



4 April 2023
ENVIRONMENTAL PROTECTION EXPENDITURE ACCOUNTS
2020

IN 2020, NATIONAL EXPENDITURE ON ENVIRONMENTAL PROTECTION INCREASED BY 2.2%, DESPITE THE CONTRACTION OF GDP (-6.5%)

In 2020, in contrast with the behaviour of economic activity in Portugal in which GDP decreases significantly in the context of the COVID-19 pandemic, National expenditure on environmental protection (NEEP) increased 2.2%, as a result of positive variations in Final Consumption expenditure (+11.7%) and Investment (+10.2%), and a negative variation in Intermediate Consumption (-6.3%).

Corporations were responsible for more than half of the NEEP (53.3%), with General government and Non-profit institutions serving households accounting for 25.8% and Households for the remaining 20.9%. The environmental domain that contributed most to the NEEP was *Waste management* (40.3%), followed by *Wastewater management* (32.4%).

Employment engaged in the production of environmental protection services accounted for 1.0% of national employment. It recorded an increase (+8.3%), as opposed to the decrease recorded in the economy (-2.2%).

In 2019, the last year with available information for the EU, the share of NEEP in GDP (1.7%) was below the EU27 average (2.0%).

This press release summarizes the main results of the Environmental protection expenditure accounts (EPEA) for the period 2014 to 2020.

Until 2022, the EPEA results were disclosed together with the Accounts of the environmental goods and services sector (EGSS). After a long period of development, it was deemed appropriate to release a specific highlight for this Account, which complements the information released in January on the EGSS.

Additional tables are available in the INE portal, in the National Accounts disclosure area ([Satellite Accounts section](#)).

Environmental protection expenditure accounts (EPEA), as the name indicates, cover only **environmental protection** (not covering resource management – see methodological notes) and focus on **specific environmental protection services** (EP services).



National environmental protection expenditure (NEEP) is the main variable in these Accounts, measuring the economic resources allocated to environmental protection, by resident units, in a given period. It is obtained through the formula:

$$\begin{aligned} \text{NEEP} = & \text{Final consumption expenditure (FC)} \\ & + \text{intermediate consumption (IC)}^1 \\ & + \text{investment}^2 \text{ for the production of EP services} \\ & - \text{current and capital transfers}^3 \text{ received from Rest of the world (RoW)} \\ & + \text{current and capital transfers paid to Rest of the world.} \end{aligned}$$

In 2020, National expenditure on environmental protection increased, contrary to GDP

In 2020, in contrast with the behaviour of economic activity in Portugal, where GDP fell significantly in the context of the COVID-19 pandemic, the NEEP increased by 2.2%, reaching 3 334.4 M€ (1.7% of GDP), resulting essentially from the combination of positive variations in Final Consumption expenditure (FC) of EP services (+11.7%) and in Investment for the production of EP services (+10.2%), and a negative variation in Intermediate Consumption (IC) of EP services (-6.3%).

Between 2014 and 2020 NEEP grew 27.4% in nominal terms, exceeding the nominal GDP variation in the period, which was 15.9%. Investment for the production of EP services was the main driver of this evolution (+60.0%), recording a more significant growth than that observed in the national economy (+48.0%). In 2020, investment for the production of EP services grew by 10.2%, with the total having decreased by 0.8%.

Consumption (final and intermediate) in EP services showed a similar trend to that of consumption in the national economy, diverging in 2020. In that year this aggregate practically stabilised compared to the previous year (+0.1%), while there was a decrease in the economy as a whole (-6.8%).

¹ Intermediate consumption (IC) excluding IC for environmental protection services by producers engaged in the production of environmental protection services as their main or secondary activity.

² Gross fixed capital formation (GFCF) + acquisitions less disposals of non-produced assets (NP).

³ Transfers include subsidies.



Table 1. Main results of Environmental protection expenditure accounts (2014 – 2020)

		2014	2015	2016	2017	2018	2019	2020	Rate of Variation 19/20	Rate of Variation 14/20
National expenditure on EP (NEEP)		2,616.4	2,729.5	2,688.7	2,968.8	3,147.0	3,263.6	3,334.4	2.2	27.4
Final consumption expenditure										
Final consumption of EP services	10 ⁶	782.0	790.5	792.3	949.7	922.1	932.9	1,041.6	11.7	33.2
National economy	euro	146,288.8	149,890.4	154,824.0	160,214.1	166,705.6	173,762.0	166,485.4	-4.2	13.8
Weight in the economy		0.5%	0.5%	0.5%	0.6%	0.6%	0.5%	0.6%		
Intermediate consumption (IC)										
CI de serviços PA**	10 ⁶	1,386.7	1,373.8	1,475.8	1,482.4	1,625.8	1,683.4	1,577.7	-6.3	13.8
National economy	euro	158,694.8	161,315.5	162,830.1	178,151.0	189,268.5	195,870.3	177,936.5	-9.2	12.1
Weight in the economy		0.9%	0.9%	0.9%	0.8%	0.9%	0.9%	0.9%		
Investment (GFCF+NP)										
Investment for the production of EP services	10 ⁶	456.8	577.1	432.4	543.0	614.6	663.1	730.7	10.2	60.0
National economy	euro	26,012.7	27,886.5	28,893.4	32,887.7	35,953.4	38,815.2	38,509.8	-0.8	48.0
Weight in the economy		1.8%	2.1%	1.5%	1.7%	1.7%	1.7%	1.9%		
Current and capital transfers received from RoW**										
To EP services	10 ⁶	12.6	16.2	13.5	12.0	17.6	17.1	17.5	2.7	38.8
National economy	euro	10,232.4	10,162.1	18,990.0	9,635.2	10,260.9	10,497.0	10,906.0	3.9	6.6
Weight in the economy		0.1%	0.2%	0.1%	0.1%	0.2%	0.2%	0.2%		
Current and capital transfers paid to RoW										
To EP services	10 ⁶	3.6	4.3	1.7	5.6	2.1	1.3	1.9	48.1	-47.2
National economy	euro	3,874.5	3,608.3	3,630.2	3,232.2	3,738.0	3,836.3	4,083.6	6.4	5.4
Weight in the economy		0.1%	0.1%	0.1%	0.2%	0.1%	0.0%	0.1%		
Employment										
To EP services		x	x	x	42,047	43,600	44,554	48,254	8.3	14,8*
National economy	FTE	4,246,752	4,327,565	4,426,856	4,579,158	4,720,439	4,807,467	4,701,371	-2.2	2.7
Weight in the economy		x	x	x	0.9%	0.9%	0.9%	1.0%		
GDP		173,054	179,713	186,490	195,947	205,184	214,375	200,519	-6.5	15.9
Weight of NEEP in GDP		1.5%	1.5%	1.4%	1.5%	1.5%	1.5%	1.7%		

* In the case of employment, it corresponds to the rate of variation between 2017 and 2020.

** Excluding intermediate consumption of EP services by specialist and secondary producers.

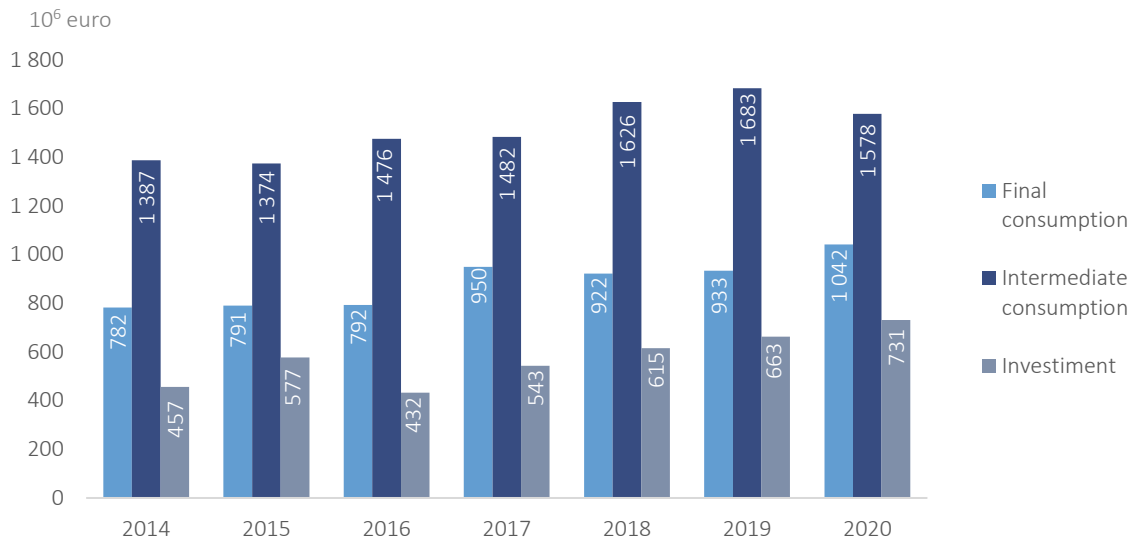
*** Current and capital transfers received from Rest of World, including subsidies.

x - Not available.

Source: Statistics Portugal (Environmental protection expenditure accounts)



Chart 1. Evolution of the main components of National expenditure on environmental protection (2014 - 2020)



Source: Statistics Portugal (Environmental protection expenditure accounts)

In 2019, NEEP *per capita* in Portugal was almost half of the EU27 average

In 2019, the weight of NEEP in GDP (1.7%) in Portugal was below the EU27 average (2.0%). Austria was the leading country in this indicator, with 3.5%.

In 2019, the last year with available information for the EU27, Portugal occupied the twentieth position regarding NEEP *per capita*, with 317.3 €/inhabitant, almost half the EU27 average (629.9 €). Only eight Member States were above the EU27 average, with Austria in first place with 1,562.9 €, around 2.5 times the EU27 average.



Chart 2. Weight (%) of NEEP, in EU27 (2019)

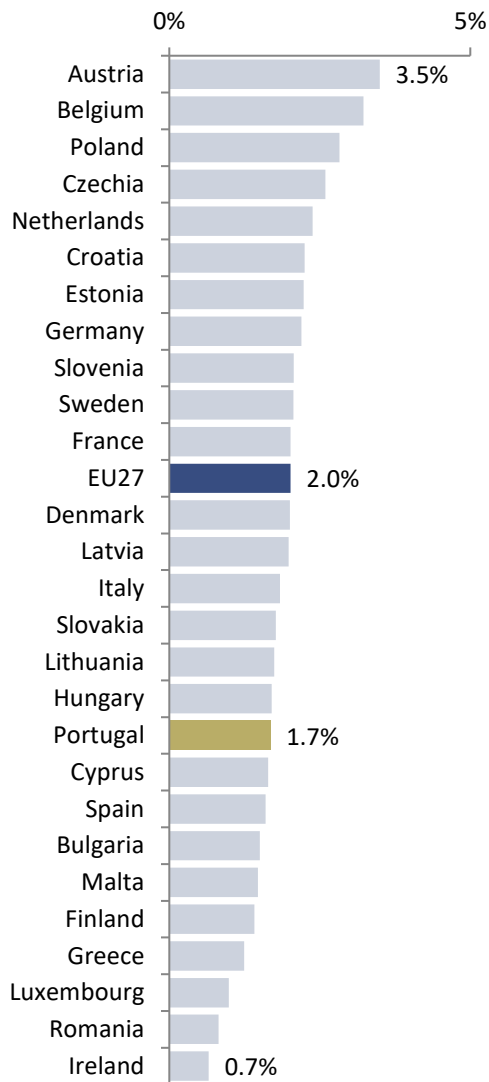
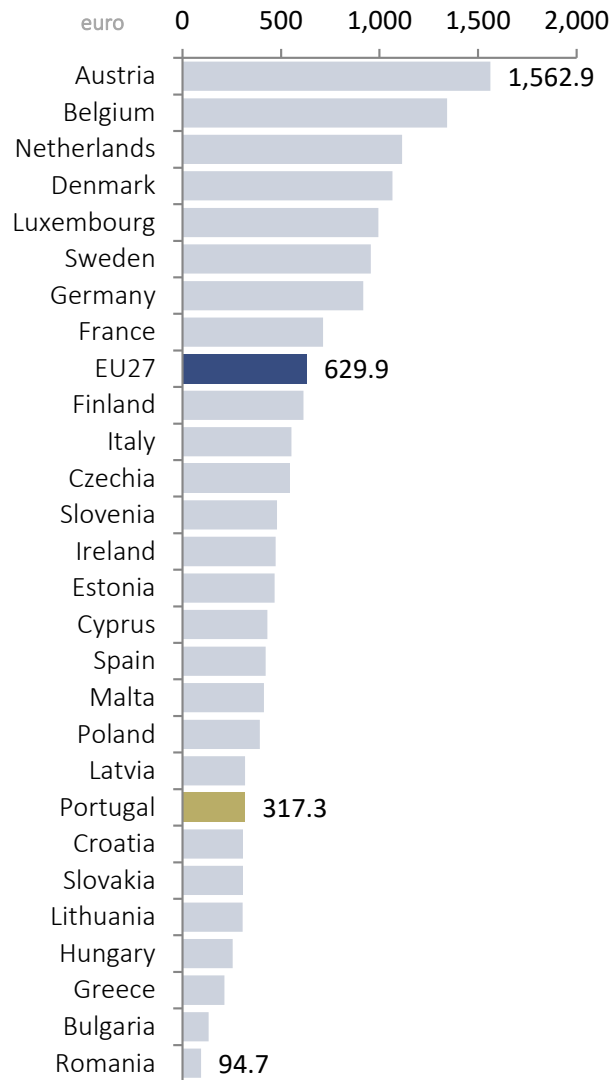


Chart 3. NEEP per capita, in EU27 (2019)



Source: Eurostat (NEEP 22 February 2023; Population: 8 March 2023; GVA: 27 March 2023) and Statistics Portugal (Environmental protection expenditure accounts)



METHODOLOGICAL NOTES:

The Environmental Protection Expenditure Accounts (EPEA) are part of the System of European Environmental Economic Accounts (SEEEA) and constitute a mandatory transmission module, since 2017, 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, as amended by Regulation (EU) No 538/2014 and Commission Delegated Regulation (EU) 2022/125 of 19 November 2021.

The Environmental Accounts were developed in interconnection with the System of National Accounts (SNA). They constitute a system of Satellite Accounts that present environmental information in a format compatible with National Accounts information, enabling an integrated analysis.

Despite being subject to regulation, EPEA still have some experimental characteristics, and the questionnaire that supports them has undergone consecutive changes by Eurostat. The growing interest and economic relevance of the environment area has led to some changes in these Accounts, in order to contribute to a better response to the needs. EPEA cover only the Environmental Protection domains (CEPA classification), and basically focus on environmental protection services (EP Services). Given the scope of the variables compiled, Eurostat plans to extend these accounts to the Resource Management domain (CReMA classification) and to focus not only on services but also on goods, as in the case of the Environmental Goods and Services Sector Accounts (EGSS).

EP services covered by the CEPA classification refer to activities and actions with the main objective of preventing, reducing and eliminating pollution or other degradation of the environment.

Table A1. Classification of environmental protection domains (CEPA)

Classification of environmental protection domains (CEPA)		
Environmental protection activities		Examples
CEPA 1	Protection of ambient air and climate	Treatment of exhaust gases and ventilation air; measurement services of exhaust gases from vehicles and heating systems; the monitoring related to the ozone layer, greenhouse gases and climate change.
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).
CEPA 5	Noise and vibration abatement	Activities and measures aimed at monitoring the level of noise and vibration such as installation and operation of stationary measurement and monitoring sites or mobile equipment in urban areas, observation networks, etc.
CEPA 6	Protection of biodiversity and landscapes	Monitoring, analysis and inspection activities for protection of natural and semi-natural landscapes. Censuses, inventories, databases of flora and fauna are included.
CEPA 7	Protection against particle radiation	Activities aimed at monitoring ambient radioactivity and radioactivity due to high level radioactive waste by means of specific equipment, instruments and installations.
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.



EPEA allows to compile the National Expenditure on Environmental Protection (NEEP). The algorithm, provided by the reporting system to Eurostat and used to calculate NEEP, is:

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

This formula presents NEEP from the perspective of Demand.

From the Supply perspective, Output of EP services at market prices (from which intermediate consumption of EP services by producers engaged in Production of EP services as their main activity or in secondary activities is excluded), Imports (with a positive sign) and Exports (with a negative sign) of EP services contribute to NEEP, Imports (with a positive sign) and Exports (with a negative sign) of EP services, and, similarly to the formula presented in the Demand perspective, *Investment* (GFCF+NP) for the production of EP services and the balance of Current and capital transfers paid and received from the Rest of the world are added.

Total intermediate consumption in environmental protection services is obtained through the balance between Supply and Demand of EP services, where total Production is the main share.

In addition to the regulations and methodological references of the National Accounts, EPEA have as main methodological reference documents the Eurostat manuals:

[*Environmental protection expenditure accounts Handbook 2017 edition*](#)

[*Classification of Environmental Protection Activities and Expenditure \(CEPA\) and Classification of Resource Management Activities \(CReMA\) - Explanatory notes, December 2020*](#)

Additionally, and since EPEA is a project consistent with the SNA, it is essential to use the concepts and nomenclatures of the latter, and to observe its methodological references, namely the United Nations System of National Accounts (SNA 2008) and the European System of Accounts (ESA 2010).

MAIN SOURCES:

- Statistics Portugal:
 - o Portuguese National Accounts (Base 2016)



- o General File of Statistical Units (FGUE)
 - o Farm Structure Survey (FSS)
 - o Environmental Goods and Services Sector Survey (ISBSA)
 - o Municipal Environmental Protection Survey (IMPA)
 - o Business Survey on Management and Protection of the Environment (IEGPA)
 - o Survey of Fire Brigade Entities (IEDCB)
 - o Survey on Urban Waste Management Entities (IEGRU)
 - o Survey on Non-Governmental Environmental Organizations (IONGA)
 - o 2019 Agricultural Census
- Other sources:
 - o Detailed analytical balance sheets of General government entities (including the General State Account)
 - o Simplified Business Information (SBI)
 - o National Scientific and Technological Potential Survey (IPCTN)
 - o Electronic pages of units of economic activity
 - o Reports and Accounts

These Accounts are related to the Environmental Goods and Services Sector Accounts (EGSS), but:

- They restrict the domains of observation to environmental protection (CEPA classification), i.e. they do not cover resource management (CReMA classification);
- They focus predominantly on the portion of specific environmental products that correspond to **specific environmental protection services**. In effect, environmental protection products, which encompass goods and services, can be categorized according to the purpose (primary or secondary) to protect the environment. Products whose primary purpose is to protect the environment are called Specific environmental protection products. The portion of specific environmental protection products corresponding to services are specific environmental protection services or, for simplification, **EP services**;



- In general, they do not provide detailed information by industry (only at the ancillary production level they provide this detail);
- They enlarge the number of estimated variables;
- Most of the variables are broken down by institutional sector.

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 not yet total harmonization in the type of environmental goods and services and units considered in the perimeter of EPEA.

REVISIONS:

As already mentioned, although EPEA are under a regulation, they are still under methodological development within the European Statistical System, namely on the variables and domains to be reported on a voluntary and mandatory basis, as well as the identification of the boundaries of the environmental domains and the classification of products.

The series now made available has the National Accounts benchmark year 2016 as reference and incorporates the latest Eurostat guidelines. The Eurostat questionnaire has undergone successive changes, namely at the level of the variables with mandatory character, the number of tables compiled and the calculation algorithm itself of one of the main variables of NEEP (Intermediate Consumption of EP services in total economy). In the 2022 reporting, and following the publication of Delegated Regulation (EU) 2022/125 mentioned above, this fraction of Intermediate Consumption of EP services became a compulsory variable and is now used directly in the calculation of NEEP, resulting in a downwards revision in Intermediate Consumption and, consequently, in the Expenditure series from 2014 to 2019.



Table A2. EPEA Revisions (2014 – 2019)

Variable	Compilation	Unit	2014	2015	2016	2017	2018	2019
National expenditure on EP (NEEP)	2022 Edition	10 ⁶ Euro	2,616.4	2,729.5	2,688.7	2,968.8	3,147.0	3,263.6
	2021 Edition		2,708.2	2,828.6	2,777.3	3,076.6	3,270.6	3,448.4
	Rate of Variation	%	-3.4	-3.5	-3.2	-3.5	-3.8	-5.4
Final consumption expenditure of EP services	2022 Edition	10 ⁶ Euro	782.0	790.5	792.3	949.7	922.1	932.9
	2021 Edition		782.0	790.5	792.3	949.7	922.1	950.3
	Rate of Variation	%	0.0	0.0	0.0	0.0	0.0	-1.8
Intermediate consumption (IC) of EP services ¹	2022 Edition	10 ⁶ Euro	1,386.7	1,373.8	1,475.8	1,482.4	1,625.8	1,683.4
	2021 Edition		1,478.5	1,472.8	1,567.5	1,589.6	1,745.6	1,837.7
	Rate of Variation	%	-6.2	-6.7	-5.8	-6.7	-6.9	-8.4
Investment (GFCF+NP) for the production of EP services	2022 Edition	10 ⁶ Euro	456.8	577.1	432.4	543.0	614.6	663.1
	2021 Edition		456.8	577.1	432.4	543.0	614.6	663.1
	Rate of Variation	%	0.0	0.0	0.0	0.0	0.0	0.0
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	13.5	12.0	17.6	17.1
	2021 Edition		12.6	16.2	16.5	11.8	14.6	2.8
	Rate of Variation	%	0.0	0.0	-18.0	1.8	20.8	512.2
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	5.6	2.1	1.3
	2021 Edition		3.6	4.3	1.7	6.1	2.9	0.2
	Rate of Variation	%	0.0	0.0	1.2	-7.4	-28.6	616.7

1 - Excluding the Intermediate consumption of EP services for production of EP services by specialist and secondary producers.

2 - Including subsidies