4 February 2025
ENVIRONMENTAL ACCOUNTS
2020 - 2022

IN 2022, THE GVA OF THE ENVIRONMENTAL GOODS AND SERVICES SECTOR REPRESENTED 3.9% OF THE GVA OF THE PORTUGUESE ECONOMY. MANAGEMENT OF ENERGY RESOURCES ACCOUNTED FOR 52.4% OF THE SECTOR'S GVA

In 2022, the environmental goods and services sector represented 5.6% of output, 3.9% of GVA, 4.3% of exports and 4.0% of employment in the Portuguese economy.

Management of energy resources accounted for more than half (52.4%) of this sector's GVA, namely heat and energy saving and management, which now includes the construction and refurbishment of nearly zero energy buildings (NZEB).

In 2021, the last year with available information for the EU, Portugal remained in fifth place among the member states with the highest share of exports of environmental goods and services in the national total (4.9 %).

This press release summarises the main results of the Environmental Goods and Services Sector Accounts (EGSS) for the years 2020 to 2022.

It is important to note that in this edition the compilation of the EGSS underwent some methodological changes as a result of the regular discussions held at European level concerning Environmental Satellite Accounts. Among the methodological changes made, the following stand out: 1) accounting for the construction and refurbishment of nearly zero energy buildings (NZEB) in the class of heat and energy saving and management; and 2) updating the list of environmental activities and products. In addition, this EGSS edition also includes changes resulting from the implementation of the National Accounts 2021 benchmark year.

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

ine.pt | Communication Unit - tel: + 351 21 842 61 10 | sci@ine.pt

In 2022, the environmental goods and services sector accounted for 5.6% of output, 3.9% of GVA, 4.3% of exports and 4.0% of employment in the Portuguese economy

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

		2020	2021	2022	Rate of change (%) 20/21	21/22
Output						
Environmental Goods and Services	10^6 euro	**13,972**	**20,052**	**26,742**	**43.5**	**33.4**
excluding NZEB [1]		*13,972*	*17,720*	*21,616*	*26.8*	*22.0*
Economy		352,871	395,952	473,336	12.2	19.5
Weight in the economy		**4.0%**	**5.1%**	**5.6%**		
excluding NZEB		*4.0%*	*4.5%*	*4.6%*		
GVA						
Environmental Goods and Services	10^6 euro	**5,003**	**6,622**	**8,187**	**32.4**	**23.6**
excluding NZEB		*5,003*	*5,935*	*6,648*	*18.6*	*12.0*
Economy		175,104	187,361	211,028	7.0	12.6
Weight in the economy		**2.9%**	**3.5%**	**3.9%**		
excluding NZEB		*2.9%*	*3.2%*	*3.2%*		
Exports						
Environmental Goods and Services	10^6 euro	**3,400**	**4,436**	**5,246**	**30.5**	**18.3**
Economy		74,897	89,950	120,714	20.1	34.2
Weight in the economy		**4.5%**	**4.9%**	**4.3%**		
Employment						
Environmental Goods and Services	FTE	**116,120**	**166,656**	**202,569**	**43.5**	**21.5**
excluding NZEB		*116,120*	*135,227*	*141,200*	*16.5*	*4.4*
Economy		4,663,482	4,779,270	5,052,060	2.5	5.7
Weight in the economy		**2.5%**	**3.5%**	**4.0%**		
excluding NZEB		*2.5%*	*2.8%*	*2.8%*		

[1] Nearly Zero Energy Buildings (NZEB)

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

It is worth mentioning that the information on NZEB is not comparable for the presented period, so the main macroeconomic aggregates are presented including and excluding NZEB. In fact, European guidelines oblige the construction of new buildings to comply with NZEB legislative standards only from the beginning of 2021. In addition, national data sources are limited in 2021, covering only the second half of the year, and are only

complete in 2022. Therefore, for the purposes of analysing the sector's behaviour in the three-year period 2020-2022, NZEB was not taken into account.

Box: **Nearly Zero Energy Buildings (NZEB)**

According to Regulation (EU) 2015/2174, 'Low-energy consumption and passive buildings, and energetic refurbishment of existing buildings' are considered environmental goods and services, and it is necessary to account for their output for the purposes of compiling the Environmental Goods and Services Sector Accounts.

It was therefore necessary to assess the feasibility of accounting for the following environmental goods and services: i) energy refurbishment of existing buildings and ii) construction of new passive and low-energy consumption buildings (considered energy-efficient buildings).

The buildings considered relevant in this context are those classified as 'nearly zero energy buildings (NZEB)' in the national labelling systems following Directive 2010/31/EU (note that the terminology used in Regulation (EU) 2015/2174 - Low energy consumption and passive buildings and in Directive 2010/31/EU - Nearly zero energy buildings (NZEB) is different but refers to the same type of buildings).

Based on the legislation in force (Directive 2010/31/EU) and its transposition into national law through Decree-Law no. 118/2013, from the beginning of 2021 all new buildings constructed must be energy efficient and therefore belong to the NZEB category.

In the case of Portugal and given that the NZEB label continues to be the highest standard for buildings in terms of energy certification, the information to be reported under the EGSS should be that relating to NZEBs.

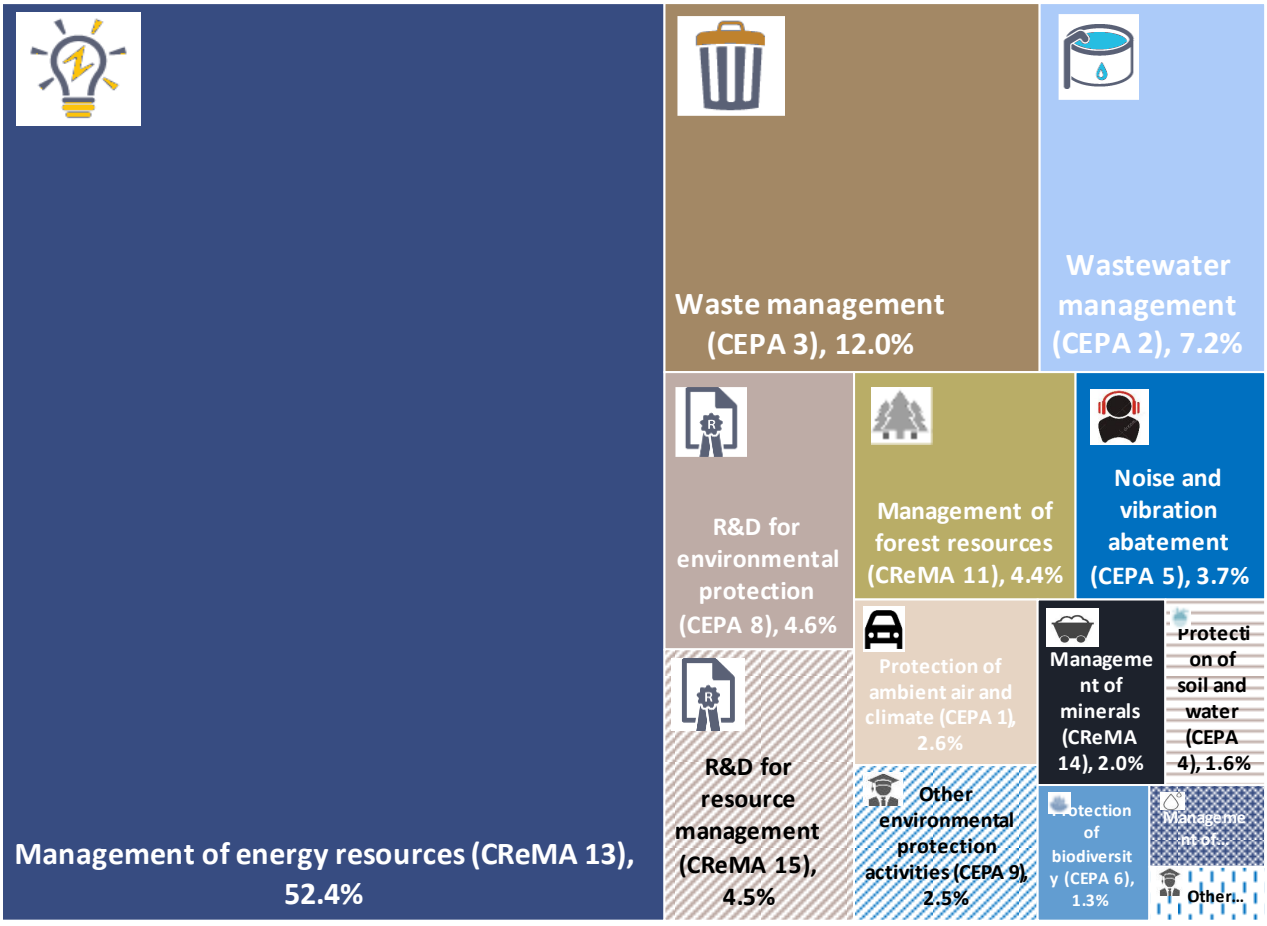
The values considered for this purpose within the scope of the Environmental Goods and Services Sector Accounts therefore correspond to: i) the estimate of the share of NZEB buildings (based on the energy certification made available by the Portuguese Energy Agency (ADENE) to Statistics Portugal, as of 1 July 2021) applied to the overall values calculated within the scope of the National Accounts; ii) for the component of energy-efficiency related costs, due to the unavailability of data sources, Eurostat's recommendation of considering 20% of the construction costs in NZEBs was followed.

In 2022, the *management of energy resources* was the most relevant area

Management of energy resources contributed more than half of the sector's output (57.9%), GVA (52.4%), exports (54.4%) and employment (52.3%).

Waste management (12.0%) and *wastewater management* (7.2%) also outstand to this sector's GVA.

Figure 1. GVA by environmental area (2022)



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

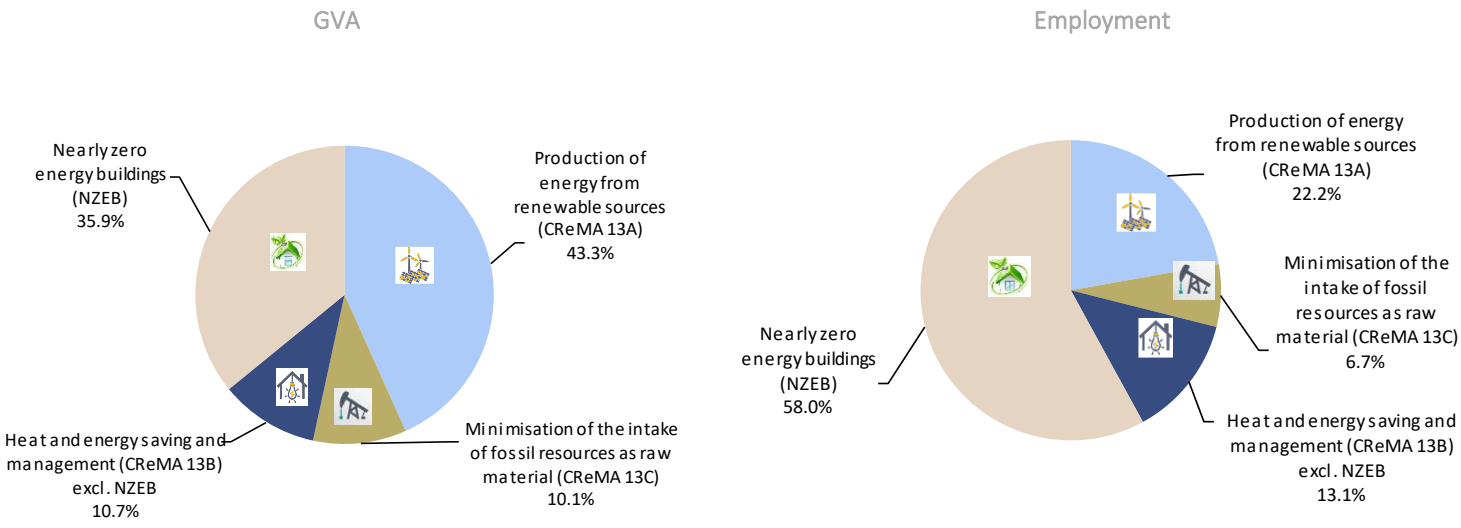
In the *management of energy resources*, the GVA and employment contributions of the classes *heat and energy saving and management* and *production of energy from renewable sources* stand out

The area of *management of energy resources* is made up of the classes *production of energy from renewable sources*, *heat and energy saving and management*, and *minimising the intake of fossil resources as raw materials*.

As mentioned above, the EGSS now includes accounting for the construction and refurbishment of nearly zero energy buildings (NZEB) in the *heat and energy saving and management* area.

This methodological change led to an increase in the weight of *heat and energy saving and management*, which stood at 24.4% of GVA and 37.1% of employment. This was followed by the *production of energy from renewable sources*, which includes equipment for the generation of renewable energy (22.7% of GVA and 11.6% of employment).

Figure 2. **Breakdown of GVA and employment of management** of energy resources by environmental classes (2022)



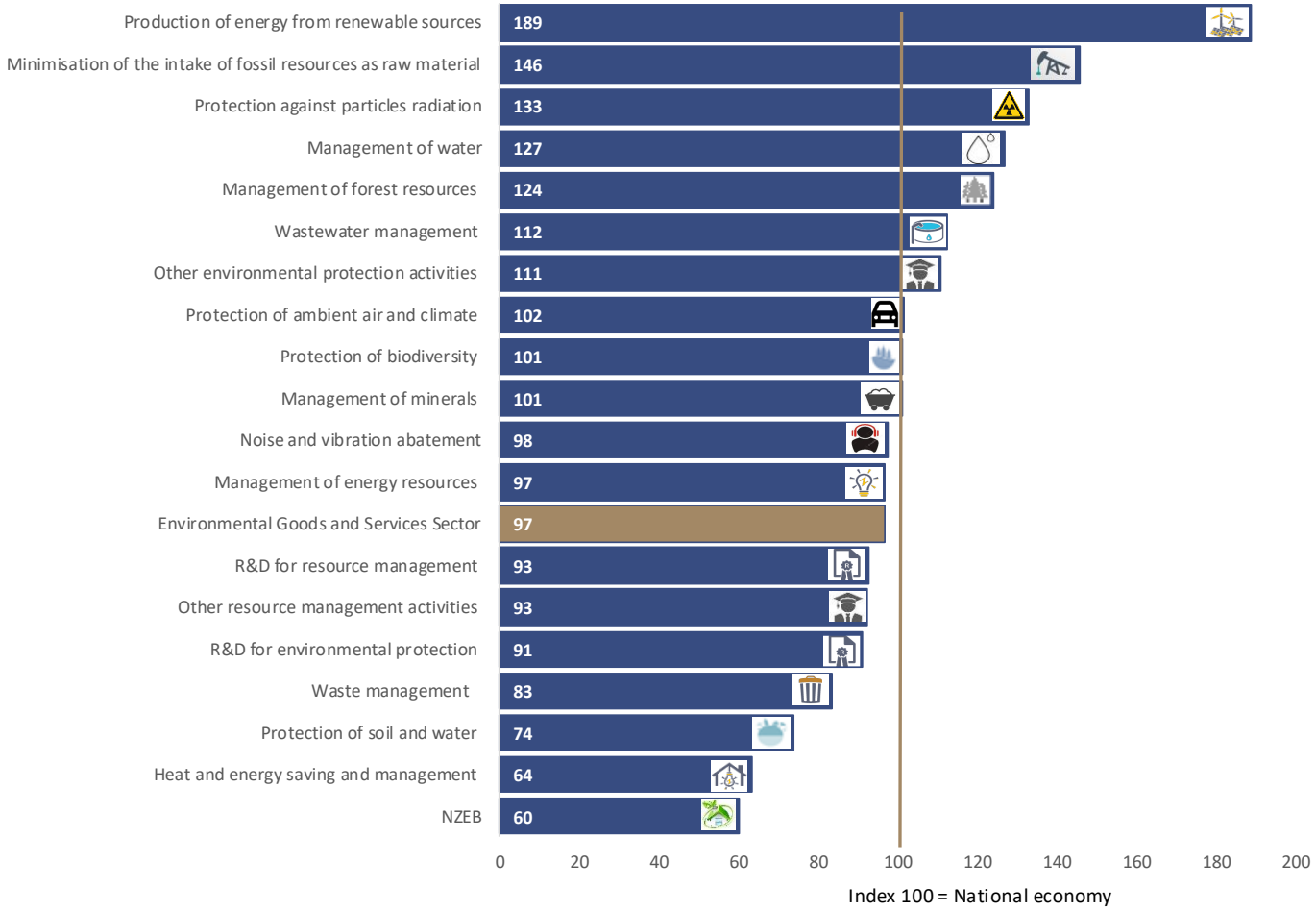
Source: Statistics Portugal (Environmental Goods and Services Sector Accounts)

Analysing the ratio between GVA and employment, it can be observed that in 2022 the environmental goods and services sector was 3.0% lower than the national economy. This was strongly influenced by the inclusion of the construction and refurbishment of NZEBs in the area of *heat and energy saving and management*. As a labour-intensive area, it contrasts with other capital-intensive areas of this sector, where the labour factor is less important.

The areas and classes with a ratio above the national average are the *production of energy from renewable sources* (89% above average), *minimising of the intake of fossil resources as raw materials* (+46%), *protection against particles radiation* (+33%), *management of water* (+27%) and *management of forest resources* (+24%).

Figure 3. GVA / employment, by environmental area (2022)

(national economy = 100)

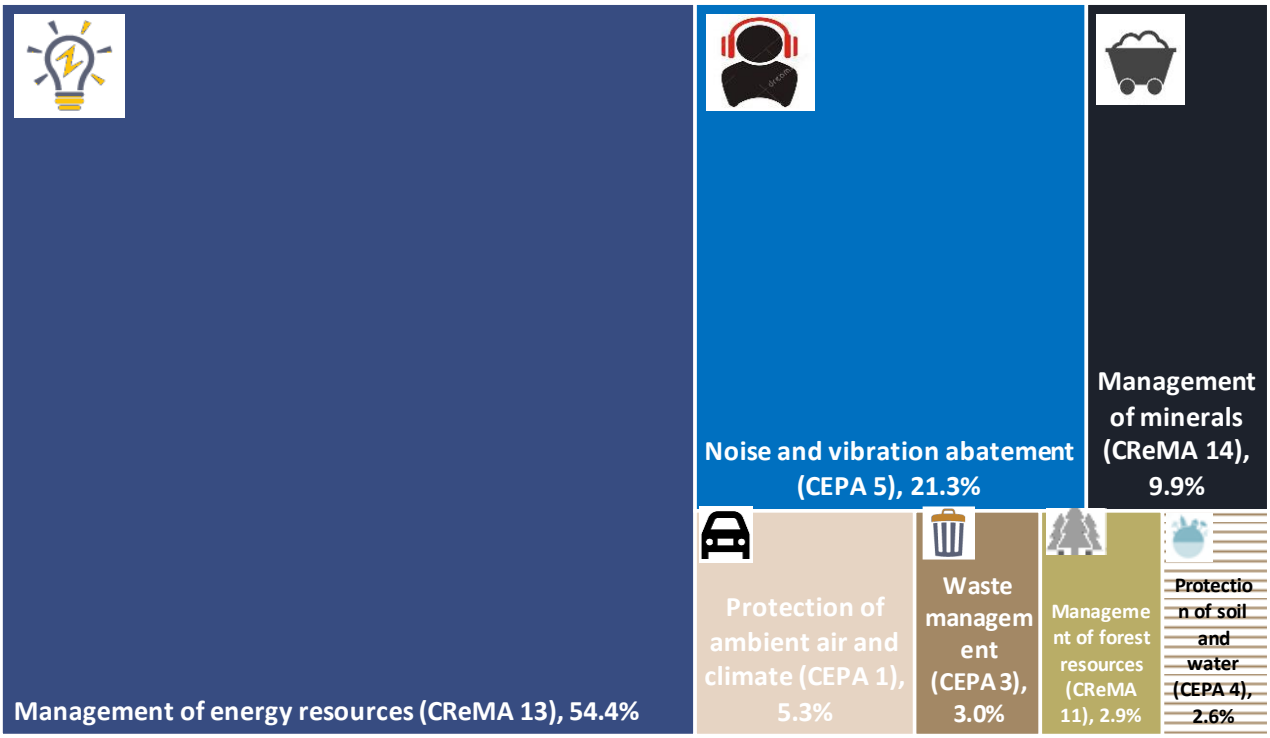


Source: Statistics Portugal (Environmental Goods and Services Sector Accounts)

In 2022, *management of energy resource* accounted for more than half of exports in the environmental goods and services sector

The *management of energy resources* accounted for 54.4% of exports in the environmental goods and services sector, particularly exports of solar energy production equipment (photovoltaic panels and other components) and wind energy (such as wind energy generator sets and other components). This was followed by noise and vibration abatement (21.3%), mainly due to car silencers and noise insulation material.

Figure 4. Exports of environmental goods and services by environmental area (2022)



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

Between 2020 and 2022, output and GVA in the environmental goods and services sector were more dynamic than the economy as a whole

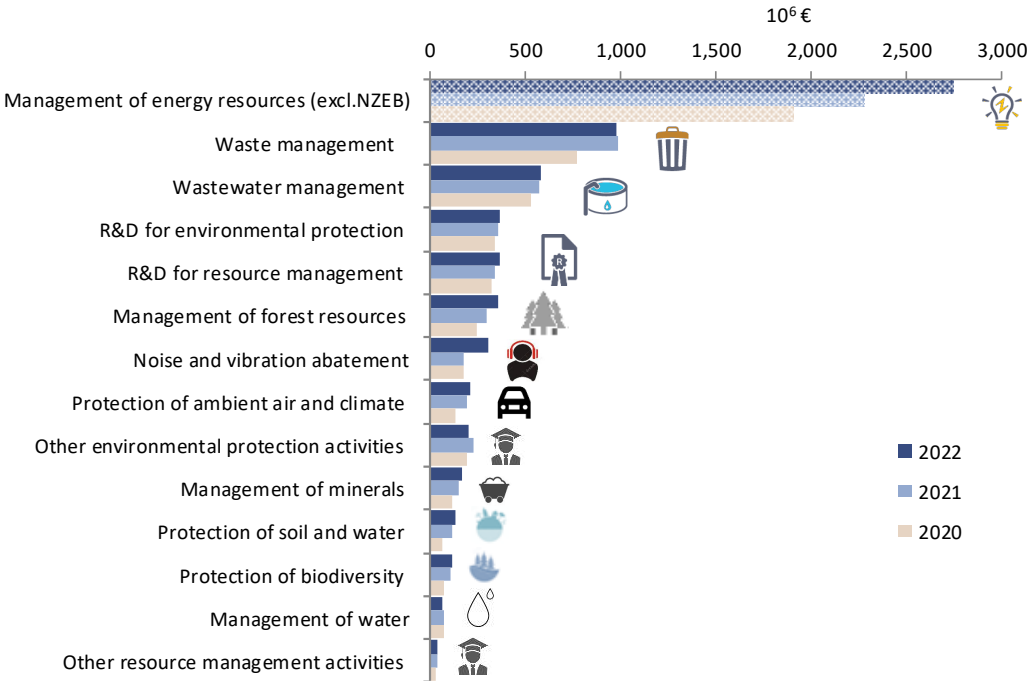
Excluding NZEB, the environmental goods and services sector recorded strong increases in output (variations of 26.8% and 22.0% respectively), GVA (18.6% and 12.0%), exports (30.5% and 18.3%) and employment (16.5% and 4.4%) in 2021 and 2022, after a year of contraction marked by the adverse effects of the COVID-19 pandemic. Output and GVA grew above the national economy (variations in output of 19.5% and 12.2% and in GVA of 12.6% and 7.0%, in 2021 and 2022 respectively). These increases were mainly driven by the area with the greatest relative importance (*management of energy resources*), with growing demand due, among other factors, to environmental policies, particularly those related to the energy transition.

In 2022, the sector was less dynamic than the economy as a whole, in terms of exports (variations of 18.3% vs. 34.2%) and employment (4.4% vs. 5.7%).

In 2022, there was an increase in GVA in most environmental areas

In 2022, most environmental areas recorded an increase in GVA, with *management of energy resource* (20.3%) standing out, driven by the growth in the production of solar and wind energy equipment, *wastewater management* (2.6%), and *noise and vibration abatement* (71.4%) strongly influenced by the increase in exports of noise insulation material. In the areas with a lower relative weight, it should be emphasised the growth in GVA in *protection of biodiversity* (15.3%) and *protection of soil and water* (11.6%) due to increases in organic agriculture and aquaculture and in *protection of ambient air and climate* (10.9%), continuing the previous trend associated with electric mobility, namely the production of electric bicycles and electric vehicle charging stations.

Figure 5. GVA by environmental area (2020 – 2022)



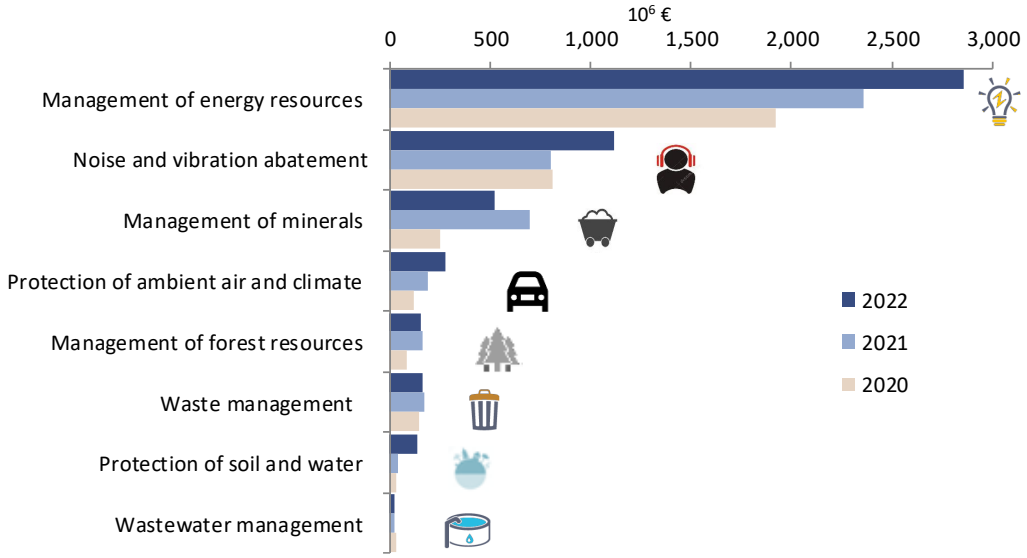
Source: Statistics Portugal (Environmental Goods and Services Sector Accounts)

In 2022, exports from the environmental goods and services sector continued to grow

In 2022, exports in the environmental goods and services sector grew by 18.3%, following an increase of 30.5% in 2021. The products in the areas with the greatest relative weight, *management of energy resources* and *noise and vibration abatement*, grew by 21.2% and 39.7% respectively, essentially due to renewable energy equipment and silencers and noise insulation material. On the other hand, exports underlying

management of minerals fell by 25.5%. Among the areas with less relative weight, the increases in exports of goods and services related to the *protection of soil and water* (271.5%) and *protection of ambient air and climate* (44.8%) stood out, emphasising organic agricultural products and electric bicycles, respectively.

Figure 6. Exports of environmental goods and services by environmental area (2021 – 2022)

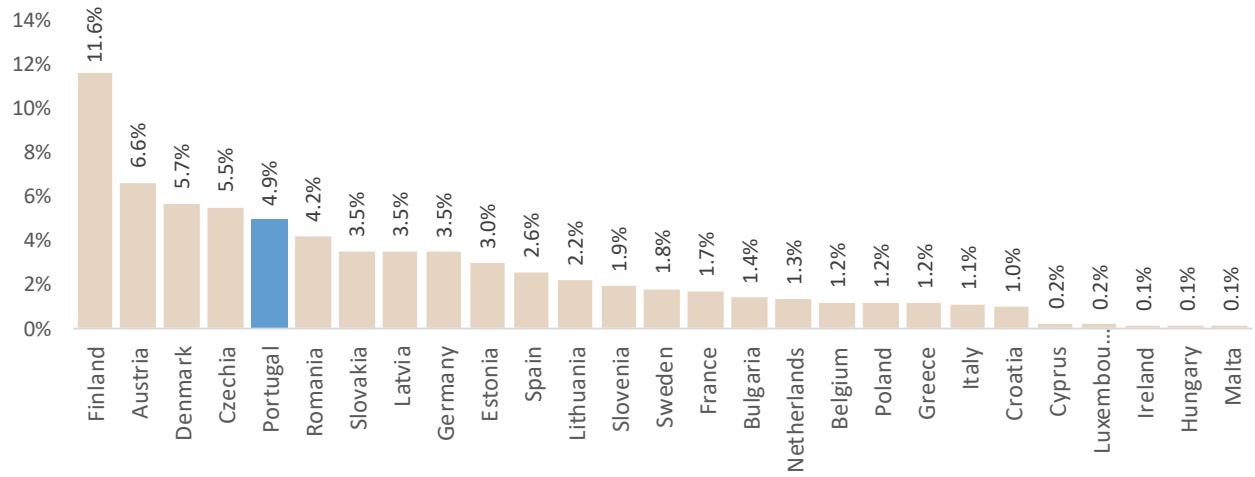


Source: Statistics Portugal (Environmental Goods and Services Sector Accounts)

In 2021, Portugal was the fifth Member State with the highest relative weight of exports of environmental goods and services in the national total

In 2021, the last year with information available for the EU, Portugal remained in the fifth place among the member states with the highest relative weight of exports of environmental goods and services in the national total (4.9%).

Figure 7. Weight (%) of environmental goods and services sector exports in national total, in European countries (2021)



Source: Eurostat (data extracted on the 27th January 2025); Portugal - Statistics Portugal (Environmental Goods and Services Sector Accounts)

ine.pt | Communication Unit - tel: + 351 21 842 61 10 | sci@ine.pt

METHODOLOGICAL NOTES

The Environmental Goods and Services Sector Accounts (EGSS) are part of the System of European Environmental Economic Accounts (SEEA) and are 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 modified by Regulation (EU) No 538/2014 and Regulation (EU) 2022/125.

The environmental accounts were developed in connection with the System of National Accounts (SNA) maintaining its methodological references, namely the United Nations System of National Accounts (SNA 2008) and the European System of Accounts (ESA 2010). They constitute a system of satellite accounts that presents environmental information in a format compatible with National Accounts information, enabling an integrated analysis.

The environmental goods and services sector comprises goods and services produced for environmental protection and resource management purposes.

In addition to the Regulation, the main methodological reference documents for EGSS are the Eurostat manuals:

Environmental goods and services sector accounts Handbook, 2016

Environmental goods and services sector accounts Pratical guide, 2016

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

Guidance note – Reporting of energetic refurbishment and construction of new energy-efficient buildings in EGSS accounts, December 2020

Reporting of energy-efficiency measures undertaken for the construction of low energy consumption and passive buildings, April 2023

EGSS list of environmental products based on CPA and CN, 2024

In 2024, the compilation of the Environmental goods and services sector accounts (EGSS) underwent some methodological changes as a result of the regular discussions held at European level under the guidance of Eurostat in the field of Environmental Satellite Accounts, that determine and prevent the comparison of results for previous years. Among the methodological changes made, the following stand out: 1) accounting for the construction and refurbishment of nearly zero energy buildings (NZEB) in the class of heat and energy saving and management; and 2) updating the list of environmental activities and products. The new list includes new products, generally linked to packaging (e.g. bioplastic bags, pallets,

crates); renewable energy production (bagasse and solid waste in pellets, equipment linked to photovoltaic solar energy); lithium batteries, heat pumps, filtration and purification equipment. In addition, this edition of the CSBSA also includes changes resulting from the implementation of the Portuguese National Accounts 2021 benchmark year.

As a result, 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.

Revisions

Although the EGSS is under a regulation, it is still undergoing methodological development within the European Statistical System, namely on the identification of the boundaries of the environmental areas and on the classification of products.

The series now available is based on the 2021 National Accounts benchmark year and incorporates Eurostat's most recent methodological guidelines in this area.

The results for 2020 and 2021 have been revised, incorporating NZEB buildings, adapting new products according to Eurostat's 2024 list, adopting National Accounts benchmark year 2021 and integrating the respective information, particularly for the General Government institutional sector.

Table A. EGSS revisions

Variable	Compilation	Units	2020	2021
Output	Benchmark year 2021	10^6 Euro	13,972	20,052
	excluding NZEB		*13,972*	*17,720*
	Benchmark year 2016		13,828	17,228
	Difference *excluding NZEB*	%	*1.0%*	*16.4%*
GVA	Benchmark year 2021	10^6 Euro	5,003	6,622
	excluding NZEB		*5,003*	*5,935*
	Benchmark year 2016		4,815	5,807
	Difference *excluding NZEB*	%	*3.9%*	*14.0%*
Employment	Benchmark year 2021	FTE	116,120	166,656
	excluding NZEB		*116,120*	*135,227*
	Benchmark year 2016		116,750	130,044
	Difference *excluding NZEB*	%	*-0.5%*	*28.2%*
Exports	Benchmark year 2021	10^6 Euro	3,400	4,436
	Benchmark year 2016		3,263	3,992
	Difference	%	4.2%	11.1%

ine.pt | Communication Unit - tel: + 351 21 842 61 10 | sci@ine.pt

ACRONYMS AND NAMES

ADENE: Portuguese Energy Agency (*Agência para a Energia*)

CEPA: Classification of environmental protection activities

CReMA: Classification of resource management activities

EGSS: Environmental goods and services sector accounts

ESA 2010: European System of Accounts

EU: European Union

FTE: Full-time equivalent

GVA: Gross Value Added

ISBSA: Environmental Goods and Services Sector Survey *(Inquérito ao Setor dos Bens e Serviços Ambientais*)

NZEB: Nearly Zero Energy Buildings

Statistics Portugal: National Institute of Statistics

SEEA: System of European Environmental Economic Accounts

SNA: System of National Accounts

SNA 2008: United Nations System of National Accounts

ine.pt | Communication Unit - tel: + 351 21 842 61 10 | sci@ine.pt