

# ENVIRONMENTAL PROTECTION IN EUROPE

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**Abstract:** *The paper presents the analysis of some indicators that capture important aspects regarding the protection of the environment. The indicators chosen were: environmental protection investment of total economy, area of wooded land, protected areas and protected forest, as well as air emissions of pollutants and greenhouse gases from production activities and households. The results showed that the reduction of pollution both from the productive activity and from the households of the population can lead to the mitigation of polluting emissions as well as to the preservation of biodiversity. Environmental protection investment is also an important help against pollution if they are applied effectively.*

**Key words:** *investment, environment protection, air pollutants, protected area.*

## 1. Introduction

According to EUROSTAT: “Historically, human activity was generally assumed to have little lasting impact on the land or other parts of the environment, as many people held a common belief that nature could restore or replenish itself. The identification of certain phenomena – rising temperatures, the rapid disappearance of vast areas of forest, desertification, species loss, growing marine pollution or sprawling urban developments – have contributed towards increasing awareness of long-term environmental damage. Climate change and environmental degradation are two of the most serious threats to the European Union (EU) and the world. The United Nations (UN’s) 2030 Agenda for Sustainable Development is a long-term strategy that aims to achieve a range of socioeconomic and environmental goals and protect the Earth from environmental degradation, through sustainable consumption and production, coupled with urgent action on climate change. The agenda introduced a set of 17 Sustainable Development Goals (SDGs); to monitor progress towards these goals the UN has adopted a list of indicators.”

From the multitude of indicators regarding the analysis of the environment, the present paper aims to analyze environmental protection investment of total economy, area of wooded land, protected area and protected forest in Europe, as well as air emissions, like air pollutants and greenhouse gases.

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## 2. Methodology

The study used official information from EUROSTAT database, Year Book 2022, information from Food and Agriculture Organisation of the United Nation (FAO), Forest Europe (FE), and European Environment Agency (EEA).

## 3. Results

The evolution of investments for environmental protection in the European Union-27 countries, in the period 2018-2022, is presented in the graph below (Figure 1):

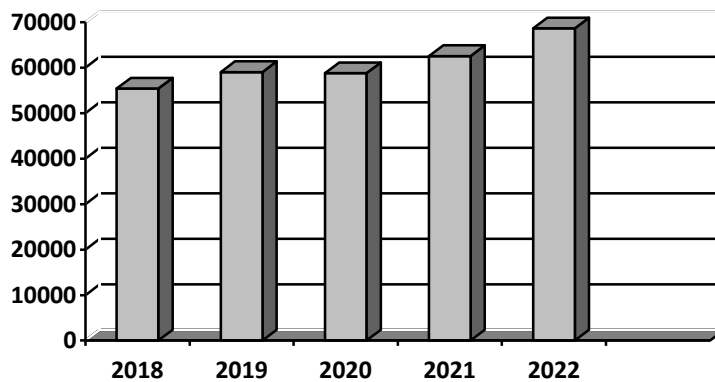


Fig. 1. EU: Environmental investment of total economy-million euro

Data source:

[https://ec.europa.eu/eurostat/databrowser/view/ENV\\_AC\\_EPITE1/default/table?lang=en](https://ec.europa.eu/eurostat/databrowser/view/ENV_AC_EPITE1/default/table?lang=en)

As it can be seen in the graph above, the evolution of investments regarding environmental protection was generally an increasing one during the analyzed period. The exception is 2020, with an approximately 0.4% decrease compared to the previous year 2019, as investments registered a decrease because of the COVID pandemic.

The biggest increase was recorded in 2022 compared to the previous year 2021, with 6111.4 million euros, i.e. 9.77% more.

On average, in the analyzed period 2018-2022, investments regarding environmental protection in the EU increased every year by 3316,125 million euros, i.e. by 5.5%.

The countries with the largest investments were Germany (14595.7 million euros), France (10424.1 million euros), Italy (5914.2 million euros) and the Netherlands (3463.7 million euros). The countries with the lowest investments in environmental protection were Cyprus (24 million euros), Malta (32.5 million euros), Latvia (131.6 million euros) and Estonia (134.4 million euros).

The evolution of investments for environmental protection in Romania, in the same period 2018-2022, is presented in the graph below (Figure 2):

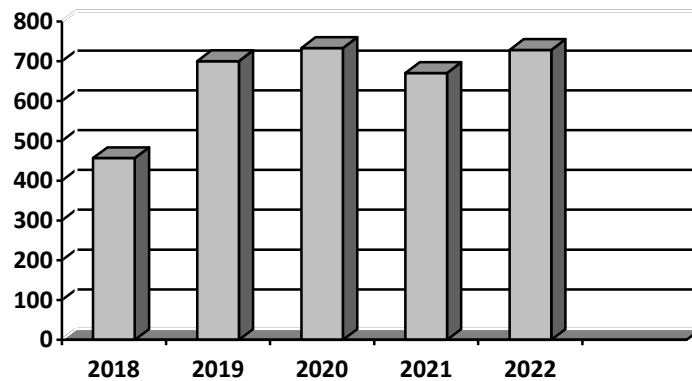


Fig. 2. ROMANIA: *Environmental investment of total economy-million euro*

Data source:

[https://ec.europa.eu/eurostat/databrowser/view/ENV\\_AC\\_EPITE1/default/table?lang=en](https://ec.europa.eu/eurostat/databrowser/view/ENV_AC_EPITE1/default/table?lang=en)

In Romania, a similar trend of evolution of investments for environmental protection is observed, increasing every year except for 2020, when there was a decrease of 62.8 million euros, representing 8.56% less than in 2019. On average, during the analyzed period, investments in environmental protection increased every year by 59.46 million euros, i.e. by 11.98%.

An important indicator in the analysis of the environment is represented by the forested area. The evolution of this indicator in the period 1990-2020, at the level of the European Union, is presented in the graph below (Figure 3).

The data analyzed starting from 1990 shows a constant increase in forested areas. The total area of the European Union is 4233262 km<sup>2</sup>. Of this, the forested area in 2020 was 159058.02 thousand hectares. The largest forested areas are in Sweden (27,980 thousand hectares), Finland (22,980 thousand hectares), Spain (18,572 thousand hectares) and France (17,253 thousand hectares). The smallest forested areas are in Malta (0.46 thousand hectares), Luxembourg (88.7 thousand hectares), Holland (369.5 thousand hectares), Denmark (628.44 thousand hectares), Belgium (689.3 thousand hectares) and Ireland (782 thousand hectares).

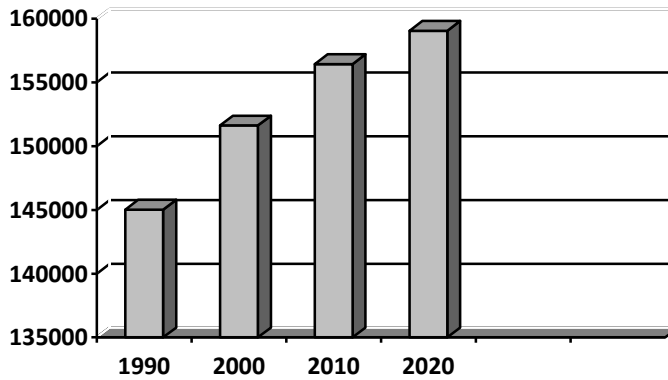


Fig. 3. EU: Area of wooded land, thousand hectares

Data source:

[https://ec.europa.eu/eurostat/databrowser/view/FOR\\_AREA/default/table?lang=en](https://ec.europa.eu/eurostat/databrowser/view/FOR_AREA/default/table?lang=en)

Because part of the forested area is intended for exploitation, in order to protect some areas, they were declared areas with protected forests. The evolution of these protected areas at the level of the European Union between 1990-2015 is presented in the graph below (Figure 4):

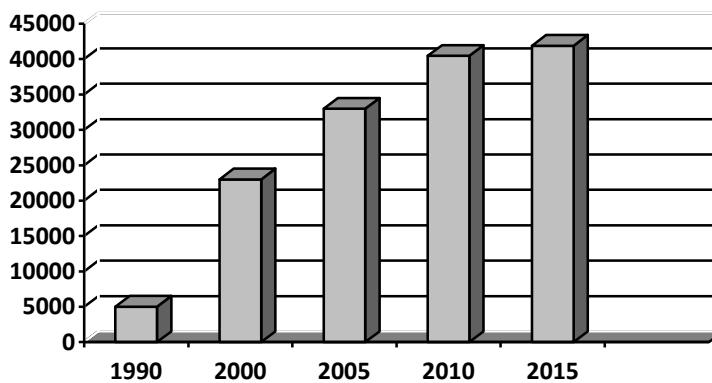


Fig. 4. EU: Protected forest in Europe, thousand hectares

Data source:

[https://ec.europa.eu/eurostat/databrowser/view/FOR\\_PROTECT/default/table?lang=en](https://ec.europa.eu/eurostat/databrowser/view/FOR_PROTECT/default/table?lang=en)

As it can be seen, the areas with protected forests increased during the analyzed period, from 5024.41 thousand hectares in 1990 to 41885.88 thousand hectares in 2015.

The largest protected forested areas are in France (6179.99 thousand hectares), Italy (4705.63 thousand hectares) and Sweden (41885.88 thousand hectares). The smallest such areas are in Luxembourg (2 thousand hectares), Ireland (6.47 thousand hectares, Netherlands (92 thousand hectares), Belgium (47.92 thousand hectares), Cyprus (26.41 thousand hectares) and Greece (197 thousand hectares). In Romania, the area of protected forests is 538.9 thousand hectares.

Another important indicator for the analysis of the environment is represented by the emissions of pollutants in the air. Our analysis took into account air pollutants and greenhouse gases by resident units (production activities and households). The evolution of air pollutants in the European Union during 2015-2021 expressed in grams per capita is presented in Figure 5:

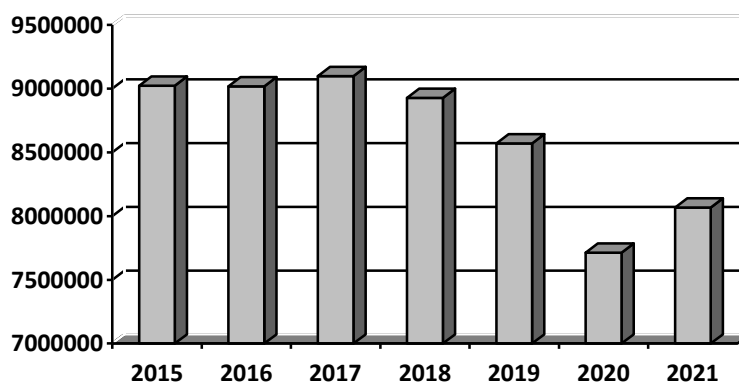


Fig. 5. EU: Air emissions accounts bridging to emission inventory totals

Data source:

[https://ec.europa.eu/eurostat/databrowser/view/ENV\\_AC\\_AIBRID\\_R2/default/table?lang=en](https://ec.europa.eu/eurostat/databrowser/view/ENV_AC_AIBRID_R2/default/table?lang=en)

The evolution is a little oscillating, but with an obvious tendency to decrease these polluting emissions. The reduction of these emissions in 2020 is also evident, due to the restriction of economic activities during the lockdown period. The largest pollutant emissions are found in Luxembourg, Denmark, Poland, the Netherlands, the Czech Republic, and Estonia. The lowest emissions are in Malta, Portugal and Croatia.

#### 4. Conclusions

As it can be seen from the analysis carried out for some of the indicators related to environmental protection, it emerged that in 2020 there was a decrease in the degree of pollution. This was due to the decrease in activity, both in the productive field and in that of households due to the restrictions imposed by the COVID pandemic.

However, in the same year, there was a decrease in investments in the field of

environmental protection. This aspect does not automatically lead to the conclusion that these investments do not have a positive impact on environmental protection.

There is still a need for effective investments to reduce pollutant emissions at the same time as increasing actions to protect biodiversity, accelerating afforestation and expanding protected areas.

According to EUROSTAT: „The European Green Deal is one of the priorities of the European Commission. The European Green Deal is a new growth strategy to make the EU’s economy sustainable by turning climate and environmental challenges into opportunities across all policy areas and making the transition just and inclusive for all. The European Green Deal announces a set of new transformative policies across the economy and increased efforts to follow-up on current legislation and policies relevant to it. Some of Eurostat's environmental statistics and their relation to European Green Deal are:

- Climate ambition: environmental accounts, forest statistics;
- Circular economy: environmental accounts, waste statistics;
- Greening the Common Agricultural Policy / “Farm to Fork” Strategy: forest accounts data on the forested area of the EU;
- Preserving and protecting biodiversity: environmental accounts, production and consumption of chemical substances hazardous for the environment or human health, forestry statistics;
- Towards a zero-pollution ambition for a toxic free environment: waste statistics, data on production and consumption of chemical substances hazardous for the environment or human health,
- Mainstreaming sustainability in all EU policies: environmental accounts.”

## References

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[https://ec.europa.eu/eurostat/databrowser/view/FOR\\_PROTECT/default/table?lang=en](https://ec.europa.eu/eurostat/databrowser/view/FOR_PROTECT/default/table?lang=en) accessed at 15.09.2023

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[https://ec.europa.eu/eurostat/databrowser/view/ENV\\_BIO1/default/table?lang=en](https://ec.europa.eu/eurostat/databrowser/view/ENV_BIO1/default/table?lang=en) accessed at 29.08.2023

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