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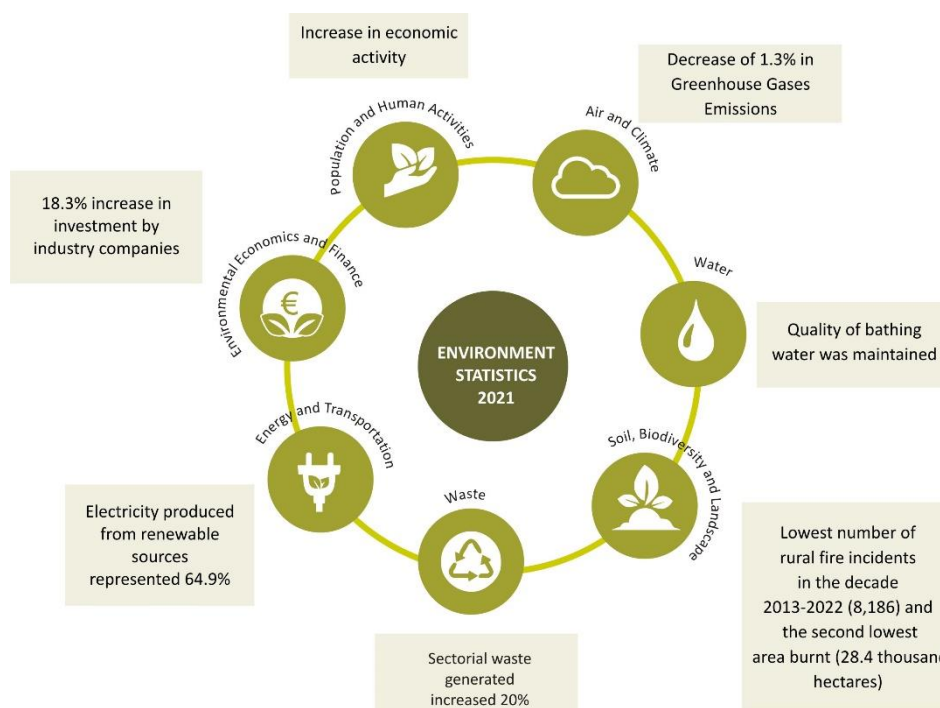
ENVIRONMENT STATISTICS

2021

THE STATE OF THE ENVIRONMENT IN 2021

The year 2021 was hot and dry, nevertheless recording the lowest number of rural fires of the last 10 years in mainland Portugal (8,186 occurrences) and the second lowest burnt area (28.4 thousand hectares). In a context of economic recovery, still without reaching the levels of 2019, the Direct Material Input in national economy increased by 6.9%. The provisional estimates of Greenhouse Gases (GHG) emissions for 2021 show a decrease of 1.3%, maintaining the downward trajectory since 2017. This trend mainly reflects the 4.5% increase in electricity produced from renewable energy sources (64.9% of total electricity), maintaining the consecutive growth since 2017. In terms of Environmental Protection, General Government expenditure increased by 33.2% and investments by Industry companies rose 18.3%, the latter with particular focus on the field of Air Quality and Climate Protection (+60.5%).

On the negative side, the increase of sectorial waste generation (+20.4%) stands out, partly as a consequence of the economic growth and, in particular, of the Construction sector growth (+39.5 billion euros in the sector's production), with construction waste increasing 53.1%. The indicator of preparation of urban waste for reuse and recycling accentuated the downward trend, reaching 32% in 2021 (-6 pp compared to 2020) and moving away from the target of 55% to be achieved in 2025.





CARBON NEUTRALITY AND GHG EMISSIONS

Climate change is currently a reality that cannot be ignored, with extreme climatic phenomena becoming increasingly frequent. The rise in air temperature is also evident, which has an impact on the average sea level rise, on natural ecosystems balance and life on Earth. The average air temperature in Portugal since 1990 has risen by an average of 0.42 °C compared to the 1971-2000 average.

Given the climate emergency that the planet is experiencing, the European Union has set the goal of achieving Carbon Neutrality by 2050, establishing it in European legislation through the Climate Law. Portugal has also ratified this commitment, having approved the Climate Framework Law in November 2021.



To achieve carbon neutrality, GHG emissions will have to be reduced. Portugal established national targets for 2020¹ and 2030² for the reduction of total GHG emissions. The intermediate target for 2020 was met (reduction between 18% and 23%), with a reduction greater than that defined (-32.9% compared to 2005), even though COVID-19 pandemic has contributed to this reduction, particularly through its impact of slowing economic activity. In 2021, the decrease in emissions was maintained (-33.8% compared to 2005), aligned with the national target for 2030 of a 45% to 55% reduction compared to 2005.

The national investment in Renewable Energy Sources (RES) for electricity production has contributed to the reduction of GHG emissions, fundamentally by allowing a reduction in fossil fuels consumption for electricity production. Between 2006 and 2021, the incorporation of RES increased 31.3 pp (64.9% in 2021), equivalent to an increase of 104.4% in the electricity produced from these sources. This evolution was decisive so that in 2020 the objective of 60% (59.6%) stipulated in the National Plan for Renewable Energies (PNAER) for that year was achieved, with the goal for 2030 being set at 80%. Beside the incorporation of RES contributing to the reduction of GHG emissions, they also have an important role in the reduction of energy dependence from abroad, which went from 88.8% in 2005 to 67.1% in 2021. It is intended to remain on a downward trajectory until at least 65% in 2030.

¹ According with Programa Nacional para as Alterações Climáticas (PNAC 2020/2030).

² According with Plano Nacional Energia e Clima 2021-2030 (PNEC 2030).



THE COMPARISON OF THE RESULTS OF 2021 WITH 2020, HIGHLIGHTS THE FOLLOWING MAIN ASPECTS:

Population and Human Activities

In 2021, the resident population in Portugal was estimated at 10,352,042 people, reflecting an increase of 53,790 inhabitants compared to the previous year and translating into a positive effective growth rate of 0.52%.

Domestic demand registered an increase of 5.6% compared to the previous year (-5.4% in 2020), reflecting mainly an increase in private consumption (4.7% and -7.1% in 2020).

The Industrial Production Index increased 3.0% in 2021 compared to 2020, reversing the trend seen in the two previous years (-7.0% in 2020 and -2.3% in 2019).

The Direct Material Input entering the economy for later use in production or consumption totalled 205 million tons in 2021, reflecting an increase of 6.9%, compared to 2020, in which the variation was -9.9%.

Air and Climate

In Mainland Portugal, 2021 was classified as a hot and dry year. The decade 2012-2021 was the warmest since 1931 (anomaly of + 0.49 °C) and the second driest, corresponding to 75.0% of precipitation normal value.

Preliminary data on Greenhouse Gas emissions for 2021, without accounting for the LULUCF sector, point to a decrease of 1.3% (-9.5% in 2020), which resulted essentially from the reduction in emissions from the electricity production sector (-1.8%) and the industrial processes and product use sector (-3.3%)

The Air Quality Index revealed that, on average, 31,0% of the days in 2021 had a “very good” air quality and 45,9% “good” quality.

Water

In 2021 were monitored 643 bathing waters (620 in 2020). The water quality in the vast majority is still classified as “Excellent” (76.9% for Inland Bathing Waters and 93.5% for Coastal and Transitional Bathing Waters).

In 2022, 393 beaches were awarded the Blue Flag, a new maximum corresponding to 21 more beaches, compared to 2021.

Soil, Biodiversity and Landscape

In 2021 there were 262 forest intervention zones (ZIF), covering an area of 1 856 thousand hectares, equivalent to 20.8% of mainland territory. In relation to December 2020, 17 more ZIF were created, with an increase of 159 thousand hectares in total area.

2021 registered the lowest number of rural fire occurrences of the decade 2013-2022 in mainland Portugal (8,186 occurrences) and the second lowest area burnt (28.4 thousand hectares).



Agri-environmental measures benefited 71,358 farmers (53,663 in 2020), who received support in a total of 237 million euros (158 million euros in 2020).

Waste

In a scenario of economic expansion in 2021, although urban waste generated also increased, the ratio between urban waste and GDP improved to 3.2% compared to 2015 (-5 .2 pp compared to 2020).

Urban waste management worsens in the target for preparing for reuse and recycling (by -23 pp compared to the target for 2025 (55%) and -6 pp compared to the 2020 result).

Sectoral waste generated by manufacturing and other industries businesses totalled 13.6 million tons (+20% compared to 2020), with emphasis on construction activities (+944 thousand tons) and trade and services (+388 thousand tons) with more significant absolute increases (excluding the waste management activities) due to economy recovery after the impact of the pandemic in the previous year.

Energy and Transportation

Primary energy consumption in 2021 maintained the levels recorded in 2020, highlighting the end of coal consumption by thermoelectric power plants for electricity production in November 2021.

Final energy consumption increased by 4.8% compared to 2020, still below the levels recorded in pre-pandemic period (2017-2019).

Electricity produced from renewable sources represented 64.9% of the total electricity produced in Portugal (59.6% in 2020, reaching the target set in the PNAER for this year).

The fleet of vehicles presumed to be in circulation increased by 1.0% compared to 2020 and reached 7.1 million vehicles.

The sale of new light passenger vehicles increased slightly to 146.6 thousand vehicles (+0.8%) and the average age of light passenger vehicles increased from 13.4 to 13.5 years (64.7% were more than 10 years old in 2021).

Fuel consumption in road transport increased by 8.7% compared with 2020 and diesel consumption accounted for 78.9% of total fuel consumption (78.6% in 2020).

Environmental Economics and Finance

General government expenditure on environmental protection activities continues to increase in 2021, amounting to 1 378 million euros (1 035 million euros in 2020).



15.3% of industrial companies in 2021 were involved in environmental management and protection activities (-1 pp compared to the previous year). Investments by companies registered an increase of 18.3% compared to 2020, resulting from the increase in the domain “Protection of Ambient Air and Climate” (+60.5%).

Entities producing environmental goods and services had a turnover of 10.6 billion euros in 2021 (8.6 billion euros in 2020), of which 5.7 billion euros resulted from environmental activities within the scope of resource management, which represents an increase of 18.8% compared to 2020.

The number of subscribers to Environmental NGOs in 2021, 220,754 members, continued to decline compared to 2020, as well as the activities carried out by them, 1.9%, due to the effects of the COVID-19 pandemic. Emphasis on the reductions in activities related to nature walks (-22.2%) and actions with the media (-5.6%), in contrast to the increases in Environmental education and Congresses, seminars and training actions, both with 18.5%.

The number of firefighters in the command and active staff stood at 26,123 individuals in 2021 (26,125 in 2020). Voluntary participation remained predominant (60.2% of the total compared to 61.3% in 2020).

The value of environmentally relevance taxes increased 6.3% compared to 2020, reflecting mainly the recovery of fuel consumption, since the revenue from taxes associated with the purchase of motor vehicles decreased again.

In terms of Cohesion Funds, approvals, implementation, commitment and execution rates, by December 2021, Portugal 2020 approvals in the field of environment, compared to programmed allocations, amounted to 100.4% (4,013 million euros), with 61.2% (2,443 million euros) of the value of approvals being executed.