

Country fact sheet: Portugal

1. Total greenhouse gas emissions

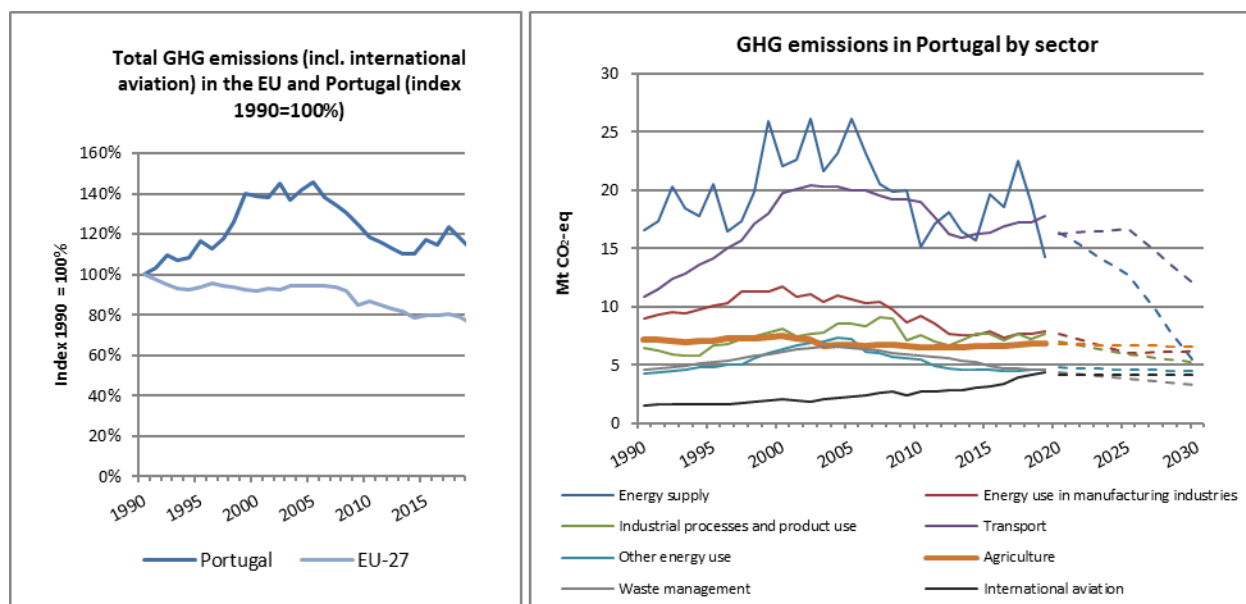


Figure 1: Left hand side: Total greenhouse gas emissions (incl. international aviation) 1990-2020 (index 1990 = 100 %). Right hand side: Greenhouse gas emissions by sector¹ – historical emissions 1990-2019, proxy 2020, projections WEM 2021-2030 (Mt CO₂-eq).

¹ The sectors in the figure correspond to the following IPCC sectors: Energy supply: 1A1, 1B and 1C. Energy use in manufacturing industries: 1A2. Industrial processes and product use: 2. Transport: 1A3. Other energy use: 1A4, 1A5 and 6. Agriculture: 3. Waste: 5. International aviation: 1.D.1.a.

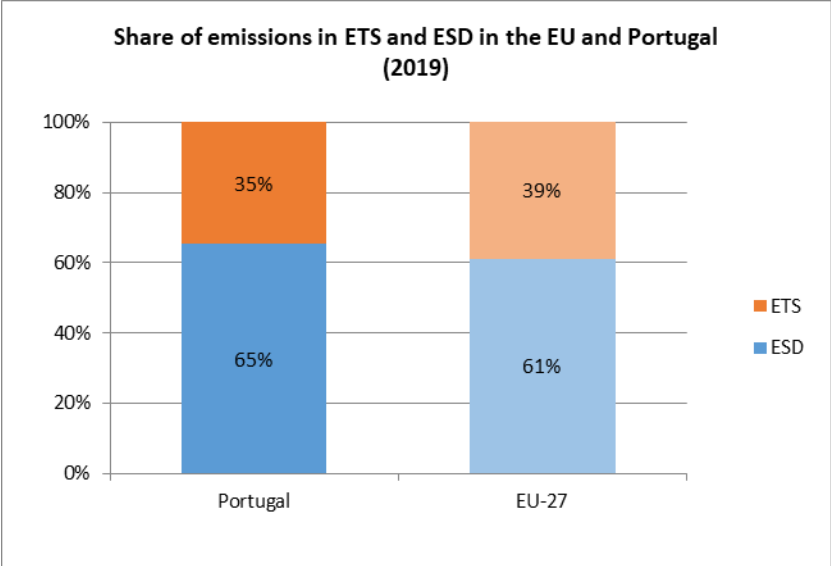


Figure 2: Share of emissions covered by the ETS and the ESD (2019).²

2. ETS emissions

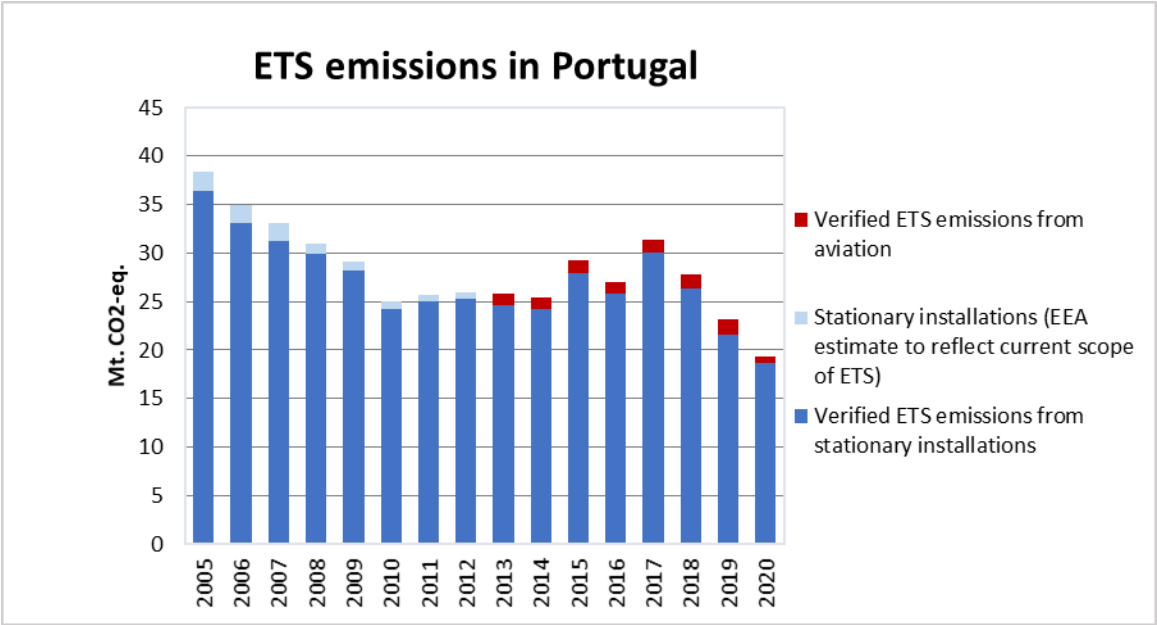


Figure 3: ETS emissions 2005-2020 (Mt CO₂-eq).³

² Excluding international aviation and NF₃.

³ The scope of ETS was extended from 2013. To reflect the current scope of ETS, estimates made by EEA are included in the figures from 2005 to 2012. The estimates cover only emissions from stationary installations.

3. Emissions in Effort Sharing sectors

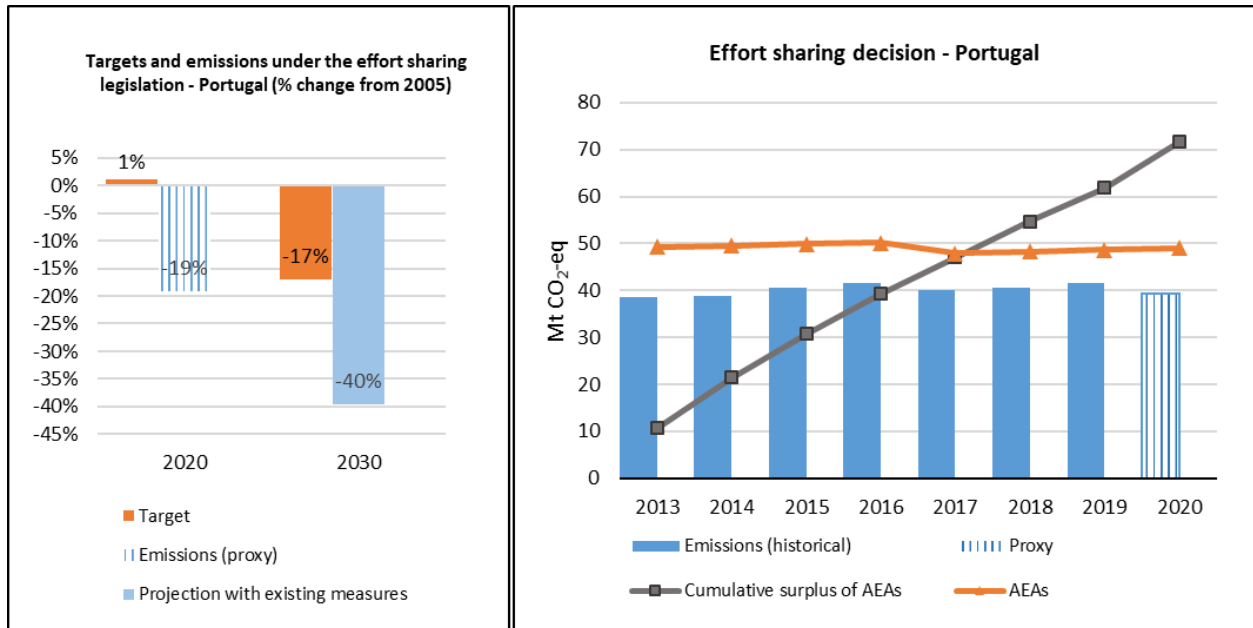


Figure 4: Left hand side: Emissions and targets under the Effort Sharing Decision/ Effort Sharing Regulation 2020 and 2030 as percentage change from 2005. Right hand side: Emissions, annual emission allocations (AEAs) and accumulated surplus/ deficit of AEAs under the Effort Sharing Decision 2013-2020 (Mt CO₂-eq).

4. Land use, land use change and forestry

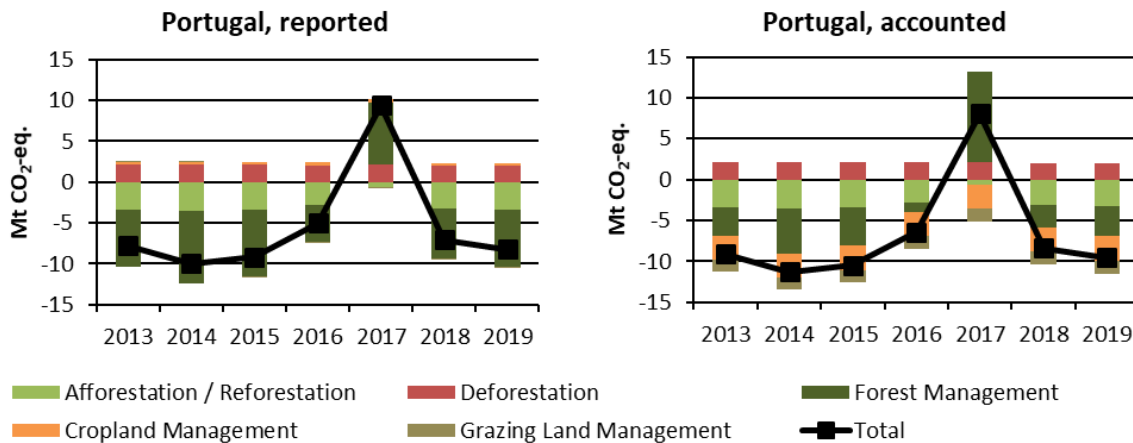


Figure 5: Reported and accounted emissions and removals from LULUCF (Mt CO₂-eq.)⁴

Reported quantities under the Kyoto Protocol for Portugal show net removals of, on average, -5.4 Mt CO₂-eq for the period 2013 to 2019. In this regard, Portugal contributes with 1.6% to the annual average sink of -344.9 Mt CO₂-eq of the EU-27. Accounting for the same period depicts net credits of, on average, -6.8 Mt CO₂-eq, which corresponds to 5.9% of the EU-27 accounted sink of -115.0 Mt CO₂-eq. Reported net removals are highest for 2014, decrease substantially thereafter, reaching net emissions in 2017, and return to notable removals in 2018 and 2019. Accounted net credits follow the same dynamic with net debits in 2017. Portugal is one of six EU Member States that show net emissions for at least one year. In addition, Portugal is one of 14 EU Member States that show net debits for at least one year in this preliminary accounting exercise. Portugal elected to report and account for Cropland Management as one of six EU Member States and for Grazing Land Management as one of five EU Member States.

The dominating reported activity is Forest Management with removals in most years. Removals by Afforestation/Reforestation are sizable for all years except 2017. Emissions by Deforestation show moderate quantities, emissions by Cropland Management are negligible, and Grazing Land Management fluctuates with very small quantities between emissions and removals. Removals by Forest Management reach -8.9 Mt CO₂-eq in 2014, but year 2017 shows 7.6 Mt CO₂-eq. of emissions by Forest Management. The singular situation in 2017 for Forest Management and Afforestation/Reforestation links to the enormous incidence of forest fires which also impacted the EU LULUCF trend. Portugal is one of four EU Member States with emissions by Forest Management for at least one year.

Credits by Afforestation/Reforestation, Cropland Management and Grazing Land Management and debits by Deforestation contribute in notable quantities to the accounts of Portugal. Sizable credits by Forest Management in 2013 to 2015 turned to debits of 11.1 Mt CO₂-eq in 2017 but returned to credits in the years thereafter. Portugal is one of 13 EU Member States with debits by Forest Management for at least one year. Credits by Afforestation/Reforestation have a marked drop for 2017.

⁴ The differences between reported and accounted emissions from LULUCF under the Kyoto Protocol are described in the 'explanatory note on LULUCF – accounted and reported quantities under the Kyoto Protocol'.

Data sources

Figure 1: Annual European Union greenhouse gas inventory 1990–2019 (EEA greenhouse gas data viewer: <https://www.eea.europa.eu/data-and-maps/data/data-viewers/greenhouse-gases-viewer>). *Approximated EU greenhouse gas inventory 2020* (European Environment Agency). Member States national projections, reviewed by the European Environment Agency.

Figure 2: Verified ETS emissions extracted from European Union Transaction Log 01.07.2021 (EEA ETS data viewer: <https://www.eea.europa.eu/data-and-maps/dashboards/emissions-trading-viewer-1>). ESD data from European Commission: *Commission Implementing Decision (EU) on greenhouse gas emissions covered by Decision No 406/2009/EC of the European Parliament and of the Council for the year 2019 for each Member State* (forthcoming).

Figure 3: extract from European Union Transaction Log 01.07.2021 (EEA ETS data viewer: <https://www.eea.europa.eu/data-and-maps/dashboards/emissions-trading-viewer-1>).

Figure 4: European Commission: *Commission Implementing Decisions on greenhouse gas emissions for each Member State for the years 2013-2019 under the Effort Sharing Decision* ([Implementation of the Effort Sharing Decision \(europa.eu\)](#)). *Approximated EU greenhouse gas inventory 2020* (European Environment Agency). Member States national projections, reviewed by the European Environment Agency.

Figure 5: European Commission based on data accounted and reported by Member States under the Kyoto Protocol.