

Greenhouse Gases & Remote Sensing

Aggregation of GHG Emissions Over Cyprus and International Reporting Obligations

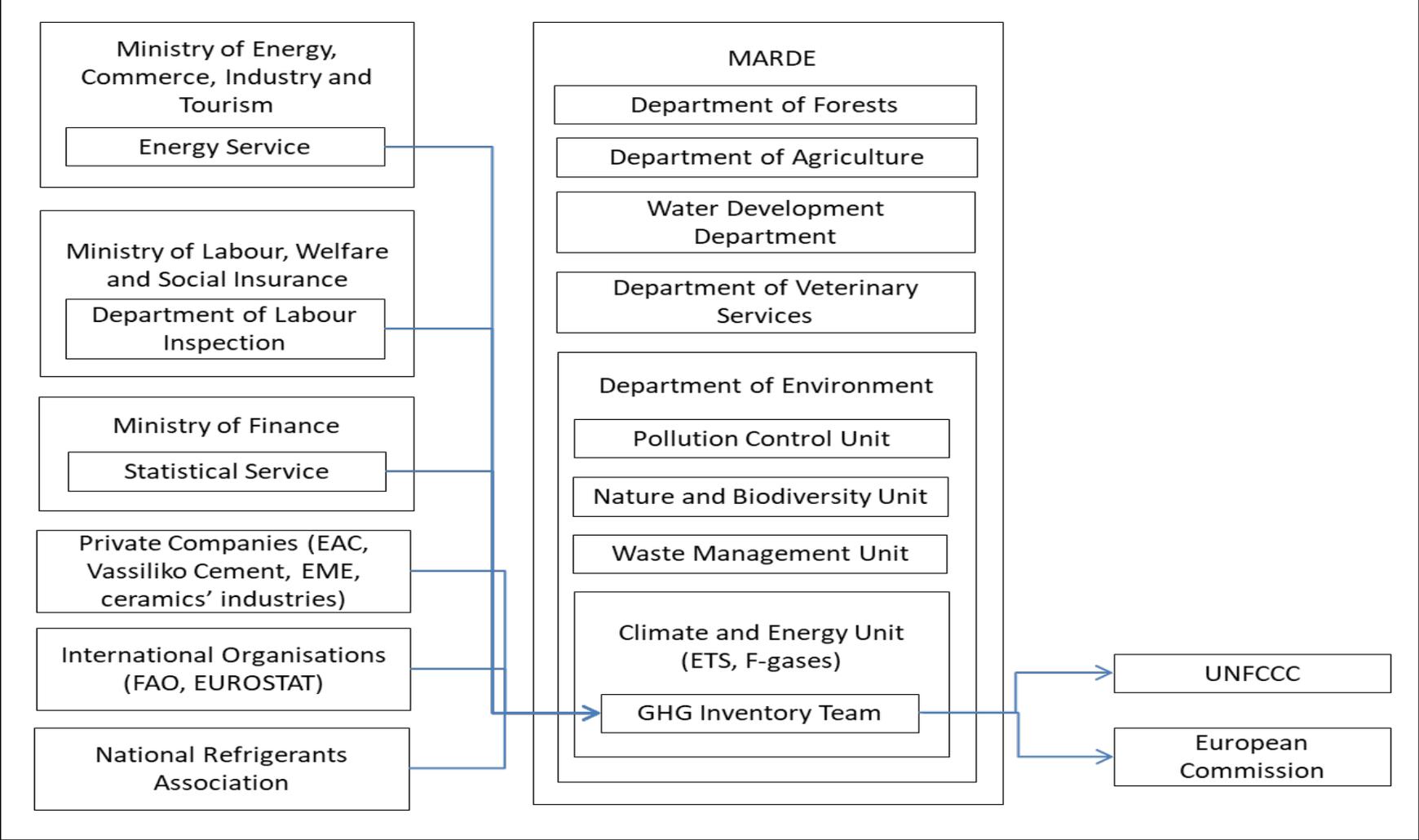
Florence Dubart, Jonilda Kushta, Demetris Demetriou, Angelos Violaris

Reporting Obligations

- The Republic of Cyprus ratified the UNFCCC in 1997 with Law No. 19(III) / 1997 as a non-Annex I party. The status changed from a non-Annex I to an Annex I party in 2013.
- The Kyoto Protocol was ratified by the Republic of Cyprus in 2003 with Law No. 29(III) / 2003. As part of the EU, Cyprus has taken up commitments for the CP2 of the KP through the Doha amendment.
- The Republic of Cyprus ratified the Paris Agreement on 4 January 2017 with Law No. 30(III)/2016.
- *The first Inventory report submitted by Cyprus to the European Commission for the purposes of Decision no. 280/2004/EC, was in 2006 for the period 1990-2004.*
- *The first submission of a national inventory report to the UNFCCC secretariat as an Annex I party was made in April 2013.*

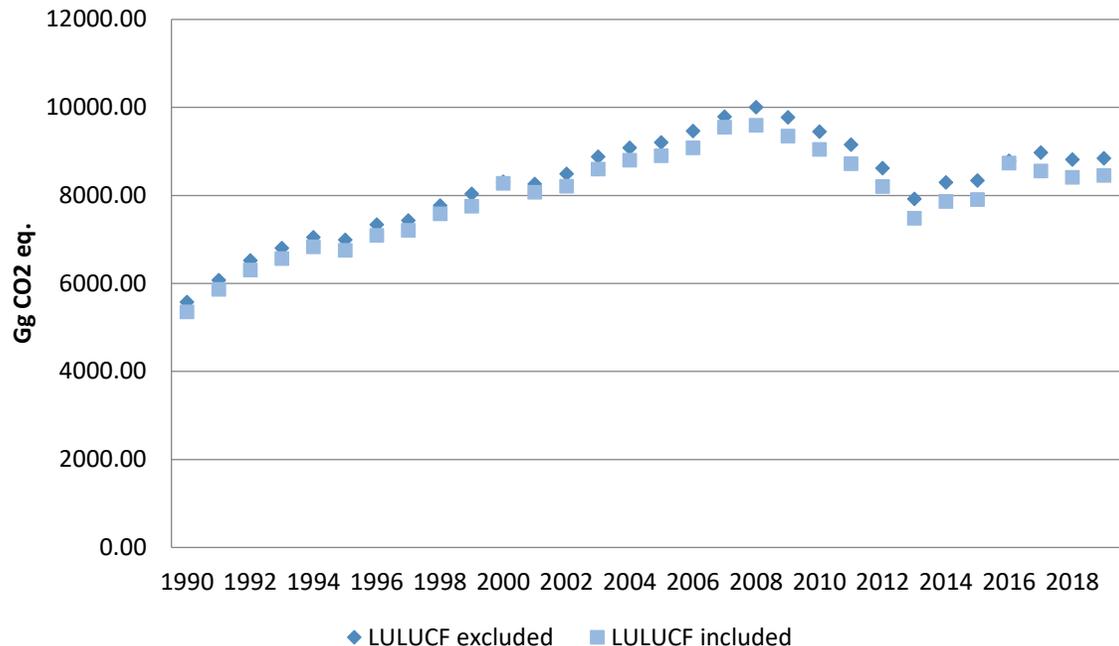


Overview of the Organizational Structure of the National Inventory System



Description and Interpretation of Emission Trends for Aggregated GHG Emissions

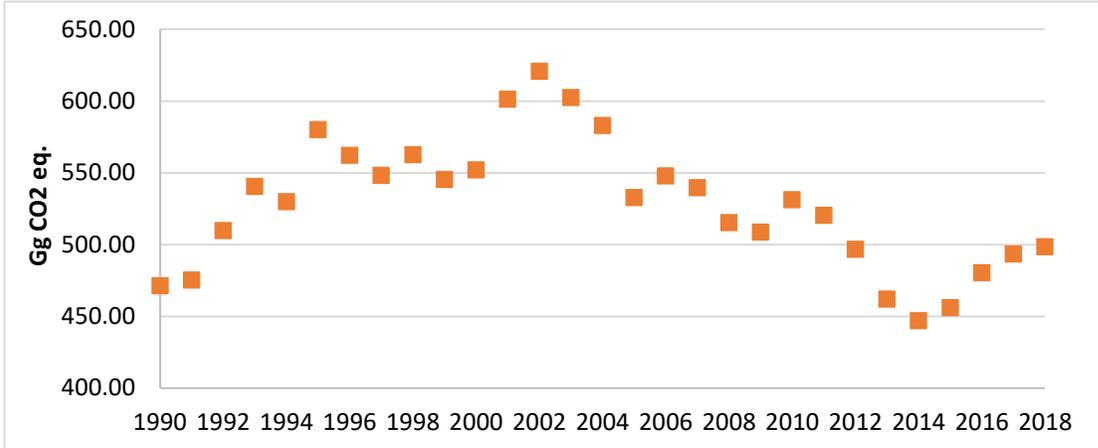
| Total emissions (Gg CO2 eq.) | 1990 | 2000 | 2005 | 2010 | 2015 | 2018 | 2019 |
|---------------------------------|---------|---------|---------|---------|---------|---------|---------|
| With LULUCF | 5352.06 | 8273.57 | 8901.93 | 9046.28 | 7904.87 | 8411.88 | 8449.22 |
| Without LULUCF | 5571.03 | 8308.59 | 9205.20 | 9444.39 | 8336.77 | 8811.43 | 8841.53 |



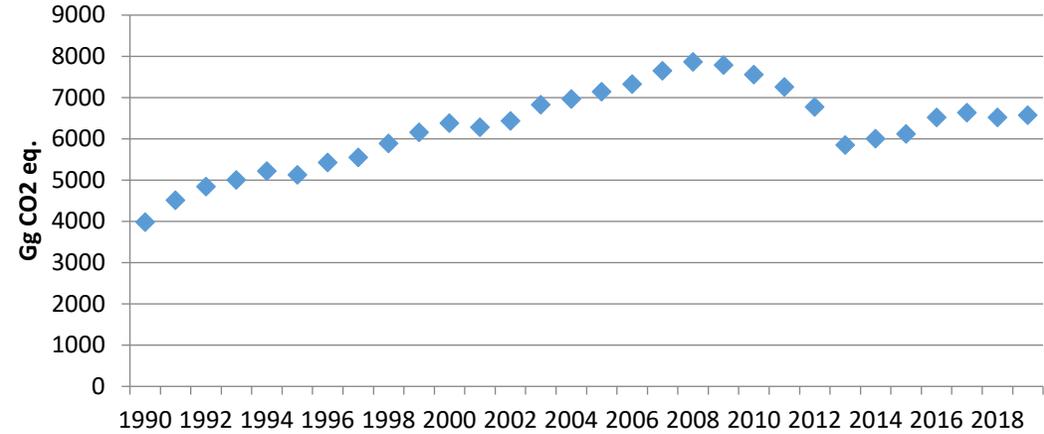
- The last National Inventory Report was submitted in April 2021 for the year 2019
- Total national emissions excluding LULUCF increased by 59% between 1990 and 2019 and decreased by 0.34% between 2018 and 2019

GHG Emissions Trends by Sector

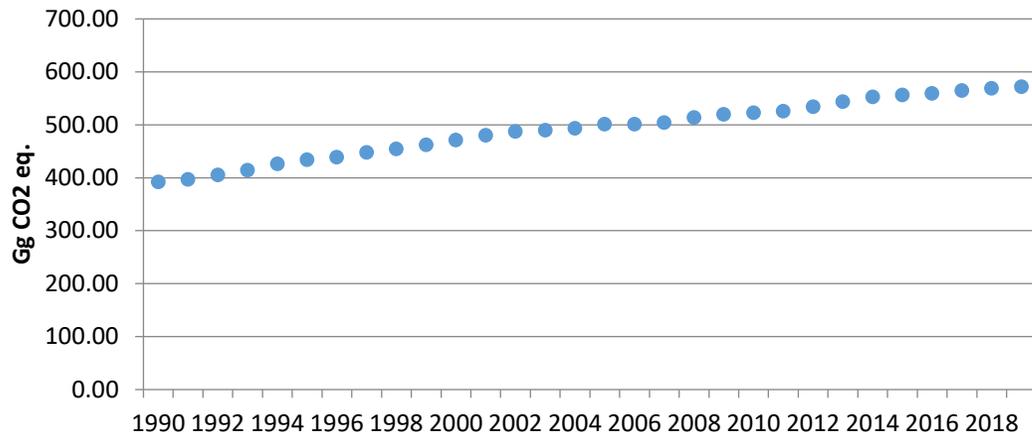
Agriculture



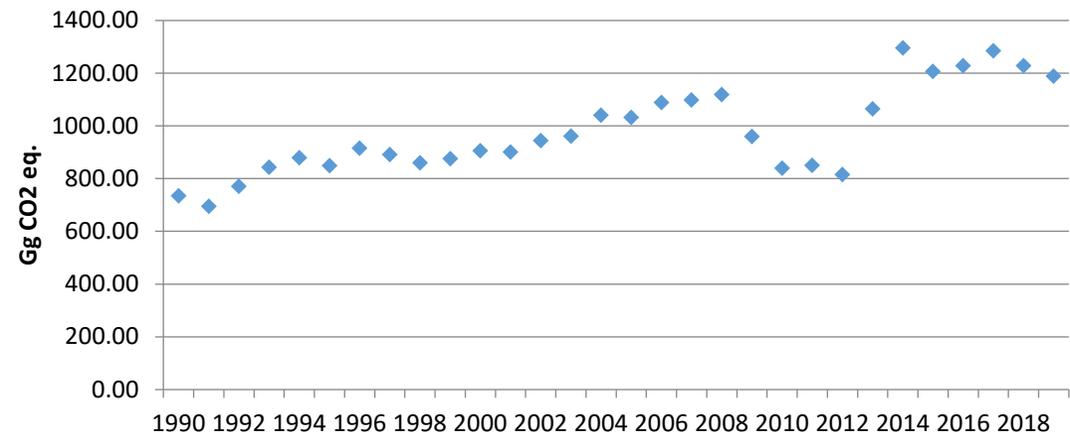
Energy



Waste



IPPU

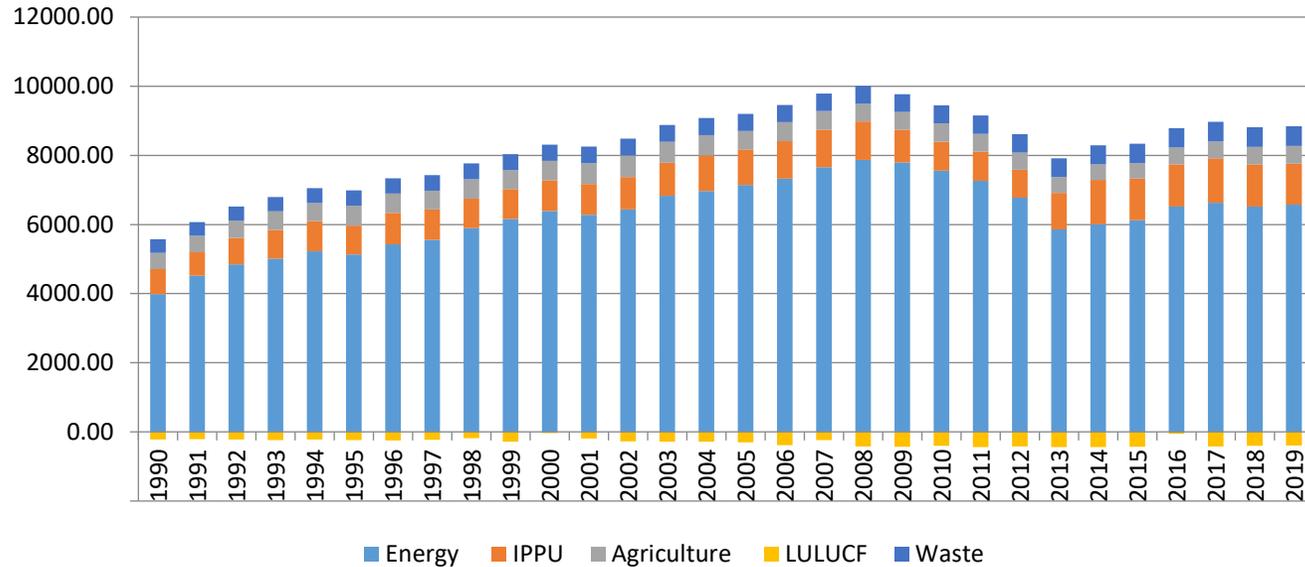


Calculations and EFs after the IPCC 2006 guidelines



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GHG Emissions Trends by Sector



Energy, with 6575.90 Gg CO₂ eq., is the largest contributor to the total national GHG emissions (74% compared to the total without LULUCF).

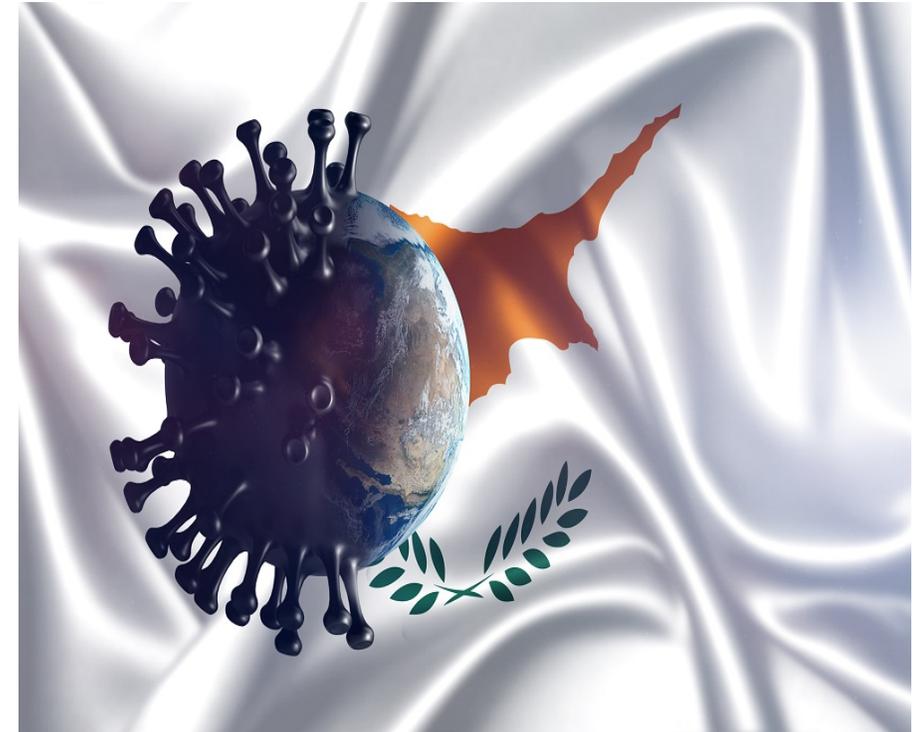
The contribution of the CO₂ emissions from the energy sector to the total in 2019 was **89%**

Fuel combustion activities:

- **Energy Industries:** *51% of total energy emissions in 2019*
- **Transport :** *33% of total energy emissions in 2019*
- **Manufacturing Industries and Construction :** *7% of total emissions*
- **Other Sectors (Commercial/Institutional, Residential, Agriculture/Forestry/Fishing) :** *8% of total emissions in 2019*
- **Other :** *0.3 %*

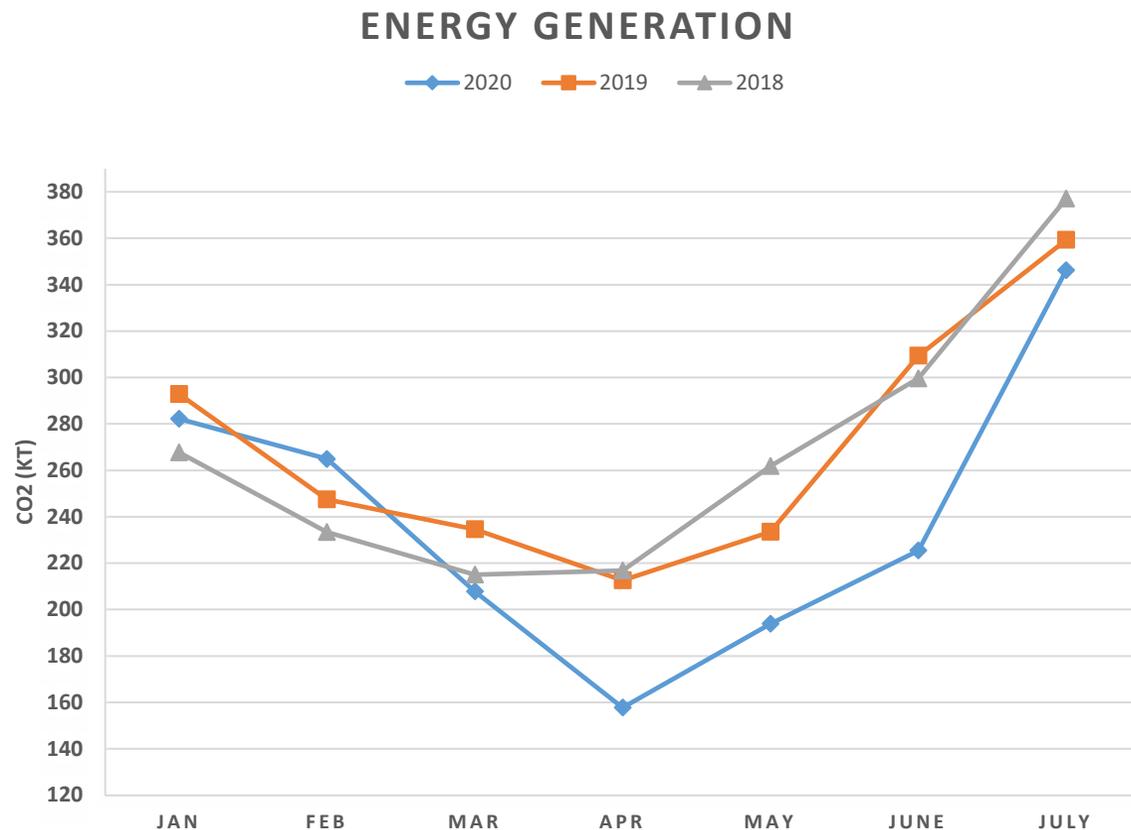
Special Case on COVID-19 in Cyprus, 2020

- The COVID-19 pandemic was confirmed to have reached Cyprus in March 2020, with the first cases confirmed on the 9th of March 2020. On the 11th and 13th of March the first government policies were announced.
- On the 24th of March the more policies were added to the previous ones (night curfew, movements restricted to 3 times a day etc.)
- On the 2nd of April, mandatory national 'lockdown' that required household confinement of all but key workers was announced. Public gatherings were banned. Personal movements were restricted to once a day.
- The mandatory national 'lockdown' lasted almost a month and a half. Restrictions were lifted gradually from mid-May to beginning of June, going back to normal daily routines ends of June and July. Policies available at <https://www.pio.gov.cy/coronavirus/categories/diat>



COVID-19 Impact on Energy Generation CO₂ Emissions

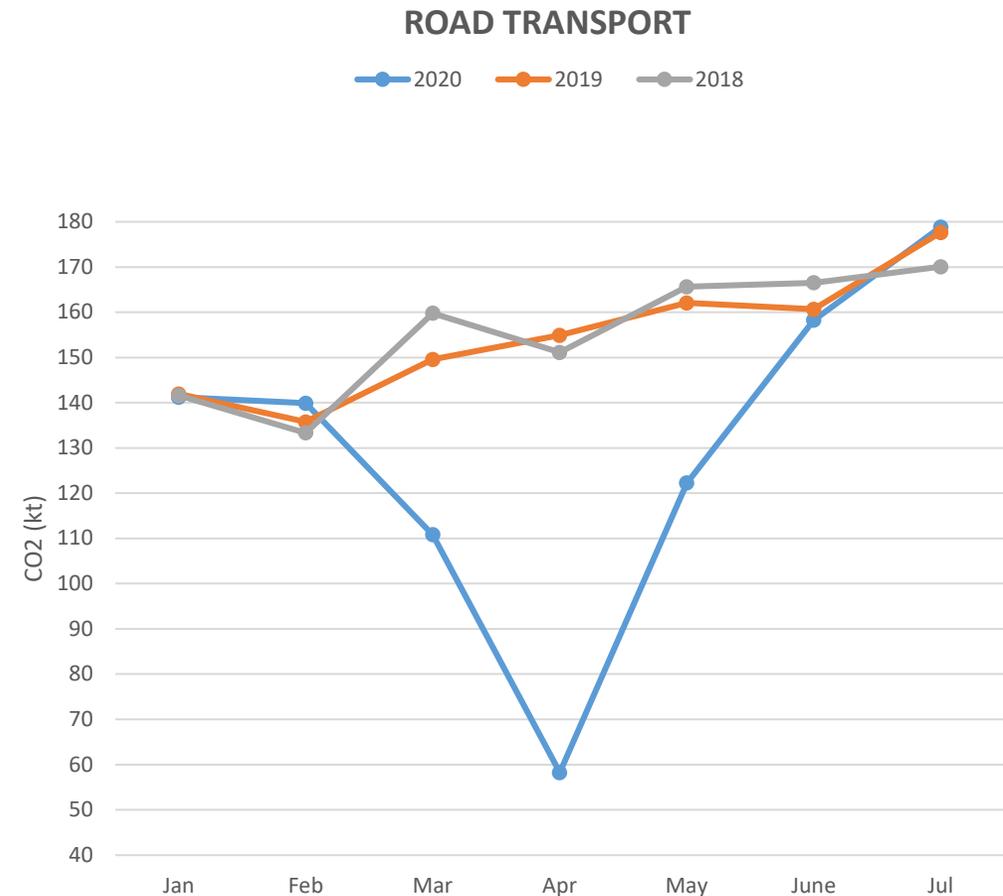
The CO₂ emissions from the power generation sector were calculated for the years 2018, 2019 and 2020 as to compare the relative change with conditions before the COVID-19, using the conversion CO₂ (tones)/MWh produced: 0.730574, given by the Electricity Authority of Cyprus, EAC.



- The maximum CO₂ emissions decrease was in April, with -25% less emissions than in April 2019 and -27% compared to April 2018.
- Comparison with other EU countries (Task Force on Emission Inventories and Projections Annual Meeting 2020) :-17% GB, -16% FR, -12% DE, -15% IT, -17% ES.

COVID Impact on Road Transport CO₂ Emissions

- Data available for the lockdown period : Monthly fuel sales from filling stations.
- The maximum decrease in CO₂ emissions was observed in April, with a decrease of -62% compared to April 2019 and -61% to April 2018.
- The emissions in March 2020 were -26% and -30% less than March 2019 and 2018 respectively.
- Almost no changes were observed in July 2020 compared to July 2019 and July 2018 which coincides with the removal of the restrictions.
- No data regarding biofuels was available but their weight in the total emissions for the previous years is very low.
- Comparison with other EU countries (**TFEIP Annual Meeting 2020**) : ECMWF estimate 60% decrease in road traffic.



Thank you!



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ENVIRONMENT**



CoCO2

Prototype system for a
Copernicus CO₂ service