

# Country fact sheet: Portugal

## 1. Total greenhouse gas emissions

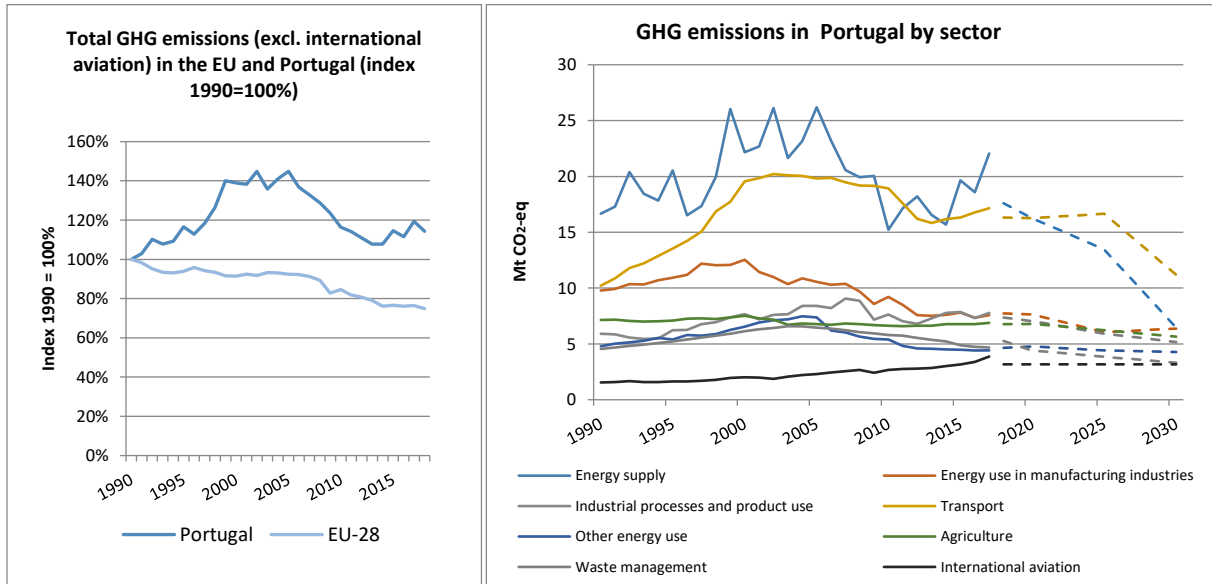


Figure 1: Left hand side: Total greenhouse gas emissions (excl. international aviation) 1990-2018(index 1990 = 100 %). Right hand side: Greenhouse gas emissions by sector<sup>1</sup> – historical emissions 1990-2017, projections 2018-2030 (Mt CO<sub>2</sub>-eq).

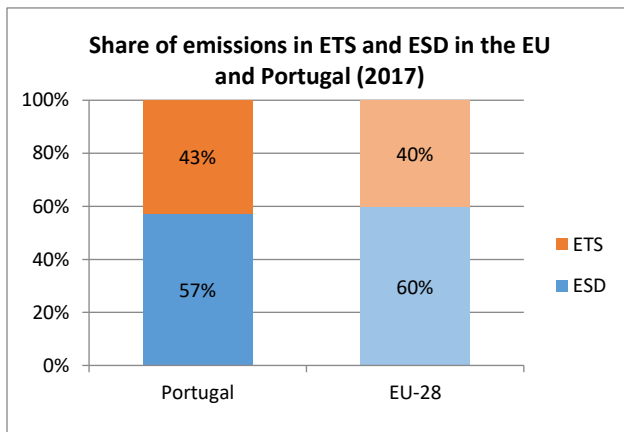


Figure 2: Share of emissions covered by the ETS and the ESD (2017).<sup>2</sup>

<sup>1</sup> 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: memo item.

<sup>2</sup> Excluding international aviation, CO<sub>2</sub> from domestic aviation and NF<sub>3</sub>.

## 2. ETS emissions

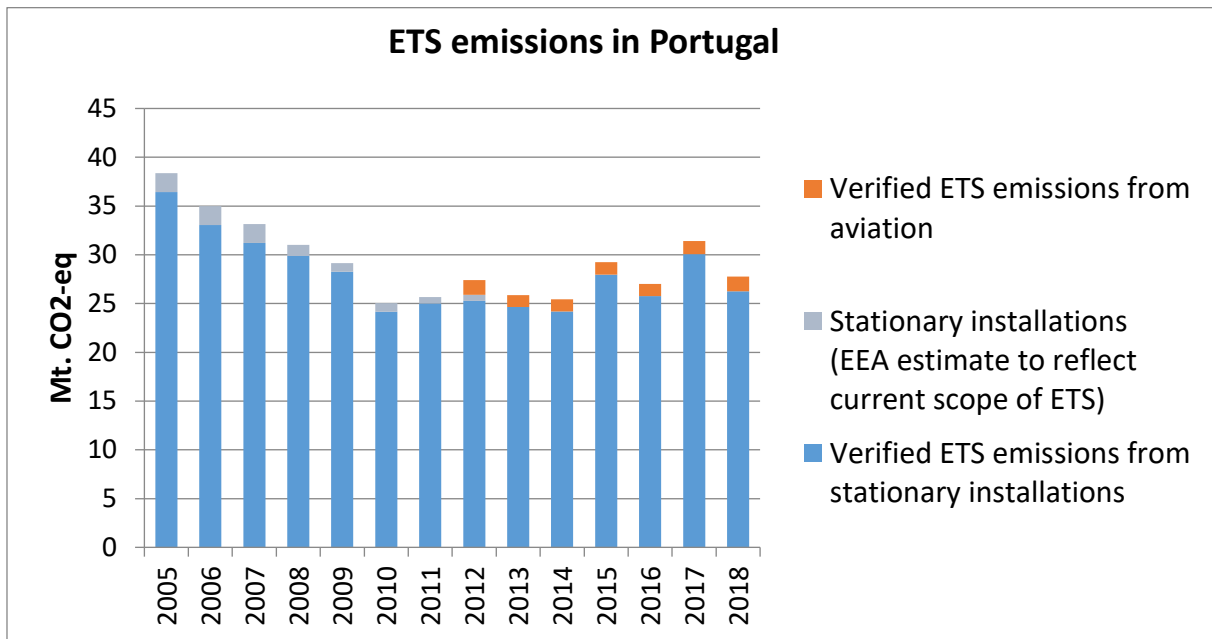


Figure 3: ETS emissions 2005-2018 (Mt CO<sub>2</sub>-eq).<sup>3</sup>

## 3. Emissions in Effort Sharing sectors

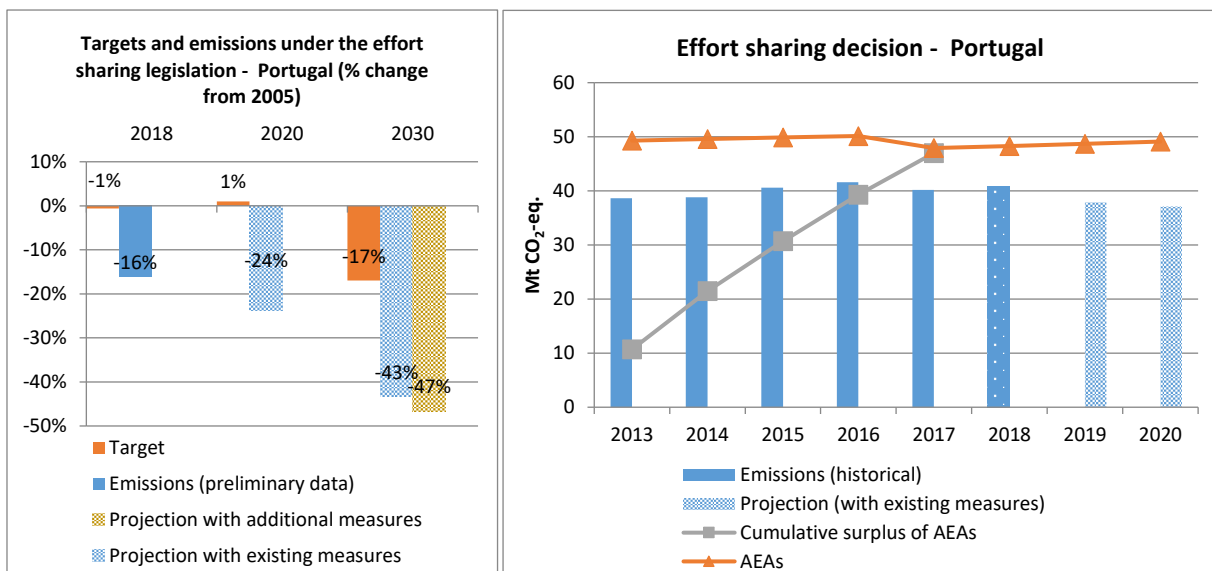
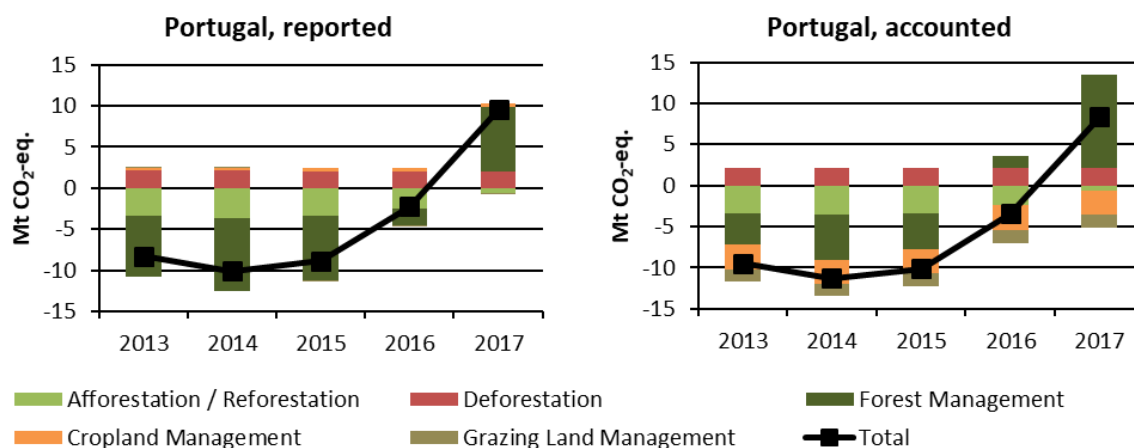


Figure 4: Left hand side: Emissions and targets under the Effort Sharing Decision/ Effort Sharing Regulation 2018, 2020 and 2030 as percentage change from 2005. Right hand side: Emissions, annual emission allocations (AEAs) and accumulated surplus/ deficit of AEAs under the Effort Sharing Decision 2013-2020 (Mt CO<sub>2</sub>-eq).

<sup>3</sup> 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.

#### 4. Land use, land use change and forestry



**Figure 5: Reported and accounted emissions and removals from LULUCF (Mt CO<sub>2</sub>-eq.)<sup>4</sup>**

Reported quantities under the Kyoto Protocol for Portugal show net removals of, on average, -4.0 Mt CO<sub>2</sub>-eq for the period 2013 to 2017. In this regard, Portugal contributes with 1.0% to the annual average sink of -411.9 Mt CO<sub>2</sub>-eq of the EU-28. Accounting for the same period depicts net credits of, on average, -5.2 Mt CO<sub>2</sub>-eq, which corresponds to 4.7% of the EU-28 accounted sink of -111.9 Mt CO<sub>2</sub>-eq. Reported net removals are highest for 2014 and decrease substantially thereafter to become net emissions in 2017. This makes Portugal one of three EU Member States that show net emissions in one of the observed years in this preliminary exercise. Accounted net credits follow this pattern and decrease until 2017 when they became net debits. This makes Portugal one of ten 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 seven EU Member States and for Grazing Land Management as one of six EU Member States.

Highest reported quantities are removals by Forest Management between 2013 and 2015 and emissions in 2017. Portugal is one of two EU Member State with emissions by Forest Management for some years. Removals by Afforestation/Reforestation also decrease for 2016, but become the highest quantity in relative terms in that year. Emissions by Deforestation show steady moderate quantities in the emission budget of the LULUCF sector. Emissions and removals by Cropland Management and Grazing Land Management are negligible and fluctuate around zero.

All activities contribute in notable quantities to the accounts of Portugal. Credits by Cropland Management show the highest annual average, followed by credits by Afforestation/Reforestation, debits by Deforestation and credits by Grazing Land Management. Credits by Forest Management turned to debits after 2015, with a sizeable increase in 2017. Portugal is one of twelve EU Member States that showed debits in this activity category for at least some of the years. Debits by Deforestation remain stable and notable throughout the period.

<sup>4</sup> 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 1990–2017 (EEA greenhouse gas data viewer: <https://www.eea.europa.eu/data-and-maps/data/data-viewers/greenhouse-gases-viewer> ). *Approximated EU greenhouse gas inventory 2017* (European Environment Agency). Member States national projections, reviewed by the European Environment Agency.

Figure 2: Verified ETS emissions abstracted from European Union Transaction Log 21.10.2019 (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 for each Member State for the year 2017 covered by Decision No 406/2009/EC of the European Parliament and of the Council* (forthcoming).

Figure 3: abstract from European Union Transaction Log 21.10.2019 (EEA ETS data viewer: <https://www.eea.europa.eu/data-and-maps/dashboards/emissions-trading-viewer-1> ).

Figure 4: European Commission: *Commission Implementing Decision (EU) on greenhouse gas emissions for each Member State for the year 2017 covered by Decision No 406/2009/EC of the European Parliament and of the Council* (forthcoming). *Approximated EU greenhouse gas inventory 2017* (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.