identifies the need to increase environment and climate-related expenditure if its environment and climate objectives are to be met. Environmental Protection Expenditure (EPE), which does not capture investment in renewables, energy efficiency and climate adaptation, increased in real terms by 18 % over the 2003–2013 period, but its proportion of gross domestic product (GDP) increased by only 7 %. To date, the highest expenditure and greatest growth in expenditure has been in waste management. Most EPE growth was driven by the public sector and specialised producers, with industry lagging significantly behind. Since at least 20 % of the EU budget should be spent on climate change activities until 2020, it is likely that EPE will continue to grow.

For further information on the scoreboard methodology please see Box I.1 in the EEA Environmental indicator report 2016

Setting the Scene

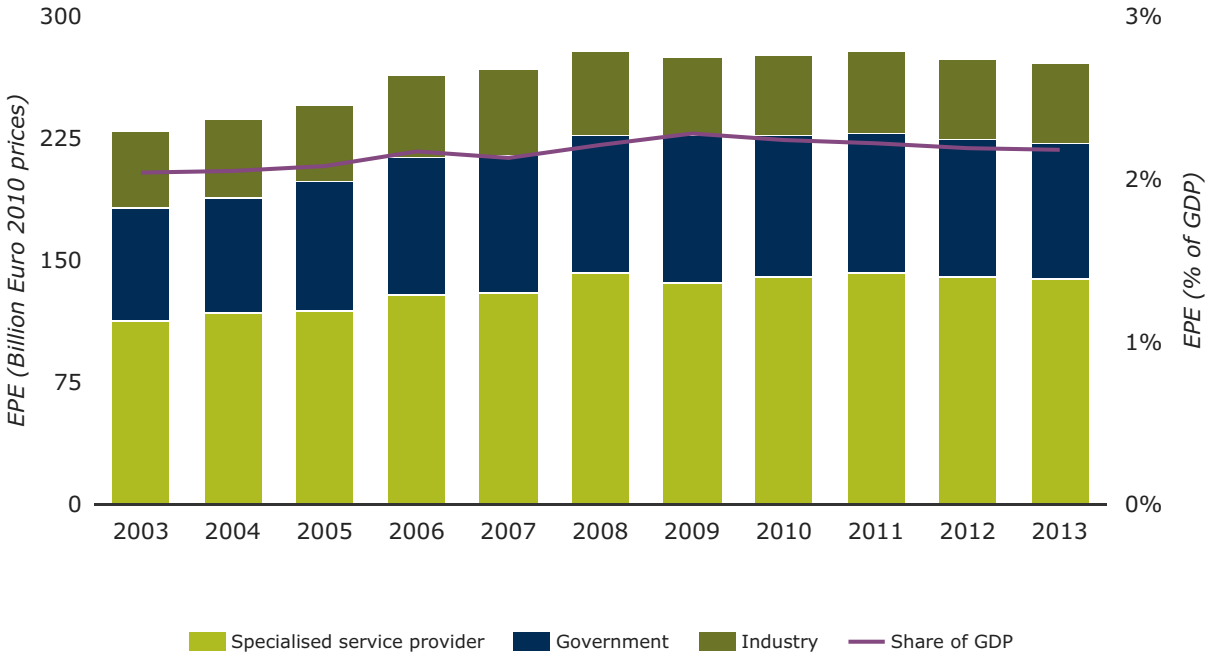
The 7th EAP calls for an increase in both public and private sector environment- and climate-related expenditure to achieve environment and climate objectives (EU, 2013). This briefing presents trends in EPE; promoting activities and technologies aimed at preventing pollution and environmental degradation can reduce the environmental and climate impacts of economic activity. This can also lead to economic development via growth and increasing employment in the environmental goods and services sector (EGSS) (AIRS_PO2.12, 2016).[1] However, increased spending can also reflect responses to growing environmental pressures and impacts on the environment.

Policy targets and progress

The 7th EAP Priority Objective 6 identifies the need to increase both public and private sector environment and climate-related expenditure. EPE has grown over the 2003–2013 period by 18 % in real terms, although most of this growth took place before 2008 (Figure 1). The proportions of expenditure of the public sector, industry and specialised producers (a mixture of public and privately run environmental specialist services such as waste and wastewater companies) remained relatively constant over the same period. Specialised producers accounted for half of total expenditure, industry for 20 % and the public sector for 30 %. Expenditure by industry has lagged behind the other two sectors, growing at half the speed.

Overall EPE experienced a dip due to the financial crisis and did not recover to 2008 levels in real terms (fixed prices) until 2011. However, the reduction was mainly driven by industry and specialised providers. Public expenditure actually increased during and immediately following the crisis as governments in EU Member States tried to stabilise their economies by increasing investments, including green investments (Görlach et al., 2014). This increasing trend in EPE in the public sector also protected the EGSS in Europe from the economic downturn (AIRS_PO2.12, 2016).[1] However, it should be noted that the main reason for growth in the EGSS was a continuous increase in renewable energy activities, and the EPE indicator does not capture this.

Figure 1. Trends in EU-28 environmental protection expenditure by organisation type, in absolute value (2010 fixed prices) and proportion of GDP

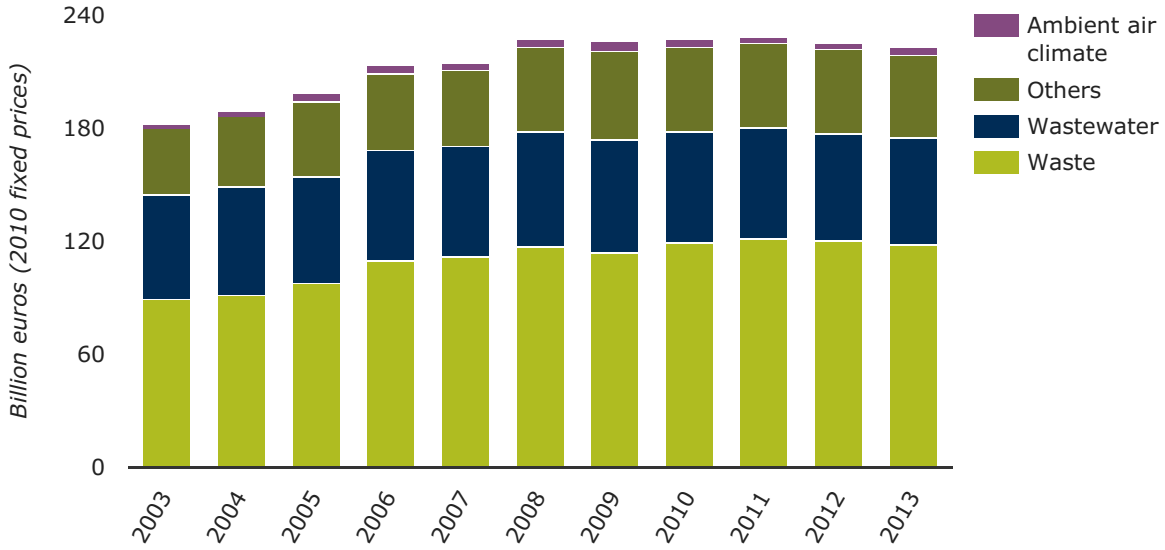


Data sources:

a. Eurostat. Environmental protection expenditure in Europe - EUR per capita and % of GDP (env_ac_exp2)
b. Eurostat. Environmental protection expenditure in Europe - detailed data, NACE Rev. 2 (env_ac_exp1r2)

Public expenditure on environment activities as part of policy interventions to stabilise economies also affected the proportion of overall EPE in GDP. This showed a 7 % increase over the 2003–2013 period with a peak in 2009, following 2 years of increased government expenditure (from EUR 85 billion in 2007 to EUR 90 billion in 2009), while the overall economy shrank. Public sector EPE then dropped to EUR 86 billion in 2010 (at 2010 prices), then stagnated after 2009 as the economy began to grow again, reducing the EPE proportion of GDP to 2006 levels by 2013.

Figure 2. Environmental protection expenditure by specialised producers and the public sector split by environmental domain, EU



Data sources: Eurostat. Environmental protection expenditure in Europe - detailed data (NACE Rev. 2) (env_ac_exp1r2)

Figure 2 shows EPE trends according to environmental domain in the same period. Data are available only for the public sector and specialised producers (approximately 80 % of overall EPE).

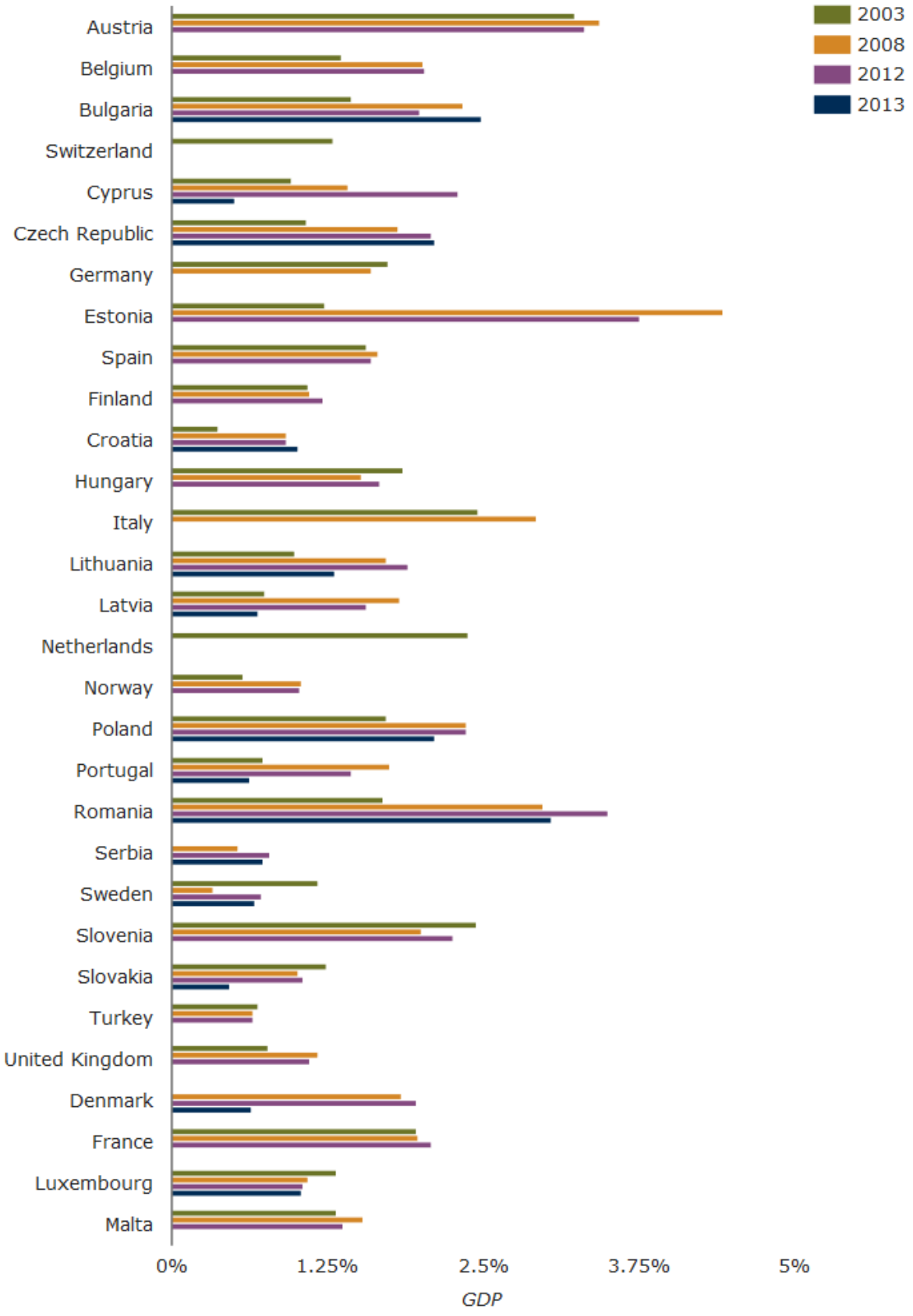
Most expenditure was on waste management, followed by wastewater treatment. The growth in EPE has been driven primarily by growth in waste management expenditure. EPE related to air pollution and climate was very limited but this is in part due to industry expenditure not being included in the figures. If this was included, it would add an extra EUR 12 billion EPE in 2013, in addition to the EUR 4 billion spent on air and climate, as shown in Figure 2 (Eurostat, 2015a).

The EPE will only partly capture climate-related expenditure. Nevertheless, given current EU budget allocation commitments and the clear increase in EPE since 2003, it seems unlikely that this trend will be reversed by 2020. Therefore, the prospects for increased environmental expenditure by 2020 appear positive.

Country level information

Figure 3 shows developments at country level in total EPE as percentages of GDP in the 2003–2013 period, where data are available. While trends varied between countries, of the 11 countries with data for all 3 years, eight saw increasing proportions of GDP.

Figure 3. Environmental protection expenditure as a percentage of GDP



Data sources: Eurostat. Environmental protection expenditure in Europe (env_ac_exp2)

EPE as a proportion of GDP varies strongly across countries. Austria, Estonia, Italy and Romania have proportions over 3 % while Serbia and Turkey have proportions lower than 0.75 % (Figure 3). This wide gap reflects differences in economic structure (e.g. type of industry, type of energy sources used). In most countries, public sector expenditure is concentrated on waste management and wastewater treatment.

The division between EPE current expenditure and investment differs across countries according to the date when they entered the EU. For Member States that have joined the EU since 2004, investment accounts for more than 35 % of total EPE. This expenditure can be explained by the new fixed assets necessary to meet EU water quality and waste management directives.

Outlook beyond 2020

Progress towards a circular economy will require increases in investments and current expenditure in the waste management sector, but also within the business sector as a whole, to close resource loops. The EU intends to invest EUR 5.5 billion of structural funds in accelerating the circular economy (EC, 2015). This could also provide a catalyst for expenditure by the public sector and businesses in Member States up to and beyond 2020.

The EU's agreed long-term target (EC, 2014) for further reducing greenhouse gas emissions (a 40 % reduction compared with 1990 by 2030) also implies additional investments, not all of which will be captured by the EPE indicator. The air quality targets for 2030 proposed by the European Commission in late 2013 ('A Clean Air Programme for Europe'; EC, 2013b) could also lead to an increase in EPE beyond 2020. Additional efforts will be needed beyond 2020 to achieve the water quality targets of the Water Framework Directive (EU, 2000) which are also likely to be reflected in an increase in EPE.

About the indicator

This briefing uses data from the environmental protection expenditure account (EPEA), which is one of the European environmental accounts. Environmental accounts analyse the interaction between the economy and the environment by organising environmental information in a way that is consistent with national accounts. EPE illustrates the investments aimed at preventing, reducing and eliminating pollution and environmental degradation. The EPE indicator estimates country spending on these activities in fixed prices (2010 reference year) in euros and as a percentage of GDP.

EPE data are available by environmental domain (protection of ambient air and climate; wastewater management; waste management; protection and remediation of soil, groundwater and surface water; noise and vibration abatement; protection of biodiversity and landscape; protection against radiation; research and development; and other environmental protection activities). EPE data are also available by type of organisation (public, industrial and specialist producers, which can be a mixture of public and privately run environmental specialist services such as waste management companies etc.). EPE can also be split between investments and current (ongoing) expenditure.

European environmental accounts are established by Regulation 691/2011 on European environmental economic accounts. From 2017, reporting of data on the EPEA will be mandatory and standardised. Currently, data on expenditure by certain sectors, particularly industry, is missing in some years for some countries, and in these cases it is estimated by Eurostat. Moreover, industry EPE data broken down by environmental domain are missing.

Although the EPEA includes investment in reducing air pollutants (including greenhouse gases), it does not capture investment in renewable energy, energy efficiency or any form of climate adaptation. Therefore it does not fully capture expenditure to achieve climate policy objectives.

Footnotes and references

EC, 2013a, 'An EU budget for low-carbon growth', European Commission press release, Warsaw, 19 November 2013 (http://ec.europa.eu/clima/policies/budget/docs/pr_2013_11_19_en.pdf), accessed 16/11/2016.

EC, 2013b, Commission staff working document 'Impact assessment' (SWD(2013) 531 (http://ec.europa.eu/environment/archives/air/pdf/Impact_assessment_en.pdf), accessed 16/11/2016.

Annual Indicator Report Series (AIRS)

EC, 2014, Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions 'A policy framework for climate and energy in the period from 2020 up to 2030' (COM(2014) 015 final);

EC, 2015, 'Closing the loop: Commission adopts ambitious new Circular Economy Package to boost competitiveness, create jobs and generate sustainable growth', European Commission press release, Brussels, 2 December 2015 (http://europa.eu/rapid/press-release_IP-15-6203_en.htm), accessed 16/11/2016.

EU, 2000, Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy (OJ L 327, 22.12.2000, p. 1–73).

EU, 2013, Decision No 1386/2013/EU of the European Parliament and of the Council of 20 November 2013 on a General Union Environment Action Programme to 2020 'Living well, within the limits of our planet', Annexe A, paragraph 84b (OJ L 354, 28.12.2013, p. 171–200).

Eurostat, 2015a, 'Statistics explained — Environmental protection expenditure' (http://ec.europa.eu/eurostat/statistics-explained/index.php/Environmental_protection_expenditure), accessed 16/11/2016.

Eurostat, 2015b, 'Environmental protection expenditure in Europe —EUR per capita and % of GDP' (http://ec.europa.eu/eurostat/en/web/products-datasets/-/ENV_AC_EXP2), accessed 16/11/2016.

Görlach, B., Porsch, L., Marcellino, D. and Pearson, A., 2014, How crisis-resistant and competitive are Europe's Eco-Industries?Ecologic Institute, Berlin (http://docplayer.net/9826167-How-crisis-resistant-and-competitive-are-europe-s-eco-industries.html), accessed 16/11/2016.

AIRS briefings

1. AIRS_PO2.12, 2016, Environmental goods and services sector: Employment and value added, European Environment Agency.

> Environmental indicator report 2016 – In support to the monitoring of the 7th Environment Action Programme, EEA report No30/2016, European Environment Agency