



23 March 2022
ENVIRONMENTAL ACCOUNTS
2022

IN 2019 THE ENVIRONMENTAL GOODS AND SERVICES SECTOR GENERATED 2.6% OF NATIONAL GVA AND 2.3% OF EMPLOYMENT. NATIONAL EXPENDITURE ON ENVIRONMENT PROTECTION INCREASED 5.4%

In 2019, the environmental goods and services sector generated 2.6% of the national Gross Value Added (GVA), 3.6% of exports and 2.3% of employment.

Between 2014 and 2019, exports in this sector increased by 41.9% and employment by 23.8%, which translates into higher changes by 8.5 percentage points (p.p.) and 10.6 p.p., respectively, compared to those observed for the total economy. In this period, GVA grew 19.8%, 3.0 p.p. below that registered in the national economy.

In 2018, the last year with available information for the EU, Portugal was the eighth country with the largest share of environmental goods and services sector GVA in the national GVA and the fifth with the largest share of exports in the national total.

In 2019, the National Expenditure on Environmental Protection (NEEP) amounted to 3 448.4 M€ (1.6% of GDP), increasing by 5.4% compared to the previous year (change of +6.3% in 2018) and reaching the maximum value.

This press release summarizes the main results of the Environmental goods and services sector accounts (EGSS) and the Environmental protection expenditure accounts (EPEA) for 2019. The retrospective series from 2014 to 2018 has been revised in both projects, in accordance with new Eurostat guidelines¹ regarding the amendment of some environmental domains and the integration of electric vehicles, as well as the exclusion of the values of transfers related to the production of goods. At the end, methodological notes are presented where the revisions made are described in more detail.

Additional tables are available on Statistics Portugal website, in the National Accounts dissemination area ([Satellite Accounts Accounts](#)).

¹ CEPA and CReMA - Explanatory notes, December 2020; Guidance note – Reporting of electric and more resource-efficient transport equipment in EPEA and EGSS accounts, December 2020



1. Environmental Goods and Services Sector Accounts (EGSS)

In 2019, the environmental goods and services sector accounted for 3.6% of production, 2.6% of GVA, 3.6% of exports and 2.3% of employment in the Portuguese economy.

With the exception of exports, which decreased by 1.8% in 2019 (the first reduction in 5 years), the remaining aggregates increased, albeit less intensely than in the previous year.

Considering the period from 2014 to 2019, environmental goods and services sector recorded growth in exports and employment of 41.9% and 23.8%, above those seen in the national economy (+33.3% and +13.2%, respectively). On the contrary, the variation in the sector's GVA (+19.8%) was lower than that recorded in the total economy (+22.8%). This was largely due to the behaviour of the GVA of *energy resources management*, which increased by only 0.7% in that period, reflecting the weather conditions in the *production of energy from renewable sources*², which in years of greater rainfall give rise to greater GVA in this domain.

Table 1. Main results of the Environmental Goods and Services Sector Accounts

			2014	2015	2016	2017	2018	2019	Rate of variation (%)					
									14/15	15/16	16/17	17/18	18/19	14/19
Environmental Goods and Services Sector output	10 ⁶		11.030	11.287	11.939	12.551	13.347	13.898	2,3	5,8	5,1	6,3	4,1	26,0
<i>Economy output</i>	euro		309.831	317.833	324.823	347.793	366.734	381.407	2,6	2,2	7,1	5,4	4,0	23,1
Weight in the national economy			3,6%	3,5%	3,7%	3,6%	3,6%	3,6%						
Environmental Goods and Services Sector GVA	10 ⁶		4.076	4.105	4.339	4.547	4.717	4.882	0,7	5,7	4,8	3,7	3,5	19,8
<i>Economy GVA</i>	euro		151.136	156.517	161.993	169.642	177.466	185.536	3,6	3,5	4,7	4,6	4,5	22,8
Weight in the national economy			2,7%	2,6%	2,7%	2,7%	2,7%	2,6%						
Environmental Goods and Services Sector exports	10 ⁶		2.349	2.647	2.970	3.127	3.393	3.332	12,7	12,2	5,3	8,5	-1,8	41,9
<i>Economy exports</i>	euro		69.595	72.991	74.989	83.717	89.144	92.798	4,9	2,7	11,6	6,5	4,1	33,3
Weight in the national economy			3,4%	3,6%	4,0%	3,7%	3,8%	3,6%						
Environmental Goods and Services Sector employment	FTE		90.336	95.689	99.586	105.685	108.999	111.814	5,9	4,1	6,1	3,1	2,6	23,8
<i>Economy employment</i>			4.246.752	4.327.565	4.426.856	4.579.158	4.720.439	4.807.467	1,9	2,3	3,4	3,1	1,8	13,2
Weight in the national economy			2,1%	2,2%	2,2%	2,3%	2,3%	2,3%						

Source: Statistics Portugal (Environmental Goods and Services Sector Accounts)

²Note: Weather conditions are measured using the Hydro Capability Factor – HCF 2019 was a dry year (HCF of 0.81) compared to a very wet year of 2014 (HCF of 1.27).



Environmental goods and services are grouped into two classifications of major environmental domains:

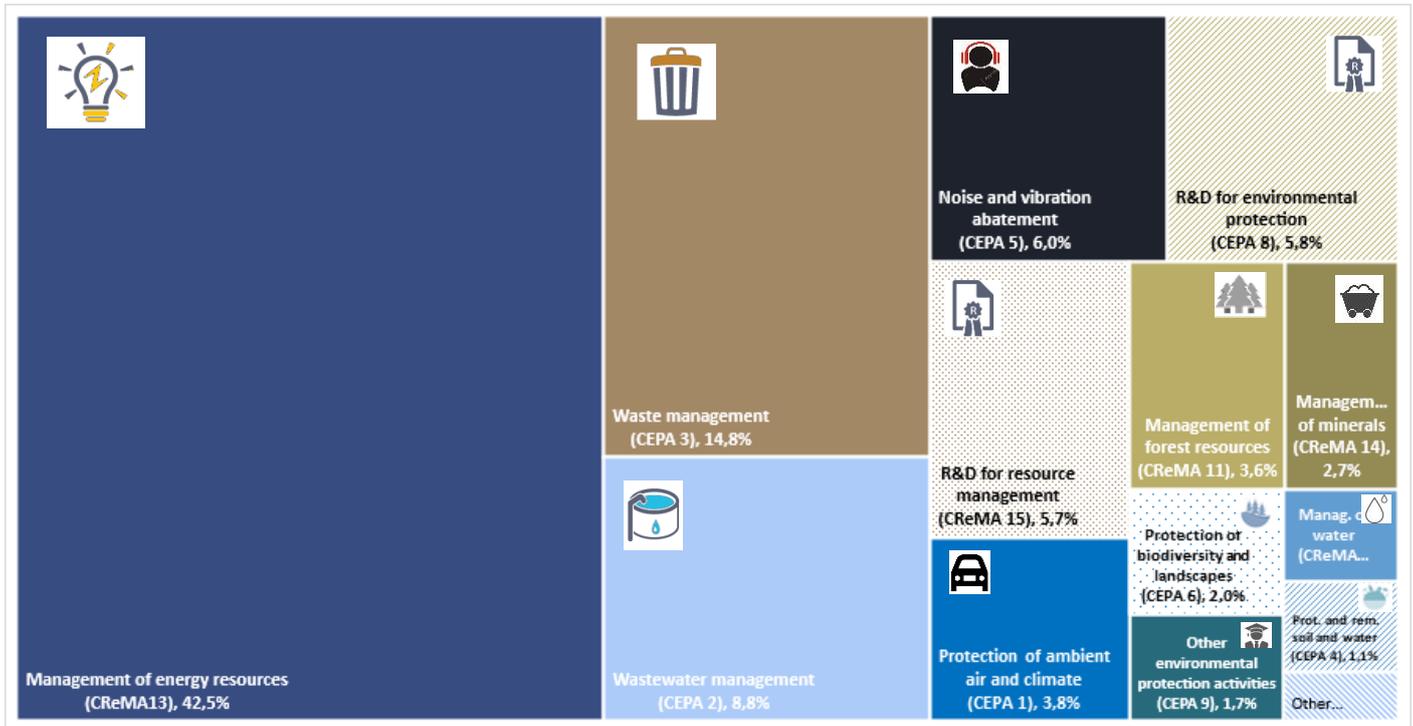
- **Environmental protection (CEPA)** - activities and actions that have as main objective the prevention, reduction and elimination of pollution, or other degradation of the environment which encompasses the fields of *protection of ambient air and climate, wastewater management, waste management, protection and remediation of soils and water, noise and vibration abatement, protection of biodiversity and landscapes, protection against particle radiation, research and development (R&D) for environmental protection and other environmental protection activities*
- **Resource management (CReMA)** - activities and actions aimed at the preservation, maintenance and reinforcement of existing natural resources, how to combat their decrease and avoid depletion (see methodological notes) that comprises the domains of *water management, management of forest resources, management of energy resources, management of mineral, R&D for resource management and other resource management activities*

In 2019, the output of **environmental protection** goods and services amounted 6,097 M€ (43.9%) and that of **resource management** reached 7,801 M€ (56.1%).

The *management of energy resources* remained the most relevant area (42.5%). *Waste management* was the second most important domain (14.8%), followed by *wastewater management* (8.8%).



Figure 1. Output by environmental domain (2019)

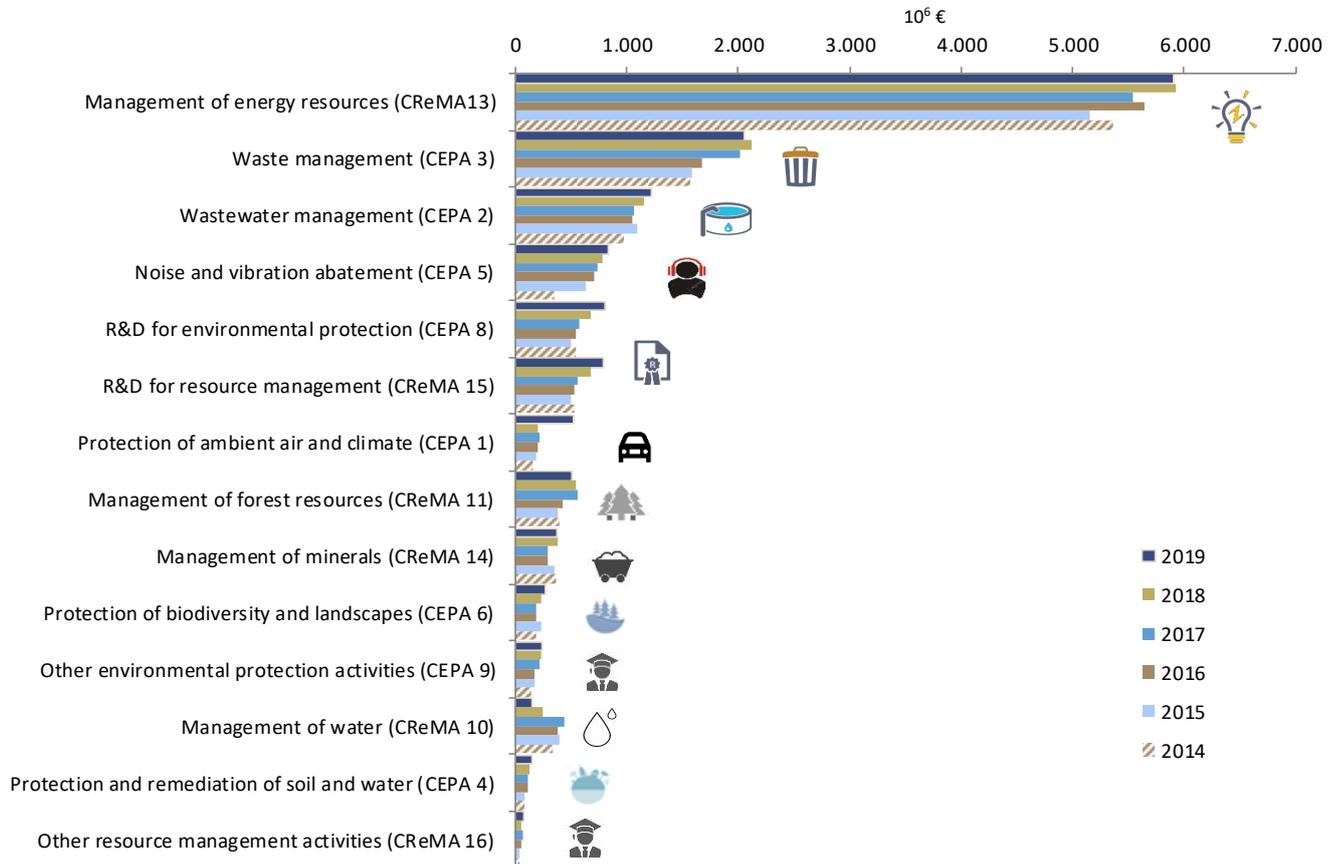


Source: Statistics Portugal (Environmental Goods and Services Sector Accounts)

In the period 2014 to 2019, output related to **environmental protection** increased, on average, by 7.2% per year. This was the consequence of the growth contribution of the two most significant areas: *waste management* (+4.5%) and *wastewater management* (+3.8%), and also of considerable increases in areas with less weight such as *protection of ambient air and climate* (+22.7%), due to the production of electric bicycles and electric vehicle charging stations, *noise and vibration abatement* (+15.7%), due to the production of silencers, and the *protection and remediation of soil and water* (+11.3%), through organic farming and aquaculture.

In the same period, output within the scope of **resource management** grew, on average, by 1.8% per year. Noteworthy is the growth in the most representative area, the *management of energy resources* (+1.6%), as well as the increases in other areas such as the *management of forest resources* (+4.5%). R&D activities showed significant growth for both environmental protection (+9.5%) and resource management (+6.9%).

Figure 2. Output by environmental domain (2014 - 2019)



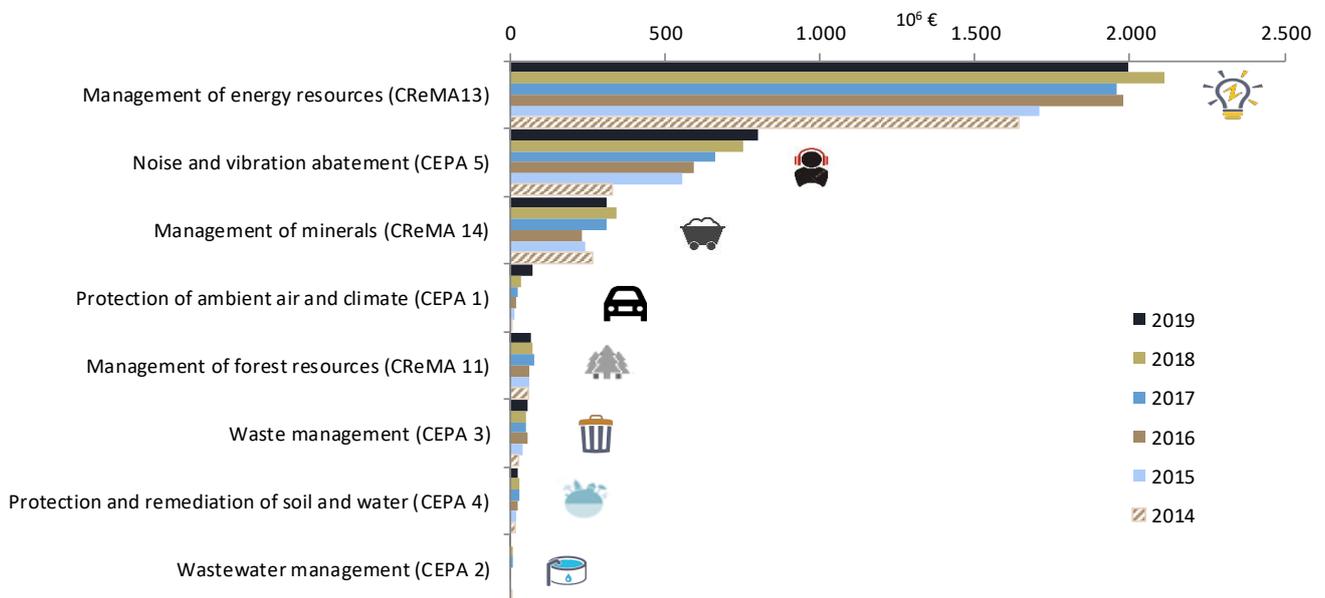
Source: Statistics Portugal (Environmental Goods and Services Sector Accounts)

In 2019, 24.0% of the environmental goods and services output was **exported** (compared to 25.4% in 2018). The *management of energy resources* was responsible for 59.9% of these exports, with emphasis on wind power production equipment (such as wind power generator sets and other components). *Noise and vibration abatement* followed, with a relative weight of 24.1%, mainly due to silencers for motor vehicles. In third place is the *management of minerals*, which represented 9.4% of exports, as a result of the increase in metallic and non-metallic mineral waste. Also noteworthy, is the *protection of ambient air and climate* with a growth of 115.2%, due to a significant increase in electric bicycles, although with a weight of only 2.1% in exports of this type of goods and services.

Between 2014 and 2019, total exports of the environmental goods and services sector increased by 41.9%. The areas with the most relevant contributions were the *management of energy resources* (+21.4%), *noise and vibration abatement* (+143.9%) and *management of minerals* (+17.9%).



Figure 3. Exports by environmental domain (2014 - 2019)



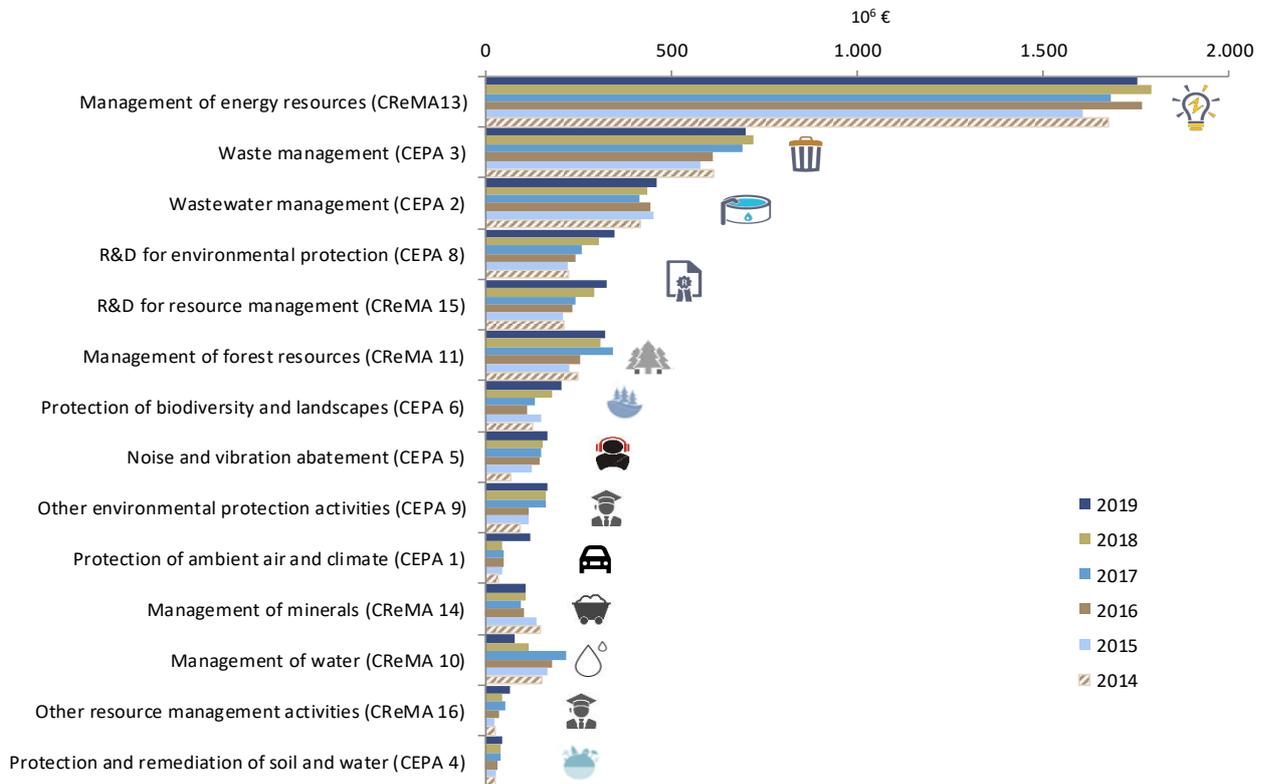
Source: Statistics Portugal (Environmental Goods and Services Sector Accounts)

In the period from 2014 to 2019, GVA and Employment in **environmental protection** increased, on average, by 5.5% and 5.6% per year, respectively. The areas that contributed most significantly to this growth were *waste management* (+2.2% and +2.4%, respectively) and *wastewater management* with variations of 2.2% and 2.4%, respectively, and *wastewater management* (+1.7% and +3.0%, in the same order). However, as in output, areas with a lower relative weight showed high average growth, such as *protection of ambient air and climate* (+22.0% and +18.5%, respectively), *noise and vibration abatement* (+16.1% and +13.2%, in the same order), the *protection and remediation of soil and water* (+10.5% and +6.2%) and the *protection of biodiversity and landscape* (+8.6% and +6.8%, respectively).

In the same period, within the scope of **resource management**, GVA and Employment grew, on average, by 1.3% and 1.4% per year, respectively. It should be noted that, in the most representative area, the *management of energy resources*, the average growth was in a opposite direction (+0.7% and -0.1%, respectively), which is explained, on the one hand, by the irregularity of the hydrological and wind conditions, which affect output and GVA and, on the other hand, by the growing trend towards greater incorporation of renewable energies in the energy mix, whose GVA/Employment ratio is higher than that of electricity generation with fossil fuels.



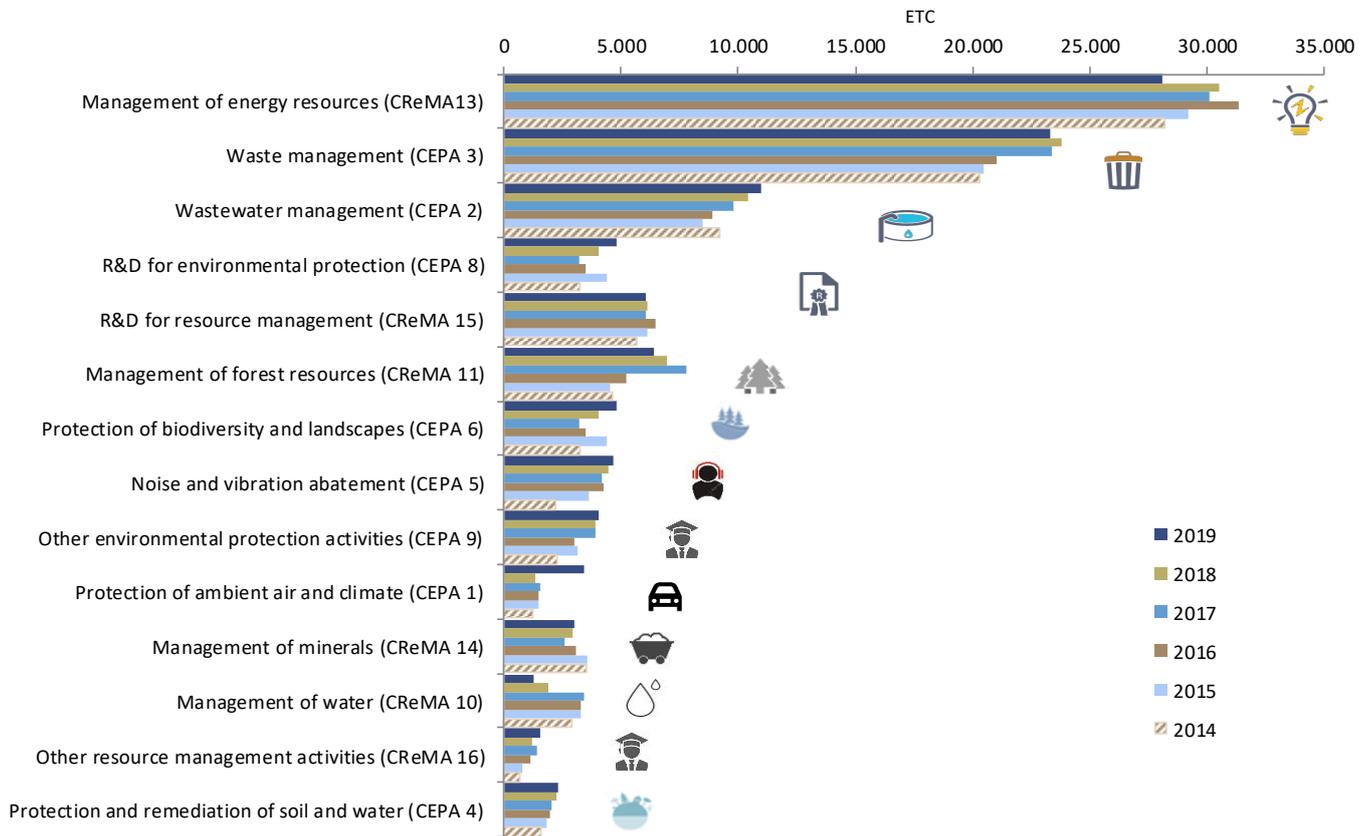
Figure 4. GVA by environmental domain (2014 - 2019)



Source: Statistics Portugal (Environmental Goods and Services Sector Accounts)



Figure 5. Employment by environmental domain (2014 - 2019)



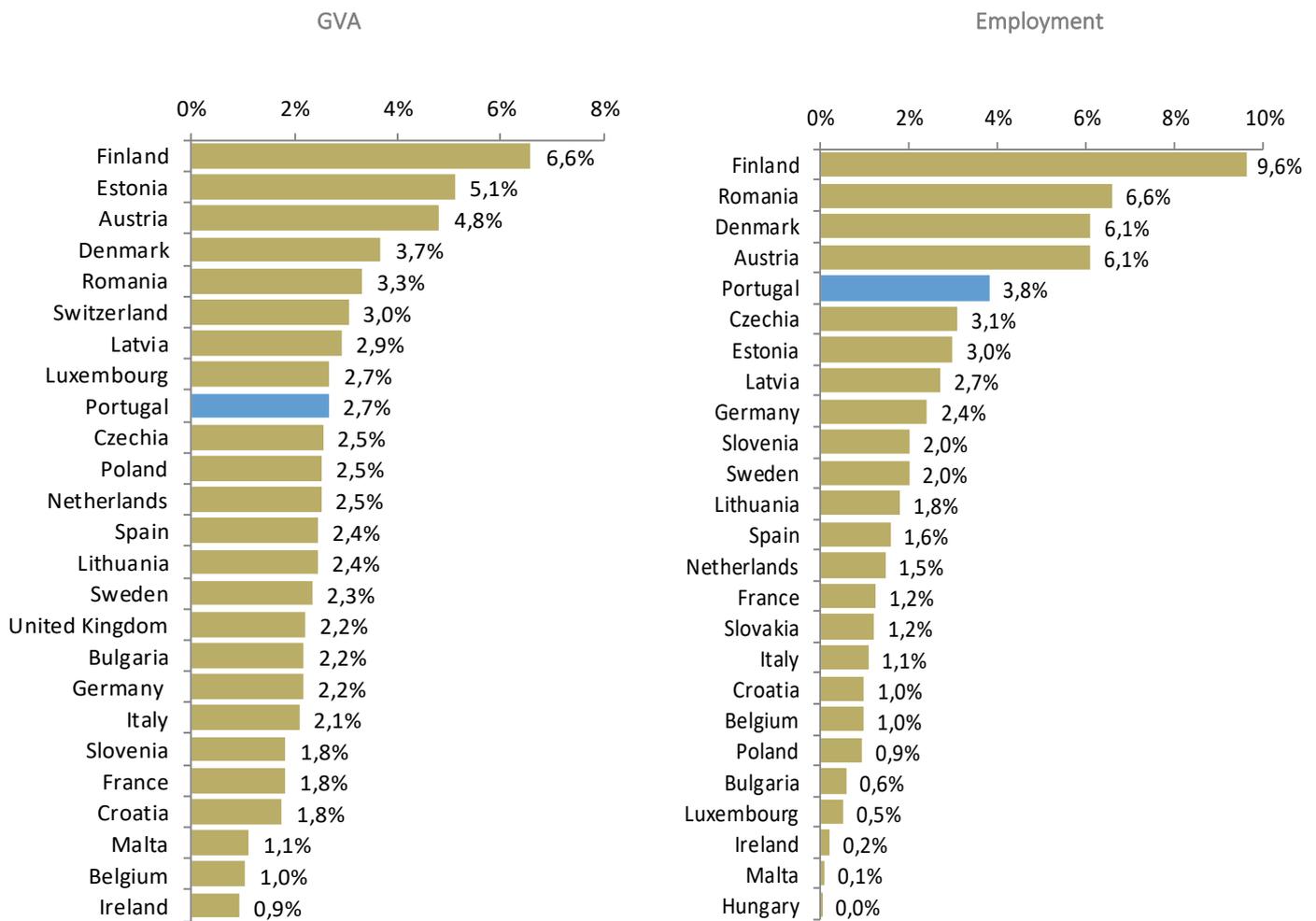
Source: Statistics Portugal (Environmental Goods and Services Sector Accounts)

International comparisons

In 2018 (the last year with information available for the EU), Portugal registered the eighth highest relative position, among the EU countries, in terms of the relative importance of the GVA of Environmental Goods and Services in the national GVA (with 2.7%), and the fifth position in terms of exports of Environmental Goods and Services in national exports (with 3.8%).



Figure 6. Weight (%) of environmental goods and services sector GVA and exports in national GVA and exports, in European countries (2018)



Source: Eurostat (data extracted on the 16th March 2022); Portugal - Statistics Portugal (Environmental Goods and Services Sector Accounts)



2. Environmental Protection Expenditure Accounts (EPEA)

Compared to EGSS, EPEA limits observation domains to environmental protection (not covering resource management - see methodological notes). These accounts cover specific **environmental protection** services, the most relevant of which are *waste management* and *wastewater management*.

National expenditure on environmental protection (NEEP) is the main variable, corresponding to the economic resources allocated to environmental protection. This indicator is obtained as follows:

NEEP = final consumption expenditure

+ intermediate consumption (IC)³

+ investment (GFCF + NP)⁴

- current and capital transfers⁵ received from the Rest of the World

+ current and capital transfers paid to the Rest of the World

Main results

In 2019, NEEP totaled 3,448.4 M €, having increased by 5.4% compared to 2018, with the most representative variables showing growth compared to the previous year:

- Increase of 5.3% in the IC of environmental protection services (EP services), higher than at the national economy level (+3.5%)
- 7.9% increase in *investment* for the production of environmental protection services (which compares with +8.0% for the national economy), driven by the significant increase in investment General government (+20.4%), offset by a less marked growth in Companies (+3.8%)
- 3.1% growth in final consumption expenditure on PA services (+4.2% at the national economy)
- On the contrary, there was a decrease in the flow of current and capital transfers with the Rest of the World (RoW), both paid and received, while the corresponding flows increased when considering the national economy.

³ Intermediate consumption (IC), excluding the IC of environmental protection services by specialized producers in environmental protection (producers whose main activity is the production of environmental protection services).

⁴ Sum of gross fixed capital formation (GFCF) and acquisitions less disposals of non-produced assets (NP).

⁵ Current transfers include subsidies.



Figure 7. Main results of the Environmental Protection Expenditure Accounts (2014 – 2019)

	2014	2015	2016	2017	2018	2019	Rate of variation (%)					
							14/15	15/16	16/17	17/18	18/19	
<i>unit: 10⁶ euro</i>												
National expenditure on EP (NEEP)	2.708,2	2.828,6	2.777,3	3.076,6	3.270,6	3.448,4	4,4	-1,8	10,8	6,3	5,4	
Final consumption expenditure of EP services	782,0	790,5	792,3	949,7	922,1	950,3	1,1	0,2	19,9	-2,9	3,1	
<i>Final consumption expenditure in national economy</i>	<i>146.289</i>	<i>149.890</i>	<i>154.824</i>	<i>160.214</i>	<i>166.706</i>	<i>173.762</i>	<i>2,5</i>	<i>3,3</i>	<i>3,5</i>	<i>4,1</i>	<i>4,2</i>	
Weight of final consumption expenditure of EP services in the national economy	0,5%	0,5%	0,5%	0,6%	0,6%	0,6%						
Intermediate consumption (IC) of EP services¹	1.478,5	1.472,8	1.567,5	1.589,6	1.745,6	1.837,7	-0,4	6,4	1,4	9,8	5,3	
<i>Intermediate consumption in national economy</i>	<i>158.695</i>	<i>161.316</i>	<i>162.830</i>	<i>178.151</i>	<i>189.269</i>	<i>195.870</i>	<i>1,7</i>	<i>0,9</i>	<i>9,4</i>	<i>6,2</i>	<i>3,5</i>	
Weight of intermediate consumption of EP services in the national economy	0,9%	0,9%	1,0%	0,9%	0,9%	0,9%						
Investment (GFCF+NP) for the production of EP services	456,8	577,1	432,4	543,0	614,6	663,1	26,4	-25,1	25,6	13,2	7,9	
<i>Investment, in the national economy</i>	<i>26.013</i>	<i>27.886</i>	<i>28.893</i>	<i>32.888</i>	<i>35.953</i>	<i>38.815</i>	<i>7,2</i>	<i>3,6</i>	<i>13,8</i>	<i>9,3</i>	<i>8,0</i>	
Weight of investment for the production of EP services in the national economy	1,8%	2,1%	1,5%	1,7%	1,7%	1,7%						
Current² and capital transfers for EP services received from the Rest of the world (RoW)	12,6	16,2	16,5	11,8	14,6	2,8	28,4	1,6	-28,7	23,7	-80,8	
<i>Total current and capital transfers received from the RoW</i>	<i>10.232</i>	<i>10.162</i>	<i>18.990</i>	<i>9.635</i>	<i>10.261</i>	<i>10.497</i>	<i>-0,7</i>	<i>86,9</i>	<i>-49,3</i>	<i>6,5</i>	<i>2,3</i>	
Weight of transfers for EP services received, in total transfers received from the RoW	0,1%	0,2%	0,1%	0,1%	0,1%	0,0%						
Current and capital of transfers for EP services paid to the Rest of the world (RoW)	3,6	4,3	1,7	6,1	2,9	0,2	19,3	-61,8	266,7	-52,6	-93,7	
<i>Total current and capital transfers paid to the RoW</i>	<i>3.874</i>	<i>3.608</i>	<i>3.630</i>	<i>3.232</i>	<i>3.738</i>	<i>3.836</i>	<i>-6,9</i>	<i>0,6</i>	<i>-11,0</i>	<i>15,6</i>	<i>2,6</i>	
Weight of transfers for EP services paid, in total transfers paid to the RoW	0,1%	0,1%	0,1%	0,2%	0,1%	0,0%						
<i>1 - excluding the IC of EP services by specialized producers in environmental protection</i>												
<i>2 - including subsidies</i>												
<i>by memory:</i>												
GDP	173.054	179.713	186.490	195.947	205.184	214.375	3,8	3,8	5,1	4,7	4,5	

Source: Statistics Portugal (Environmental Protection Expenditure Accounts)

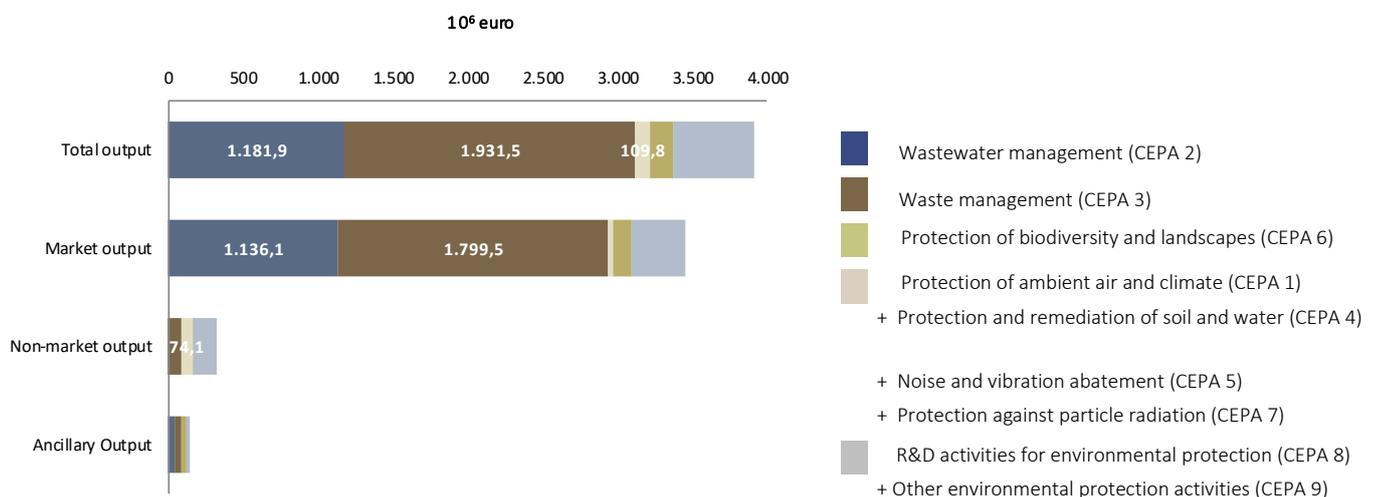
The intermediate consumption (IC) for environmental protection services is obtained by balancing resources and use of environmental protection services, where total production is the main resource. In 2019 the following results are highlighted:

- **Total output** of environmental protection services increased by 4.3%, maintaining the upward trend since 2014
- *Waste management* represented 49.3% of **total output**, followed by *wastewater management* (30.2%), with opposite variations, of -7.8% and +4.0% respectively, when compared with the previous year
- **Market output** and **output for own final use** together increased by 4.6%. **Non-market output** increased by 5.1% and **ancillary output** decreased by 3.8%



- The increase in **non-market output** and **output for own final use** was mainly due to increases in *protection of biodiversity and landscape* (+40.6%) and in *research and development (R&D) for environmental protection* (+16.6%) and was offset by decreases in *waste management* (-5.7%) and *other environmental protection activities* (-8.7%)
- **Market output** maintained the growth trend of the last 5 years. The increase was practically generalized, being noteworthy, due to its weight in the total, the evolutions observed in *wastewater management* (+9.0%) and in *research and development activities (R&D) for environmental protection* (+15.3%).

Figure 8. Output of environmental protection services, by activity (2019)



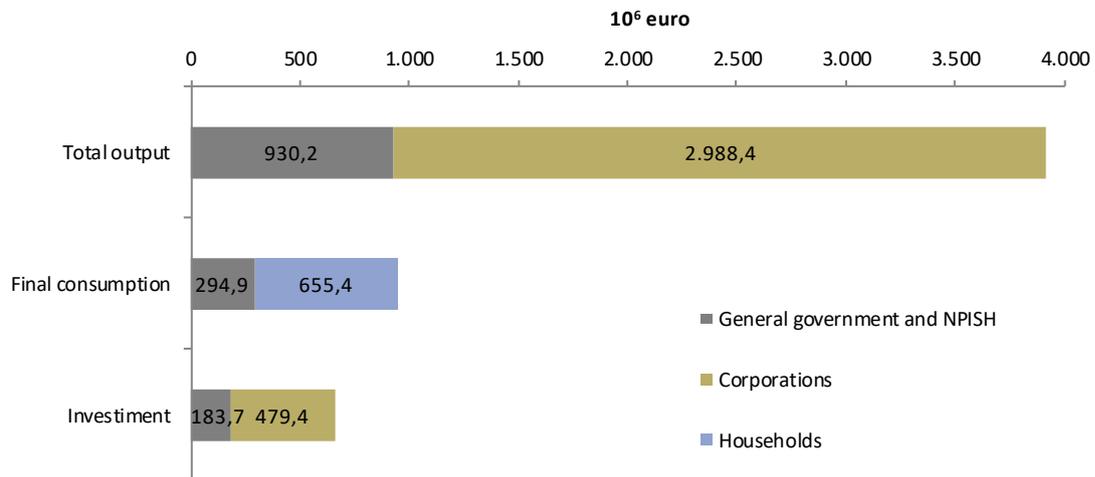
Source: Statistics Portugal (Environmental Protection Expenditure Accounts)

At NEEP by institutional sector, the largest contribution was from Corporations

- **Corporations** is the institutional sector that contributes most to the NEEP. Its contribution has expanded in the last 2 years, having increased from 61.5% in 2017 to 67.2% in 2019
- **Corporations** maintained their relevance in the total production of environmental protection services (76.3%), with **General Government** and **NPISH** accounting for the remaining 23.7% in 2019. In 2017 these percentages were 74.5% and 25.5%, respectively
- Final consumption expenditure on environmental protection services by **Households** was 69.0% of the total, being above 60% since 2014. The remaining 31.0% are due to **General government** and **NPISH**
- Most of the investment for the production of EP services came from the **Corporations** (72.3%), with the **General government** and **NPISH** being responsible for the remaining 27.7%. A sharply increasing trend can be observed since 2014, in which Corporations contributed 48.5%.



Figure 9. Main variables of Environmental Protection Expenditure Accounts, by Institutional Sector (2019)



Source: Statistics Portugal (Environmental Protection Expenditure Accounts)



METHODOLOGICAL NOTES

The Environmental Goods and Services Sector Accounts (EGSS) and the Environmental Protection Expenditure Accounts (EPEA) are part of the System of European Environmental Economic Accounts (SEEA) and are two mandatory transmission modules, from 2017 onwards, to comply with Regulation (EU) No. 691/2011 of the European Parliament and of the Council of 6 July 2011 on European Environmental Economic Accounts and Regulation (EU) No. 538/2014. Member States have been required to report these accounts to Eurostat since December 2017.

The environmental accounts were developed in connection with the System of National Accounts (SNA). They are a satellite account system that presents environmental information in a format compatible with the National Accounts information, enabling an integrated analysis. In this exercise, the 2014 to 2018 series was revised, in order to be comparable and to integrate the majority of the most recent Eurostat guidelines, namely:

- [CEPA and CReMA - Explanatory notes, December 2020](#)
- [Guidance note – Reporting of electric and more resource-efficient transport equipment in EPEA and EGSS accounts, December 2020.](#)

A.1 Environmental Goods and Services Sector Accounts (EGSS)

Environmental goods and services sector comprises goods and services produced for the purpose of protecting the environment and managing resources.

In addition to the Regulation and the documents referred to above, EGSS's main methodological reference documents are the Eurostat handbooks: [Environmental goods and services sector accounts Handbook](#) and [Environmental goods and services sector accounts Practical guide](#). Additionally, since EGSS is a project consistent with the SNA, the use of its concepts, nomenclatures and methodological references is essential, namely the United Nations System of National Accounts (SNA 2008) and the European System of Accounts (ESA 2010).

Statistics on environmental goods and services record and present data on production activities of national economies that generate environmental products in a manner consistent with the data transmitted under ESA2010. Environmental products (environmental goods and services) have as their main objective environmental protection or resource management. The selection and classification of the products and economic activities covered by this project comply with the requirements of the Eurostat manual [Environmental goods and services sector accounts Practical guide](#).

The comparisons with the results of other countries should be made with some caution. In fact, not all data presented originates from Satellite Accounts, and in some cases may result from the simple appropriation of surveys. In addition, there is still no complete harmonization in the type of environmental goods and services and units considered within the EGSS perimeter.



Main data sources

- Statistics Portugal:

- Portuguese National Accounts (Base 2016)
- Portuguese National Accounts (Base 2011)
- General File of Statistical Units (FGUE)
- Farm Structure Survey (FSS)
- Environmental Goods and Services Sector Survey (ISBSA)
- Municipal Environmental Protection Survey (IMPA)
- Business Survey on Management and Protection of the Environment (IEGPA)
- Survey of Fire Brigade Entities (IEDCB)
- Survey on Urban Waste Management Entities (IEGRU)
- Survey on Non-Governmental Environmental Organizations (IONGA)
- 2019 Agricultural Census

- Other sources:

- Detailed analytical balance sheets of General government entities (including the General State Account)
- Simplified Business Information (SBI)
- National Scientific and Technological Potential Survey (IPCTN)
- Electronic pages of units of economic activity
- Reports and Accounts

The retrospective series from 2014 to 2018 was revised according to new Eurostat guidelines regarding the change of some environmental domains and the integration of electric vehicles (see table A.1 for more detail) as well as the appropriation of new data sources. EGSS data is broken down according to the following nomenclature of environmental activities and products in table A.1.



Table A.1. **Classification of the domains of the environmental goods and services sector**

Classification of environmental goods and services sector domains		
Environmental protection activities		Examples
CEPA 1	Protection of ambient air and climate	Equipment for the reduction of atmospheric emissions and electric vehicles including electric bicycles and electric charging stations.
CEPA 2	Wastewater management	Collection and treatment of wastewater including monitoring and regulation activities.
CEPA 3	Waste management	Collection and treatment of waste, including monitoring and regulation activities. Includes sorting of wastes, composting, street cleaning and the collection of public litter.
CEPA 4	Protection and remediation of soil and water	Monitoring and control of soil and water pollution (surface water, groundwater and marine waters). Organic farming and organic aquaculture.
CEPA 5	Noise and vibration abatement	Reduction of noise in places frequented by the public (swimming pools, discos, etc.), production of car automotive silencers, etc.
CEPA 6	Protection of biodiversity and landscapes	Maintaining or establishing certain landscape types, biotopes, eco-zones, etc. having a clear link to biodiversity preservation.
CEPA 7	Protection against particle radiation	Handling, transportation and treatment of high level radioactive waste that requires shielding during normal handling and transportation.
CEPA 8	Research and development in environmental protection (R&D)	R&D activities oriented towards environmental protection (identification and analysis of sources of pollution, their effects on human beings, the species and the biosphere); R&D for the prevention and elimination of pollution. When separable, all R&D activities even when referring to a specific class have to be classified under CEPA 8.
CEPA 9	Other environmental protection activities	Training or teaching activities specifically oriented towards environmental protection and consulting activities in non-discriminated environmental protection areas.
Resource management activities		Examples
CReMA 10	Management of waters	Minimisation of inland waters intake through the reduction of water losses and leaks or water reuse and savings. Does not include activities of collection, treatment and distribution of water.
CReMA 11	Management of forest resources	
CReMA 11A	Sustainable management of forest areas	Measuring, controlling and monitoring forest areas and timber stocks; education, training and general administration activities linked to the management of forests. Includes protecting against forest fires and preventing and fighting forest fires. Includes biological and mechanical pest control.
CReMA 11B	Minimisation of the intake of timber resources	Reducing the input of forest-related products (wood and non-wood); recovery, reuse or savings of forest products and byproducts. Includes reuse of wood products (pallets) and more efficient wood stoves and furnaces. In the case of Portugal forest products include cork.
CReMA 12	Management of wild flora and fauna <i>(discontinued)</i>	Discontinued and integrated in CEPA 6.
CReMA 13	Management of energy resources	
CReMA 13A	Production of energy from renewable sources	Production of energy from renewable sources (wind, solar, geothermal, hydrothermal and ocean energy, hydropower, biomass, landfill gas, sewage treatment plant gas and biogases). Cogeneration of electricity and heat using renewable fuels.
CReMA 13B	Heat/Energy saving and management	Energy savings, thermal insulation activities and energy recovery, reduction of energy transport and distribution losses, energy efficiency improvements, etc.
CReMA 13C	Minimisation of the intake of fossil resources as raw material	Minimization of fossil resources through changes in the manufacturing process, recovery of materials based on non-energy fossil resources and production of petroleum product substitutes. Includes recycled inkjet and toner cartridges for printers, recovery of textiles (from petrochemical materials) and bio-based sacks and bags, including paper bags.
CReMA 14	Management of minerals	Saving of mineral resources through recovery of mineral-based materials (waste and scrap processing of metallic and non-metallic mineral materials and other articles). Includes demolition waste. Includes textile wastes by convention.
CReMA 15	Research and development (R&D) for resource management	R&D activities for new applications in the field of natural resource management and savings: R&D for renewable energy, for energy and minerals savings, for timber and other biological resources savings, etc.
CReMA 16	Other resource management activities	Education and training activities that relate to natural resources, as well as other kinds of consulting activities that cannot be classified elsewhere. It includes specific software for environmental activities.

Source: based on the Eurostat, Environmental goods and services sector accounts, Practical Guide and Eurostat, CEPA and CReMA - Explanatory notes, December 2020



The main revisions made in this series result from the new Eurostat guidelines, where the following stand out:

- reclassifications of CEPA and CReMA environmental domains, the most significant examples of which cover electricity and heat cogeneration and biofuels (from CReMA 13B to CReMA 13A), environmental R&D (from the environmental domain related to the main activity to CEPA 8 and/ or CReMA 15), activities and products related to forest protection against fires and preventing and fighting forest fires (from CEPA 6 to CReMA 11A), activities related to waste management and their recovery and recycling (greater accuracy between CEPA 3 and CReMAs 11B, 13C, 14 and 16), organic farming and aquaculture (from CEPA 6 to CEPA 4)
- extending the scope of the account to electric vehicles (CEPA 1)
- limitation of the scope of the account with regard to water management (CReMA 10) to the minimization of water abstraction and its efficient use, excluding the capture, treatment and distribution of water
- revision and harmonization of coefficients with a breakdown by several environmental domains, based on information from the ISBSA for the entire series.

A.2 Environmental Protection Expenditure Accounts (EPEA)

EPEA present data on the expenditure incurred by resident units in environmental protection, i.e. the economic resources allocated by resident units to environmental protection. These Accounts make it possible to compile the National Expenditure on Environmental Protection (NEEP). The algorithm provided by the reporting system to Eurostat and used for the calculation of NEEP, is:

$NEEP = \text{final consumption expenditure} + \text{intermediate consumption (CI)} + \text{investment (GFCF + NP)} - \text{current and capital transfers received from the Rest of the World} + \text{current and capital transfers paid to the Rest of the World}$

Like the EGSS, in addition to the National Accounts Regulation and methodological references, the EPEA have other reference methodological documents, namely [Environmental protection expenditure accounts Handbook 2017 edition](#). The list of products and economic activities covered by this project also complies with the provisions of [Environmental goods and services sector accounts - Practical guide](#).

The main **data sources** used in the EPEA are the same as those of the EGSS.

These accounts relate to EGSS, but:

- Restrict the domains of observation to environmental protection (CEPA classification), i.e., they do not cover Resource Management (CReMA classification)
- Focus predominantly on the share of specific environmental products that correspond to **specific environmental protection services**. Environmental protection products, which encompass goods and services, can be categorized by purpose (primary or secondary) to protect the environment. Products whose primary purpose is environmental protection are designated in the methodological manual by



Specific Products EP. The portion of the specific EP products corresponding to services are the environmental protection services or, abbreviating, **EP services**

- Do not detail activities by NACE
- Extend the number of estimated variables
- Detail most of the variables by institutional sector.

Revisions

Although EGSS and EPEA are already covered by a European regulation, these projects are still in the methodological development phase within the scope of the European Statistical System, namely on the boundaries of the environmental domains and the classification of included products.

The series available is based on the 2016 benchmark year of the Portuguese National Accounts and incorporates the revisions of the classifications of environmental activities mentioned above.

Table A.2. EGSS revisions

Variable	Compilation	Units	2014	2015	2016	2017	2018
Output	2022 Edition	10 ⁶ Euros	11 030,4	11 287,2	11 939,3	12 550,5	13 347,2
	2021 Edition		10 930,3	11 495,0	12 474,1	13 147,4	13 045,3
	Rate of variation	%	0,9%	-1,8%	-4,3%	-4,5%	2,3%
GVA	2022 Edition	10 ⁶ Euros	4 076,3	4 105,1	4 338,7	4 546,8	4 716,7
	2021 Edition		4 148,7	4 376,8	4 825,8	4 804,3	4 675,8
	Rate of variation	%	-1,7%	-6,2%	-10,1%	-5,4%	0,9%
Exports	2022 Edition	10 ⁶ Euros	2 348,8	2 646,7	2 969,6	3 127,4	3 393,0
	2021 Edition		2 151,4	2 432,9	2 588,8	3 106,8	3 365,5
	Rate of variation	%	9,2%	8,8%	14,7%	0,7%	0,8%
Employment	2022 Edition	FTE	90 336,0	95 689,3	99 585,7	105 685,0	108 999,2
	2021 Edition		91 811,7	99 563,7	105 462,9	109 354,0	103 399,4
	Rate of variation	%	-1,6%	-3,9%	-5,6%	-3,4%	5,4%

The EPEA methodology has undergone an additional change. Since EPEA focus on environmental protection services, the set of current and capital transfers with the Rest of the World (ROW) received and paid should also be restricted to environmental protection services and not focused on goods. In previous editions, a set of transfers aimed at fostering production and investment in goods classified under environmental protection was accounted for. This was the case with support for agricultural production through sustainable practices, such as agri-environmental measures and greening, which focused on CEPA 4 and CEPA 6 (where organic farming was classified, which in the current version has moved to CEPA 4). The amounts allocated to the various institutional sectors for the acquisition of electric vehicles (CEPA 1) were also accounted for. These transfers, related to the production of goods, were excluded this year,



substantially reducing the value of the transfers received from the RoW recorded (in the opposite direction there were no changes), being the main cause for the upward revision of NEEP.

Table A.3. EPEA revisions

Variable	Compilation	Unit	2014	2015	2016	2017	2018
National expenditure on EP (NEEP)	2022 Edition	10 ⁶ Euro	2.708,2	2.828,6	2.777,3	3.076,6	3.270,6
	2021 Edition		2.482,0	2.442,3	2.289,4	2.721,1	2.935,7
	Rate of Variation	%	9,1	15,8	21,3	13,1	11,4
Final consumption expenditure of EP services	2022 Edition	10 ⁶ Euro	782,0	790,5	792,3	949,7	922,1
	2021 Edition		857,2	860,6	958,4	1.058,3	1.086,8
	Rate of Variation	%	-8,8	-8,1	-17,3	-10,3	-15,2
Intermediate consumption (IC) of EP services ¹	2022 Edition	10 ⁶ Euro	1.478,5	1.472,8	1.567,5	1.589,6	1.745,6
	2021 Edition		1.179,7	1.211,5	1.331,7	1.371,9	1.546,9
	Rate of Variation	%	25,3	21,6	17,7	15,9	12,8
Investment (GFCF+NP) for the production of EP services	2022 Edition	10 ⁶ Euro	456,8	577,1	432,4	543,0	614,6
	2021 Edition		610,0	684,4	511,3	578,2	637,4
	Rate of Variation	%	-25,1	-15,7	-15,4	-6,1	-3,6
Current ² and capital transfers for EP services received from the Rest of the world (RoW)	2022 Edition	10 ⁶ Euro	12,6	16,2	16,5	11,8	14,6
	2021 Edition		169,6	318,2	513,8	293,3	338,2
	Rate of Variation	%	-92,5	-94,9	-96,8	-96,0	-95,7
Current and capital of transfers for EP services paid to the Rest of the world (RoW)	2022 Edition	10 ⁶ Euro	3,6	4,3	1,7	6,1	2,9
	2021 Edition		4,8	3,9	1,8	6,1	2,9
	Rate of Variation	%	-24,3	9,9	-6,3	0,0	0,0

1 - excluding the IC of EP services by specialized producers in environmental protection

2 - including subsidies

ACCOUNTS AND NAMES

CEPA: Classification of environmental protection activities

CRema: Classification of resource management activities

EGSS: Environmental goods and services sector accounts

EPEA: Environmental Protection Expenditure Accounts

EP: Environmental protection

FC: Final consumption expenditure

GDP: Gross domestic product

GFCF: Gross fixed capital formation

IC: Intermediate consumption



INSTITUTO NACIONAL DE ESTATÍSTICA
STATISTICS PORTUGAL

press release



DIÍSTAQUE

NEEP: National expenditure on environmental protection

NPISH: Non-profit institutions serving households

Statistics Portugal: National Institute of Statistics

NP: Acquisitions less disposals of non-produced assets

RoW: Rest of the world

SNA: System of National Accounts