



JRC SCIENCE FOR POLICY REPORT

# Fossil CO<sub>2</sub> & GHG emissions of all world countries

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#### **Fossil CO<sub>2</sub> & GHG emissions of all world countries**

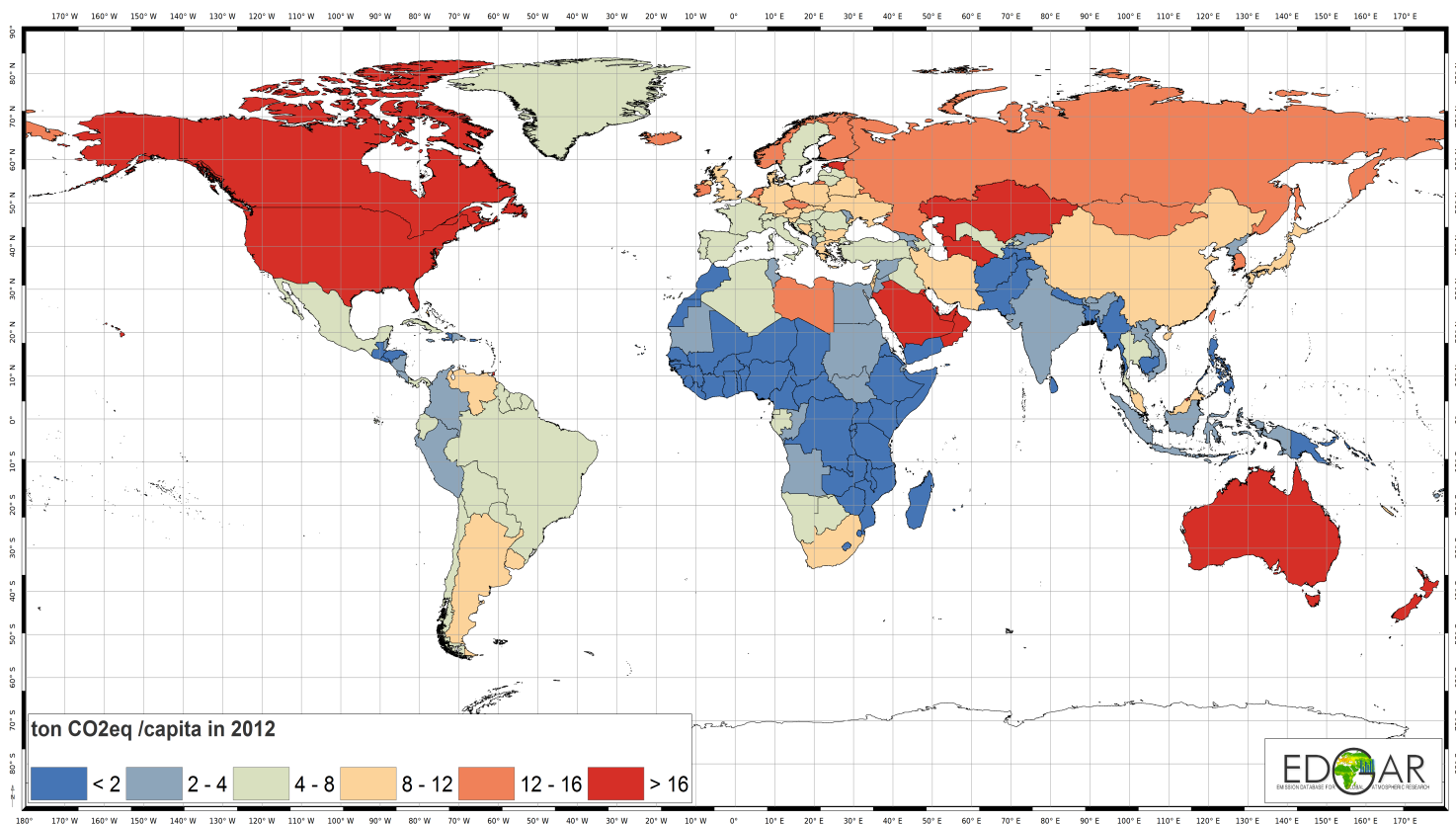
The Paris Agreement plans global stocktakes, to which the UNFCCC GHG emission inventories are the primary input. To complete this picture, the Emissions Database for Global Atmospheric Research provides for all world countries emission timeseries from 1970 until 2016 for CO<sub>2</sub> and until 2012 for the other GHGs.



European  
Commission

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EDGAR  
EMISSION DATABASE FOR GLOBAL ATMOSPHERIC RESEARCH

Joint  
Research  
Centre

# **CO<sub>2</sub> and GHG emissions of all world countries**

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## Executive summary

### Policy context

Part of the Paris Agreement is the implementation of a transparency framework to be implemented bottom-up based on the national GHG emission inventories of all Parties reported to the UNFCCC. In addition, 5-yearly global stocktakes are planned from 2023 onwards to monitor emission trends and the efforts of the individual Parties. Reported inventories however neither cover the entire globe, nor the entire time period. The Commission's in-house Emissions Database for Global Atmospheric Research (EDGAR) estimates anthropogenic greenhouse gas emissions for all world countries thereby contributing to enhanced transparency and completing the global picture with time series for each country from 1970 to 2016 for CO<sub>2</sub> and until 2012 for the other GHGs. These data provide scientific estimates of GHG emissions for the different Parties and support the role of the European Commission in the climate negotiations at the 23<sup>rd</sup> Conference of Parties.

### Key conclusions

EDGARv4.3.2 is a comprehensive database of anthropogenic emission time series from 1970 until 2016 for CO<sub>2</sub> and until 2012 for the other GHGs. All human activities, except large-scale biomass burning and land use, land-use change and forestry are included and the IPCC sectoral classification is used. A consistent bottom-up emissions calculation methodology is applied to all countries, which allows the inventories of different countries to be compared with the same level of detail and data limitations. For developing countries with less strong statistical data infrastructure and experience in reporting, EDGARv4.3.2 can provide information and help to comply with their future inventory requirements. As such EDGARv4.3.2 can complete the emission trends for all countries and contribute to the comprehensive picture needed for the UNFCCC's global stock take of 2023.

The global GHG emissions trend has increased since the beginning of the 21<sup>st</sup> century in comparison to the three previous decades, mainly driven by the increase in CO<sub>2</sub> emissions from China and the other emerging economies. By comparison, the GHG emissions trend in the EU28 is decreasing due to rather stable CO<sub>2</sub> emissions and a smooth continuous reduction in CH<sub>4</sub> emissions. Even though the overall uncertainty of global emissions has increased because of the increasing share of GHG emissions from emerging economies, for Europe the uncertainty has decreased because of progress in inventory compilation and the reduction in more uncertain CH<sub>4</sub> emissions. The dataset for CO<sub>2</sub> was extended until 2016, based on recent energy and product statistics (EDGARv4.3.2\_FT2016). This dataset shows that global anthropogenic CO<sub>2</sub> emissions are effectively constant for the third year in a row plateauing at 35.8 Gton CO<sub>2</sub> in 2016. The 0.3% increase in 2016 from 2015 can be entirely attributed to the extra day as 2016 was a leap year. While CO<sub>2</sub> emissions from the US fell by 2.0% in 2016 compared to 2015, there was little change in emissions from China with -0.3% and the EU28 with +0.2%. The EU28 emissions have fallen over the past two decades reaching 3.4 Gton CO<sub>2</sub> in 2016, a reduction of 20.8% compared to 1990. Since 2015 the EU share of the global total has remained constant at 9.6% equivalent to 6.8 ton CO<sub>2</sub>/cap/yr.

## **Main findings**

In 2016, China, US, EU28, India, Russia and Japan, the world's largest emitters in decreasing order of CO<sub>2</sub> emissions, accounted for 51% of the population, 65% of global Gross Domestic Product, 67% of the total primary energy supply and emitted 68% of total global CO<sub>2</sub> and circa 65% of total global GHGs. Emissions from international transport (aviation and shipping) contribute another 3% to the total global GHG emissions.

These six countries show different trends: with 2% decreases for US and Russia, a 1% decrease for Japan, constant emissions for China and EU28 and a 5% increase for India. India does not show yet any decoupling of their emissions growth from their economic growth, unlike Brazil, where emissions fell by 6%.

Emissions are increasing in other developing countries: 6% for Indonesia and Malaysia; 9% for Pakistan and 12% for the Philippines. Also in Eurasia emissions grew in Turkey (5%) and Ukraine (8%).

Within the EU28 the trends vary between countries with decreases of 6% for the UK and Bulgaria and of 3% for Greece and Spain, while increases of 5% in Ireland and Denmark and of 4% in Sweden and Finland occurred.

## **Related and future JRC work**

This CO<sub>2</sub>/GHG booklet provides the background data behind the CO<sub>2</sub> reports, which have been published annually by the Netherlands Environmental Assessment Agency and the European Commission Joint Research Centre. The CO<sub>2</sub> report series started in 2009 and provide up-to-date knowledge on the trend of global CO<sub>2</sub> emissions.

## **Quick guide**

The GHG emissions presented for all world countries include the emissions of CO<sub>2</sub>, CH<sub>4</sub> and N<sub>2</sub>O of all anthropogenic sectors, excluding large-scale biomass burning and the land use, land-use change and forestry sectors. These emissions were calculated bottom-up using international statistics for the activity data (such as fuel consumption or crops) and IPCC (2006) values for the emission factors. While the uncertainty in CO<sub>2</sub> emissions is generally low (below 10%), the uncertainty in CH<sub>4</sub> and N<sub>2</sub>O emissions is much larger. Moreover, while statistical data until 2016 are available for all major CO<sub>2</sub> sources, no global agriculture statistics are available yet beyond 2014 and this sector is an important source of CH<sub>4</sub> and N<sub>2</sub>O.

## Introduction

### Scope

In December 2015, the Paris Agreement brought all nations into a common cause to undertake ambitious efforts to combat climate change and required all Parties to put forward their best efforts through “nationally determined contributions”. Acknowledging the need to ensure environmental integrity it creates a transparency framework and plans 5-yearly global stock takes from 2023 onwards. The Emissions Database for Global Atmospheric Research (EDGAR) database is a unique geographically resolved global database that estimates global emissions of CO<sub>2</sub> and other greenhouse gases. As such it can contribute to the efforts to increase transparency. This report gives an overview of the country level emissions of CO<sub>2</sub>, CH<sub>4</sub> and N<sub>2</sub>O, the three major greenhouse gases (GHG), estimated by EDGAR. While information on energy-related activities is produced annually (including 2016), comparable updates are not available for agricultural activities. As such, the report provides CO<sub>2</sub> emission estimates until 2016, while the overall greenhouse gas time series are provided until 2012.

The framework and experience in compiling emissions inventories is shared and compared within the international emissions community of the Global Emissions Initiative (GEIA). In addition, EDGAR supports the IPCC Task Force on National Greenhouse Gas Inventories, compiling and refining guidelines for national GHG emission inventories. Moreover, EDGAR reaches out to developing regions with training support and knowledge databases to visualise emission hot spots.

### Overview

For each country, ordered alphabetically, this publication provides a fact sheet with time series of CO<sub>2</sub> and other GHG emissions from all anthropogenic activities except land use, land-use change, forestry and large scale biomass burning. The upper panel includes the fossil CO<sub>2</sub> annual totals from 1990 until 2016 per sector, and the bottom panel shows the GHG annual totals from 1970 until 2012 per substance (CO<sub>2</sub>, CH<sub>4</sub> and N<sub>2</sub>O, neglecting F-gases). The first two fact sheets present the world totals (including international shipping and aviation) and the EU28 region, with all 28 European countries (Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic (Czechia), Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, United Kingdom).

Key findings of the data trends are summarised in the first two sections on CO<sub>2</sub> and GHG, respectively. For a more comprehensive description of the CO<sub>2</sub> trends we refer to the annual update of the companion publication “Trends in Global CO<sub>2</sub> and GHG Emissions – 2017 Report” by Olivier et al. (2017).

At the end of the report, details on the bottom-up methodology applied for the EDGAR emissions compilation is reported together with the data sources and references used. Finally, concluding remarks are also provided. Country-specific CO<sub>2</sub> and other GHG emission timeseries can be downloaded at the following website: <http://edgar.jrc.ec.europa.eu/overview.php?v=CO2andGHG1970-2016>.



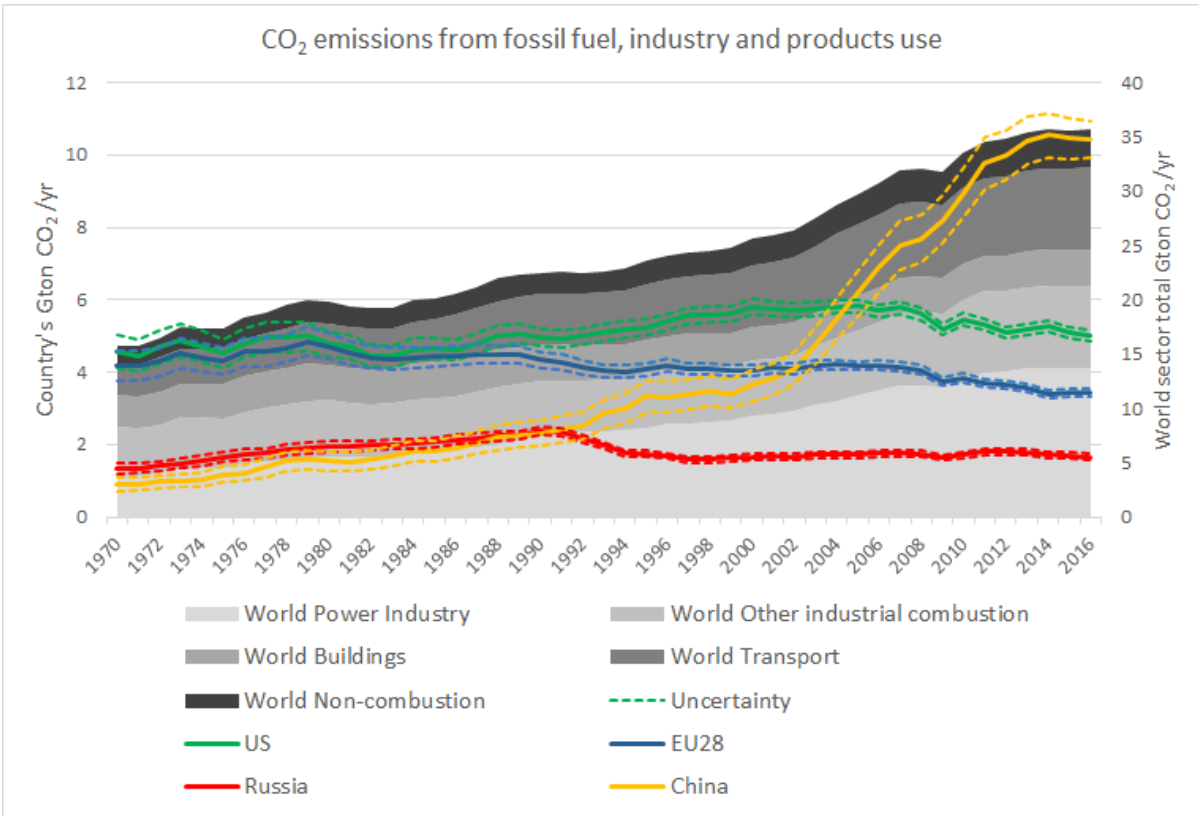
## EDGAR's Global Fossil CO<sub>2</sub> Emissions from 1990 until 2016

The Emissions Database for Global Atmospheric Research (EDGAR) supports policy making in the area of climate, energy and air pollution with independent in-house datasets on emissions of anthropogenic activities and has established a complete new inventory under the version EDGAR v4.3.2 for the period 1970-2012.

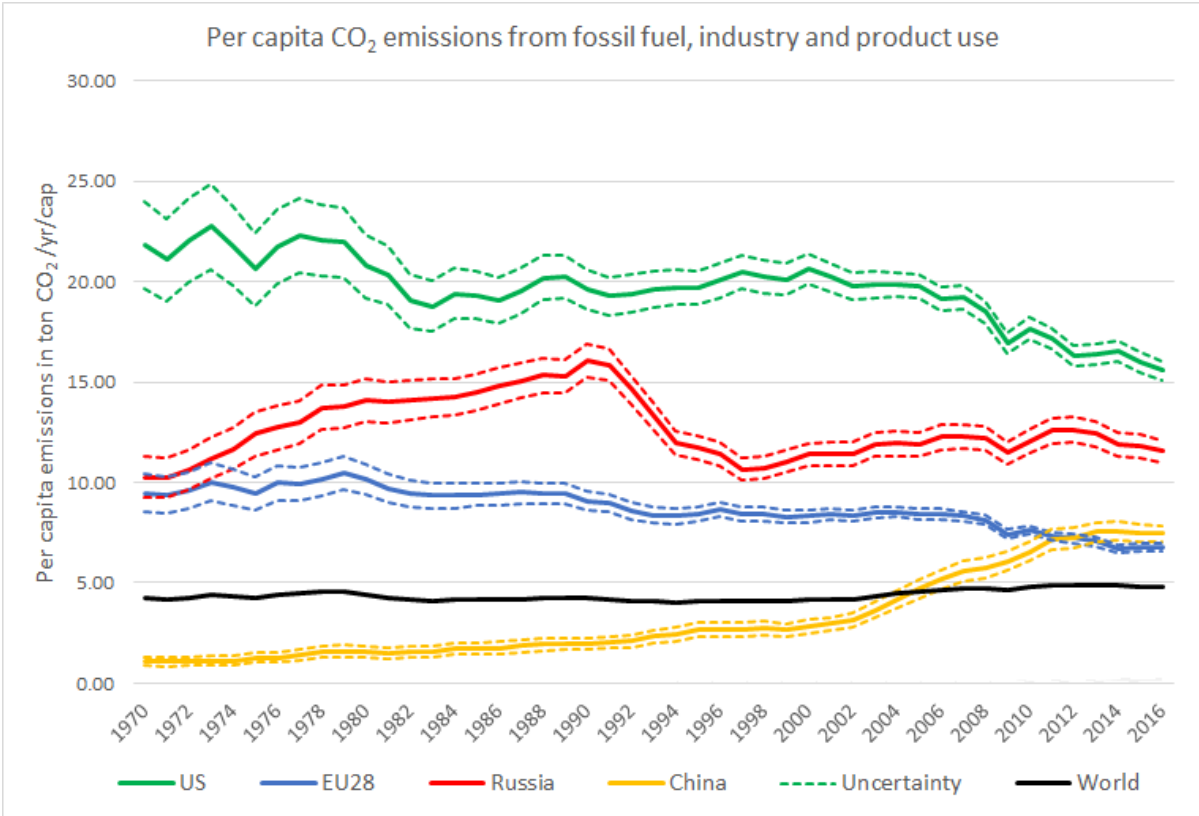
In addition, the Emissions Database for Global Atmospheric Research (latest version: EDGARv4.3.2\_FT2016) is updated annually for fossil CO<sub>2</sub> emissions only. A so called Fast Track (FT) approach is used for the years 2013-2016 when official statistical data are not yet available. This FT update is based on the most recent activity data of various sources as well as information on energy reduction measures and policies, and then estimates the impact on fossil CO<sub>2</sub> emissions. As with the standard EDGARv4.3.2 version, the long term historic data is based on IEA (2014) energy statistics. The fossil CO<sub>2</sub> emissions include all anthropogenic emissions from fossil fuel (combustion and production) and from processes (cement, steel, liming, urea and ammonia production or consumption). Activity datasets used are based on a variety of latest statistical information from IEA, BP, USGS, WSA and IFA.

Time series of annual total fossil CO<sub>2</sub> emissions for each country are presented in this publication in the upper graph of each country fact sheet. Emissions for the major emitting countries and regions are briefly discussed, as well as the per capita and per GDP trends. For a more detailed description of our findings for the EU28 and the five largest emitting countries, we refer to the companion publication "Trends in Global CO<sub>2</sub> Emissions – 2017 Report". The uncertainty in fossil CO<sub>2</sub> emissions is relatively small (below 5% for industrialised countries and below 15% for developing countries).

**Global** CO<sub>2</sub> emissions are stalled for the third year in a row, plateauing with no further increase to a total of 35.8 Gton CO<sub>2</sub> in 2016. The 0.3% increase in 2016 compared to 2015 is due to the extra day in the leap year of 2016. CO<sub>2</sub> emissions in the US (with 14% share of global total) fell by 2%. There was a status quo in emissions with -0.3% and +0.2% change in 2016 compared to 2015 in China (29.2% share of global total) and Europe (9.6% share of global total), respectively. The largest decrease is seen for UK (1.0% share) with -6.4%, Brazil (1.3% share) with -6.1% and Bulgaria (0.1% share) with -6.0% while increases are observed for India (7.1% share of global total) with +4.7%, Indonesia (1.5% share) with +6.4%, Ukraine (0.7% share) with 8.0% and Malaysia (0.7% share) with 6.5%.



Total annual emissions of fossil CO<sub>2</sub> in Gton CO<sub>2</sub>/yr. The fossil CO<sub>2</sub> emissions include sources from fossil fuel and industrial processes and product use (combustion, flaring, cement, iron and steel, chemicals and urea) for the EU28 and large emitting countries with uncertainty (in dashed line) (left axis) and for the world total per sector (right axis).



Per capita CO<sub>2</sub> emissions (in ton CO<sub>2</sub>/cap/yr) for the EU28 and large emitting countries with uncertainty (in dashed line) and for the world average.

**EU28** emissions have decreased over the past two decades, such that emissions in 2016 are 20.8% less than in 1990 and 17.9% less than in 2005. Since 2015 the EU share of the global total has remained constant at 9.6%. In 2016 the EU28 emitted 3.4 Gton CO<sub>2</sub>, corresponding to 6.8 ton CO<sub>2</sub>/cap/yr. This was obtained by a reduction of the 1.1% increase in 2015 compared to 2014 down to a 0.2% in 2016 compared to 2015. The 0.2% increase in 2016 can be explained by it being a leap year, so effectively CO<sub>2</sub> emission rates for the EU28 have remained constant over the past 2 years within the uncertainties. The EDGARv4.3.2\_FT2016 emission estimates agree with less than 3% difference to the EU-28 inventory submitted to UNFCCC and show 1% difference for the CO<sub>2</sub> trends compared to UNFCCC ones. However, in particular for the early 1990s, inventories for countries that were part of the Soviet Union or part of Yugoslavia before their breakup are reconstructed assuming representative shares for these countries with economies in transition and are subject to larger uncertainties. There is no increase in CO<sub>2</sub> emissions from fossil fuel combustion, whereas cement and lime production emissions increased by 6.4% in 2016, almost double the increase in 2015. Eurostat (May 2017) estimate that the CO<sub>2</sub> emissions from fossil fuel combustion in the EU decreased slightly by 0.4%. According to BP (2017) the almost constant CO<sub>2</sub> emissions from fossil fuel combustion in 2016 are the result of a 9% fall in coal consumption, a 0.5% increase in renewables and a 1.7% increase in hydro, offset by a 7.2 % increase in gas consumption, and a 1.8% increase in oil consumption. Economic growth at 1.9% continues to be decoupled from growth in emissions. At the end of 2016, Germany and Denmark were the world leaders in installed per capita capacity of Solar PV and wind respectively (REN21, 2017).

**China's** CO<sub>2</sub> emissions have decreased since 2015 with a further 0.3% in 2016, which is similar to the decrease in 2015 after leap year correction. Equivalent per capita CO<sub>2</sub> emissions of 7.4 ton CO<sub>2</sub>/cap/yr are similar to the European average while per GDP CO<sub>2</sub> emissions are 0.5 ton CO<sub>2</sub> /1000 USD /yr. This results mainly from the decrease in coal consumption, despite the increase in oil and gas consumption during the colder winter of 2016. Since 2012 the total primary energy supply (i.e. consumption) (TPES) in China has increased by 10%, while the Gross Domestic Product (GDP) on PPP basis grew by 31% in that period (about 7% per year). Power generation increased with 5.6% in 2016 but with an increased share of nuclear energy and renewables.

**US** CO<sub>2</sub> emissions peaked in 2005. They are 14% less in 2016 compared to 2005, whereas the population has increased by 12% over this period. Total CO<sub>2</sub> emissions of 5.0 Gton decreased by about 2.7% in 2015 and 2.0% in 2016, virtually all from fossil fuel combustion (BP, 2017). When correcting for the extra day in 2016, the rate of emission reduction in 2016 was very similar to that for 2015. The 97% share of total CO<sub>2</sub> emissions from fossil fuel combustion is the highest among the G20 countries. In 2016, the decrease in CO<sub>2</sub>/GDP was 3.7%, slightly more than the 5-year average. The CO<sub>2</sub>/capita has decreased by 2.7%. The continuing decline in CO<sub>2</sub> emissions is mostly due to substitution of coal by gas and renewables in power plants. The 2.0% CO<sub>2</sub> reduction in 2016 is almost entirely due to a 8.5% decline of coal use, partially offset by small rises (~1%) in gas and oil consumption (BP, 2017).

**India's** CO<sub>2</sub> emissions continued to increase to 2.5 Gton CO<sub>2</sub> in 2016, 4.7% more than in 2015. This annual increase is a little below the average annual increase of 7.5% per year for the period 2006–2012. India's emissions already surpassed those of the Russian Federation in 2009 and with a share of 7.1% of total global CO<sub>2</sub> emissions, India is the next largest emitting country after China, the United States and the EU28. However, India's per capita emissions of 1.9 ton CO<sub>2</sub>/cap/yr are more than four times lower than the average per capita emissions of China and the EU28, eight times lower than the average per capita emissions of the United States and lower even than average per capita emissions in many developing countries. India's emissions are not yet decoupled from GDP growth. The major contribution to India's growing emissions is the 5.7%/yr increase in Total Primary Energy Supply (TPES), 57% of which is supplied by coal. Annual coal consumption increased with 3.6% whereas annual oil consumption increased by 8.6% (with a 29.4 % share of TPES), according to BP (2017).

The **Russian Federation's** CO<sub>2</sub> emissions decreased by 2.1% to about 1.66 Gton, the fourth year in a row since 2013 with average decreases of about 2%/yr. The 36 Mton of CO<sub>2</sub> saved, in 2016 is of the same order of magnitude as the 30 Mton decrease in Chinese emissions in 2016. Unlike China, this decrease seems related to the 0.2 % decrease in GDP in 2016 (World Bank, 2017). Russia's share of global CO<sub>2</sub> emissions fell to 4.7% in 2016, which is 0.5% lower than the share in 2011 (5.2%). The decrease in CO<sub>2</sub> emissions in 2016 was mainly due to a decrease in the consumption of coal by 5.3%, and natural gas by 3.0%; oil consumption increased by 2.6% instead (BP, 2017). The Russian Federation's per capita emissions of 11.5 ton CO<sub>2</sub>/cap/yr are 36%, 38% and 17% higher than those of China, EU28 and Japan respectively and 35% lower than per capita emissions of the United States.

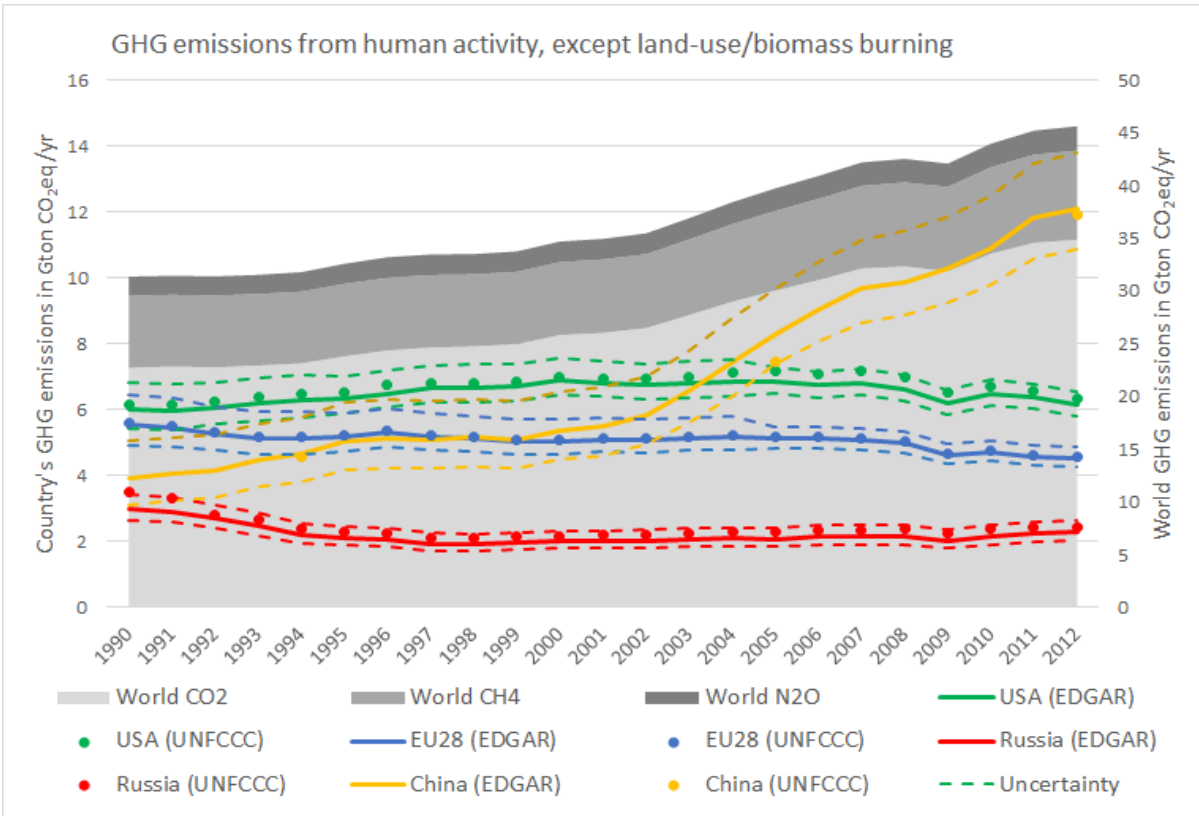
**Japan** further decreased its CO<sub>2</sub> emissions in 2016 by 1.2%, less than observed in 2015 (-2.2%), yielding a 3.5% share in global CO<sub>2</sub> emissions and a total of 1.2 Gton CO<sub>2</sub>. Japan's per capita emissions of 9.7 ton CO<sub>2</sub>/cap/yr are of the same order of magnitude as those of Germany (9.5) and the Netherlands (9.6) even though Japanese GDP, which increased by 1% in 2016, is about one third higher than that of Germany. This increase is small but positive and comparable to that of the year before (1.2%). 2016 is the third year in a row that GDP growth was combined with a fall in emissions giving signs of potential structural changes in the economy, decoupling economic growth from emissions growth. In 2016, the TPES was 0.1% less than in 2015; the shares in total TPES for oil decreased from 42.4% in 2015 to 41.4% in 2016 and for nuclear energy and renewables increased from 0.2% to 0.9% and from 3.3% to 4.2% respectively; oil consumption decreased by 2.5%/yr and coal consumption remained unchanged (BP, 2017).

## EDGAR's Global Greenhouse Gas Emissions for the Period 1970-2012

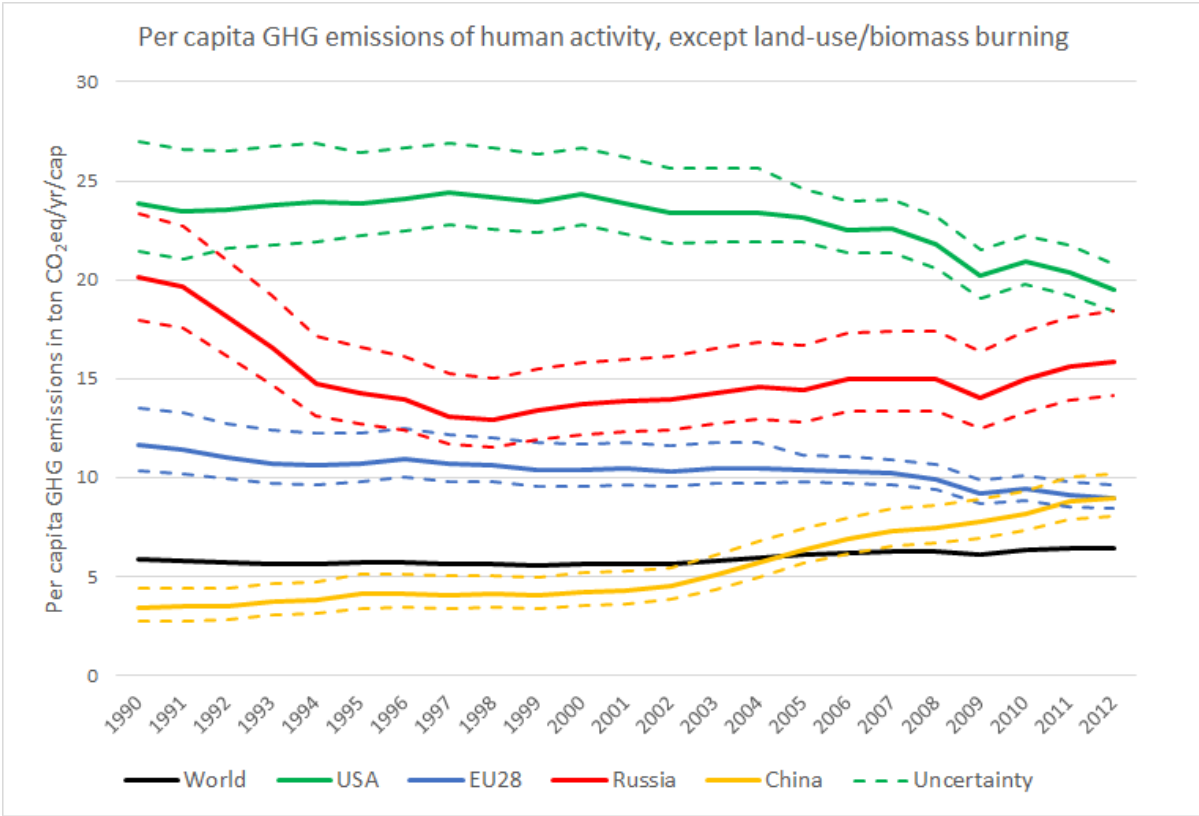
The EDGARv4.3.2 database is not only unique in its space and time coverage, but also in its completeness and consistency of the emissions compilations for multiple pollutants: the greenhouse gases (GHG), air pollutants and aerosols. The new version v4.3.2 of the EDGAR emission inventory provides global emission estimates for all anthropogenic activities except the land-use, land-use change and forestry sector (including Forest fires and Savannah burning). The dataset is available at disaggregated country and source-sector level, from 1970 until 2012, the end of the first commitment period of the Kyoto Protocol. We note the large uncertainty range around the estimates. The comparison with the UNFCCC values show that the emission estimates are within the uncertainty range, but also that the annual variation is much smaller than the uncertainty as such no recent trends are presented.

EDGARv4.3.2 estimates by region/country for the three major Greenhouse Gases (CO<sub>2</sub>, CH<sub>4</sub> and N<sub>2</sub>O, summed in CO<sub>2</sub> equivalent using the GWP-100 metric of AR4) and for the per capita GHG emissions are given in the lower figure of each fact sheet. GHG emissions for the major emitting countries and regions are briefly described, as well as the per capita and per GDP trends. For a more detailed description of our findings for the EU28 and the five largest emitting countries, we refer to the ESSD publication of Janssens-Maenhout et al. (2017).

**Global** GHG emissions are dominated by the fossil CO<sub>2</sub> share and increased steadily over the entire period 1970-2012 from 24.3 to 46.4 Gton CO<sub>2</sub>eq/yr, with an overall increase in total GHG emissions of 91%. Per capita GHG emissions decreased in the 1980s and 1990s to a minimum of 5.7 ton CO<sub>2</sub>eq/cap/yr but have increased by 13% from 2002 to 2012 to reach 6.5 ton CO<sub>2</sub>eq/cap/yr. CH<sub>4</sub> and N<sub>2</sub>O emissions were 27% and 7% of the global total respectively in 1970 and decreased to 19% and 6% respectively by 2012. This corresponded to a shift in primarily the emerging economies from agricultural societies, with a large share of N<sub>2</sub>O and CH<sub>4</sub> emissions coming from agricultural activities to industrialised economies, with strongly increasing fossil CO<sub>2</sub> emissions in the energy and industrial sectors.



Total annual GHG emissions in Gton CO<sub>2</sub>eq/yr from all anthropogenic activities, except land use, land-use change, forestry, forest fires and savannah burning for the EU28 and large emitting countries with uncertainty (in dashed line) (left axis) and for the world total per contributing gas (CO<sub>2</sub>, CH<sub>4</sub> and N<sub>2</sub>O) (right axis). The AR4 GWP coefficients of 25 and 298 have been used to calculate the CO<sub>2</sub>eq for CH<sub>4</sub> and N<sub>2</sub>O.



Per capita GHG emissions (in ton CO<sub>2</sub>eq/cap/yr) for the EU28 and large emitting countries with uncertainty (in dashed line) and for the world average. Excluded are land-use, land-use change, forestry activities and forest fires and Savannah burning. AR4 GWP coefficients of 25 for CH<sub>4</sub> and 298 for N<sub>2</sub>O were applied.

**EU28** GHG emissions have decreased since the eighties and the 4577 Mton CO<sub>2</sub>eq/yr GHG emissions in 2012 represent a reduction of 18% compared to 1990 and 16% compared to 1970. In the seventies, emissions were characterised by an increase of 12% over the entire decade, whereas in the eighties and nineties decreases of 8% respectively 9% were obtained. The decrease in emissions has slowed since 2000 with a reduction of 6% in 2010 compared to 2000. The EDGARv4.3.2 GHG emission trends differ by 2% from the reported UNFCCC trends for EU28. The EU28 GHG emissions are dominated by fossil CO<sub>2</sub> emissions which contribute for more than two thirds to the total GHGs (ranging from 77.1% to 82.5% over time). CH<sub>4</sub> contributes from 12% to 15.4% and it is mainly emitted by agricultural activities (enteric fermentation and manure management, representing 35.4% to 44.0% of CH<sub>4</sub> emissions), production of coal and gas (representing 18.4% to 28.5% of CH<sub>4</sub> emissions with the predominant share currently coming from gas production and distribution) and waste treatment and disposal (representing 28.8% to 36.8% of CH<sub>4</sub> emissions). The top six emitting countries of Europe generate more than 60% of CH<sub>4</sub> emissions and are Germany (in average 16.2%), UK (14.8%), Poland (13.4%), France (10.5%), Italy (7.0%) and Spain (5.4%). Overall CH<sub>4</sub> landfills emissions have decreased pattern from 1996 onwards; however, individual countries have behaved differently. With the exception of Spain and Portugal, most Western EU countries strongly reduced their CH<sub>4</sub> emissions from landfills over time, while stable or increasing emissions observed for Eastern EU countries (in particular for Romania, Slovakia, Hungary and Czech Republic). CH<sub>4</sub> fugitive emissions from coal and gas production also show a decreasing pattern, with most of the reduction associated with the production of coal in Poland, Romania, Germany and Great Britain, while increasing emissions are observed for several EU countries for the gas production sector. N<sub>2</sub>O emissions are 5.5% to 7.7% of the total greenhouse gas emissions and are produced mainly by agricultural soil activities (representing 32.1% to 47.3% of N<sub>2</sub>O emissions) and the production of chemicals (adipic and nitric acid, representing 13.4% to 41.6% of N<sub>2</sub>O emissions). More than 60% of N<sub>2</sub>O emissions are associated with 6 top emitting countries, namely Germany (on average 16.9%), France (16.1%), UK (11.9%), Poland (8.4%), Italy (7.6%), Spain (6.3%).

**China's** GHG emissions increased almost 6 times in the last decades from 2063 Mton CO<sub>2</sub>eq/yr in 1970 to 12102 Mton CO<sub>2</sub>eq/yr in 2012. The shares in 1970, 1990 and 2012 of CH<sub>4</sub> in total CO<sub>2</sub>eq emissions in China were 46.9%, 30.0% and 13.7%, whereas for N<sub>2</sub>O they were 6.7%, 8.1% and 4.3%, respectively. The shares of non-CO<sub>2</sub> GHG decreased considerably over time from 53.6% in 1970 to 38.1% in 1990 reaching 18% in 2012, which show the effects of industrial versus agriculture development on GHG emissions since 1970. With N<sub>2</sub>O and CH<sub>4</sub> added to the GHG emissions budget of China, we observe increases of 27.7% and 26.6% of per capita emissions and per GDP emissions respectively in 2012.

**US** GHG emission time series are dominated by fossil CO<sub>2</sub> emissions which contribute from 82.3% to 86.8% (peak in 2005) to total GHG emissions and represented 84.9% of total greenhouse gases in 2012. CH<sub>4</sub> is the second largest contributor to total greenhouse gases (from 8.9% to 12.4%) with more than 93% of US CH<sub>4</sub> emissions produced by agricultural activities (enteric fermentation and manure management) (range: 30.8%-37.5%), fugitive emissions from the production of oil, gas and coal (range: 31.6%-39.8%) and landfills (range: 19.8%-28.6%). N<sub>2</sub>O emissions represent from 4.3% to 5.5% of total GHG and they are emitted mainly from the agricultural soil sector and partly from the production of chemicals (adipic and nitric acid production).

**India's** GHG emissions continuously increased and had values of 785, 1425 and 3166 Mton CO<sub>2</sub>eq/yr in 1970, 1990 and 2012 respectively. The shares of CH<sub>4</sub> for these three years in total CO<sub>2</sub>eq emissions in India were 60.9%, 43.3%, 25.7% whereas for N<sub>2</sub>O were 9.4%, 10.2% and 7.9% respectively. We note the shift from 70.3% share of non-CO<sub>2</sub> GHG to the total in 1970 to only 33.7% in 2012, due to the decreasing share of agricultural activities. Per capita emissions are 55.3% higher and per GDP emissions are 55.7% higher in 2012 when comparing the CO<sub>2</sub>eq (CO<sub>2</sub>+CH<sub>4</sub>+N<sub>2</sub>O) to the same numbers based on CO<sub>2</sub> alone.

The **Russian Federation's** GHG emissions decreased by 23.4% from 1990-2012 after an increase of 66.3% from 1970 to 1990. This corresponds to a change in GHG emissions from 1791 Mton CO<sub>2</sub>eq/yr in 1970 to 2978 Mton CO<sub>2</sub>eq/yr in 1990, and reaching the level of 2281 Mton CO<sub>2</sub>eq/yr in 2012. The shares of CH<sub>4</sub> for these three years in total CO<sub>2</sub>eq emissions in Russia were 18.5%, 16.8% and 19.1%, whereas for N<sub>2</sub>O were 5.6%, 4.0% and 2.8%, respectively; over the last decade the shares of non-CO<sub>2</sub> GHG in the total were in the range 21-24%. Increases of 30.1% and 30.3% of per capita emissions and per GDP emissions respectively are seen when adding N<sub>2</sub>O and CH<sub>4</sub> to the CO<sub>2</sub> emissions to estimate the budget of the most important GHG emissions for Russia in 2012.

**Japan's** GHG emissions slowly increased over the last decade; in 1970, 1990 and 2012 the levels of emissions were 1001, 1269 and 1369 Mton CO<sub>2</sub>eq/yr, respectively. The shares of CH<sub>4</sub> for these three years in total CO<sub>2</sub>eq emissions in Japan were 11.7%, 6.1% and 3.4%, whereas for N<sub>2</sub>O were 2.6%, 2.5% and 1.6%, respectively. In Japan, the shares of non-CO<sub>2</sub> GHG in the total are small; they decreased from 14.3% in 1970 to 5% in 2012. Adding up the N<sub>2</sub>O and CH<sub>4</sub> emissions to the CO<sub>2</sub> emissions resulted in a value 9.4% higher of per capita emissions and a value 8.3% higher of per GDP emissions in 2012.



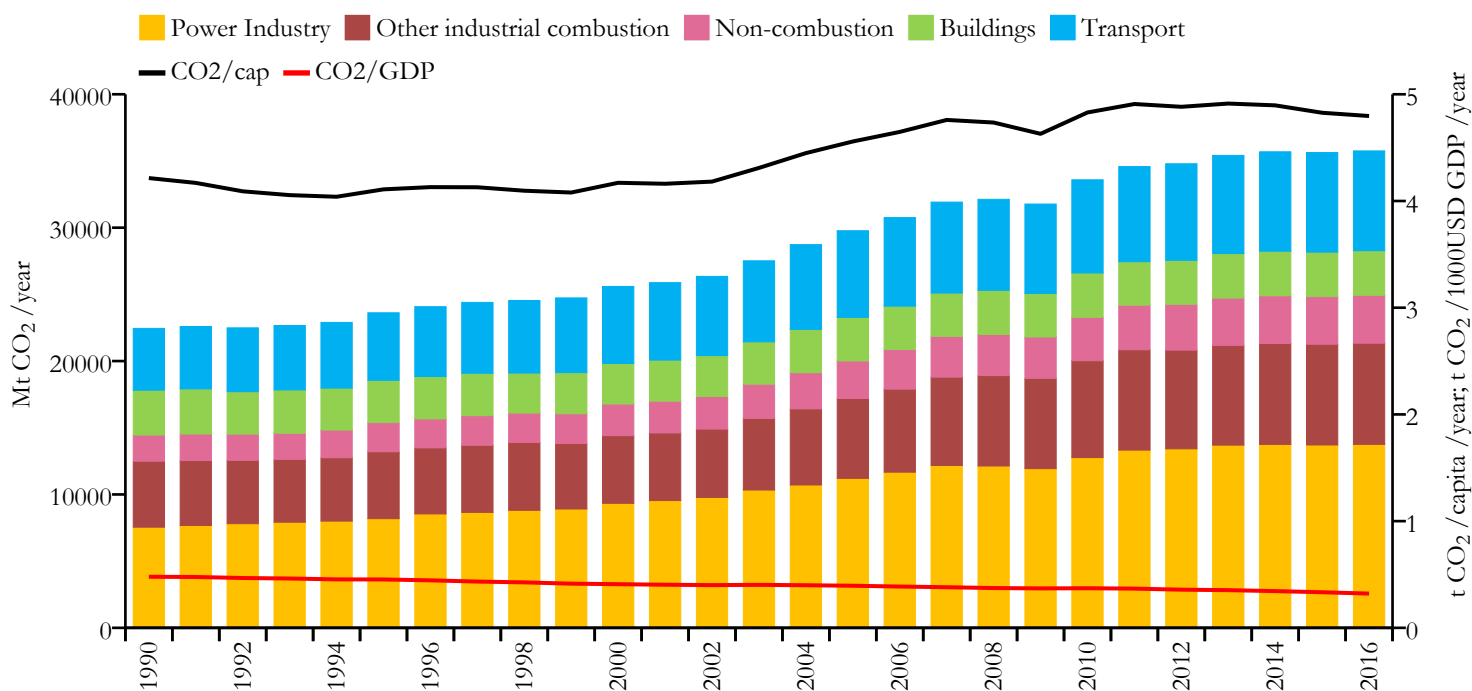
## **Fossil CO<sub>2</sub> and GHG emissions for the world and the EU28**

We present first the global totals for all countries, including international shipping and aviation, followed by the international transport sector (shipping and aviation).

Next, we present total EU28 emissions from the 28 Member States of the EU (2016): Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, United Kingdom.



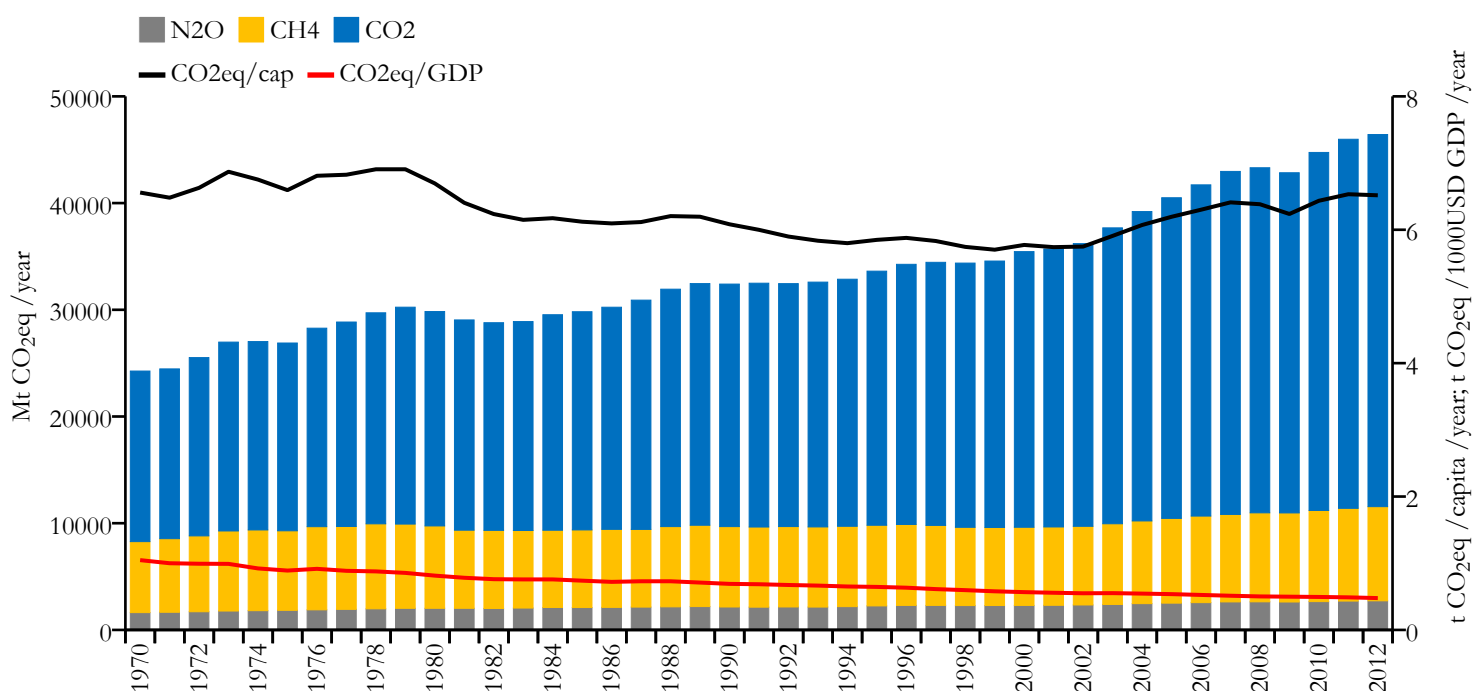
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	35753.306	4.796	0.321	7461900000
1990	22450.442	4.215	0.479	5328680000



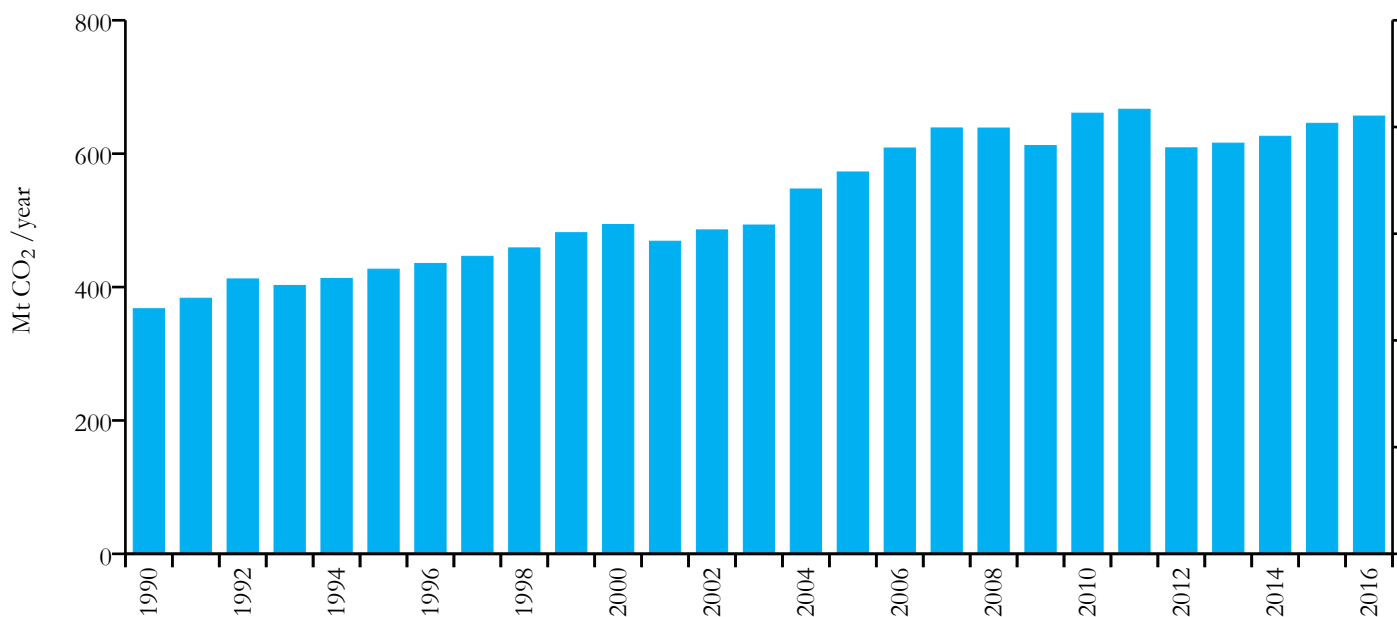
## Greenhouse gas emissions (EDGARv4.3.2 dataset)



# International Shipping

## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)

■ Power Industry 
 ■ Other industrial combustion 
 ■ Non-combustion 
 ■ Buildings 
 ■ Transport

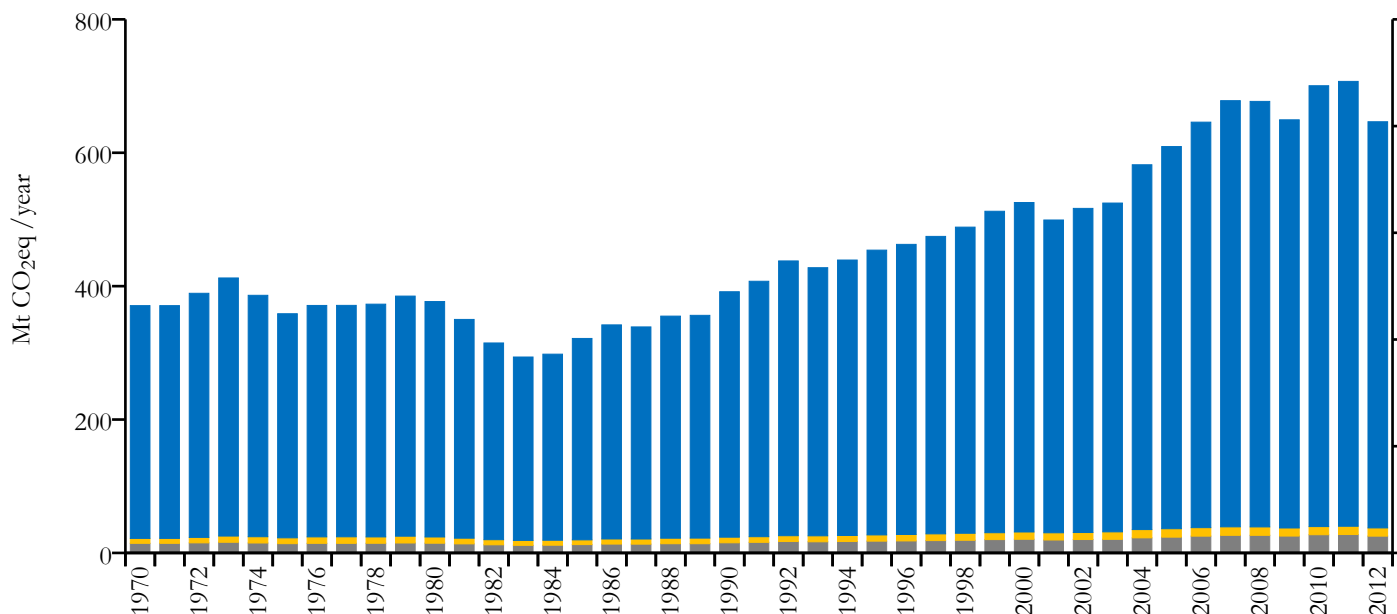


Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	656.369	n/a	n/a	n/a
1990	367.521	n/a	n/a	n/a



## Greenhouse gas emissions (EDGARv4.3.2 dataset)

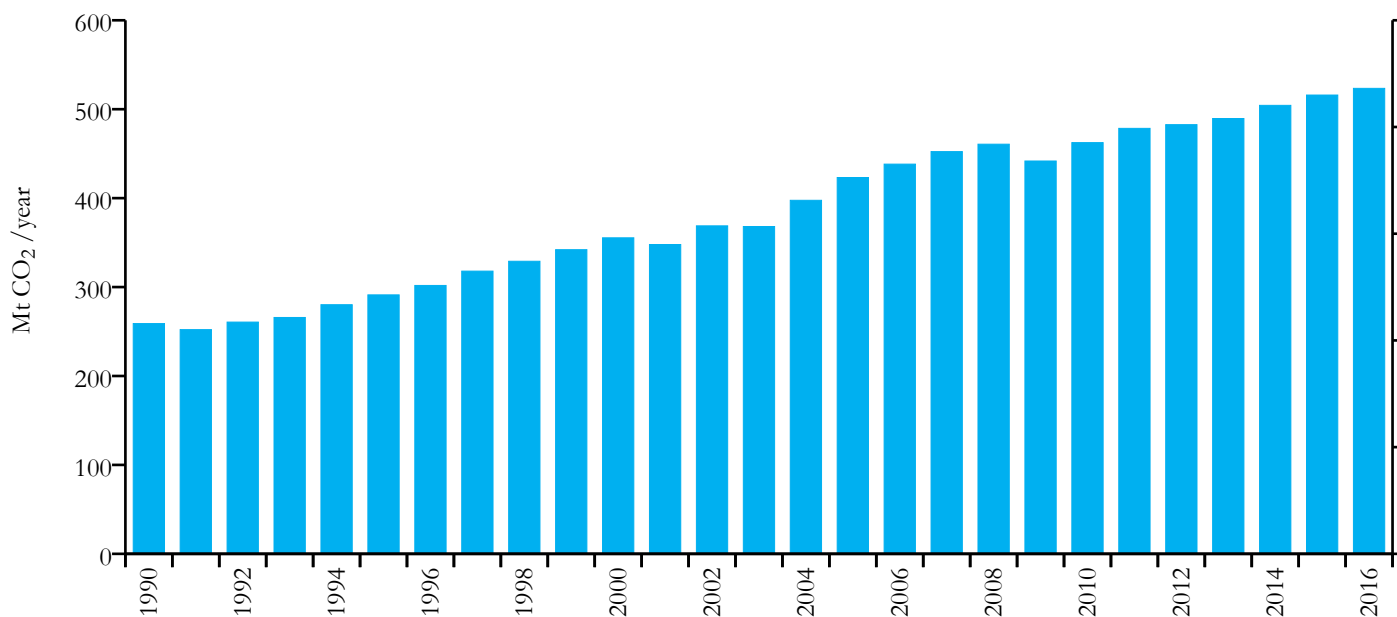
■ N<sub>2</sub>O 
 ■ CH<sub>4</sub>
■ CO<sub>2</sub>



# International Aviation

## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)

■ Power Industry 
 ■ Other industrial combustion 
 ■ Non-combustion 
 ■ Buildings 
 ■ Transport

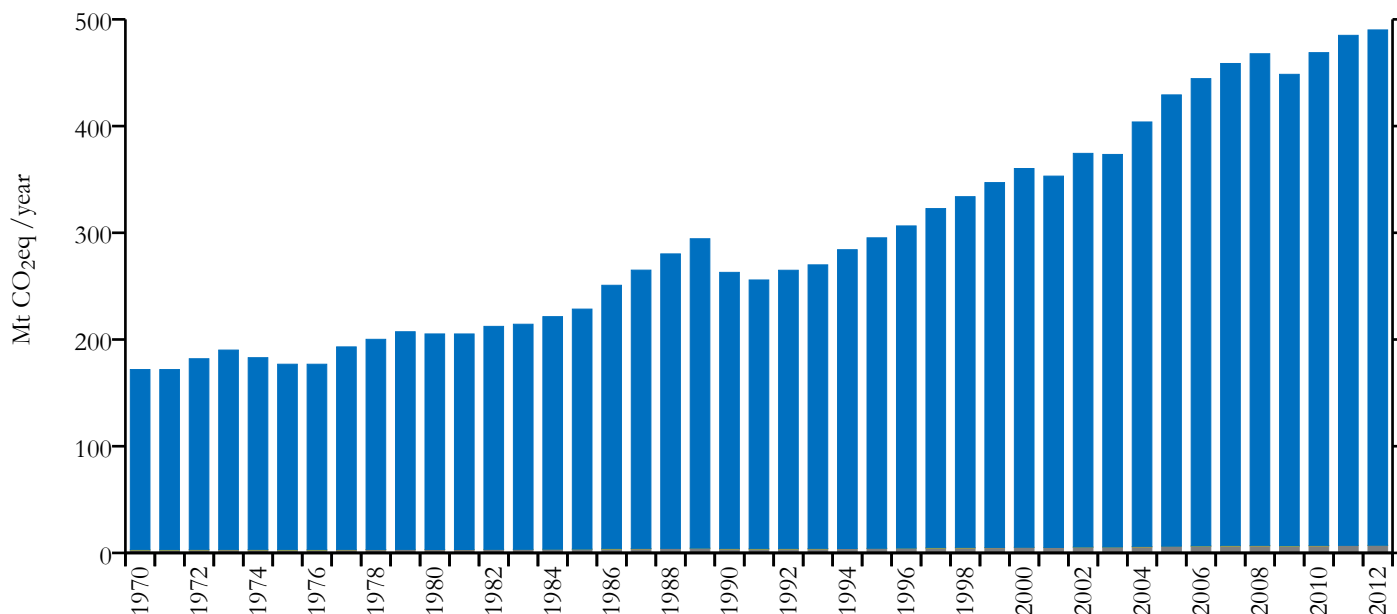


Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	523.454	n/a	n/a	n/a
1990	258.943	n/a	n/a	n/a



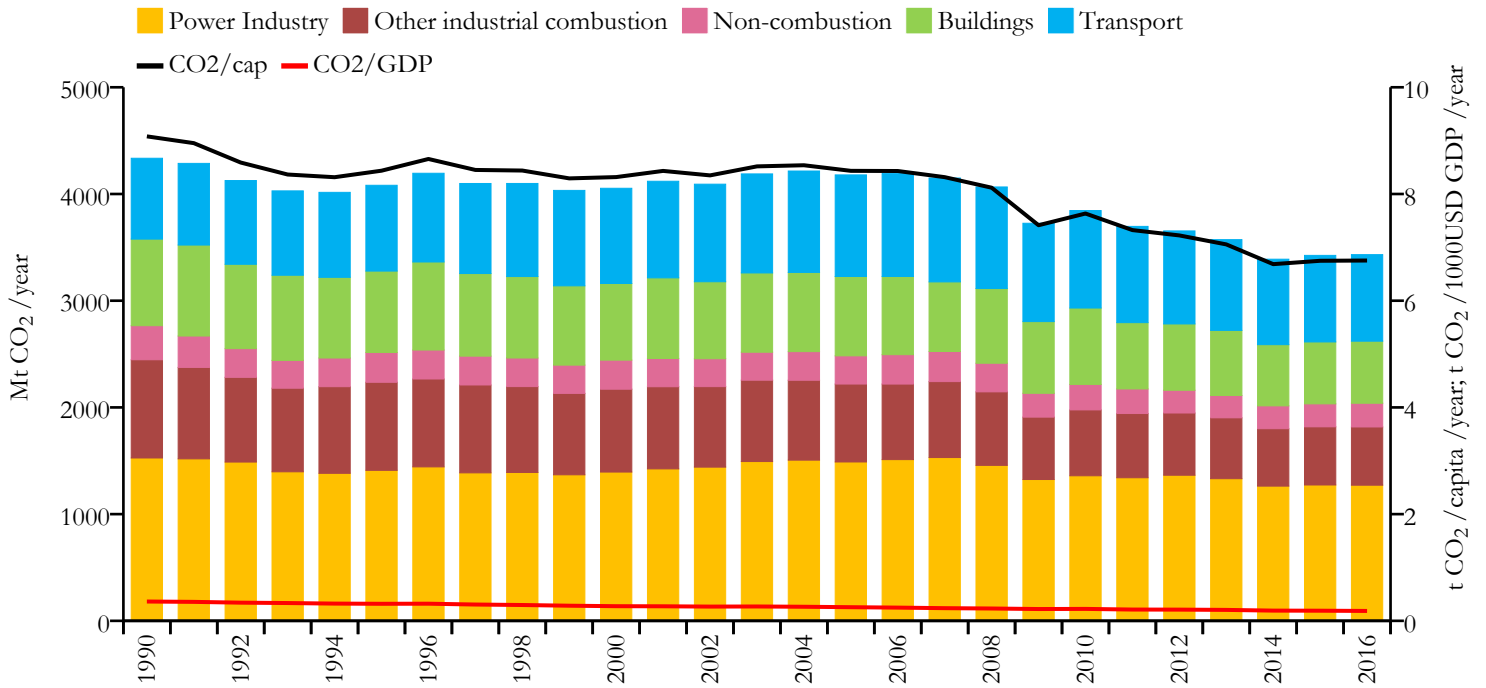
## Greenhouse gas emissions (EDGARv4.3.2 dataset)

■ N<sub>2</sub>O 
 ■ CH<sub>4</sub>
■ CO<sub>2</sub>





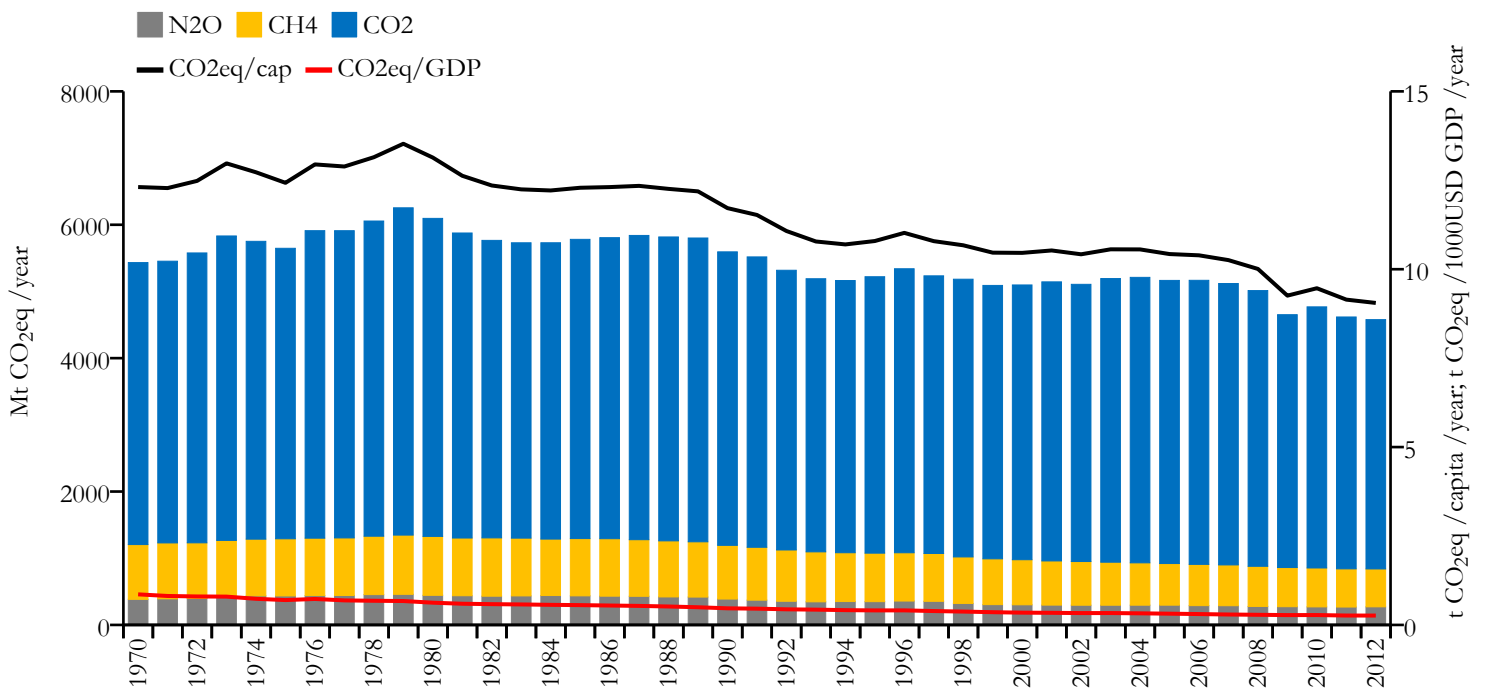
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	3431.656	6.753	0.185	508193000
1990	4334.975	9.080	0.362	477381000



## Greenhouse gas emissions (EDGARv4.3.2 dataset)



## **Fossil CO<sub>2</sub> and GHG emissions by country**

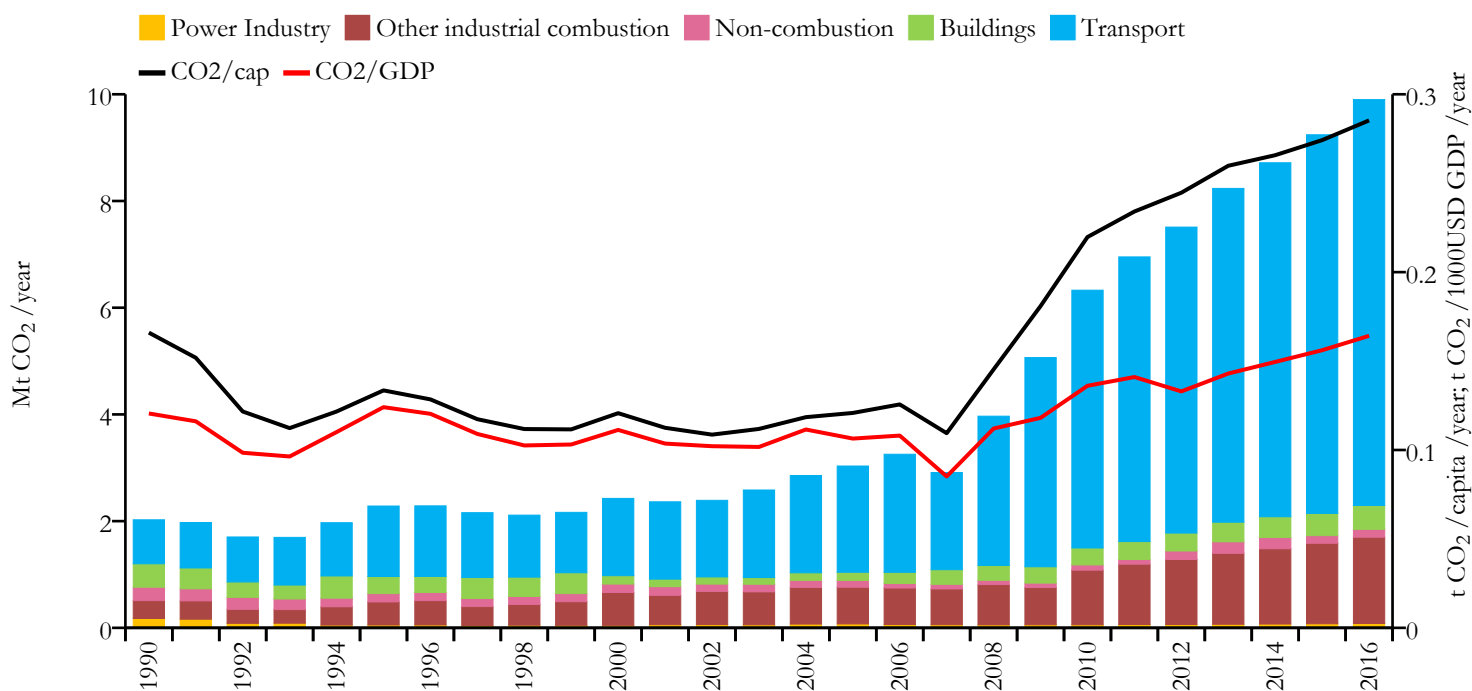
The following countries are presented:

Afghanistan; Albania; Algeria; Angola; Anguilla; Antigua and Barbuda; Argentina; Armenia; Aruba; Australia; Austria; Azerbaijan; Bahamas; Bahrain; Bangladesh; Barbados; Belarus; Belgium; Belize; Benin; Bermuda; Bhutan; Bolivia; Bosnia and Herzegovina; Botswana; Brazil; British Virgin Islands; Brunei; Bulgaria; Burkina Faso; Burundi; Cambodia; Cameroon; Canada; Cape Verde; Cayman Islands; Central African Republic; Chad; Chile; China; Colombia; Comoros; Congo; Cook Islands; Costa Rica; Côte d'Ivoire; Croatia; Cuba; Curaçao; Cyprus; Czech Republic; Democratic Republic of the Congo; Denmark; Djibouti; Dominica; Dominican Republic; Ecuador; Egypt; El Salvador; Equatorial Guinea; Eritrea; Estonia; Ethiopia; Falkland Islands; Faroes; Fiji; Finland; former Yugoslav Republic of Macedonia, the; France and Monaco; French Guiana; French Polynesia; Gabon; Georgia; Germany; Ghana; Gibraltar; Greece; Greenland; Grenada; Guadeloupe; Guatemala; Guinea; Guinea-Bissau; Guyana; Haiti; Honduras; Hong Kong; Hungary; Iceland; India; Indonesia; Iran; Iraq; Ireland; Israel and Palestine, State of; Italy, San Marino and the Holy See; Jamaica; Japan; Jordan; Kazakhstan; Kenya; Kiribati; Kuwait; Kyrgyzstan; Laos; Latvia; Lebanon; Lesotho; Liberia; Libya; Lithuania; Luxembourg; Macao; Madagascar; Malawi; Malaysia; Maldives; Mali; Malta; Martinique; Mauritania; Mauritius; Mexico; Moldova; Mongolia; Morocco; Mozambique; Myanmar/Burma; Namibia; Nepal; Netherlands; New Caledonia; New Zealand; Nicaragua; Niger; Nigeria; North Korea; Norway; Oman; Pakistan; Palau; Panama; Papua New Guinea; Paraguay; Peru; Philippines; Poland; Portugal; Puerto Rico; Qatar; Réunion; Romania; Russia; Rwanda; Saint Helena, Ascension and Tristan da Cunha; Saint Kitts and Nevis; Saint Lucia; Saint Pierre and Miquelon; Saint Vincent and the Grenadines; Samoa; São Tomé and Príncipe; Saudi Arabia; Senegal; Serbia and Montenegro; Seychelles; Sierra Leone; Singapore; Slovakia; Slovenia; Solomon Islands; Somalia; South Africa; South Korea; Spain and Andorra; Sri Lanka; Sudan and South Sudan; Suriname; Swaziland; Sweden; Switzerland and Liechtenstein; Syria; Taiwan; Tajikistan; Tanzania; Thailand; The Gambia; Timor-Leste; Togo; Tonga; Trinidad and Tobago; Tunisia; Turkey; Turkmenistan; Turks and Caicos Islands; Uganda; Ukraine; United Arab Emirates; United Kingdom; United States; Uruguay; Uzbekistan; Vanuatu; Venezuela; Vietnam; Western Sahara; Yemen; Zambia; Zimbabwe.

# Afghanistan



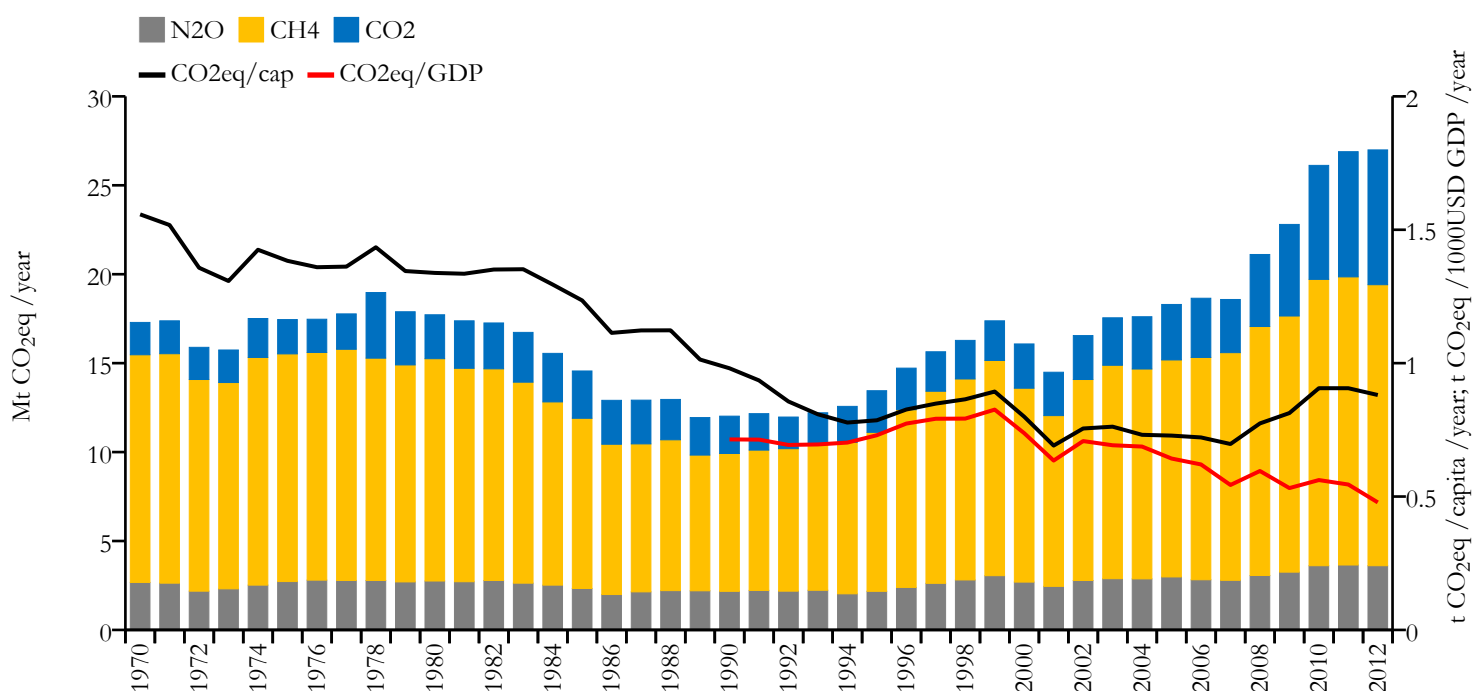
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	9.900	0.285	0.164	34656032
1990	2.025	0.166	0.121	12249114

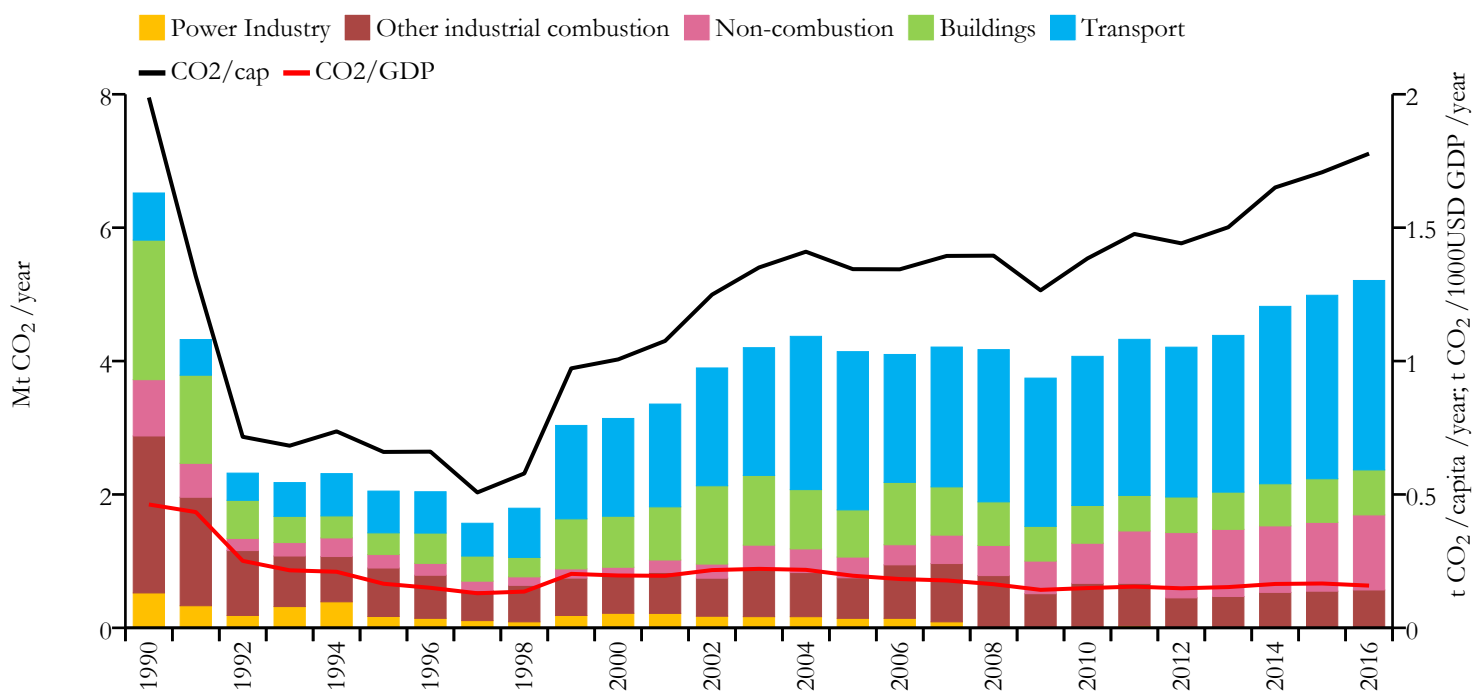


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





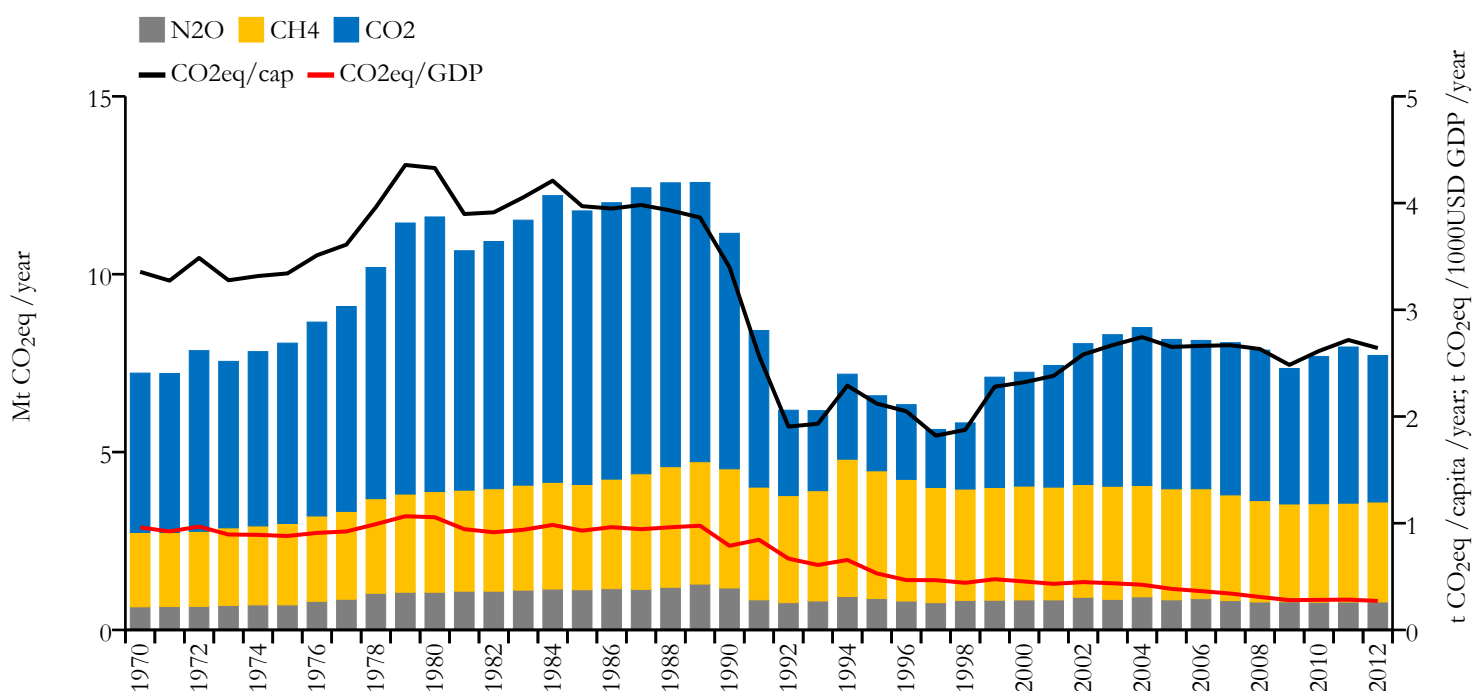
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	5.208	1.778	0.158	2926348
1990	6.520	1.988	0.462	3281454



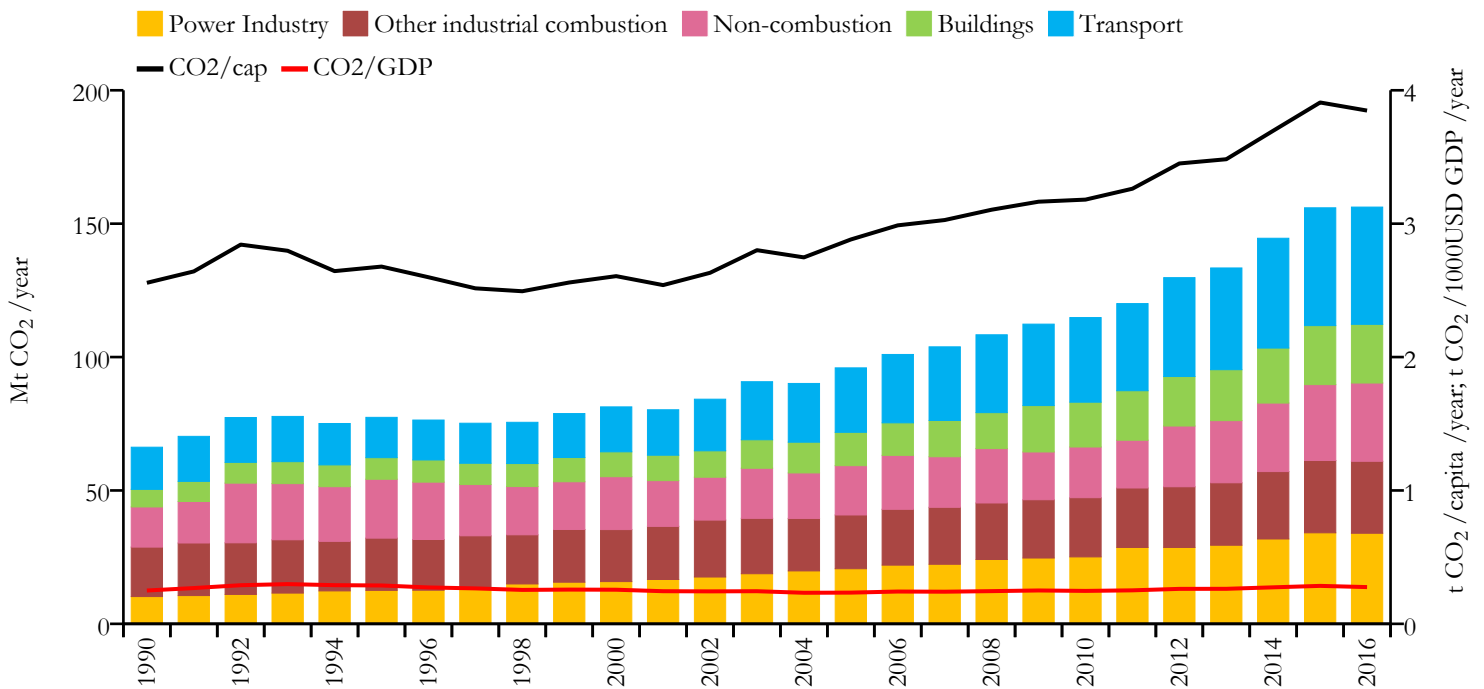
## Greenhouse gas emissions (EDGARv4.3.2 dataset)







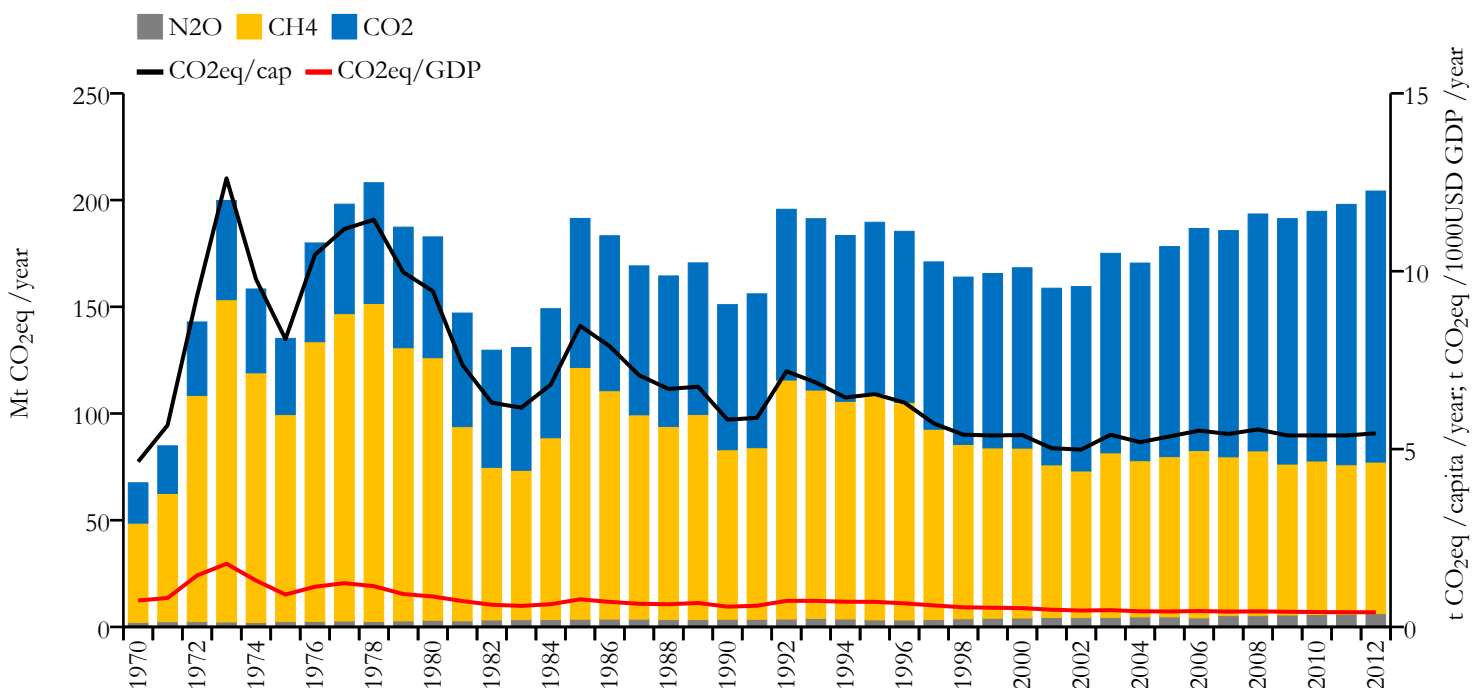
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	156.221	3.848	0.276	40606052
1990	66.215	2.557	0.250	25912367

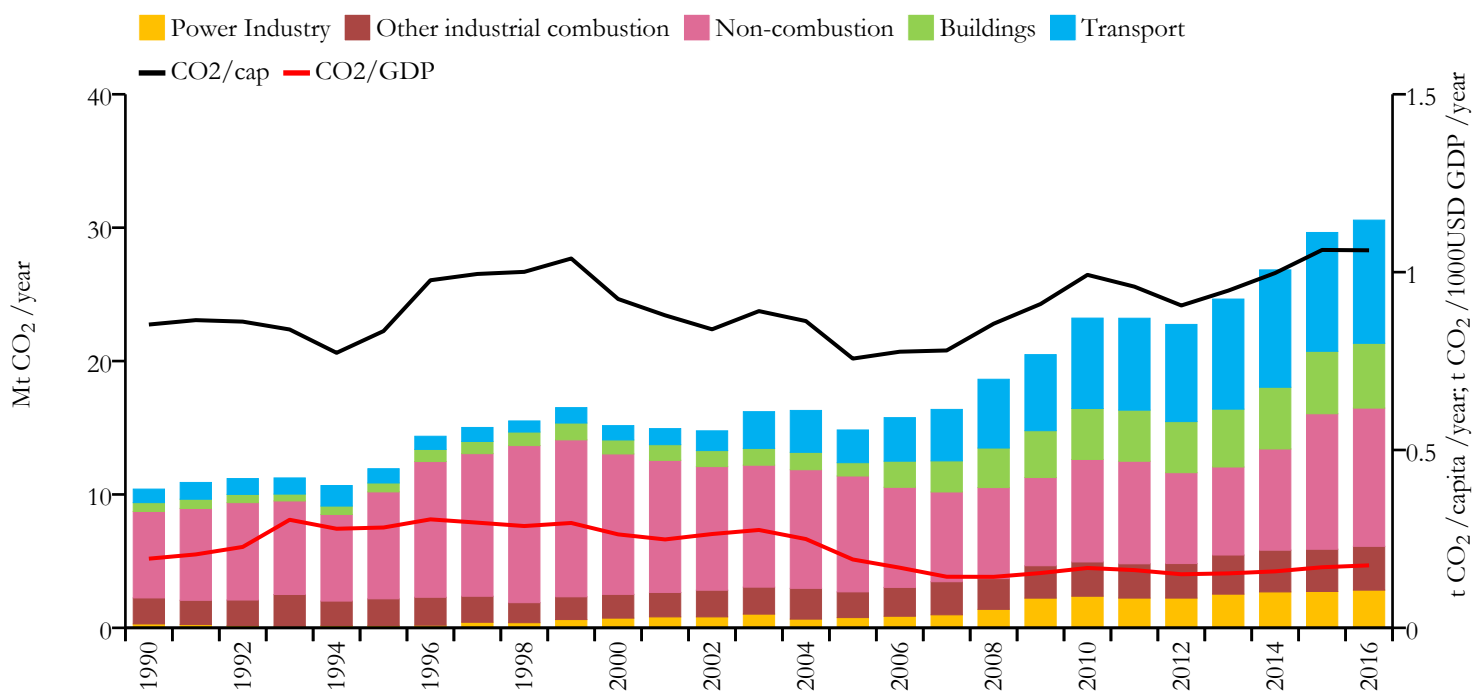


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





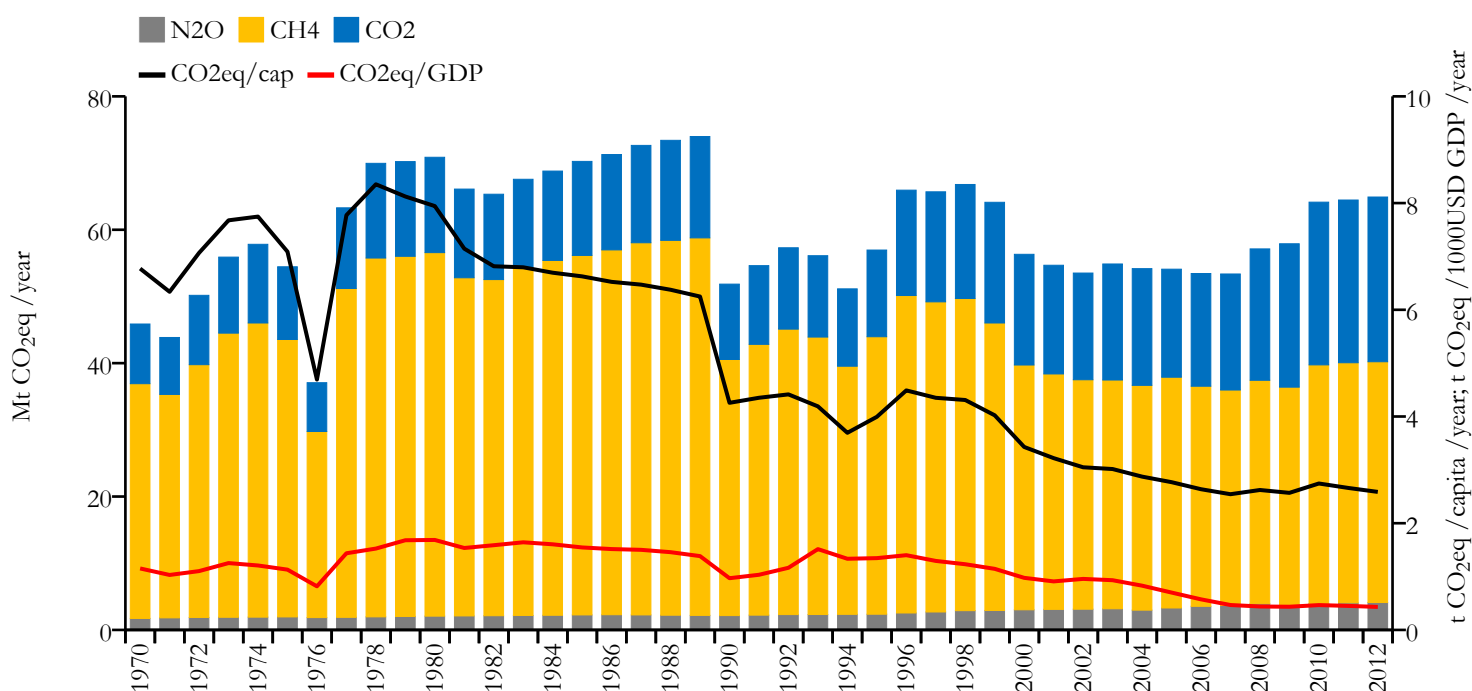
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	30.567	1.061	0.176	28813463
1990	10.402	0.853	0.194	12171441

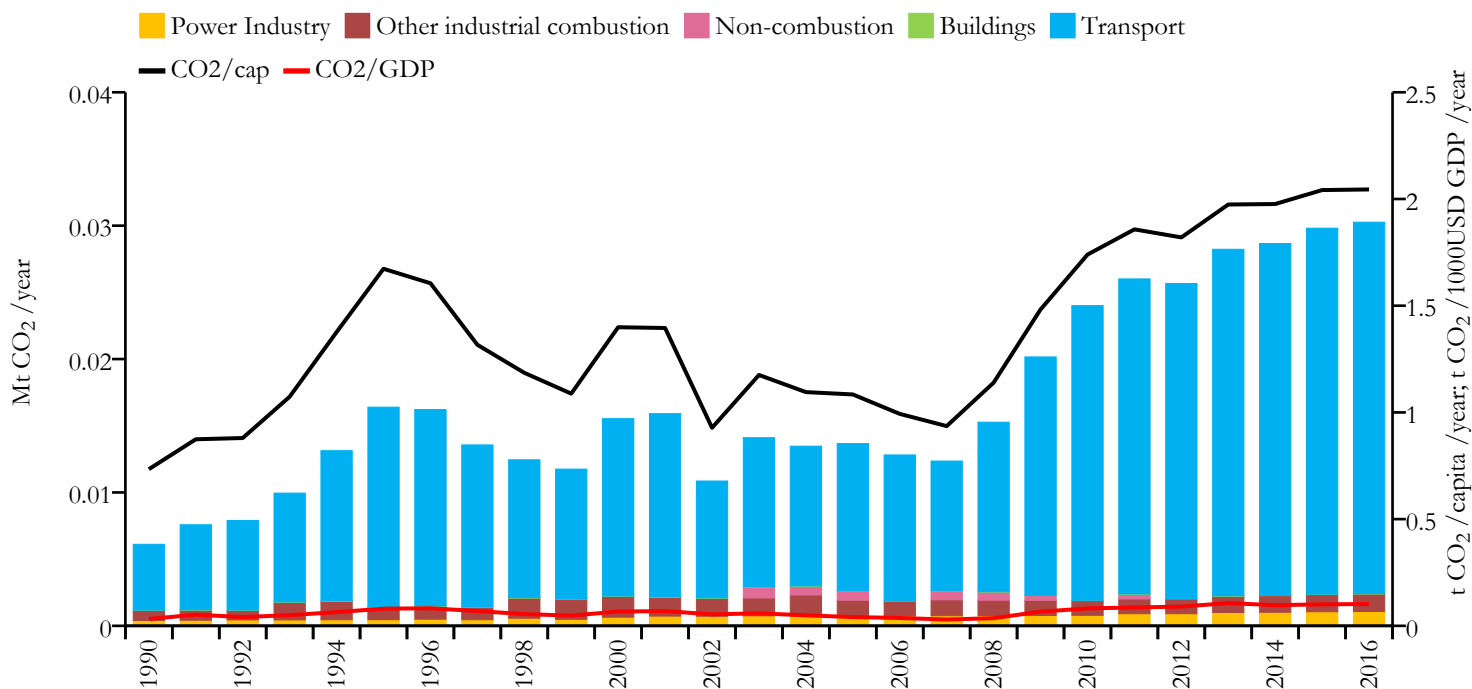


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





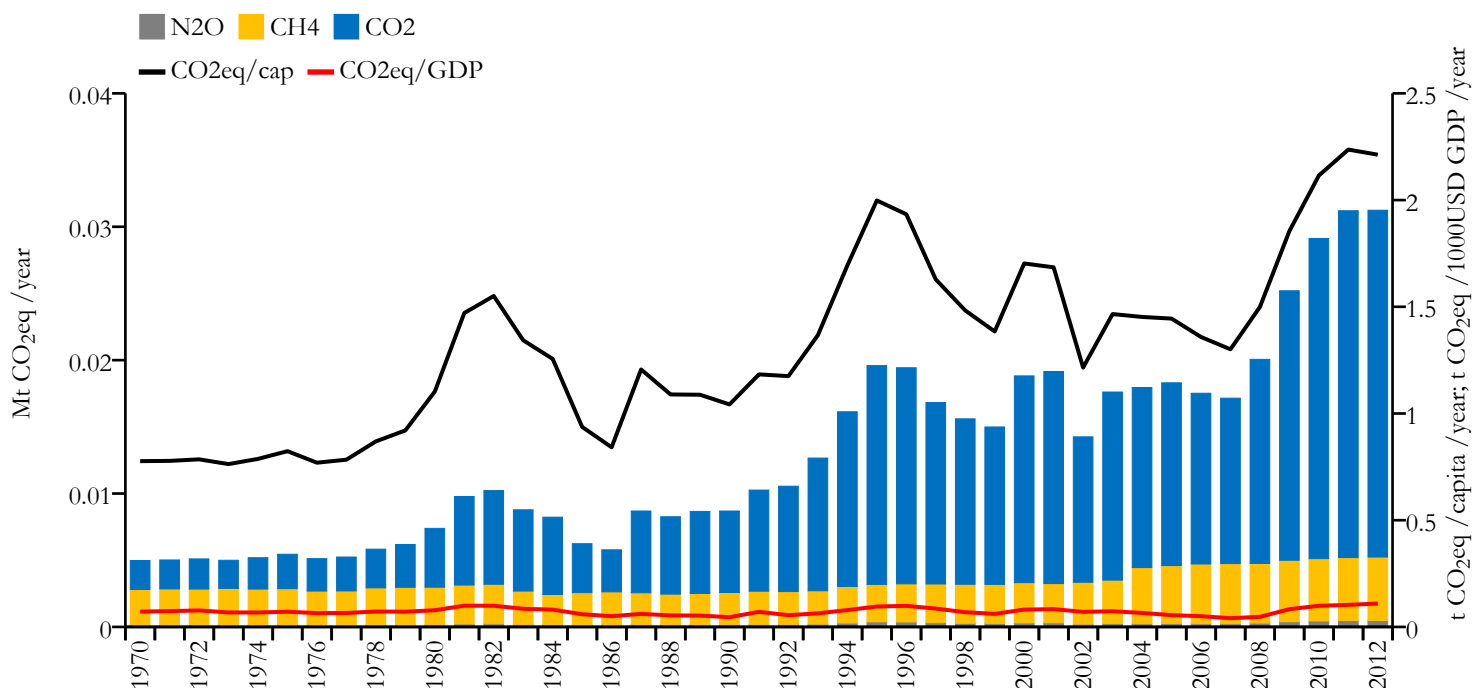
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	0.030	2.045	0.102	14764
1990	0.006	0.734	0.032	8334



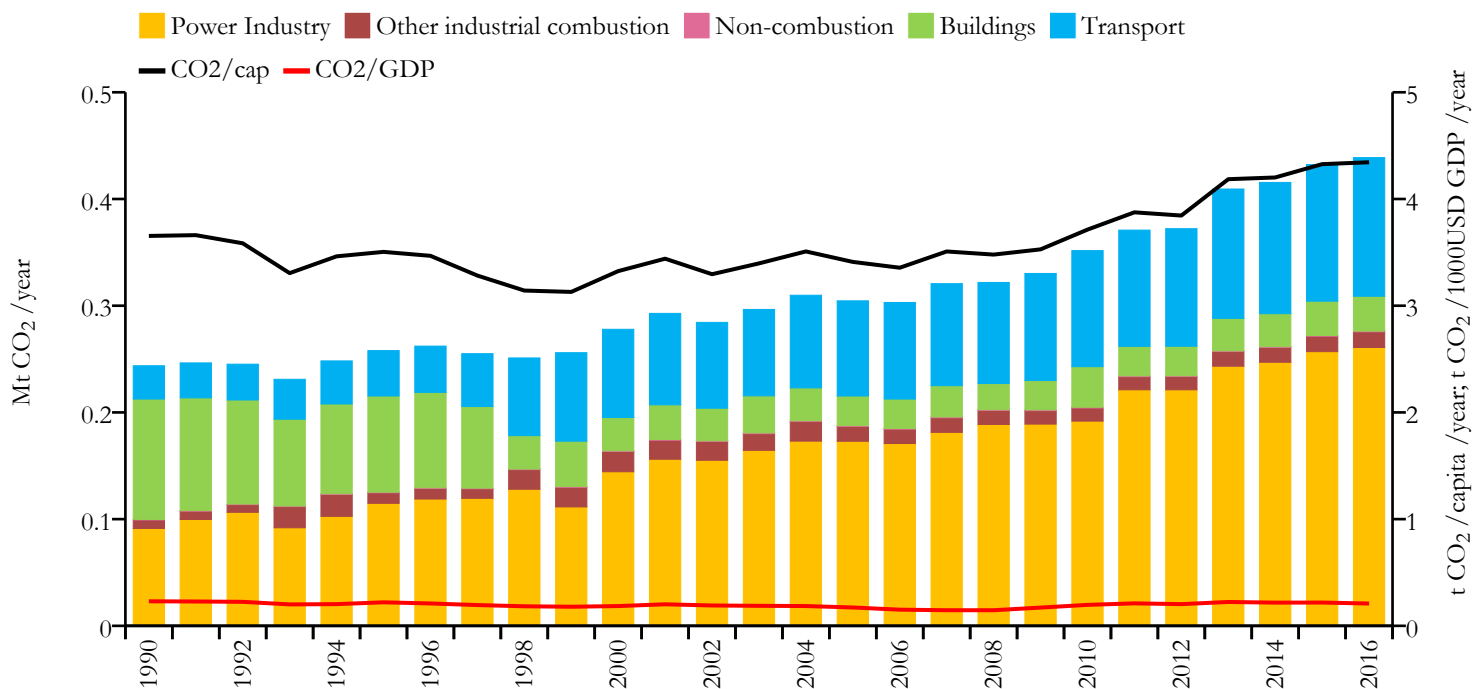
## Greenhouse gas emissions (EDGARv4.3.2 dataset)



# Antigua and Barbuda



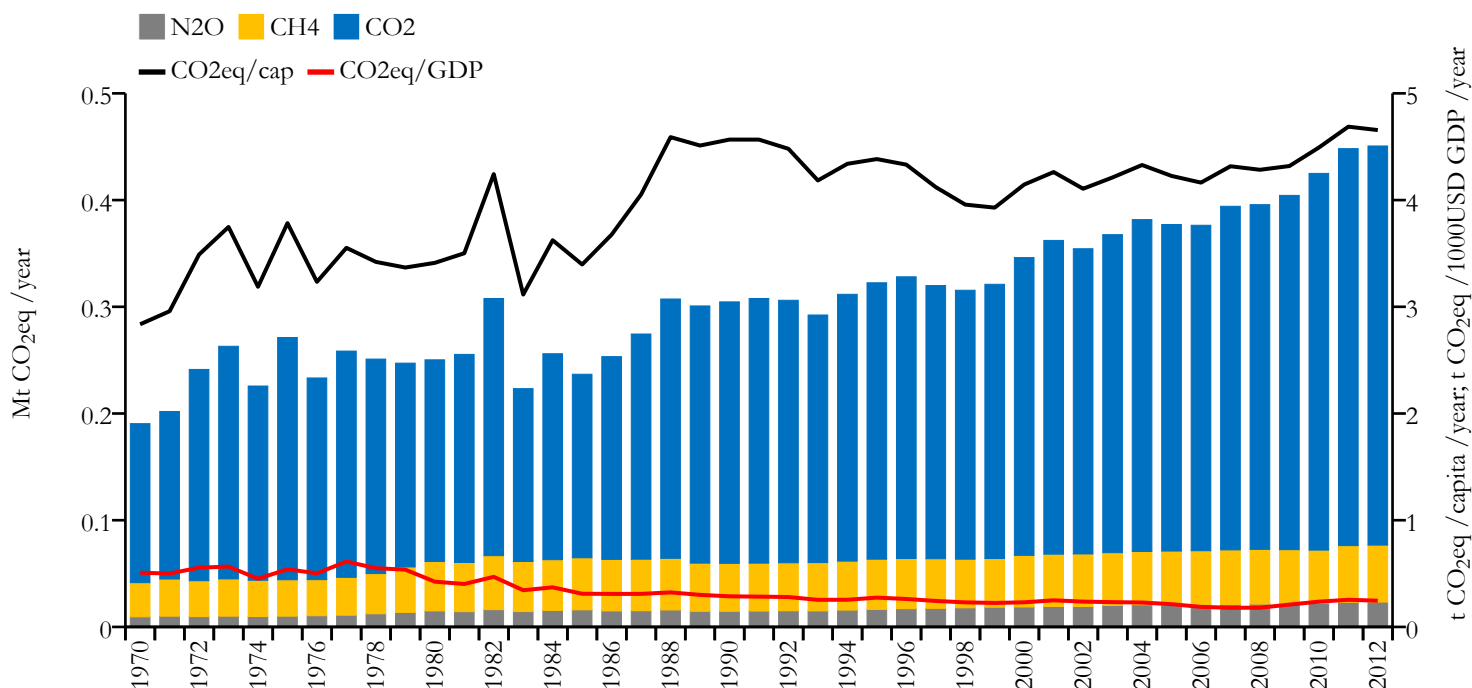
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	0.439	4.344	0.209	100963
1990	0.244	3.654	0.230	66696

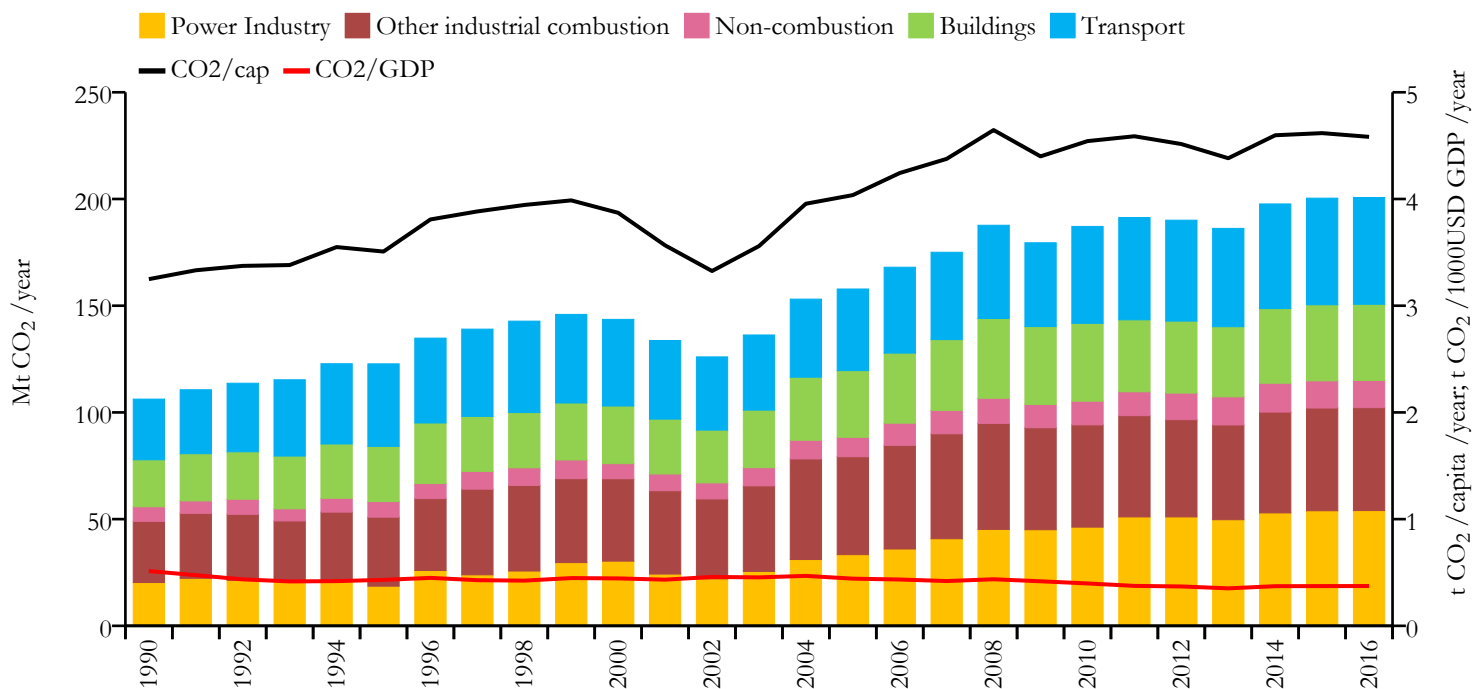


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





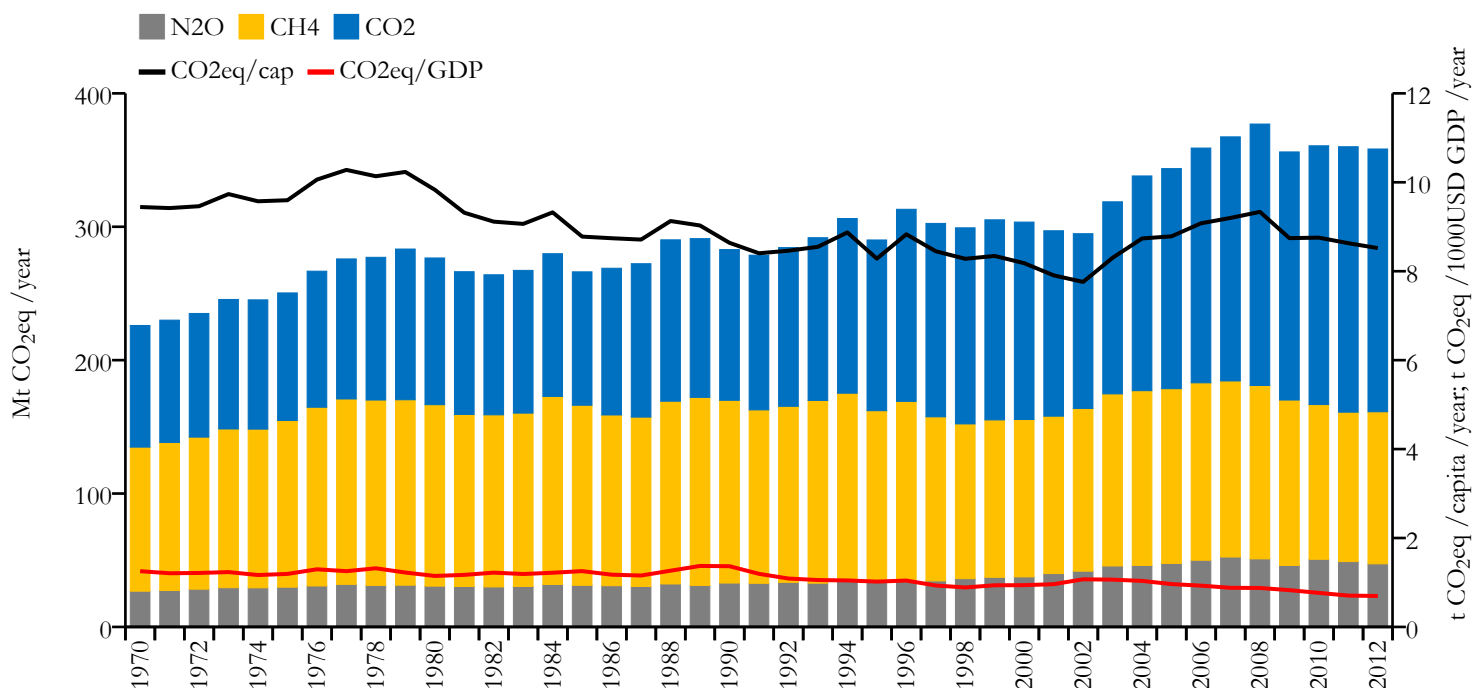
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	200.708	4.582	0.373	43847430
1990	106.240	3.249	0.513	32729739

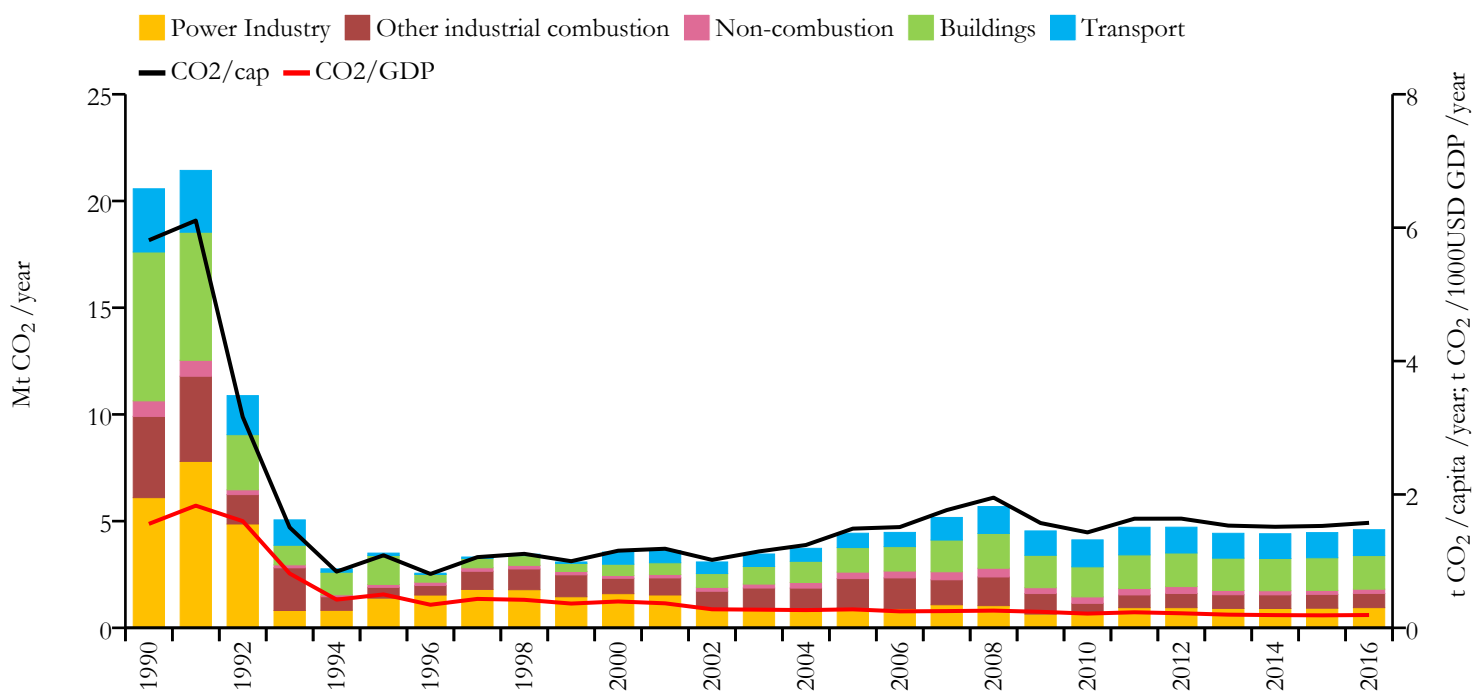


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





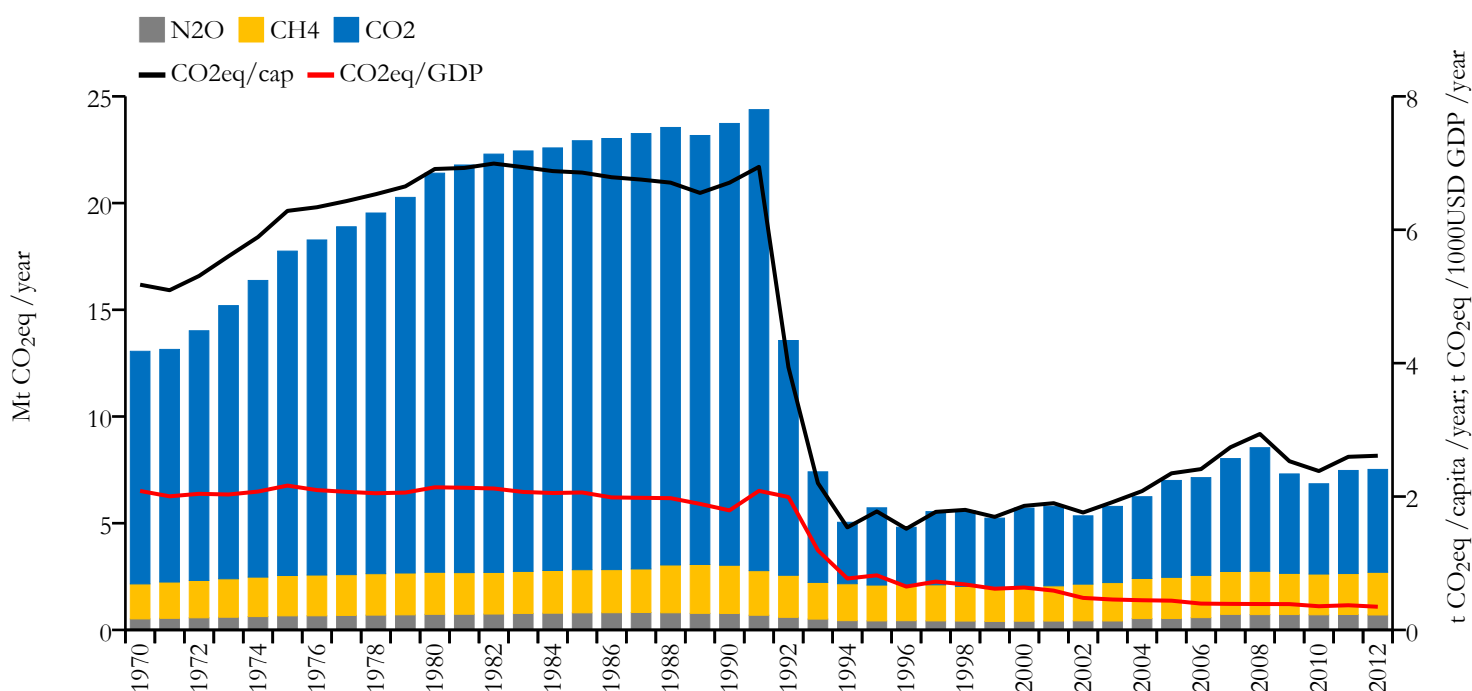
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	4.598	1.575	0.192	2924816
1990	20.572	5.811	1.558	3538165

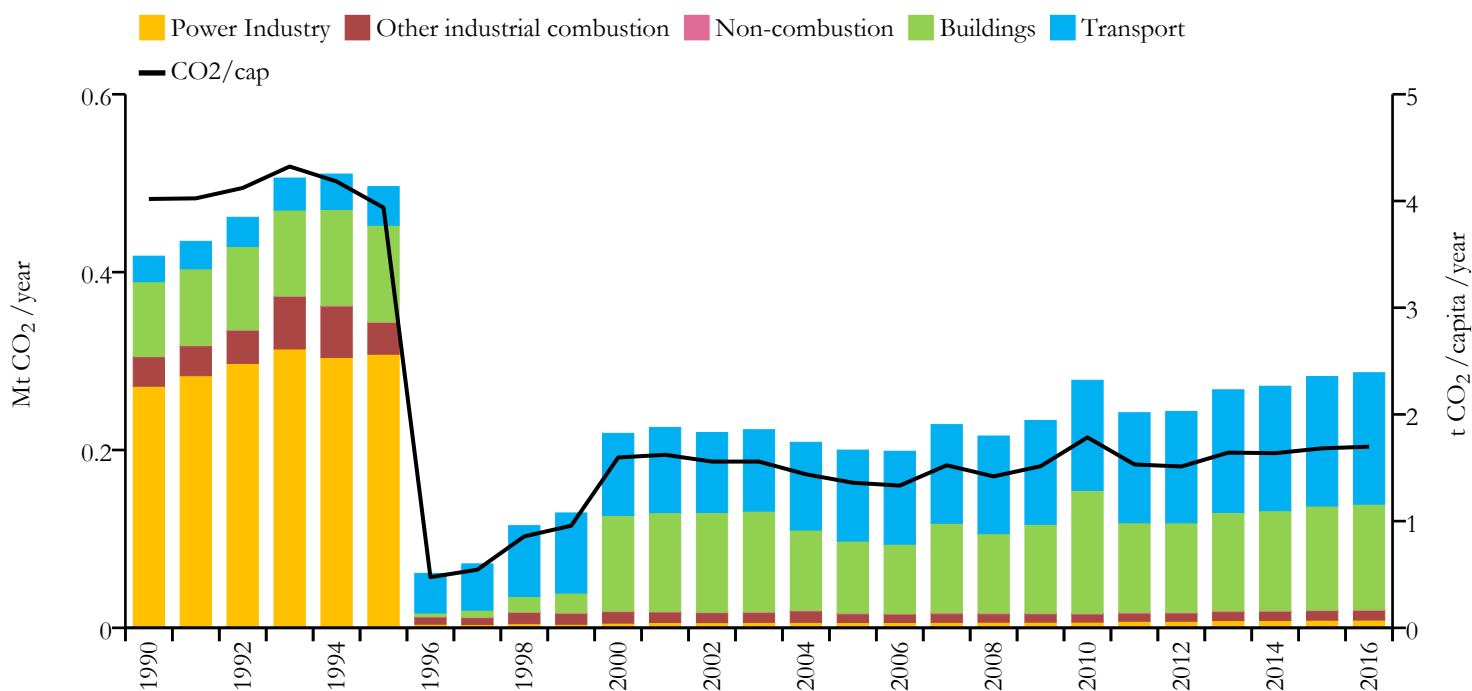


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





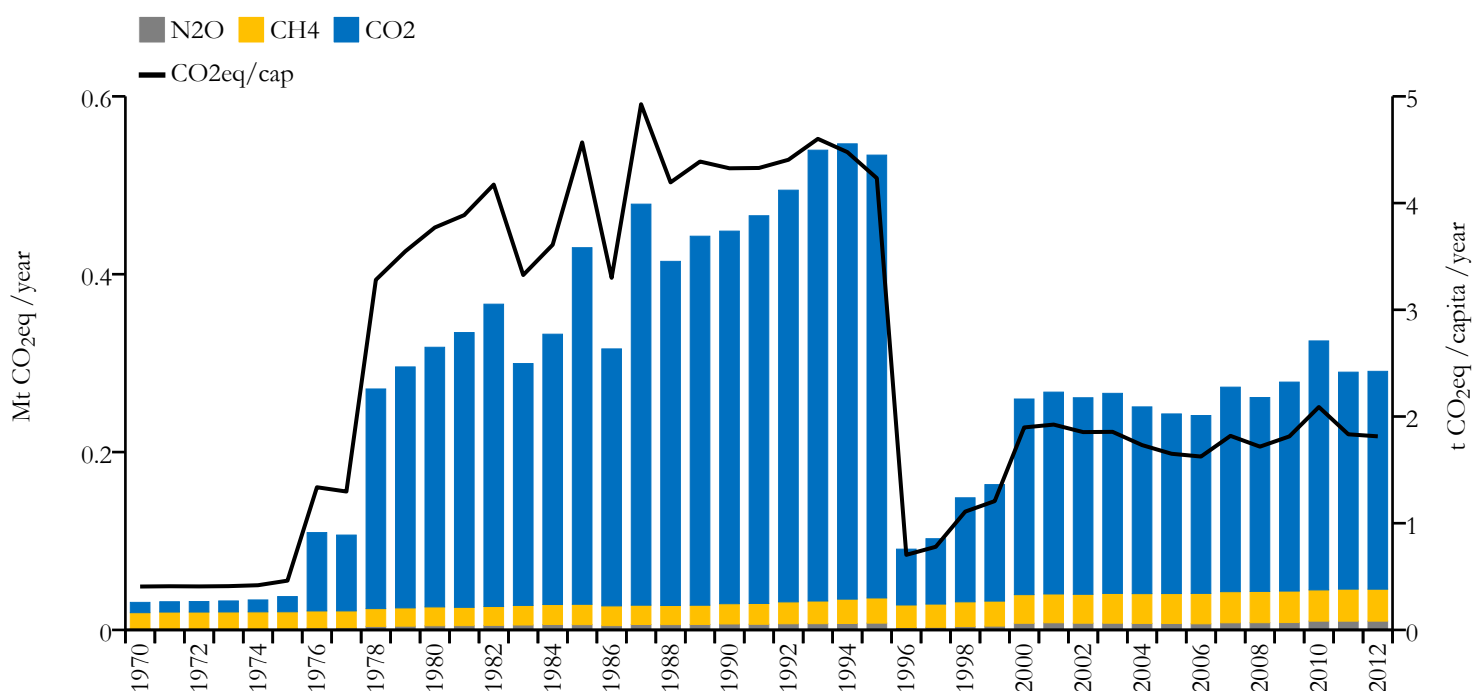
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	0.287	1.697	n/a	169378
1990	0.418	4.019	n/a	103717

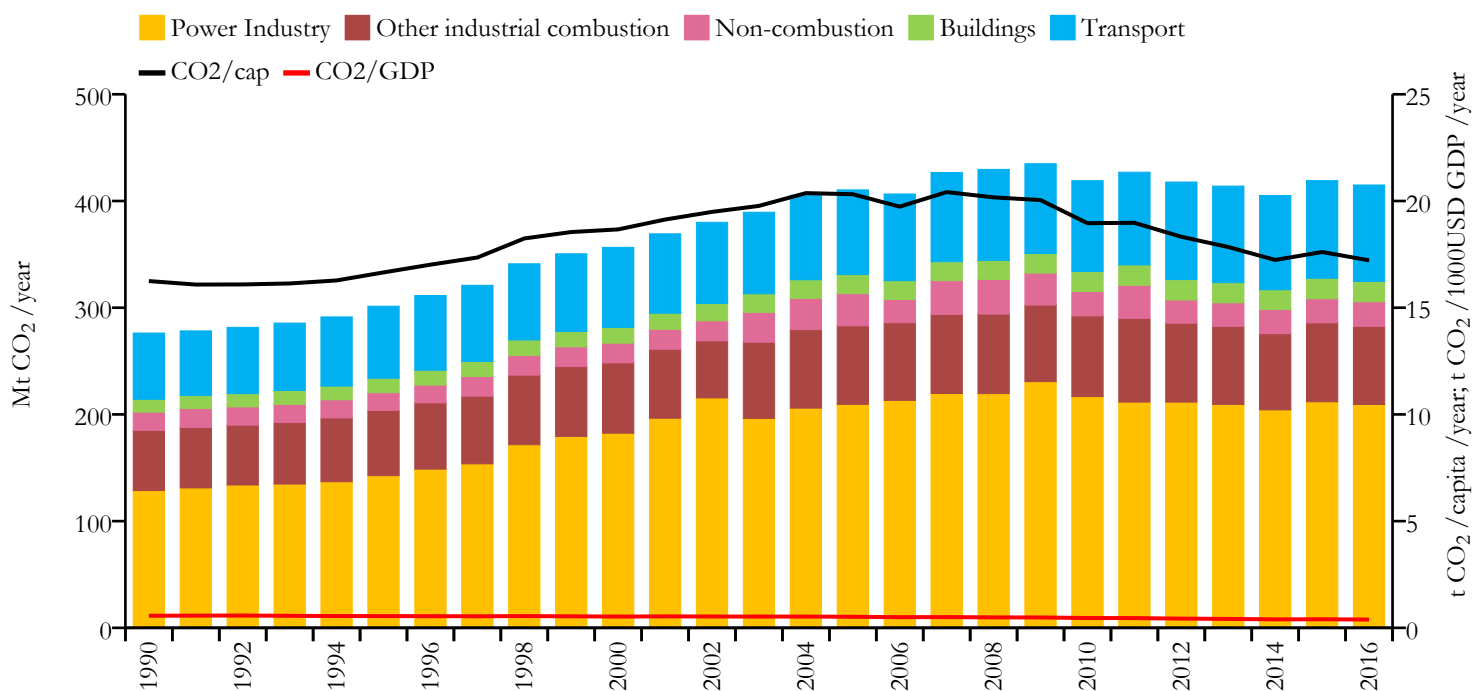


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





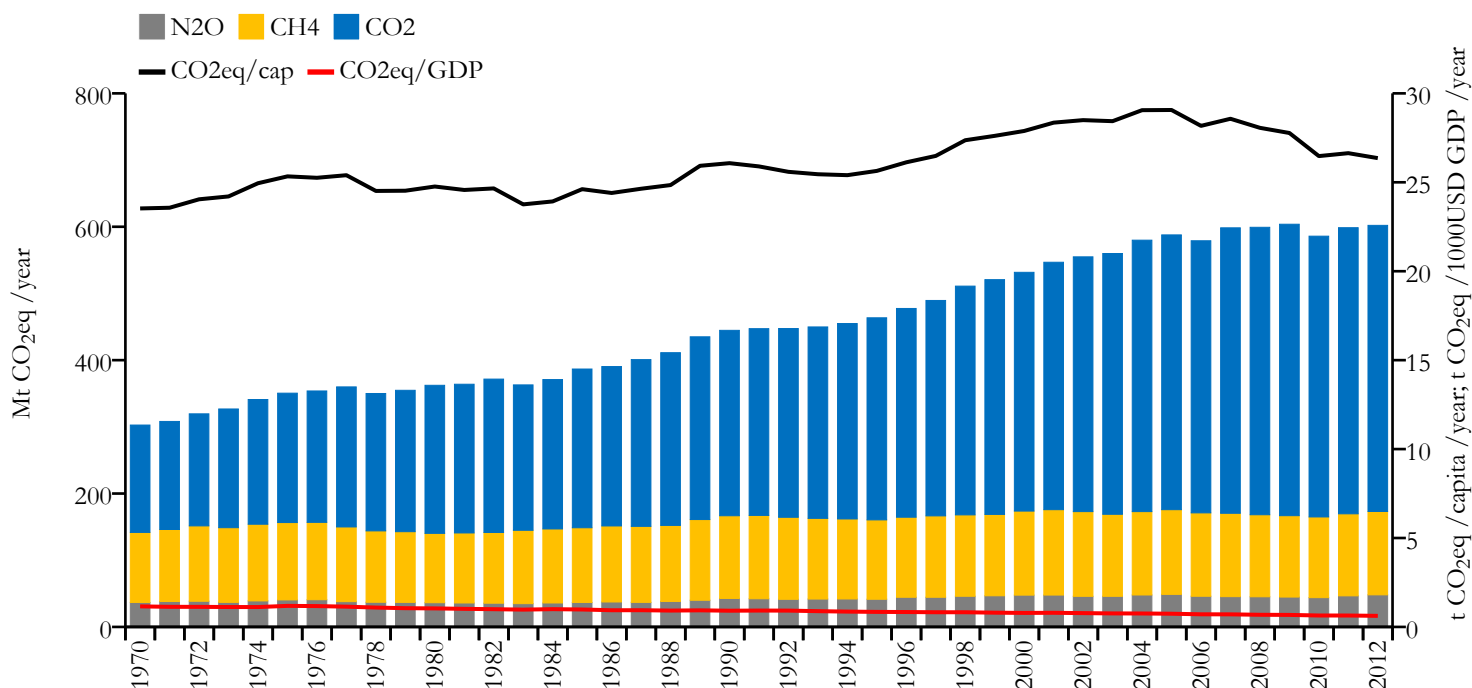
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	414.989	17.219	0.388	24125848
1990	276.218	16.248	0.566	17041431



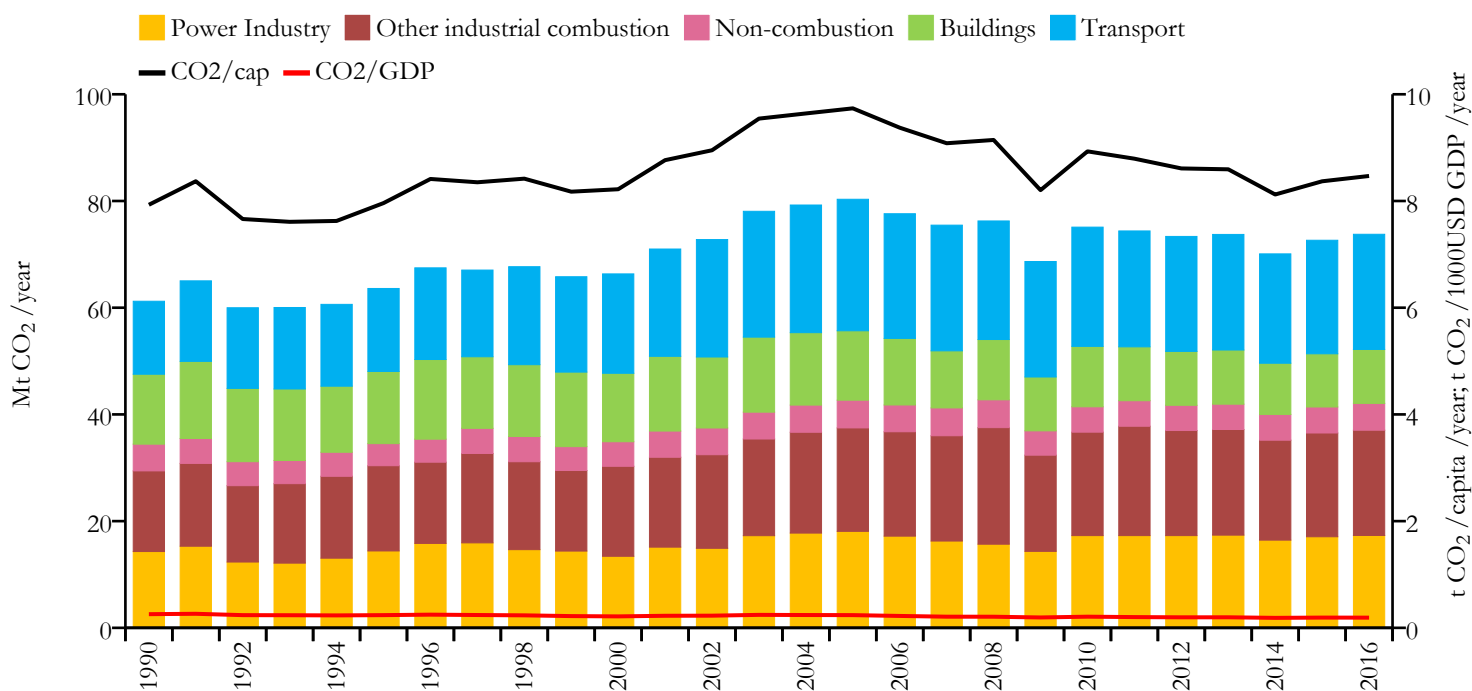
## Greenhouse gas emissions (EDGARv4.3.2 dataset)







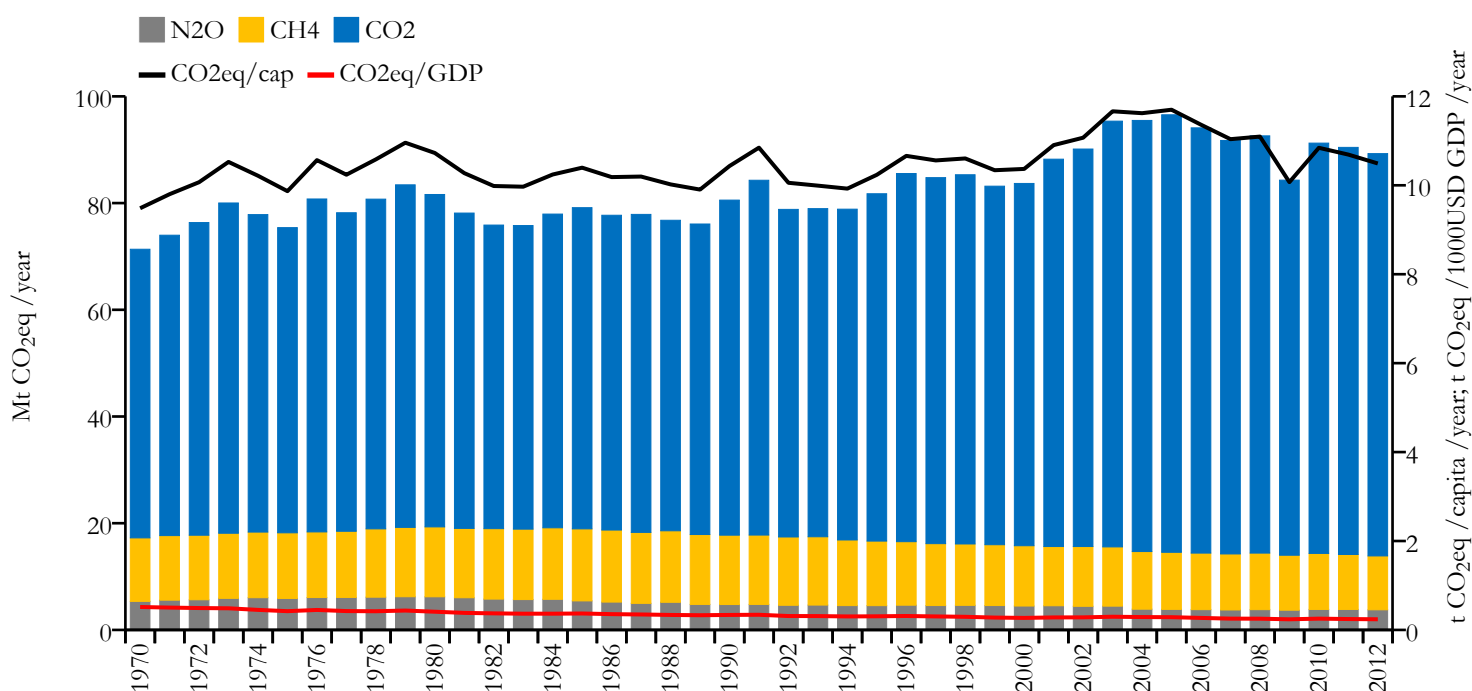
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	73.764	8.469	0.191	8712137
1990	61.212	7.929	0.256	7723949

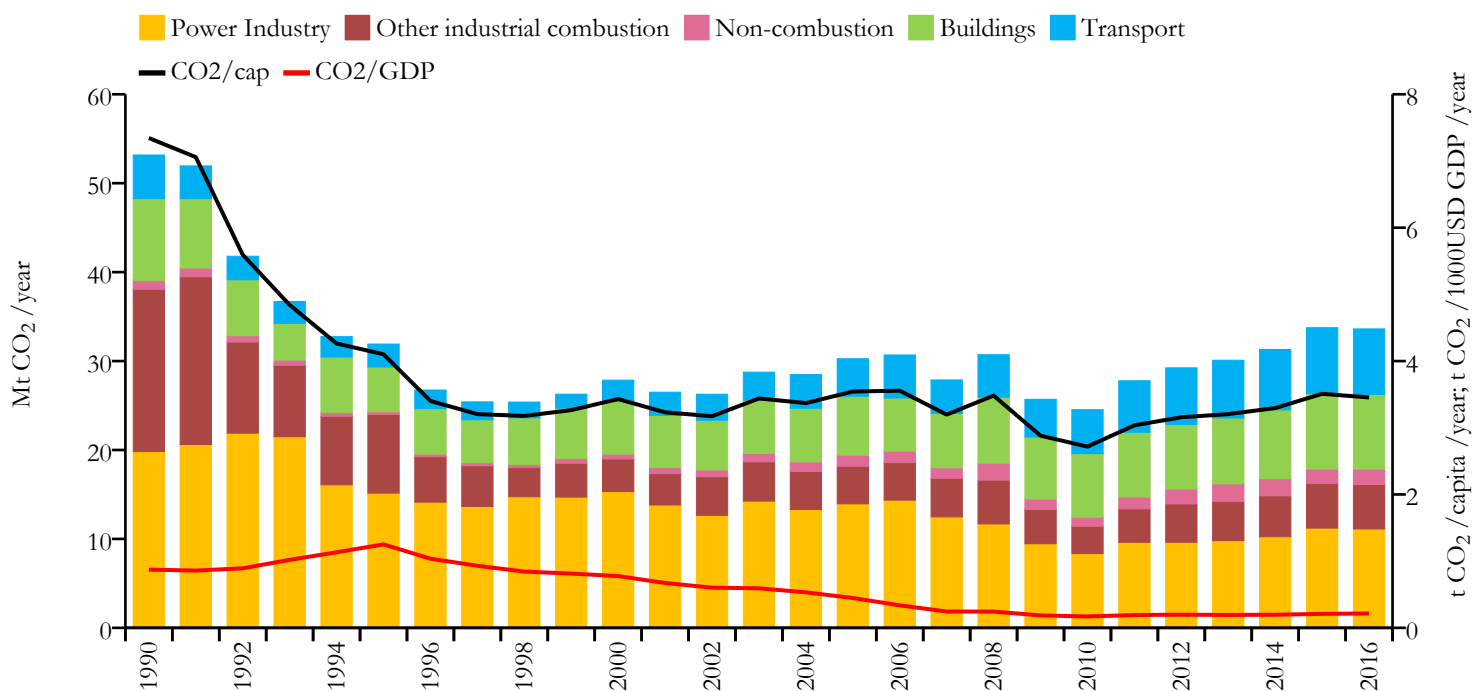


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





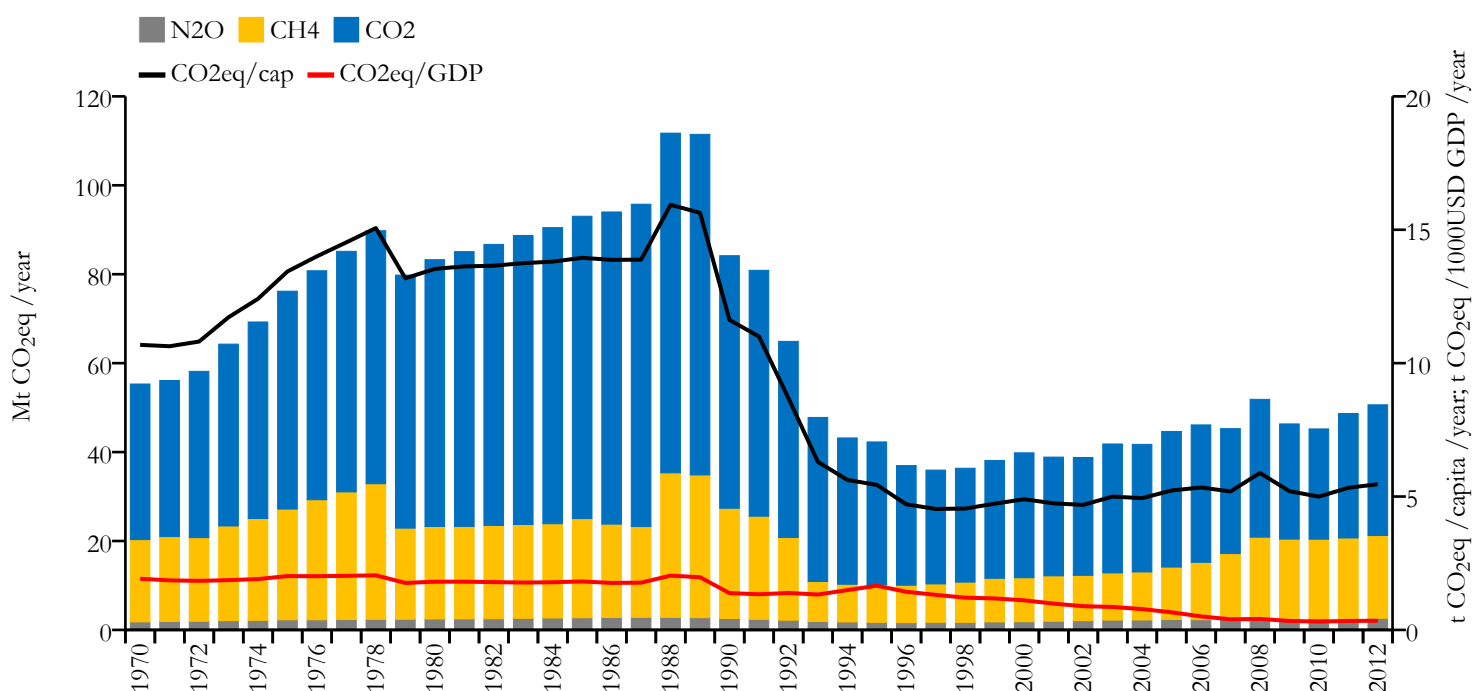
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)

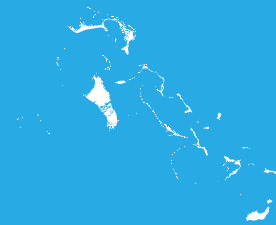


Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	33.614	3.455	0.215	9725376
1990	53.171	7.344	0.873	7242770

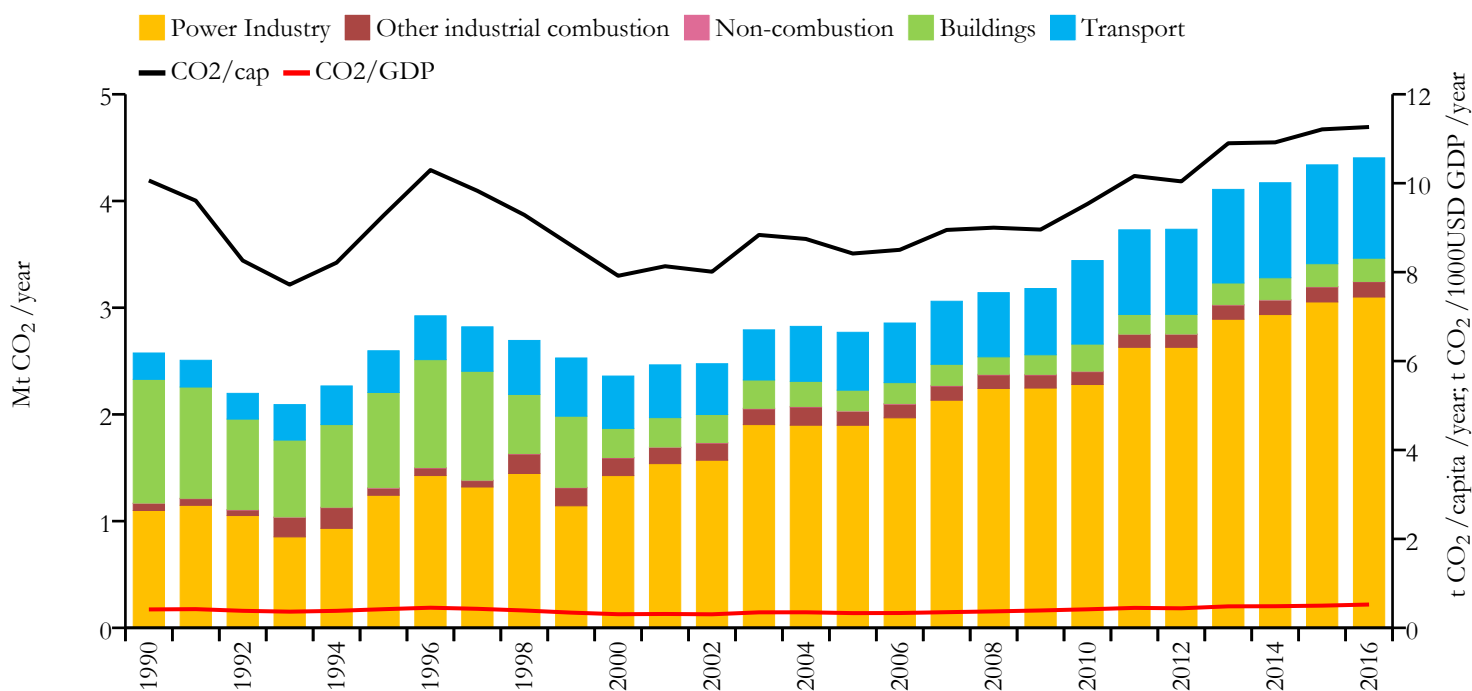


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





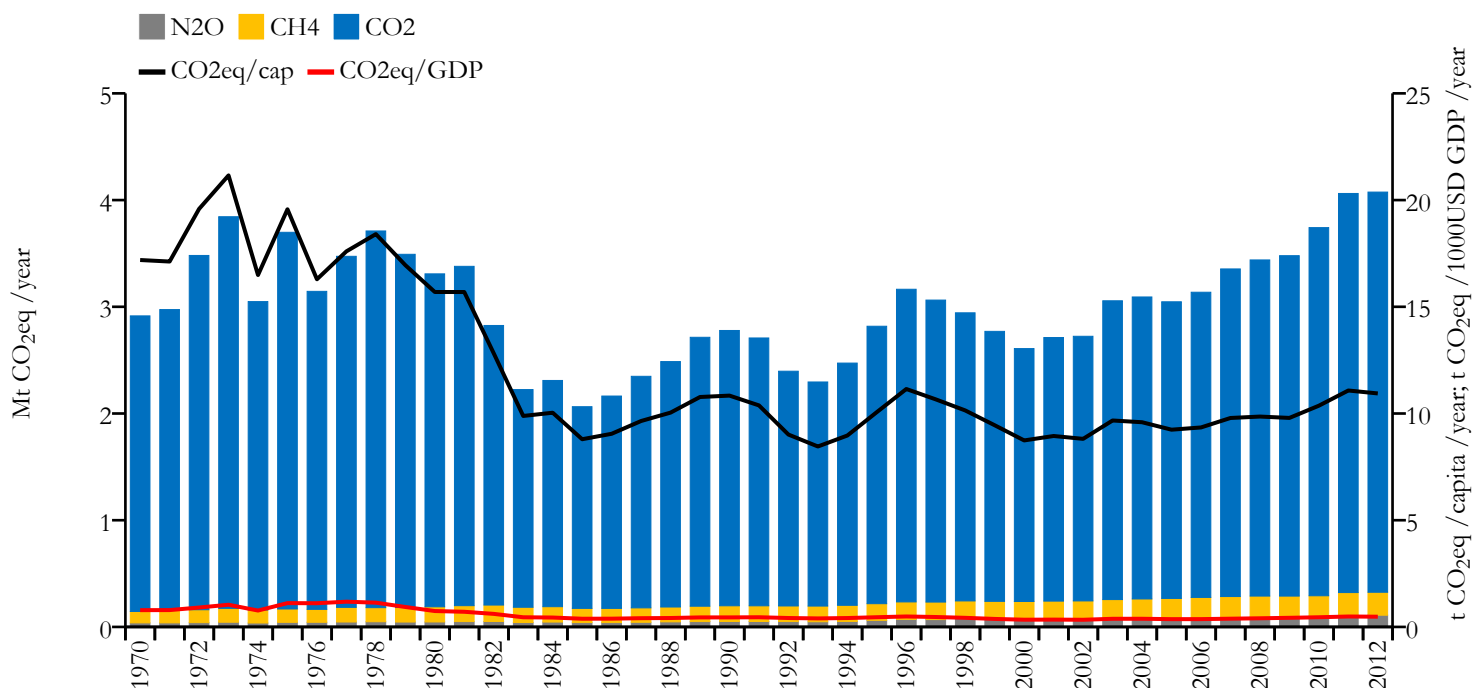
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	4.404	11.264	0.524	391232
1990	2.576	10.061	0.414	256336

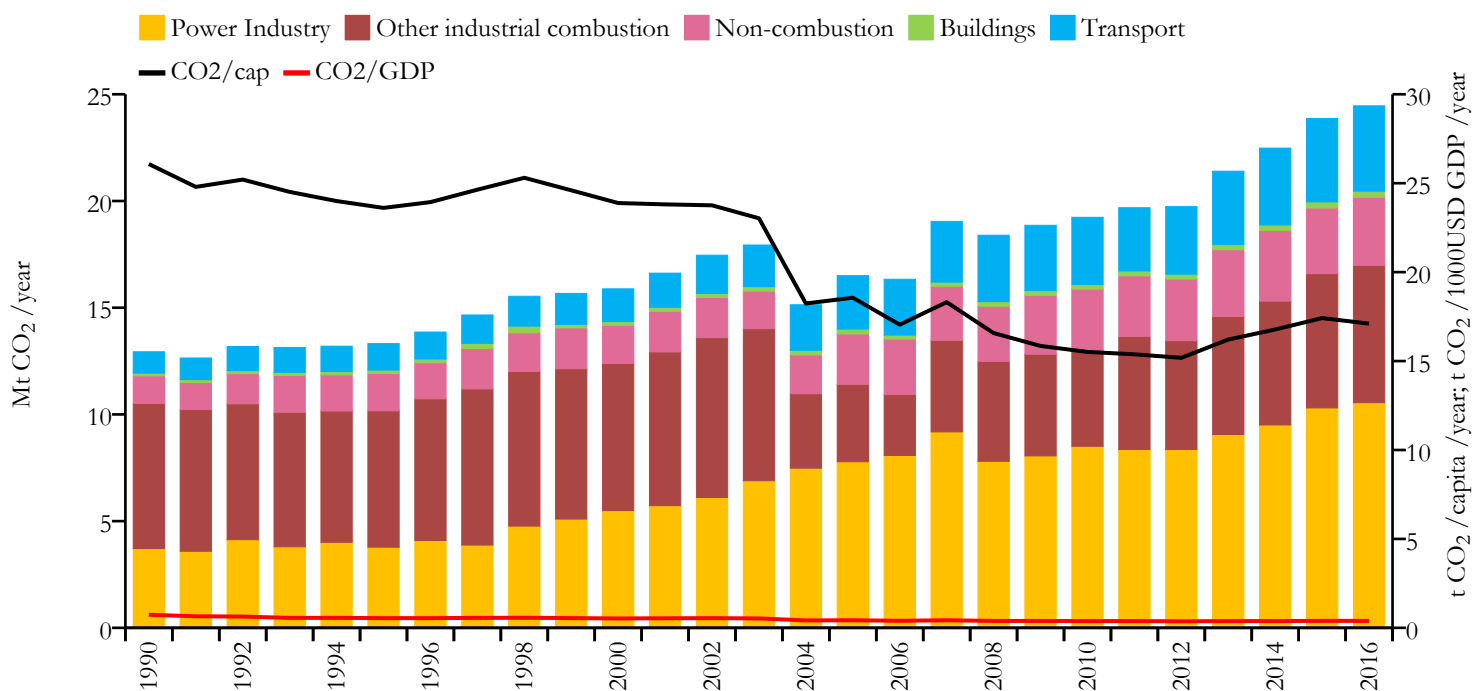


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





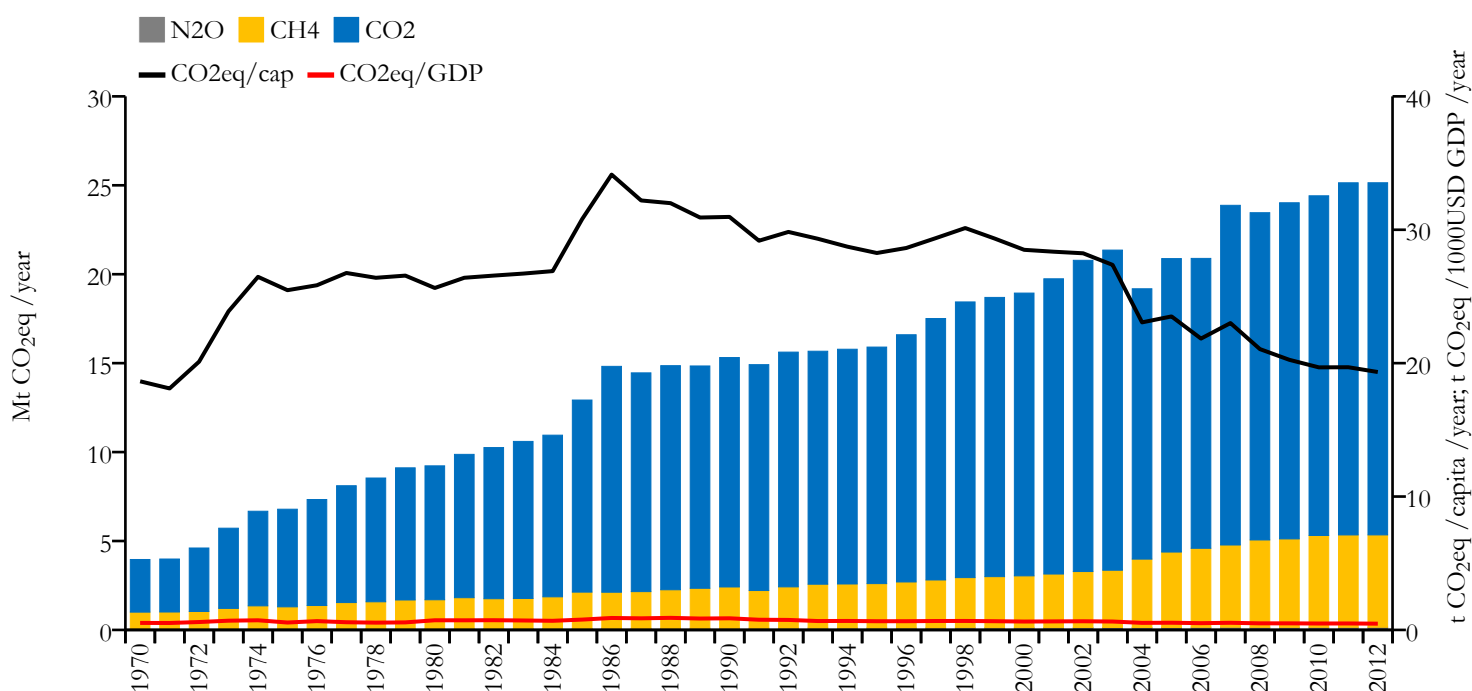
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	24.458	17.104	0.390	1425171
1990	12.935	26.079	0.735	495931

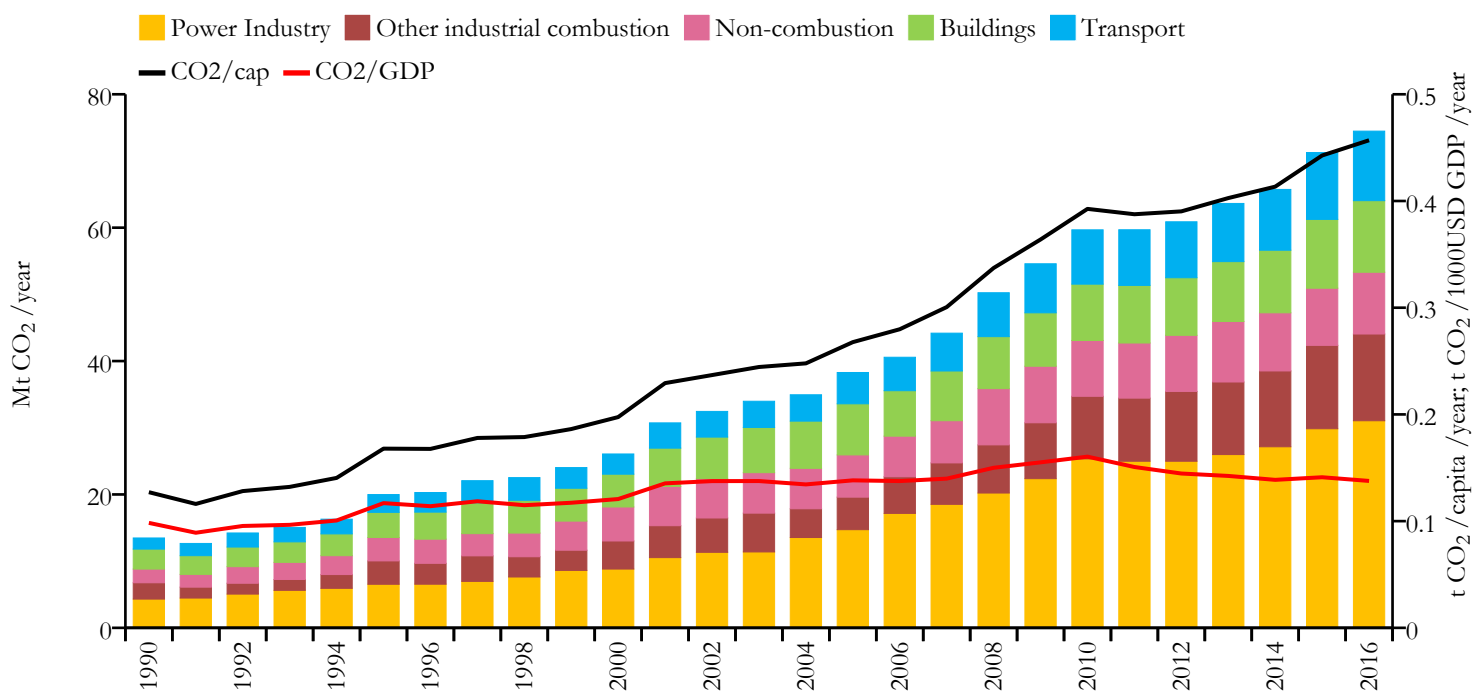


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





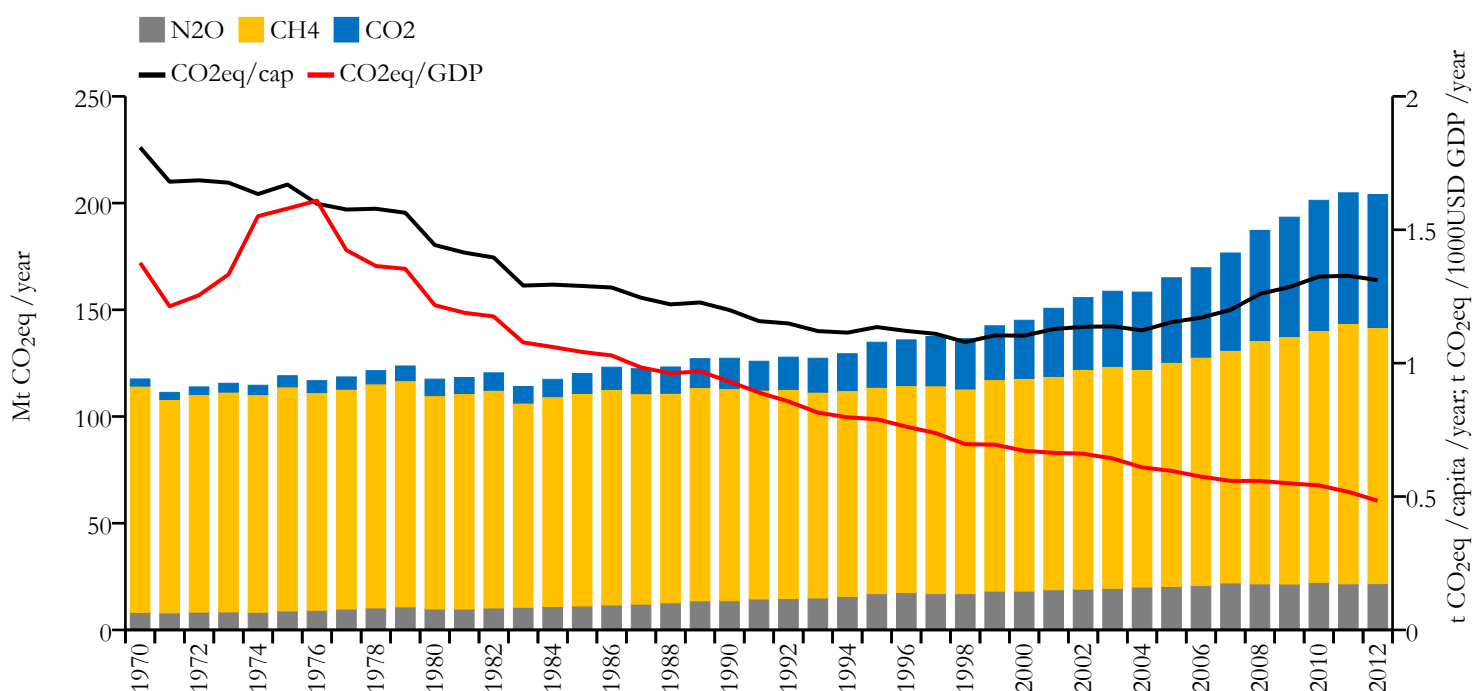
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	74.476	0.457	0.138	162951560
1990	13.475	0.127	0.098	106188642

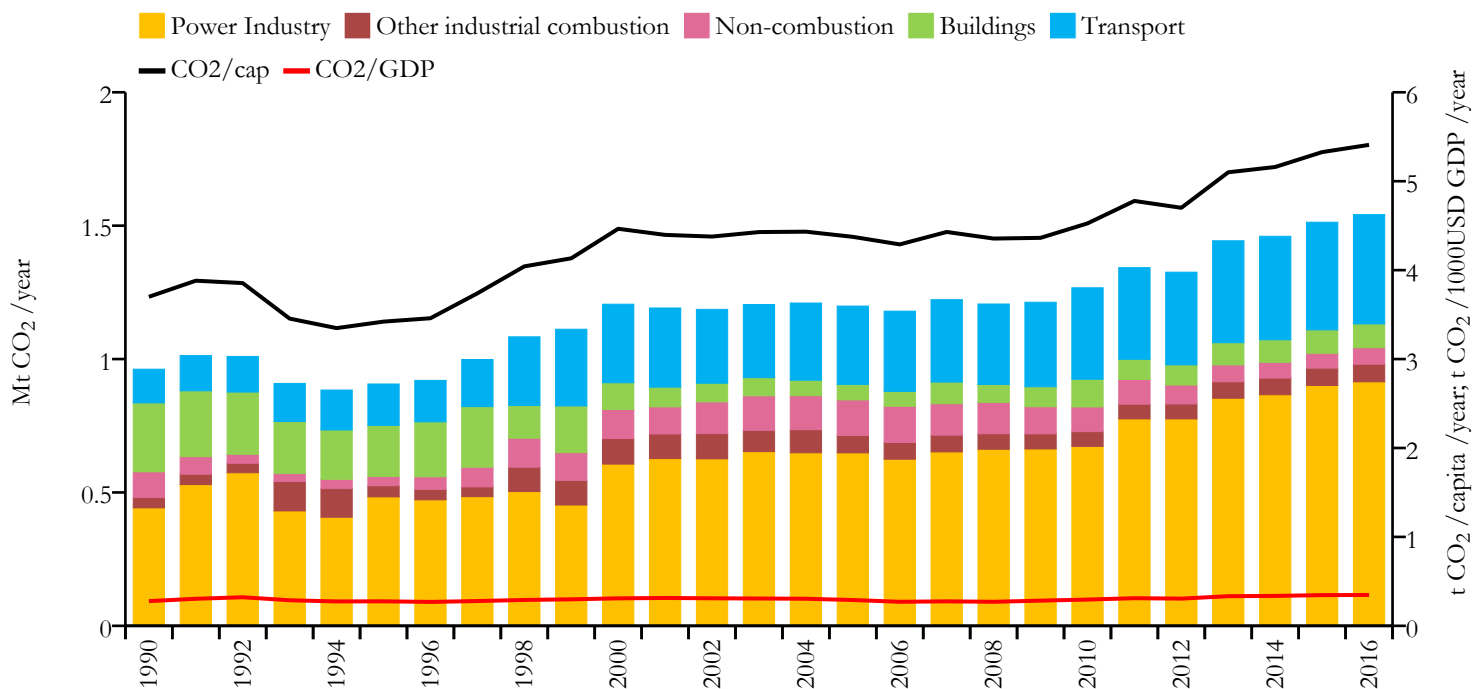


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





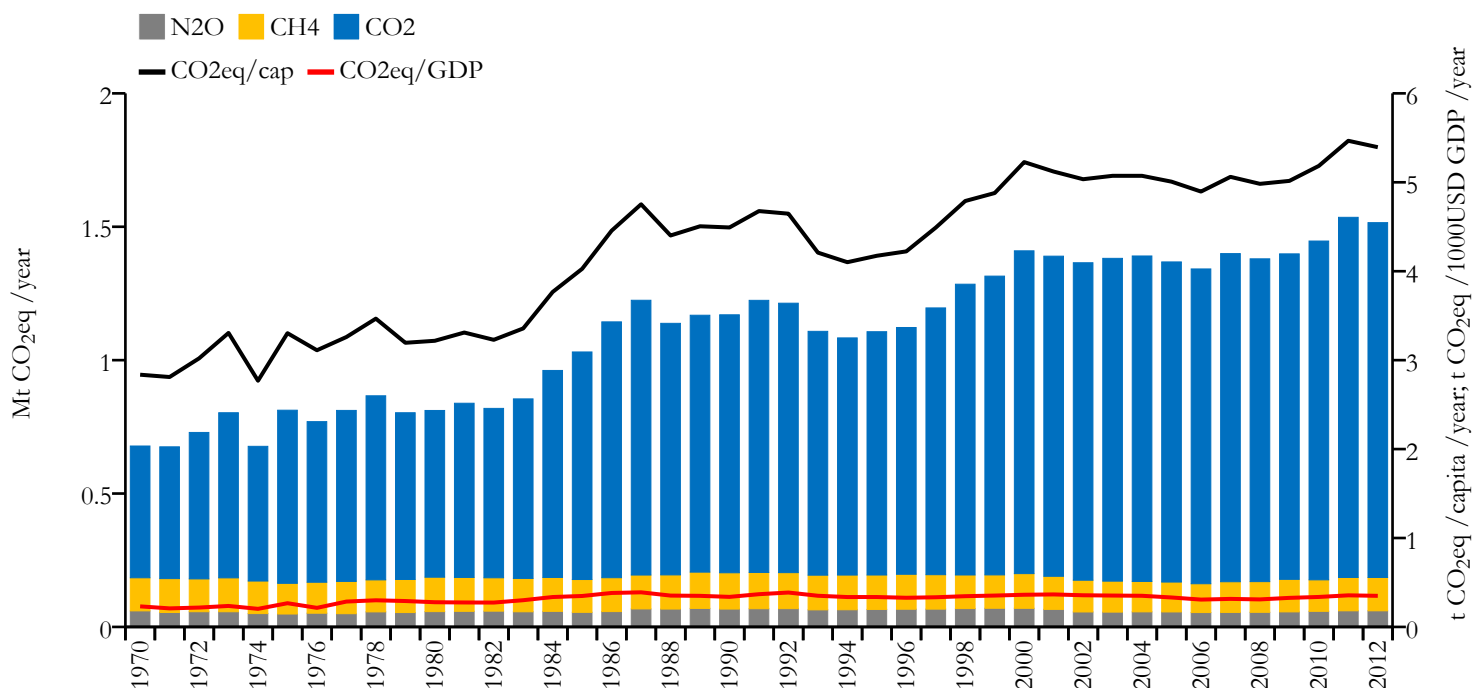
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	1.541	5.409	0.347	284996
1990	0.962	3.700	0.278	260374

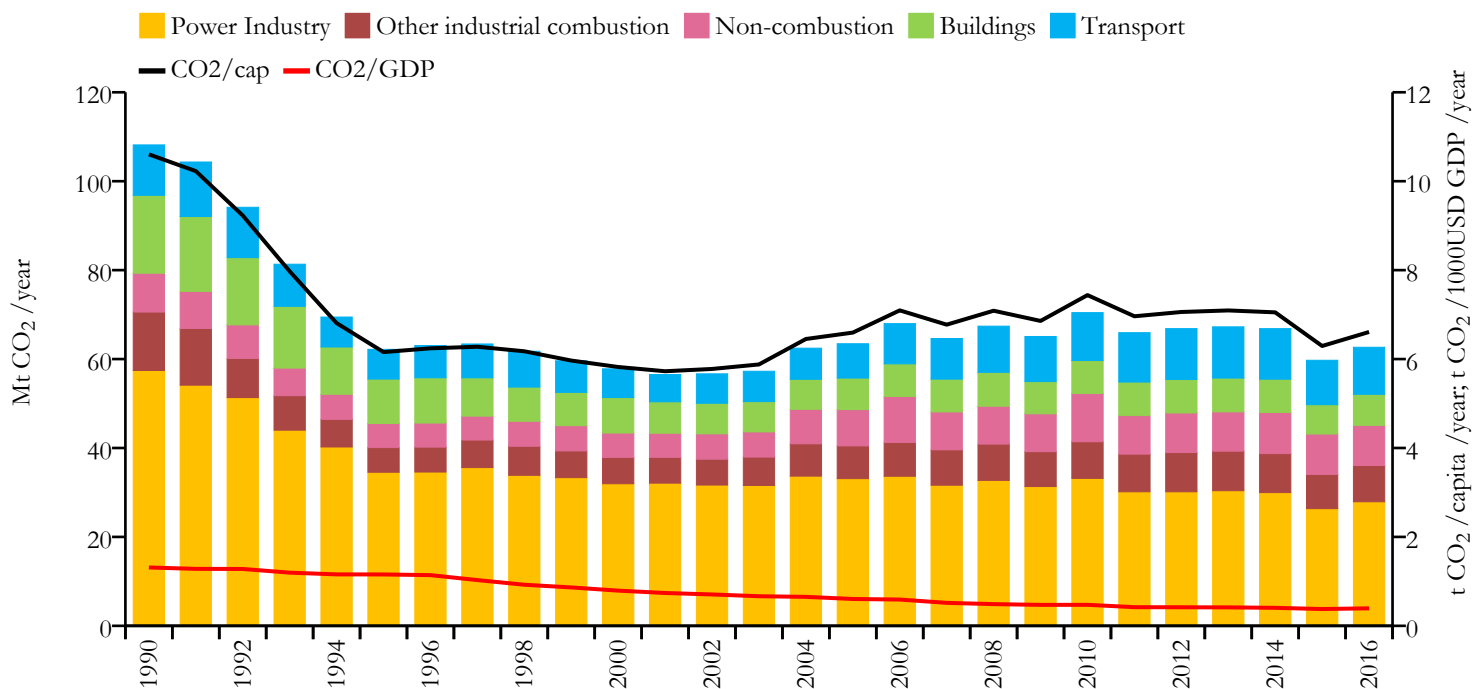


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





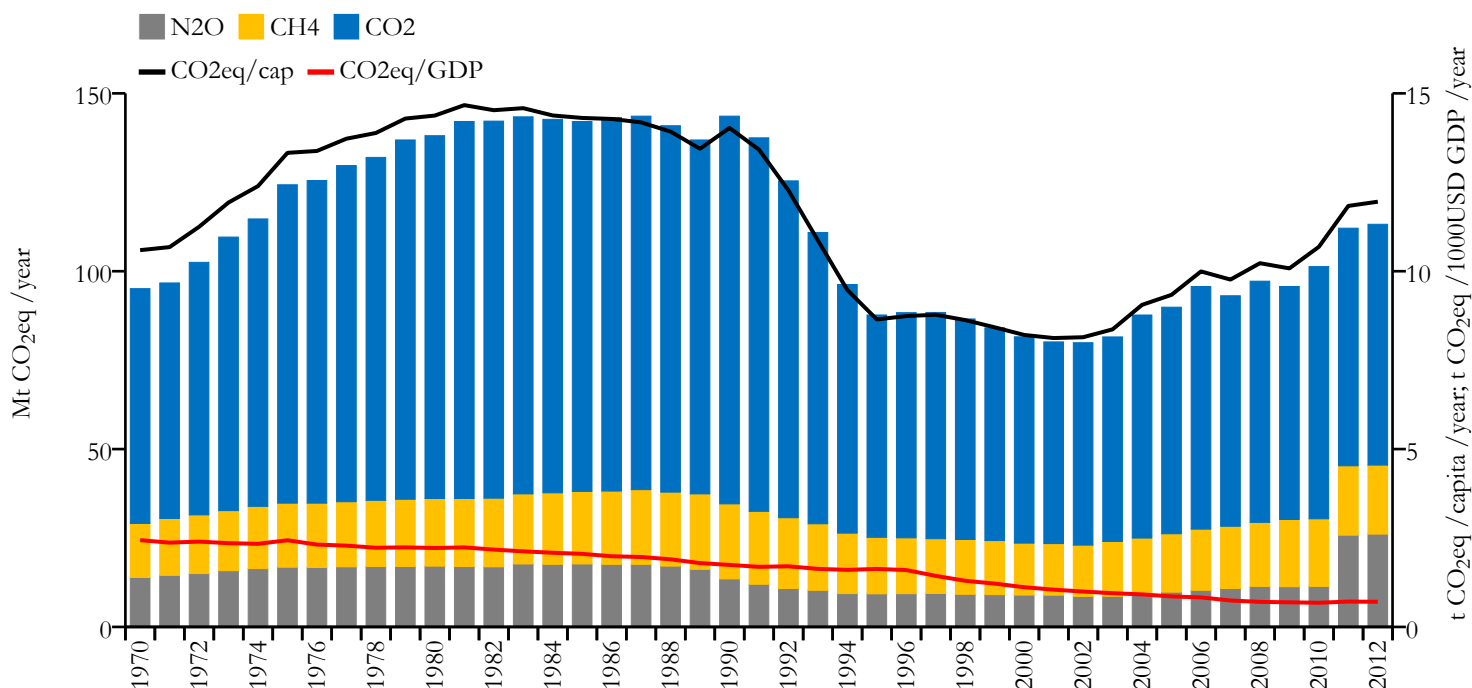
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	62.656	6.609	0.394	9480042
1990	108.163	10.604	1.313	10216846

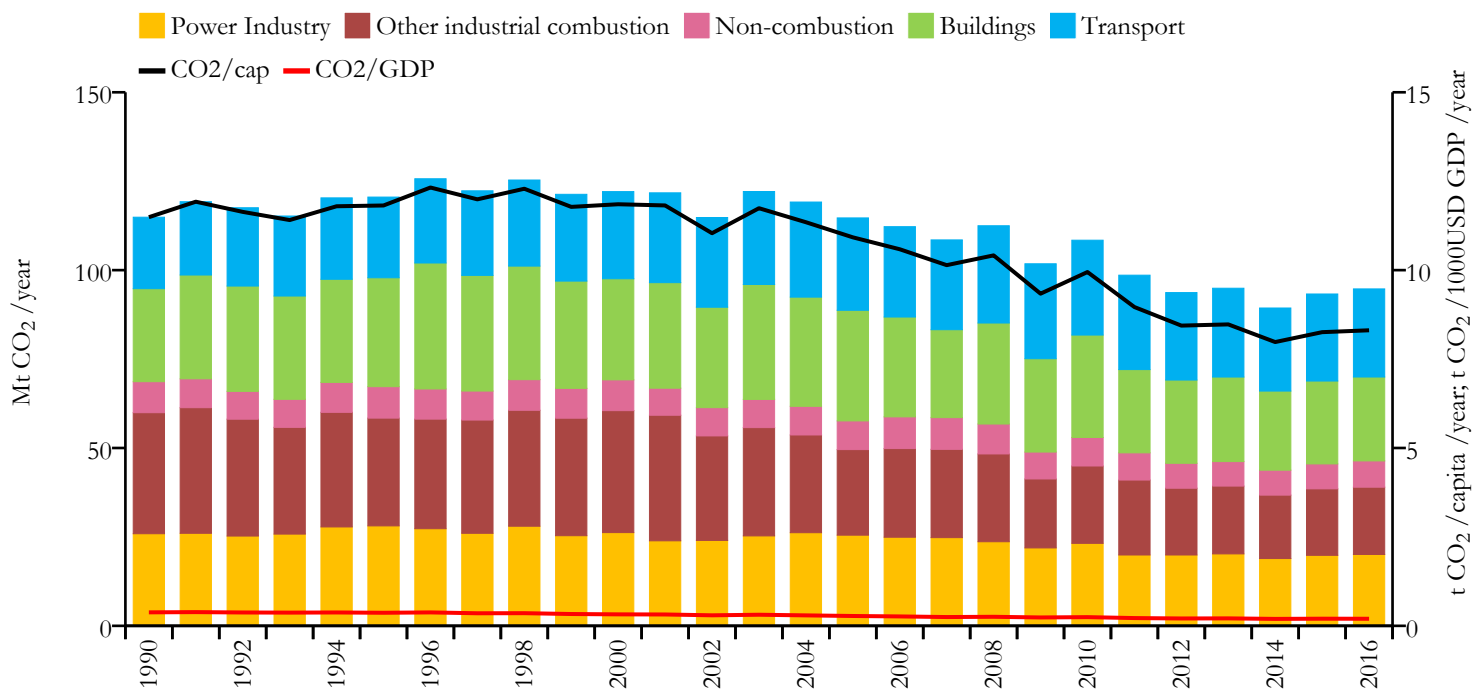


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





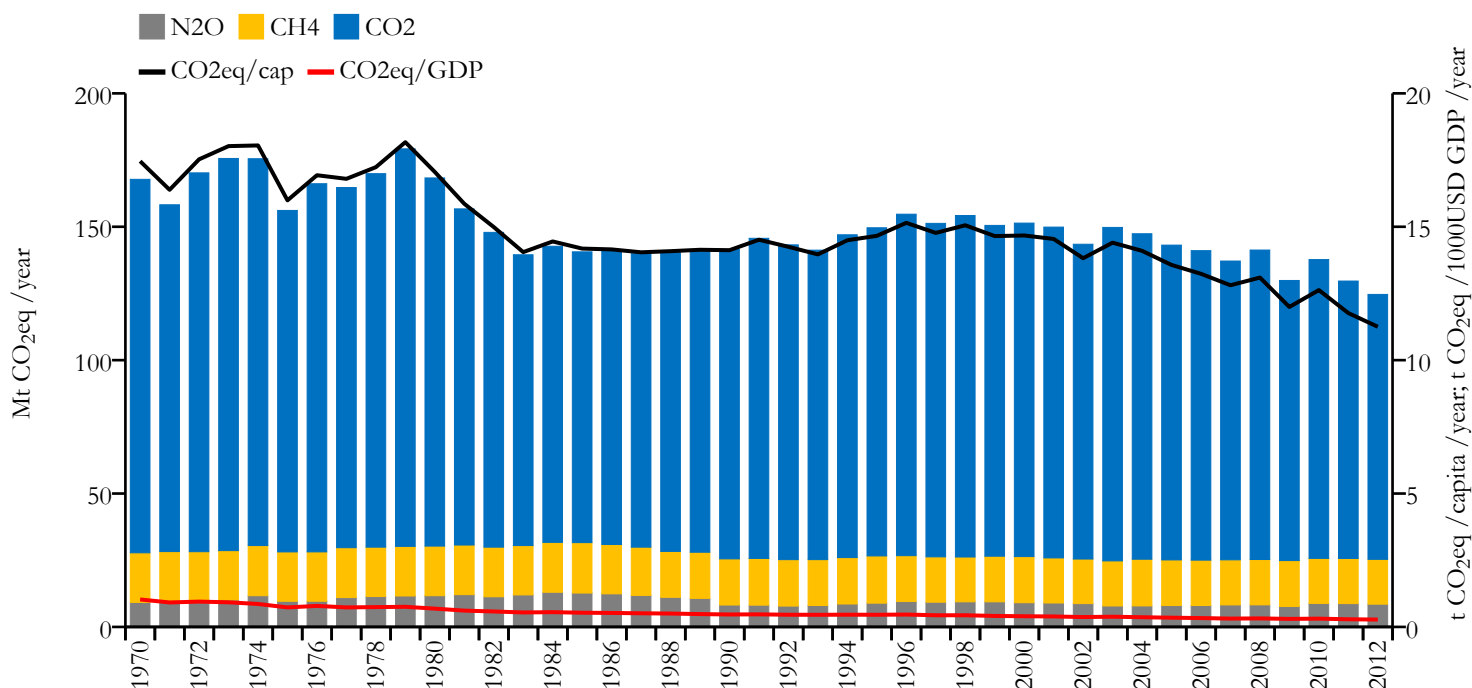
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	94.723	8.309	0.199	11358379
1990	114.882	11.488	0.379	10006544



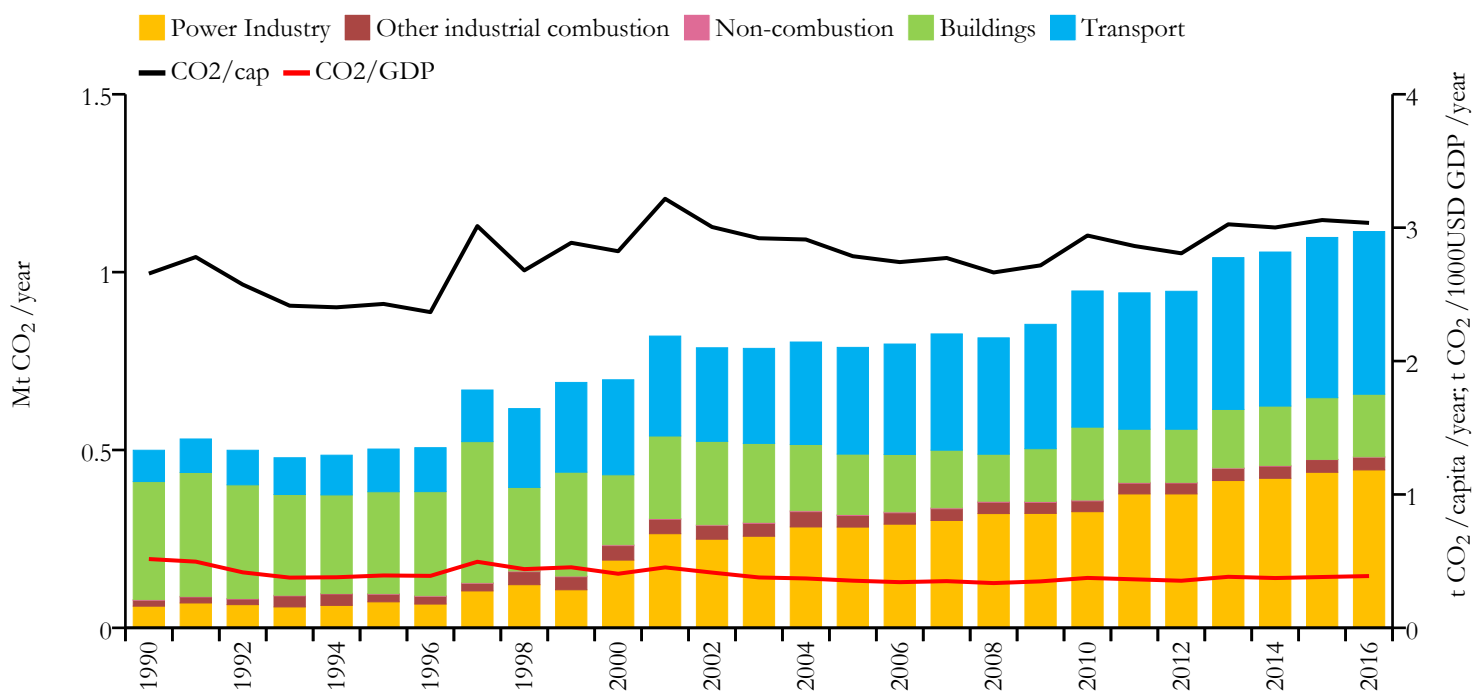
## Greenhouse gas emissions (EDGARv4.3.2 dataset)







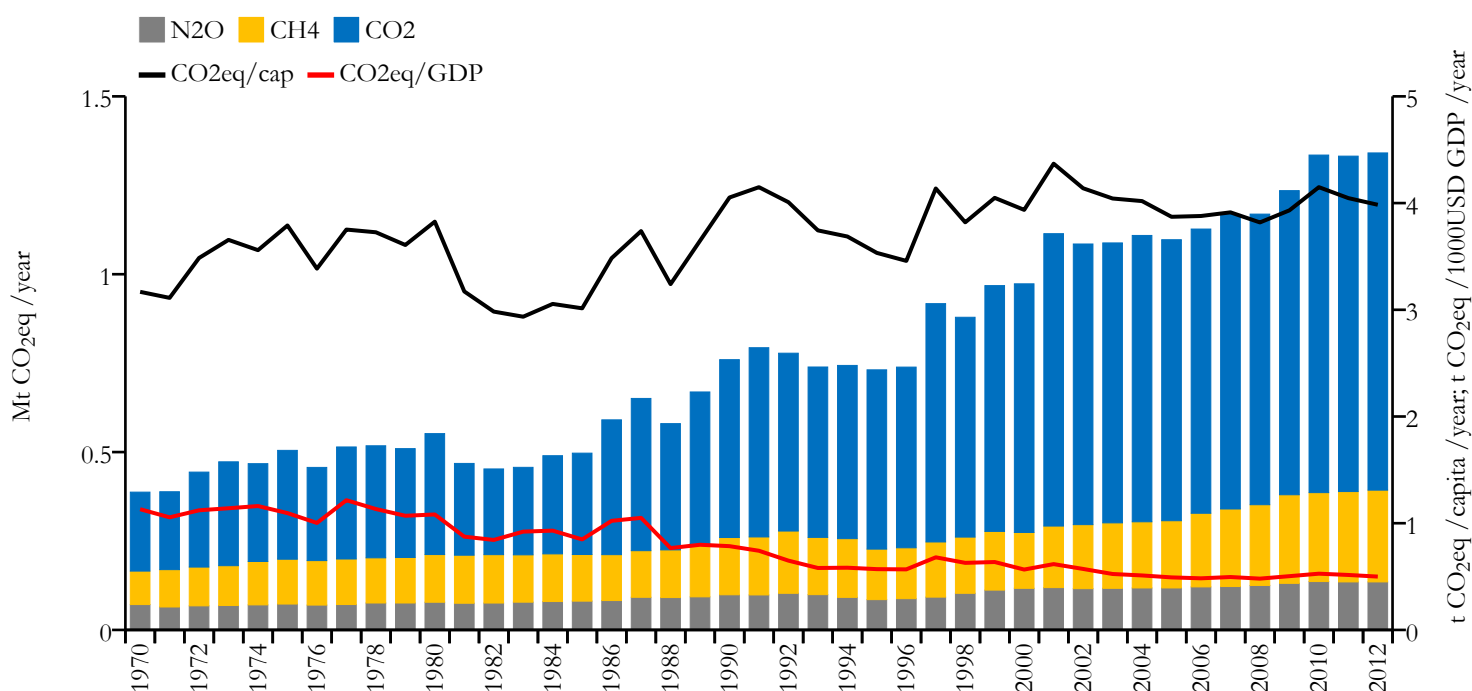
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	1.114	3.036	0.388	366954
1990	0.499	2.656	0.516	187552

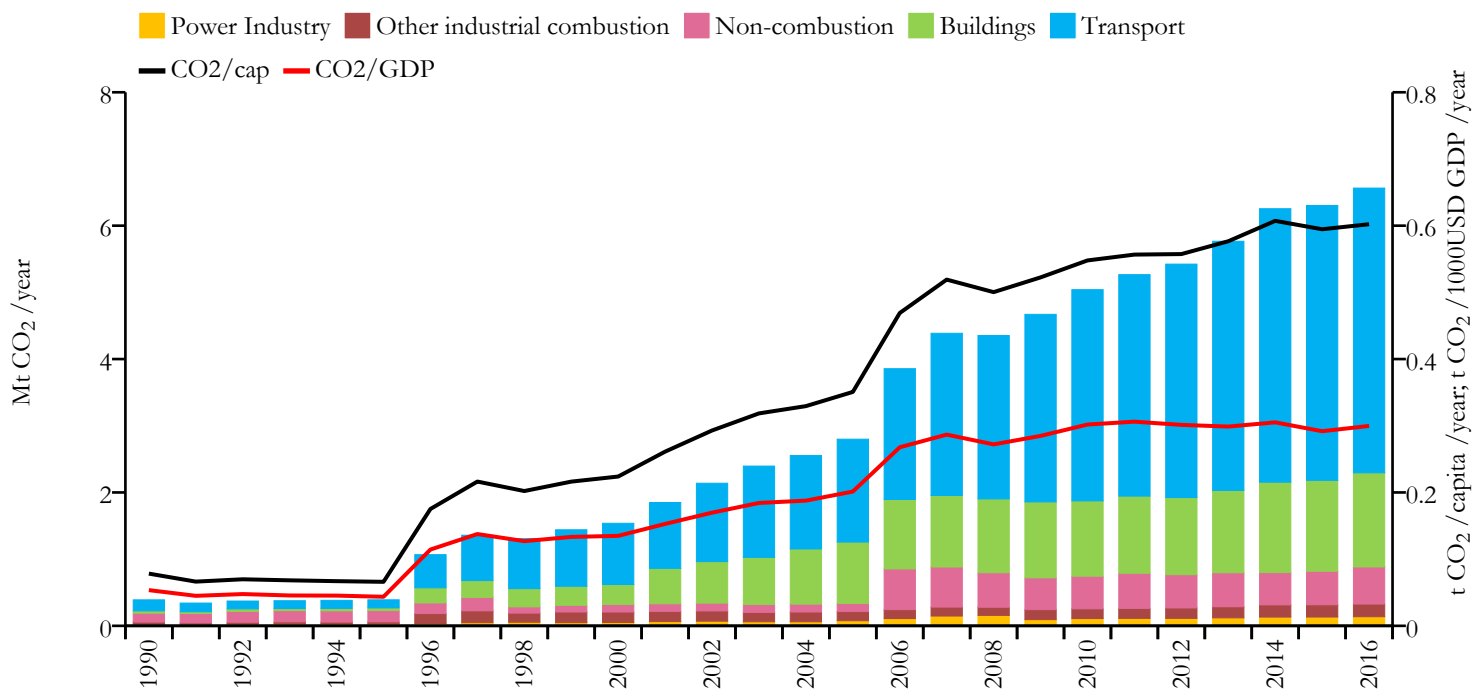


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





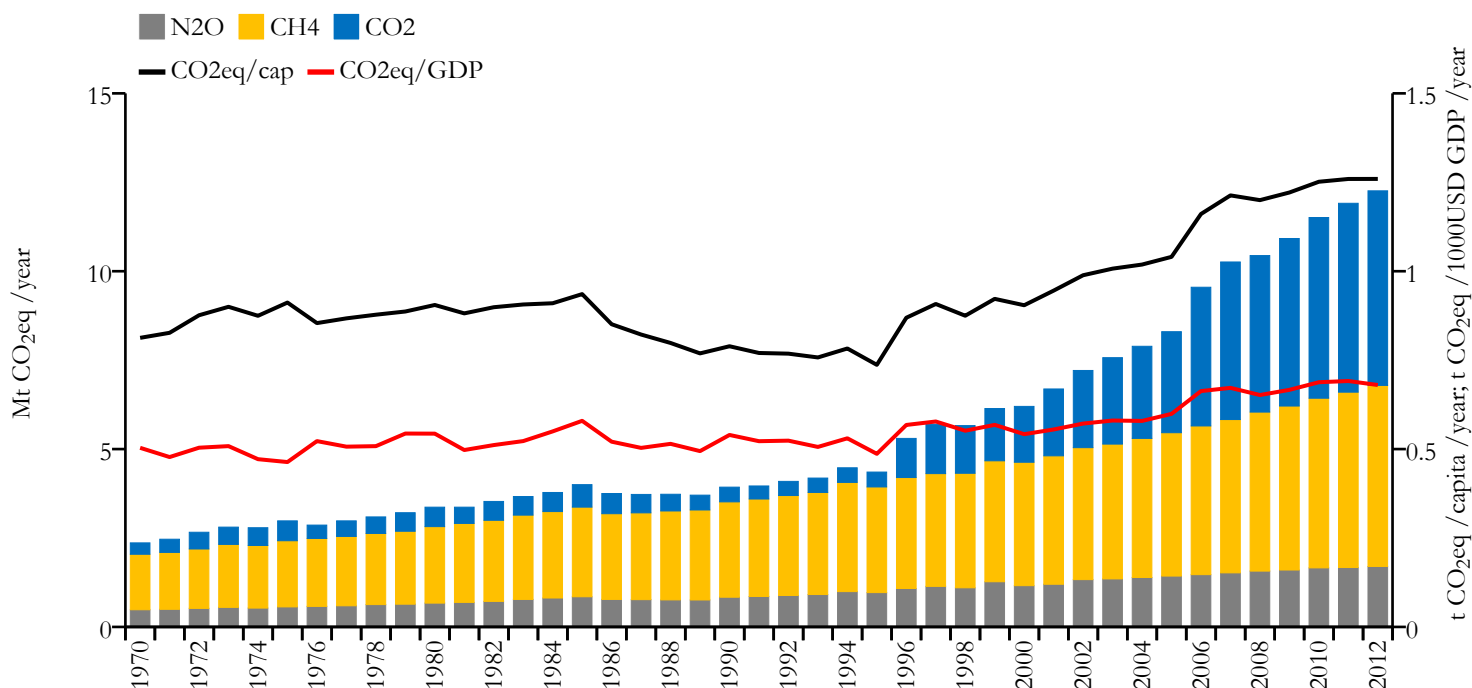
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	6.564	0.602	0.300	10872298
1990	0.390	0.078	0.054	4978496

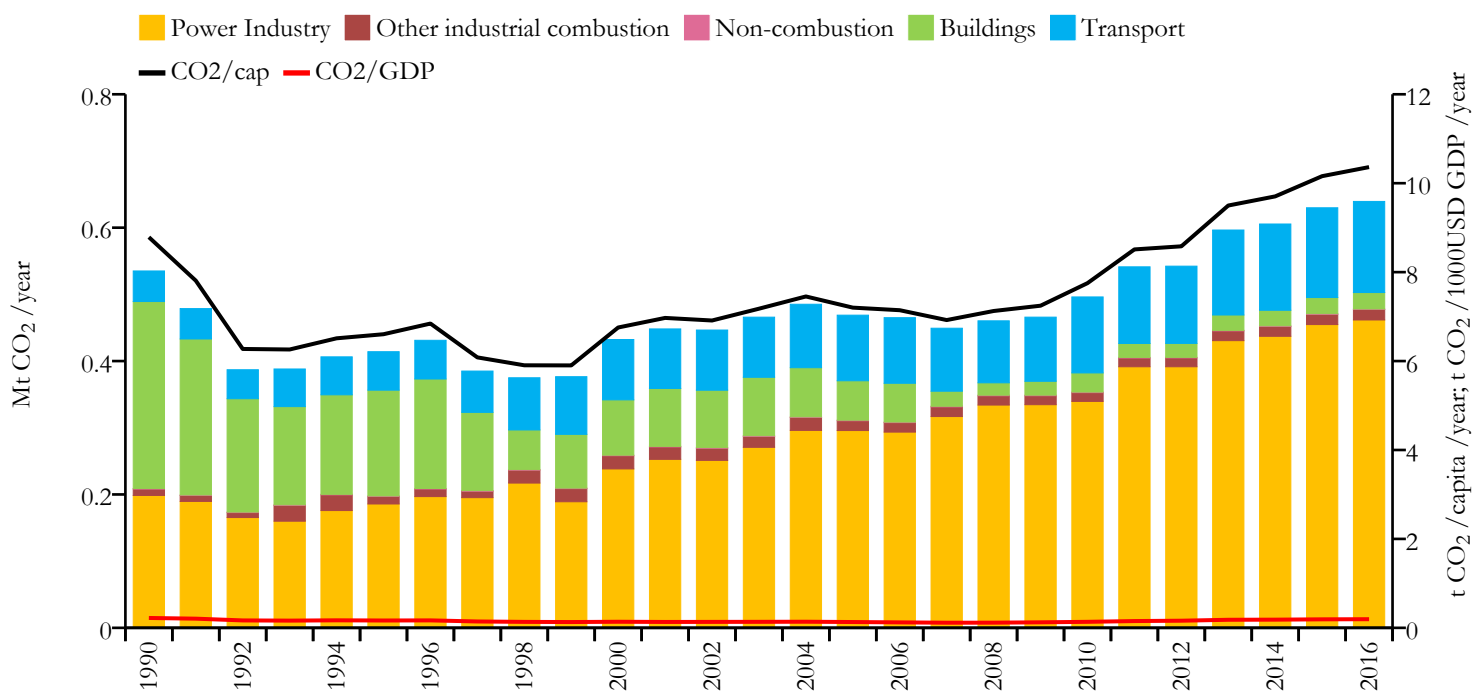


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





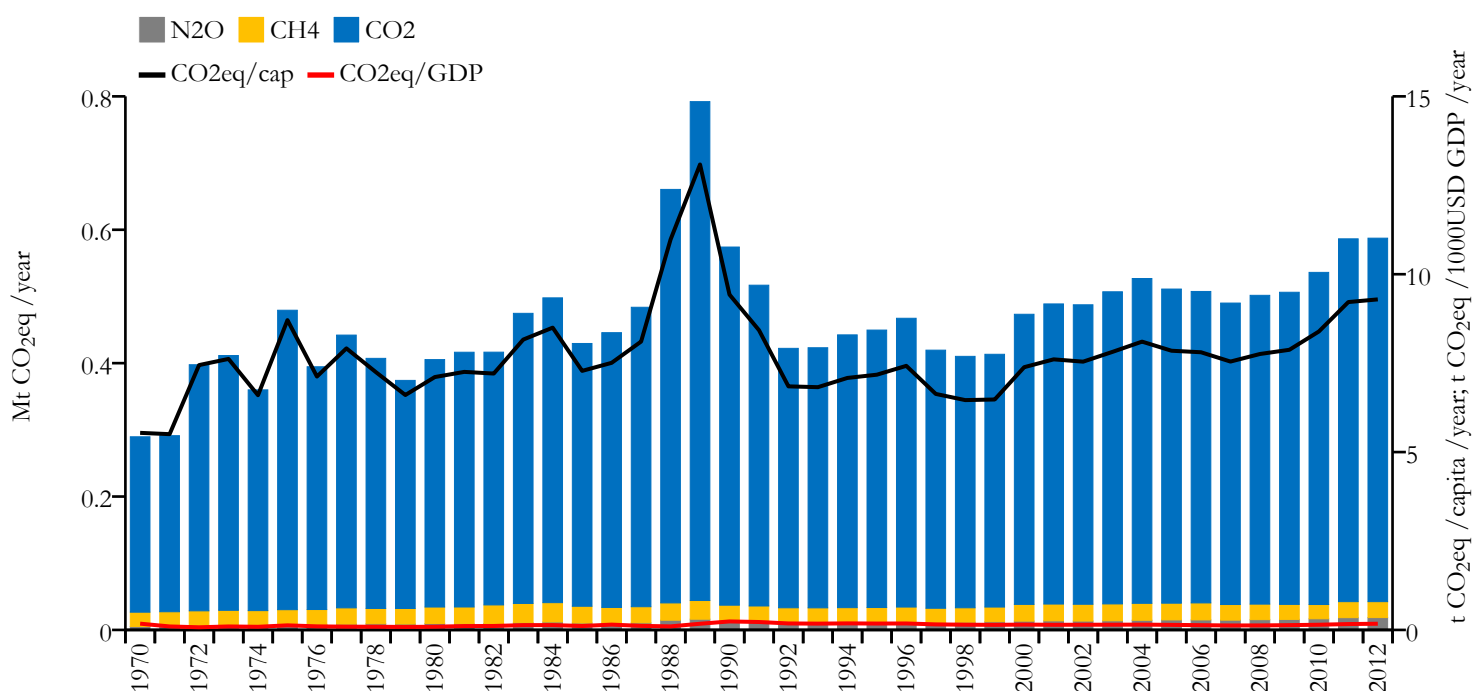
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	0.639	10.362	0.194	61666
1990	0.535	8.786	0.222	60930

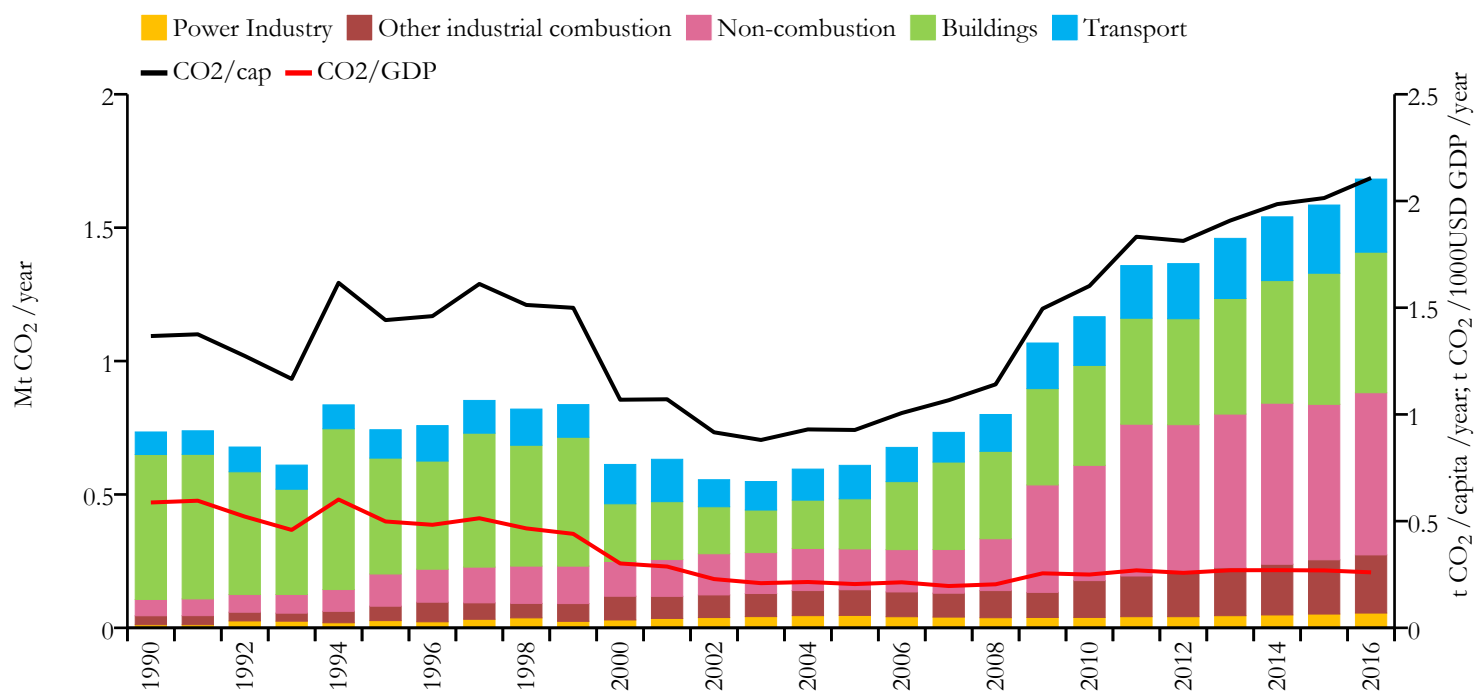


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





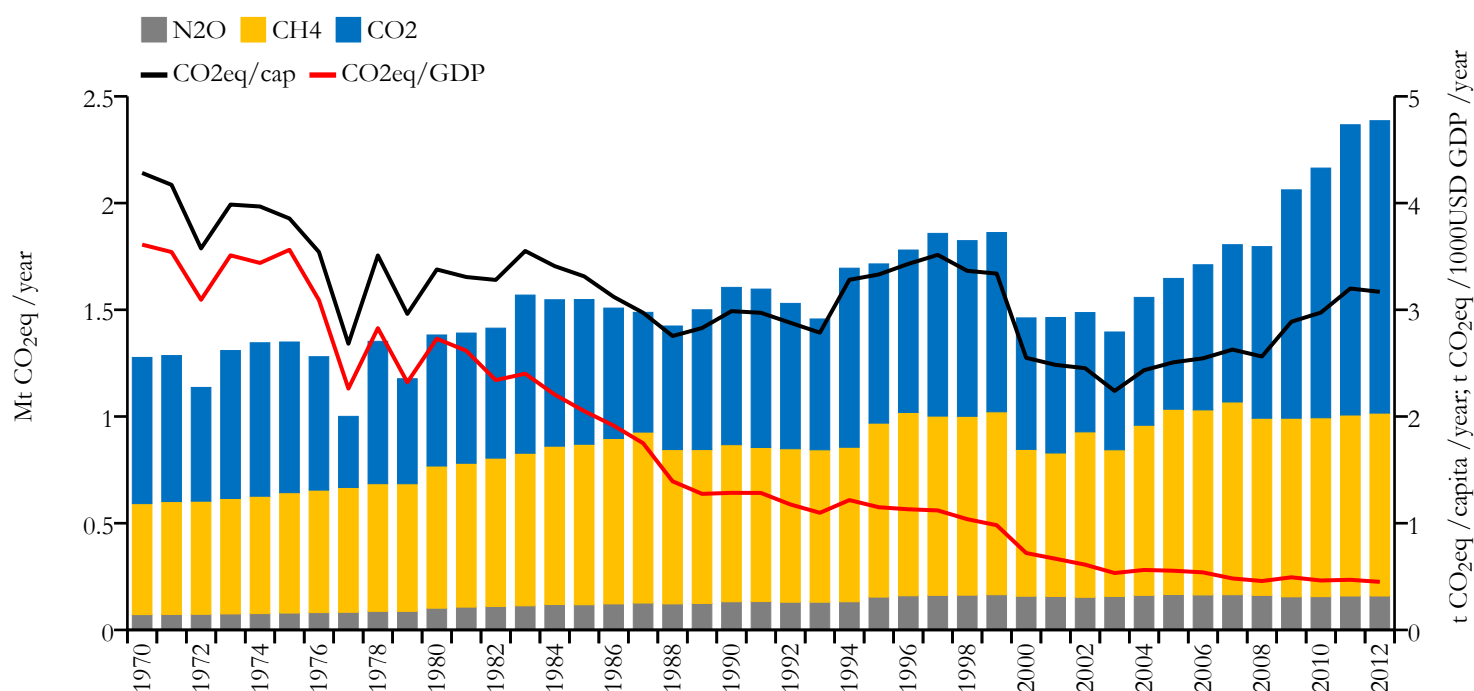
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	1.682	2.108	0.260	797765
1990	0.734	1.367	0.587	537280

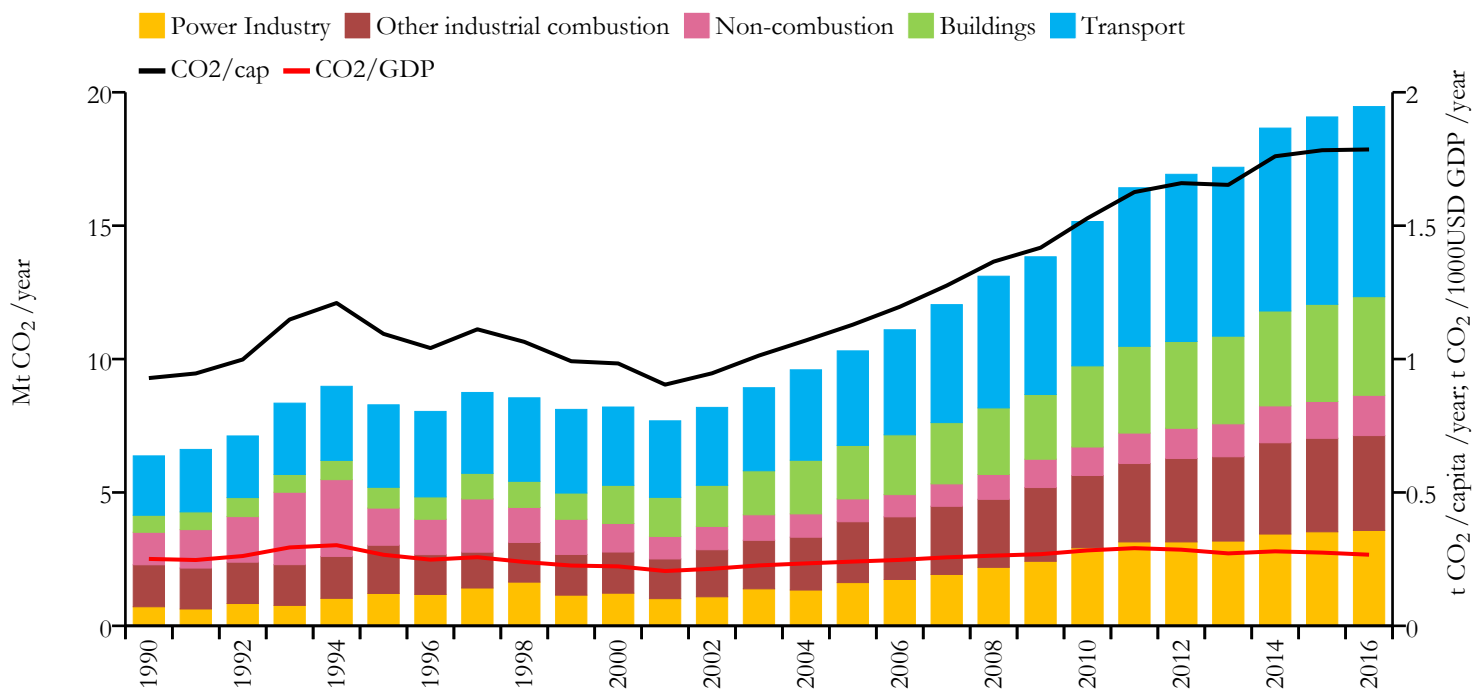


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





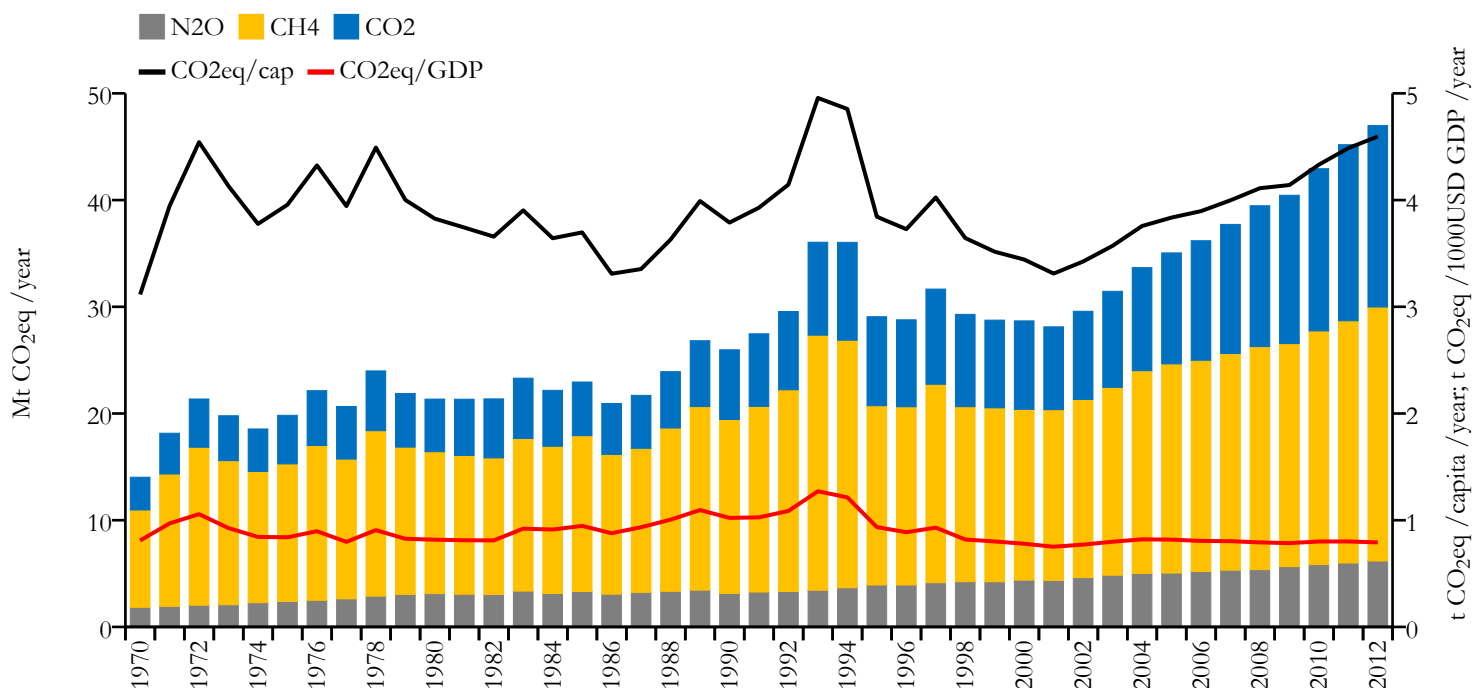
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	19.464	1.786	0.267	10887882
1990	6.371	0.929	0.251	6856244



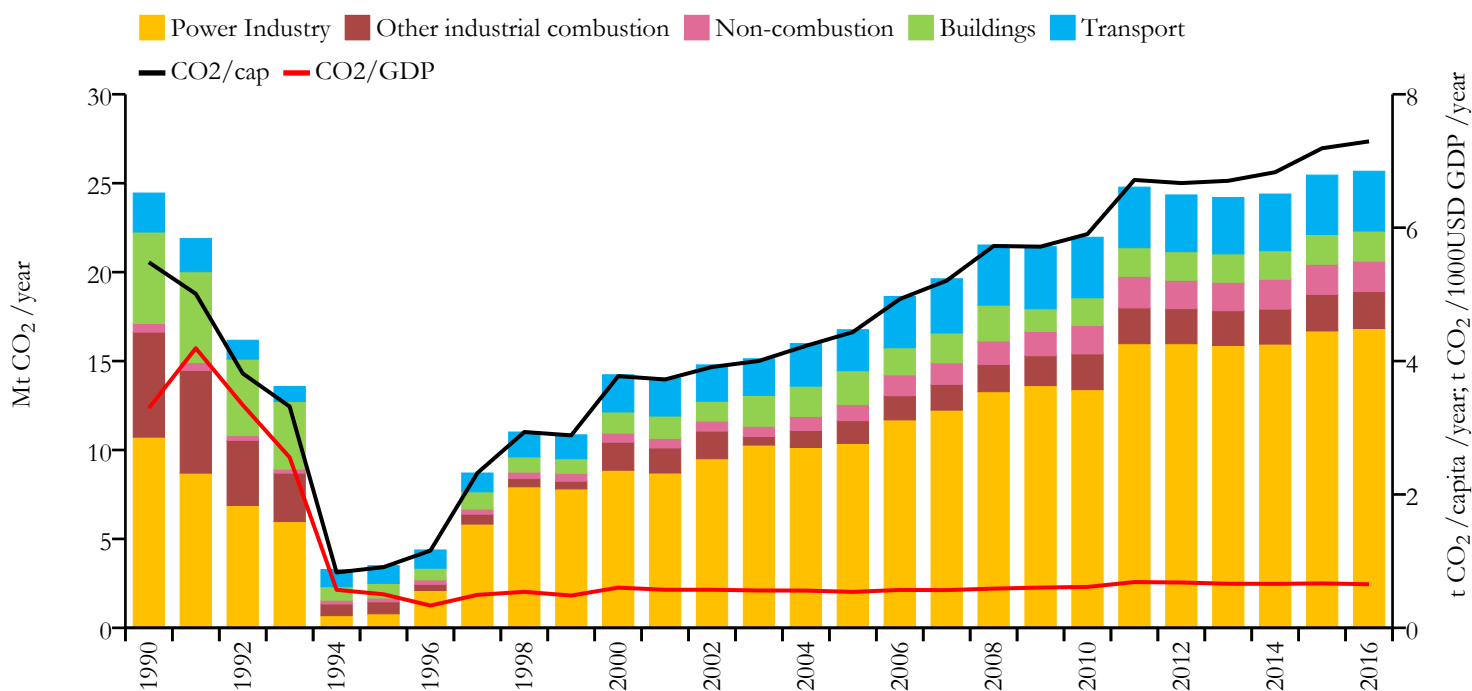
## Greenhouse gas emissions (EDGARv4.3.2 dataset)



# Bosnia and Herzegovina



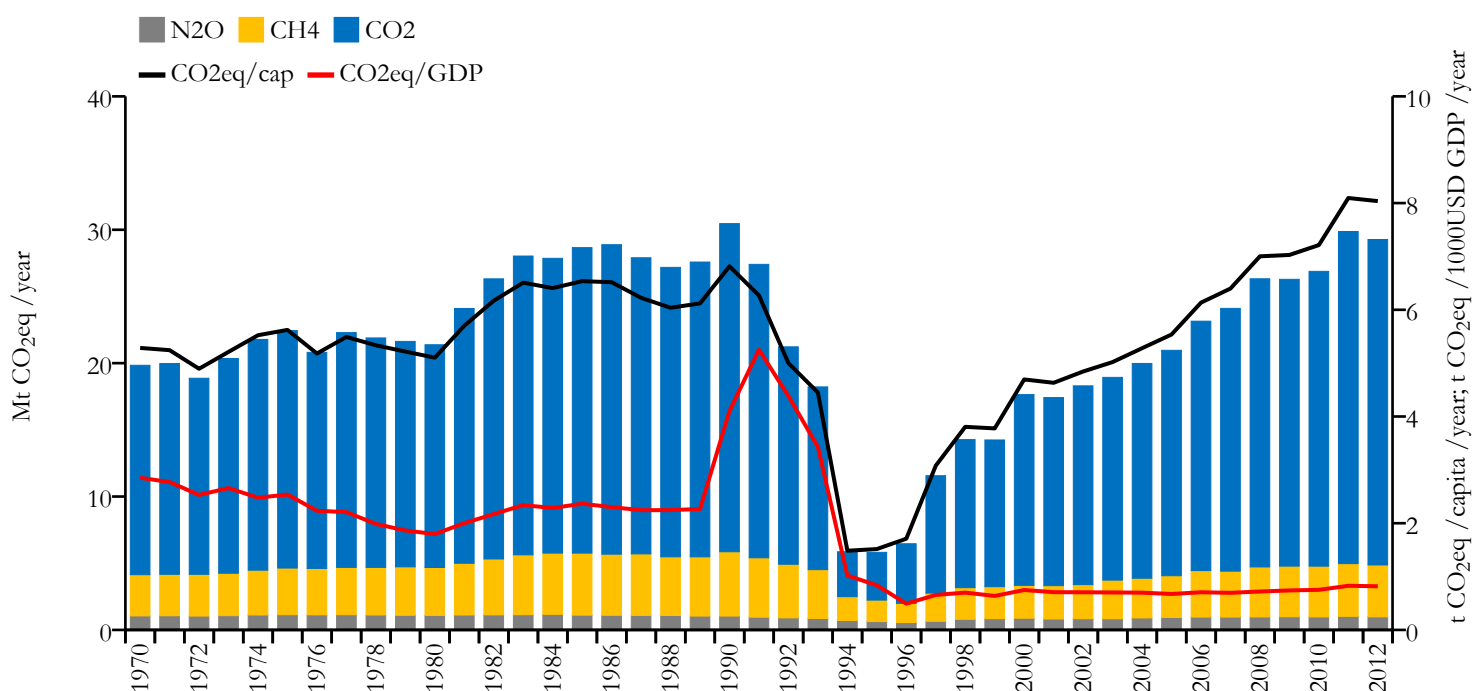
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)

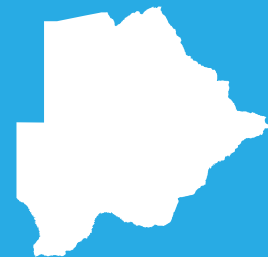


Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	25.674	7.294	0.653	3516816
1990	24.447	5.481	3.295	4463422

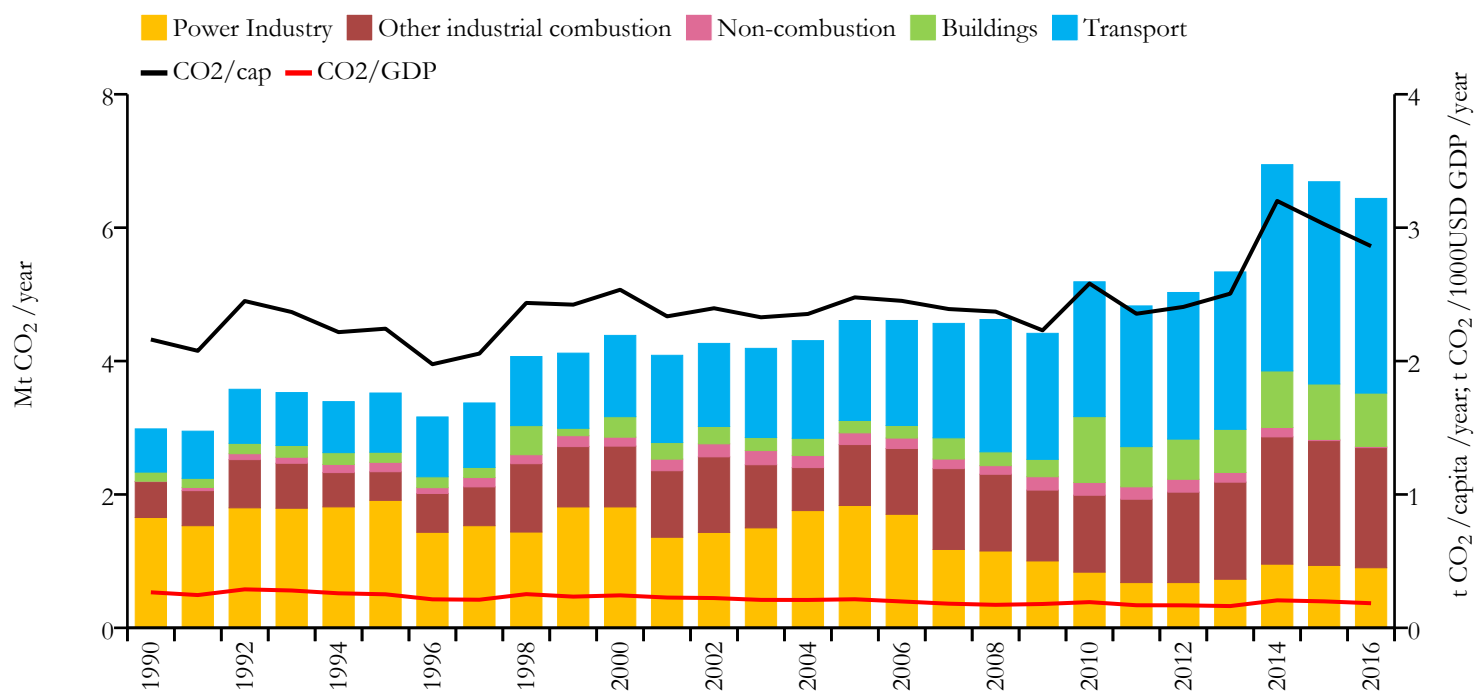


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





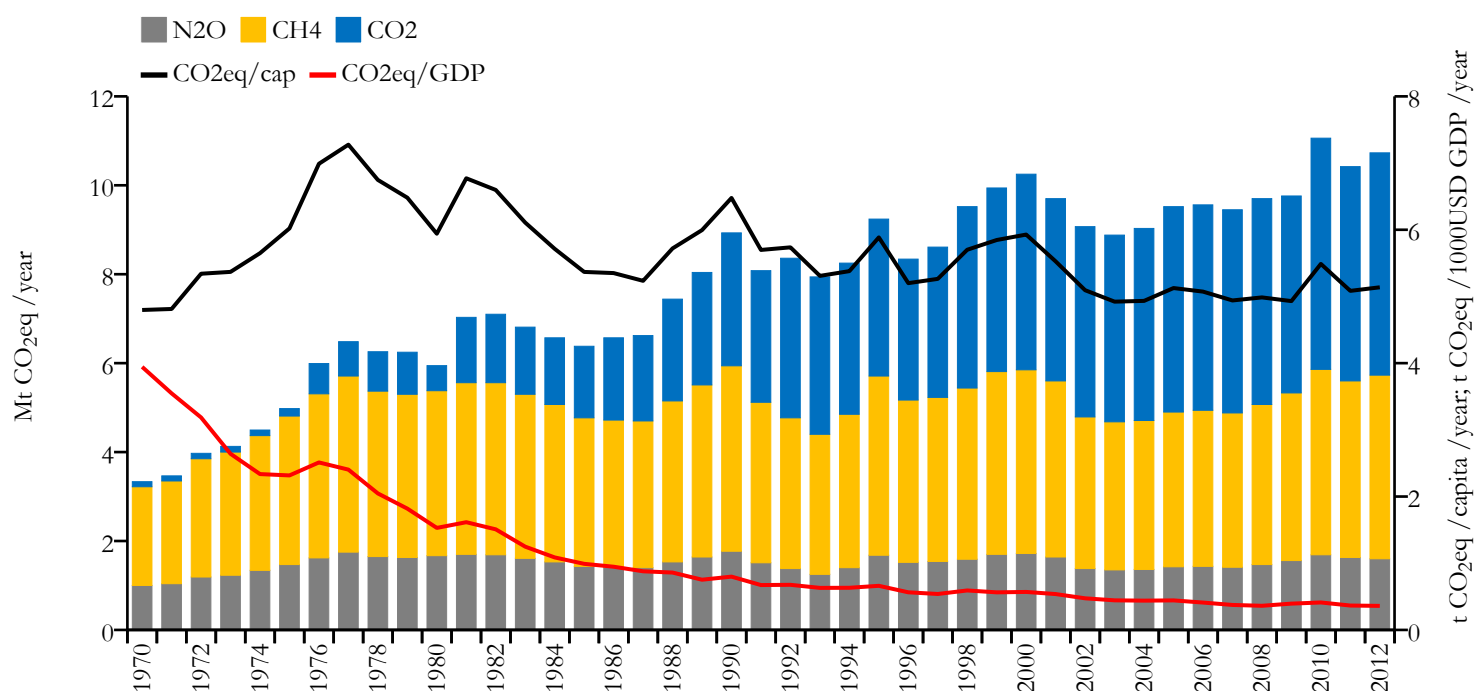
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	6.438	2.862	0.184	2250260
1990	2.983	2.162	0.266	1377912

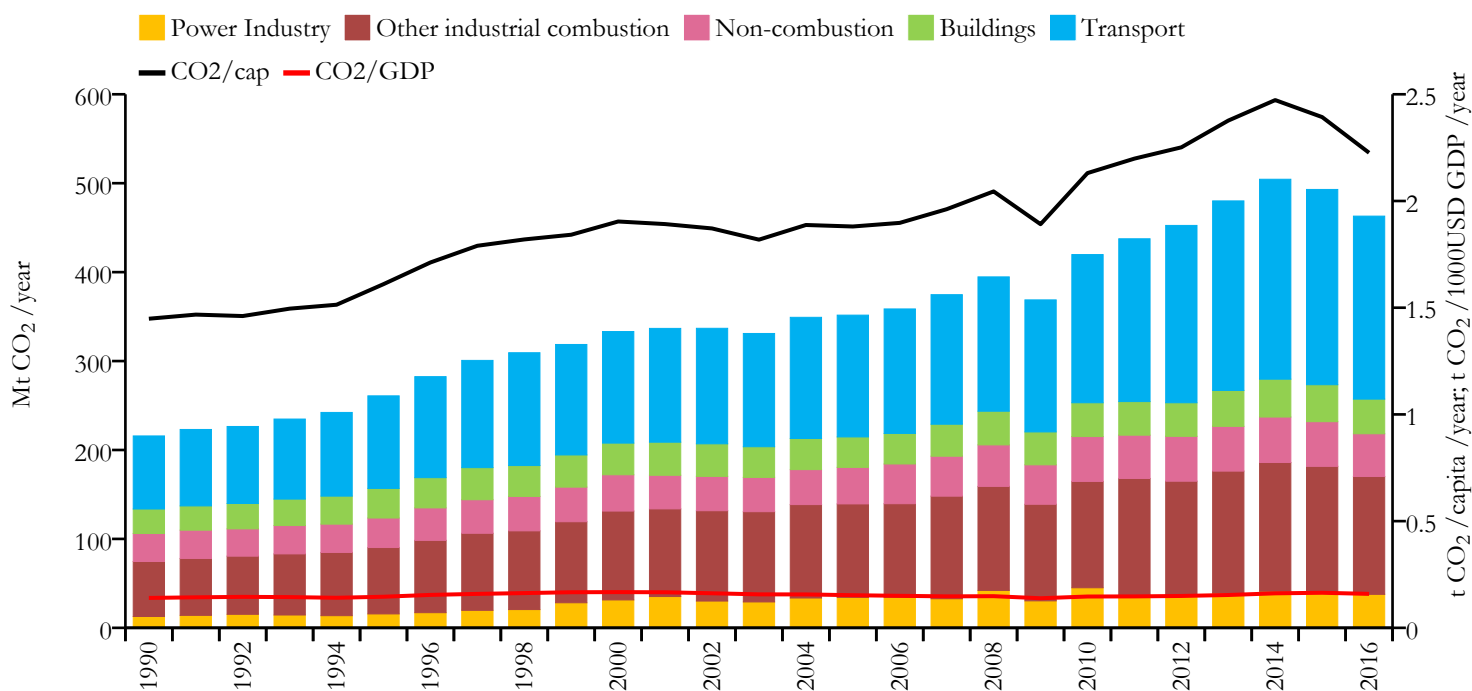


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





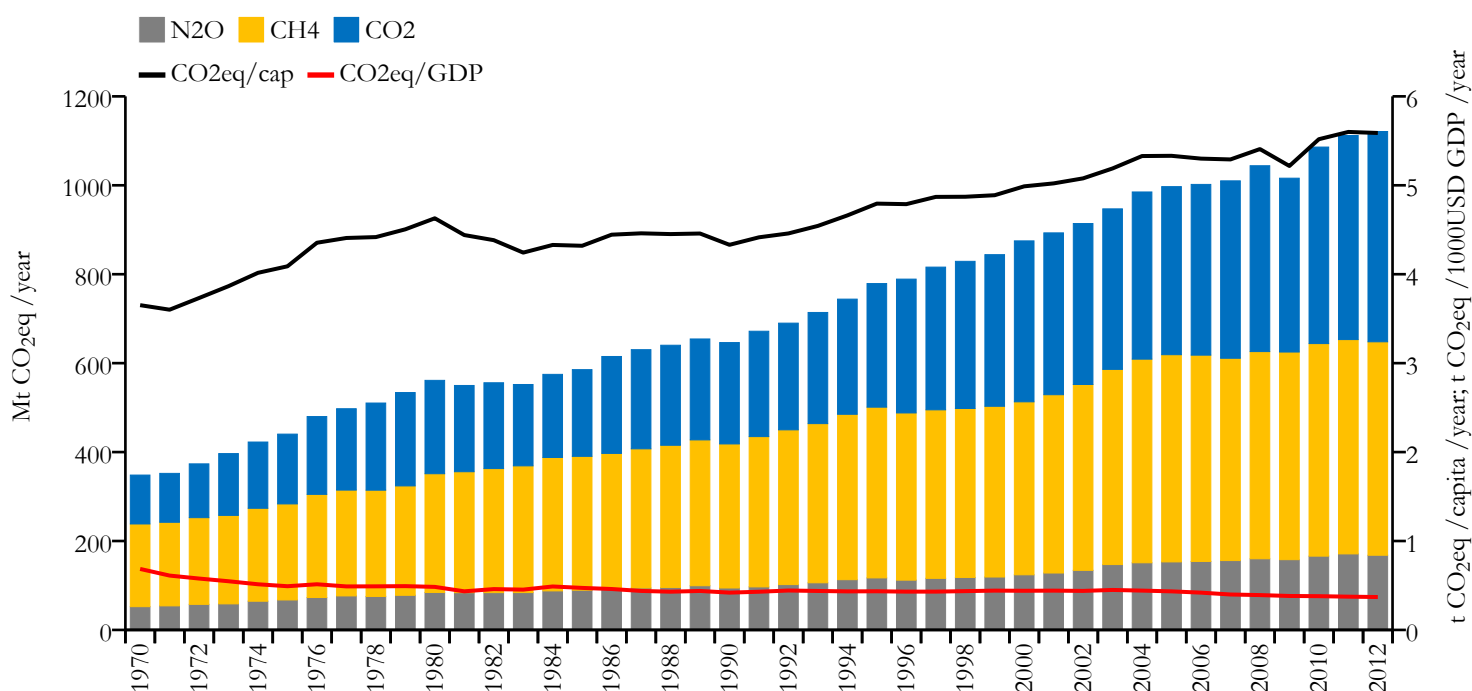
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	462.995	2.226	0.159	207652865
1990	215.804	1.448	0.140	149352145



## Greenhouse gas emissions (EDGARv4.3.2 dataset)

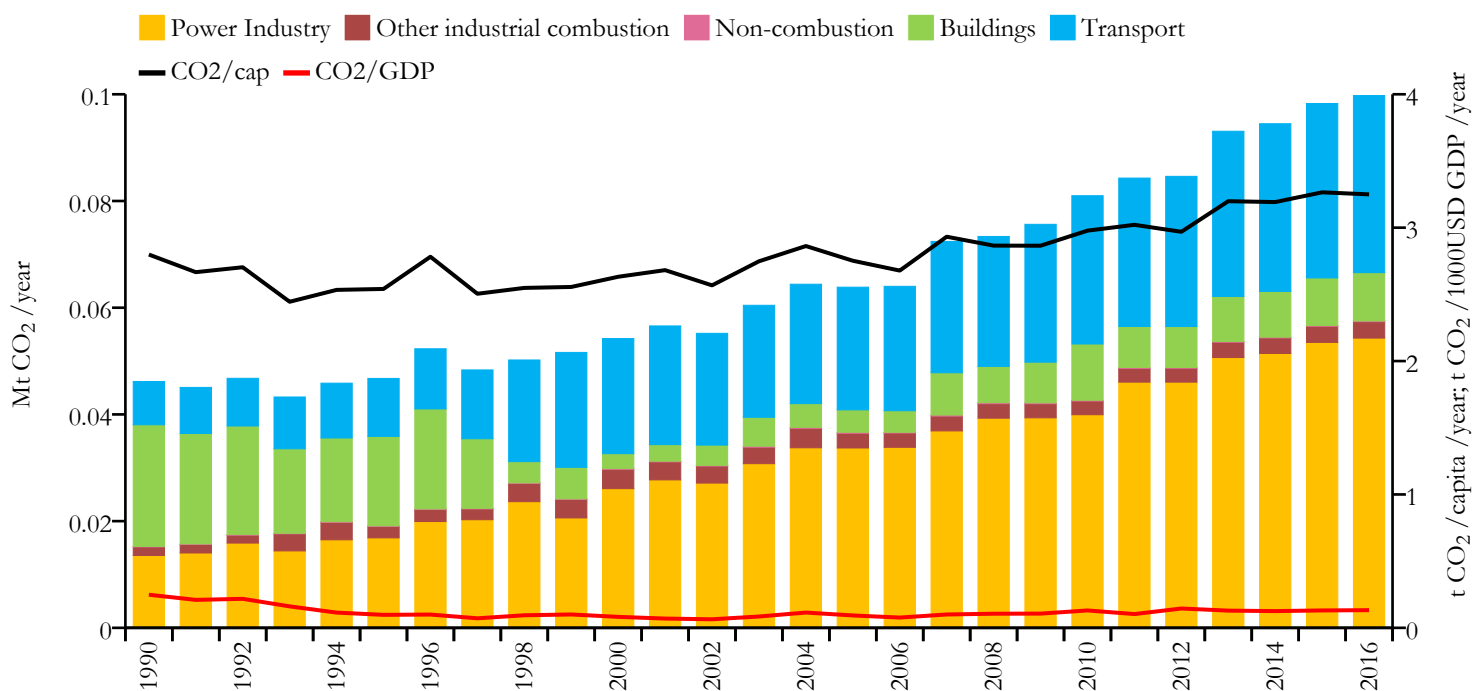




# British Virgin Islands



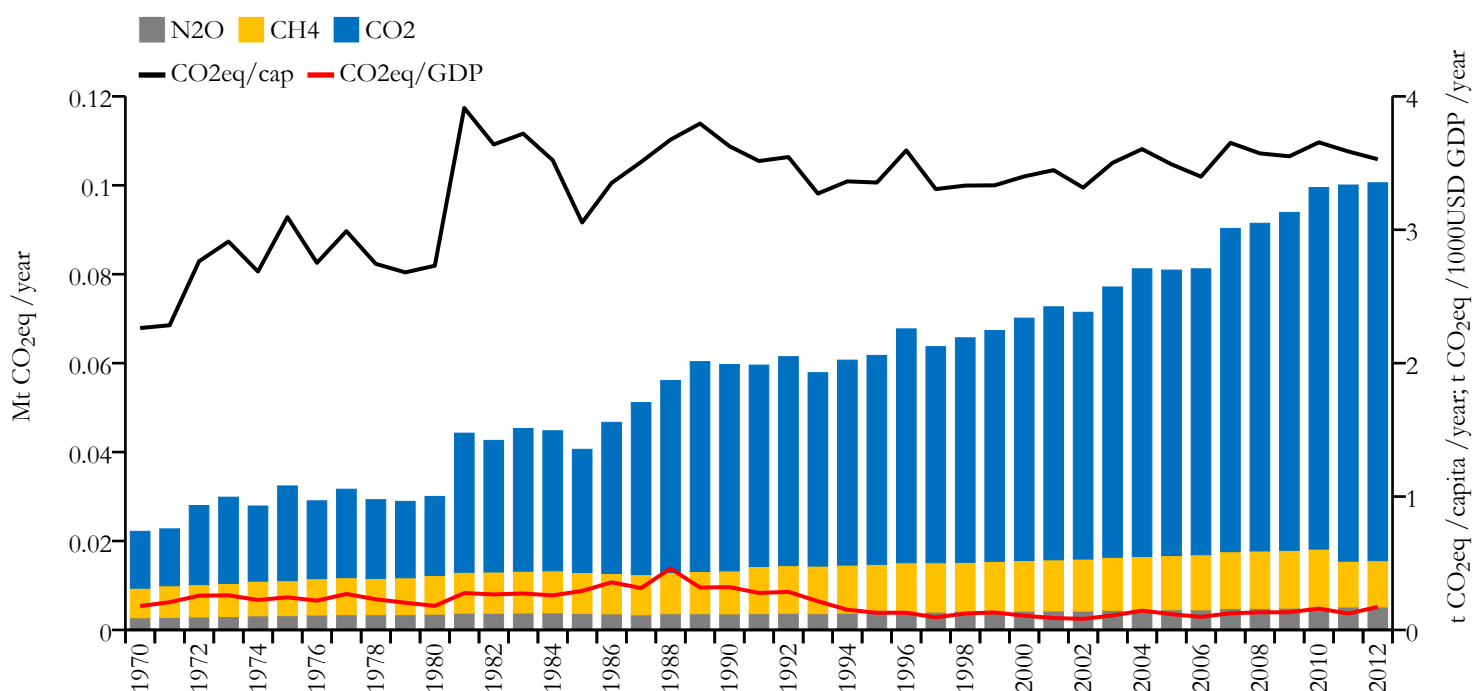
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	0.100	3.250	0.132	30661
1990	0.046	2.799	0.248	16461

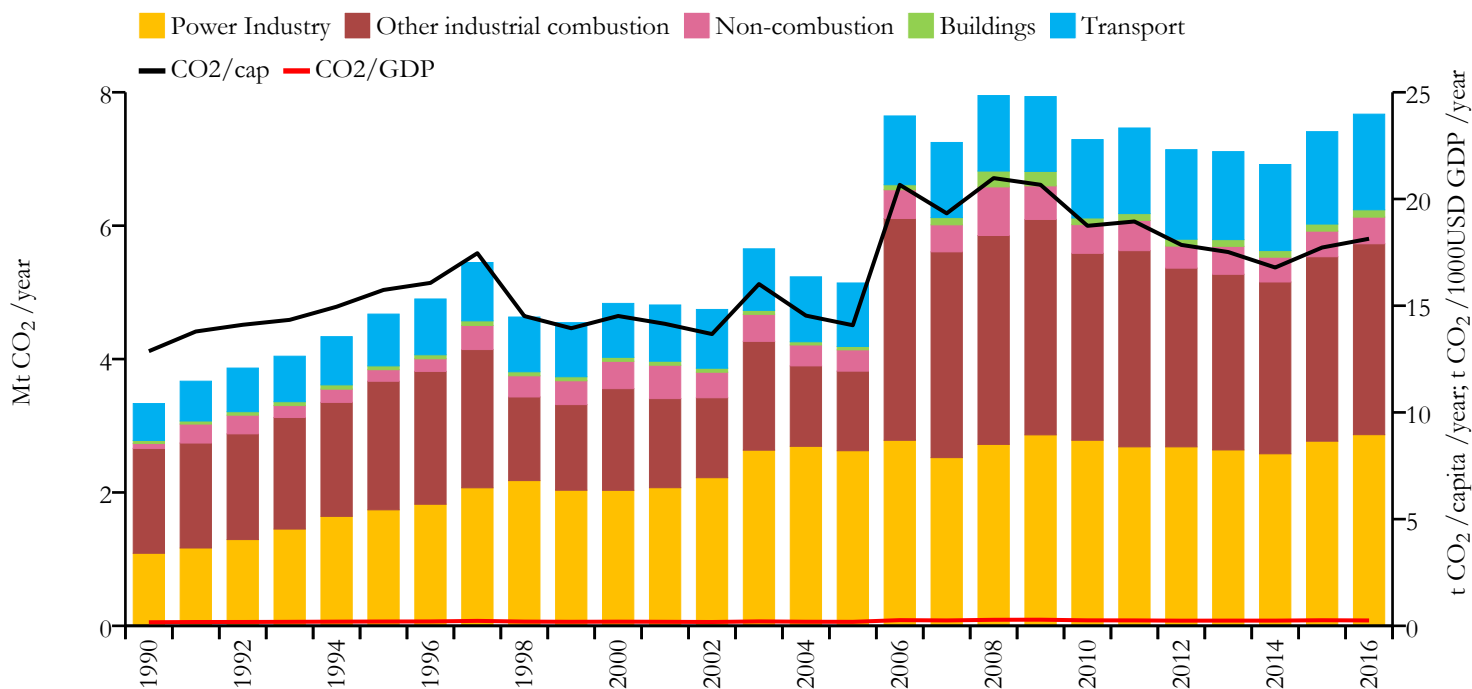


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





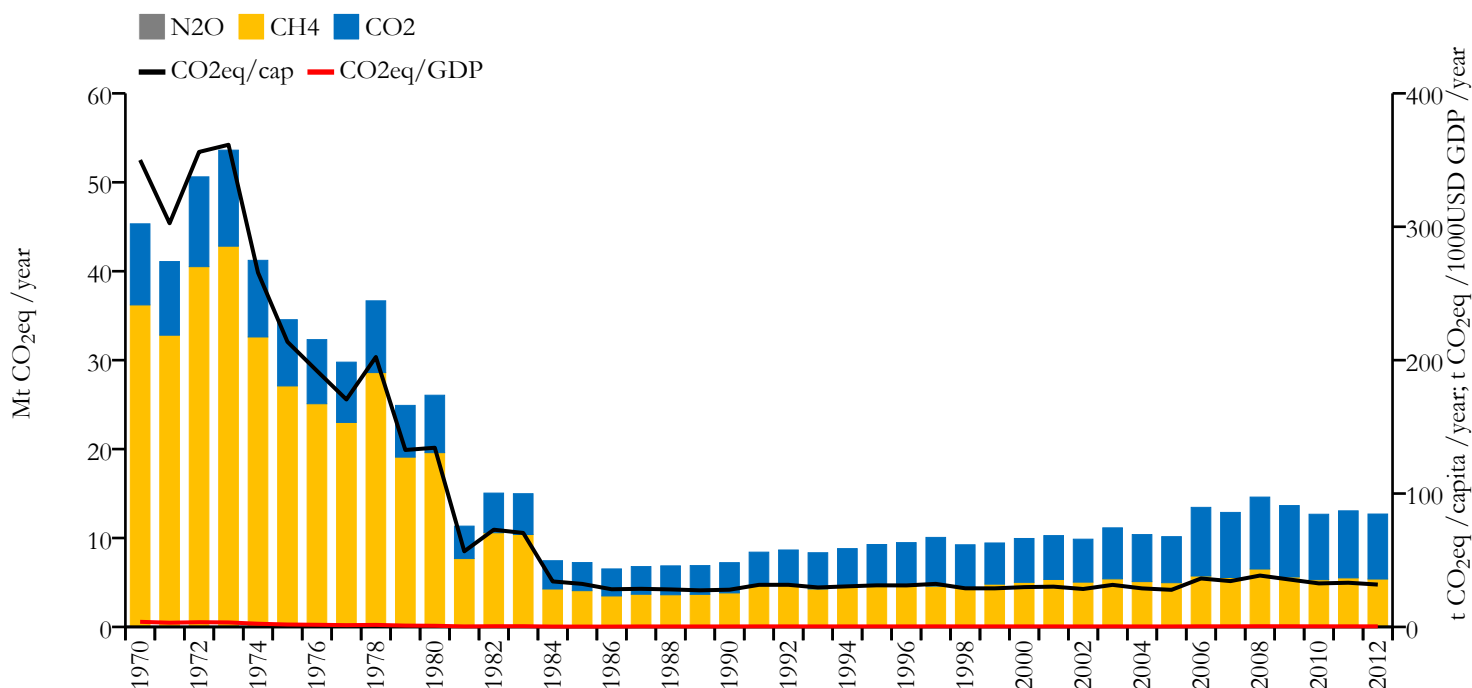
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	7.672	18.137	0.252	423196
1990	3.333	12.868	0.168	258785

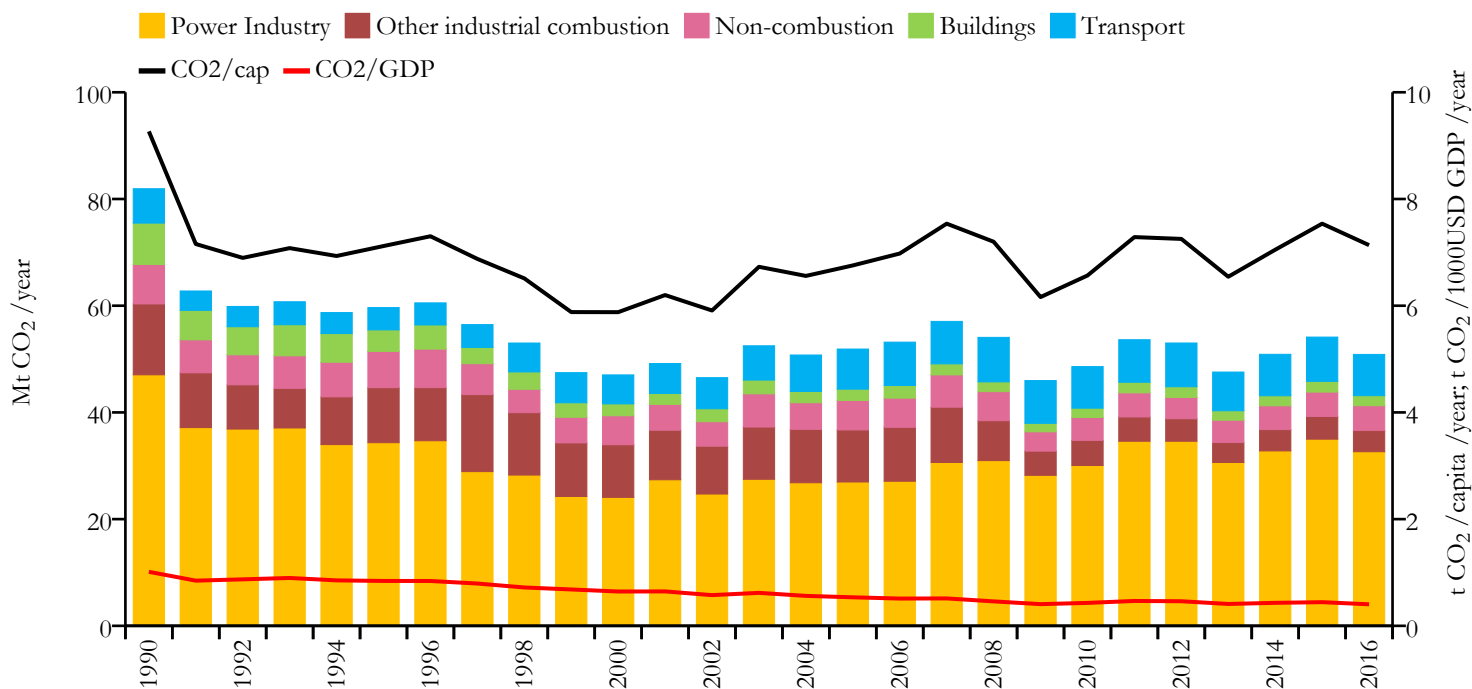


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





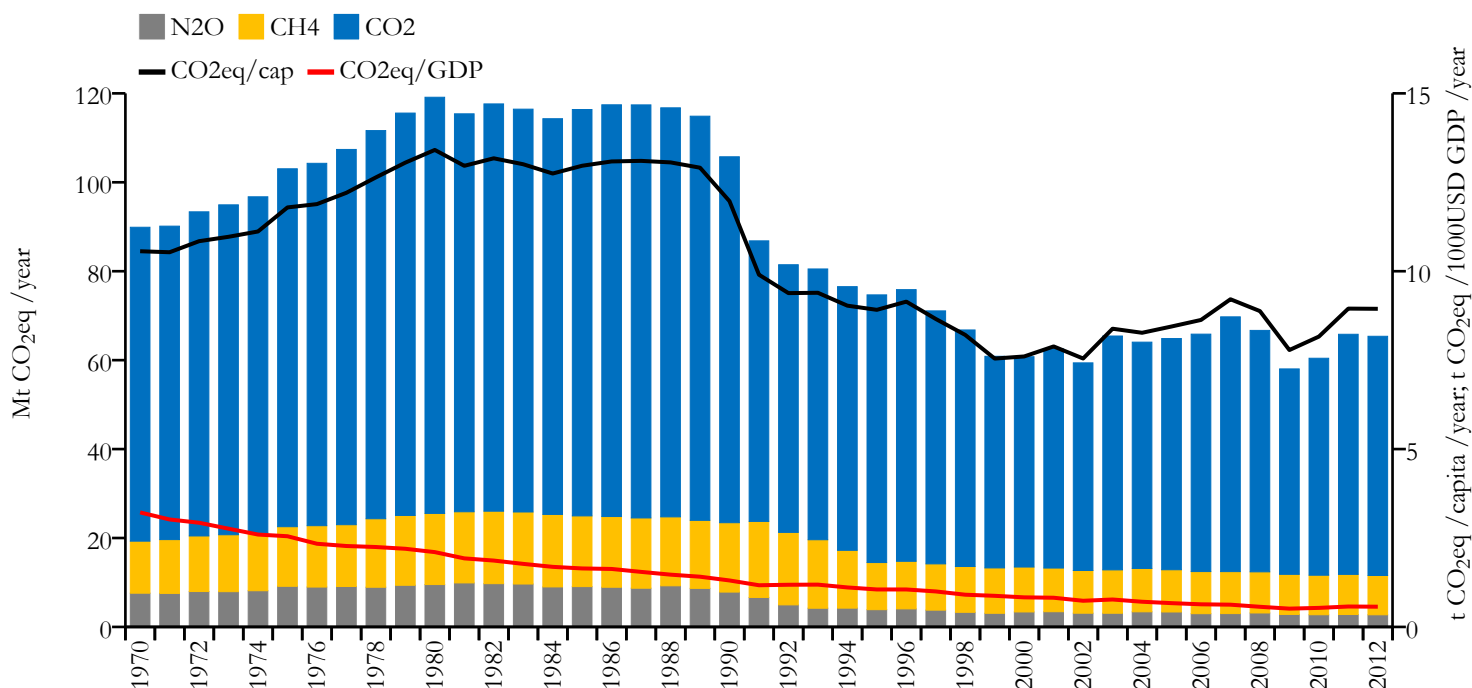
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	50.873	7.135	0.404	7131494
1990	81.923	9.267	1.013	8841371

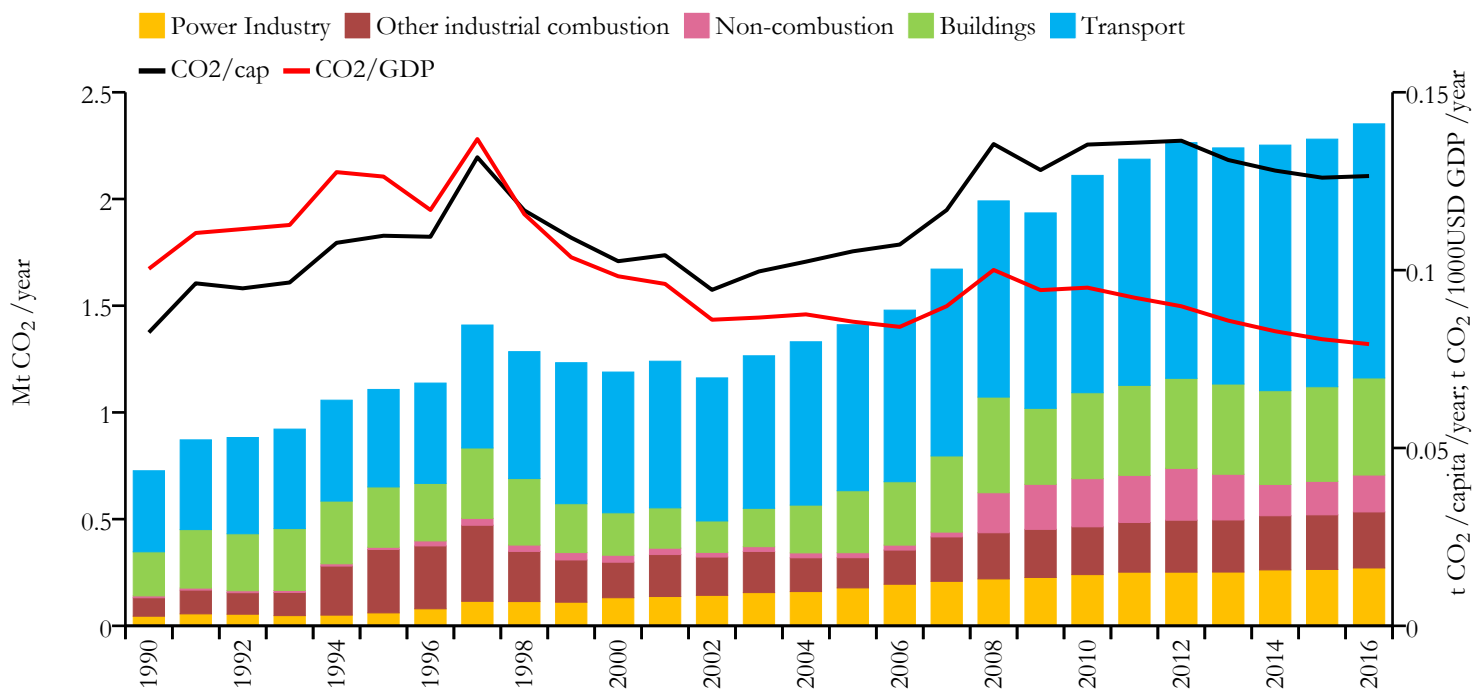


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





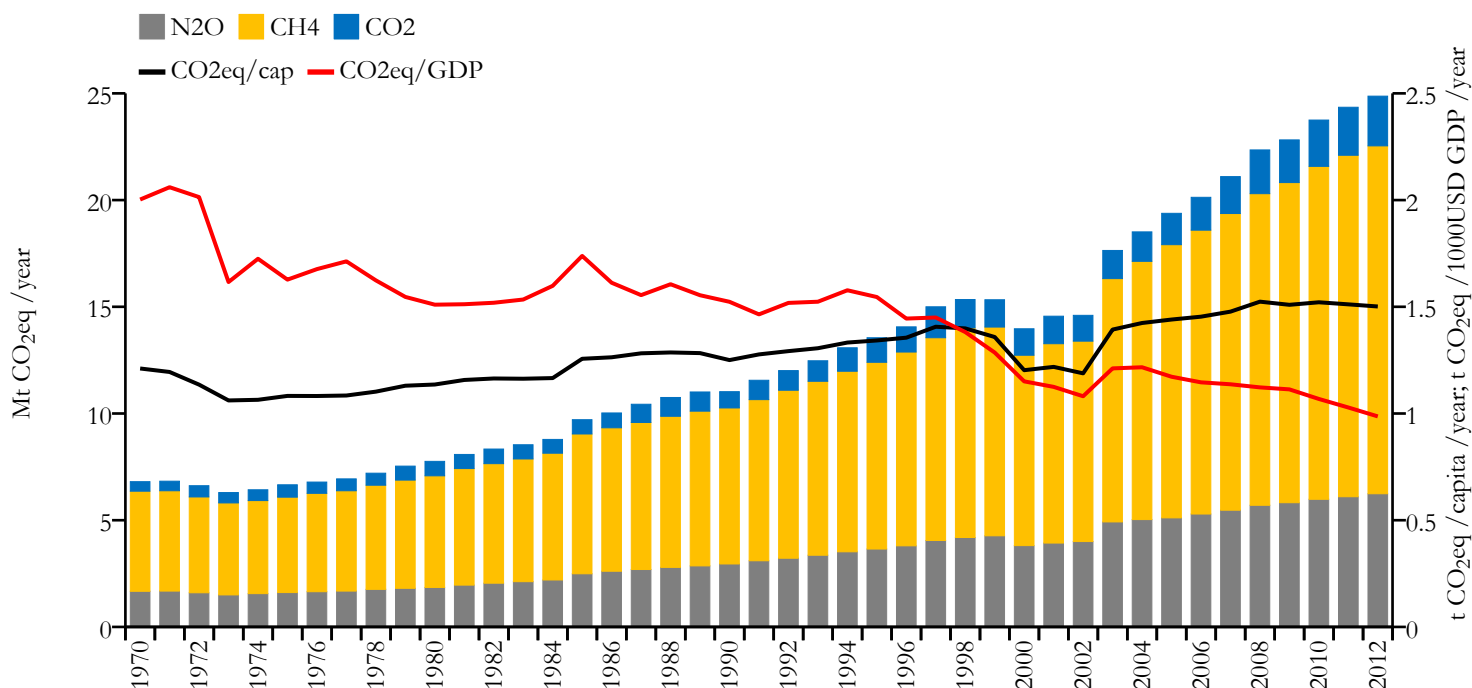
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	2.352	0.126	0.079	18646433
1990	0.727	0.082	0.100	8811034

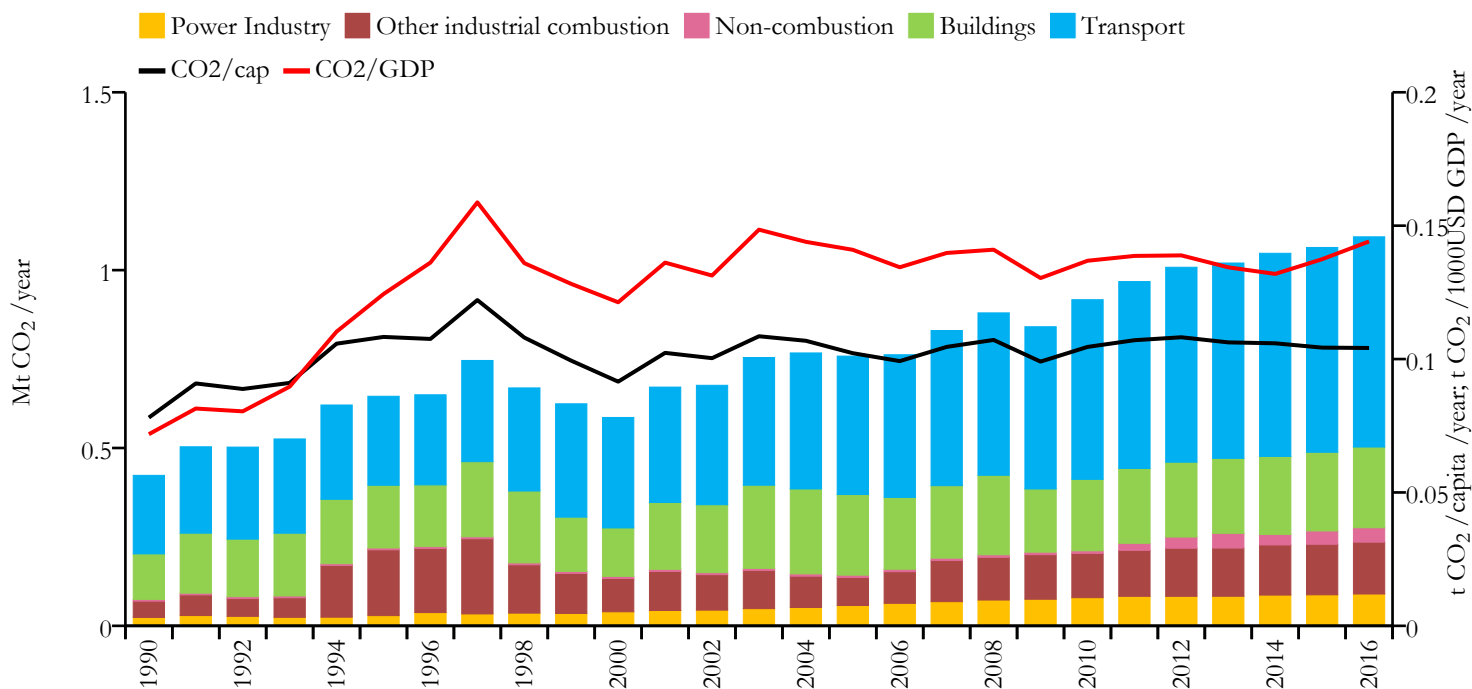


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





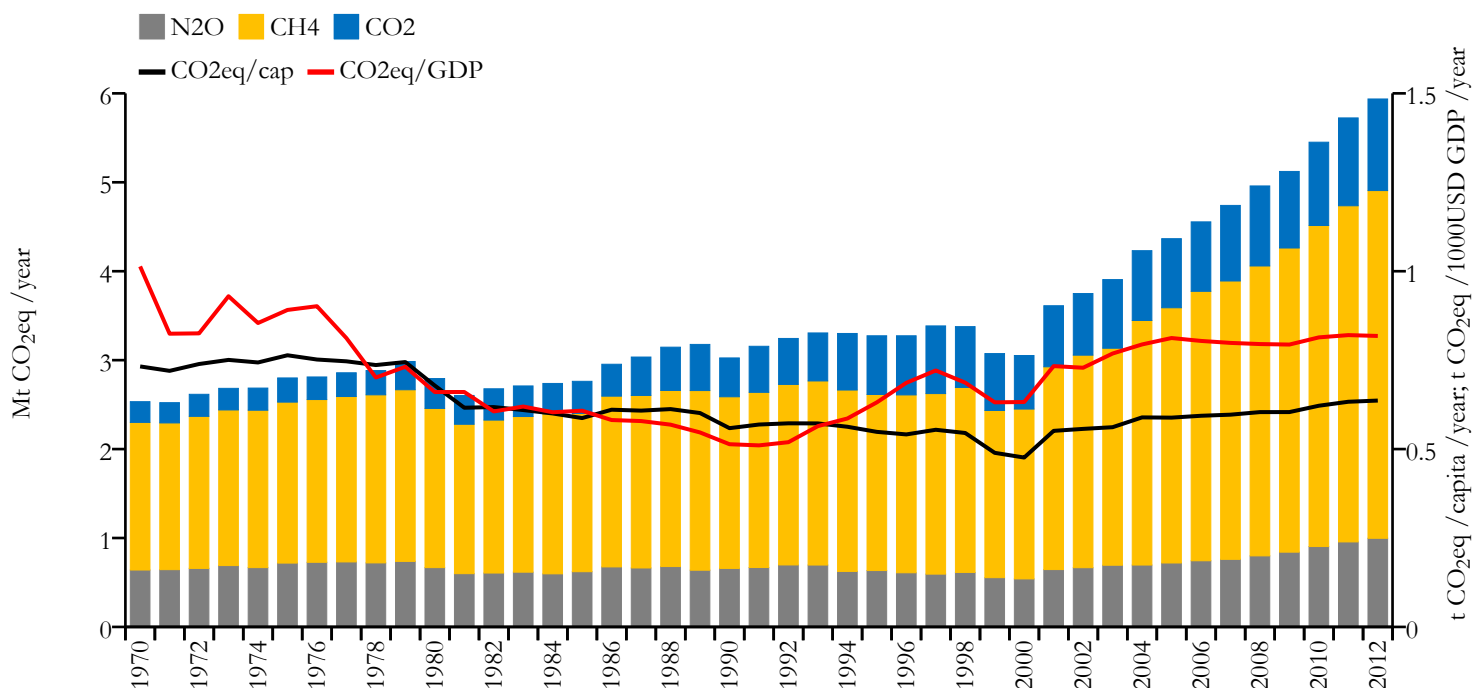
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)

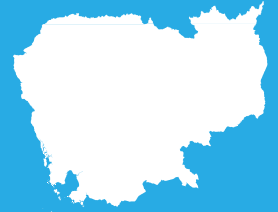


Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	1.094	0.104	0.144	10524117
1990	0.423	0.078	0.072	5415415

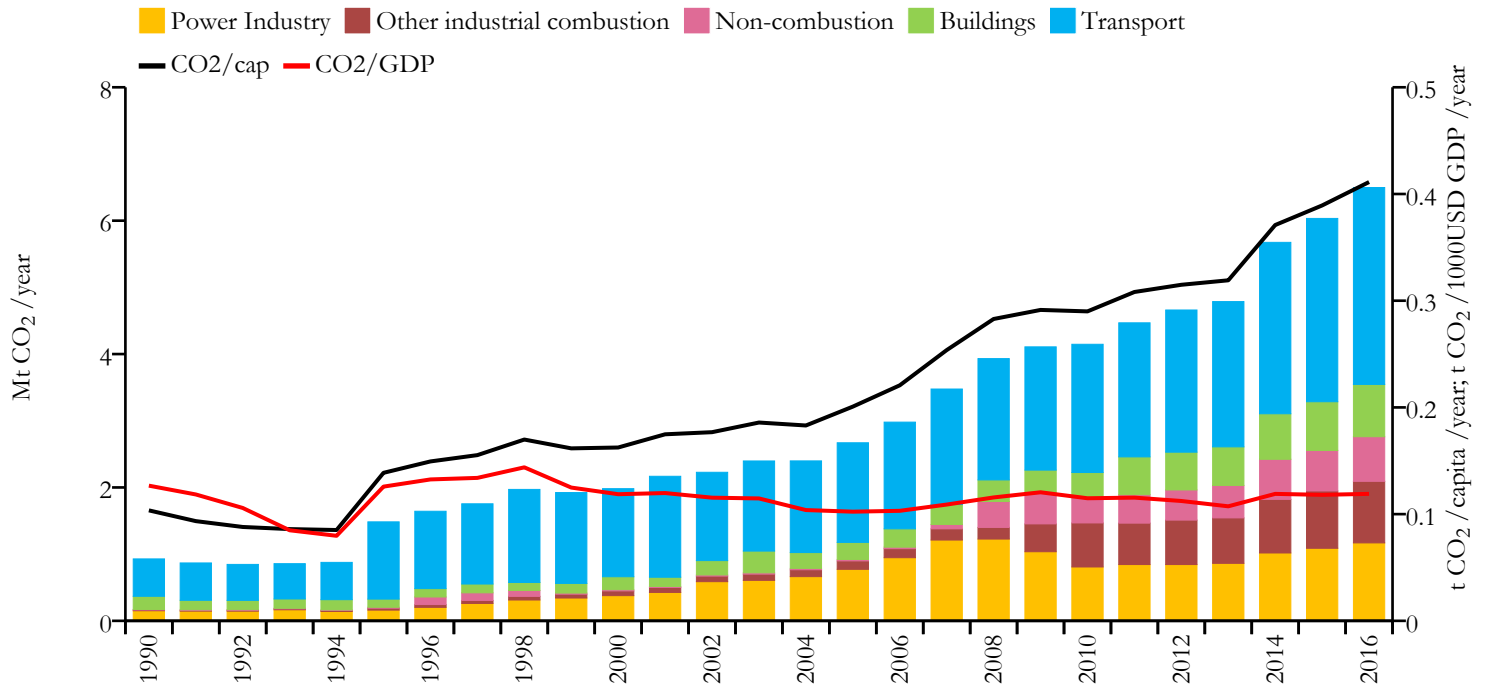


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





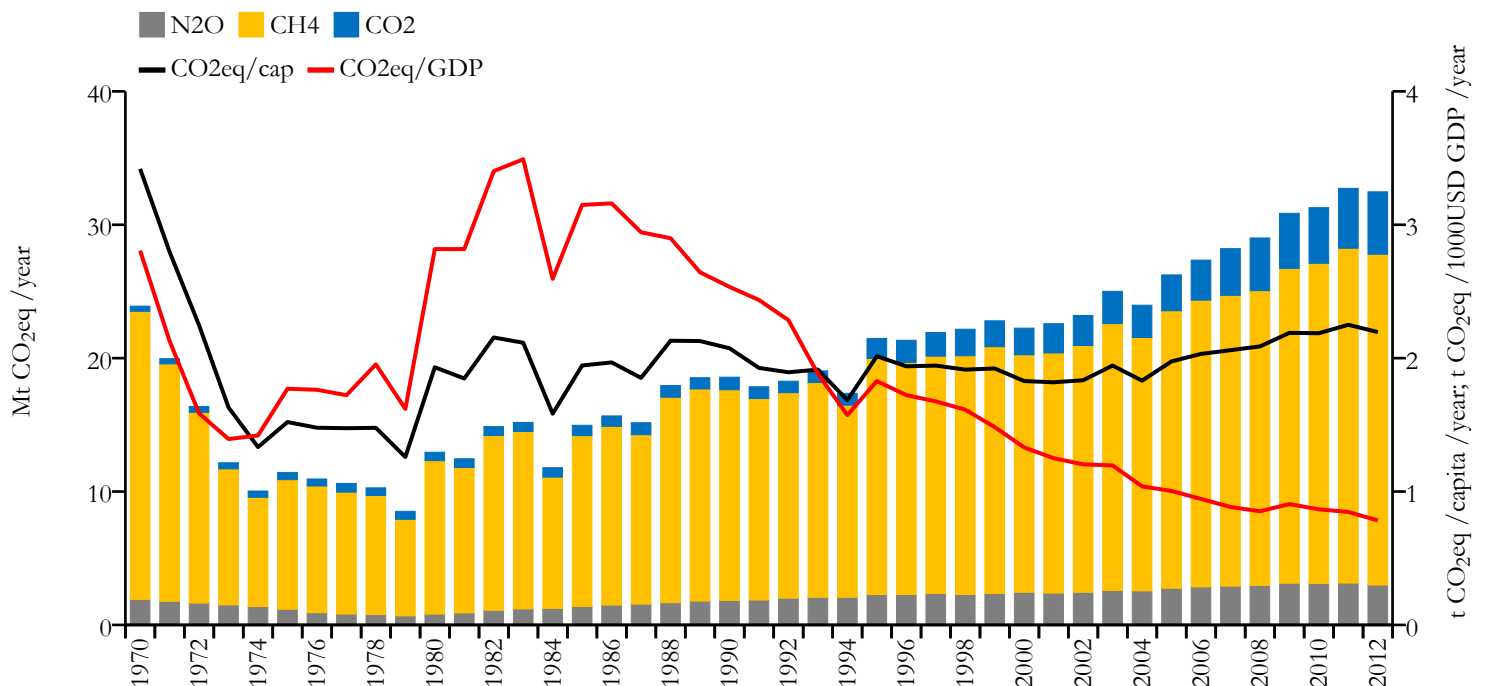
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	6.497	0.411	0.119	15762370
1990	0.929	0.104	0.127	8973342

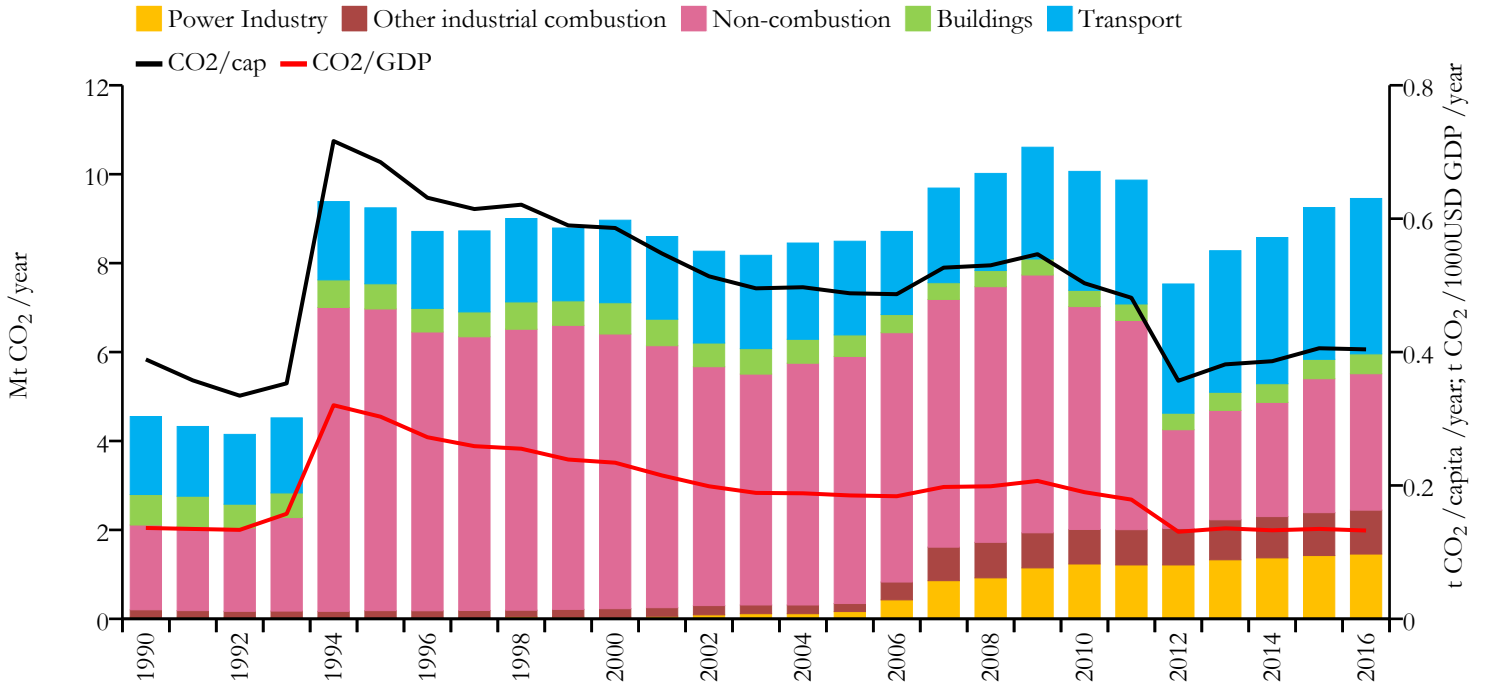


## Greenhouse gas emissions (EDGARv4.3.2 dataset)

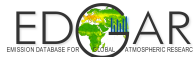




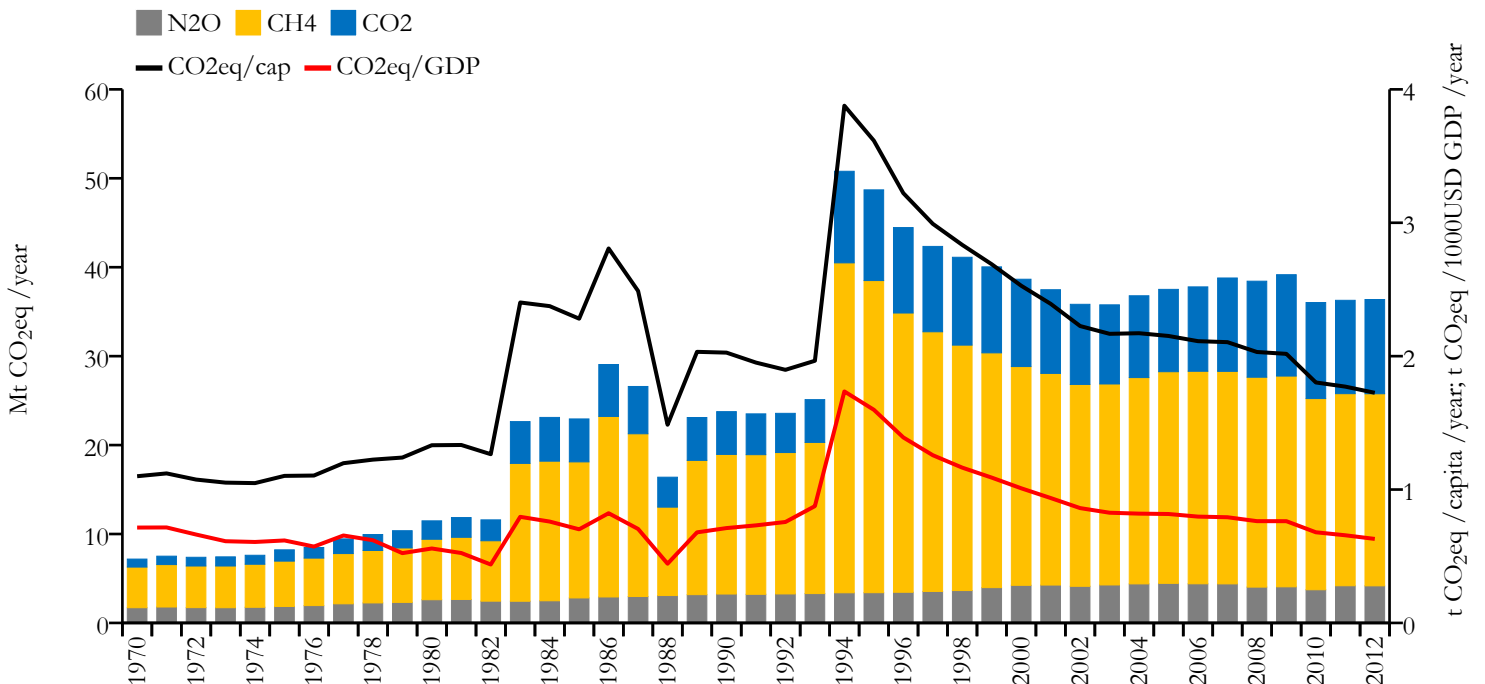
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	9.454	0.404	0.132	23439189
1990	4.551	0.389	0.136	11715218

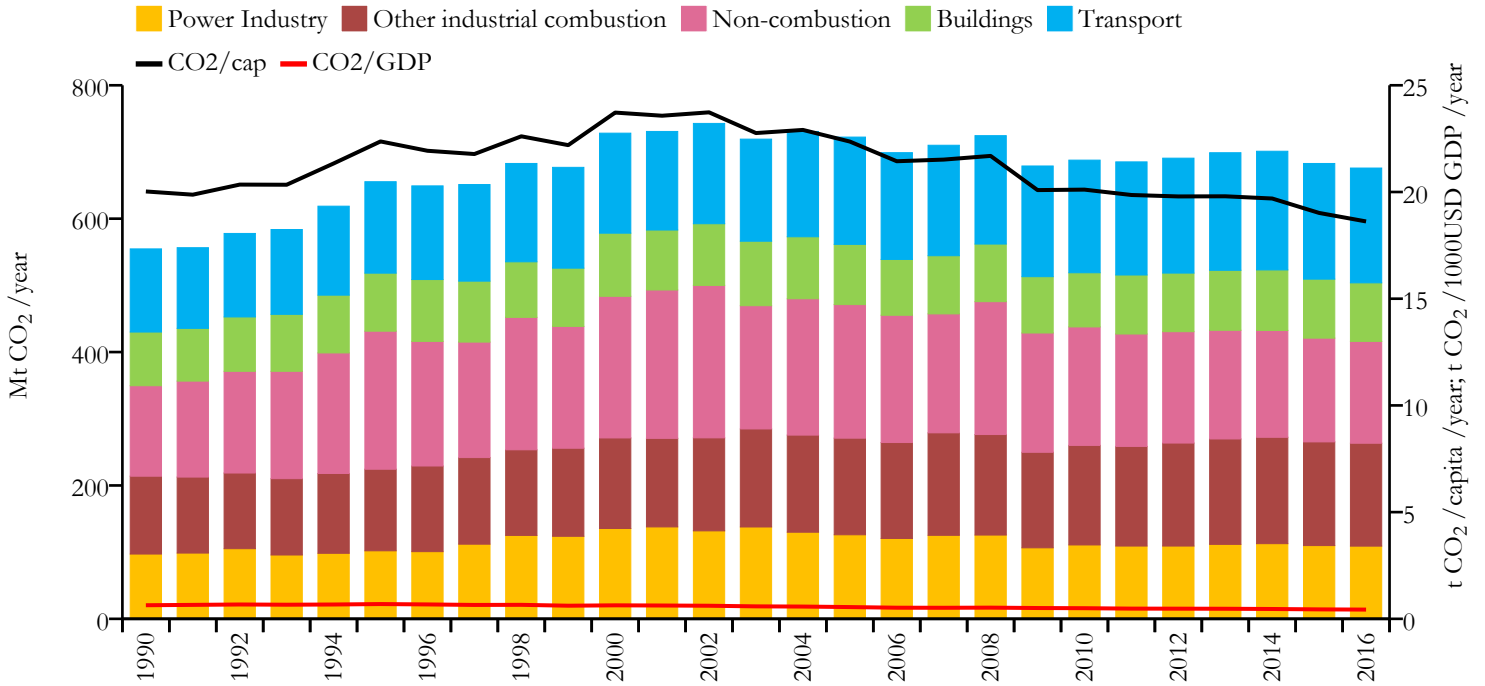


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





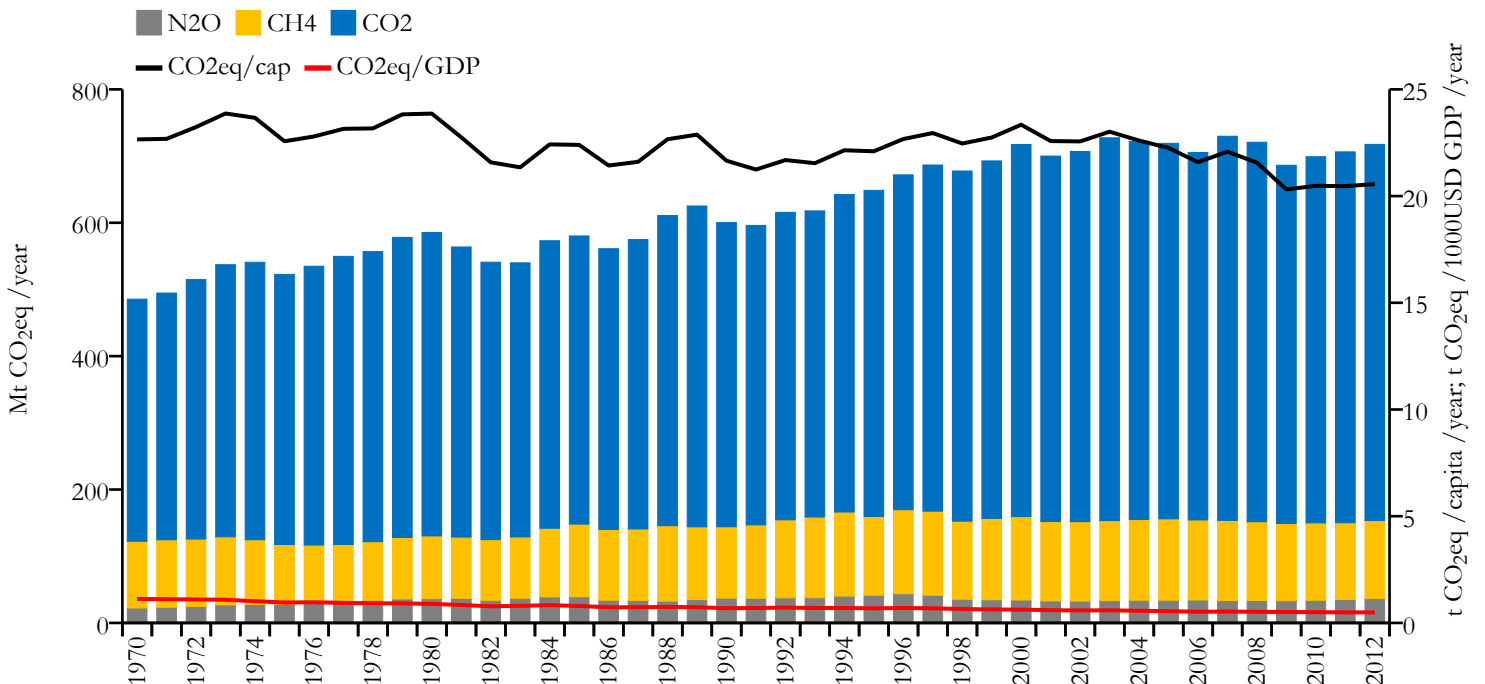
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	675.919	18.620	0.433	36289822
1990	554.684	20.025	0.638	27692680



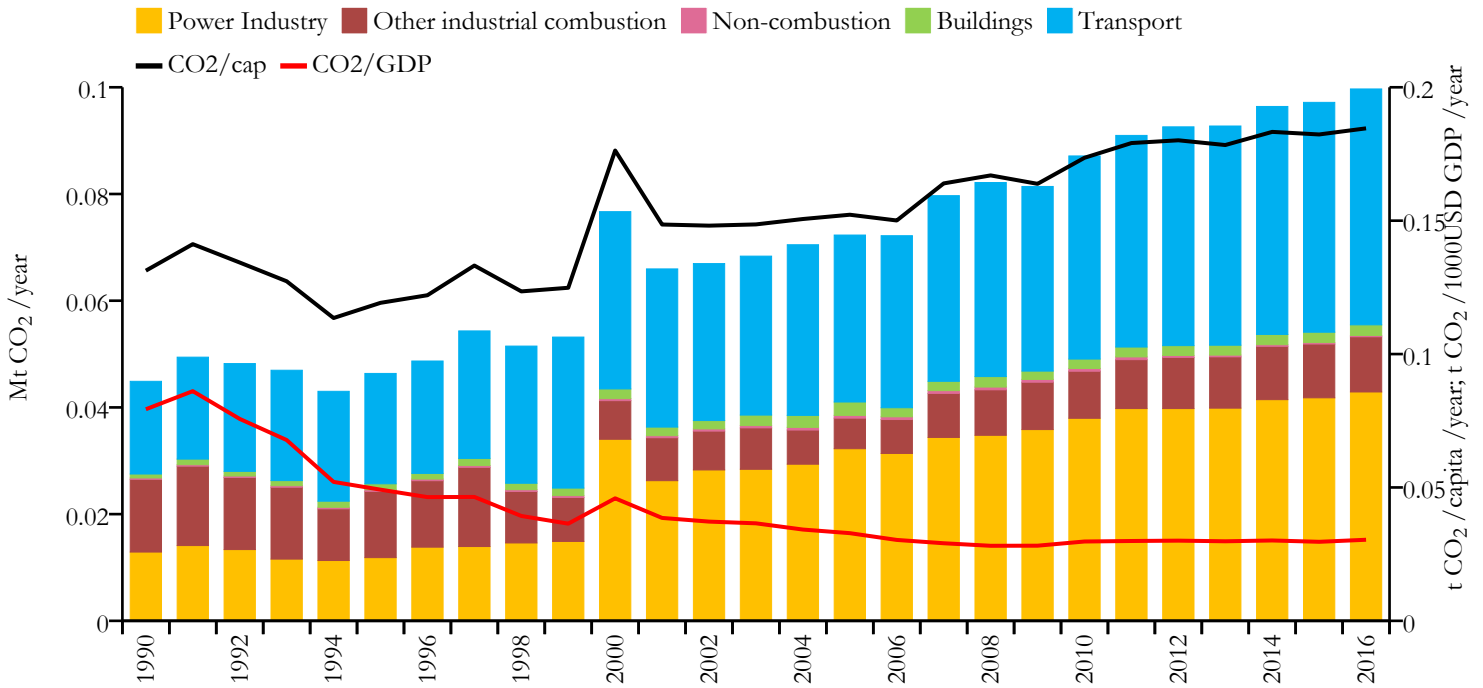
## Greenhouse gas emissions (EDGARv4.3.2 dataset)







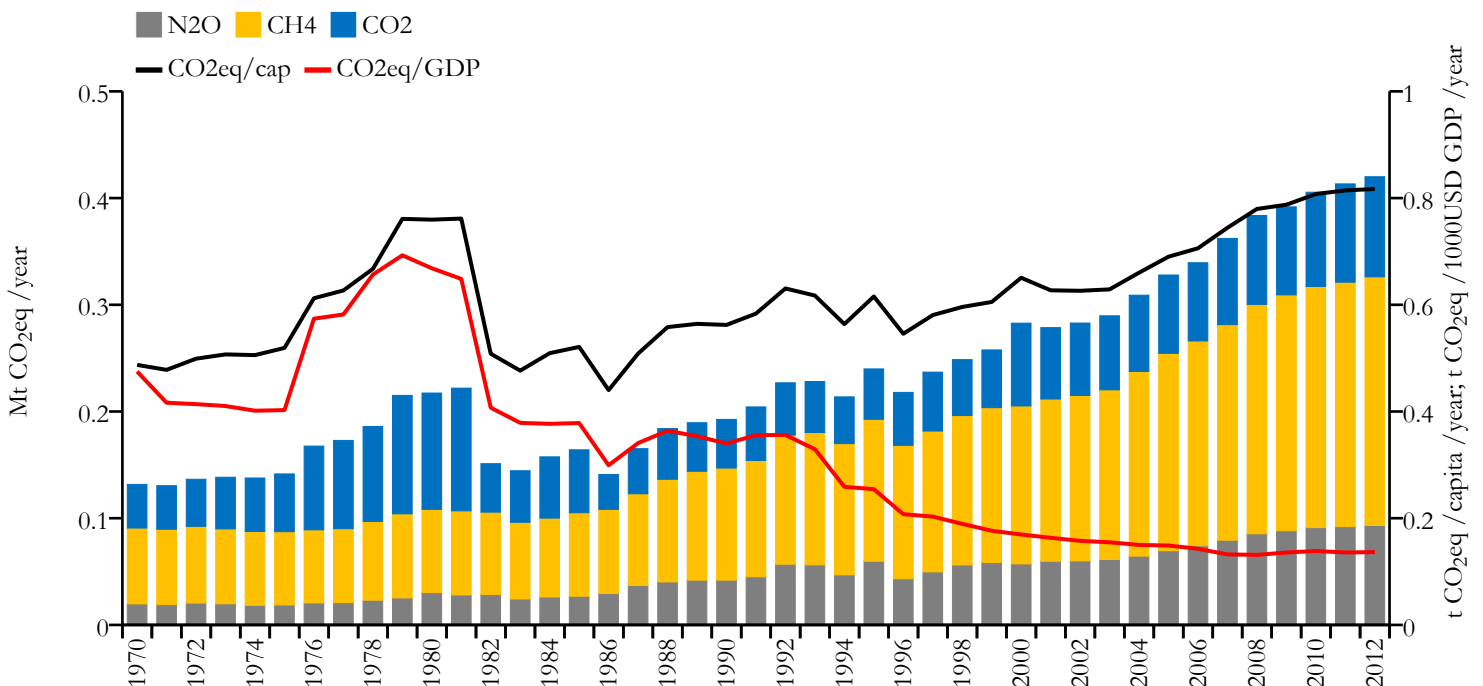
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	0.100	0.185	0.030	539560
1990	0.045	0.131	0.079	341883



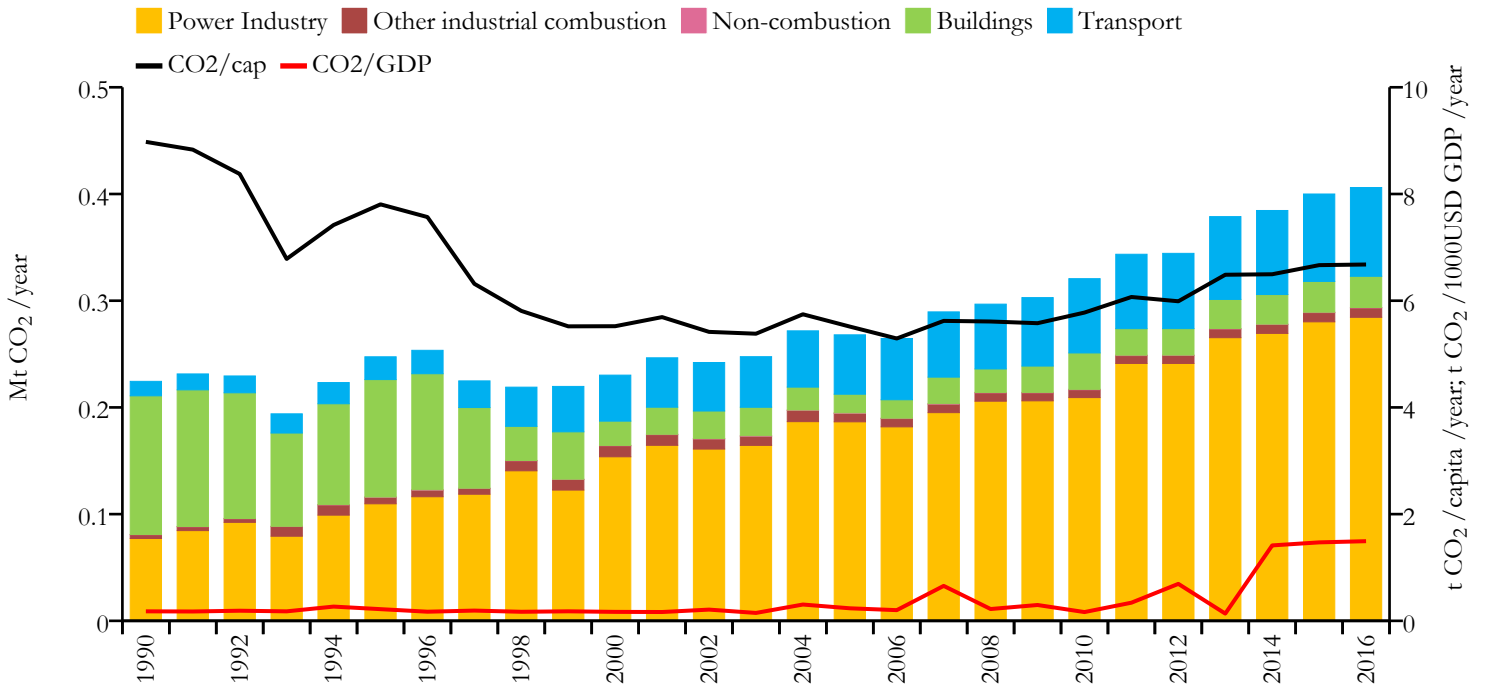
## Greenhouse gas emissions (EDGARv4.3.2 dataset)



# Cayman Islands



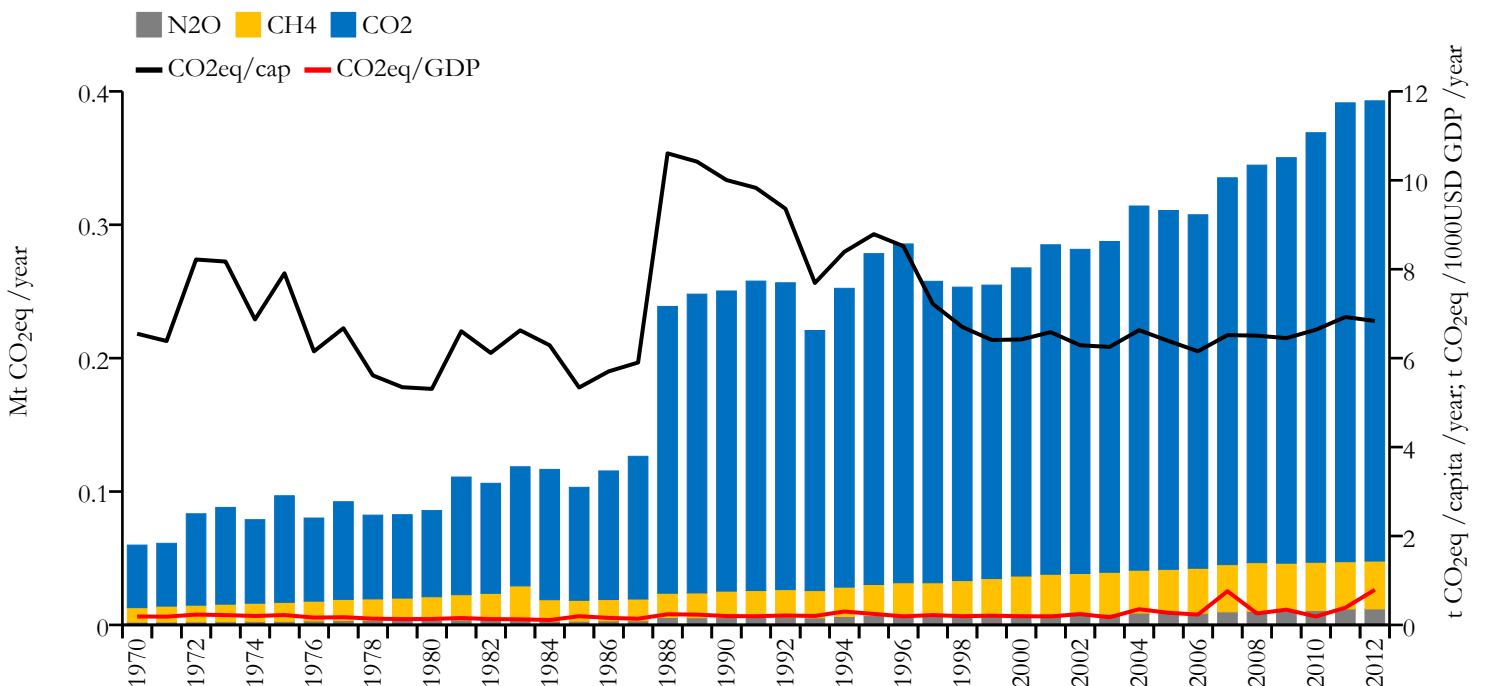
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	0.406	6.679	1.493	60765
1990	0.224	8.977	0.178	25010



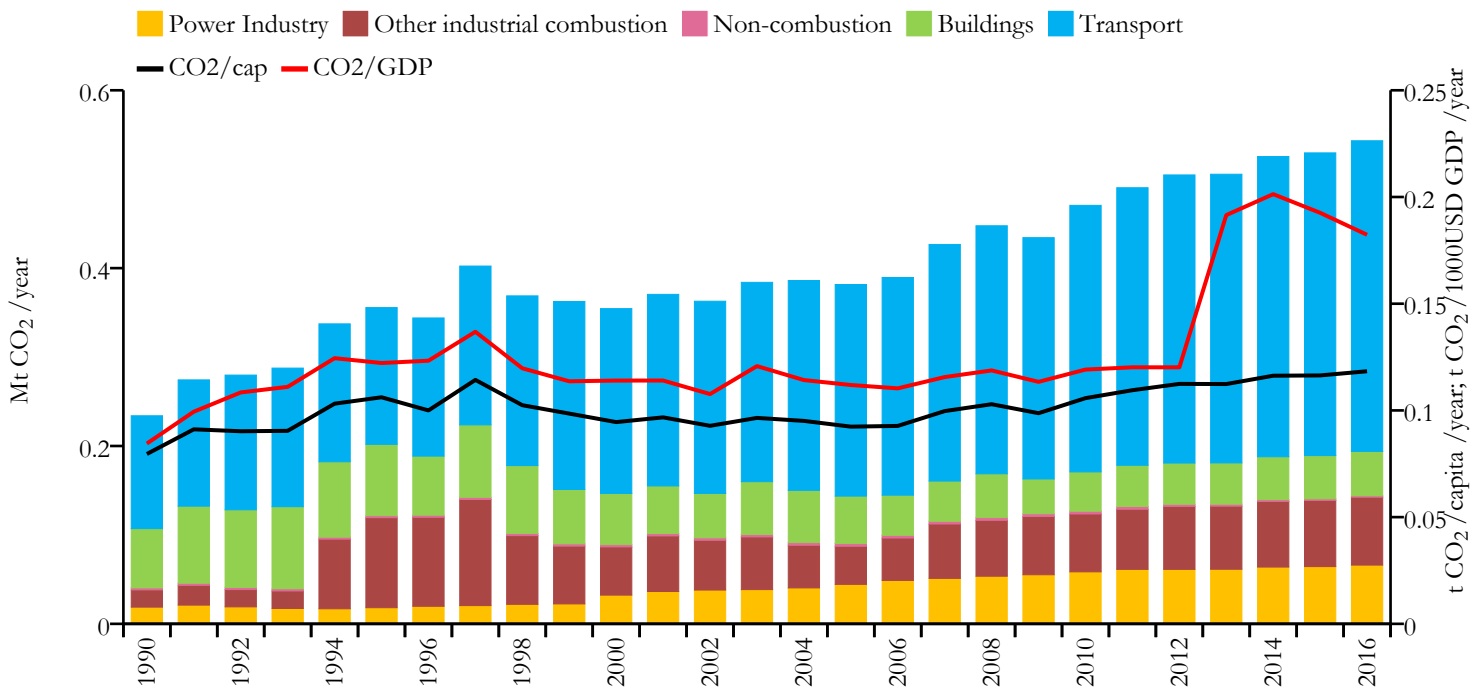
## Greenhouse gas emissions (EDGARv4.3.2 dataset)



# Central African Republic



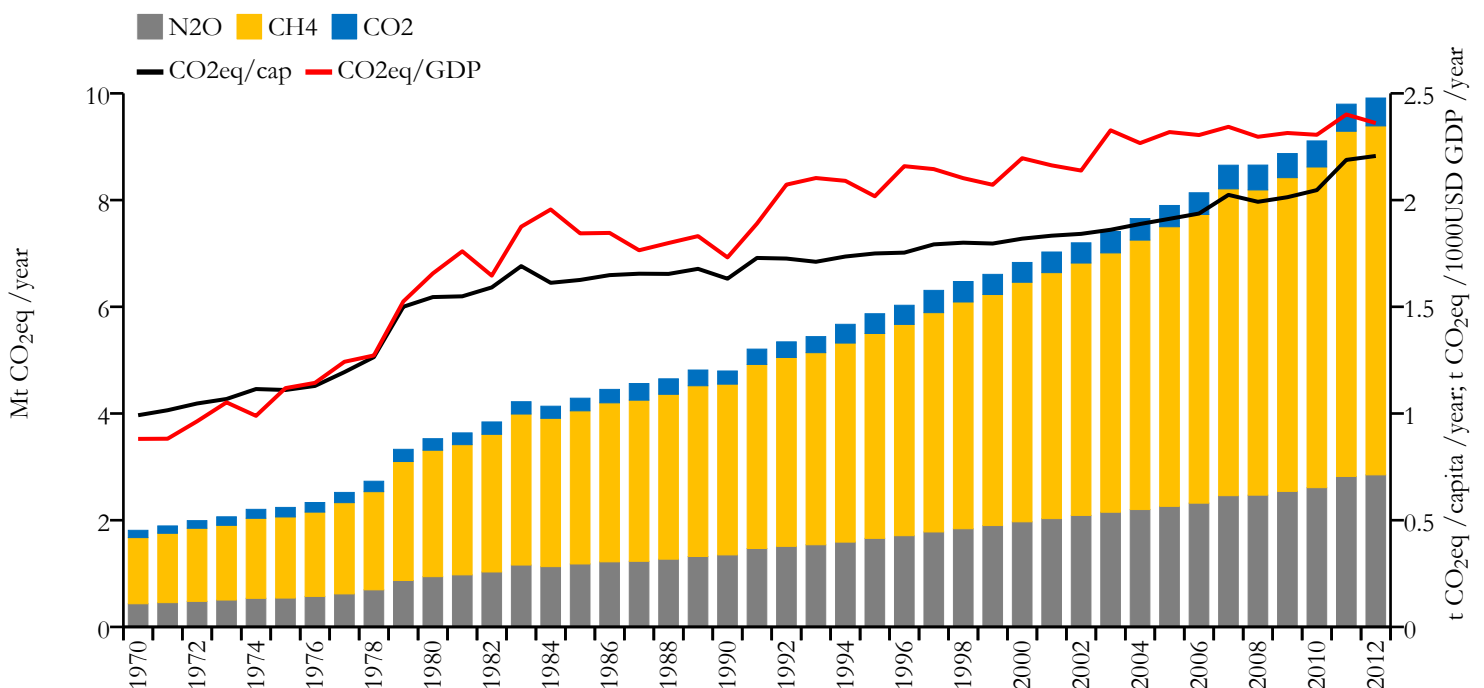
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	0.543	0.118	0.182	4594621
1990	0.234	0.080	0.084	2939780

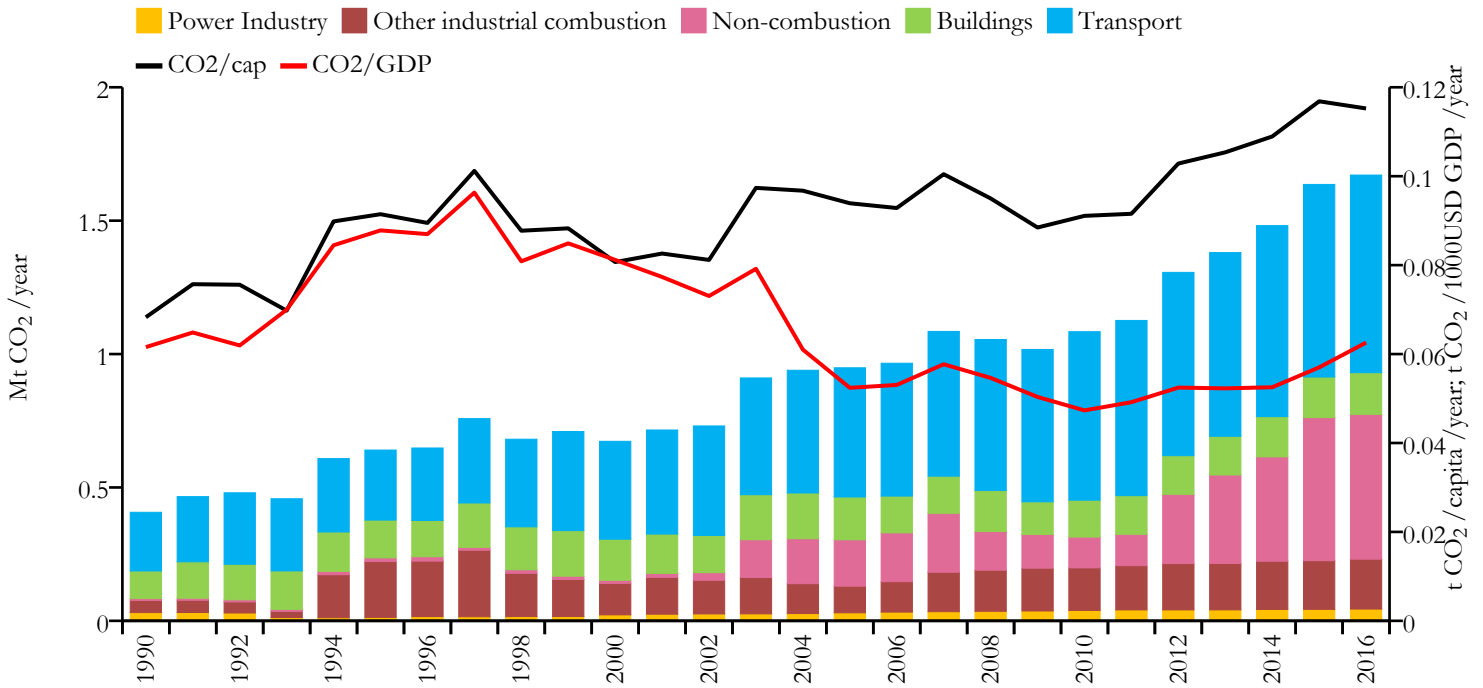


## Greenhouse gas emissions (EDGARv4.3.2 dataset)

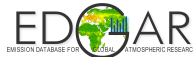




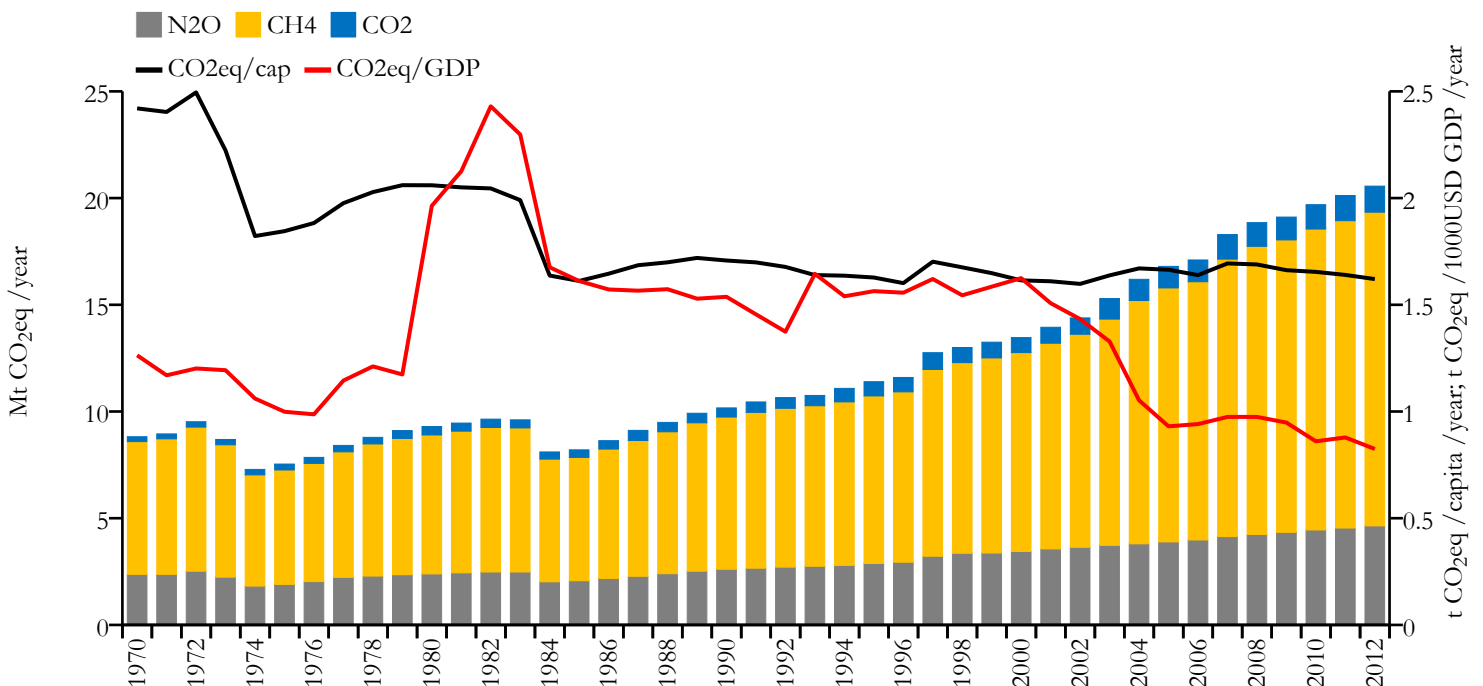
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	1.671	0.115	0.063	14452543
1990	0.407	0.068	0.062	5956859

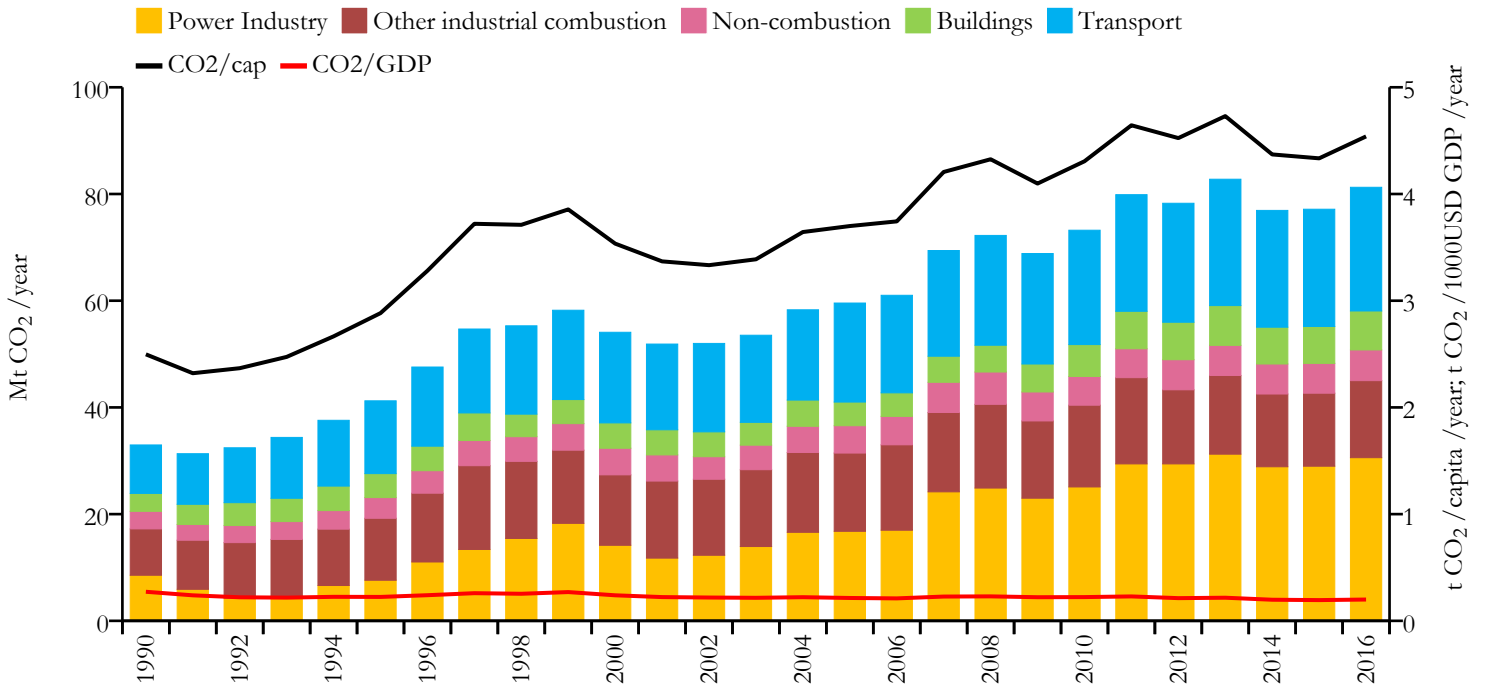


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





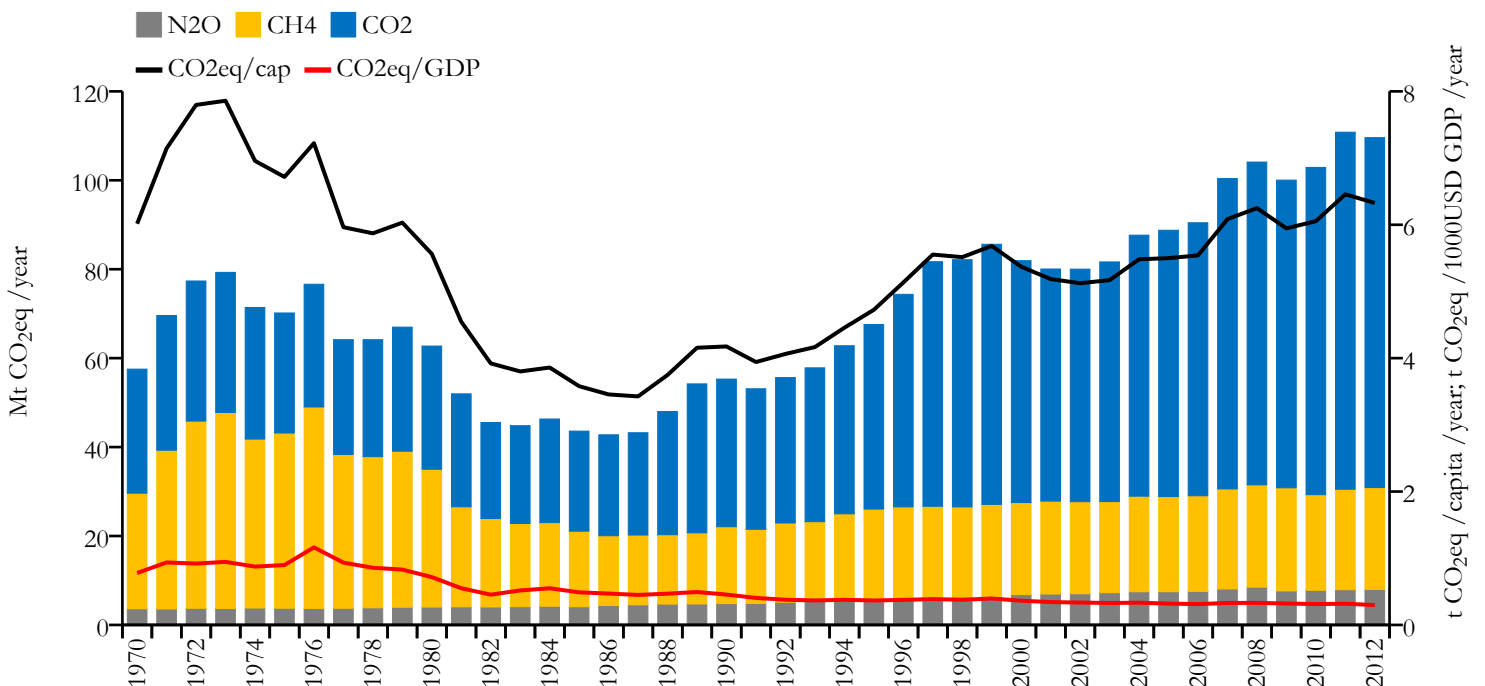
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	81.259	4.540	0.200	17909754
1990	32.966	2.497	0.272	13242132

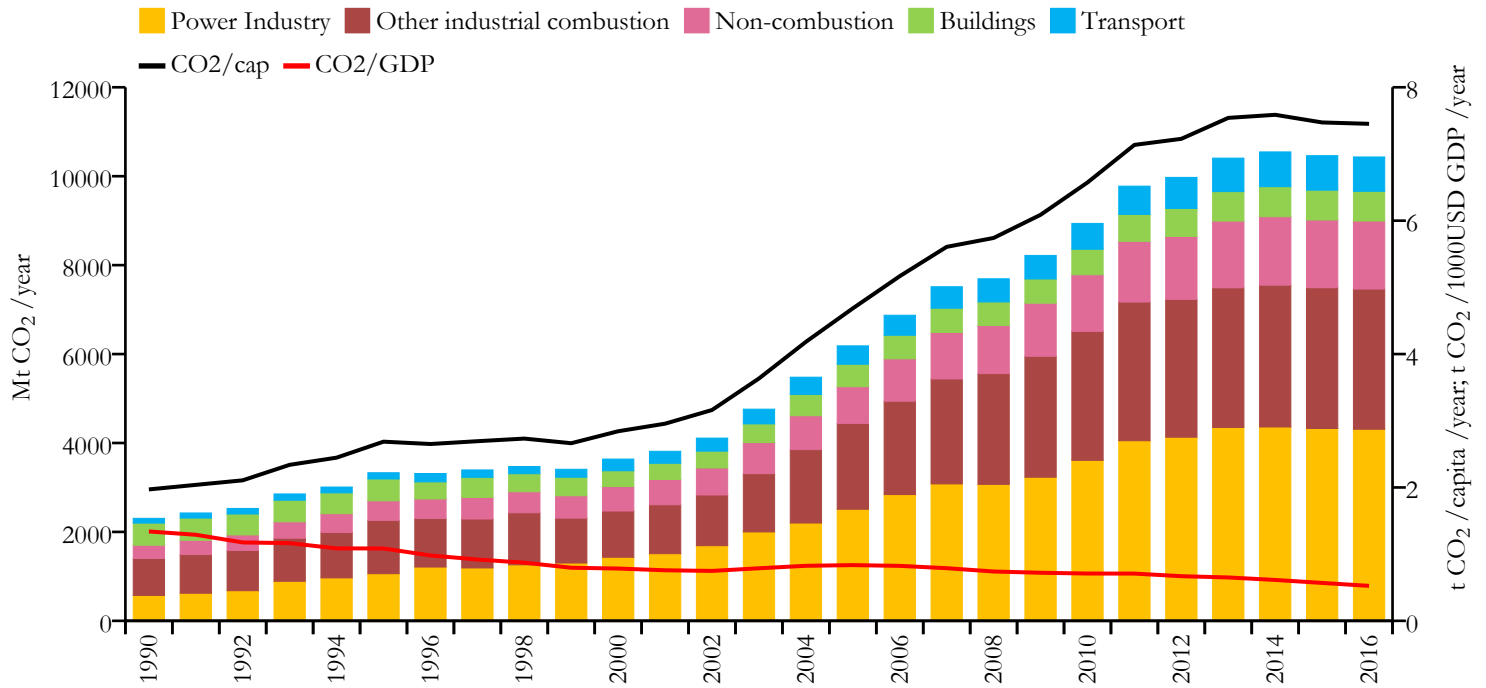


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





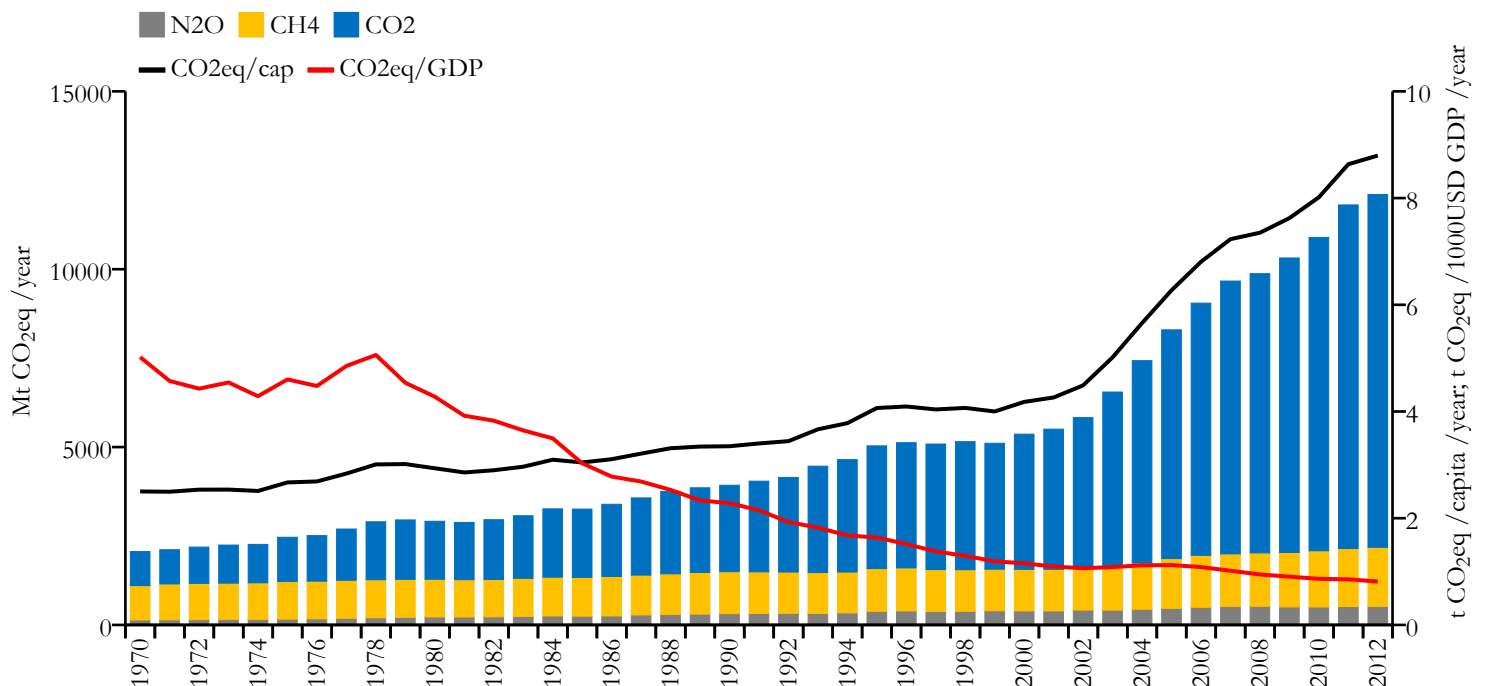
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	10432.751	7.452	0.524	1403500365
1990	2305.425	1.970	1.340	1172445200

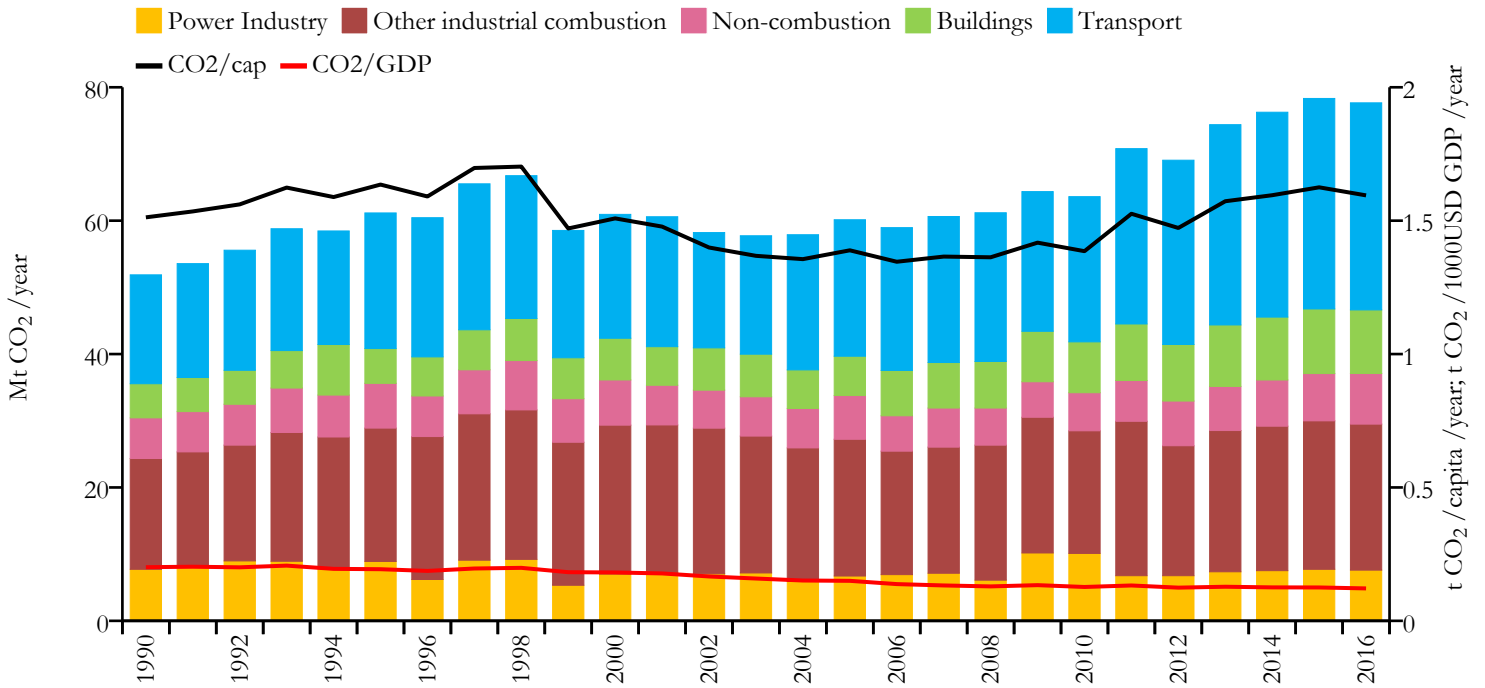


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





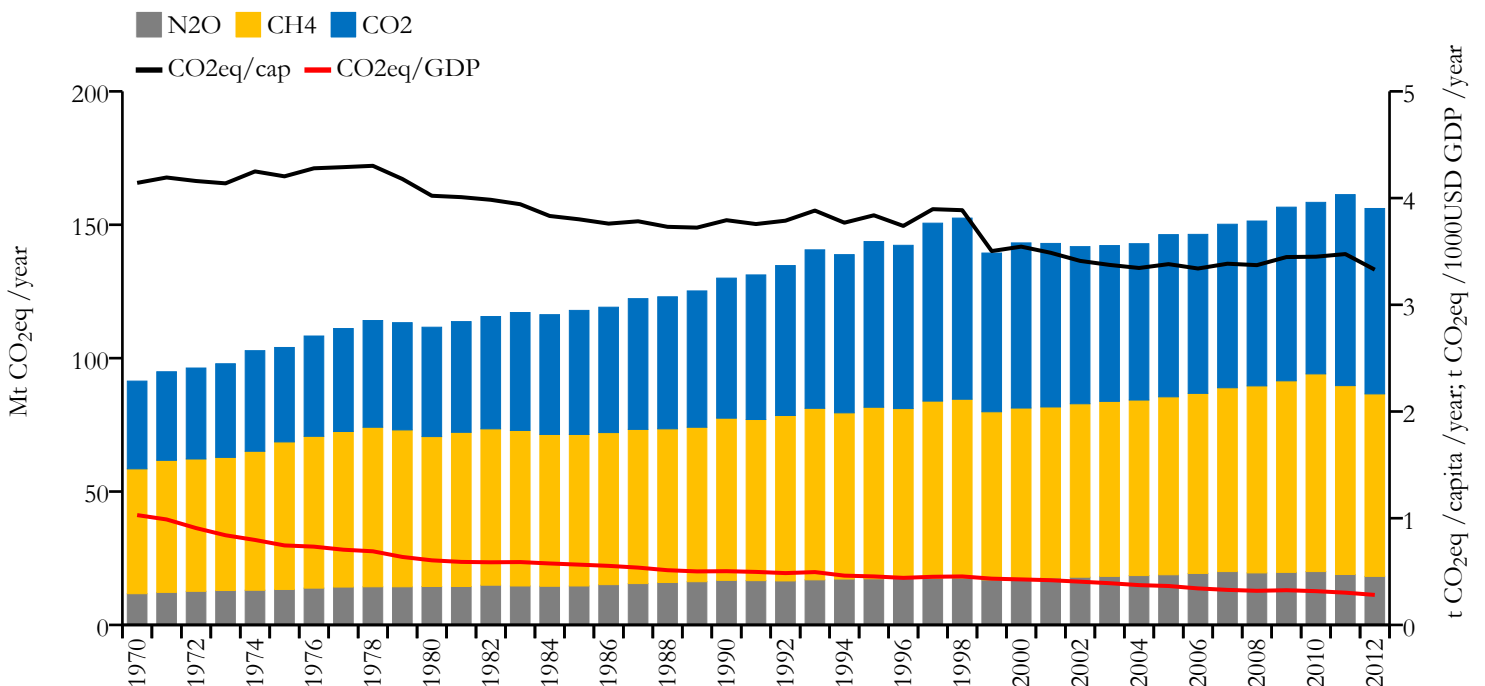
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	77.668	1.595	0.122	48653419
1990	51.877	1.512	0.201	34271565

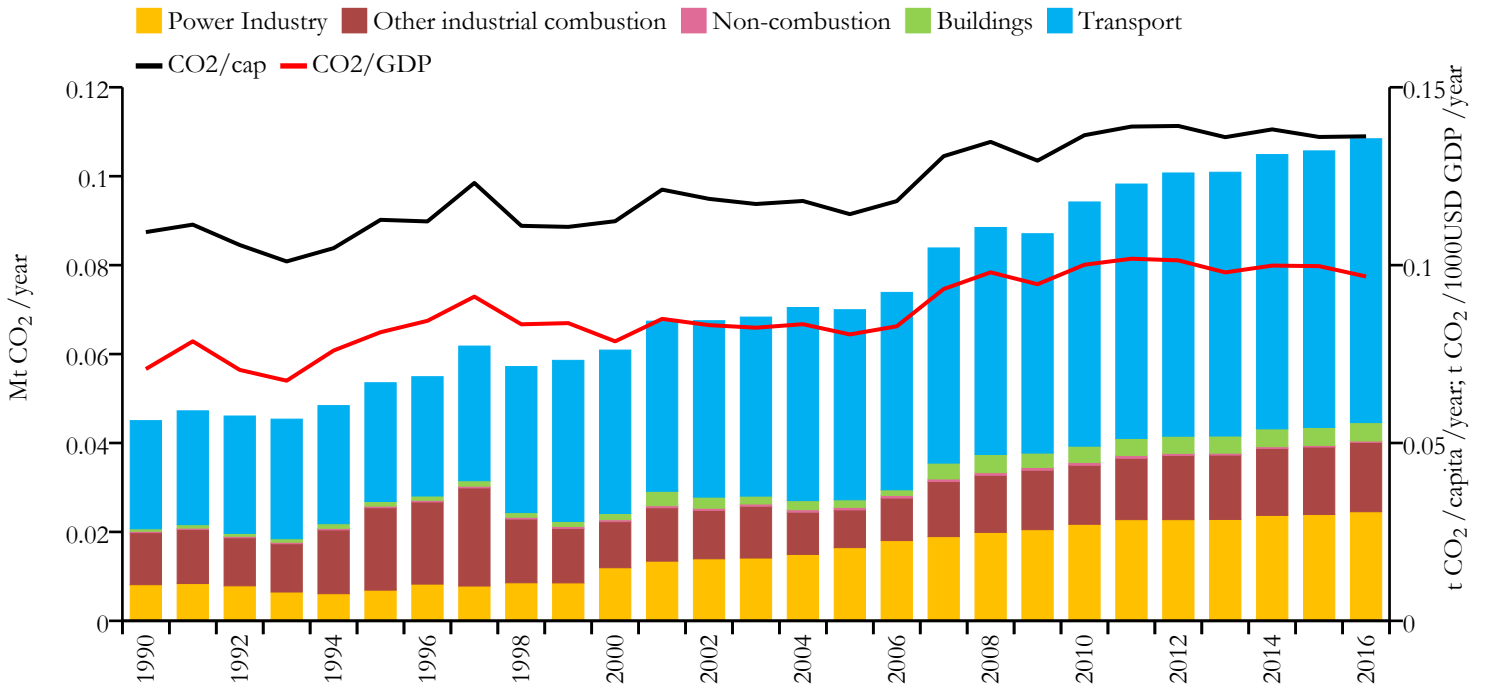


## Greenhouse gas emissions (EDGARv4.3.2 dataset)

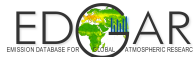




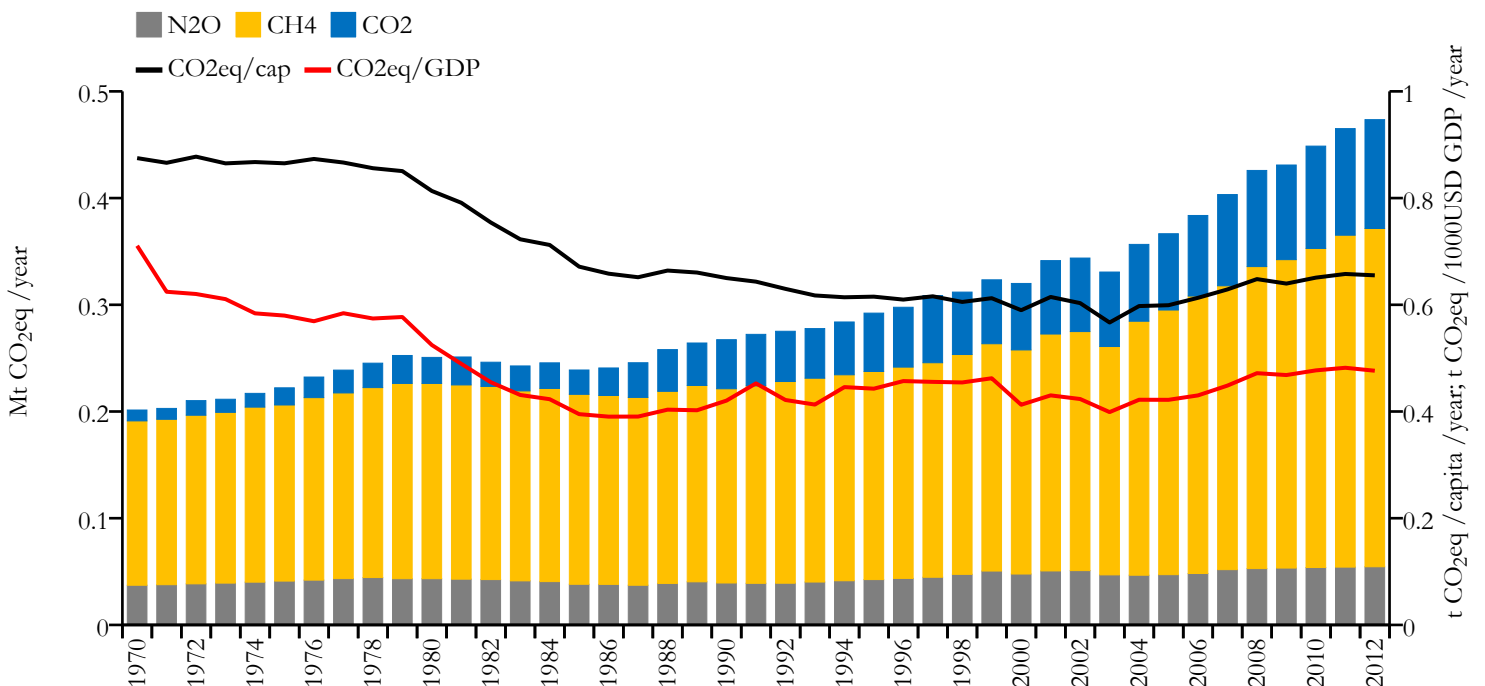
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	0.108	0.136	0.097	795601
1990	0.045	0.109	0.071	411594



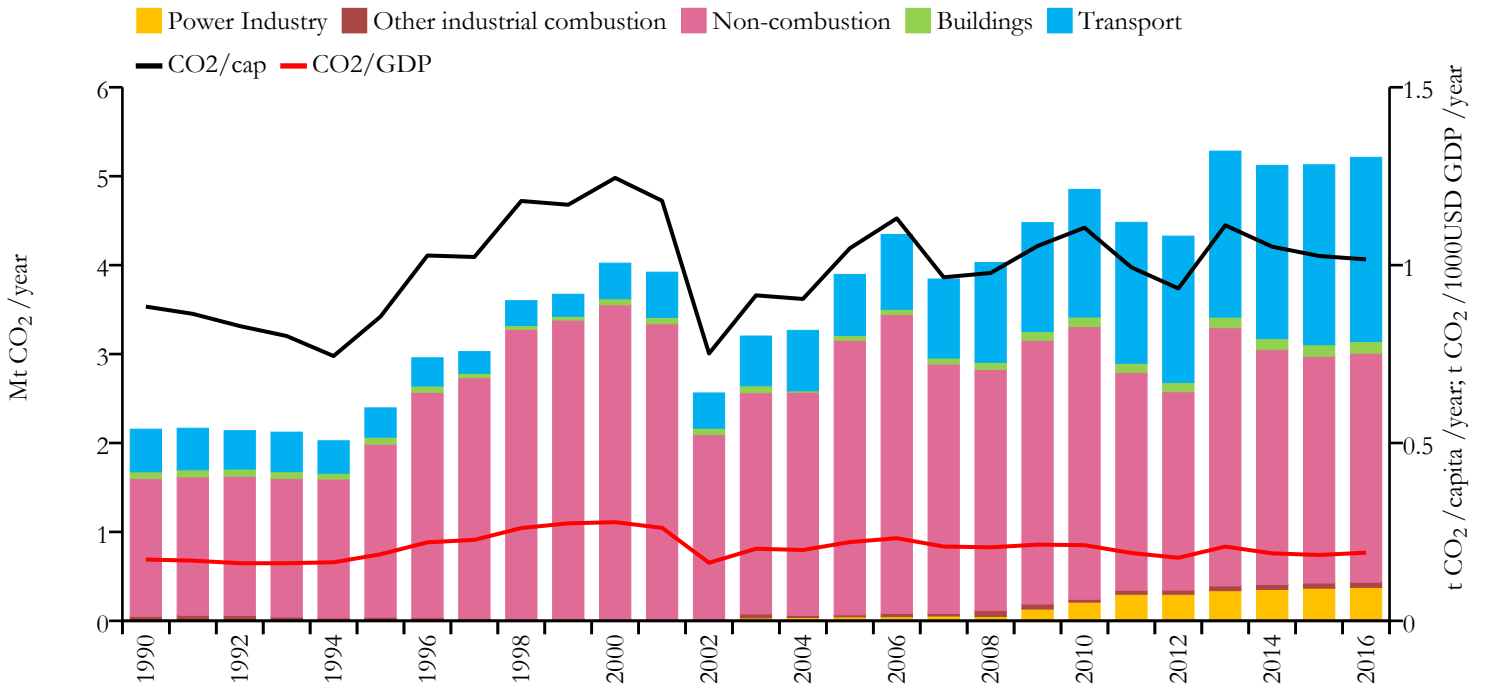
## Greenhouse gas emissions (EDGARv4.3.2 dataset)







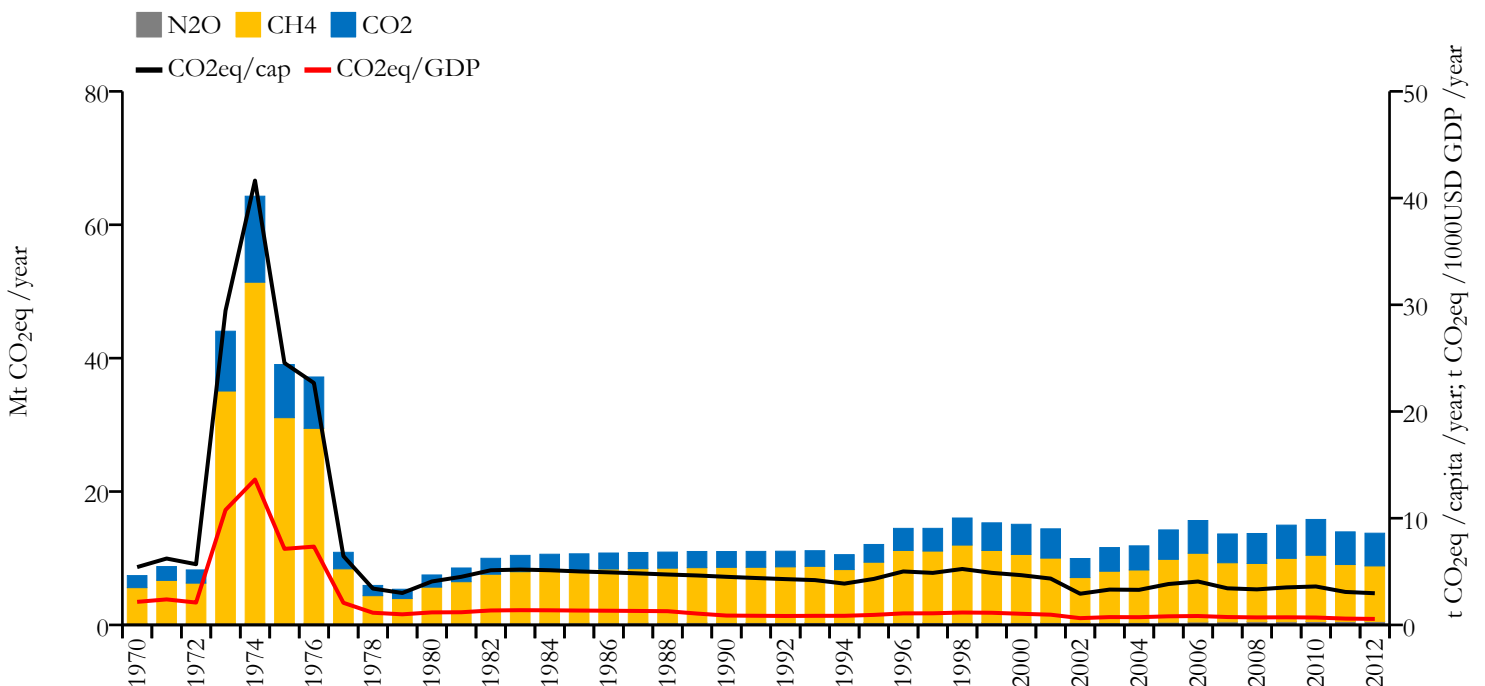
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	5.212	1.016	0.192	5125821
1990	2.156	0.883	0.172	2440457



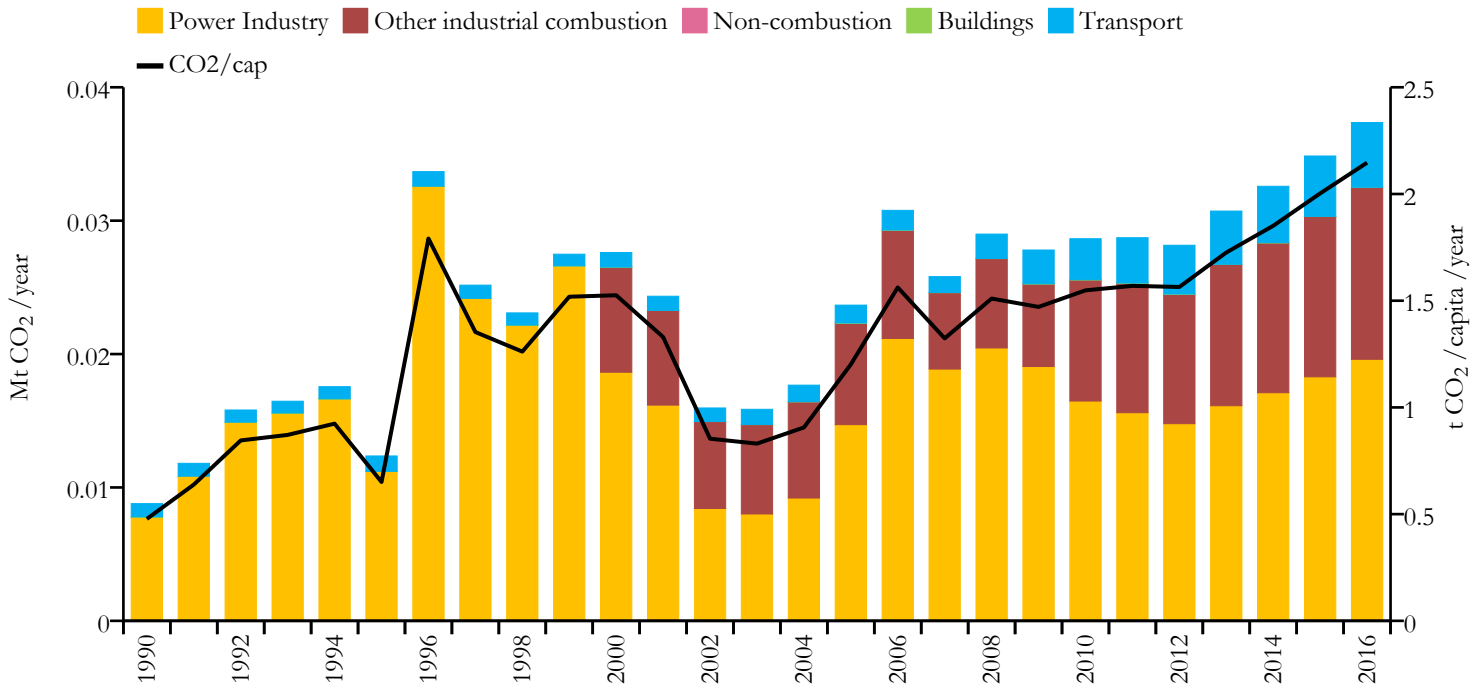
## Greenhouse gas emissions (EDGARv4.3.2 dataset)



# Cook Islands



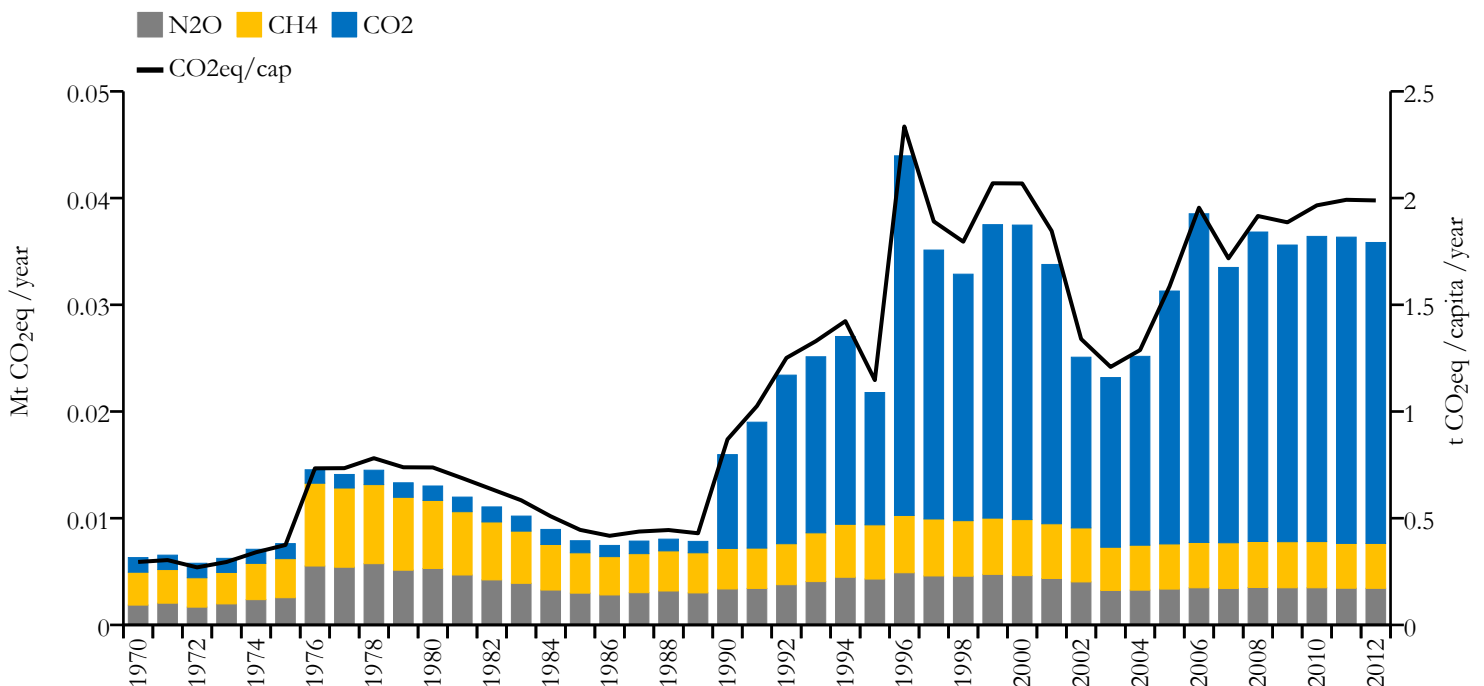
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	0.037	2.147	n/a	17379
1990	0.009	0.478	n/a	18356

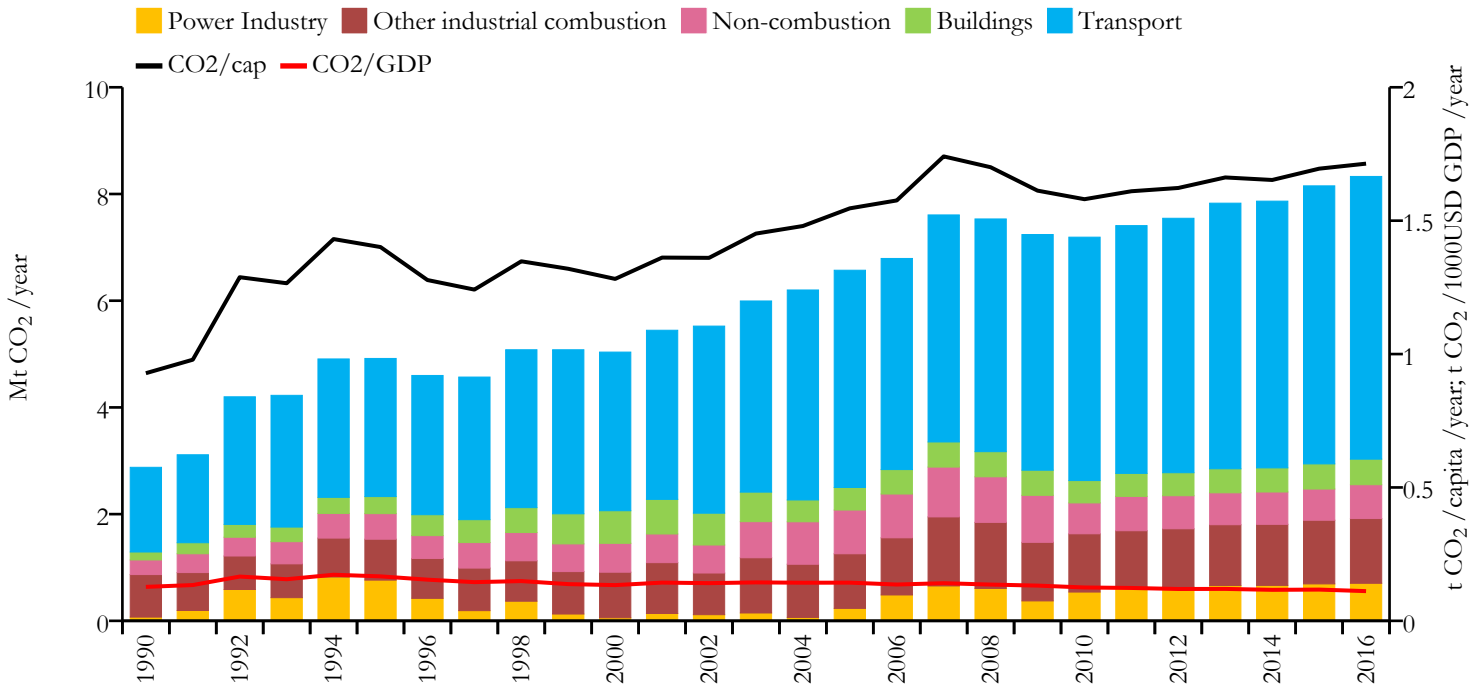


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





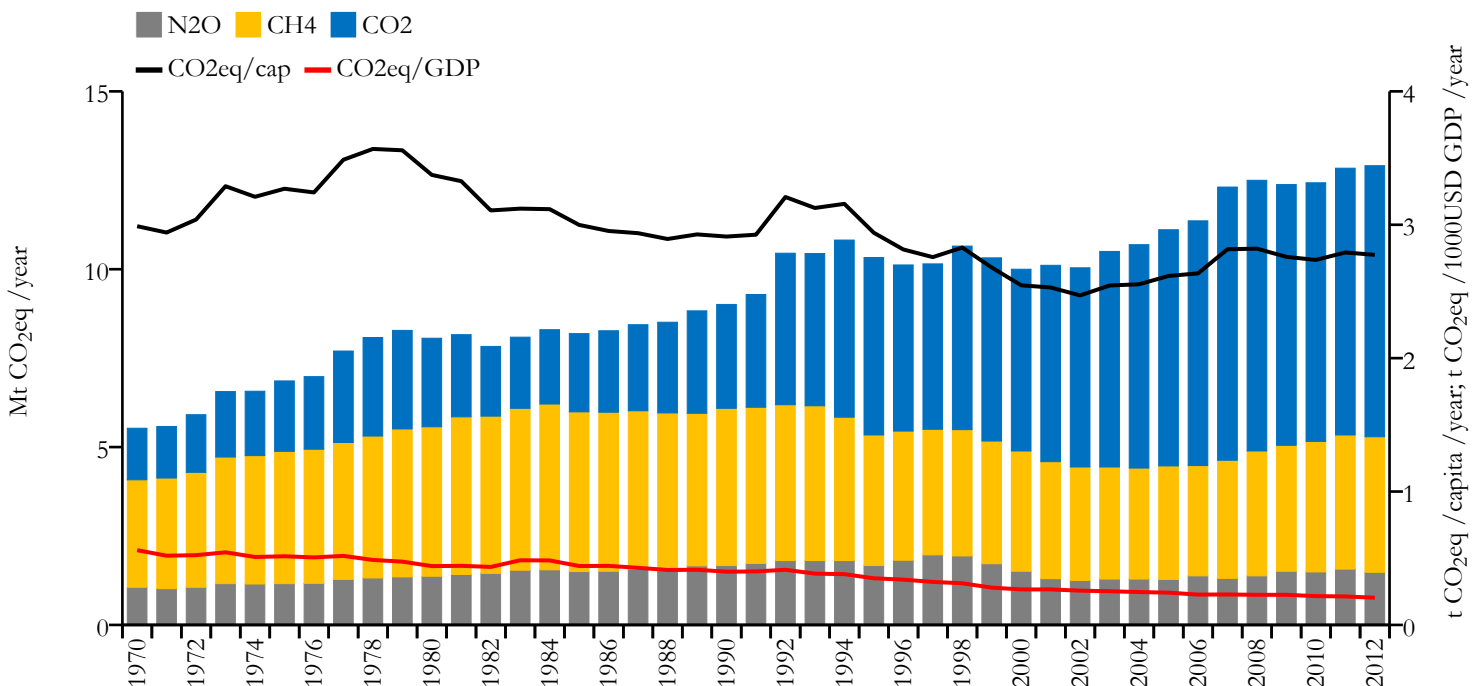
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	8.329	1.714	0.111	4857274
1990	2.878	0.928	0.127	3095995

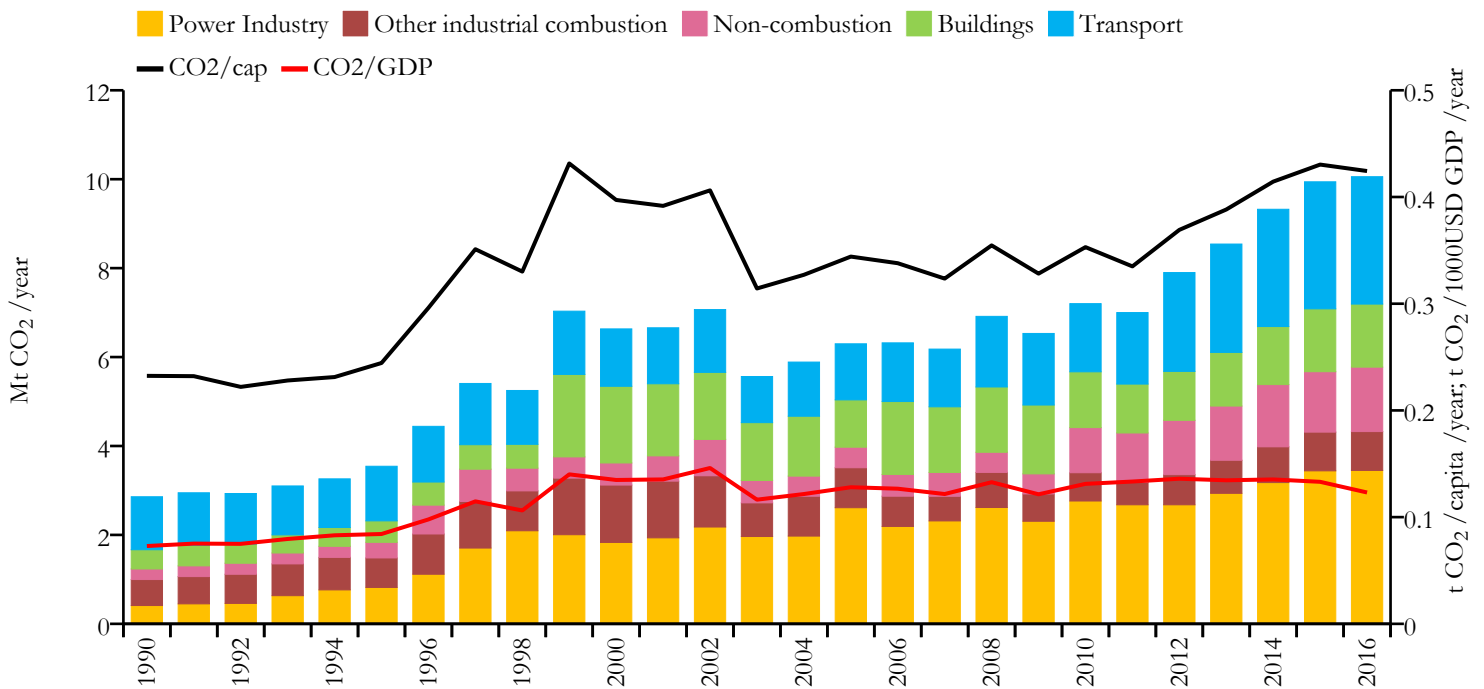


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





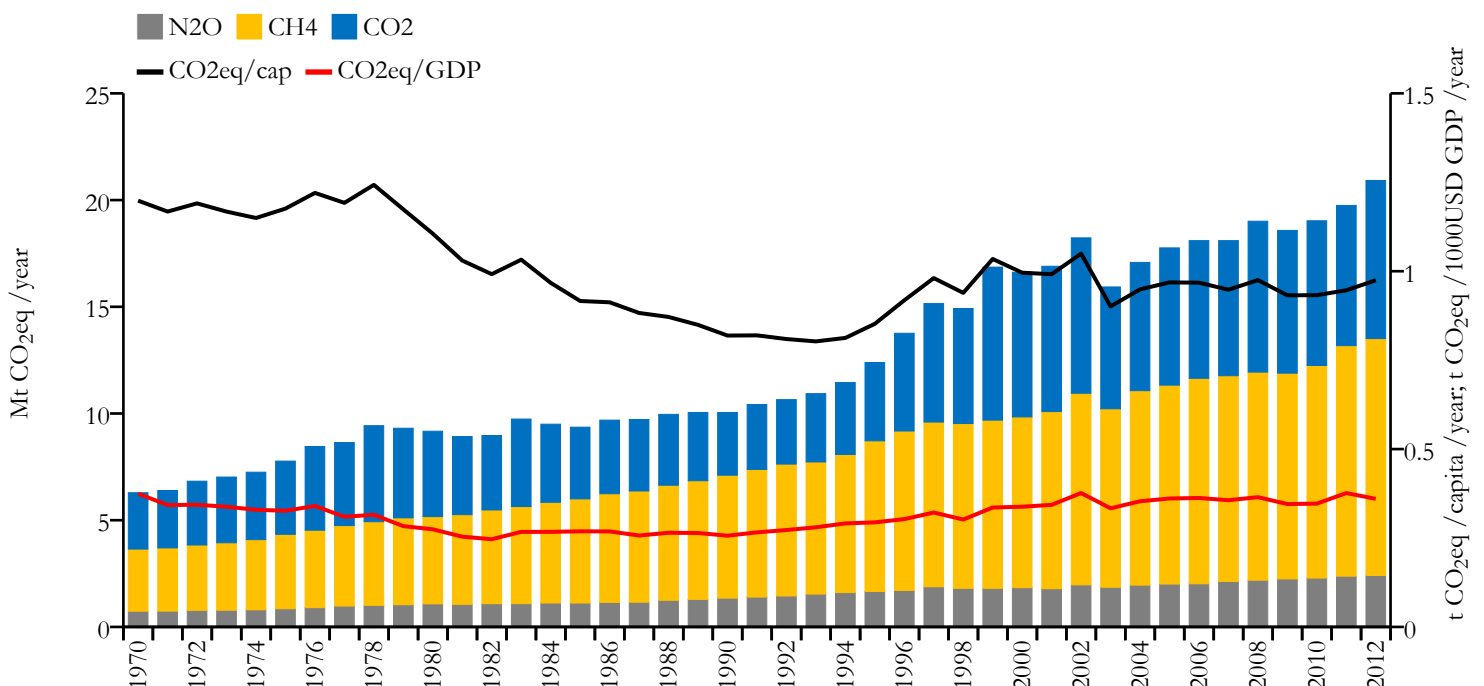
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	10.056	0.424	0.123	23695919
1990	2.858	0.232	0.073	12267754

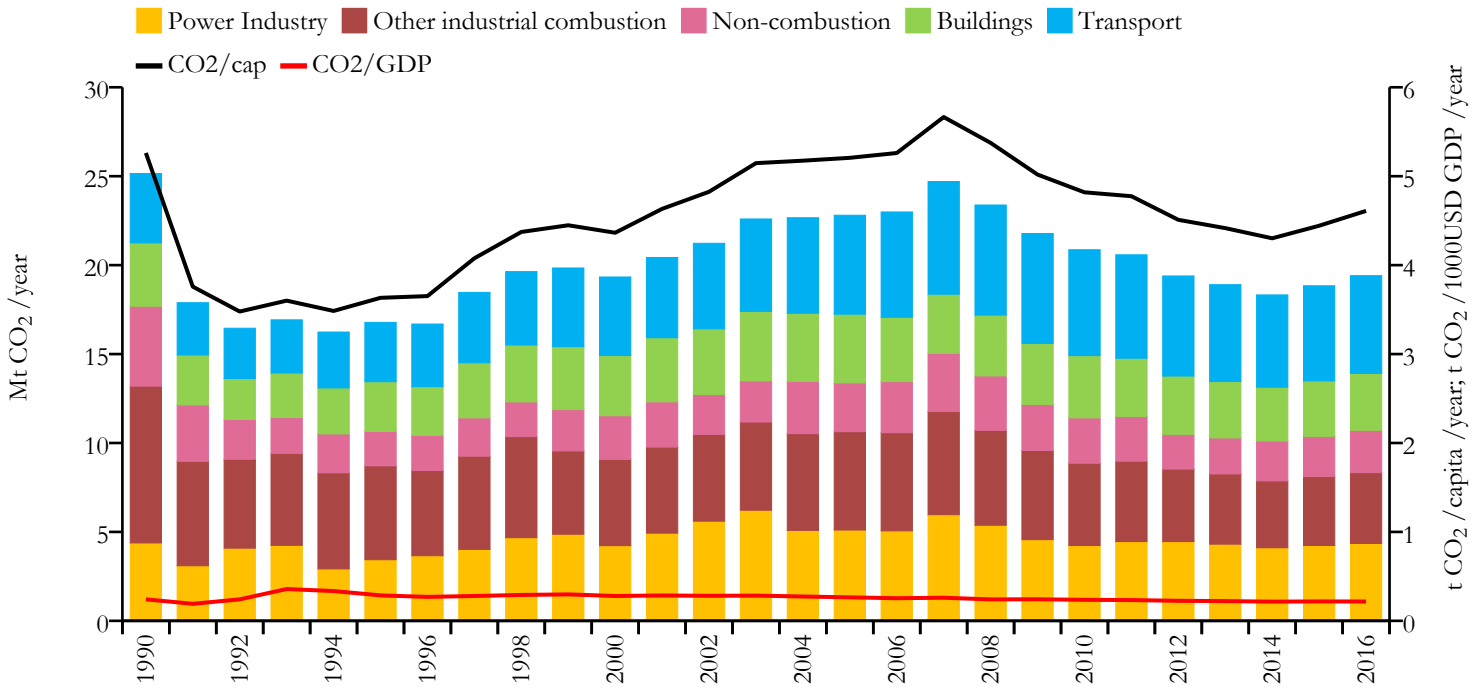


## Greenhouse gas emissions (EDGARv4.3.2 dataset)

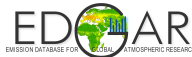




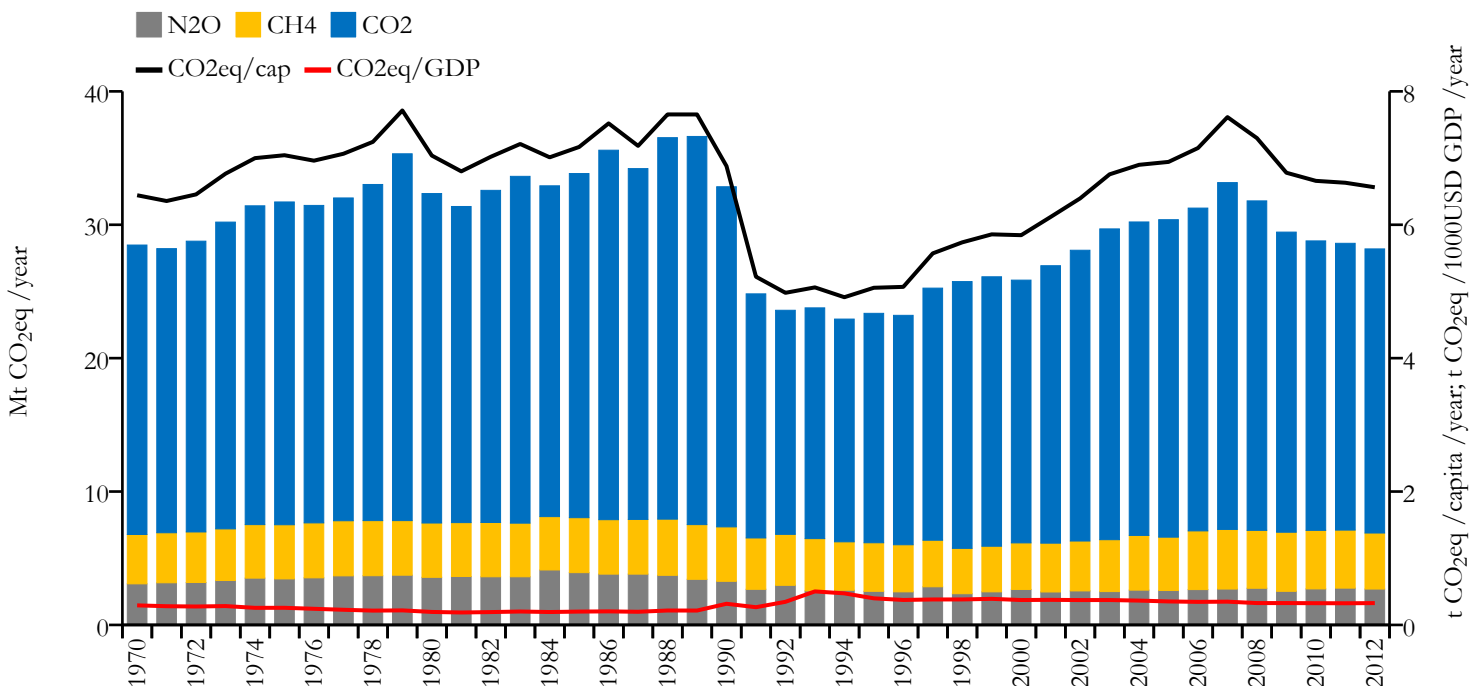
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	19.408	4.610	0.217	4213265
1990	25.151	5.262	0.242	4776372

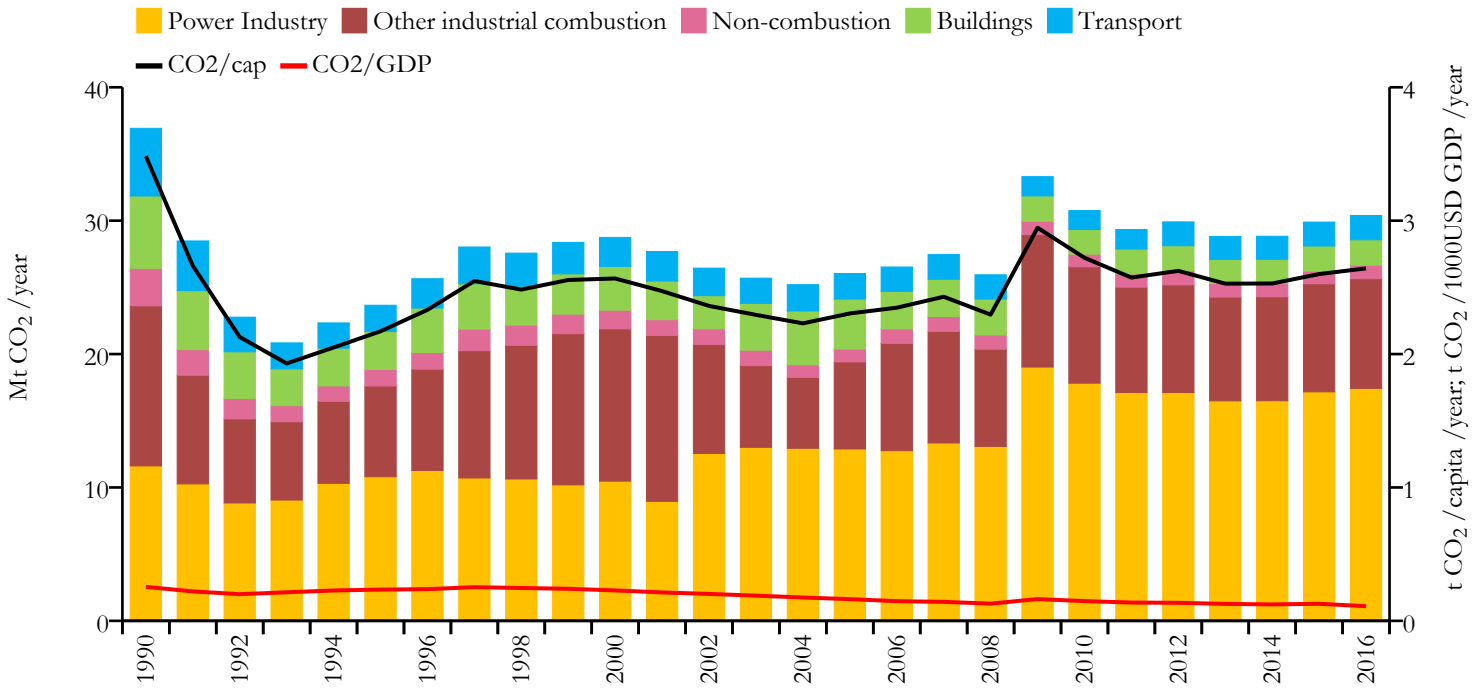


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





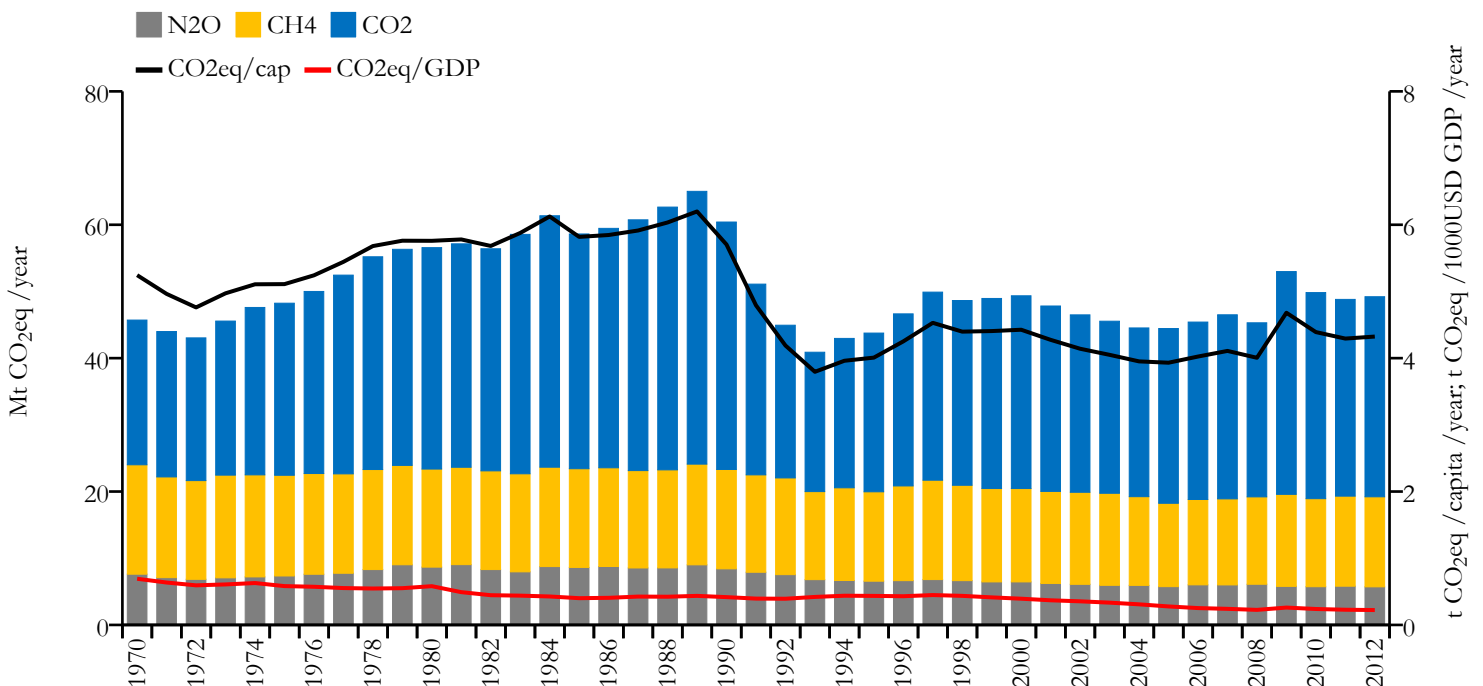
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	30.389	2.643	0.110	11475982
1990	36.924	3.483	0.255	10582081

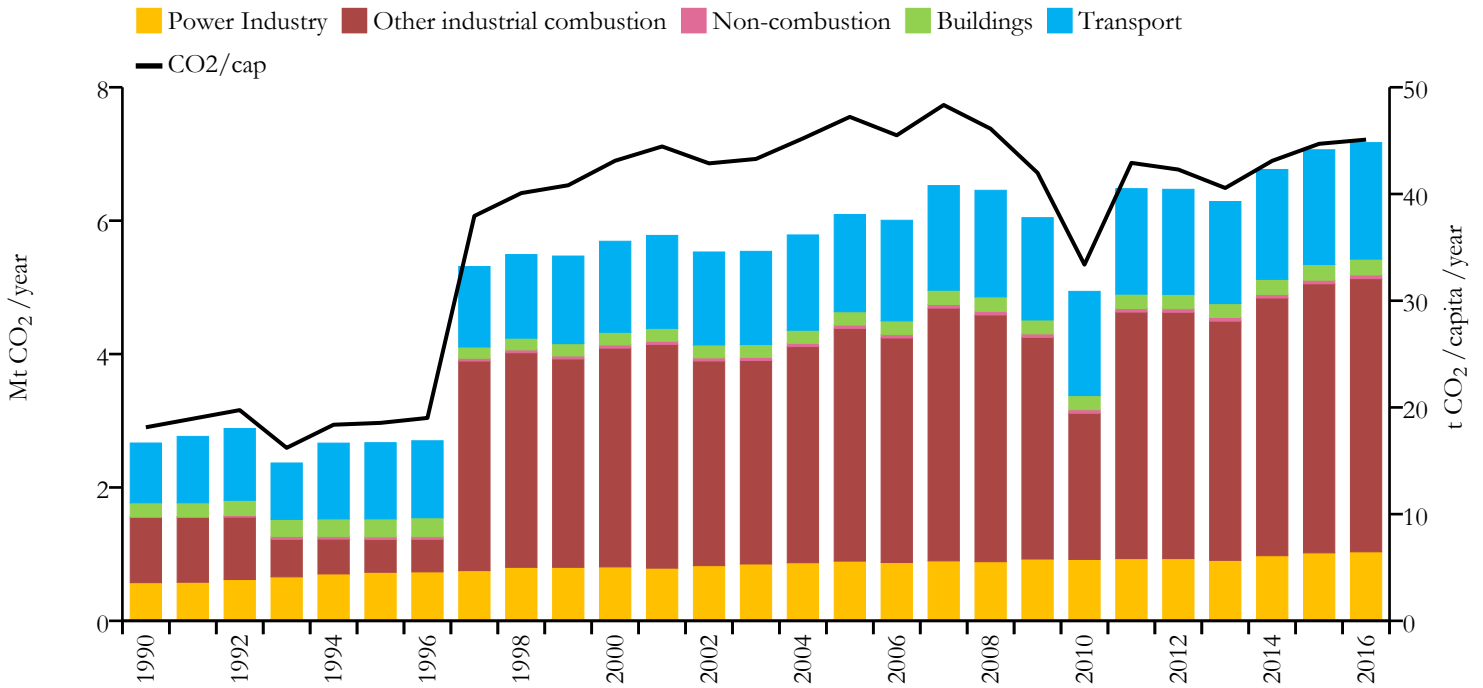


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





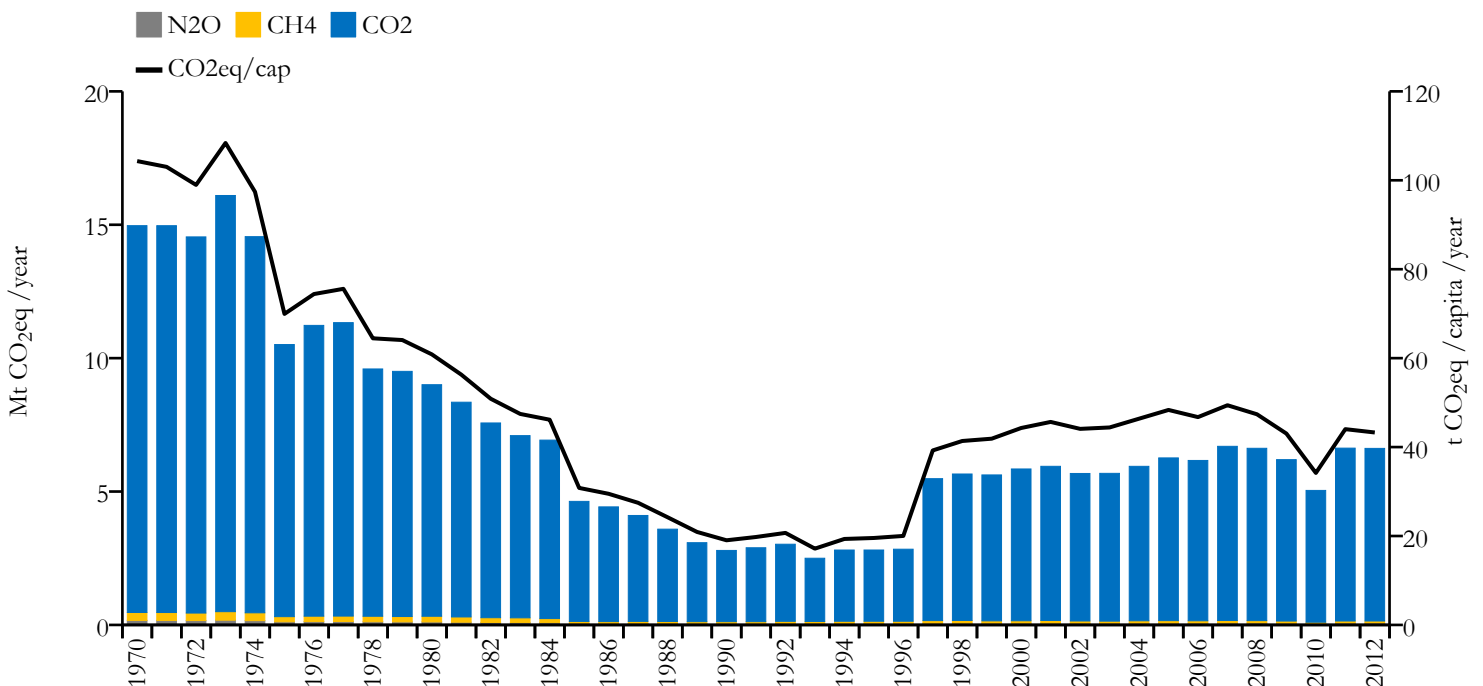
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	7.170	45.096	n/a	159371
1990	2.666	18.137	n/a	146671

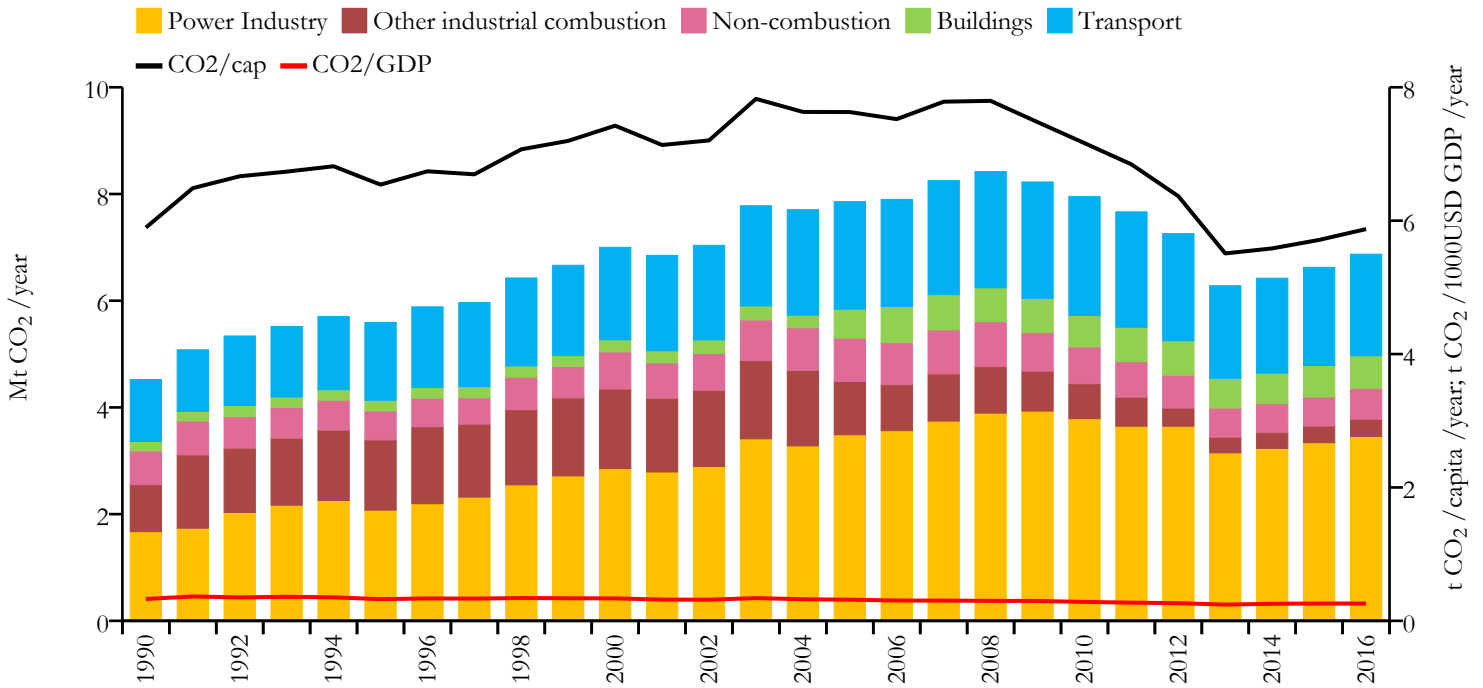


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





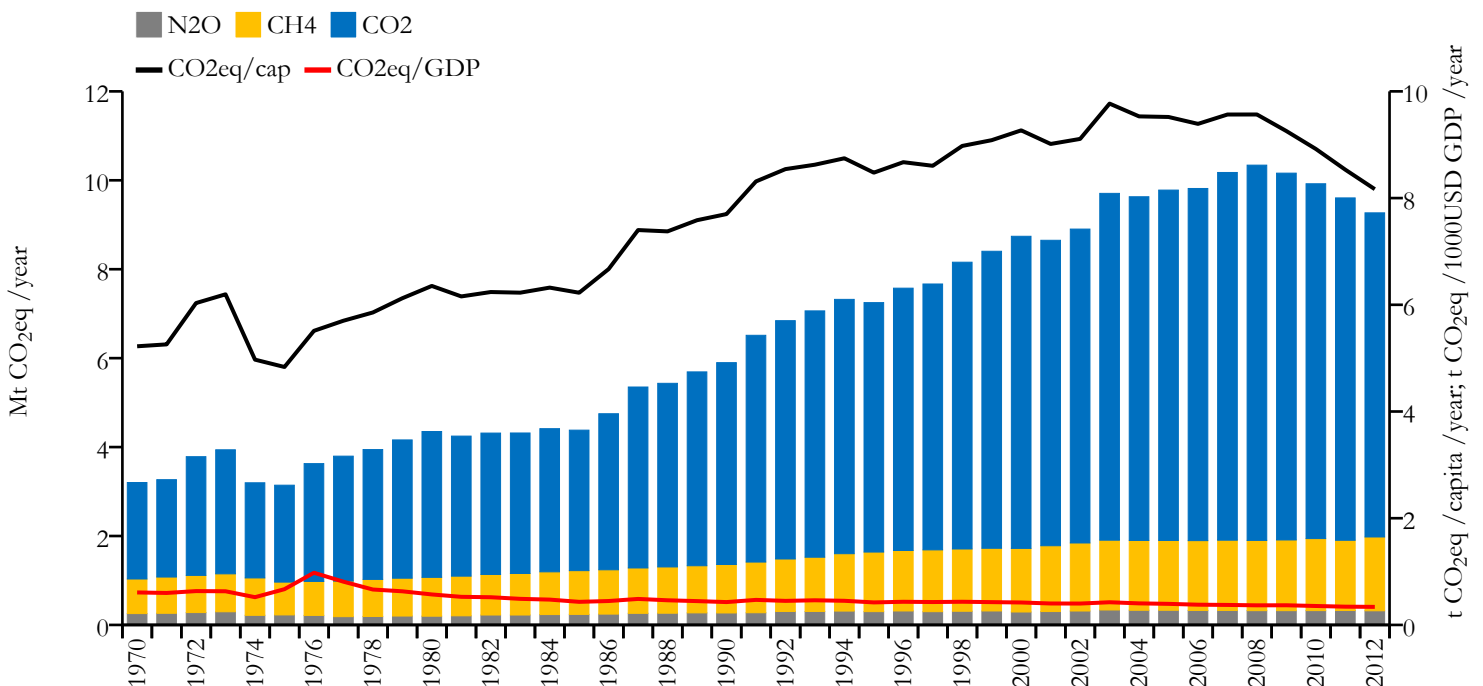
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	6.872	5.874	0.259	1170125
1990	4.523	5.896	0.328	766614



## Greenhouse gas emissions (EDGARv4.3.2 dataset)

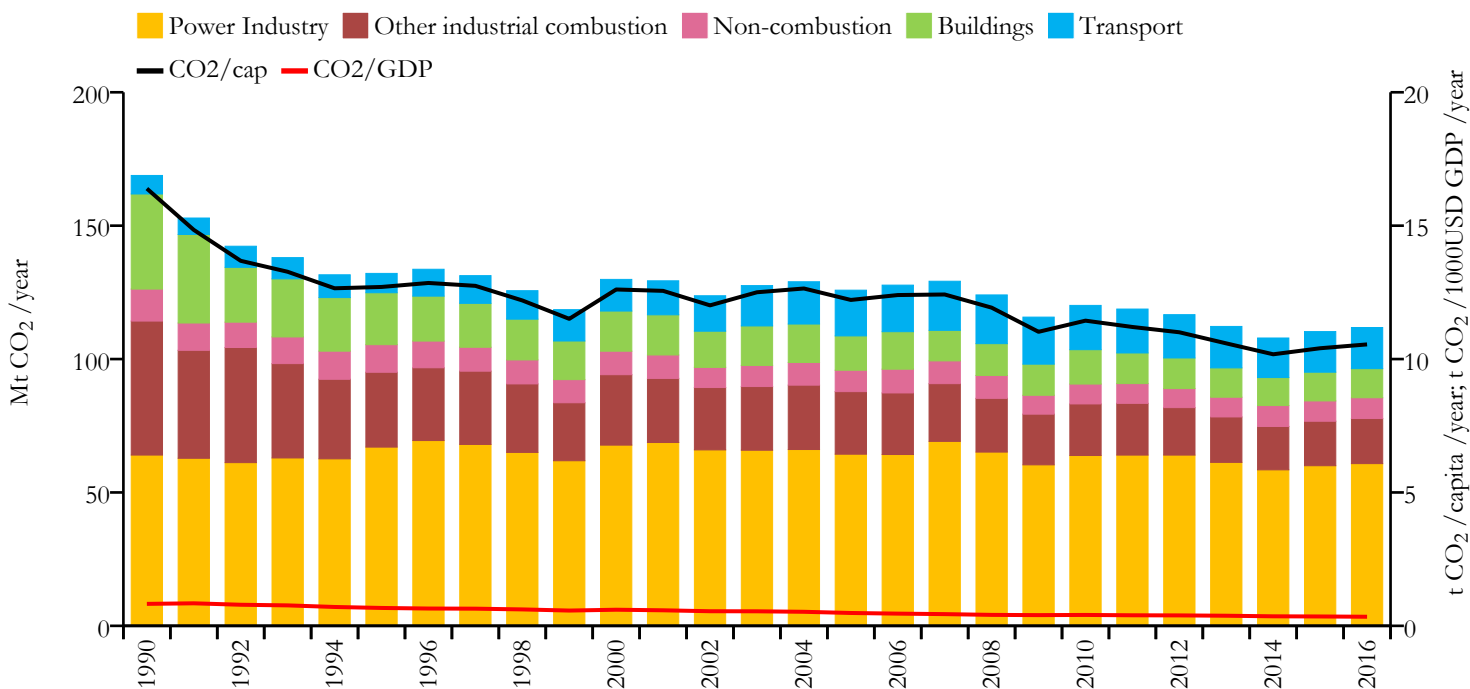




# Czech Republic



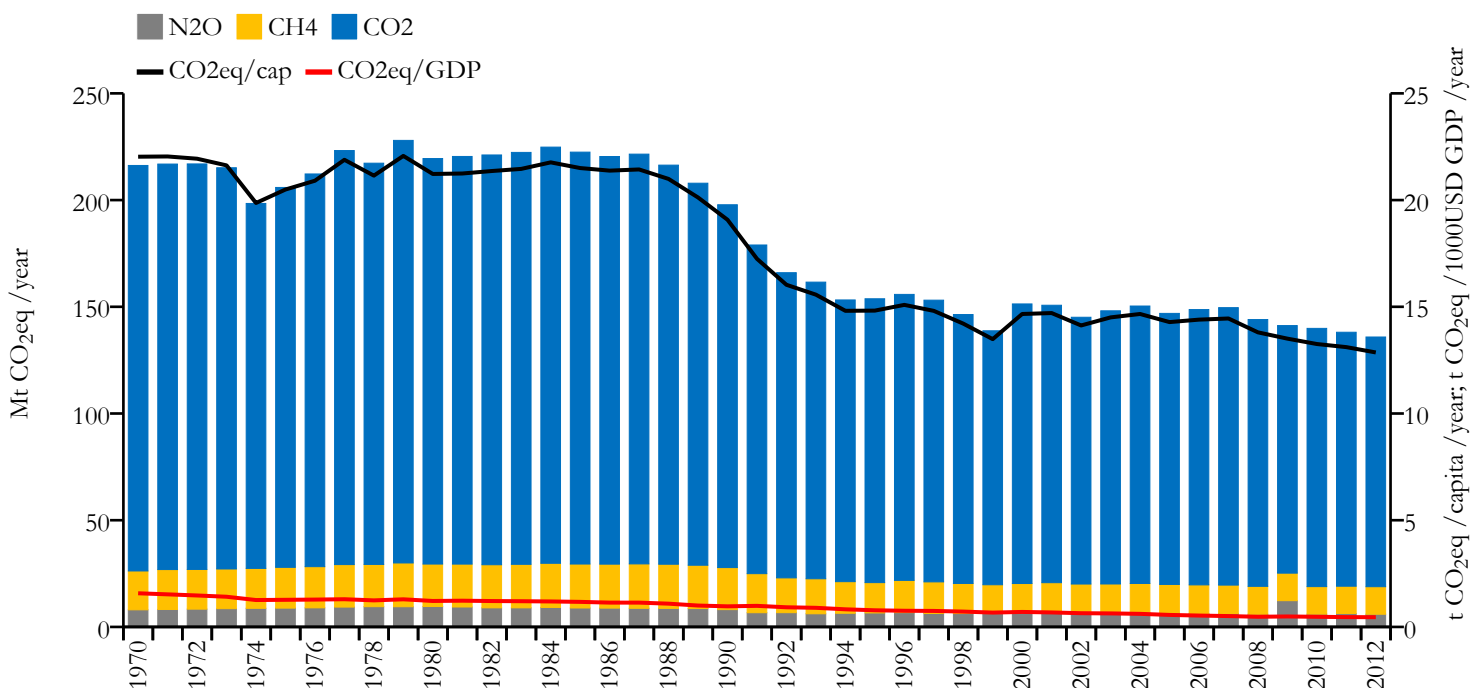
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



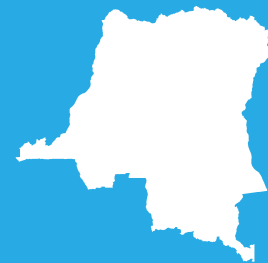
Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	111.825	10.550	0.341	10610947
1990	168.823	16.391	0.824	10341169



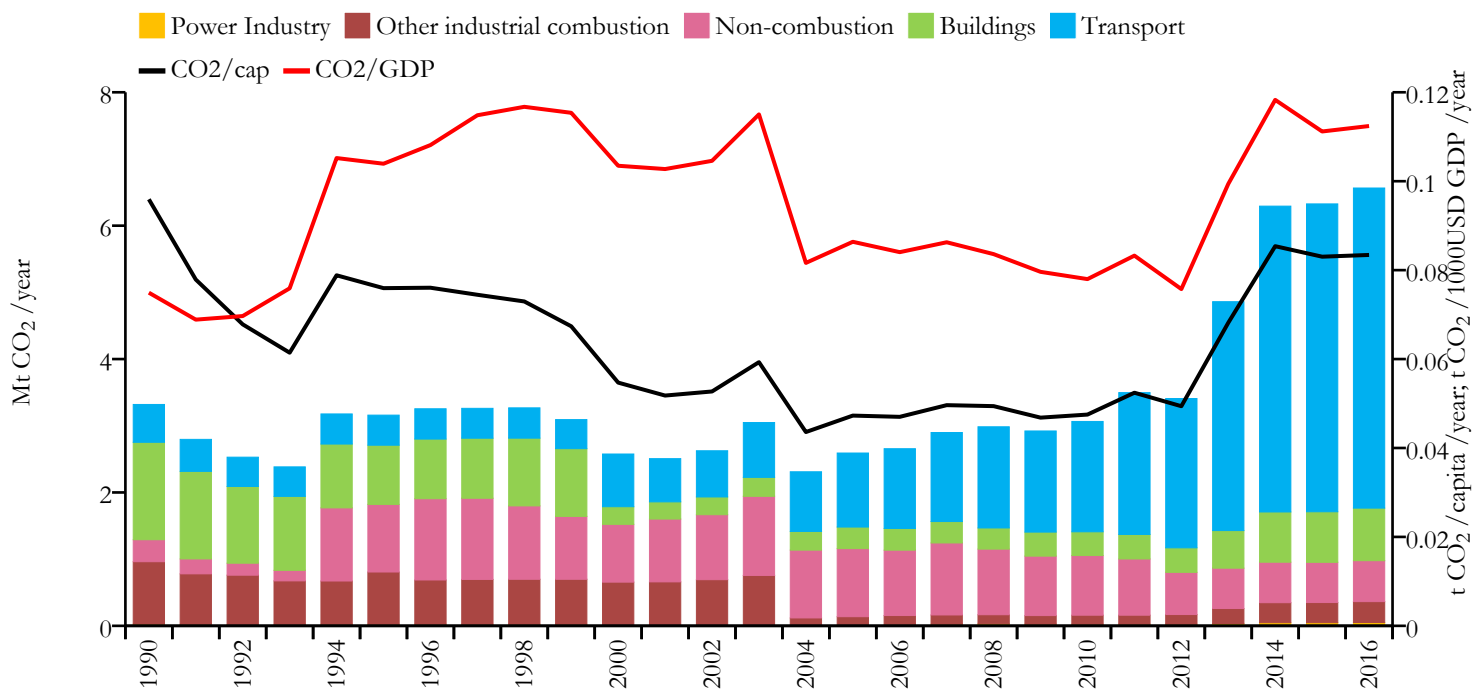
## Greenhouse gas emissions (EDGARv4.3.2 dataset)



# Democratic Republic of the Congo



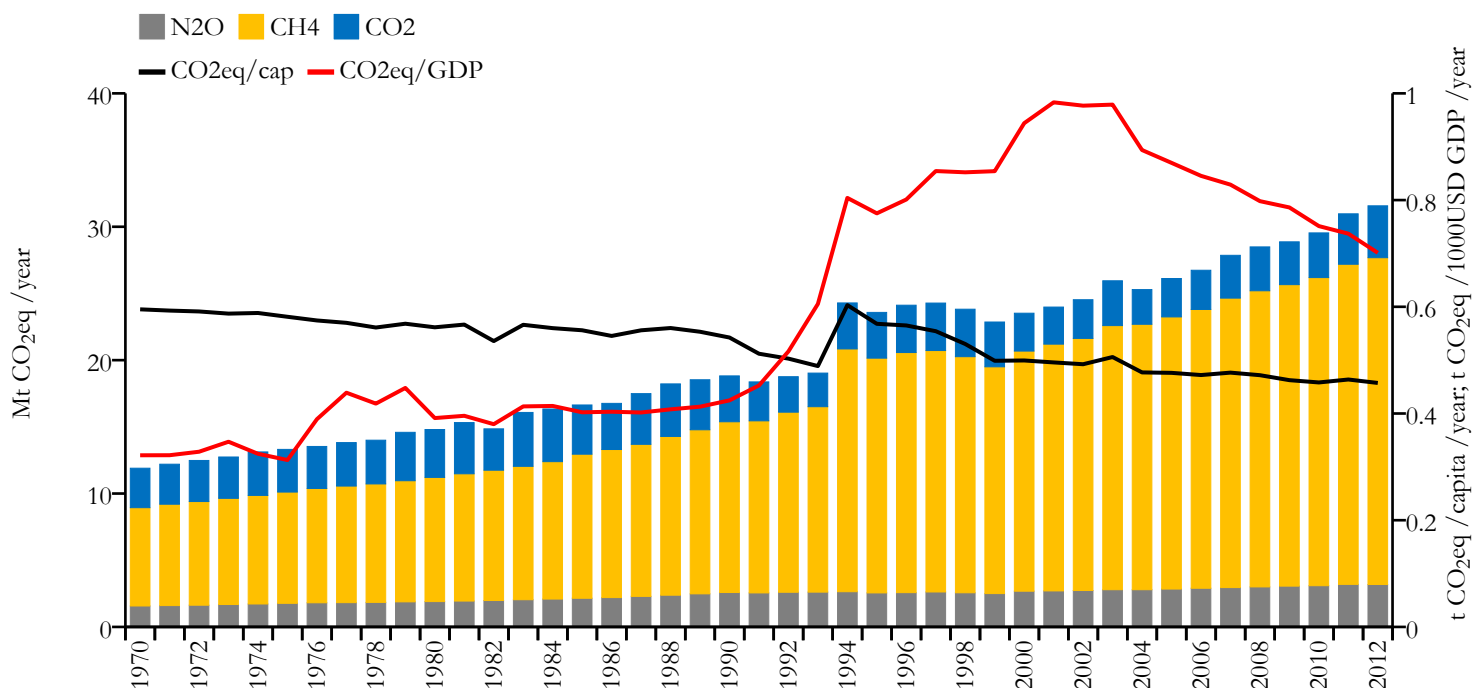
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	6.565	0.083	0.112	78736153
1990	3.319	0.096	0.075	34614581

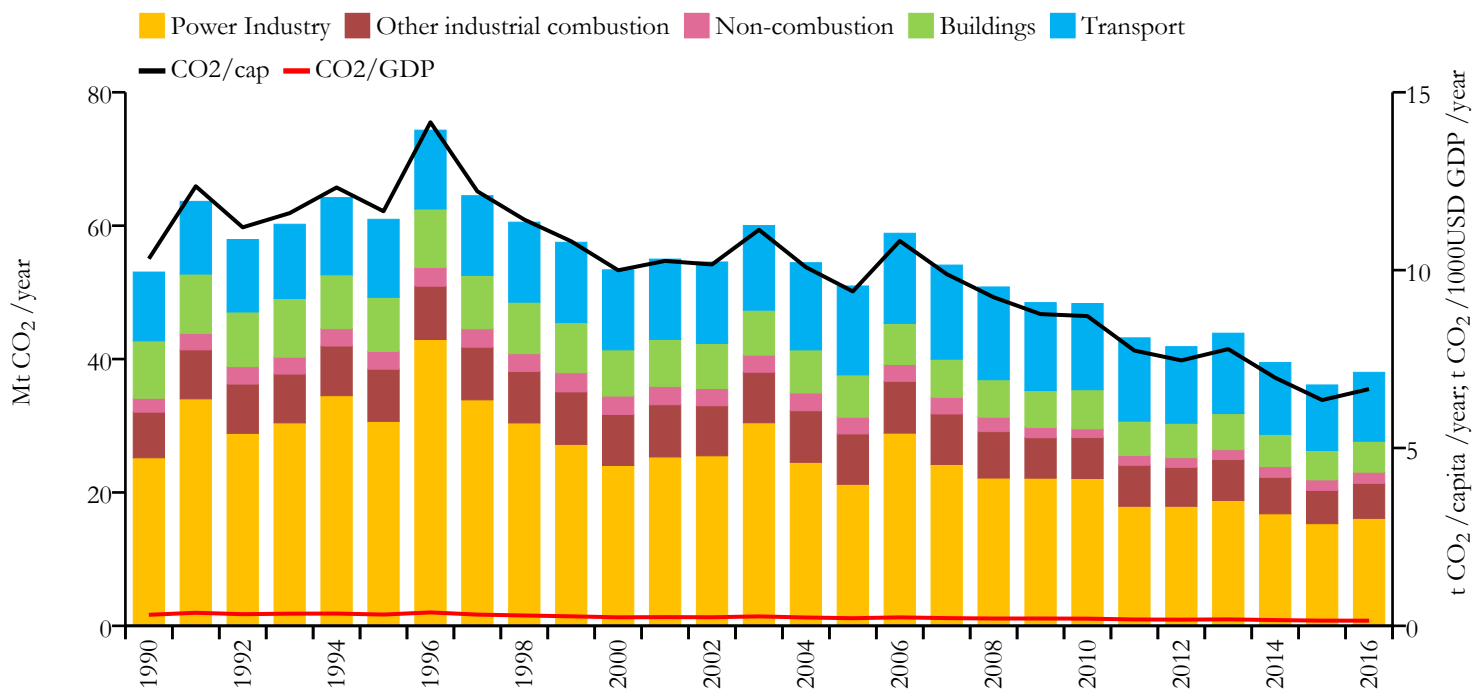


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





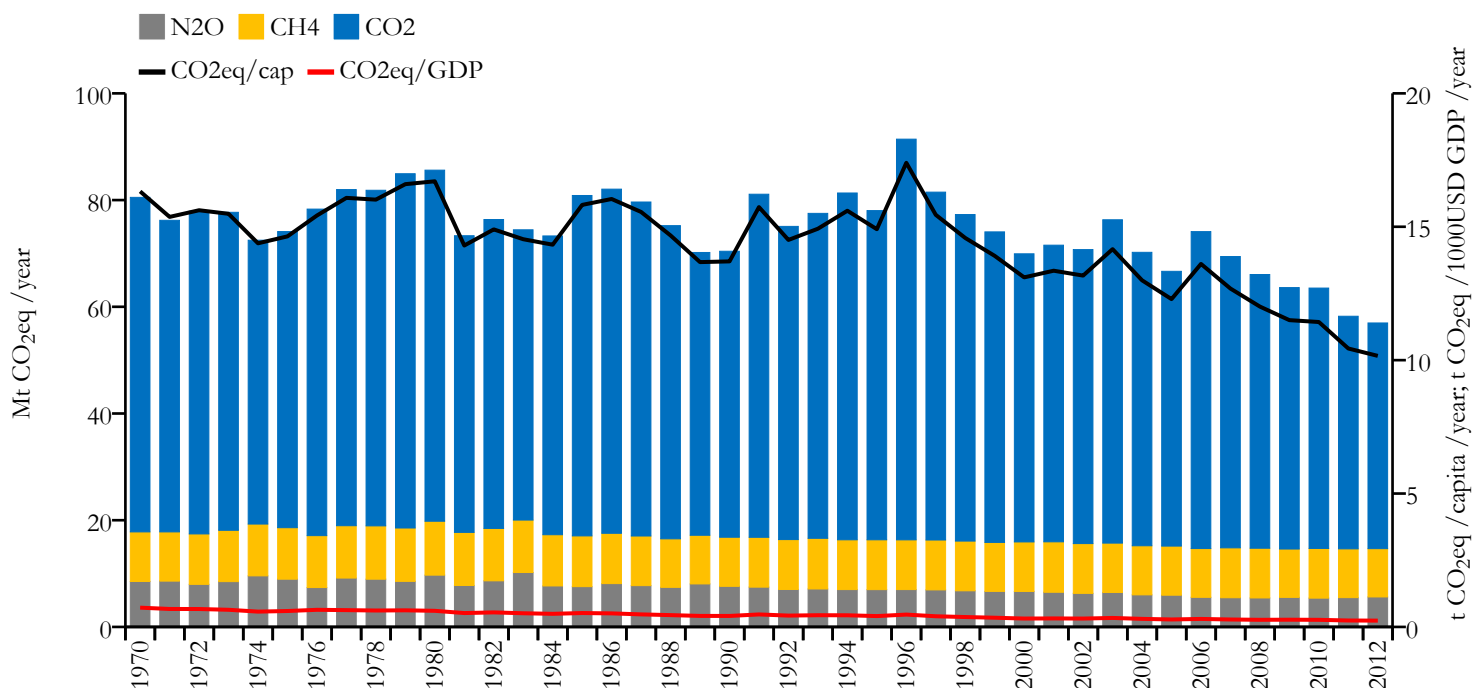
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	38.008	6.656	0.145	5711870
1990	53.045	10.320	0.310	5141115

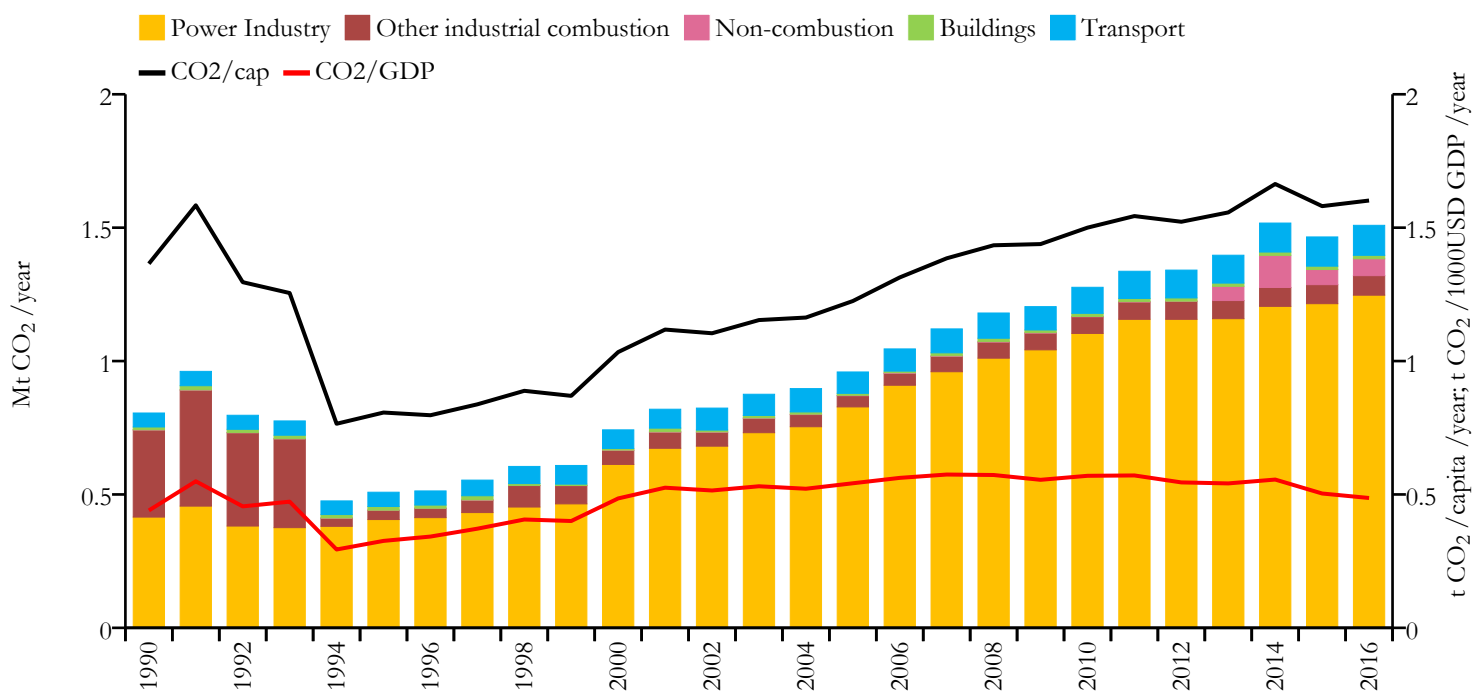


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





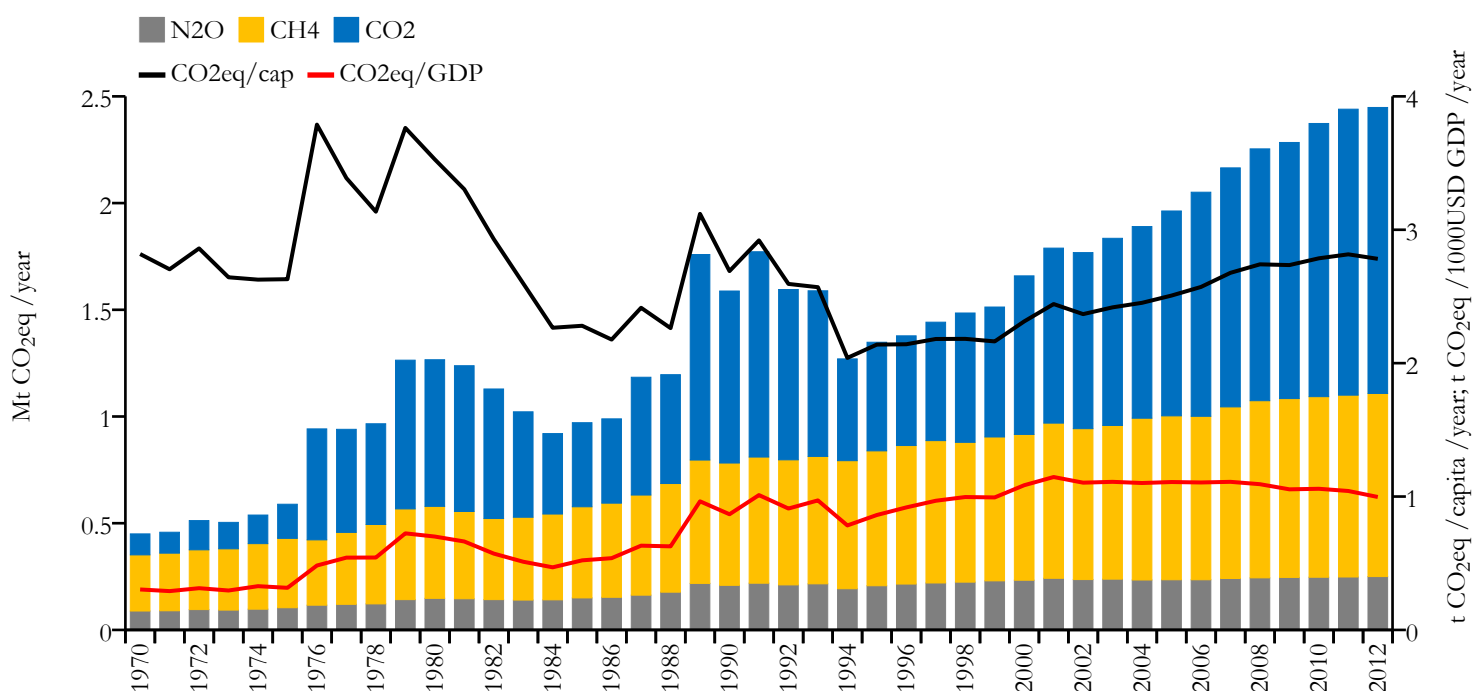
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	1.509	1.602	0.487	942333
1990	0.805	1.365	0.440	590398

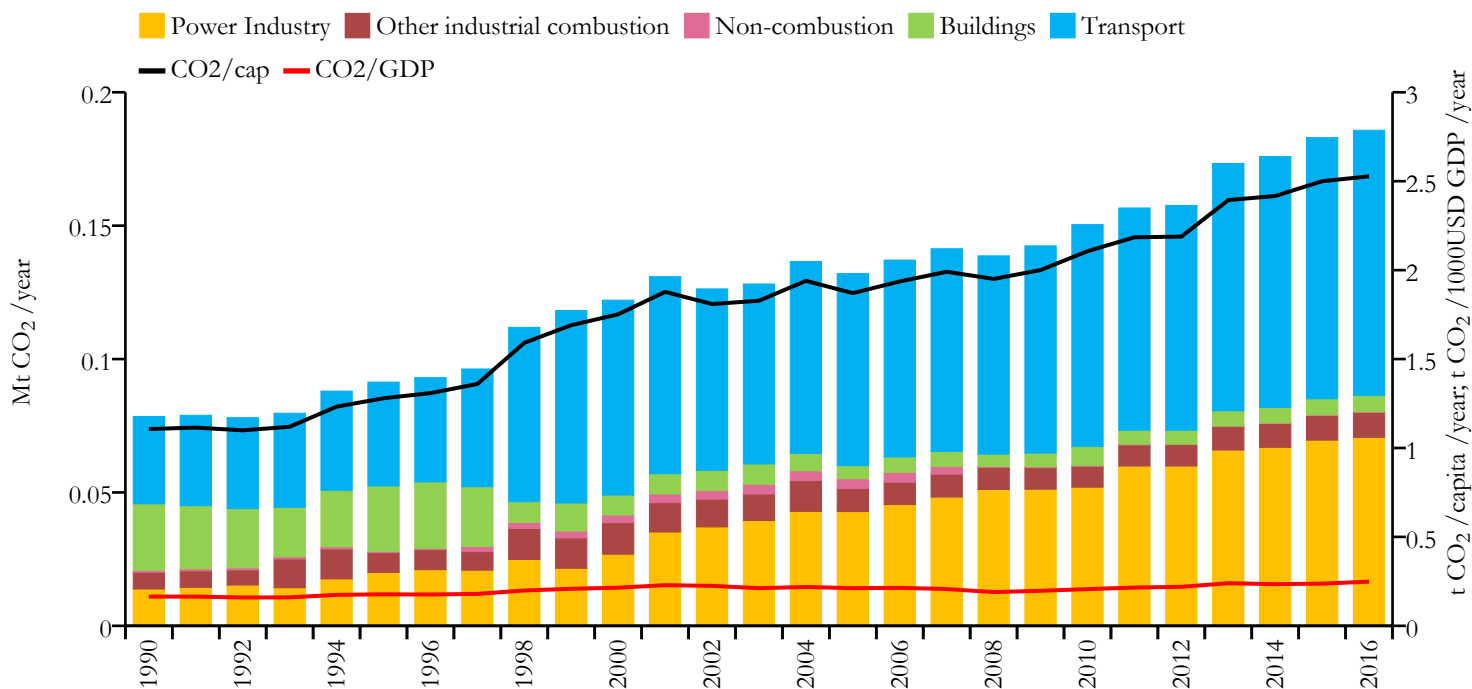


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





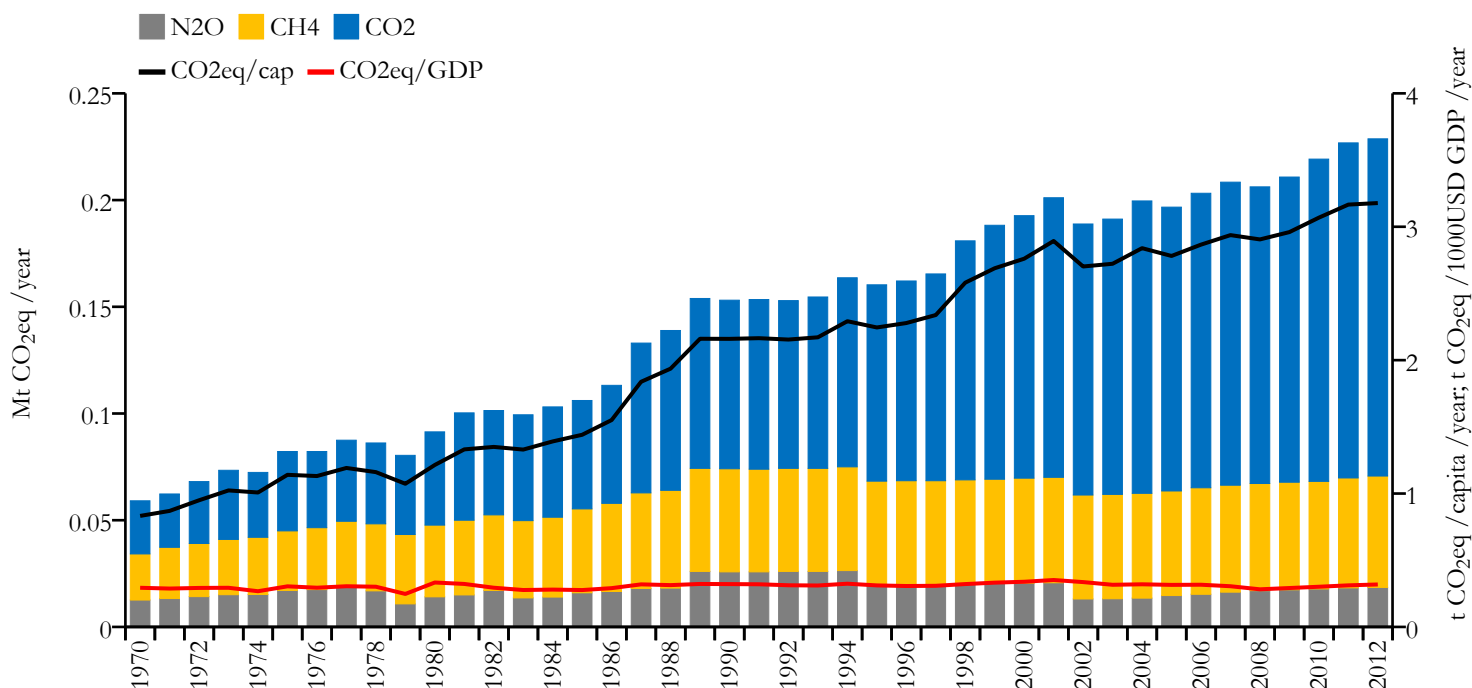
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	0.186	2.527	0.248	73543
1990	0.078	1.107	0.164	70926



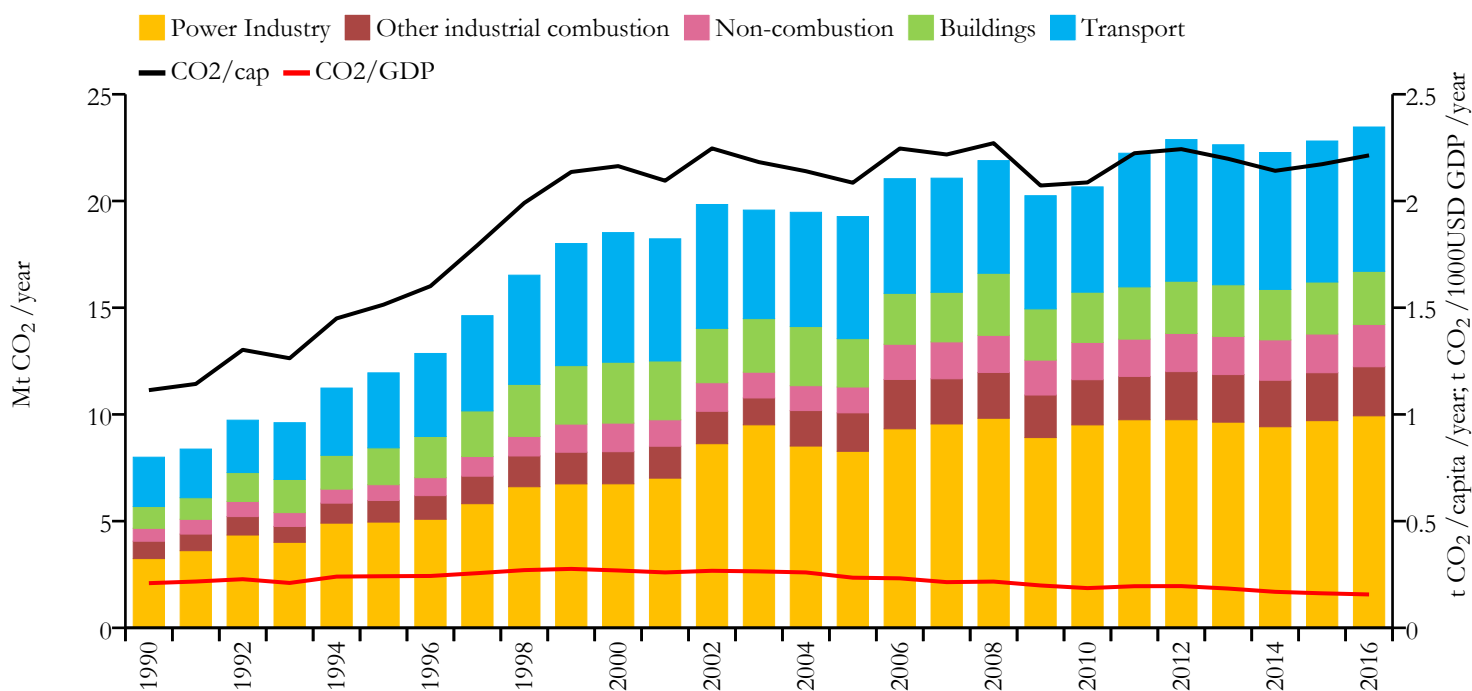
## Greenhouse gas emissions (EDGARv4.3.2 dataset)



# Dominican Republic



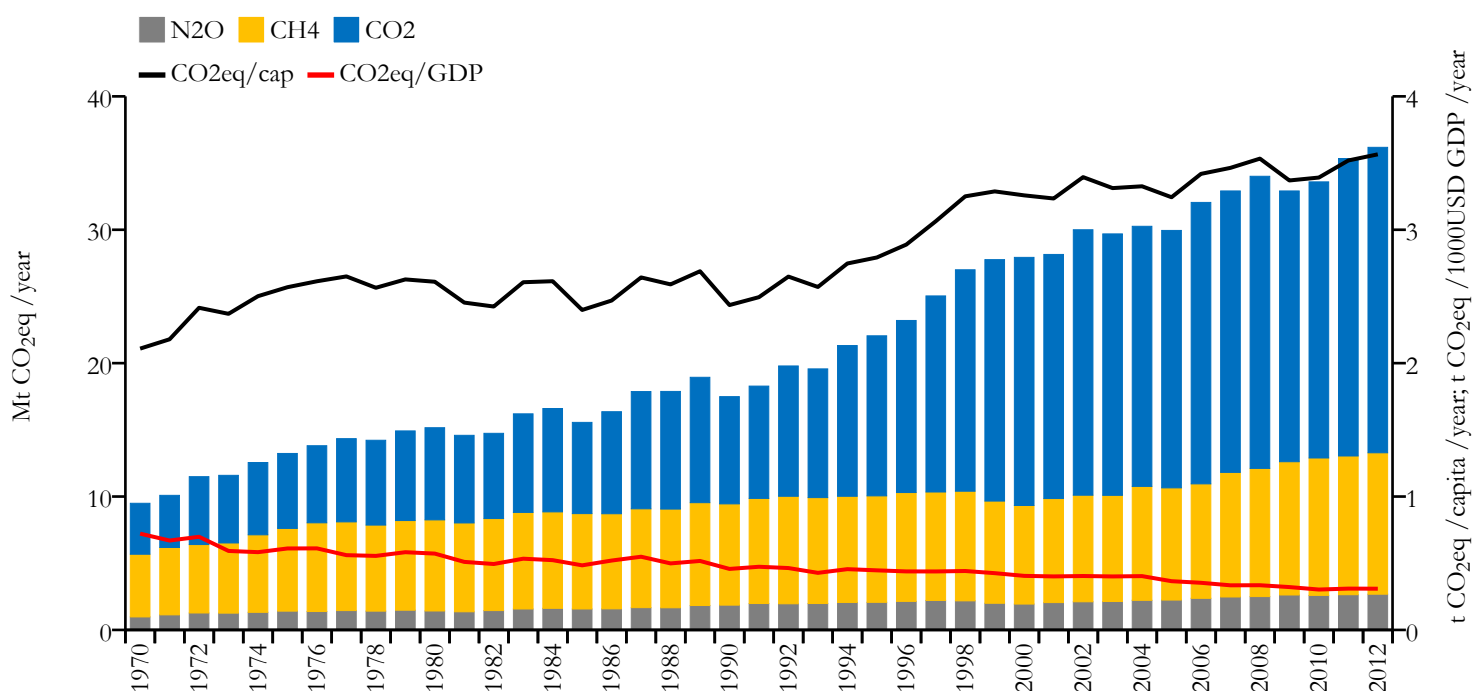
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	23.467	2.214	0.156	10648791
1990	7.996	1.114	0.209	7183647

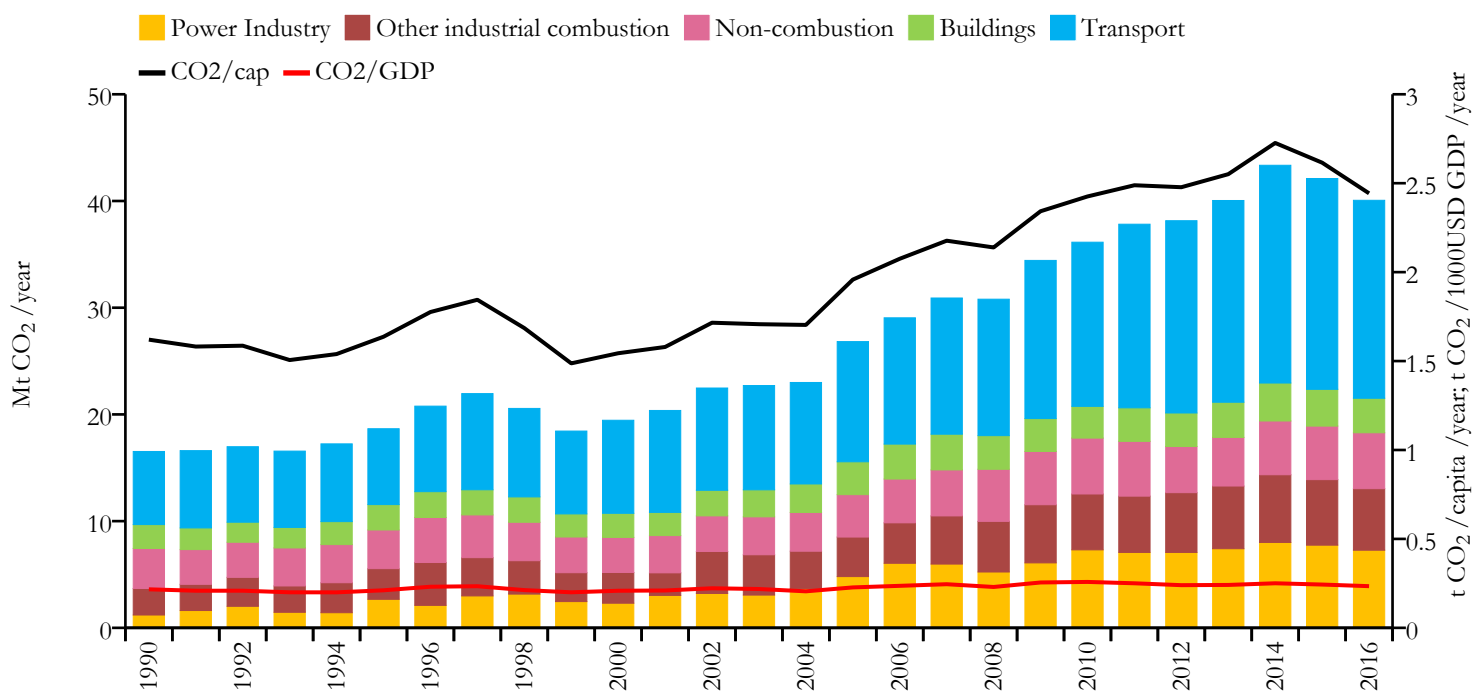


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





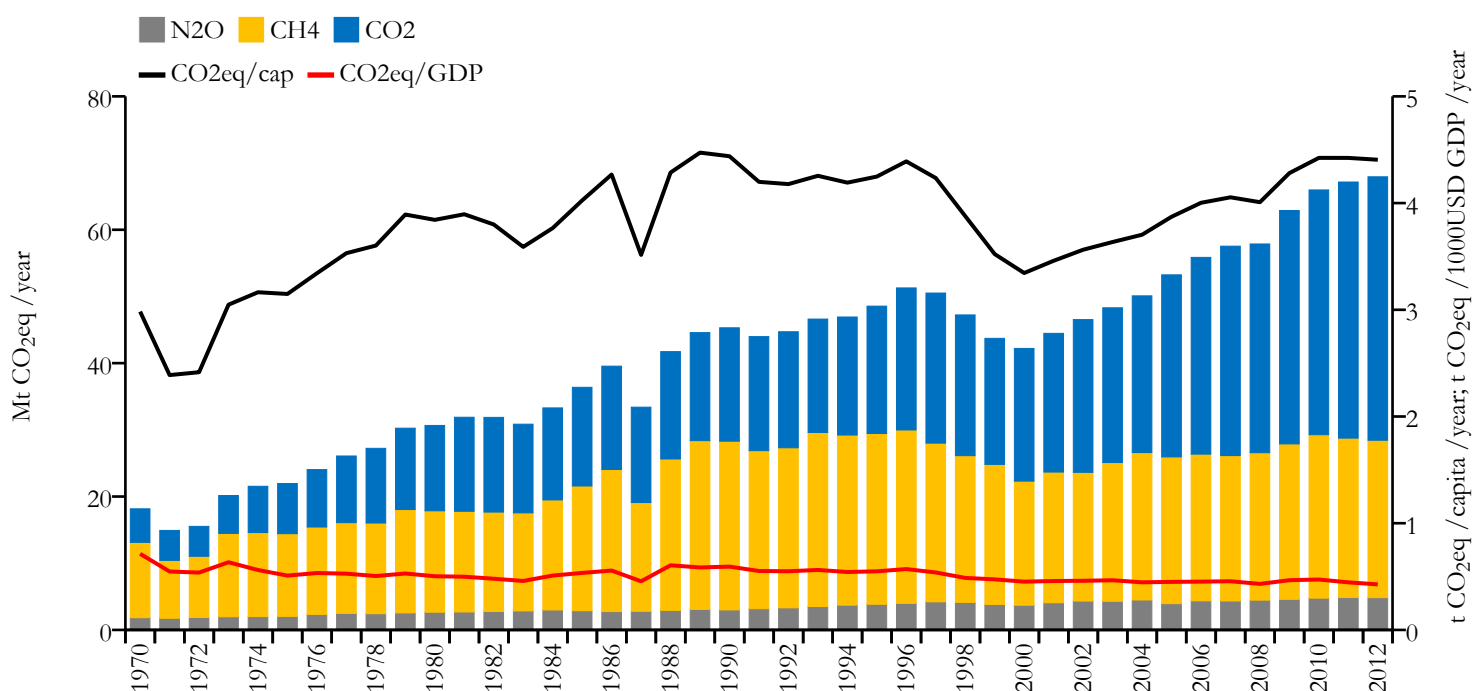
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	40.066	2.443	0.234	16385068
1990	16.528	1.620	0.217	10218091

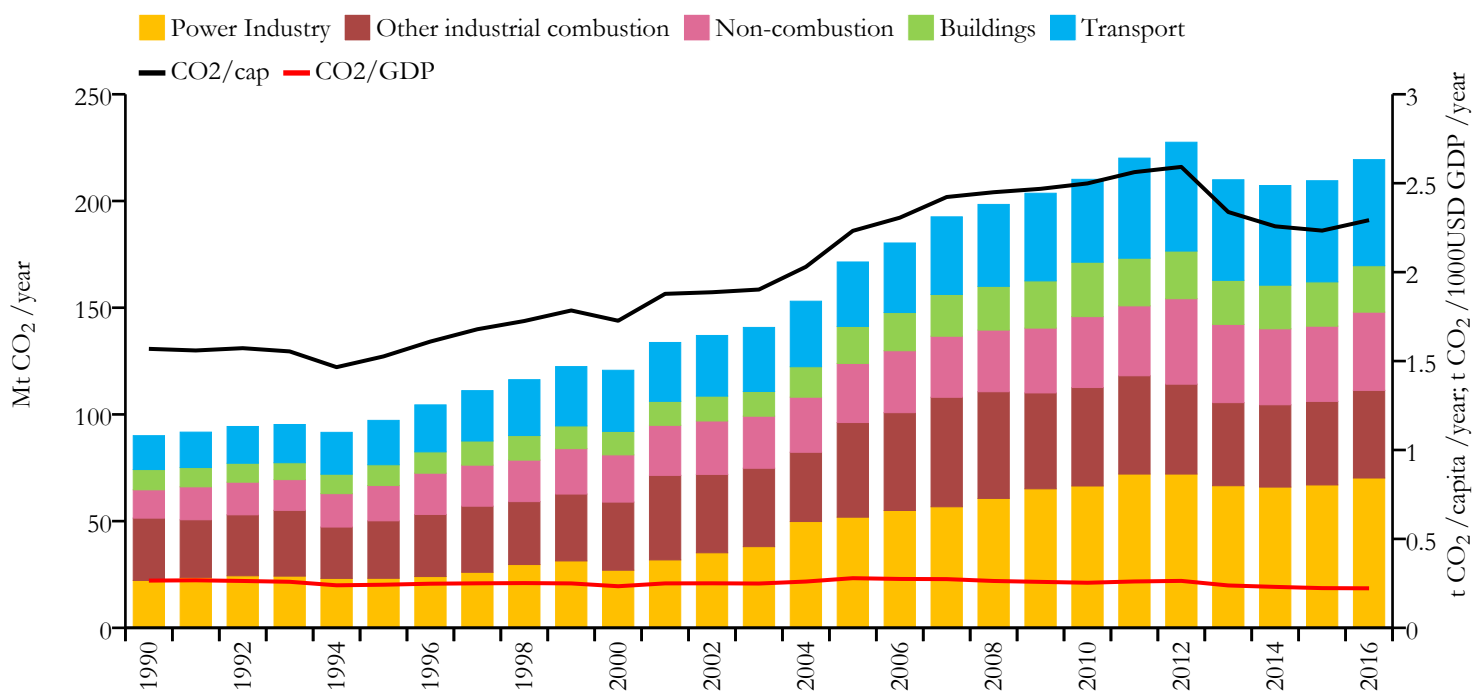


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





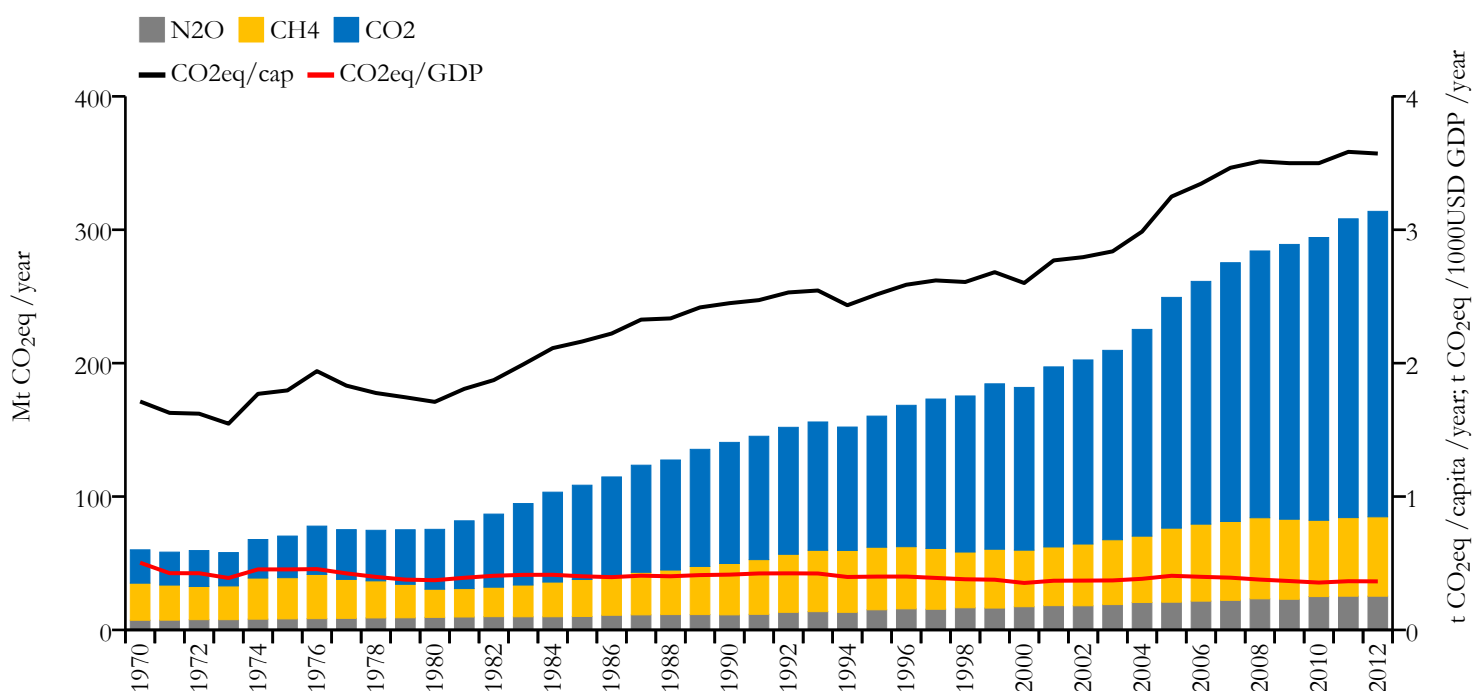
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	219.377	2.292	0.222	95688681
1990	90.038	1.569	0.266	57412215



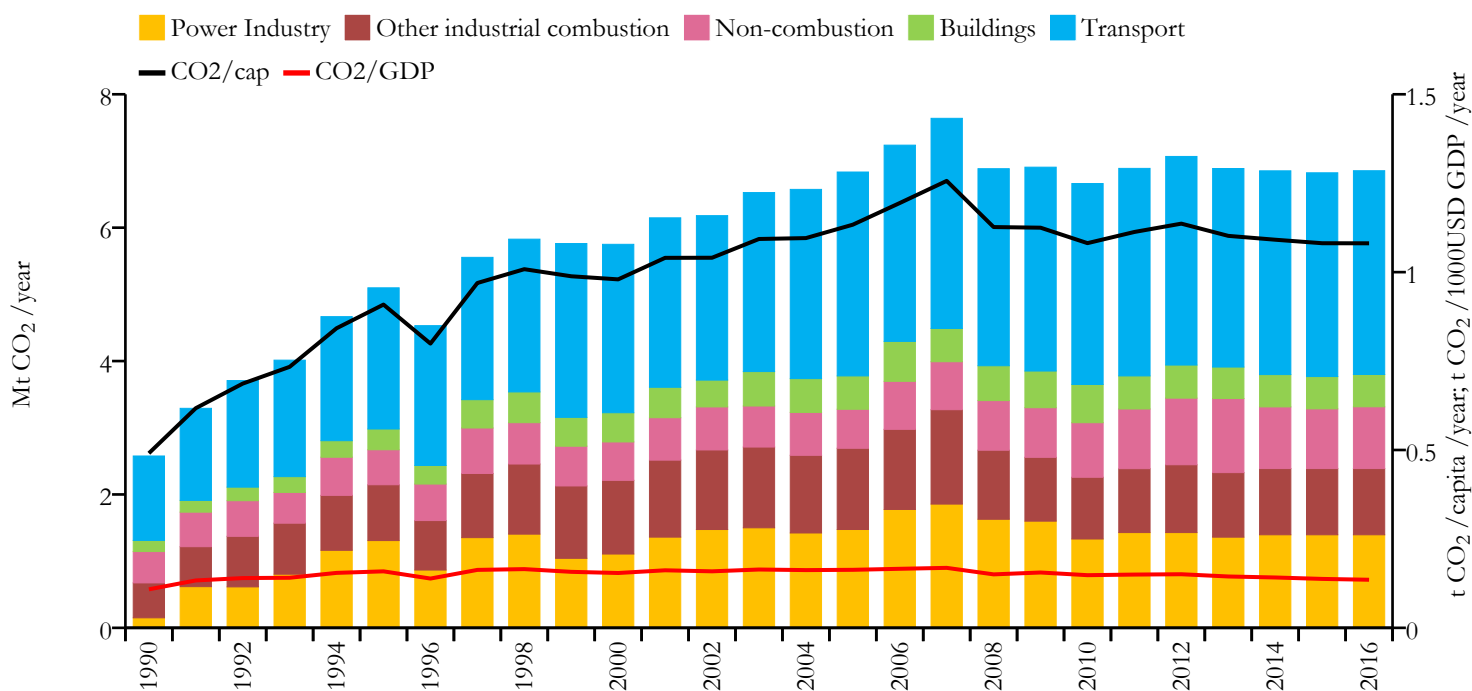
## Greenhouse gas emissions (EDGARv4.3.2 dataset)







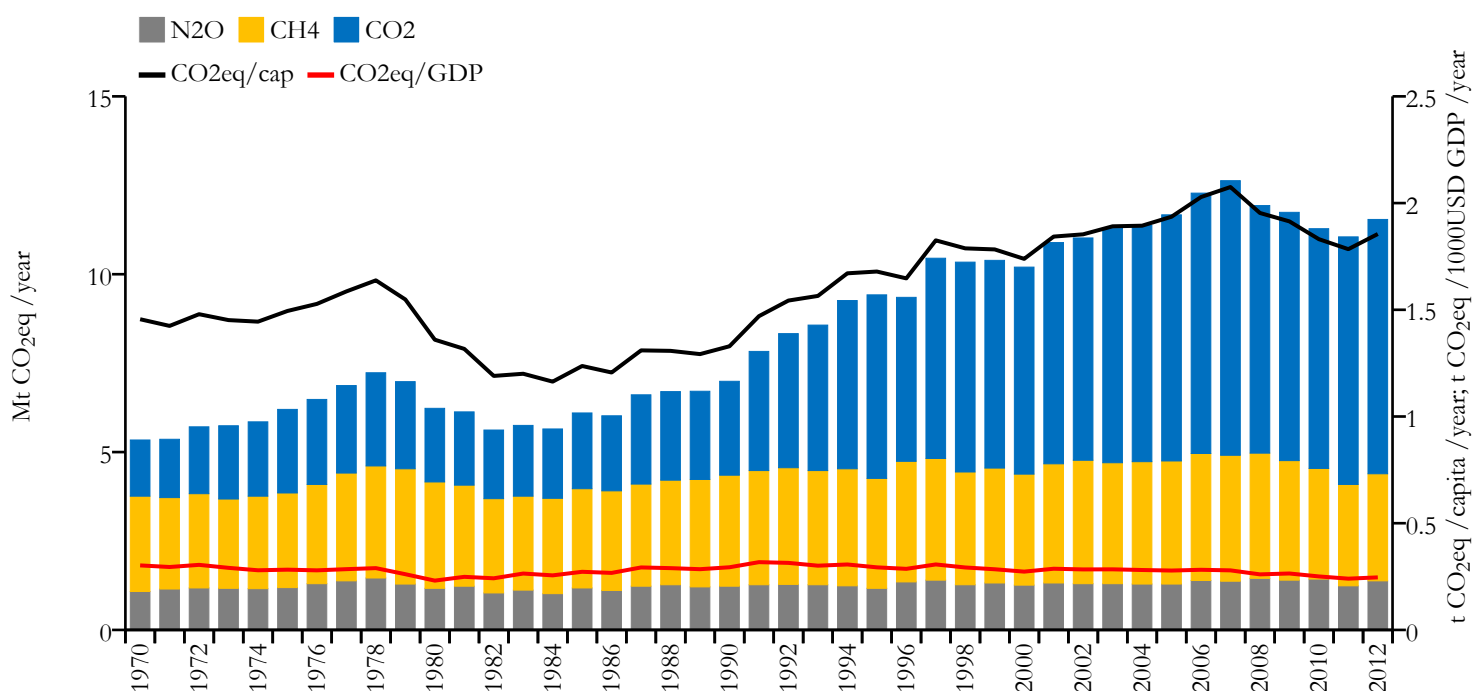
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	6.854	1.081	0.135	6344722
1990	2.577	0.491	0.108	5254984

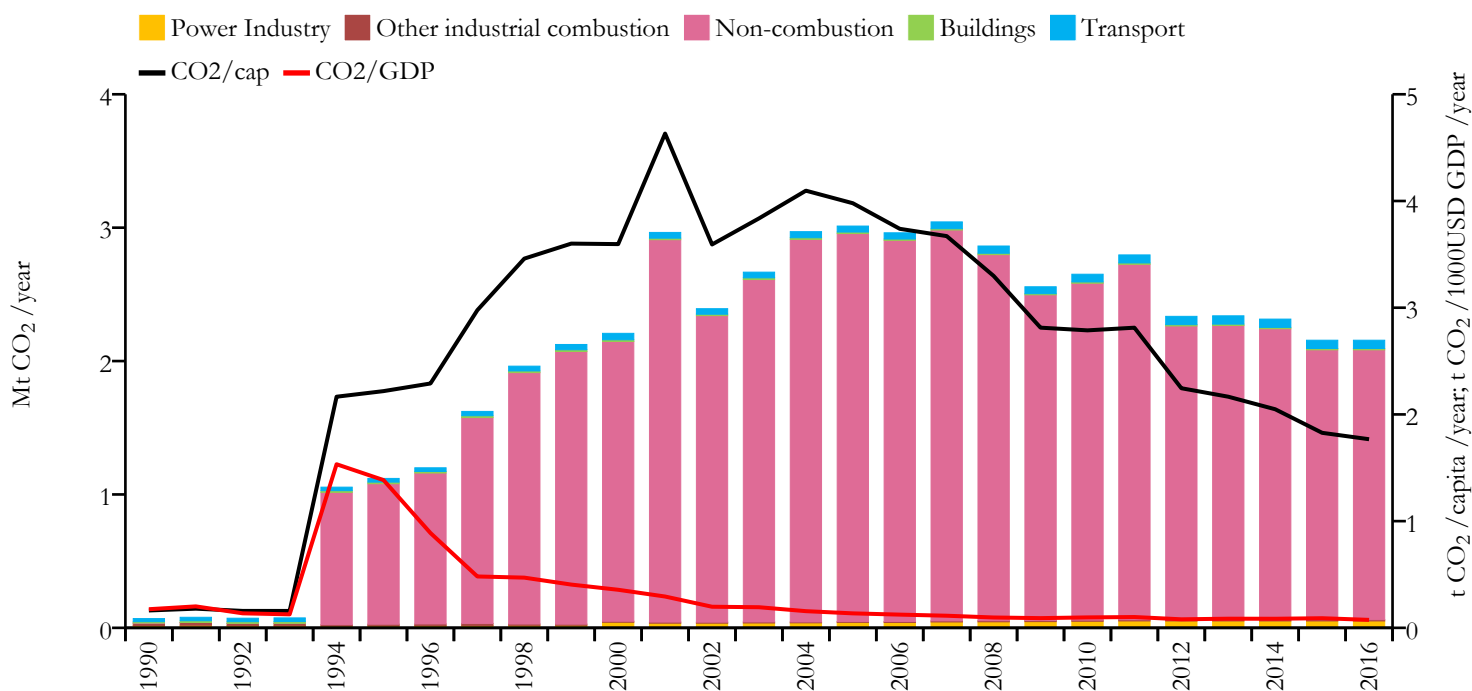


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





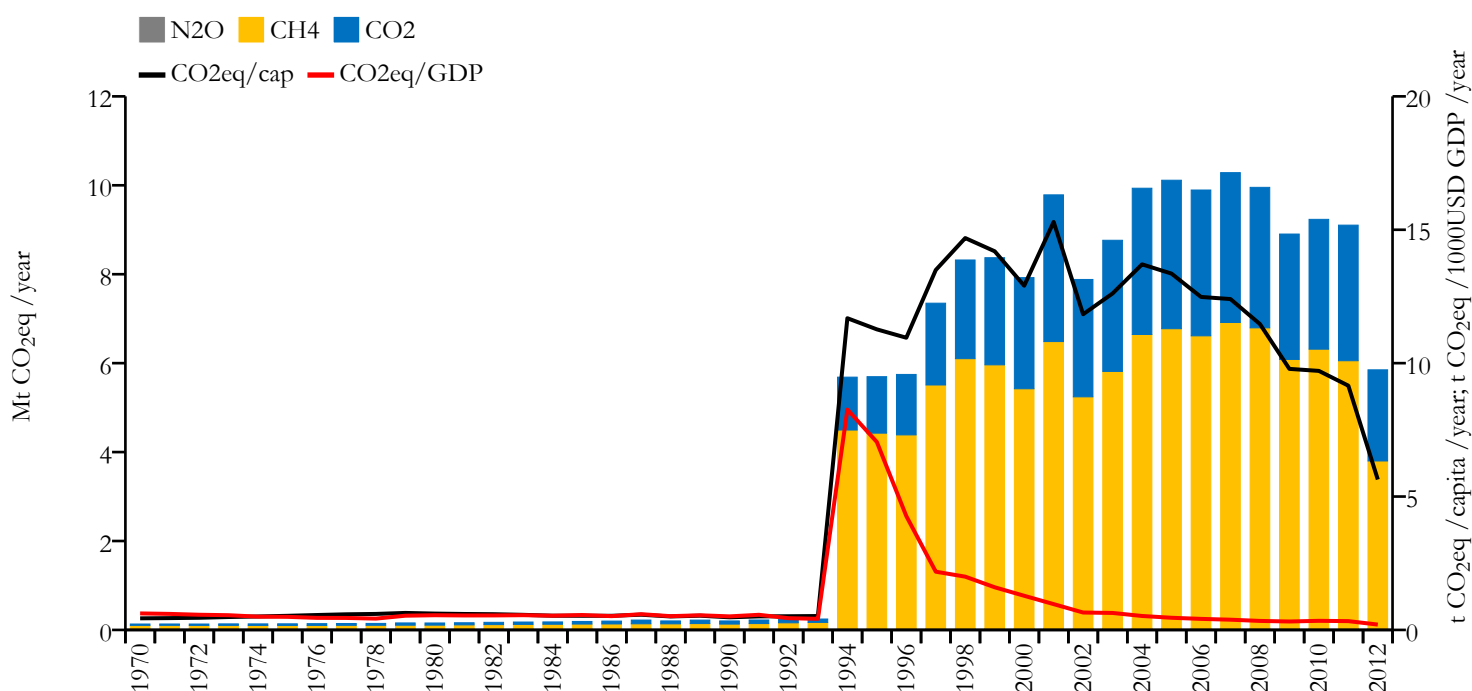
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)

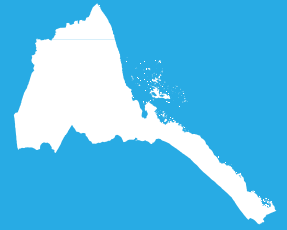


Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	2.156	1.768	0.075	1221490
1990	0.069	0.163	0.175	426846

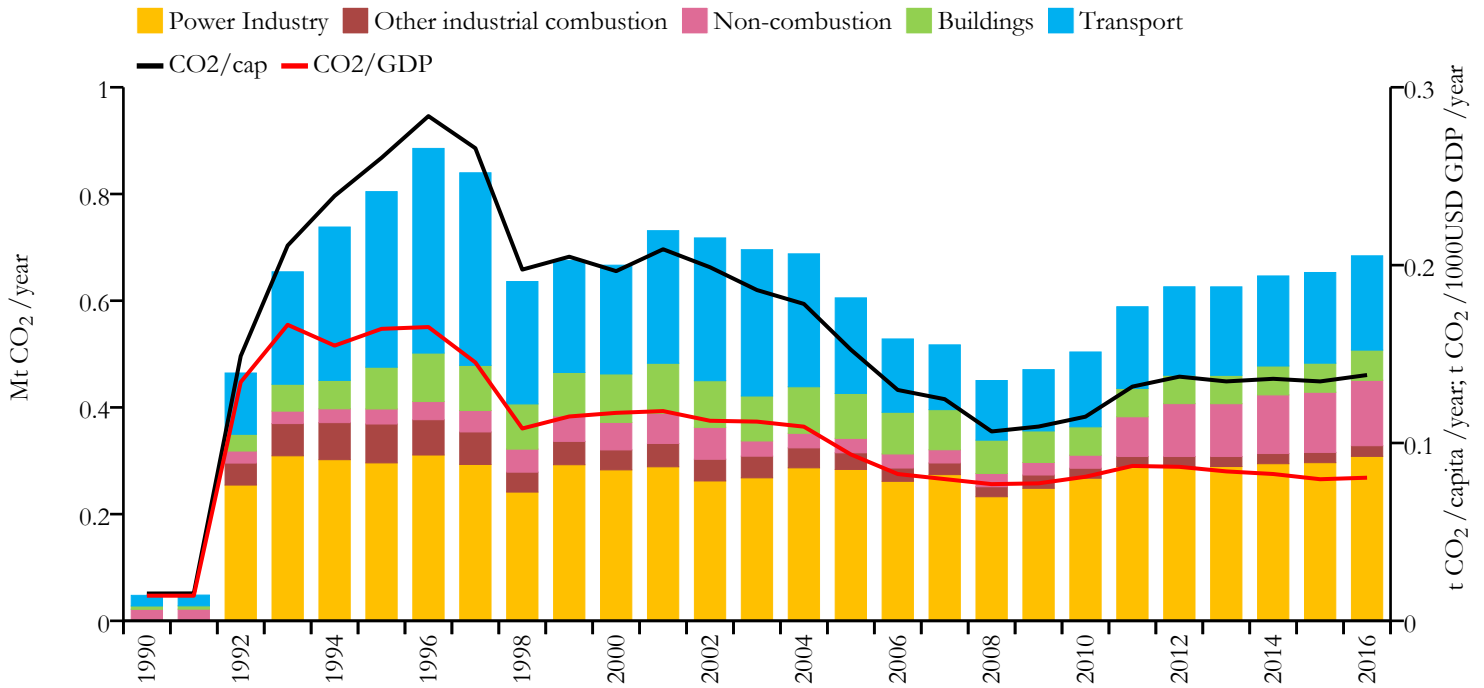


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





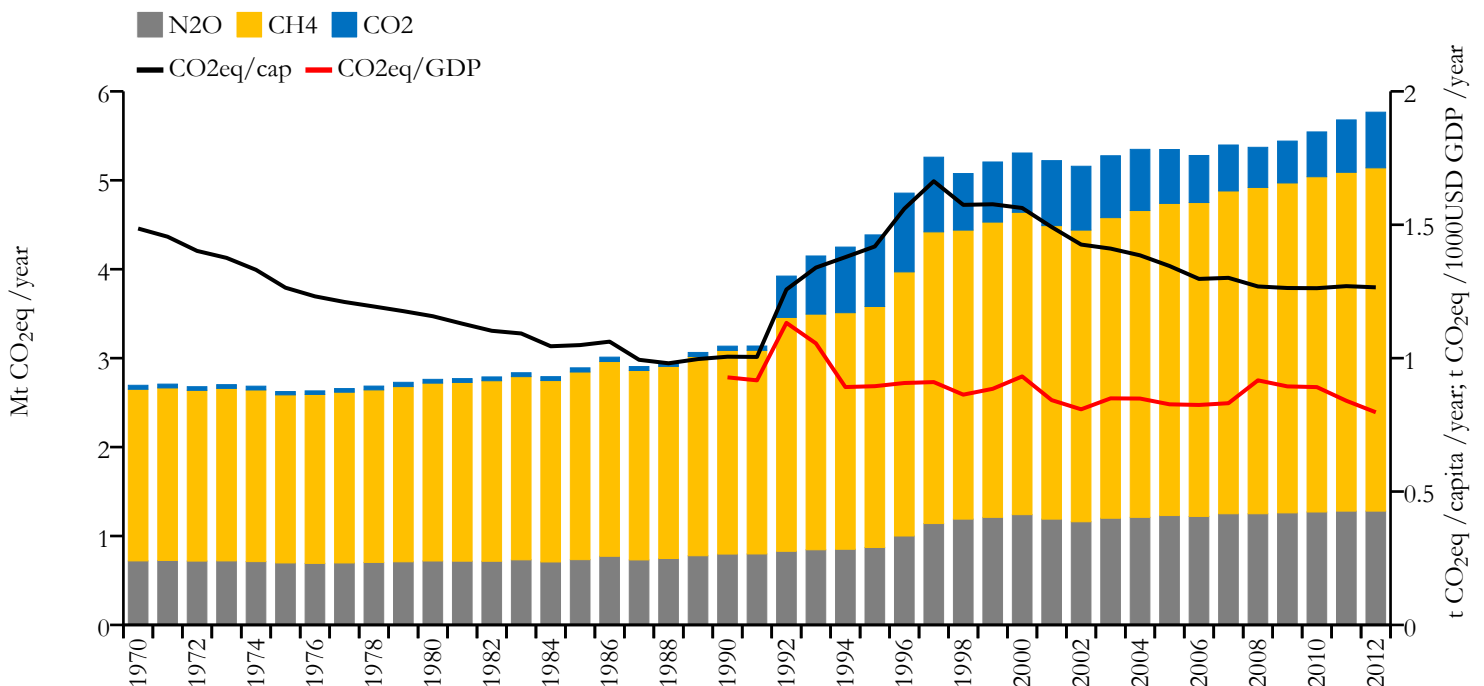
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	0.684	0.138	0.080	4954645
1990	0.048	0.015	0.014	3113311

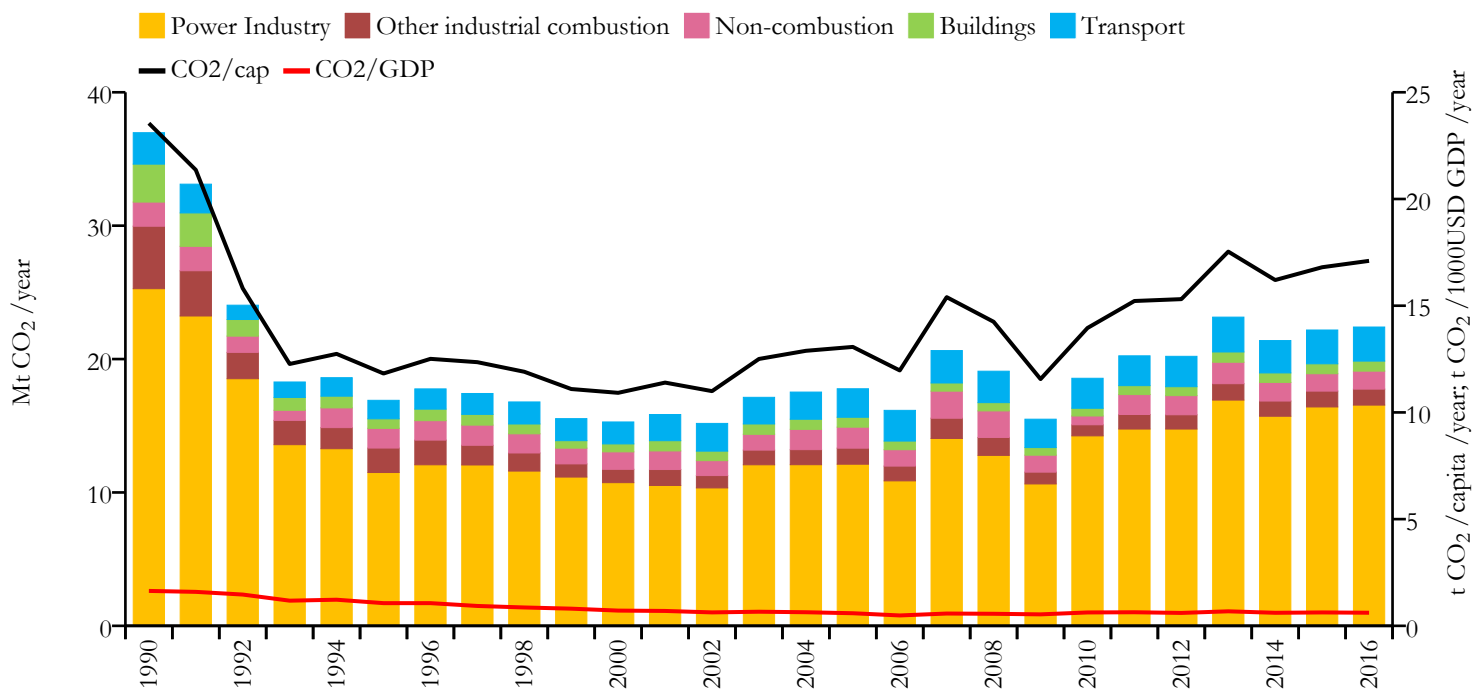


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





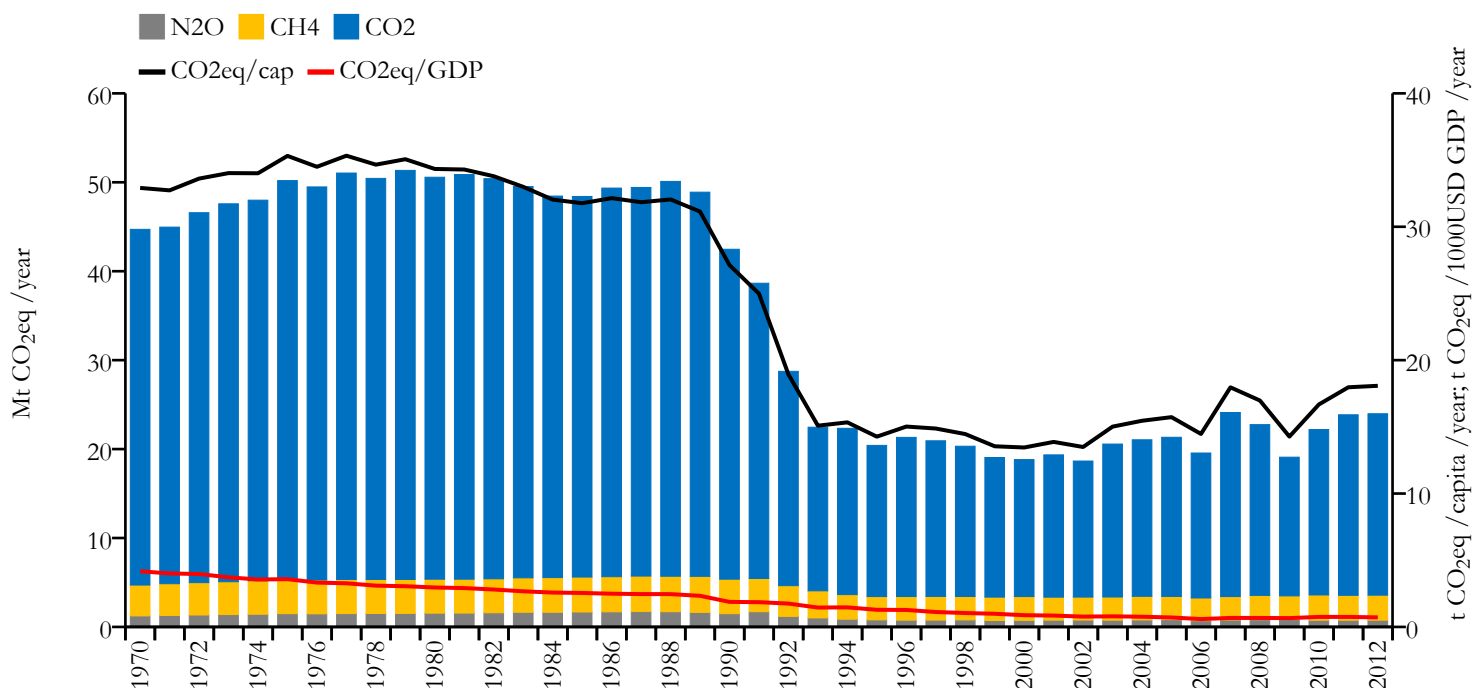
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	22.402	17.101	0.614	1312442
1990	36.971	23.548	1.636	1565242

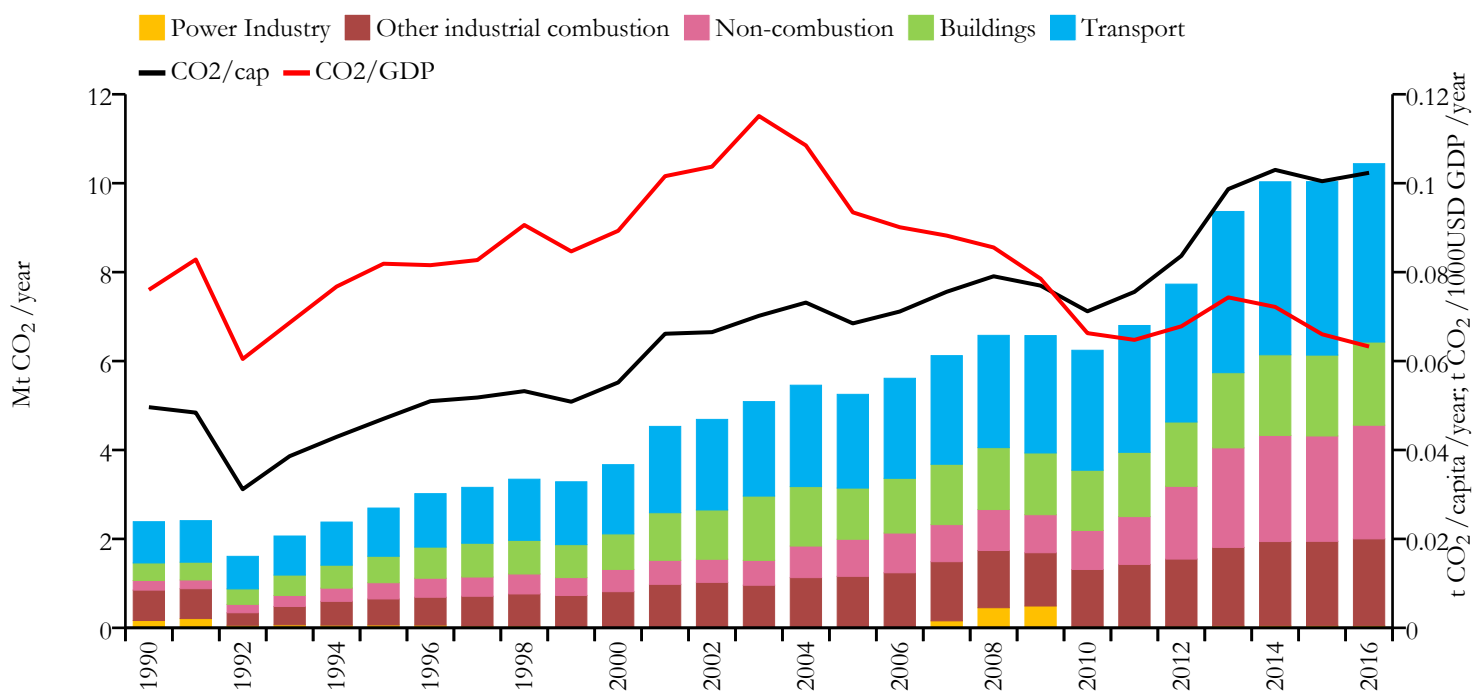


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





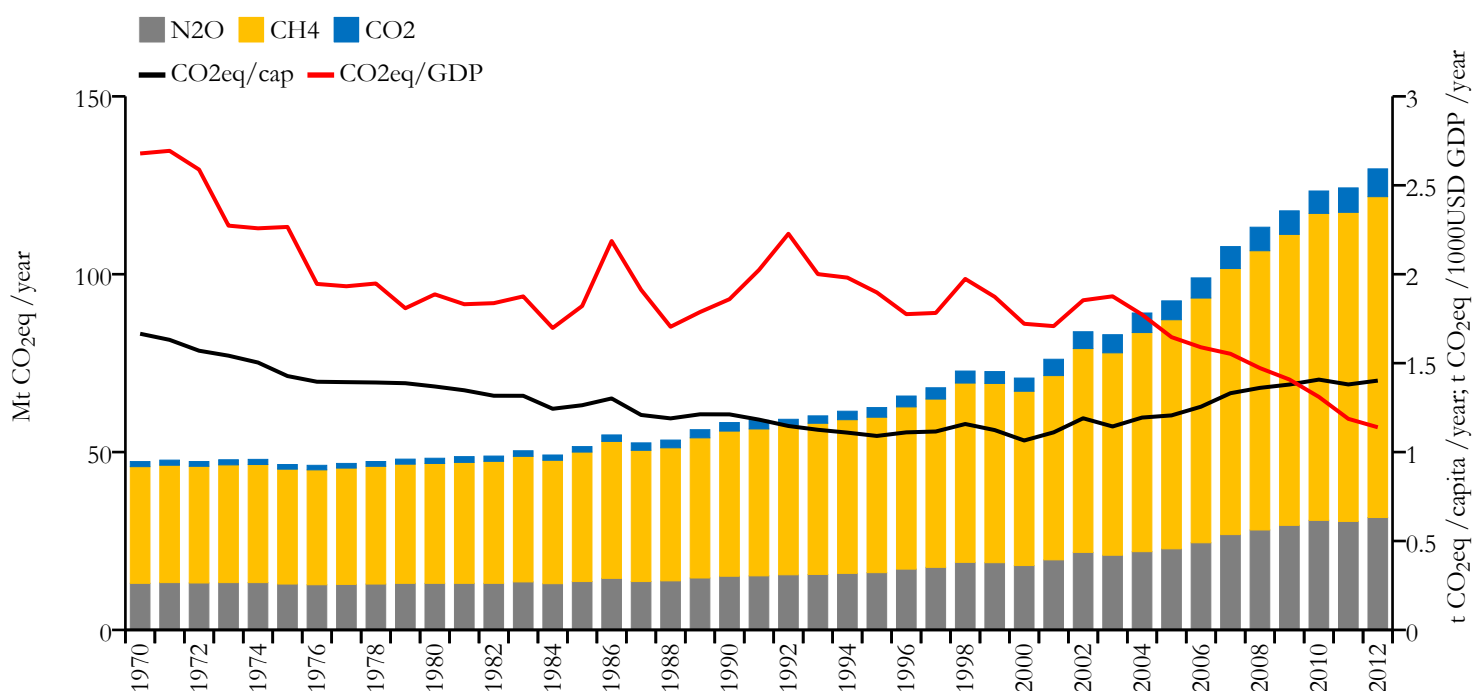
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	10.439	0.102	0.063	102403196
1990	2.387	0.050	0.076	48086516

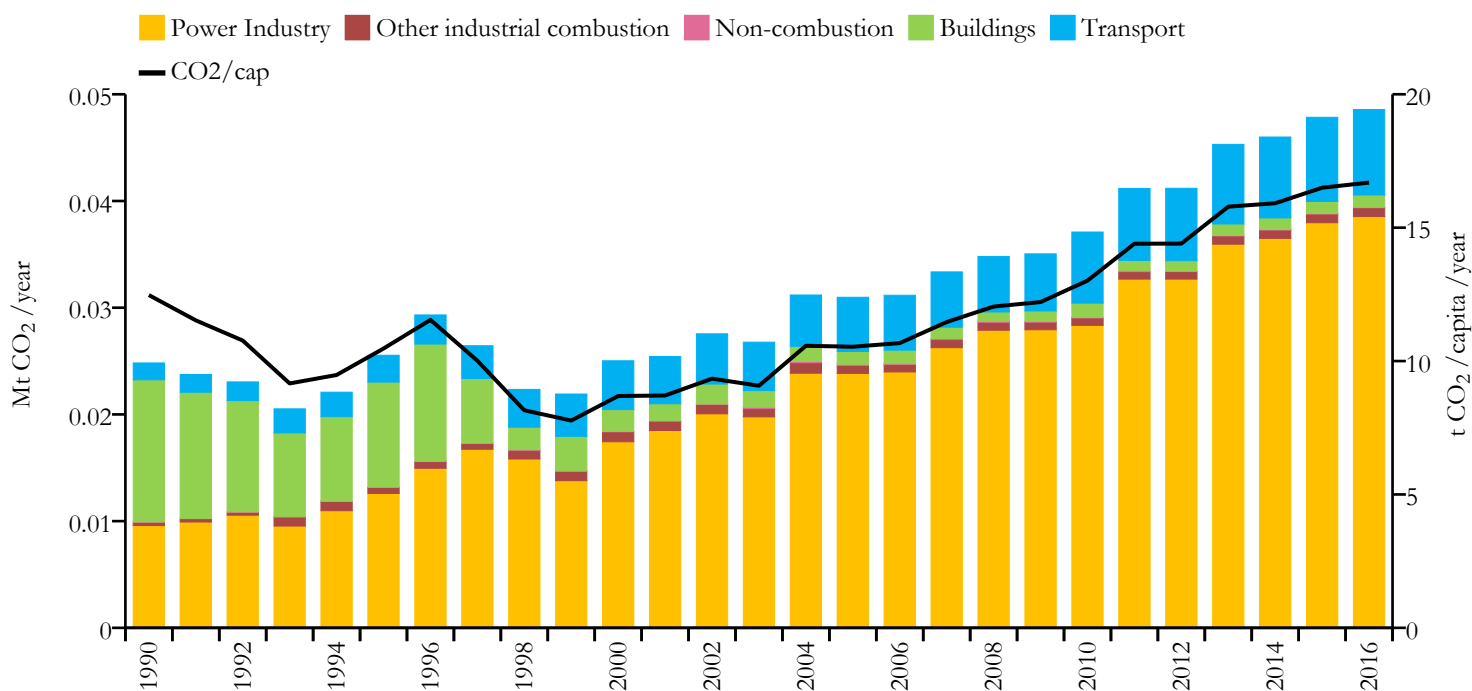


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





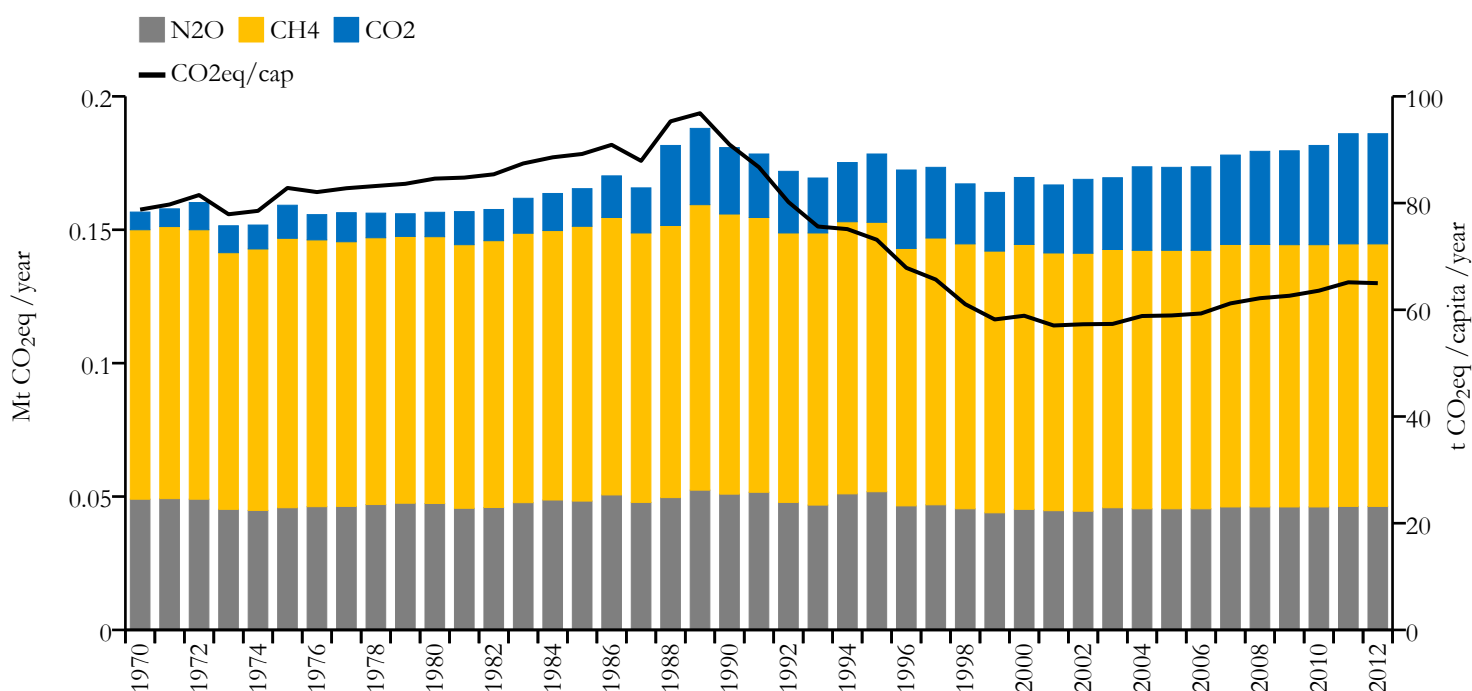
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	0.049	16.690	n/a	2910
1990	0.025	12.474	n/a	1989

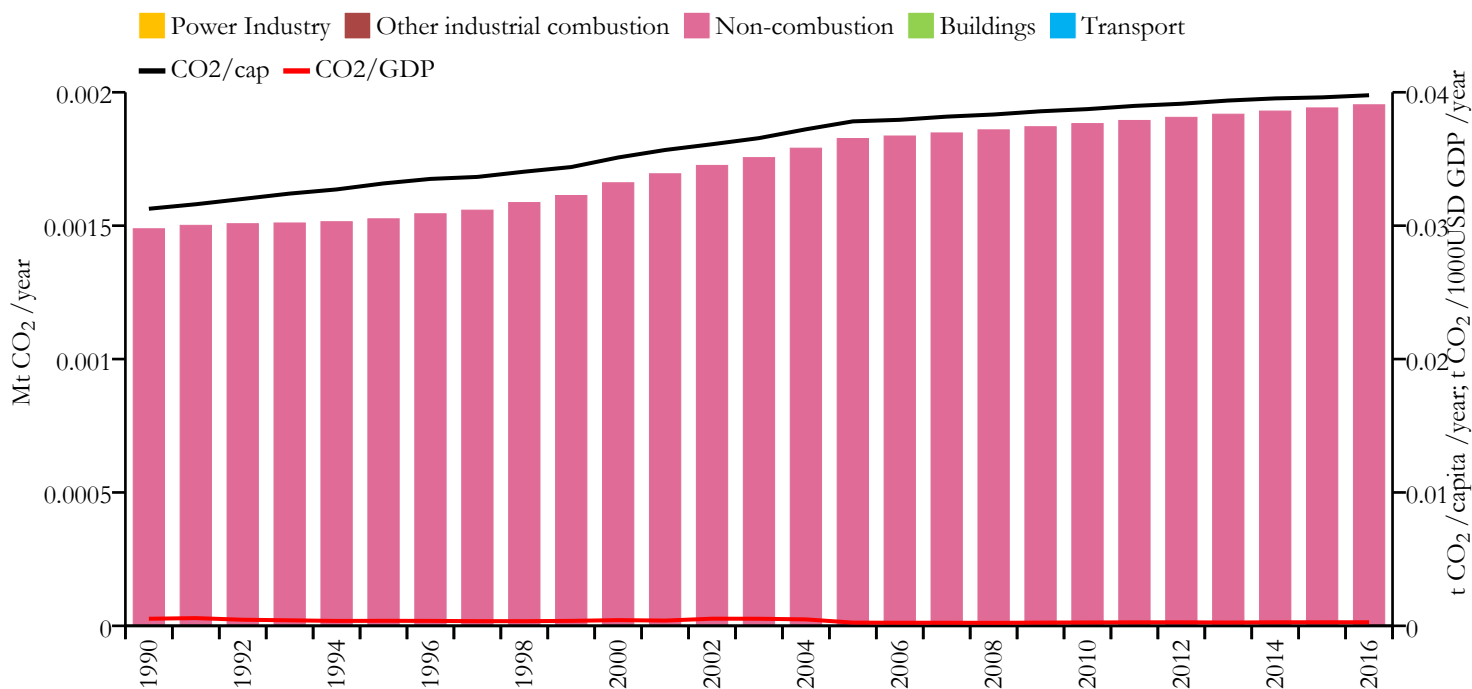


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





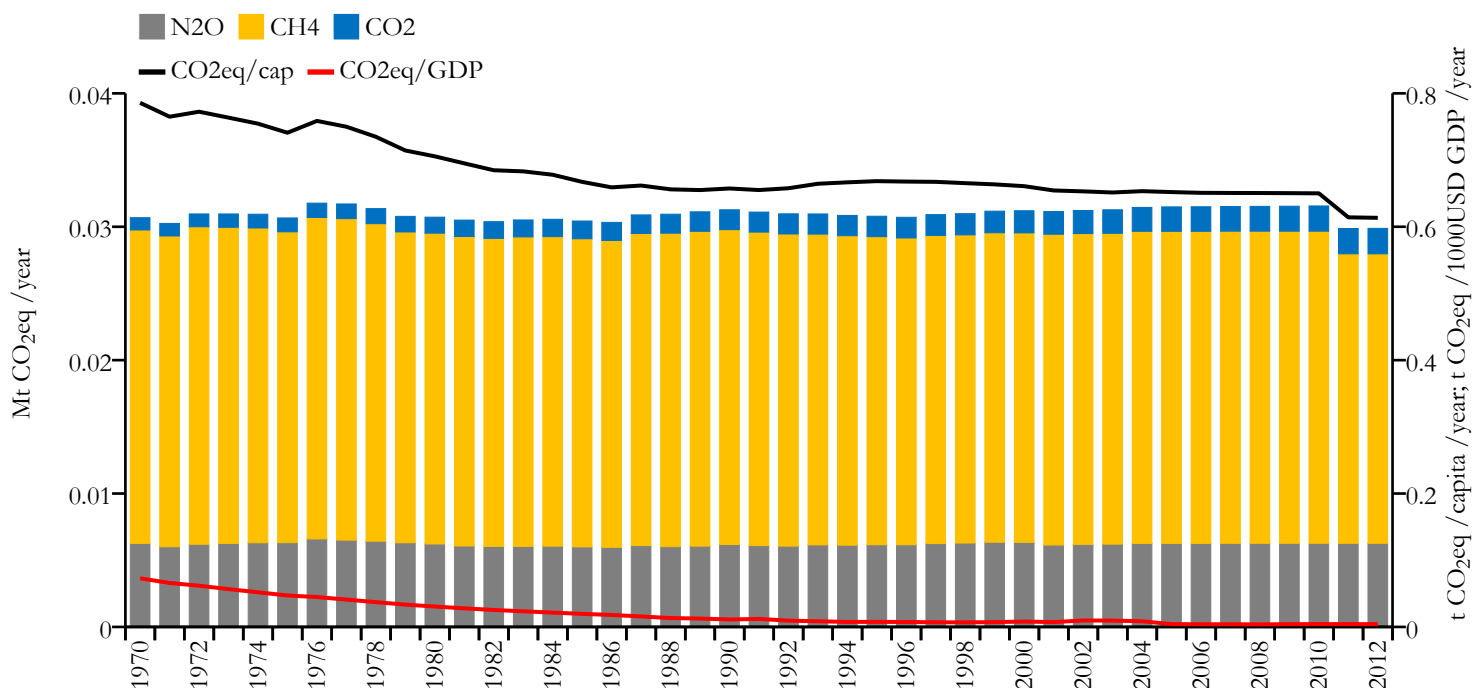
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	0.002	0.040	0.000	49117
1990	0.001	0.031	0.001	47594

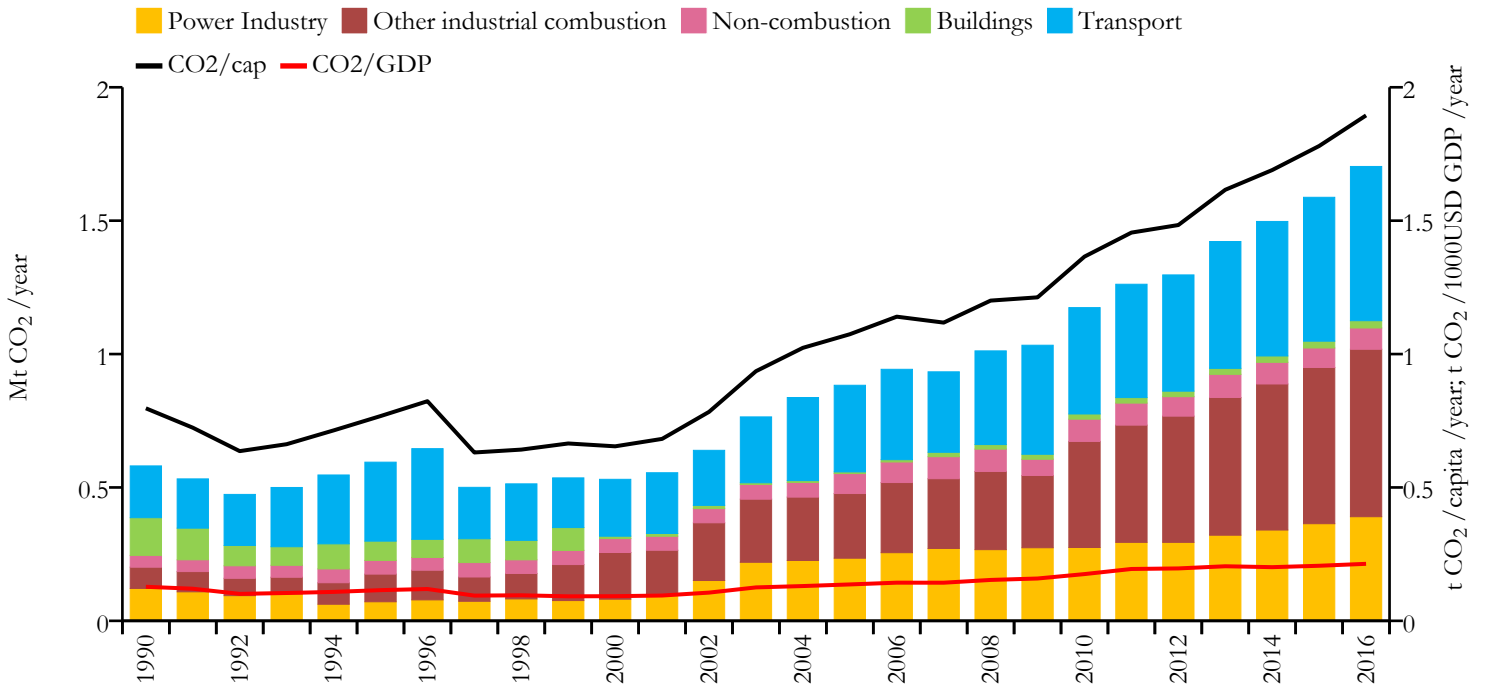


## Greenhouse gas emissions (EDGARv4.3.2 dataset)

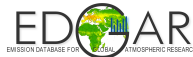




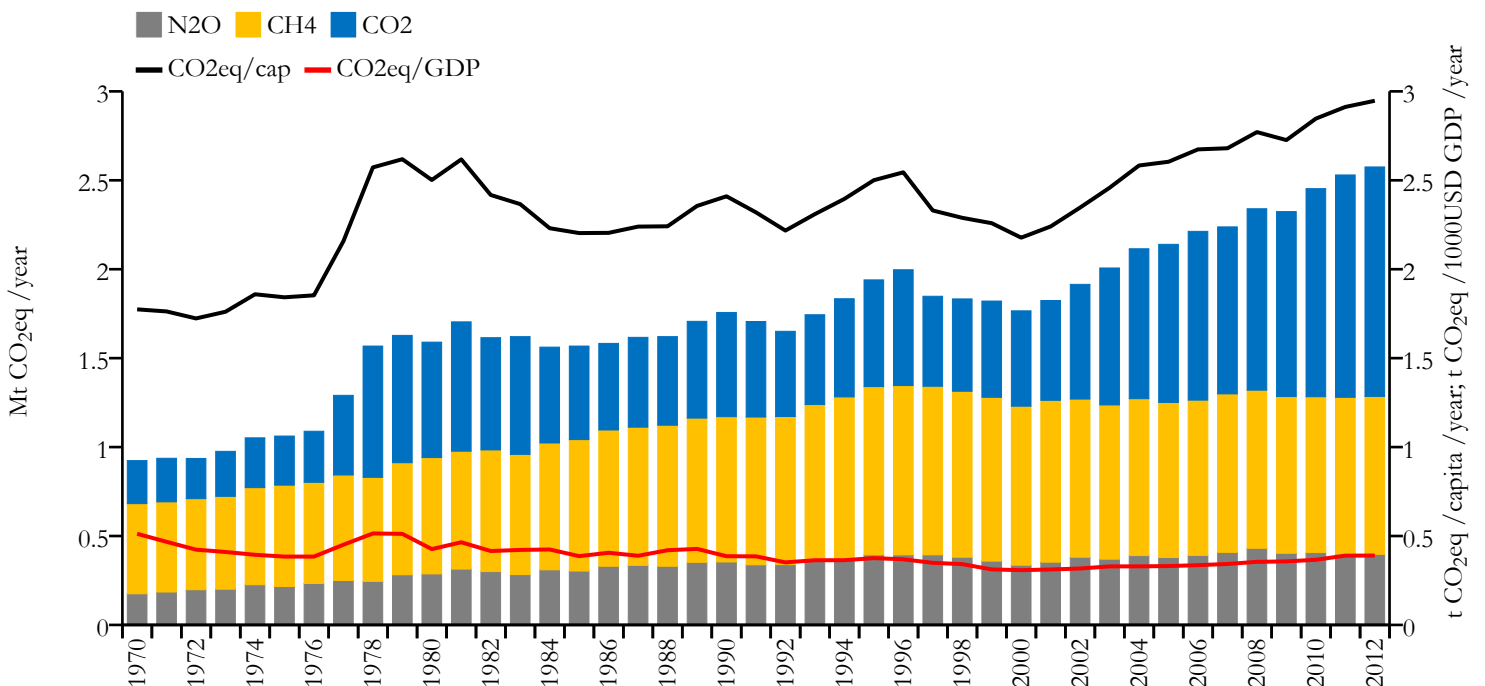
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



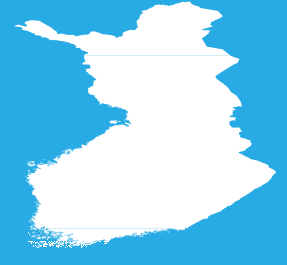
Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	1.703	1.895	0.214	898760
1990	0.581	0.797	0.128	728628



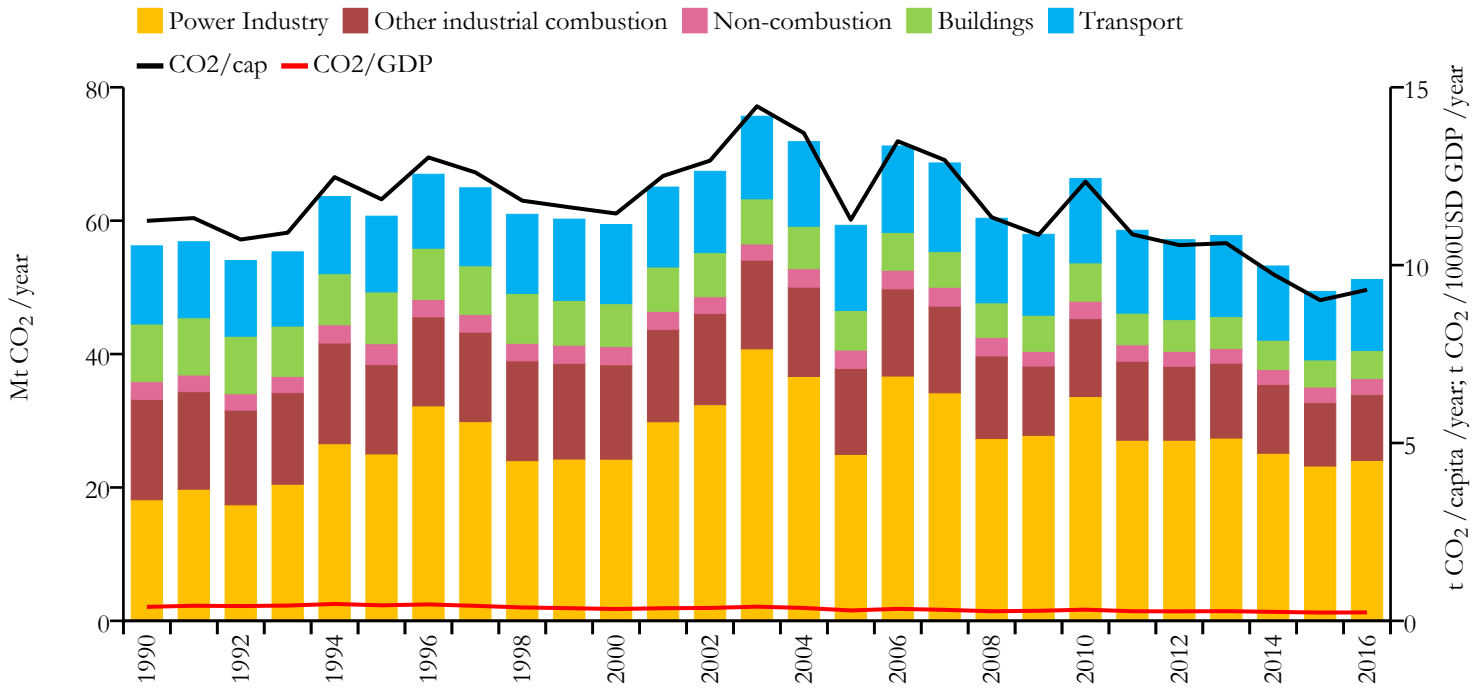
## Greenhouse gas emissions (EDGARv4.3.2 dataset)







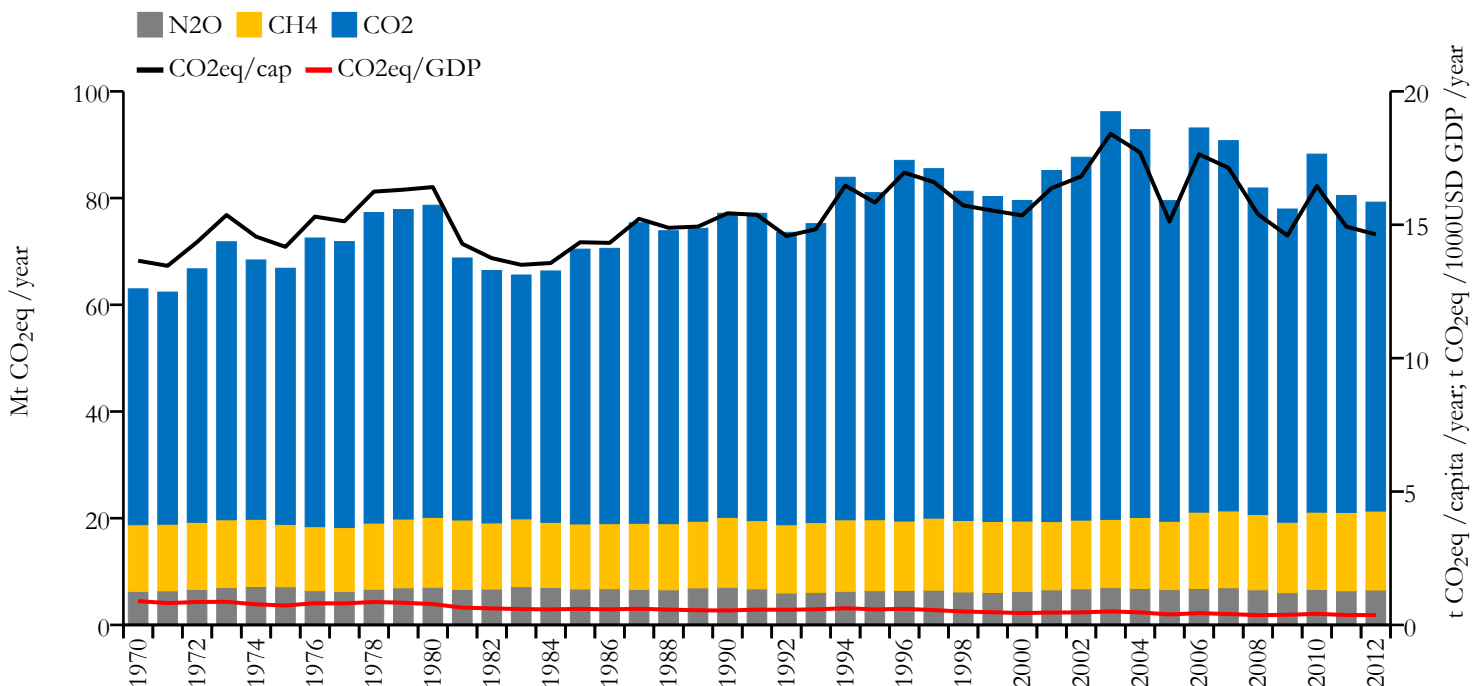
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	51.184	9.306	0.236	5503132
1990	56.225	11.245	0.393	4996222



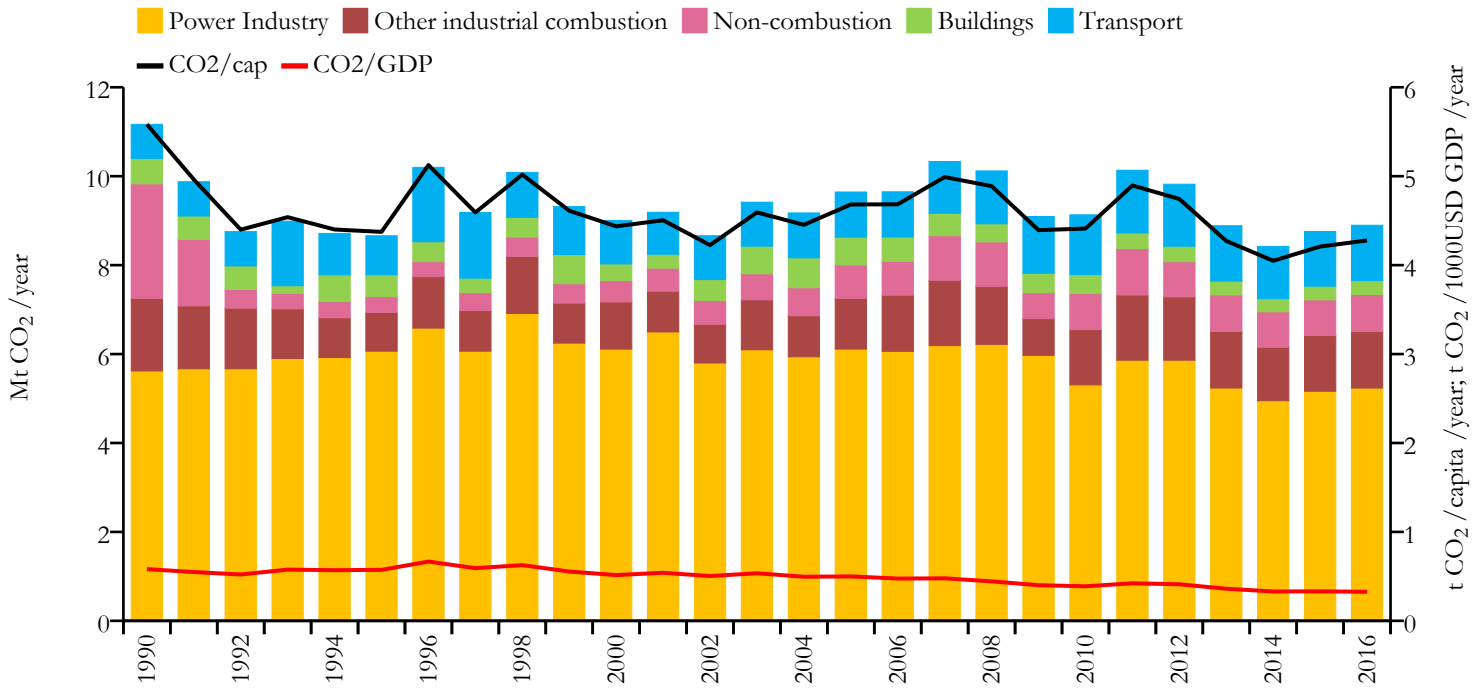
## Greenhouse gas emissions (EDGARv4.3.2 dataset)



# former Yugoslav Republic of Macedonia, the



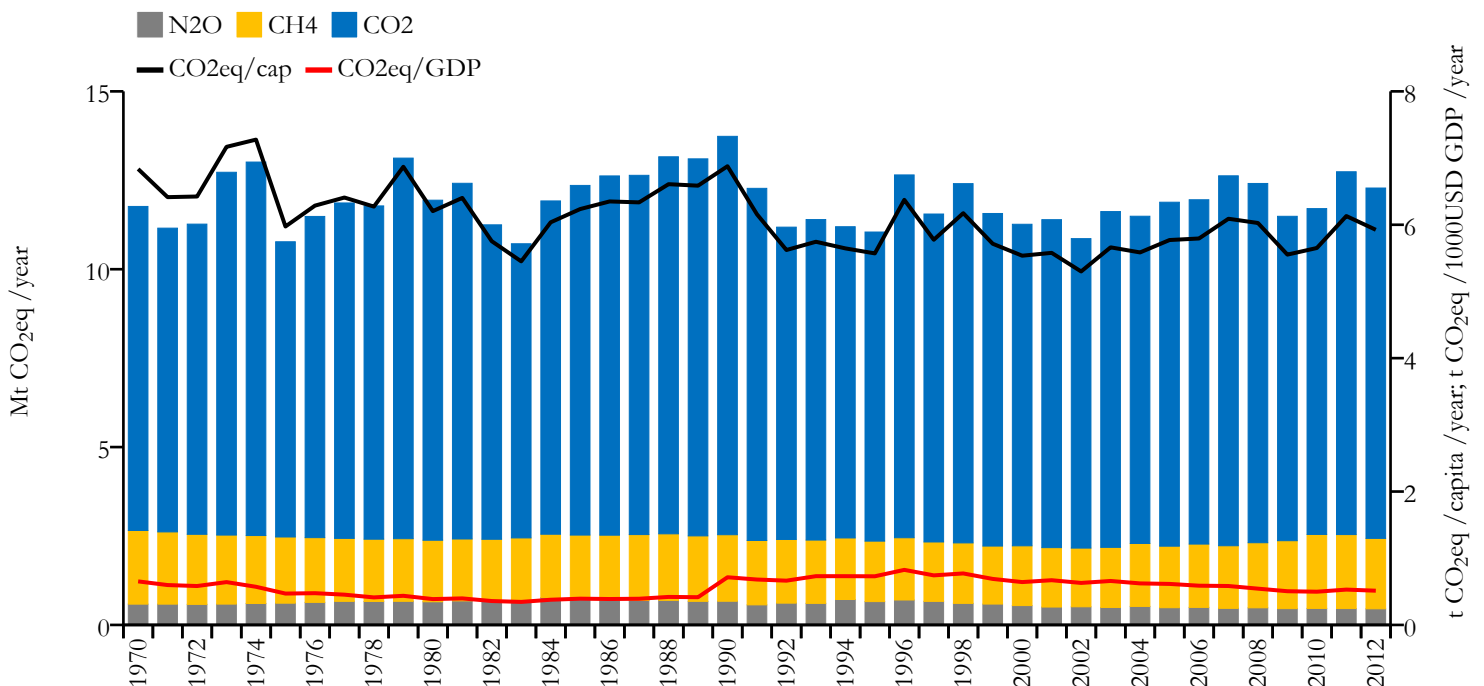
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



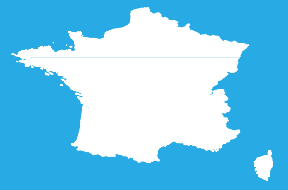
Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	8.897	4.277	0.327	2081206
1990	11.167	5.583	0.582	1996228



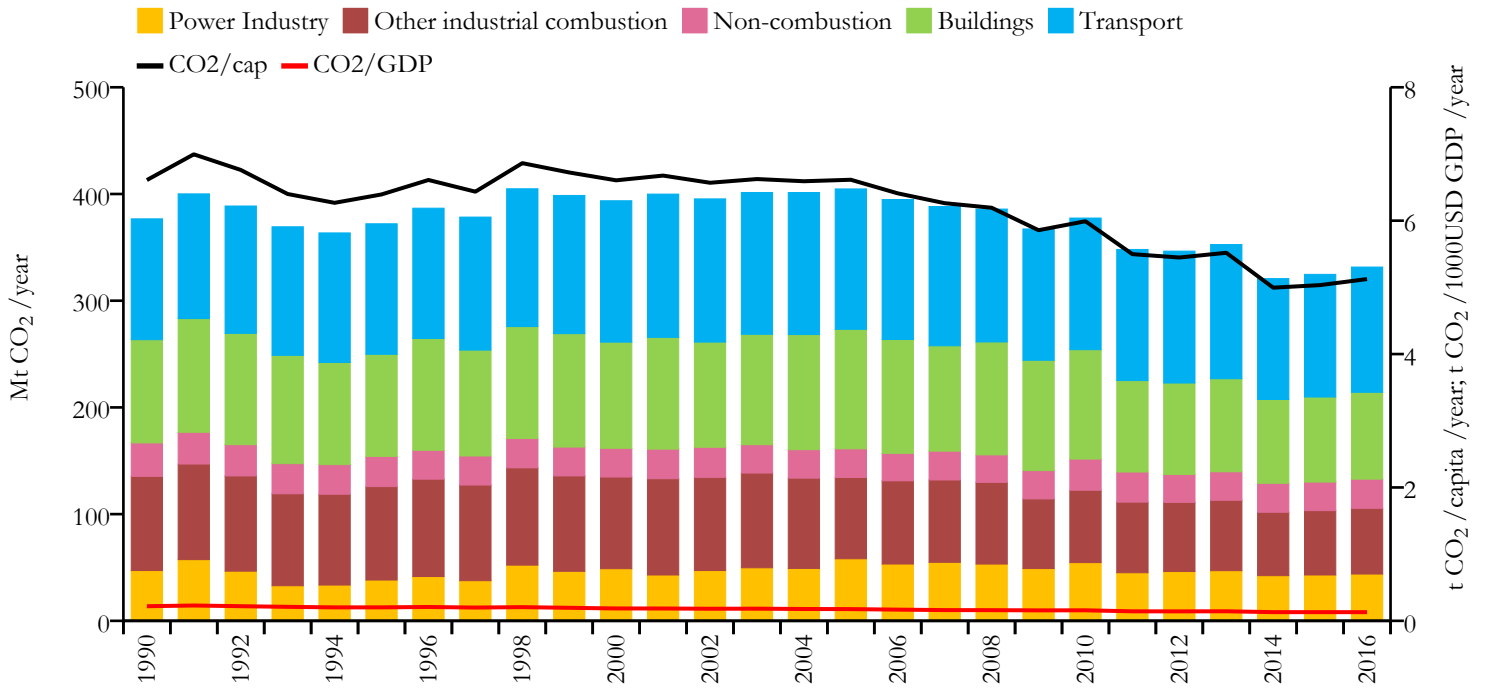
## Greenhouse gas emissions (EDGARv4.3.2 dataset)



# France and Monaco



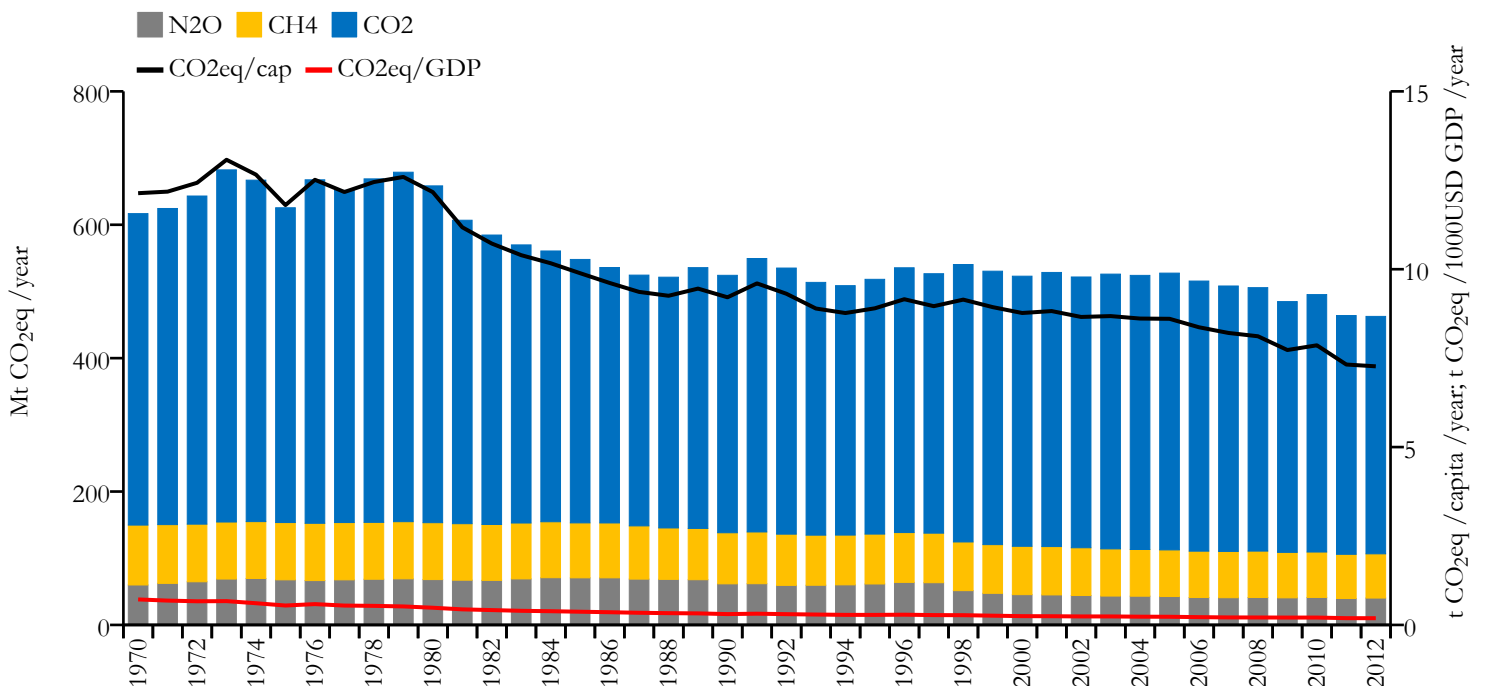
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	331.533	5.124	0.130	64720690
1990	376.700	6.609	0.219	56960835

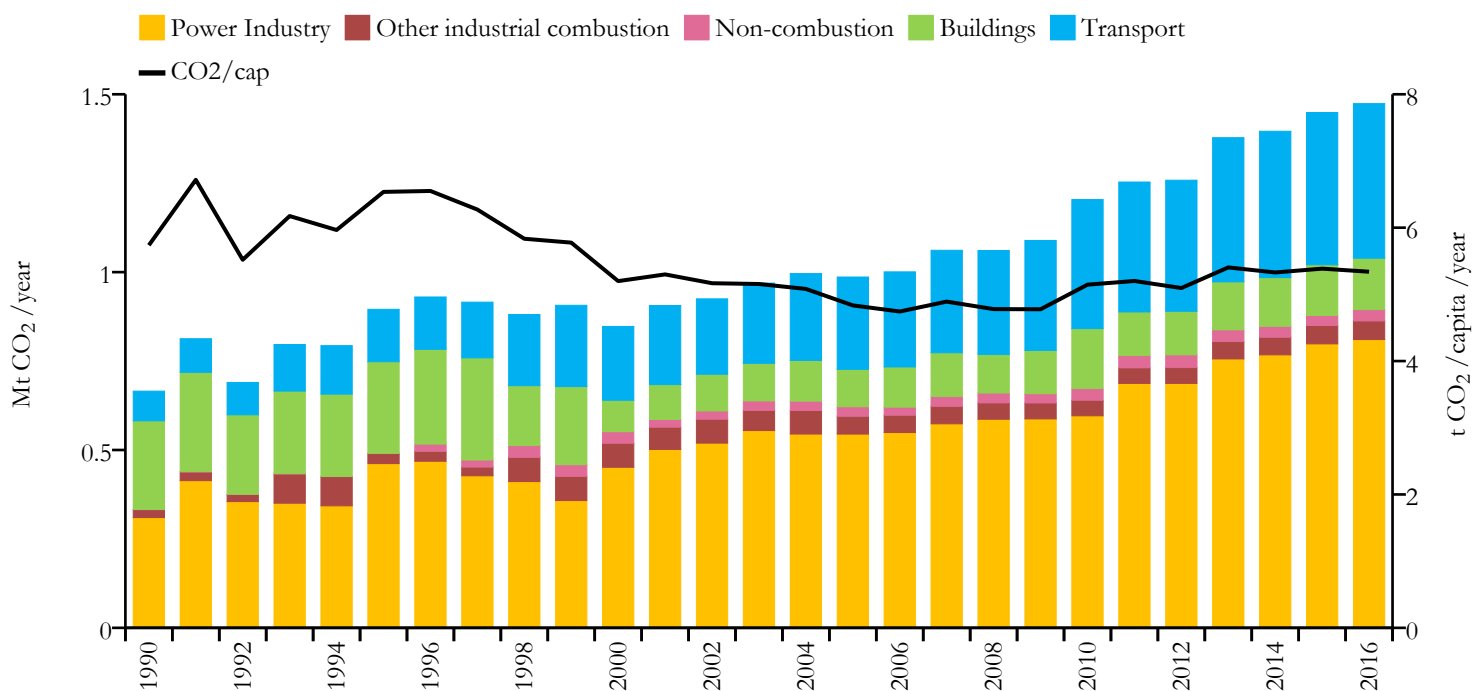


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





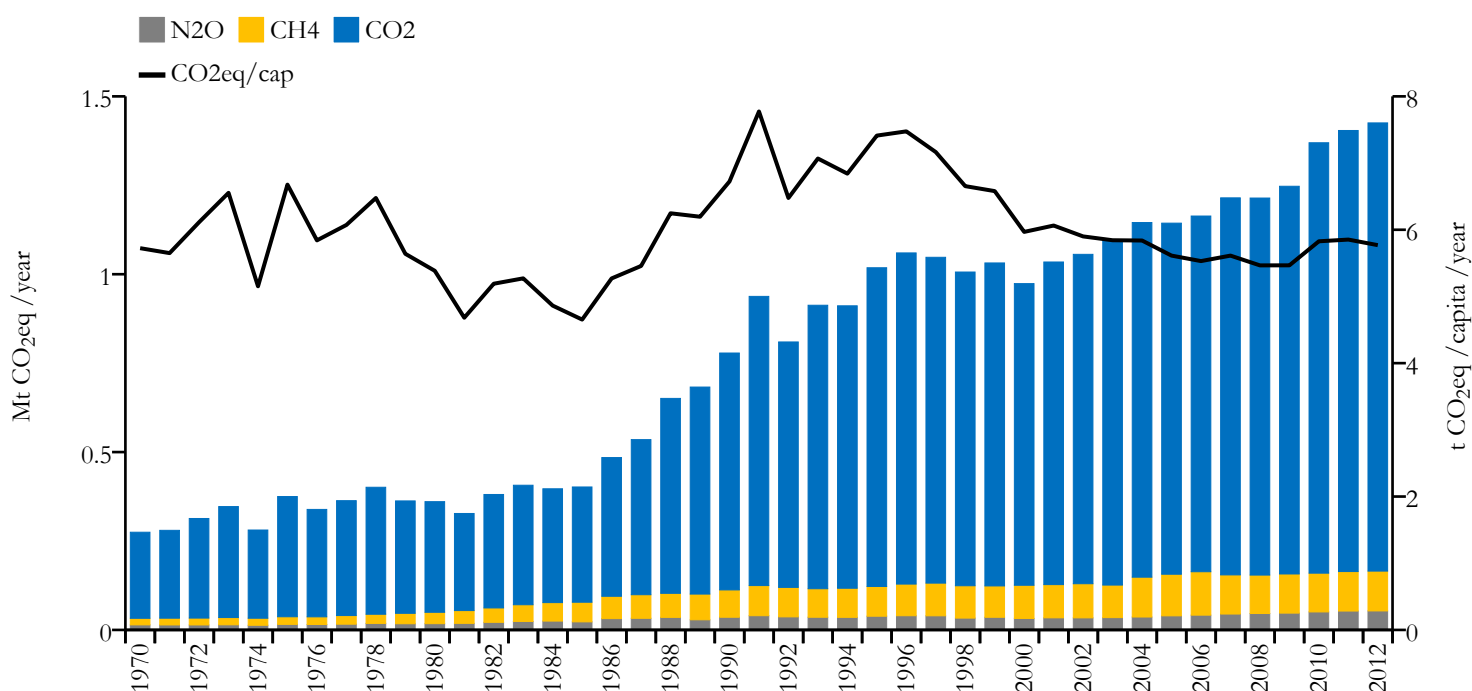
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	1.474	5.340	n/a	275713
1990	0.665	5.737	n/a	115784



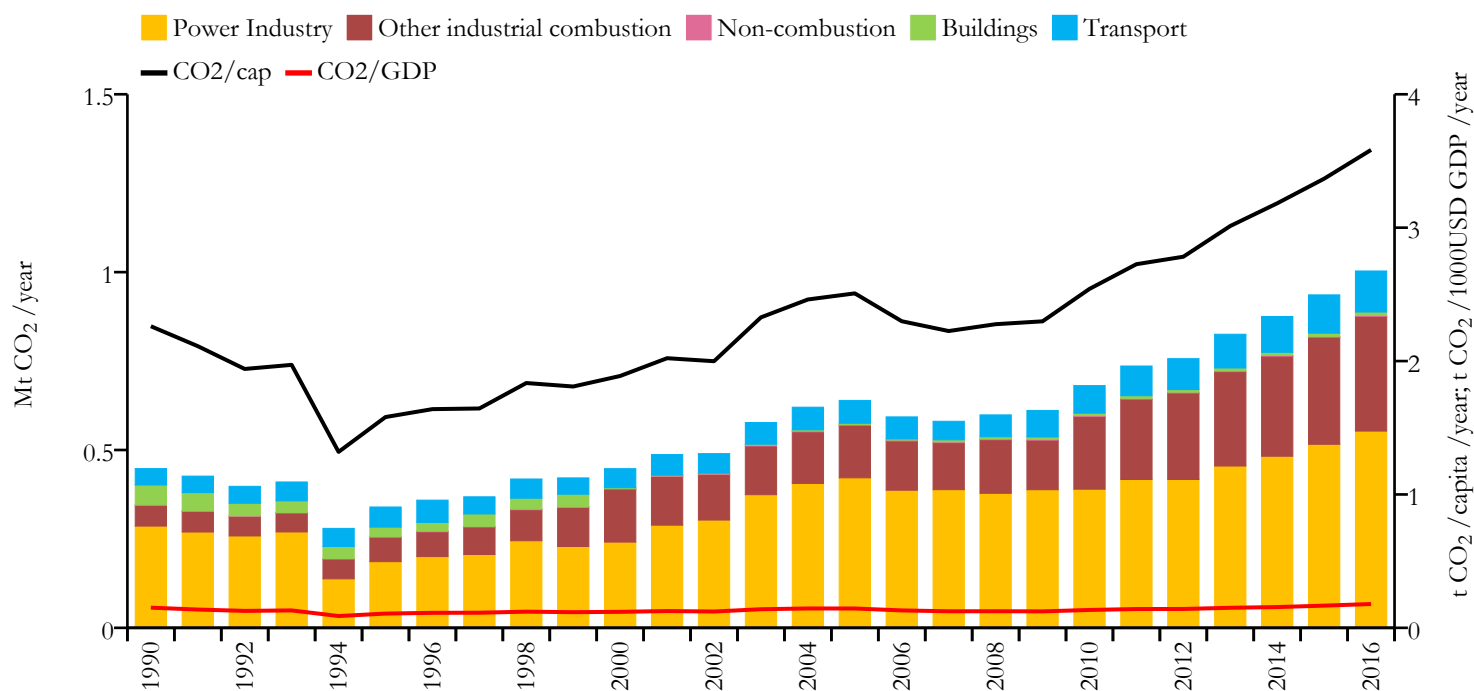
## Greenhouse gas emissions (EDGARv4.3.2 dataset)



# French Polynesia



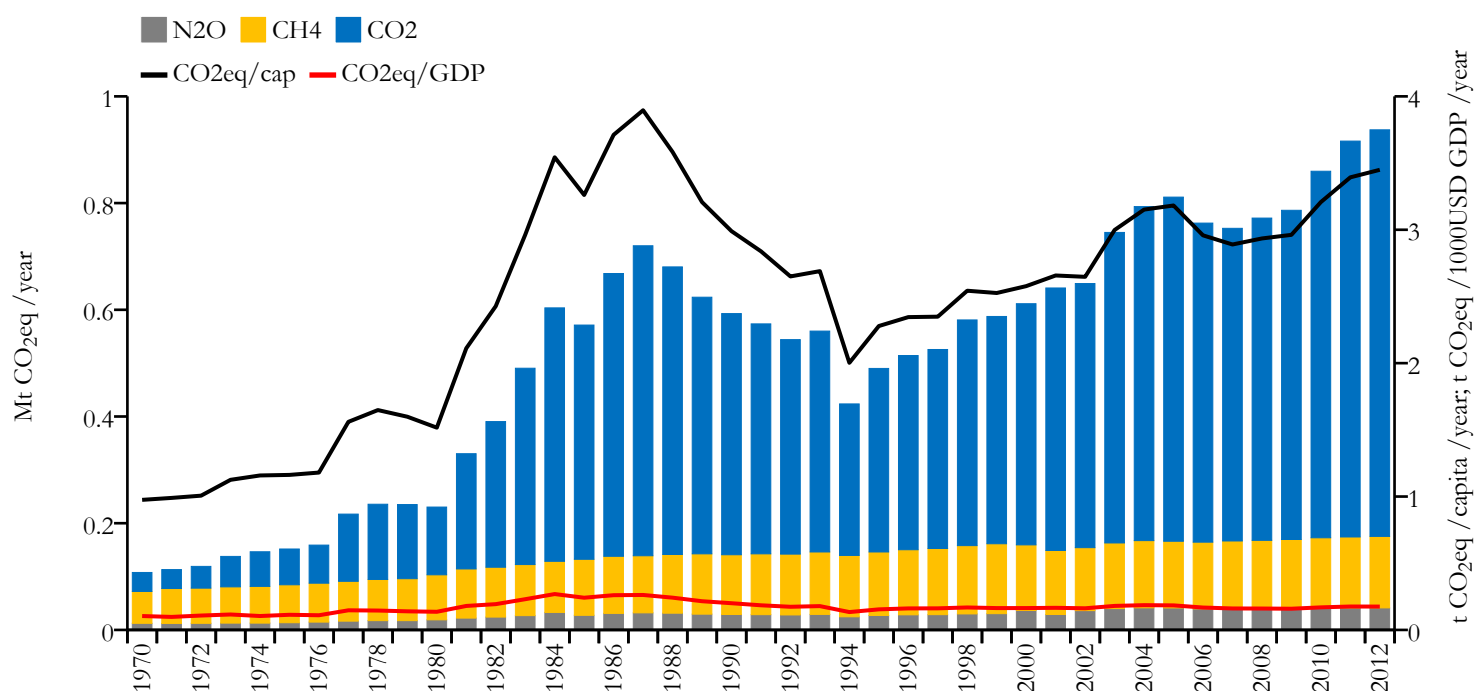
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	1.003	3.583	0.179	280208
1990	0.448	2.261	0.151	198375

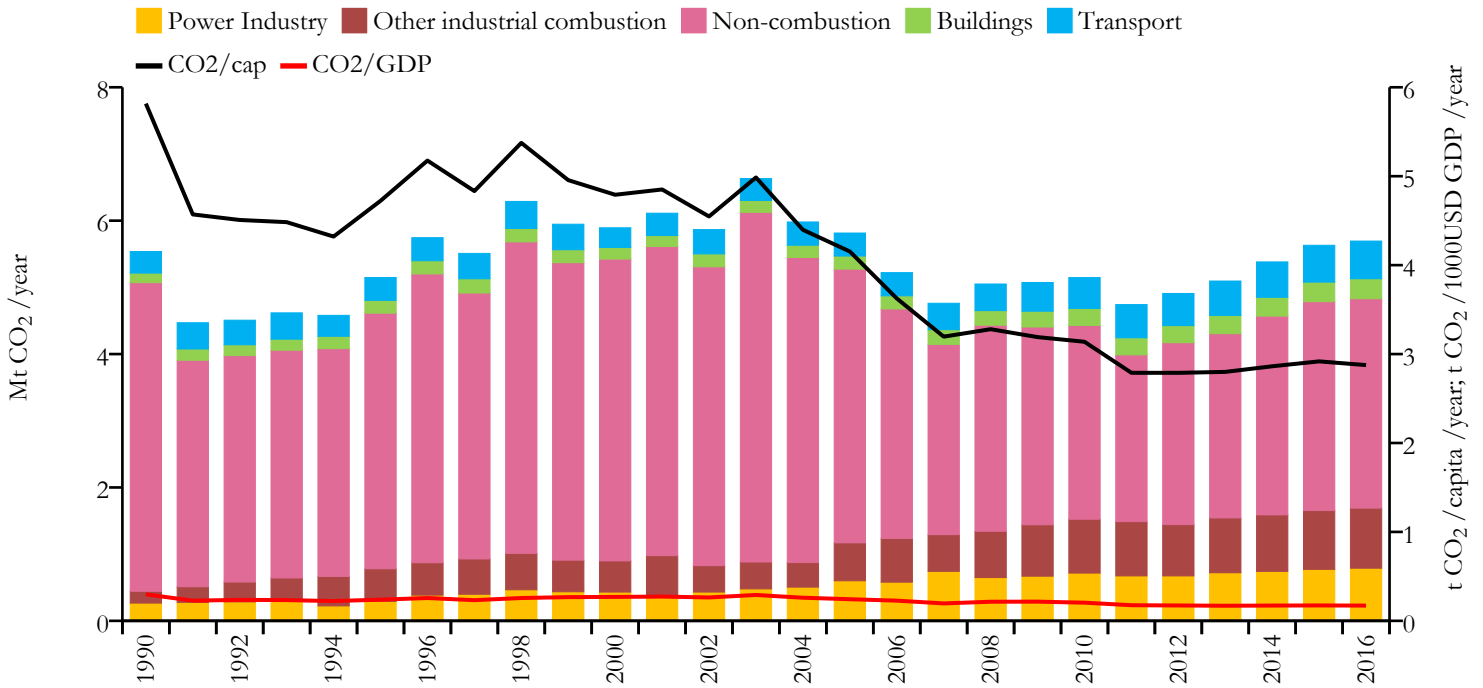


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





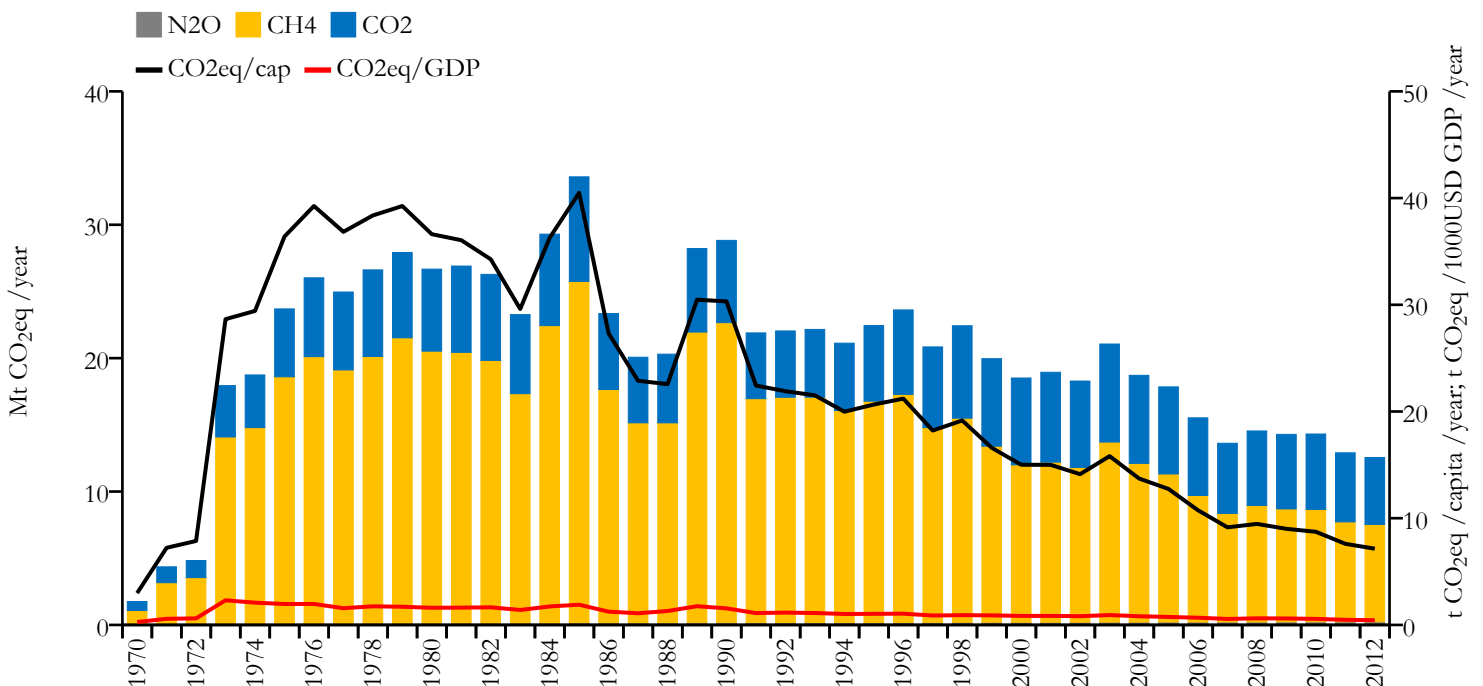
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	5.694	2.876	0.172	1979786
1990	5.537	5.816	0.298	952212

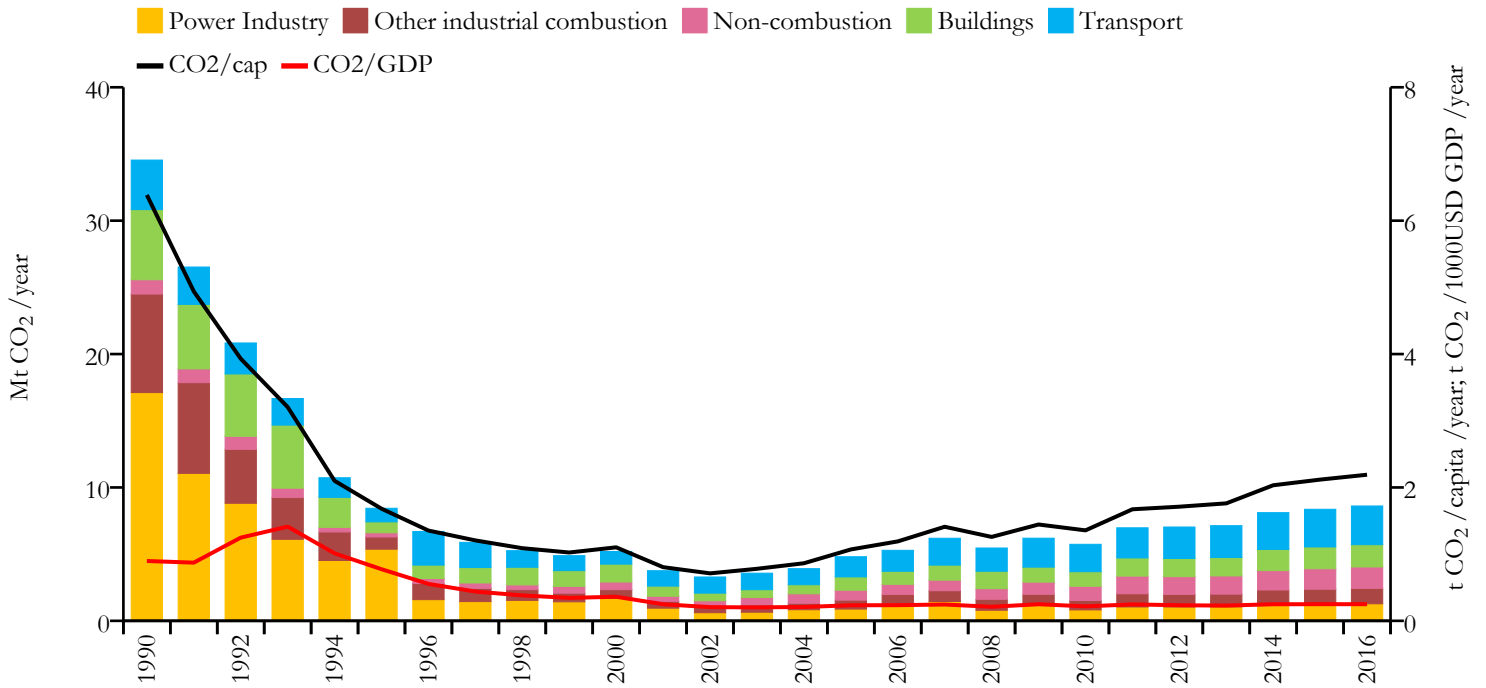


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





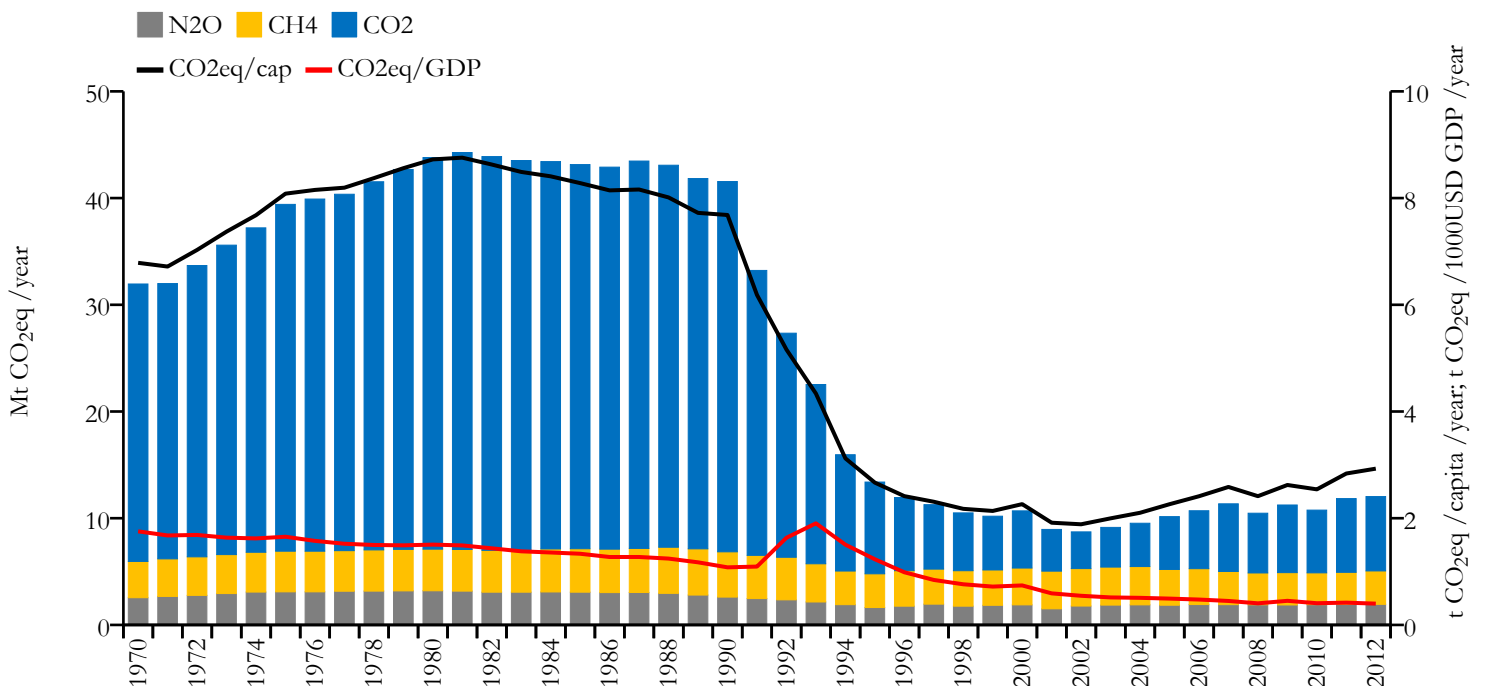
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	8.610	2.191	0.250	3925405
1990	34.543	6.385	0.897	5410372

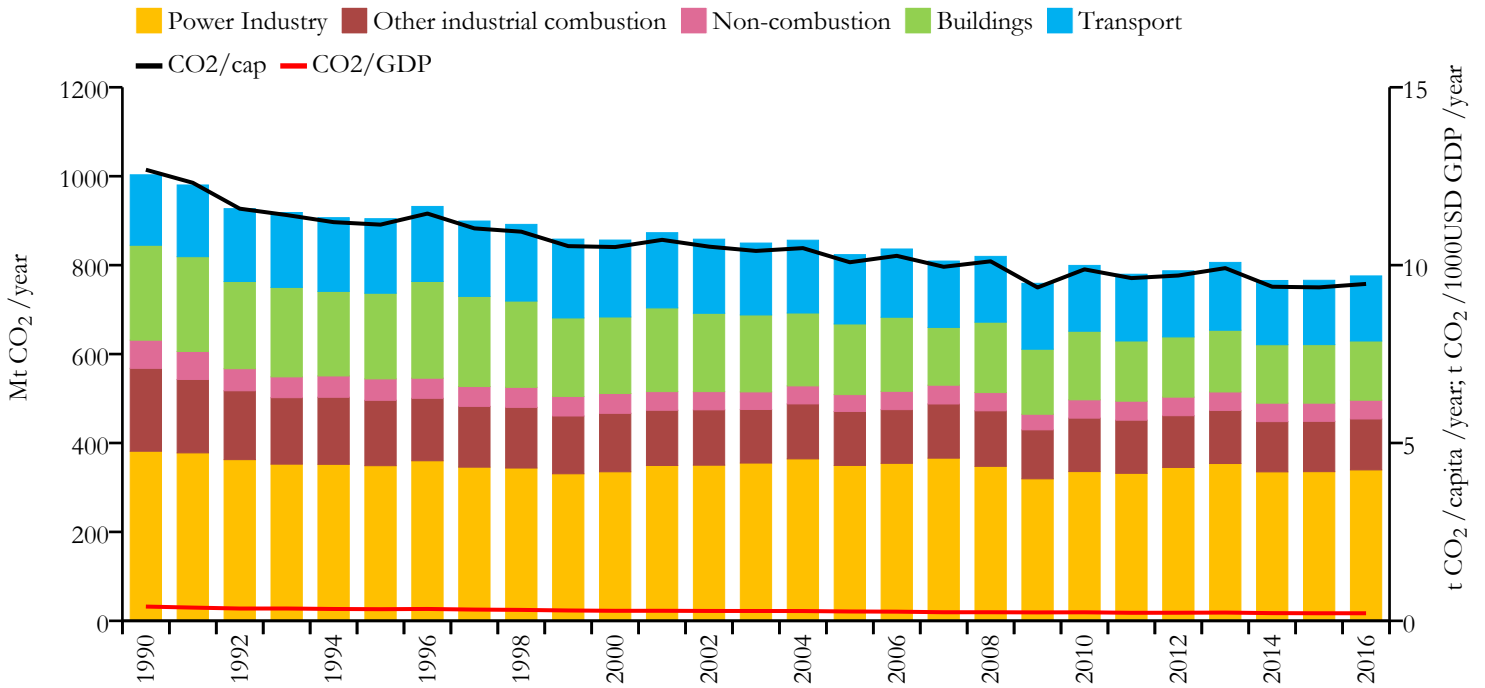


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





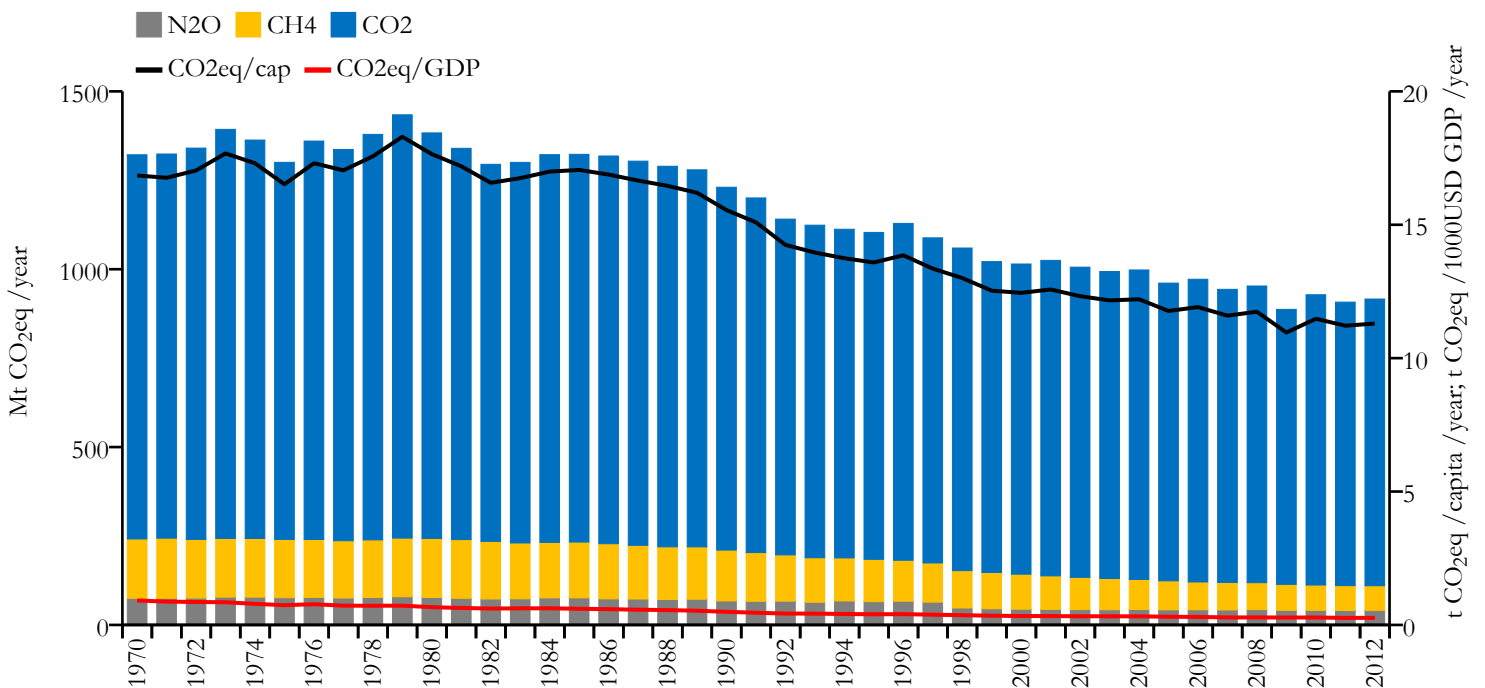
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	775.752	9.472	0.213	81914672
1990	1003.149	12.682	0.401	79118326



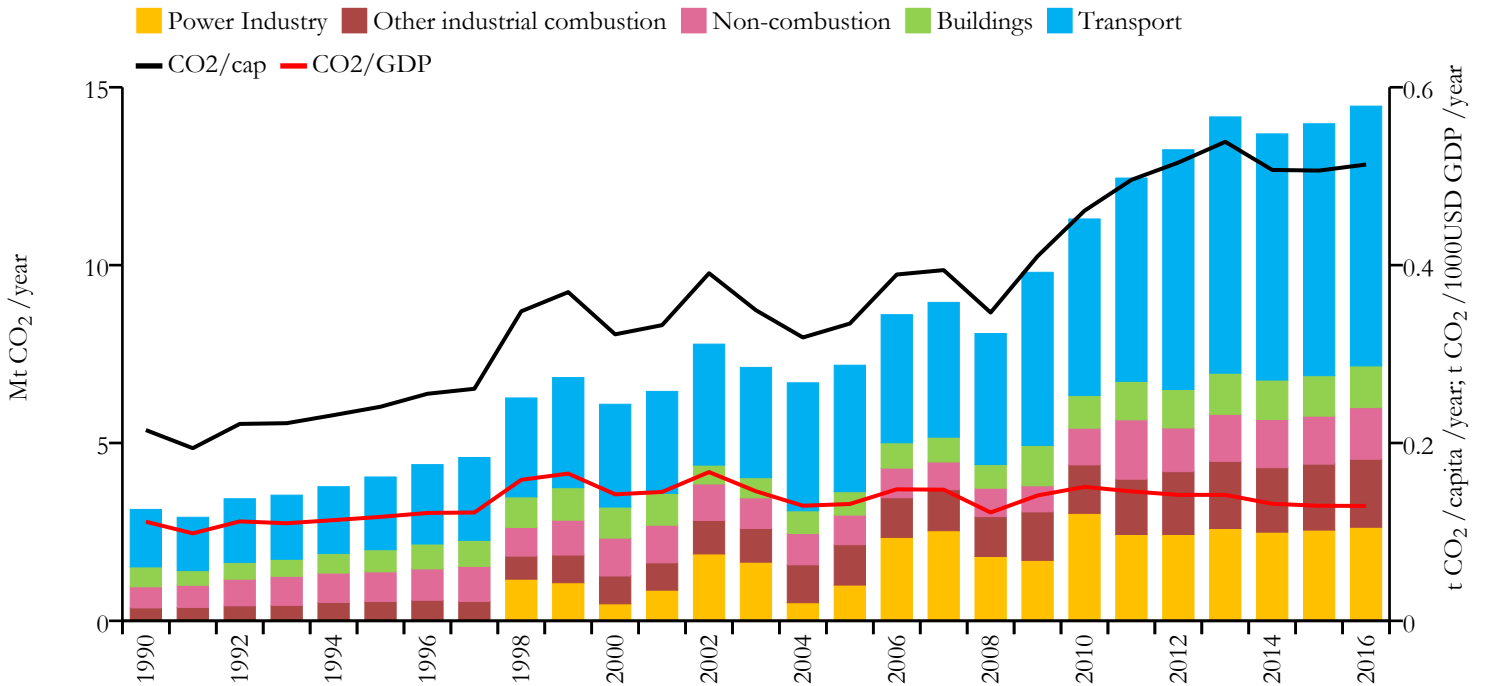
## Greenhouse gas emissions (EDGARv4.3.2 dataset)







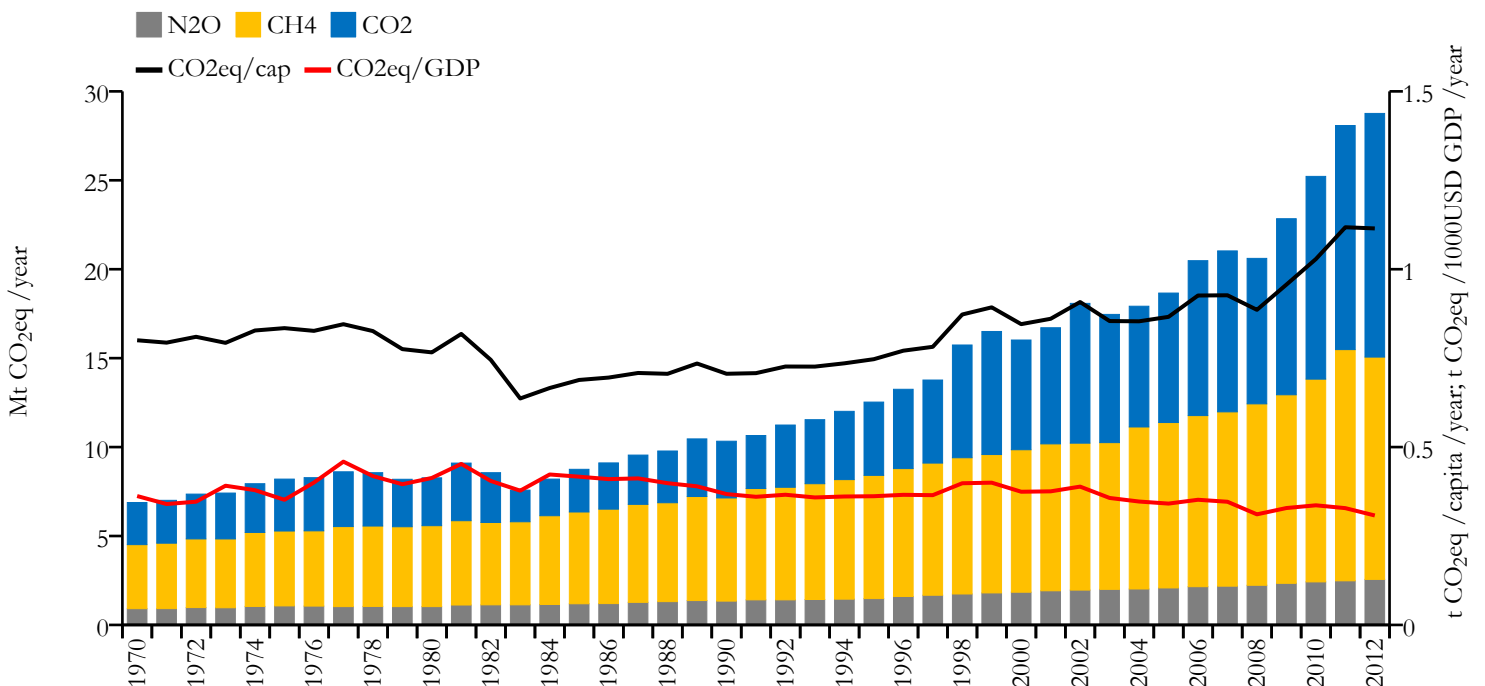
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	14.470	0.513	0.129	28206728
1990	3.132	0.215	0.111	14628260

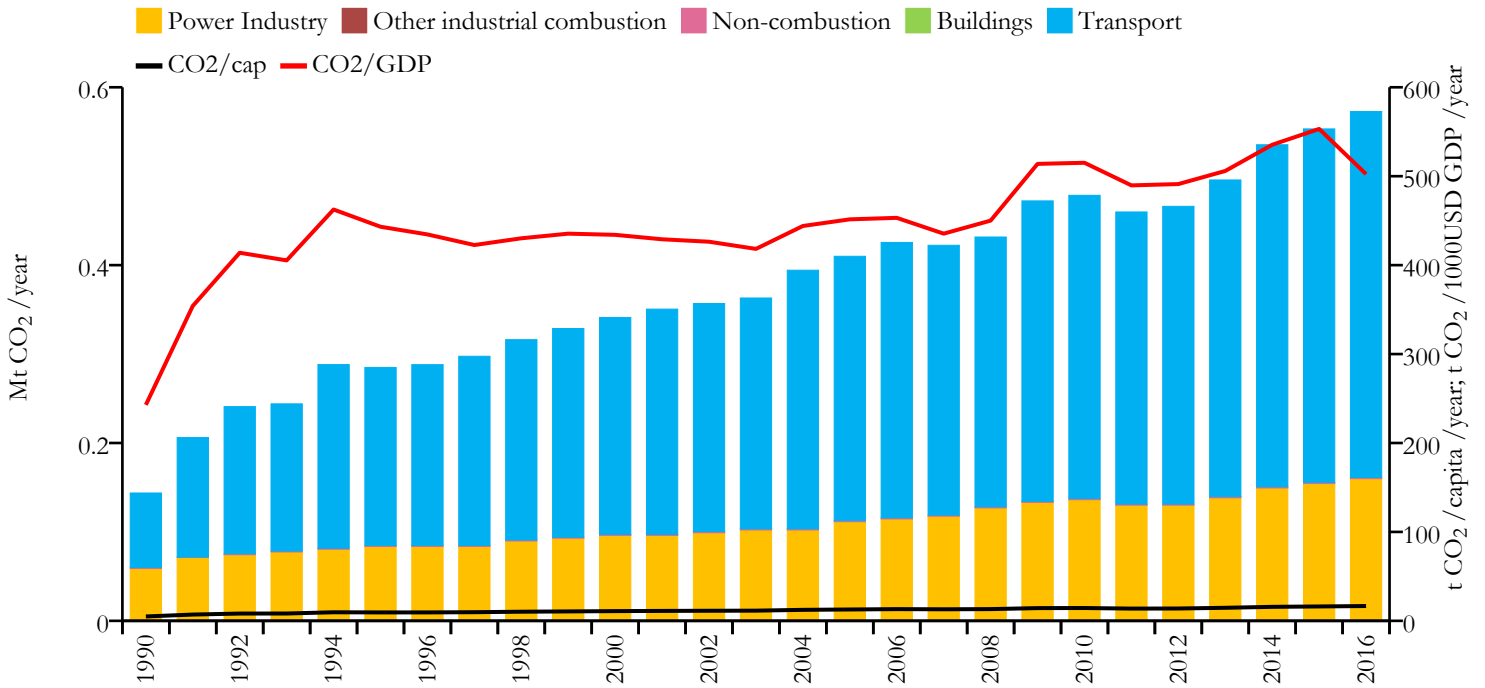


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





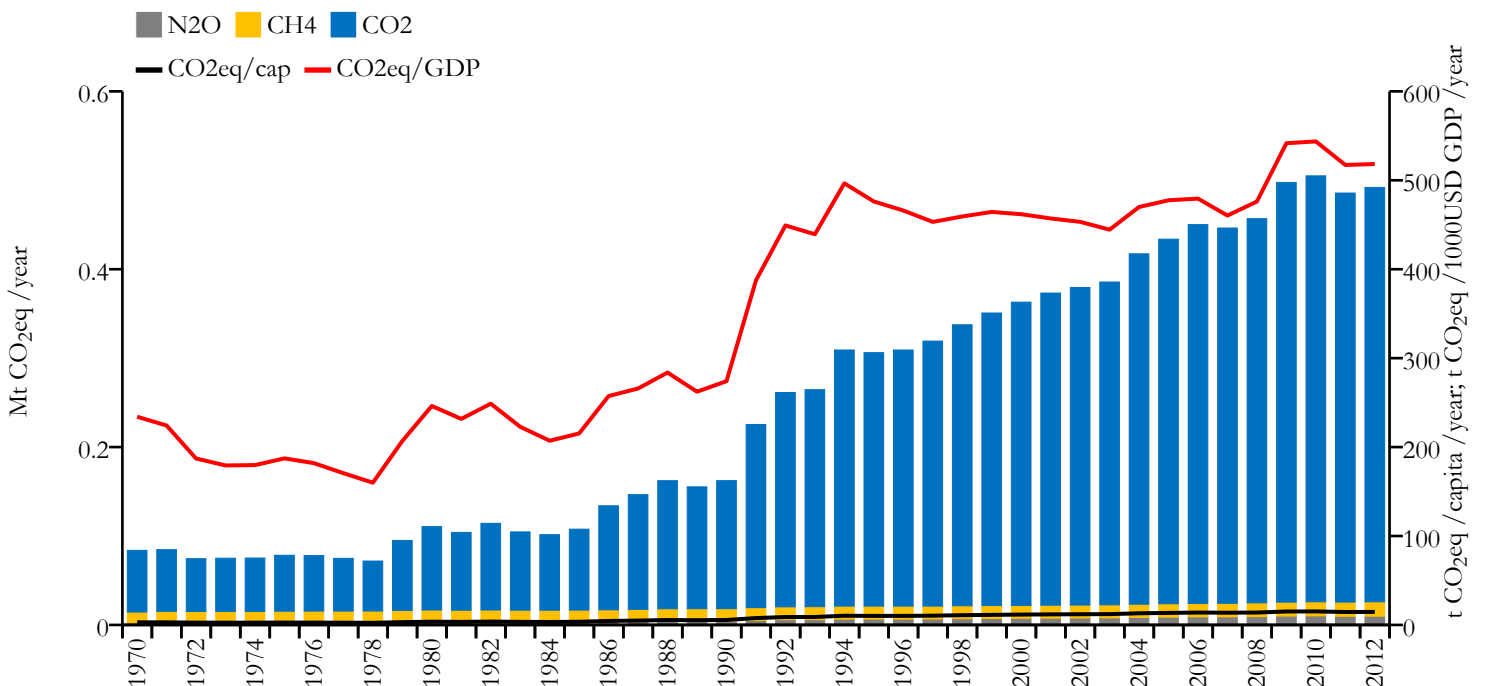
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	0.573	16.648	502.376	34408
1990	0.144	4.924	242.866	29164

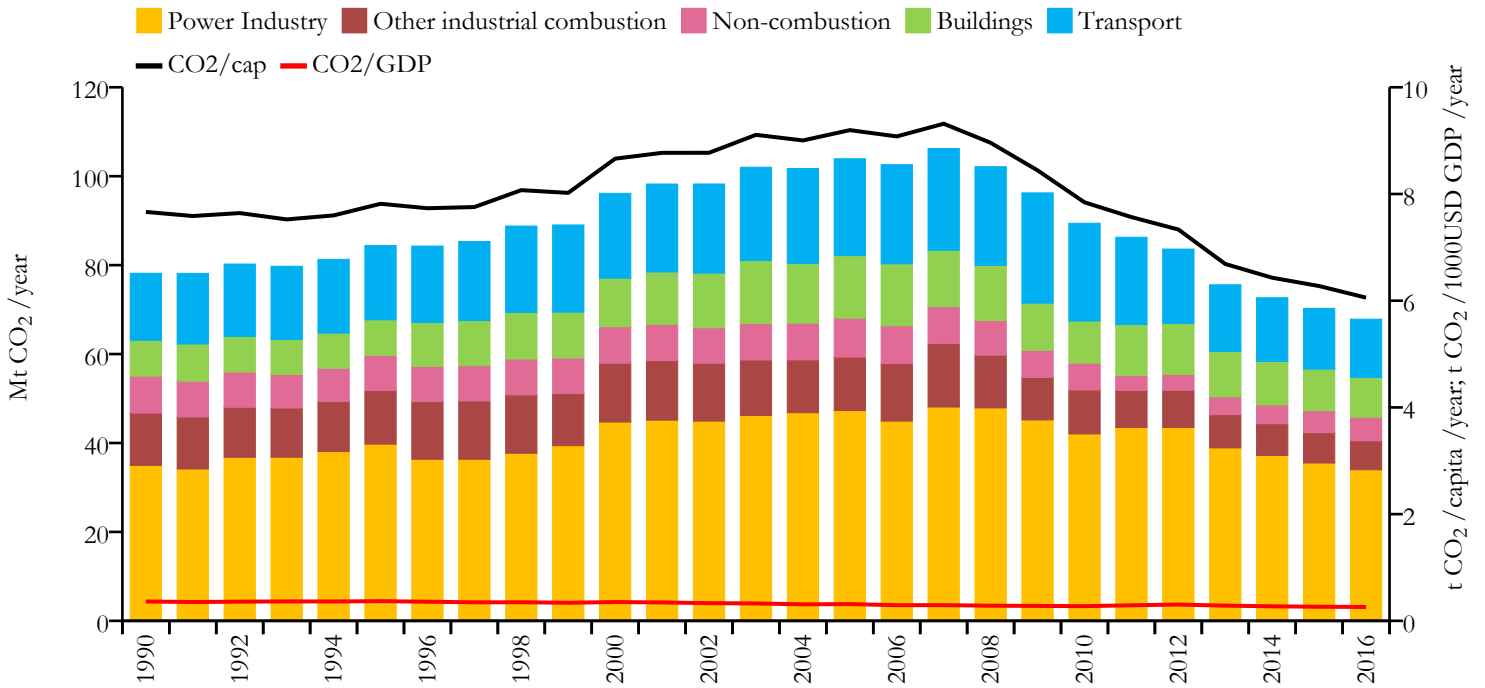


## Greenhouse gas emissions (EDGARv4.3.2 dataset)

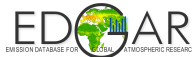




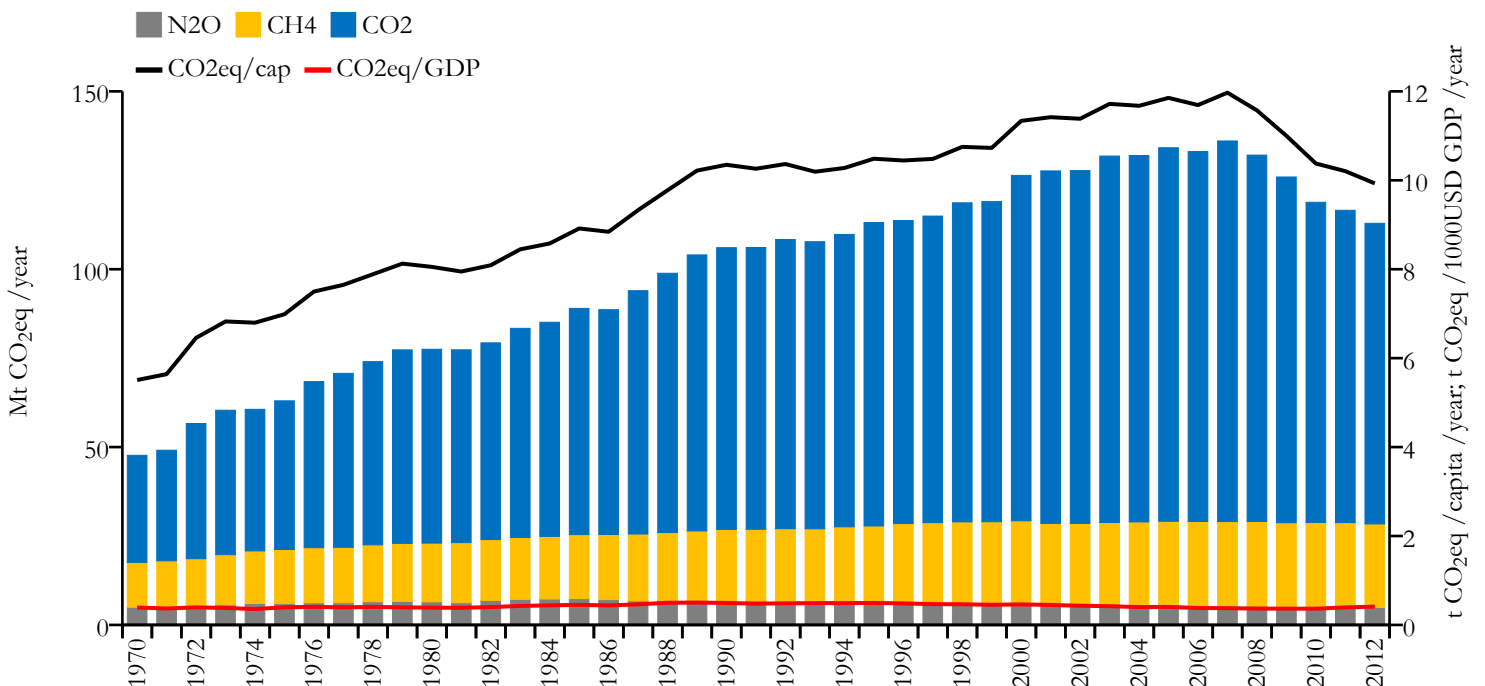
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	67.841	6.057	0.260	11183716
1990	78.171	7.664	0.364	10248537

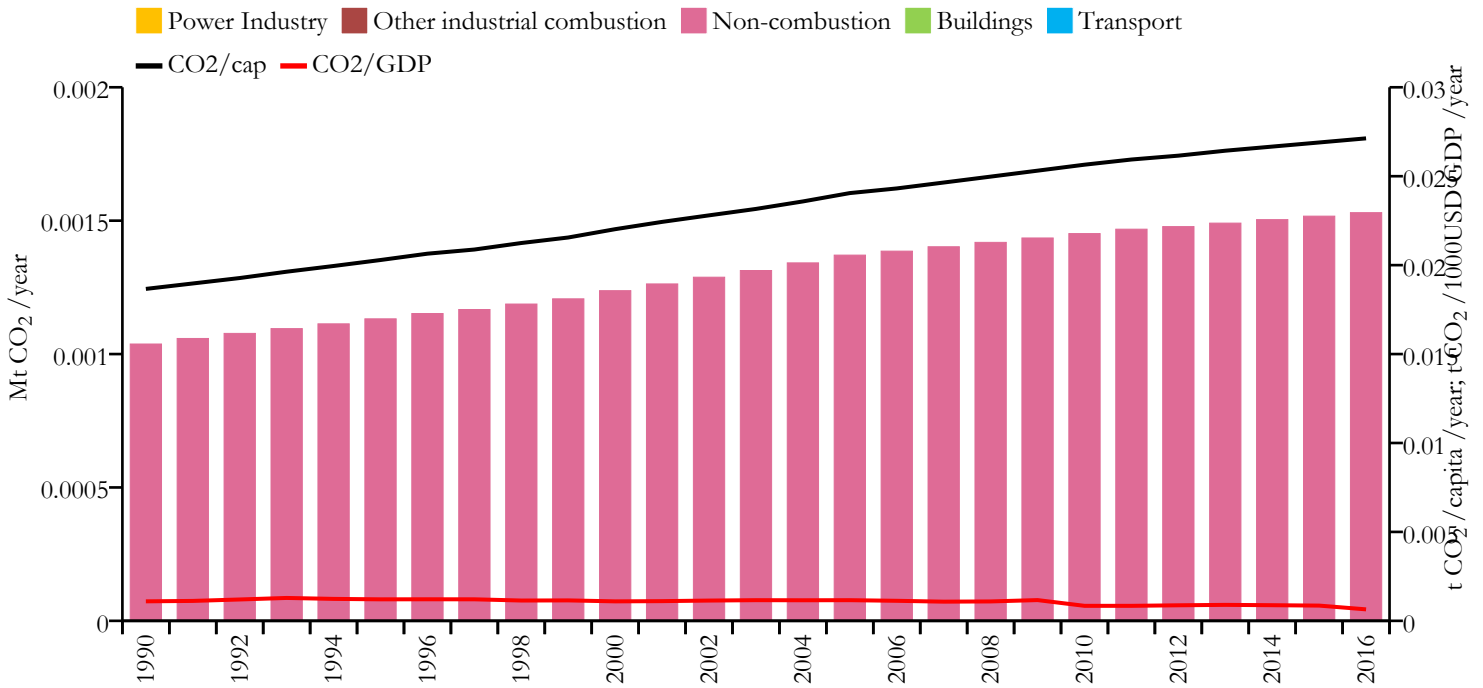


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





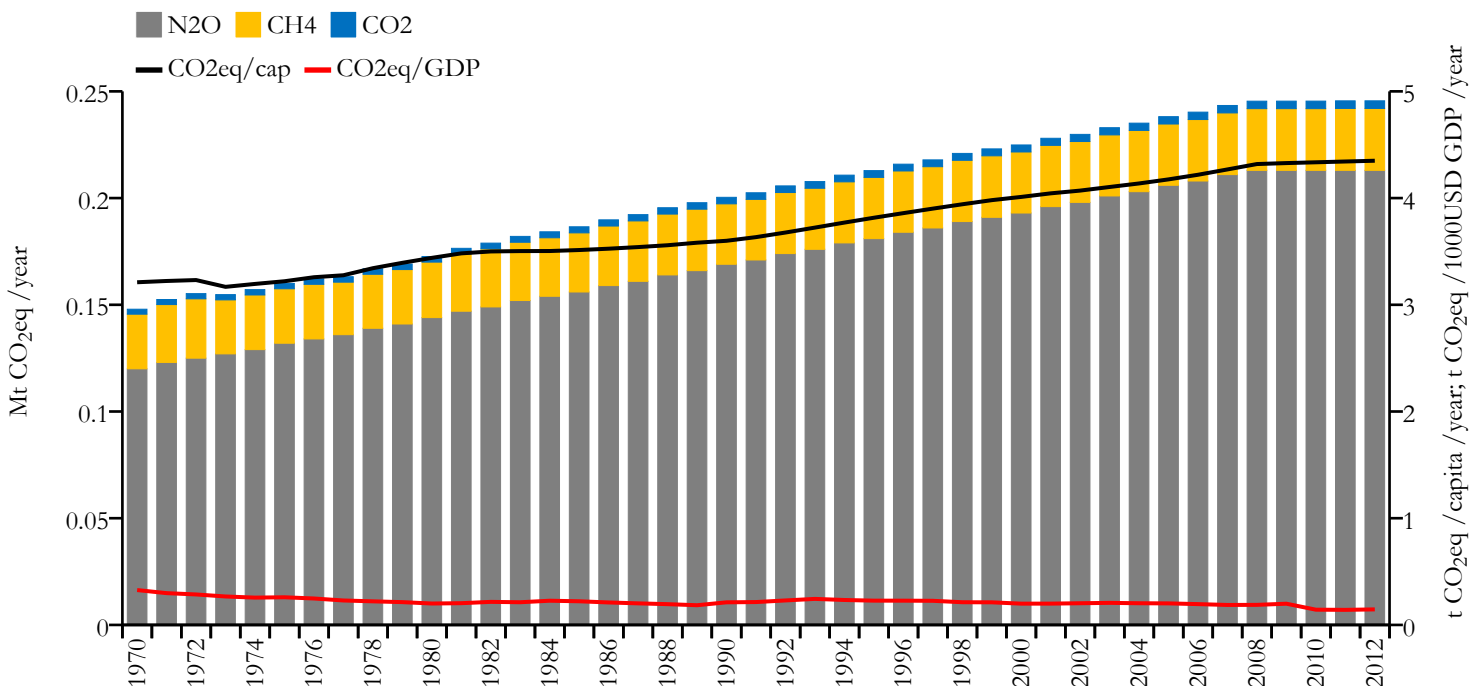
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)

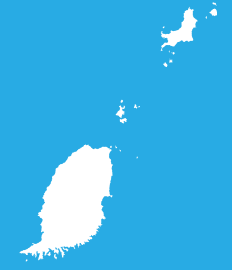


Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	0.002	0.027	0.001	56412
1990	0.001	0.019	0.001	55604

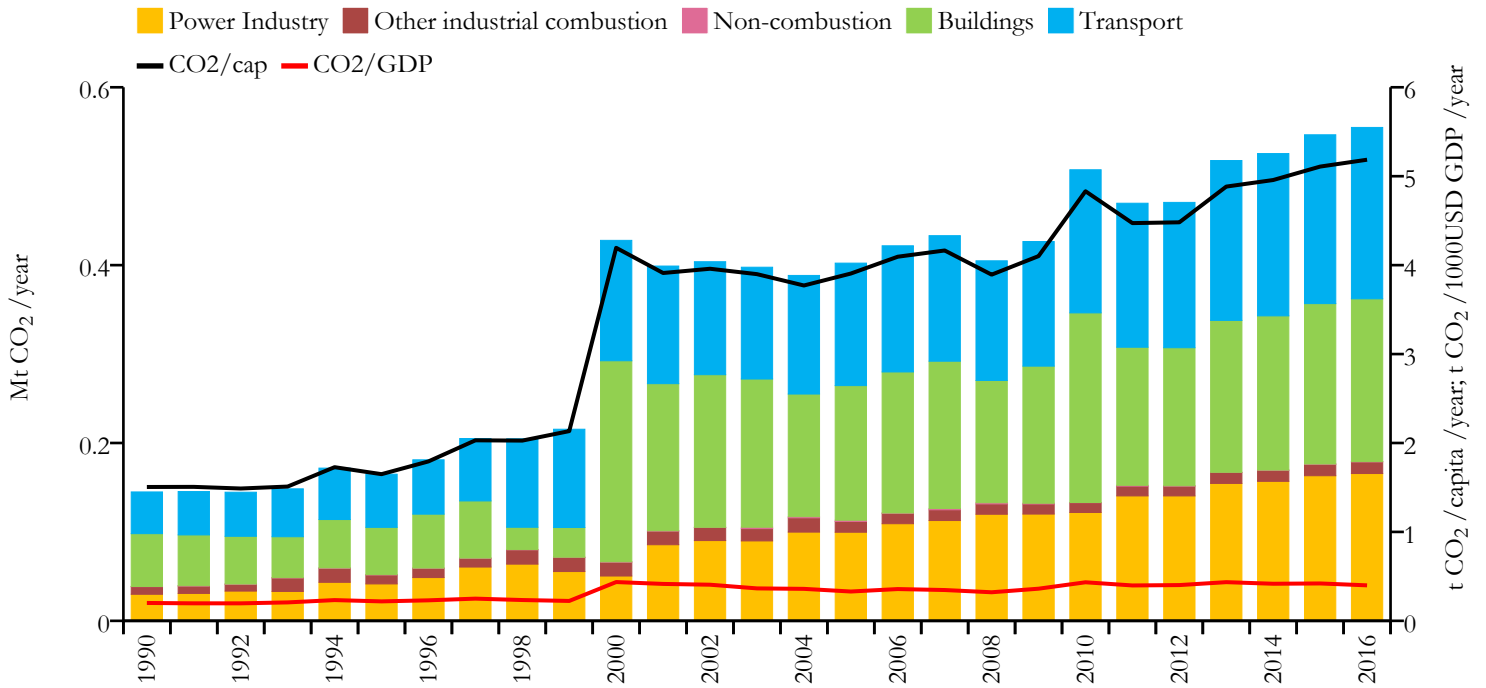


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





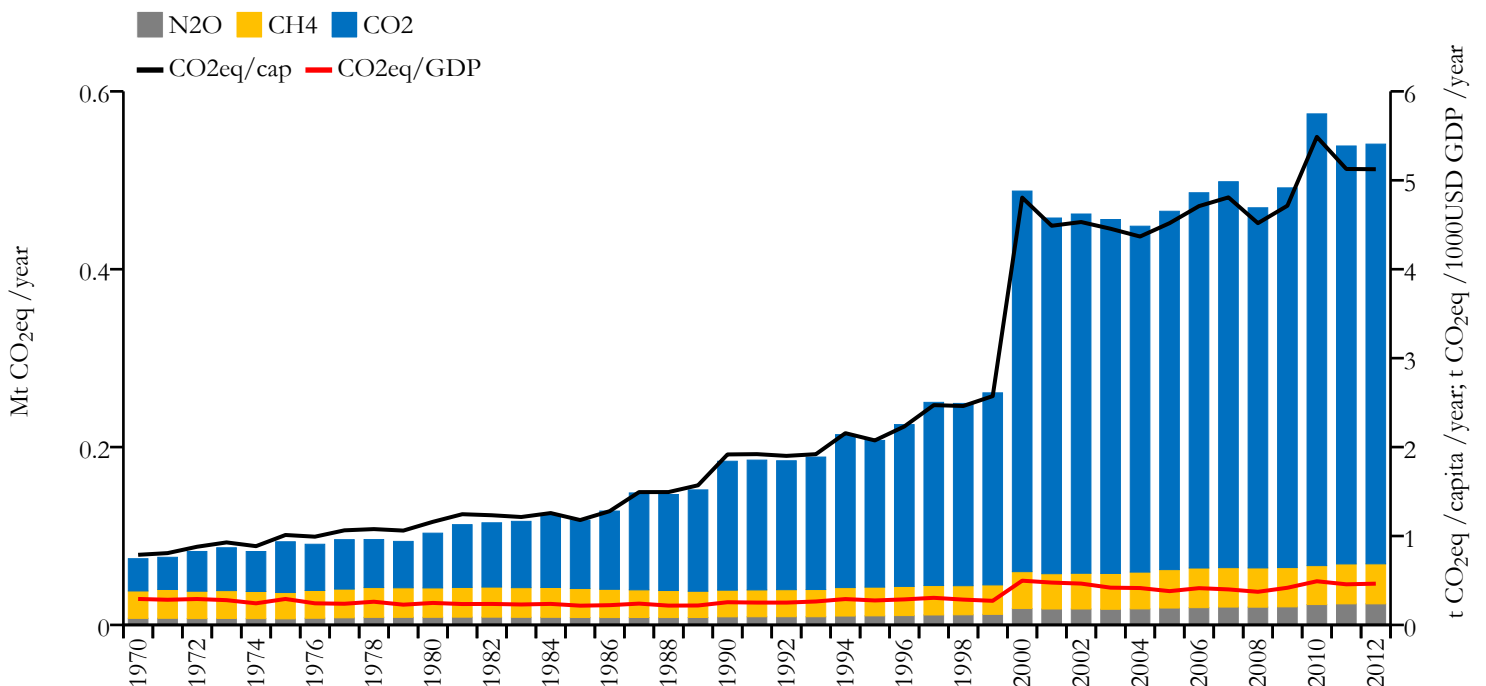
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)

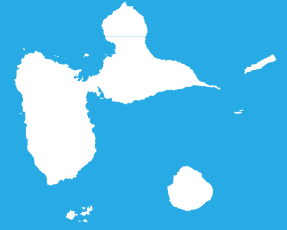


Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	0.555	5.185	0.399	107317
1990	0.145	1.505	0.201	96283

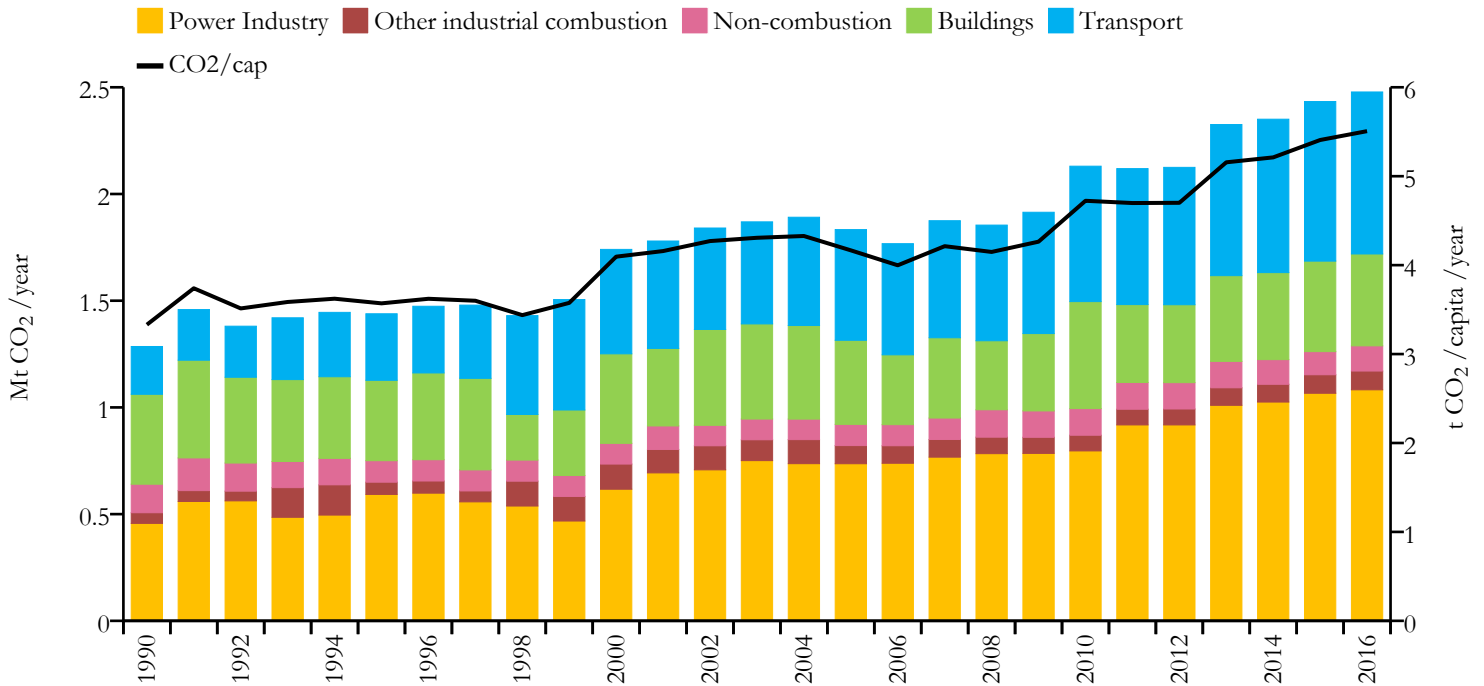


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





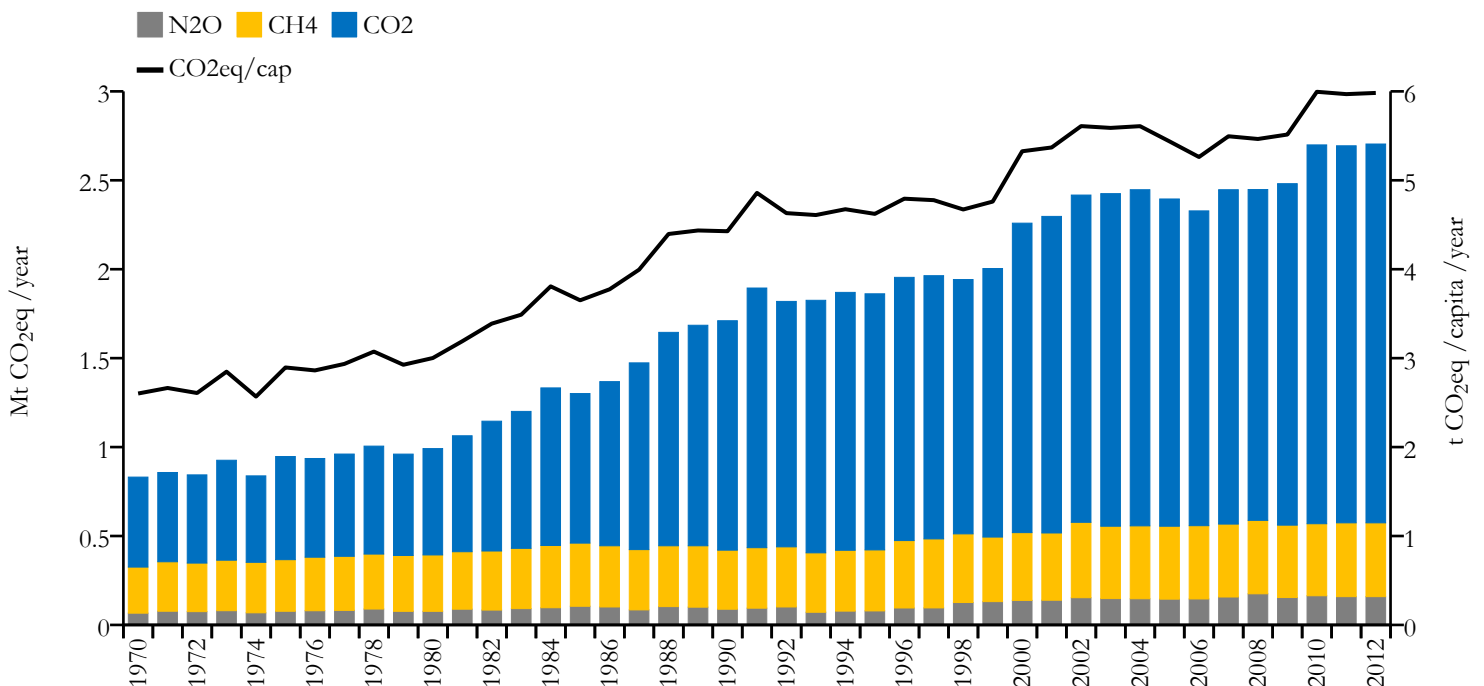
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	2.478	5.507	n/a	449975
1990	1.285	3.330	n/a	385878

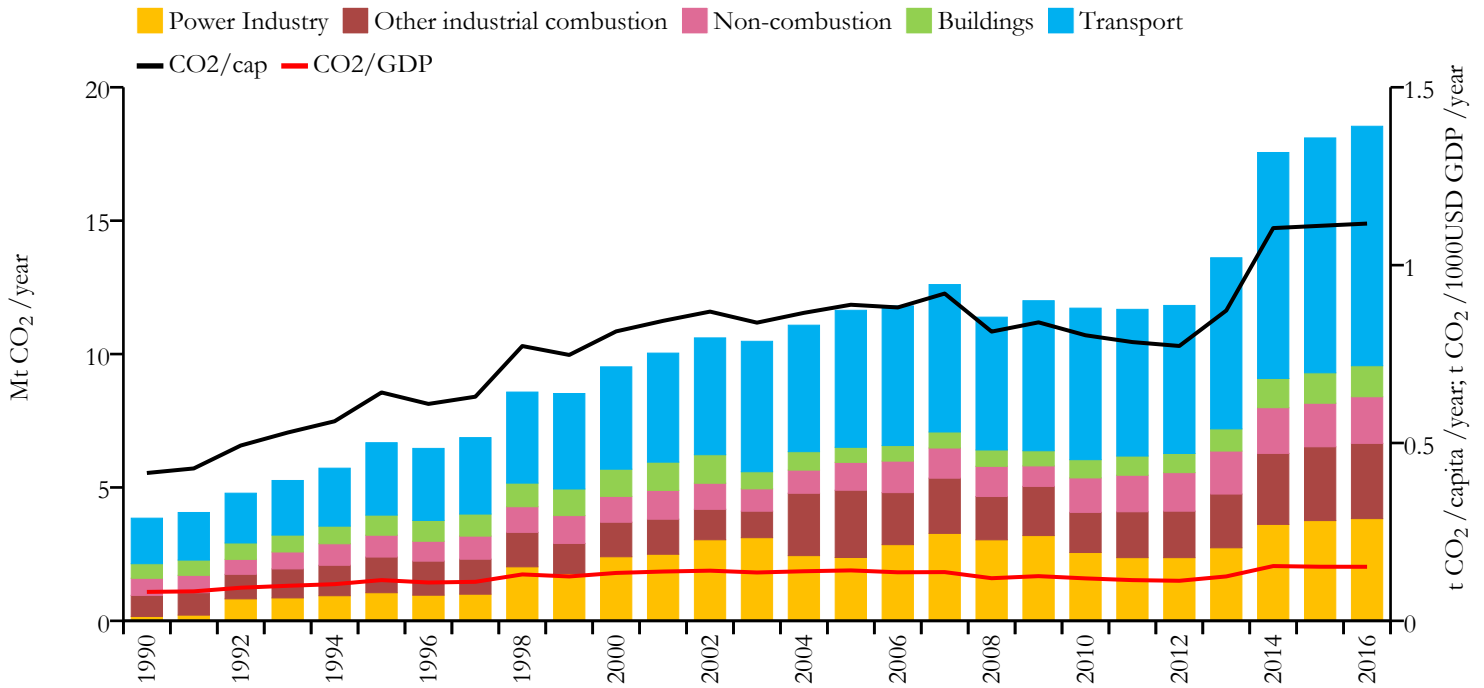


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





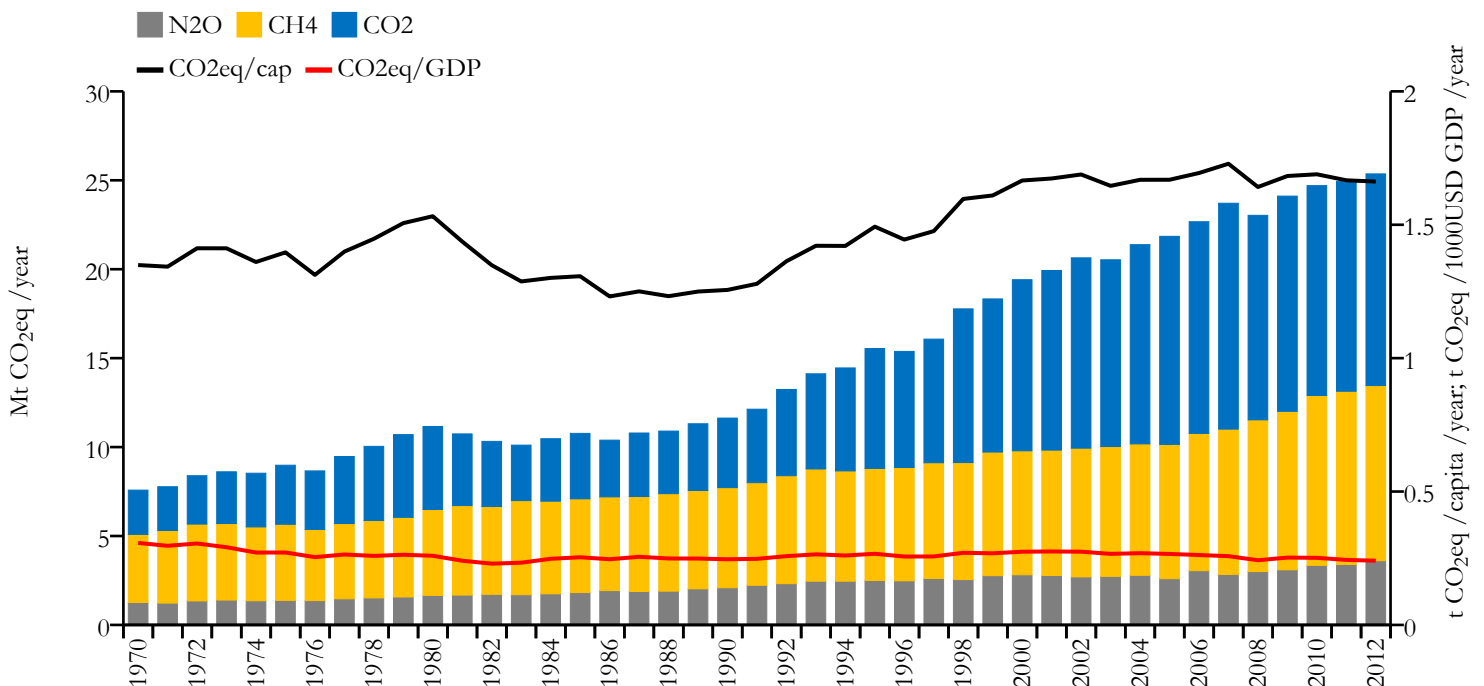
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)

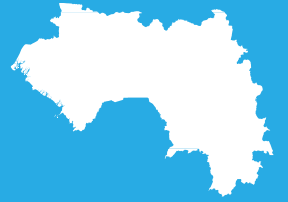


Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	18.539	1.117	0.152	16582469
1990	3.849	0.416	0.081	9263813

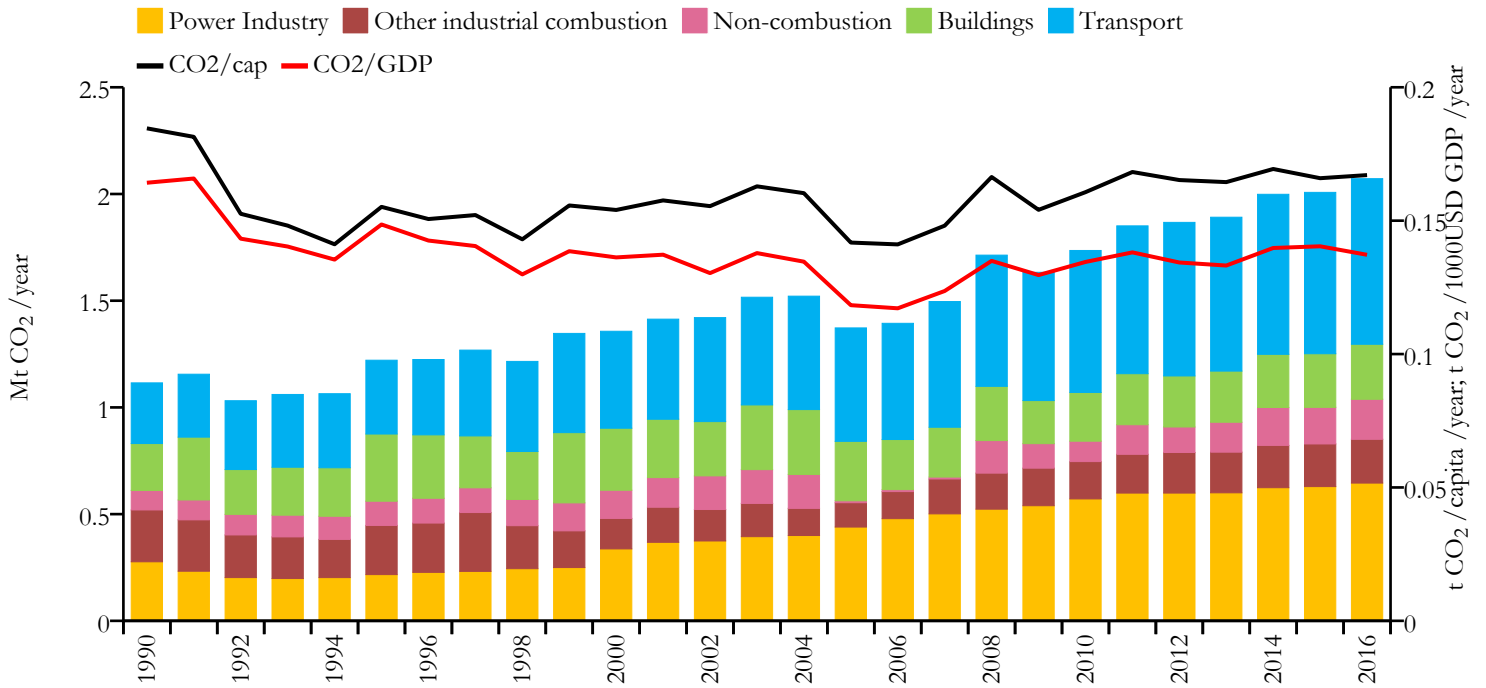


## Greenhouse gas emissions (EDGARv4.3.2 dataset)

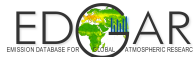




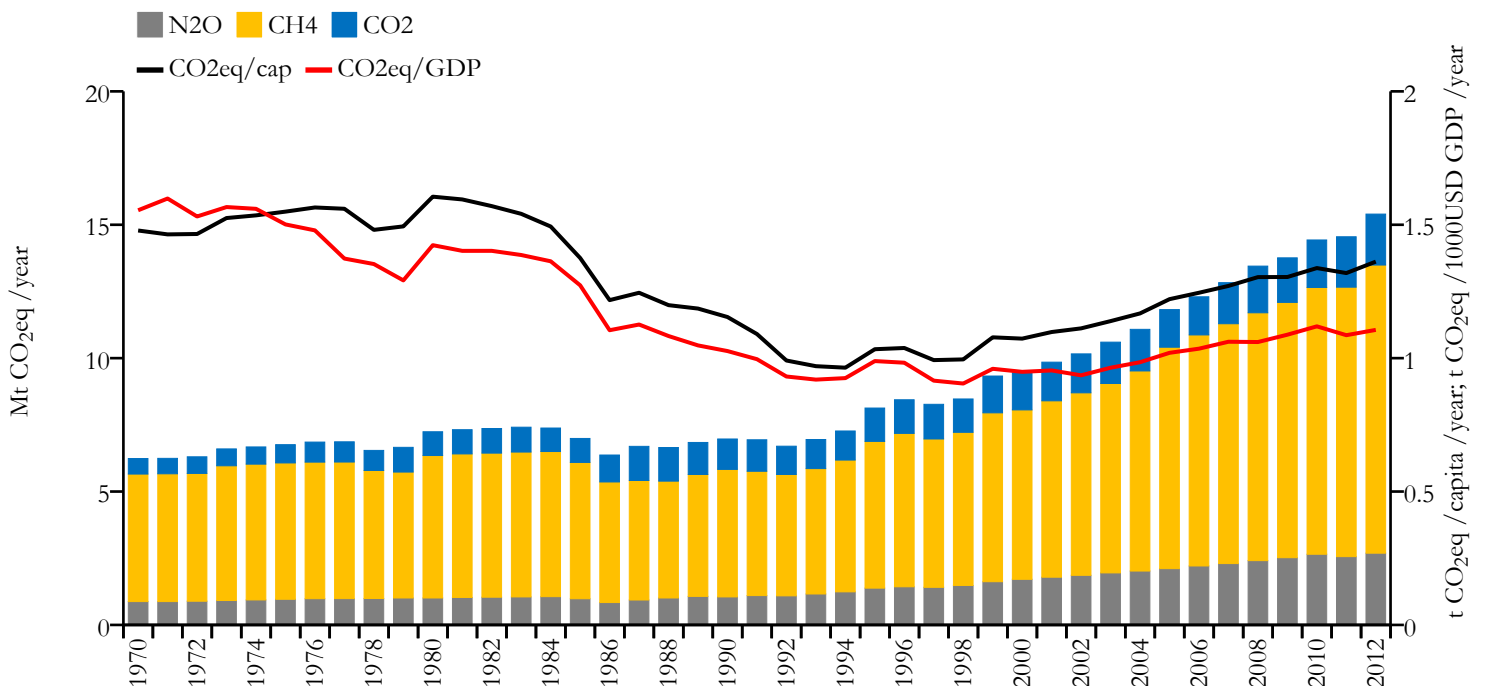
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	2.072	0.167	0.137	12395924
1990	1.115	0.185	0.164	6041094



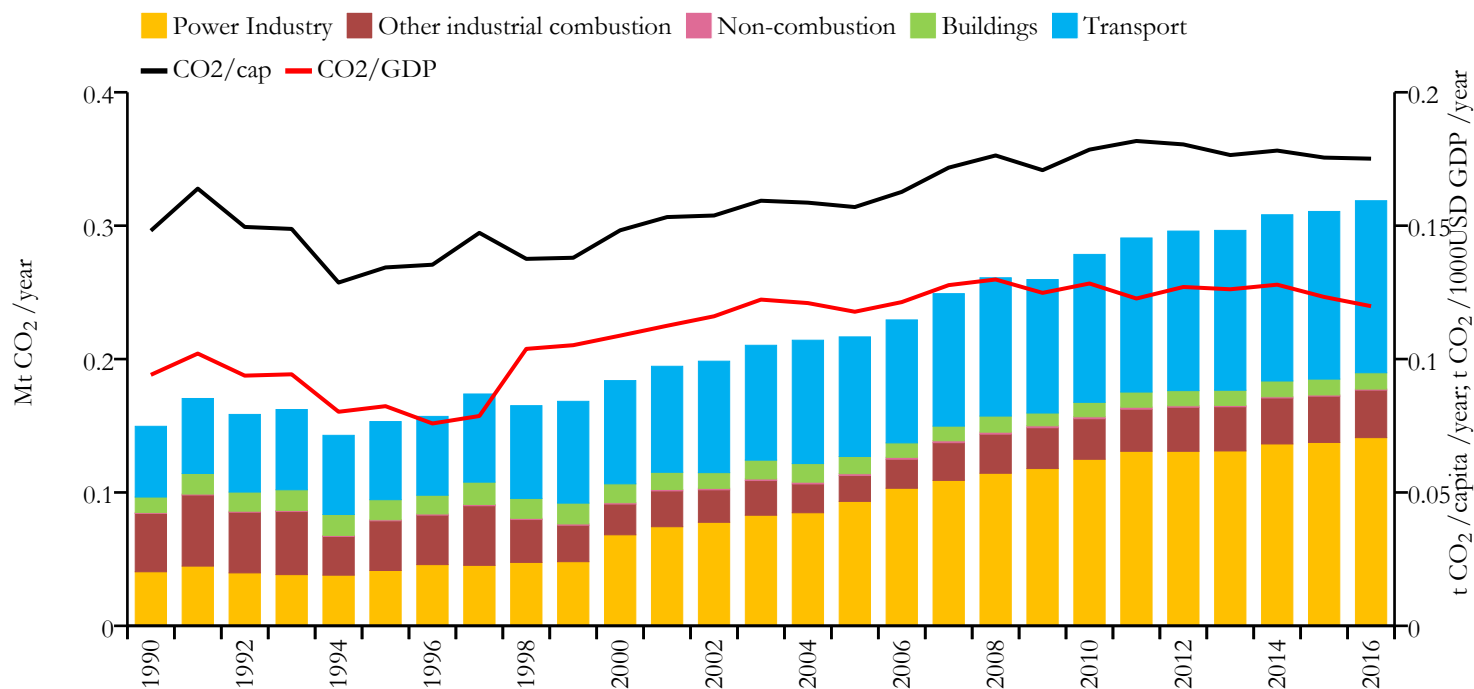
## Greenhouse gas emissions (EDGARv4.3.2 dataset)







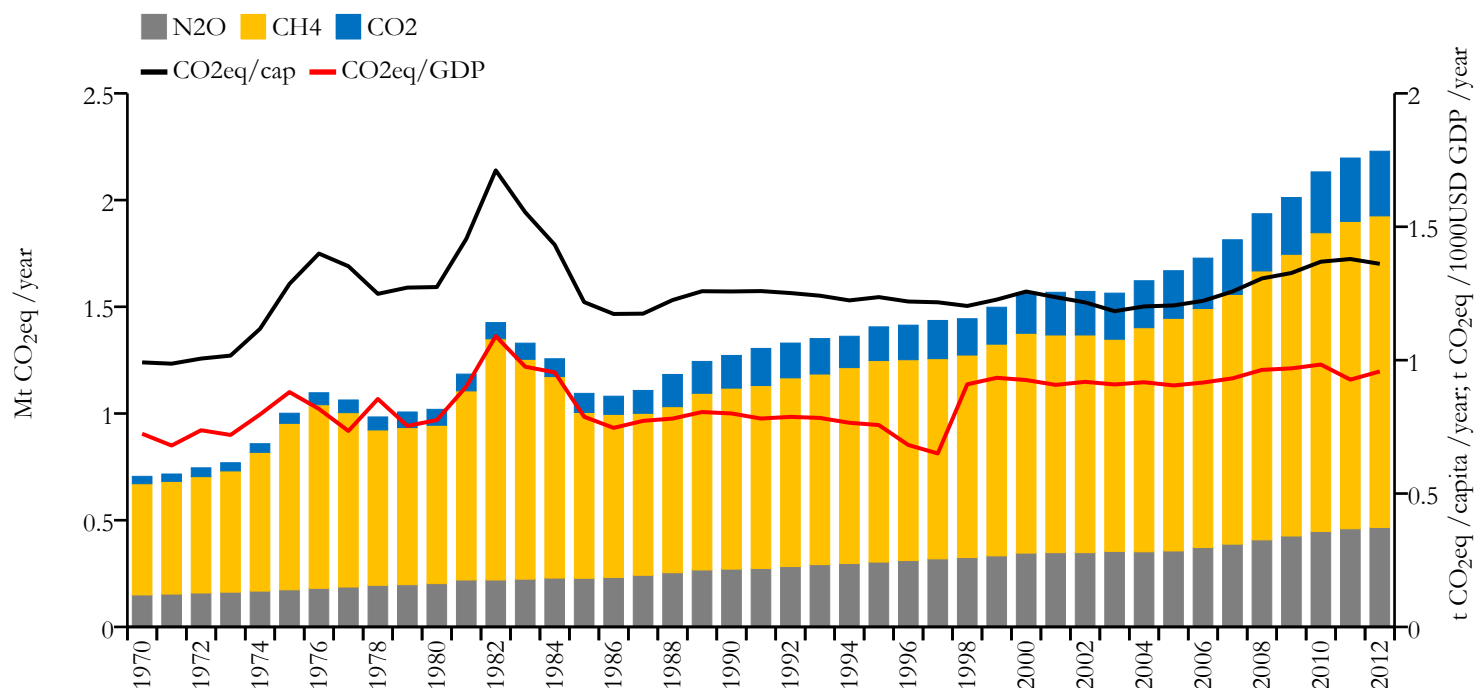
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	0.319	0.175	0.120	1815698
1990	0.150	0.148	0.094	1012280

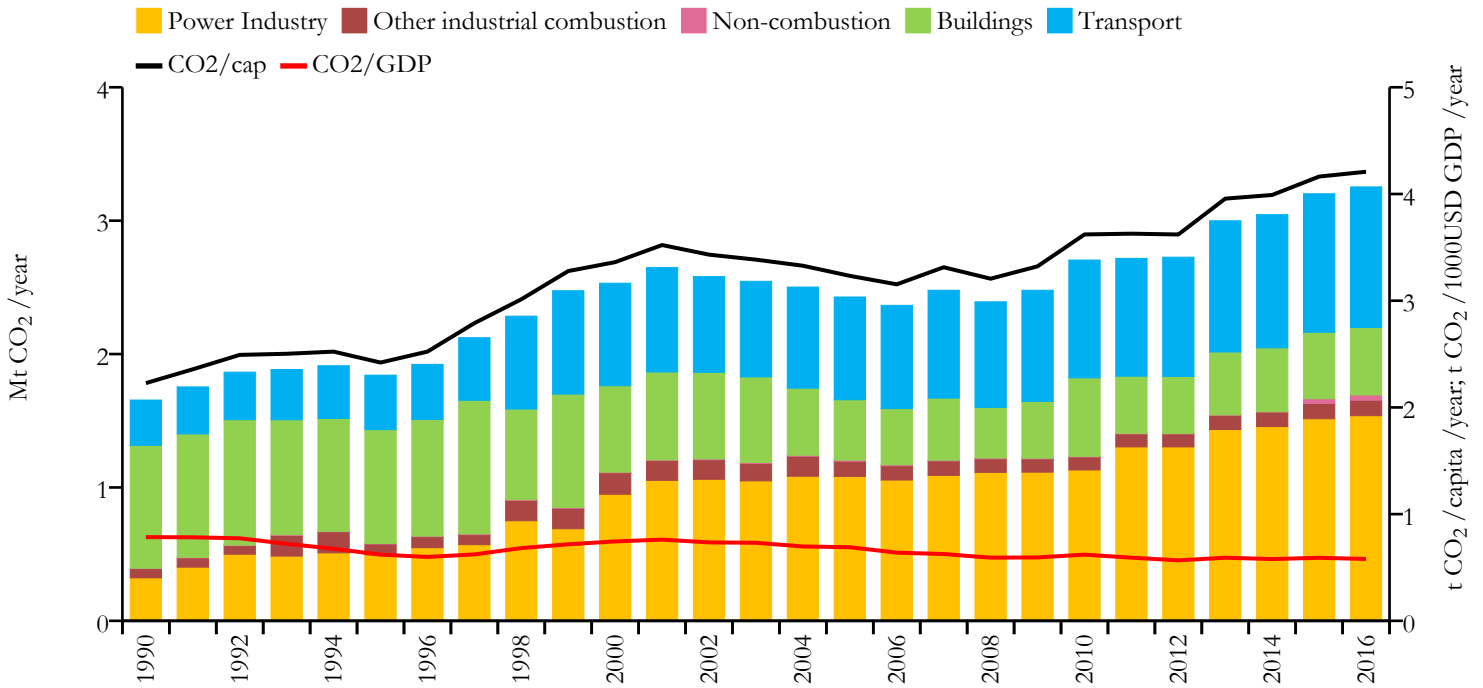


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





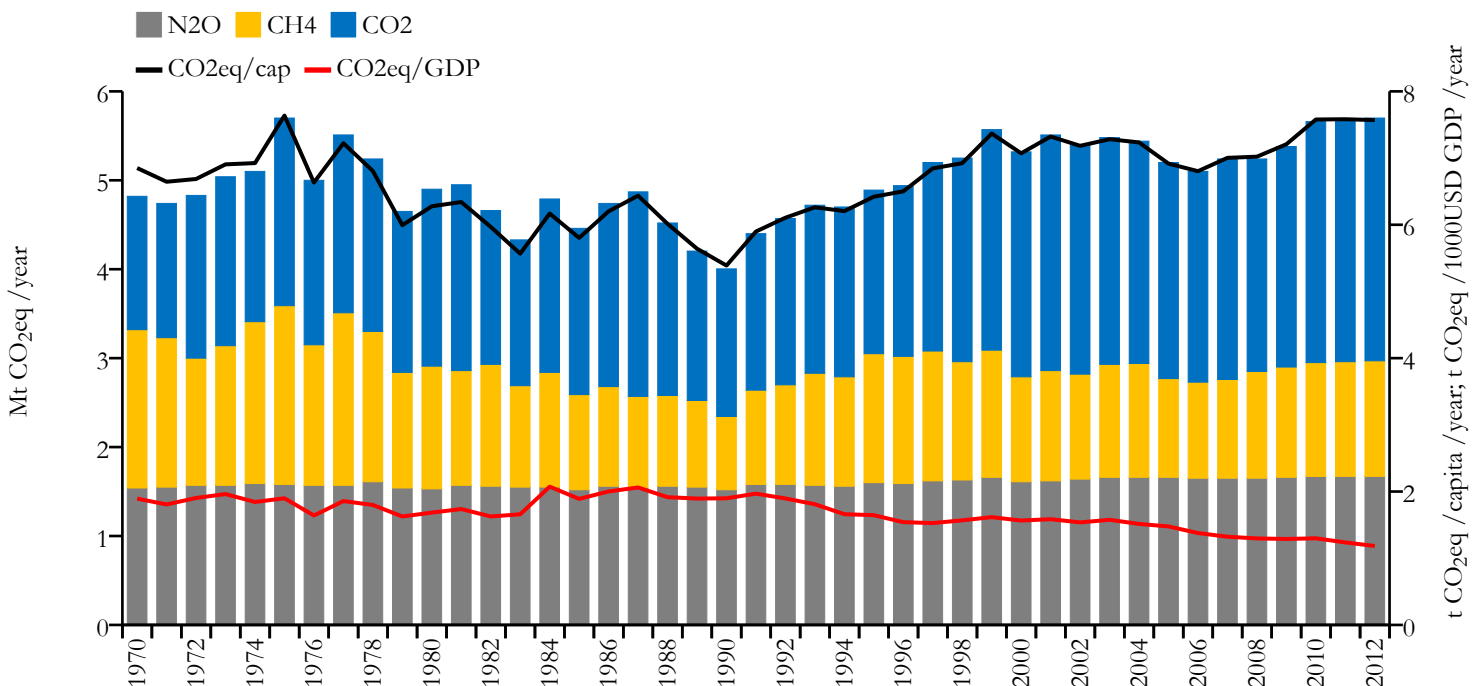
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	3.253	4.208	0.580	773303
1990	1.655	2.228	0.784	743309

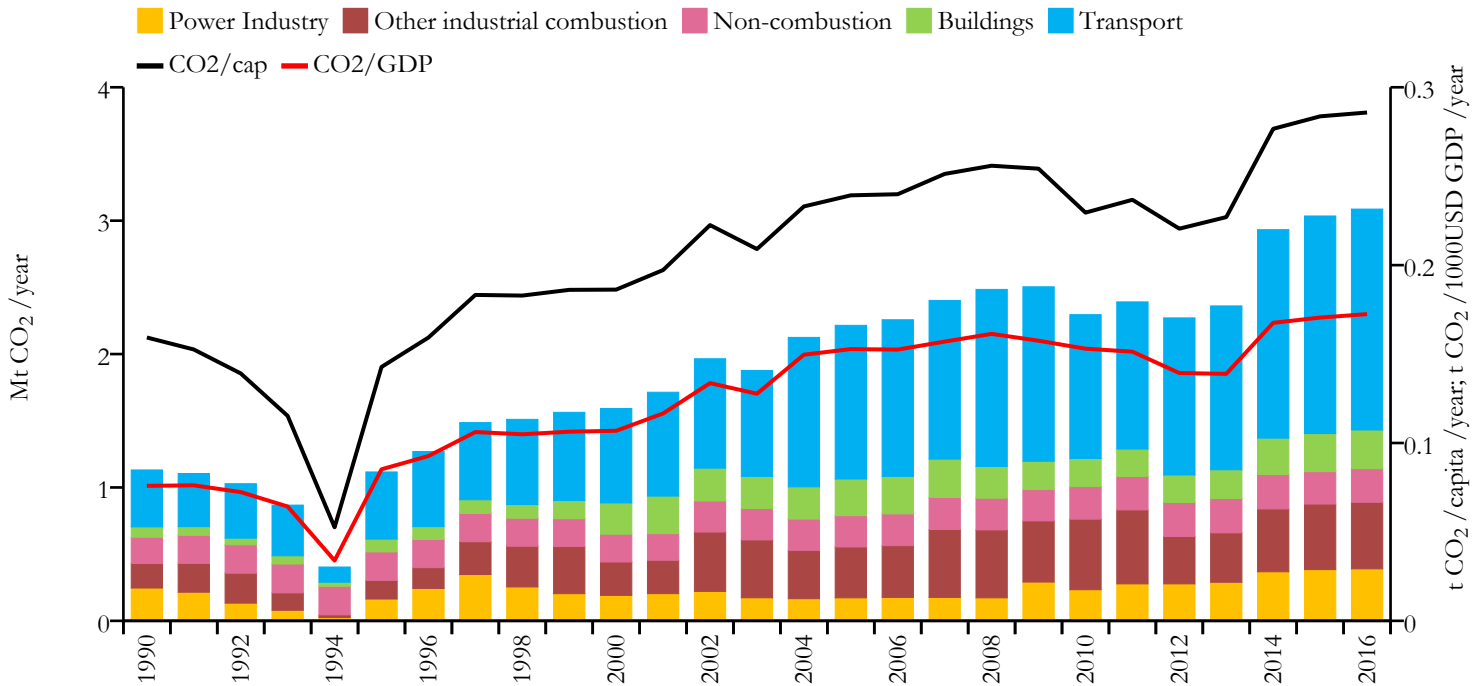


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





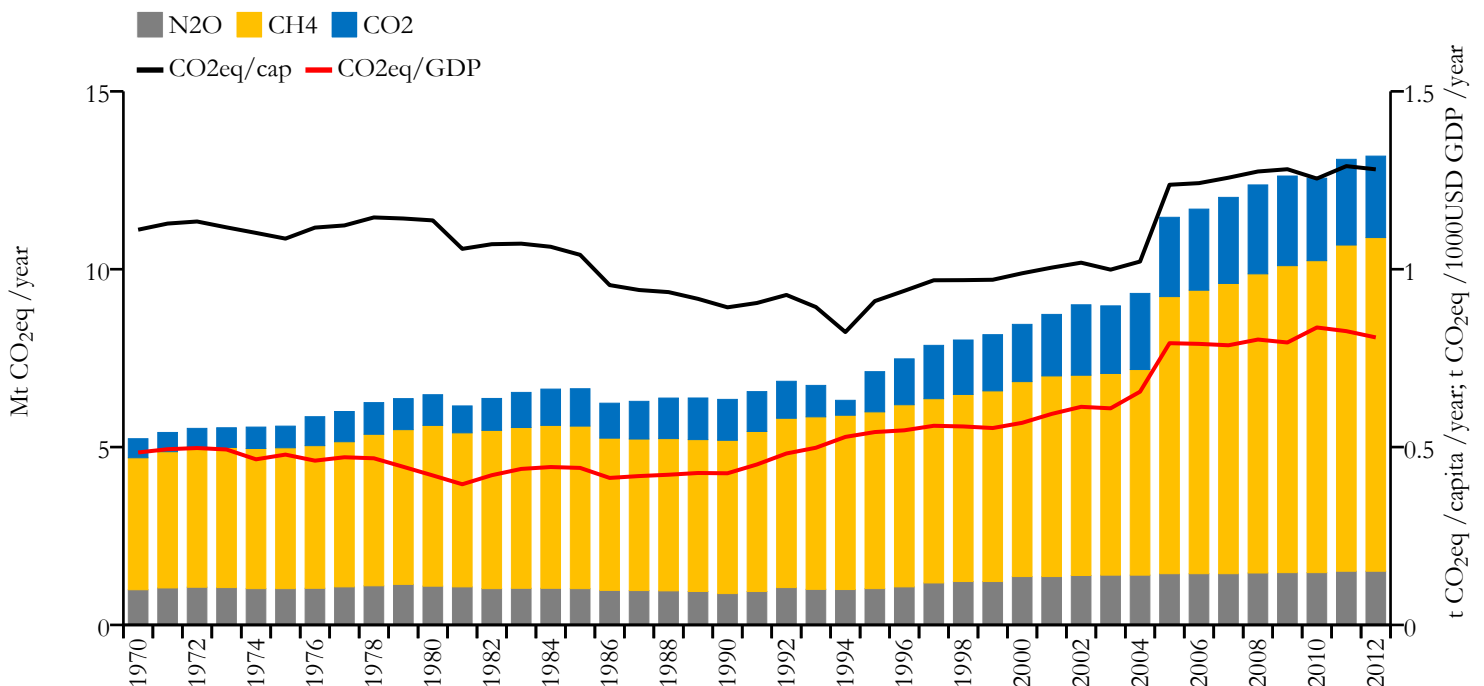
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	3.087	0.286	0.172	10847334
1990	1.131	0.159	0.076	7099732

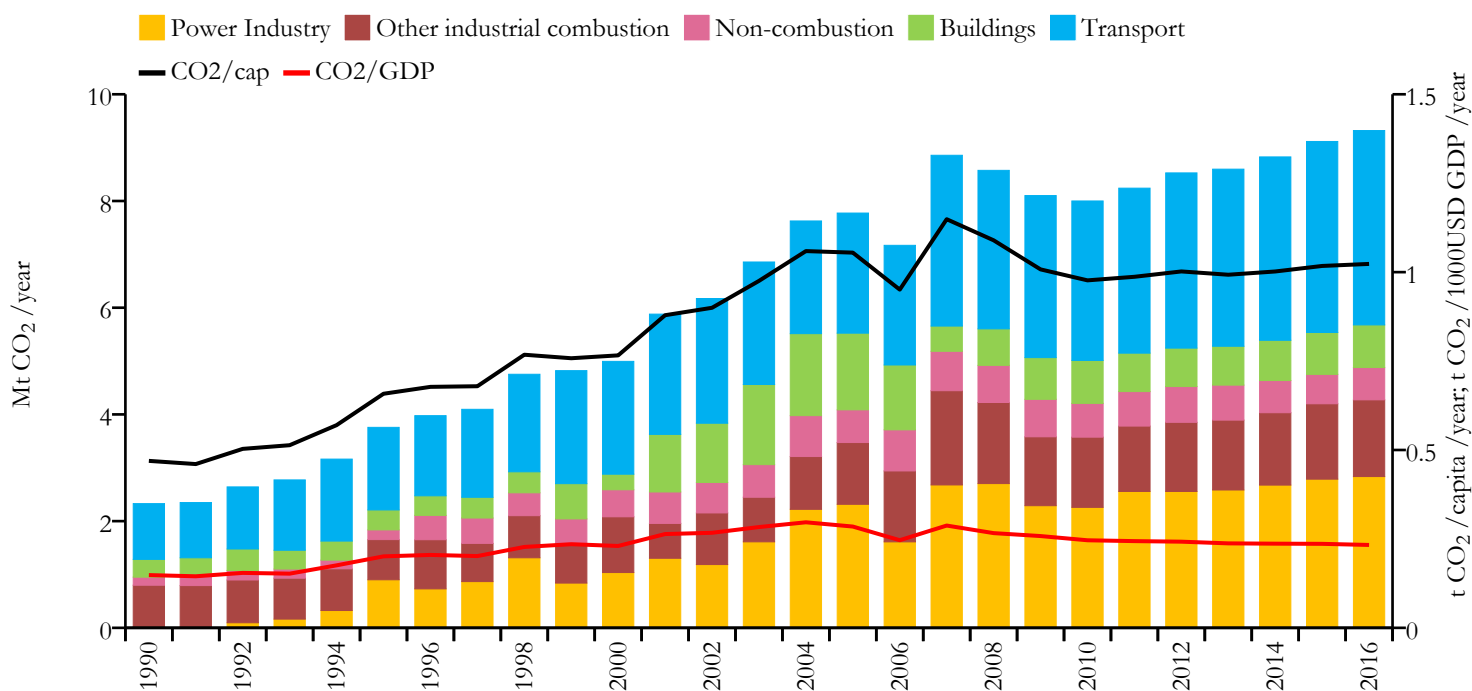


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





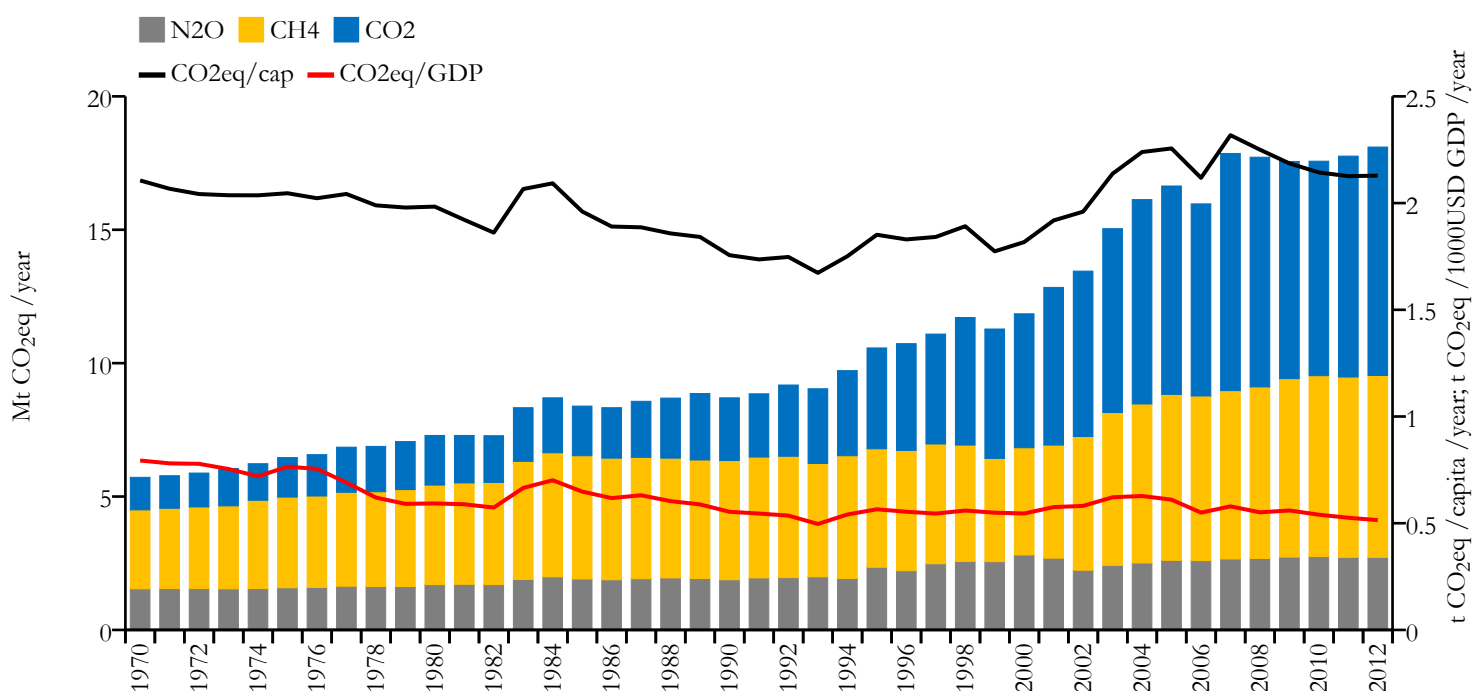
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	9.320	1.023	0.233	9112867
1990	2.328	0.469	0.148	4955328

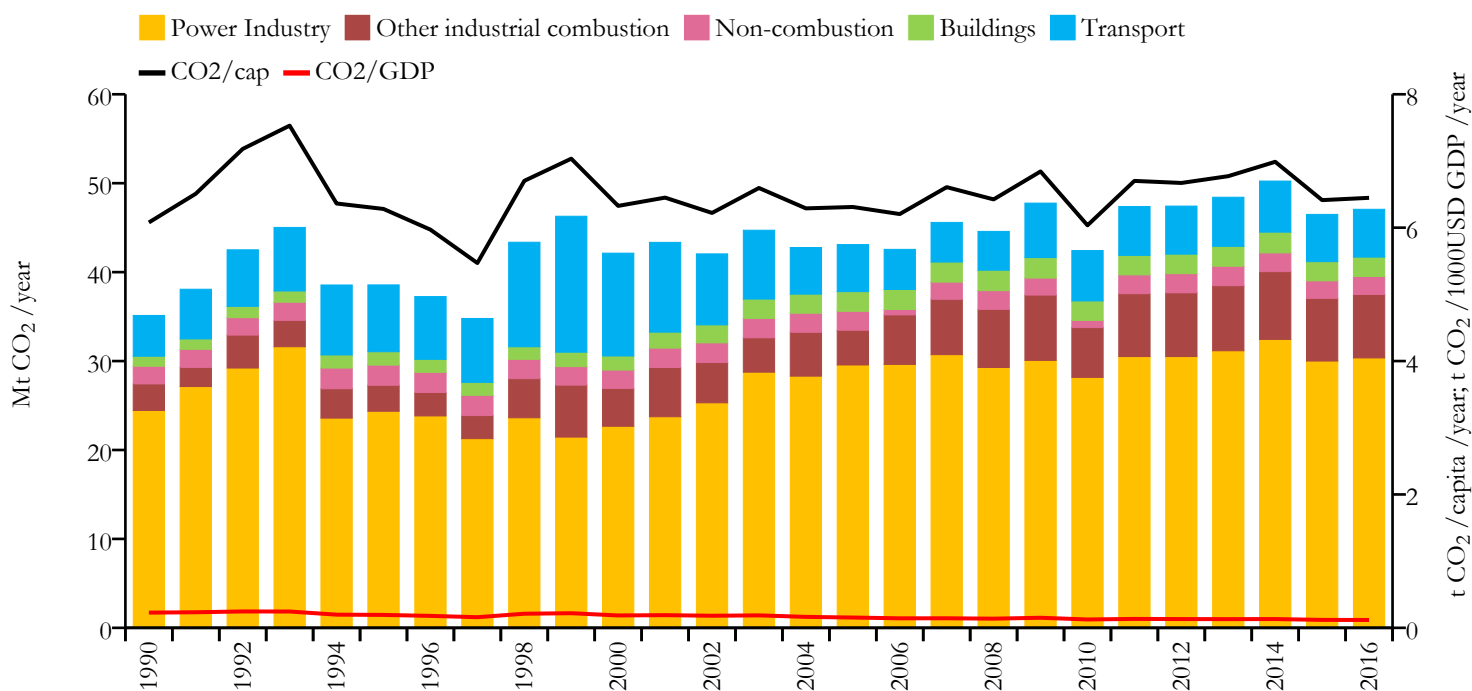


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





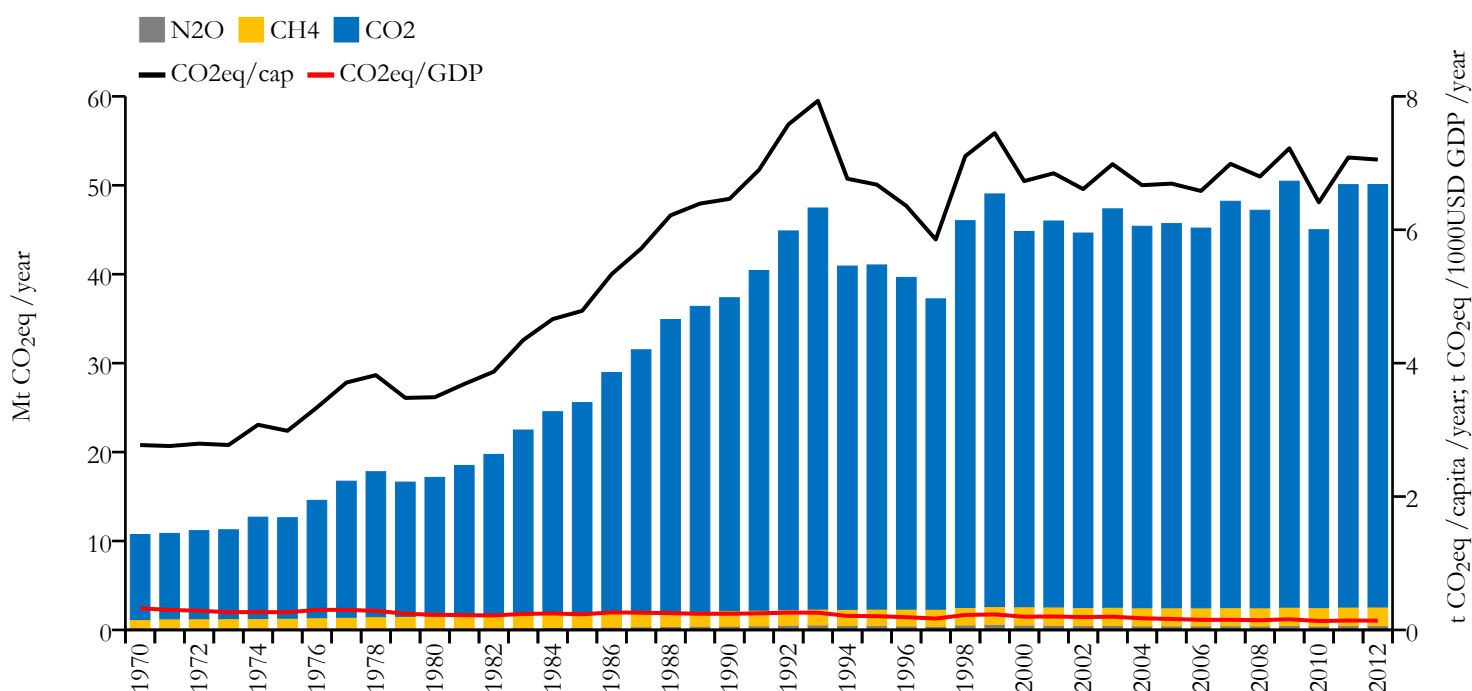
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	47.066	6.447	0.118	7302843
1990	35.131	6.078	0.228	5781459

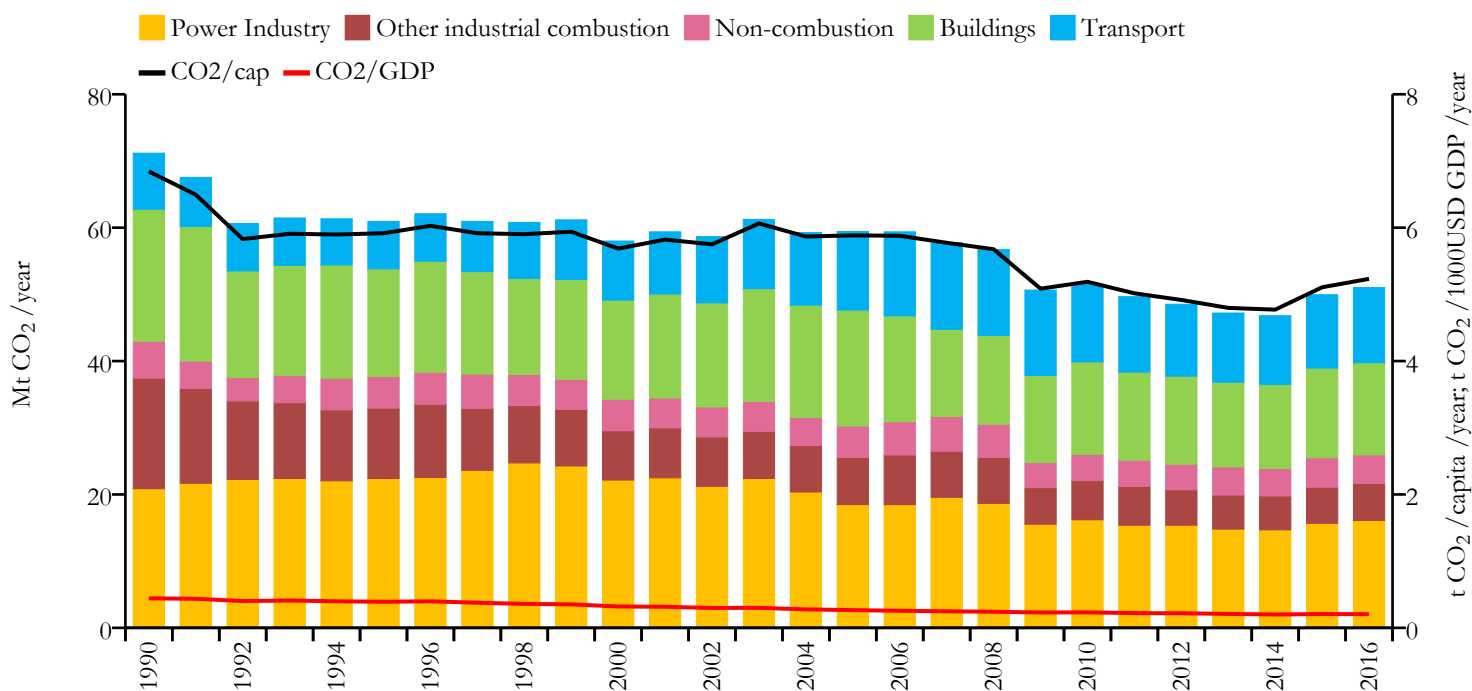


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





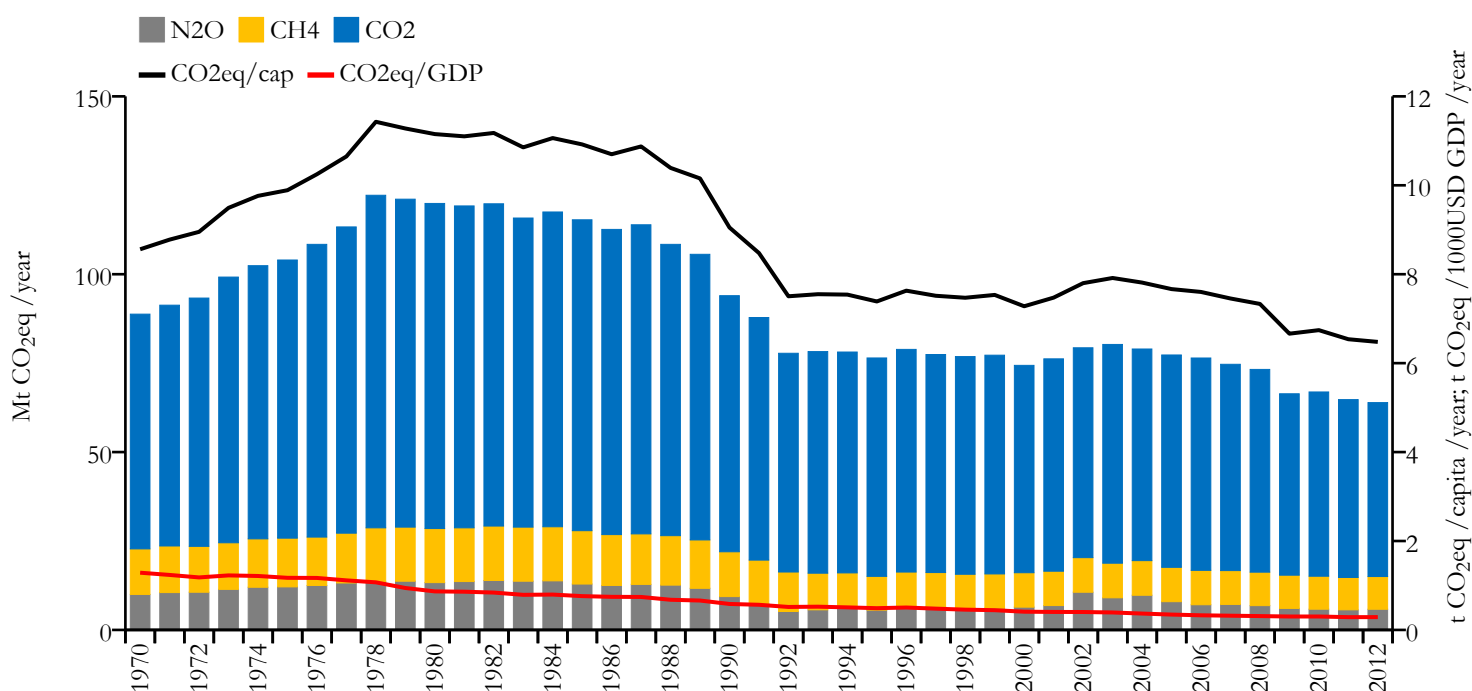
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	51.019	5.233	0.205	9753281
1990	71.170	6.843	0.442	10377651

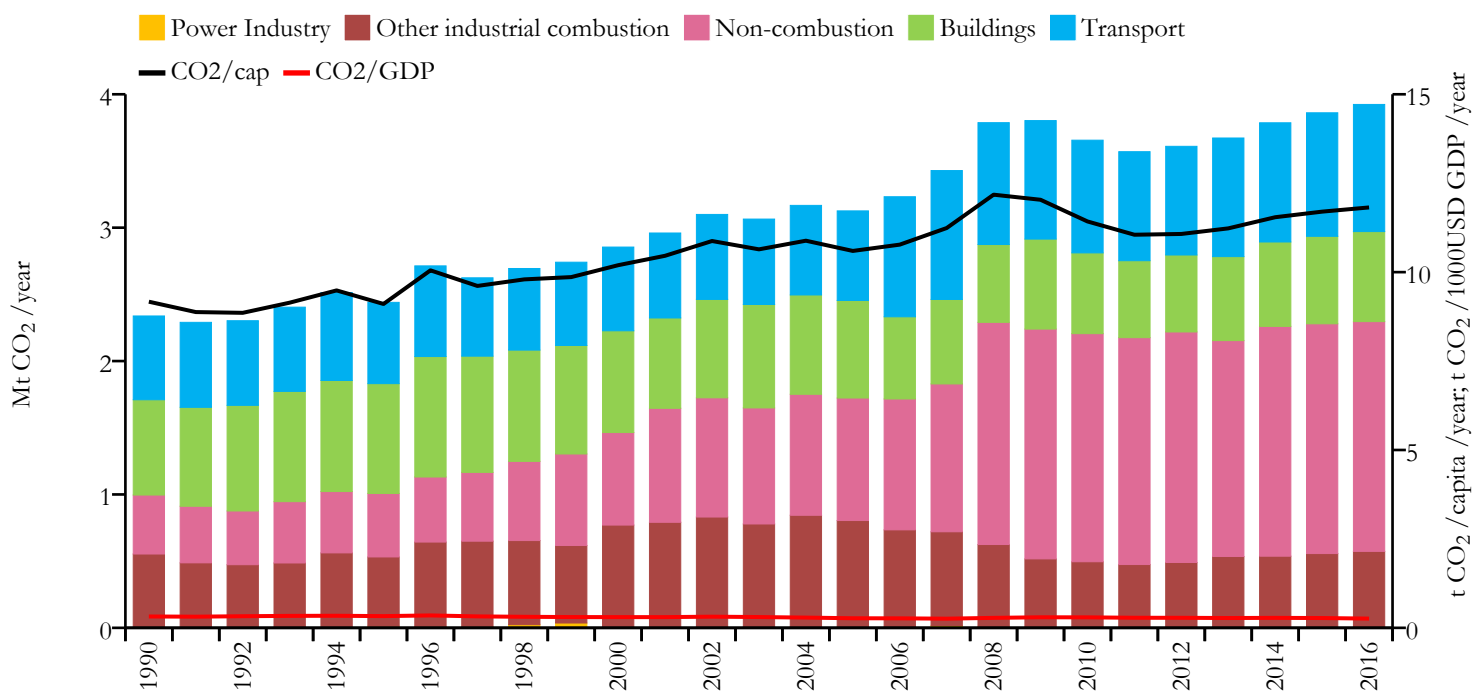


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





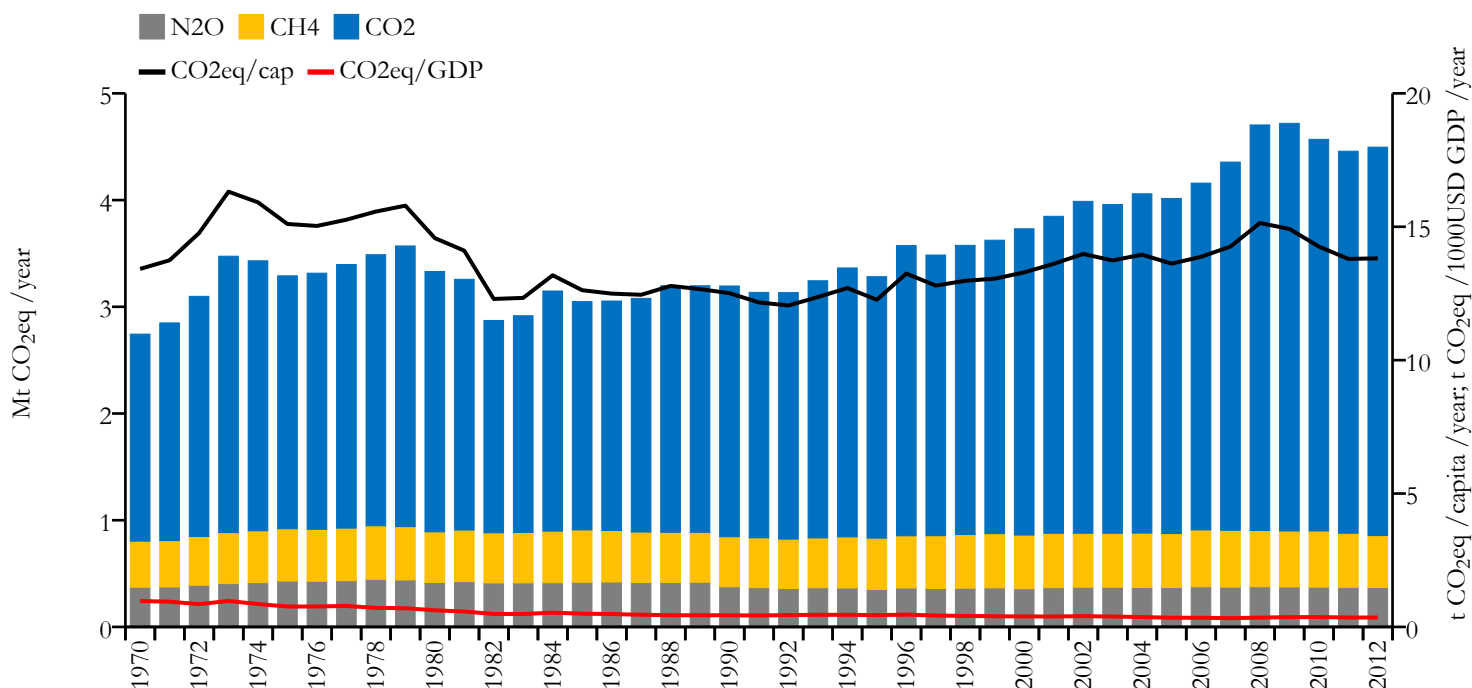
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	3.924	11.819	0.260	332474
1990	2.338	9.169	0.319	255043

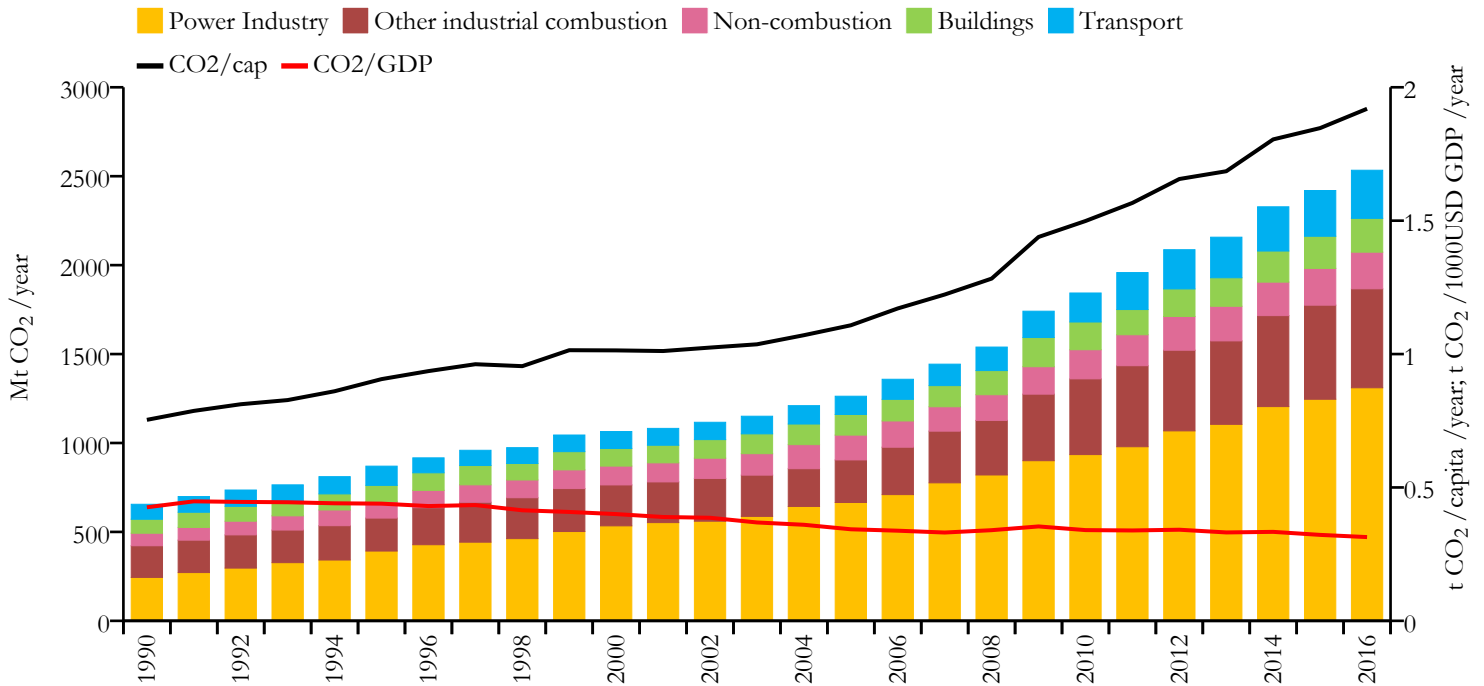


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





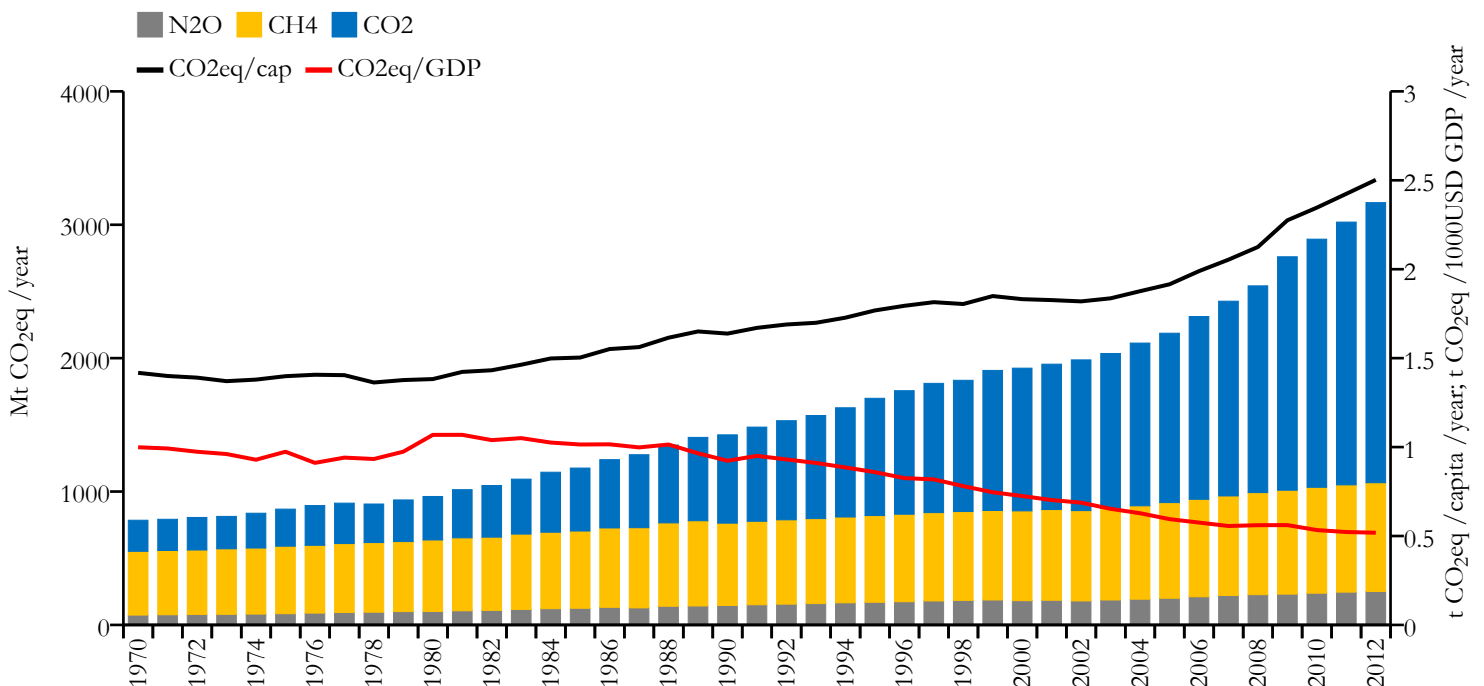
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	2533.638	1.919	0.314	1324171354
1990	655.462	0.753	0.426	870133480



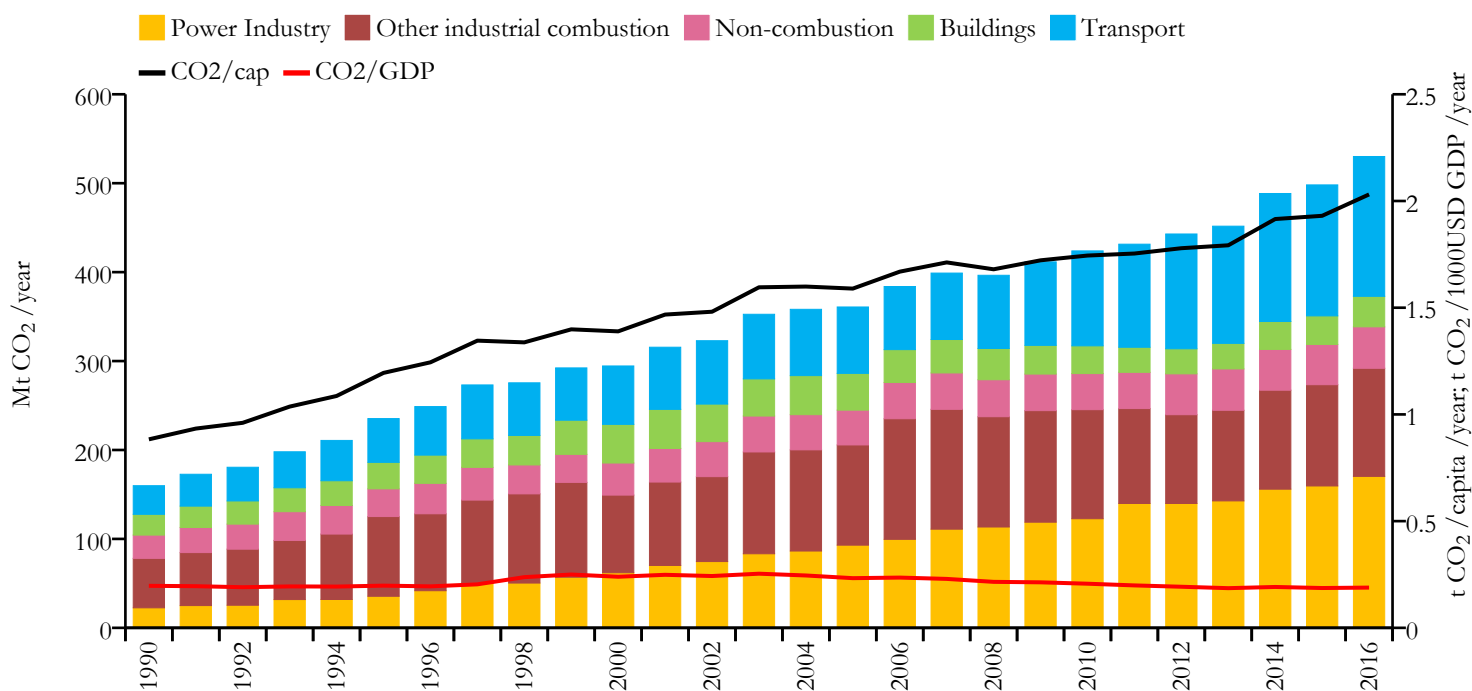
## Greenhouse gas emissions (EDGARv4.3.2 dataset)







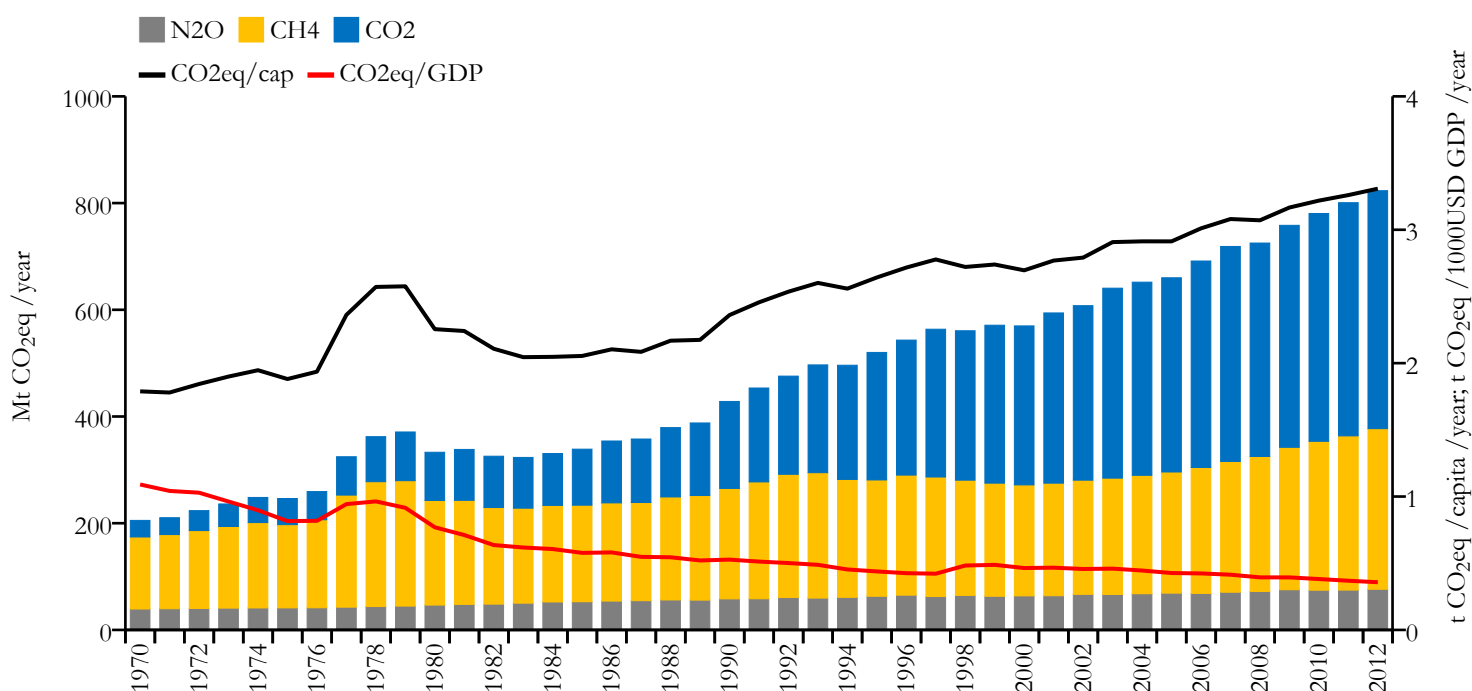
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)

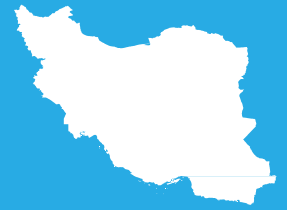


Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	530.036	2.031	0.189	261115456
1990	159.852	0.883	0.197	181436821

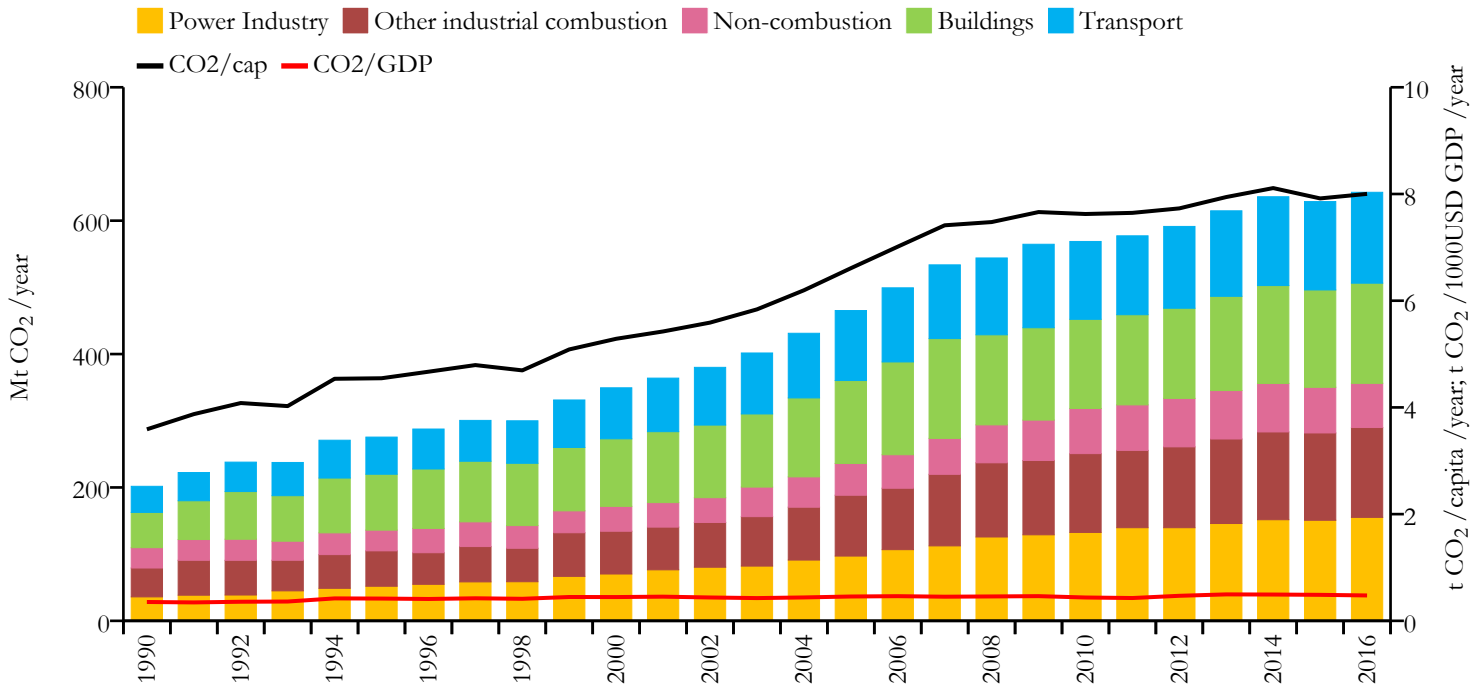


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





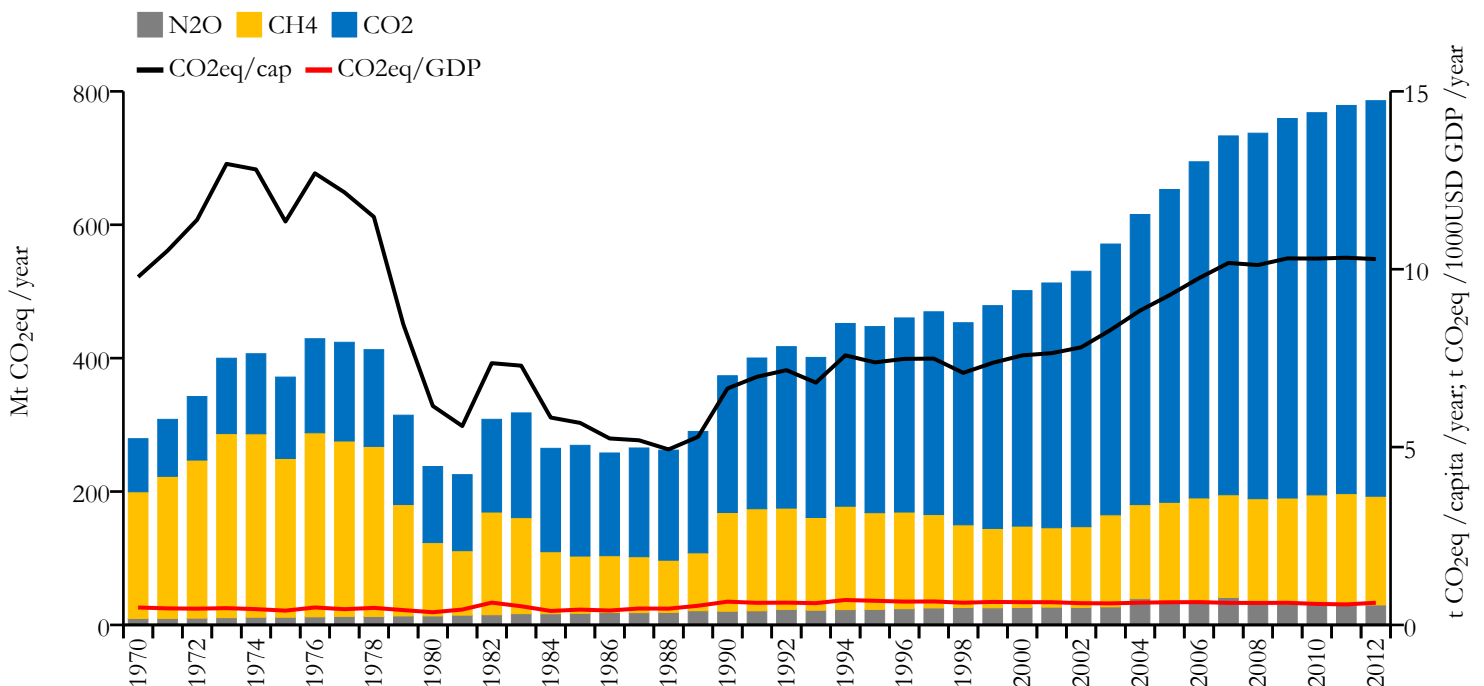
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	642.560	8.002	0.476	80277428
1990	201.720	3.589	0.353	56226185

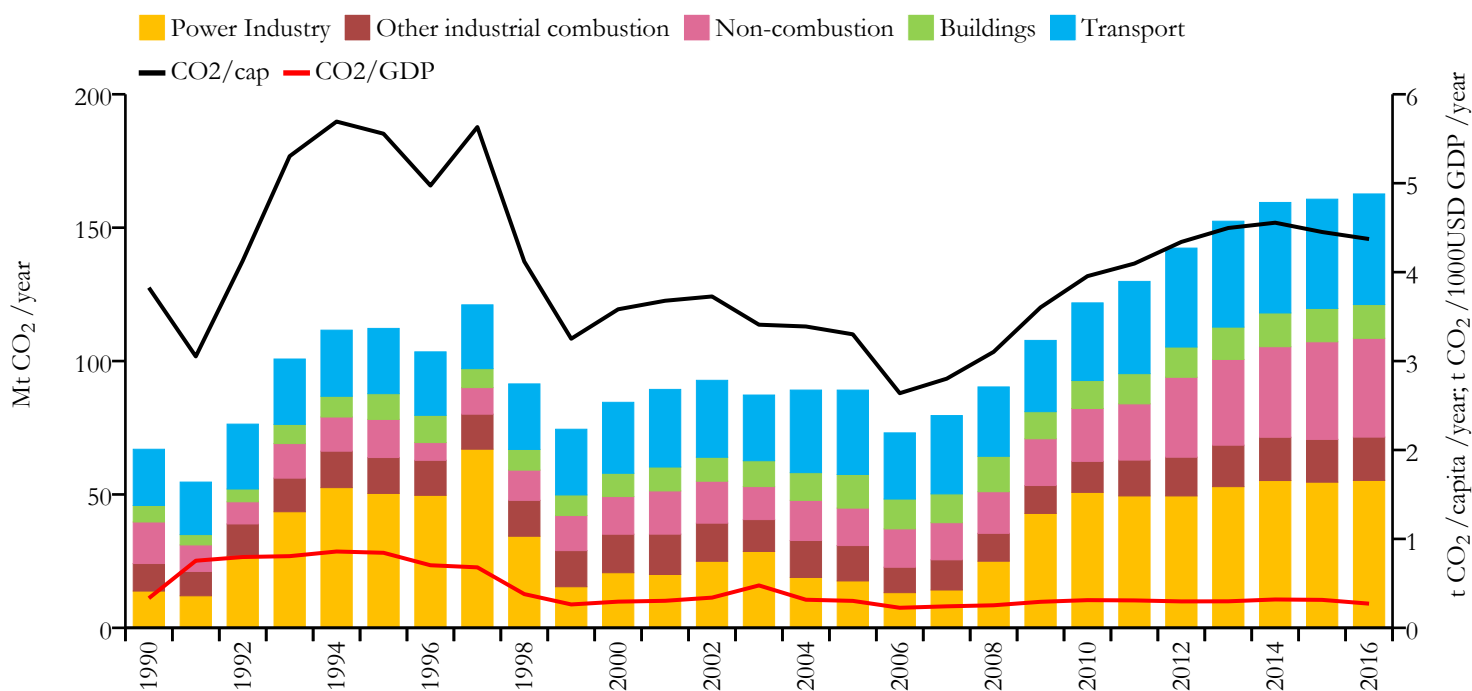


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





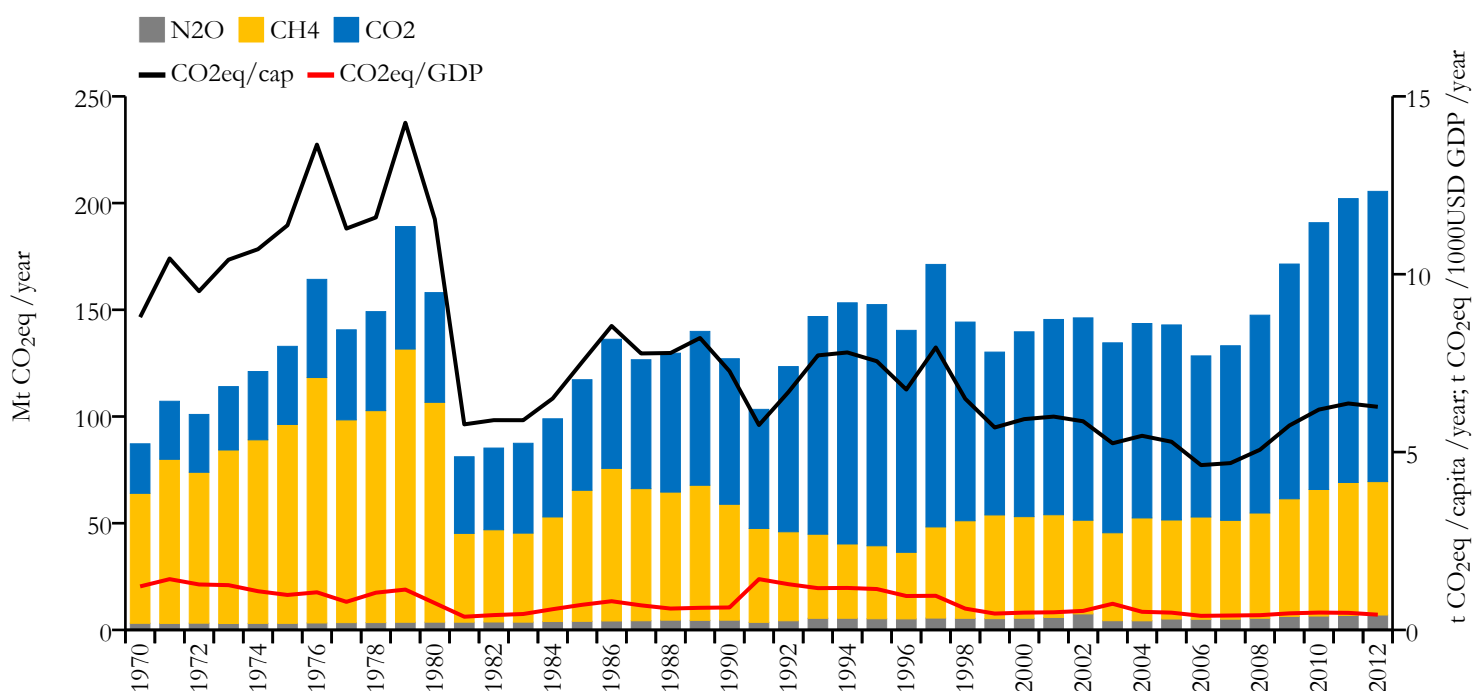
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)

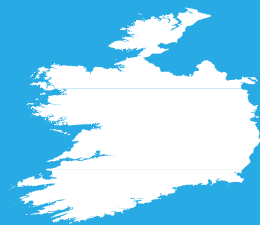


Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	162.646	4.372	0.272	37202572
1990	66.944	3.825	0.333	17469005

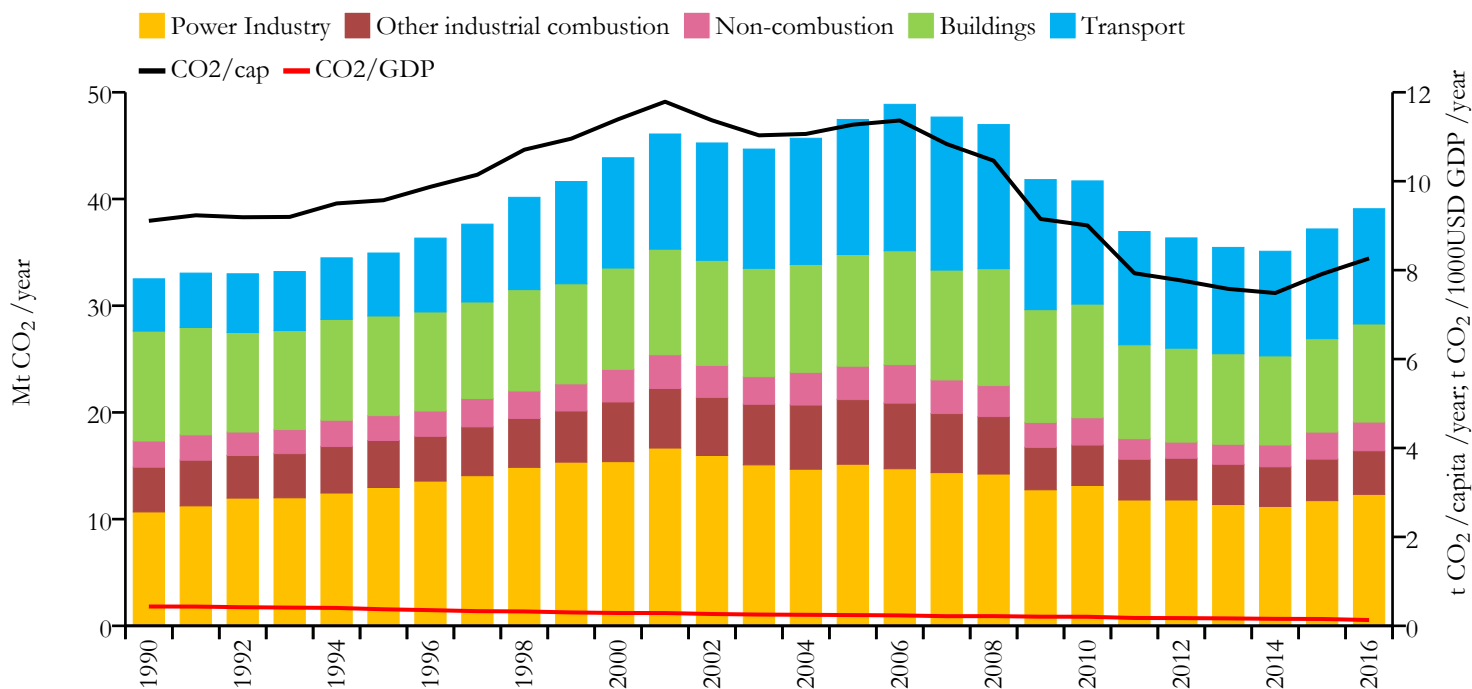


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





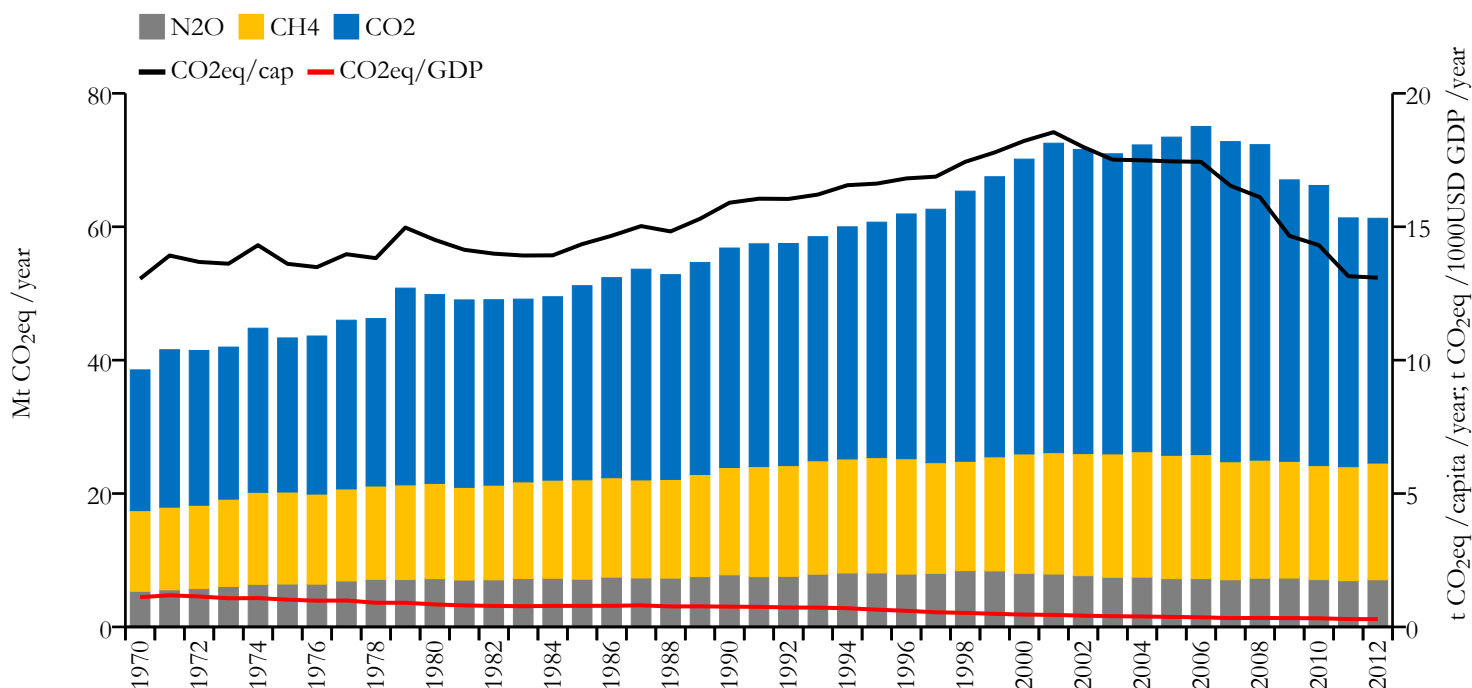
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	39.087	8.264	0.130	4726078
1990	32.518	9.109	0.435	3569257



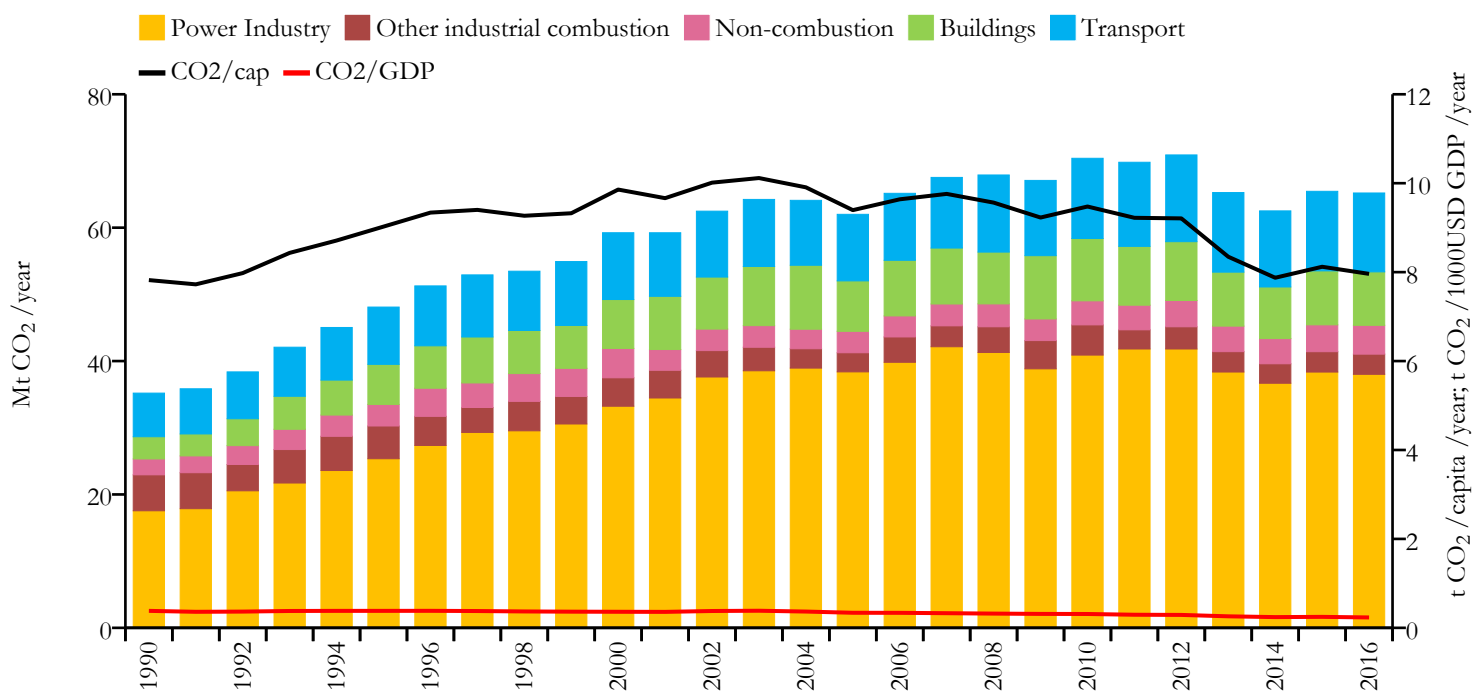
## Greenhouse gas emissions (EDGARv4.3.2 dataset)



# Israel and Palestine, State of



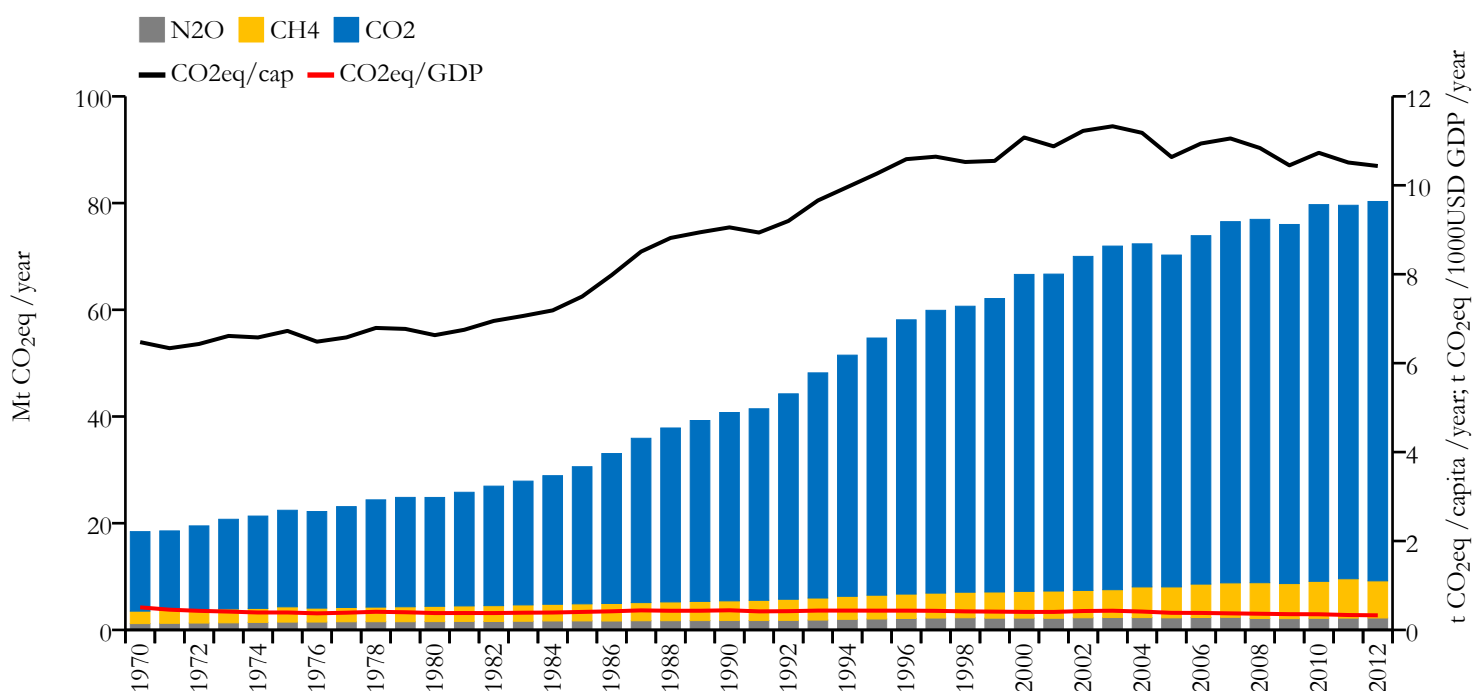
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	65.202	7.961	0.234	8191828
1990	35.195	7.821	0.382	4500475



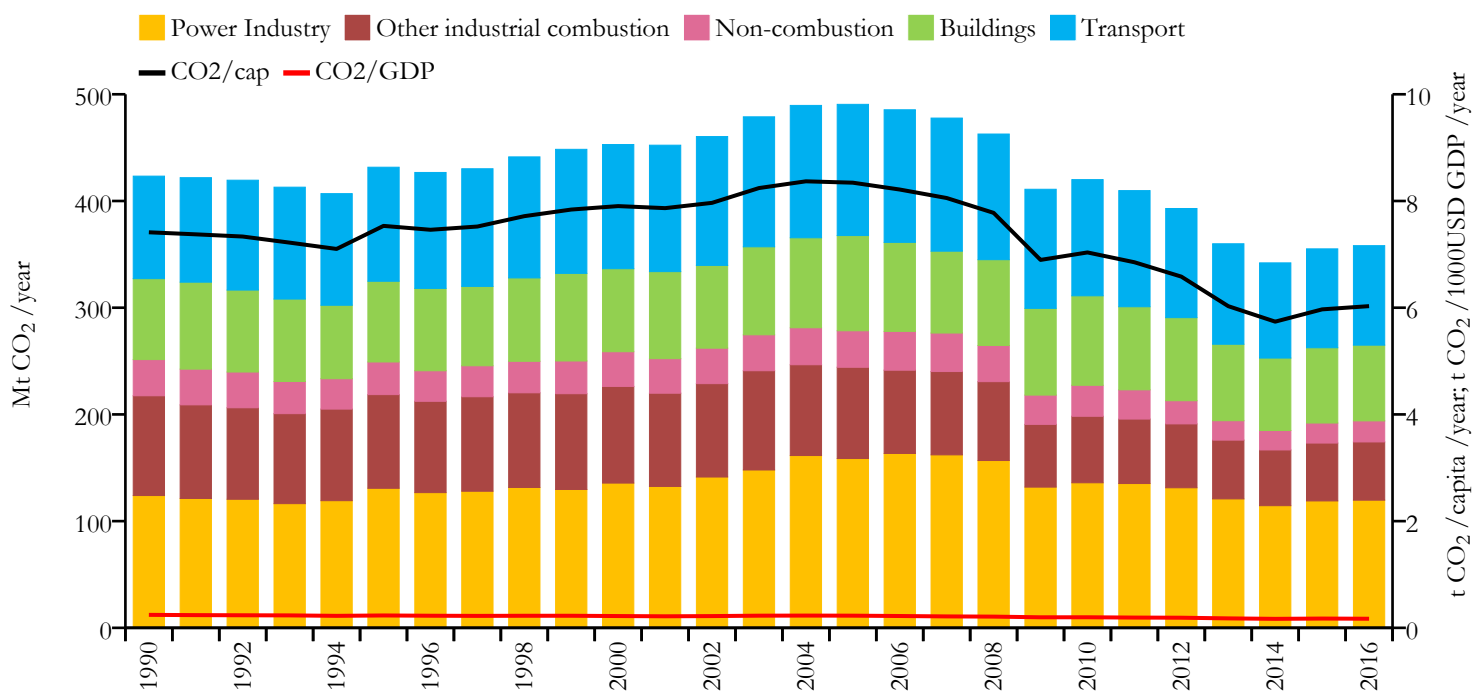
## Greenhouse gas emissions (EDGARv4.3.2 dataset)



# Italy, San Marino and the Holy See



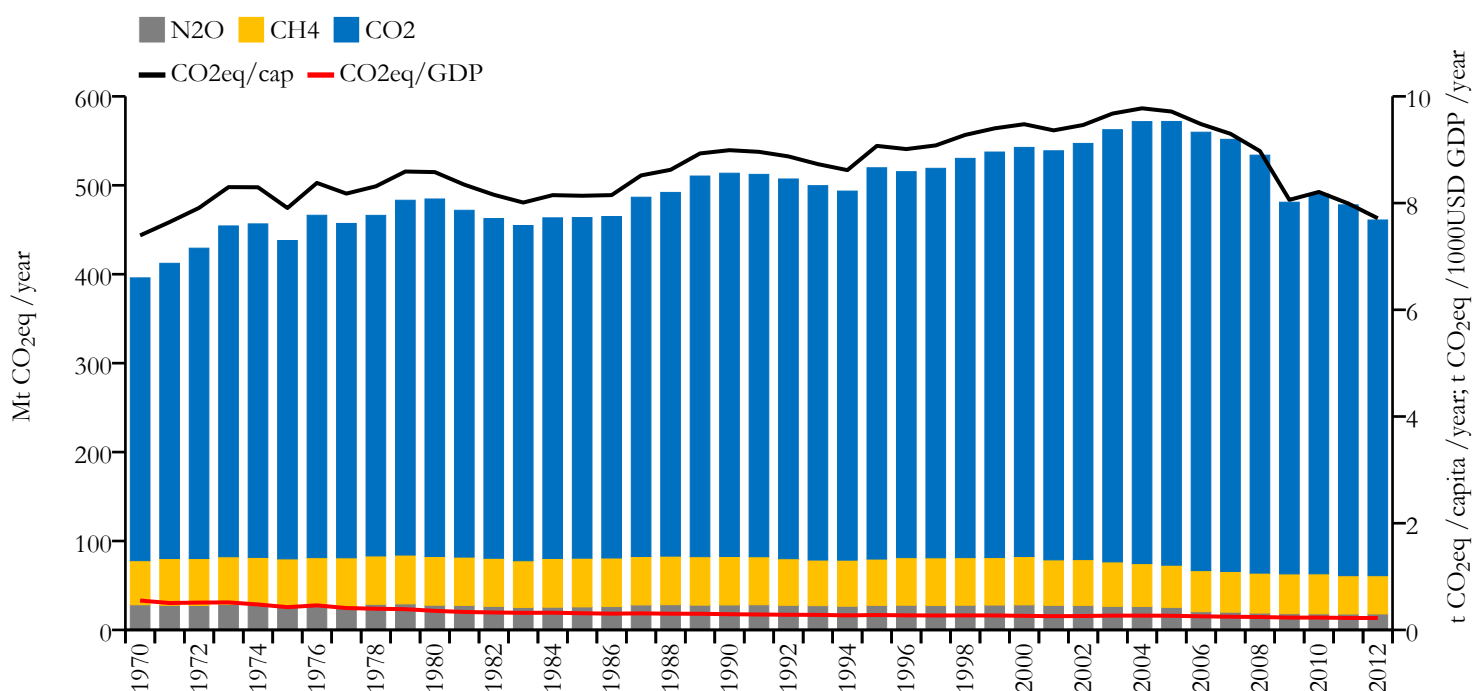
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	358.140	6.029	0.171	59429938
1990	423.297	7.413	0.243	57127120

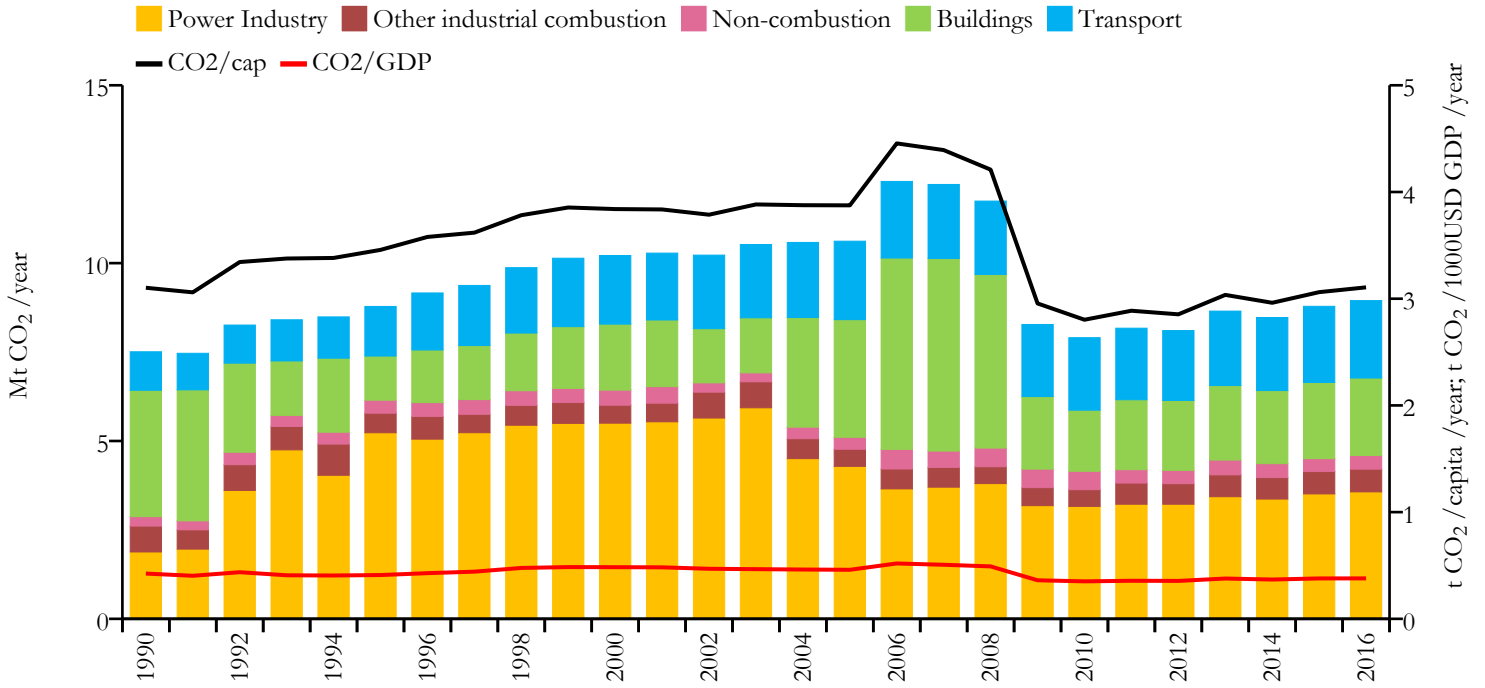


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





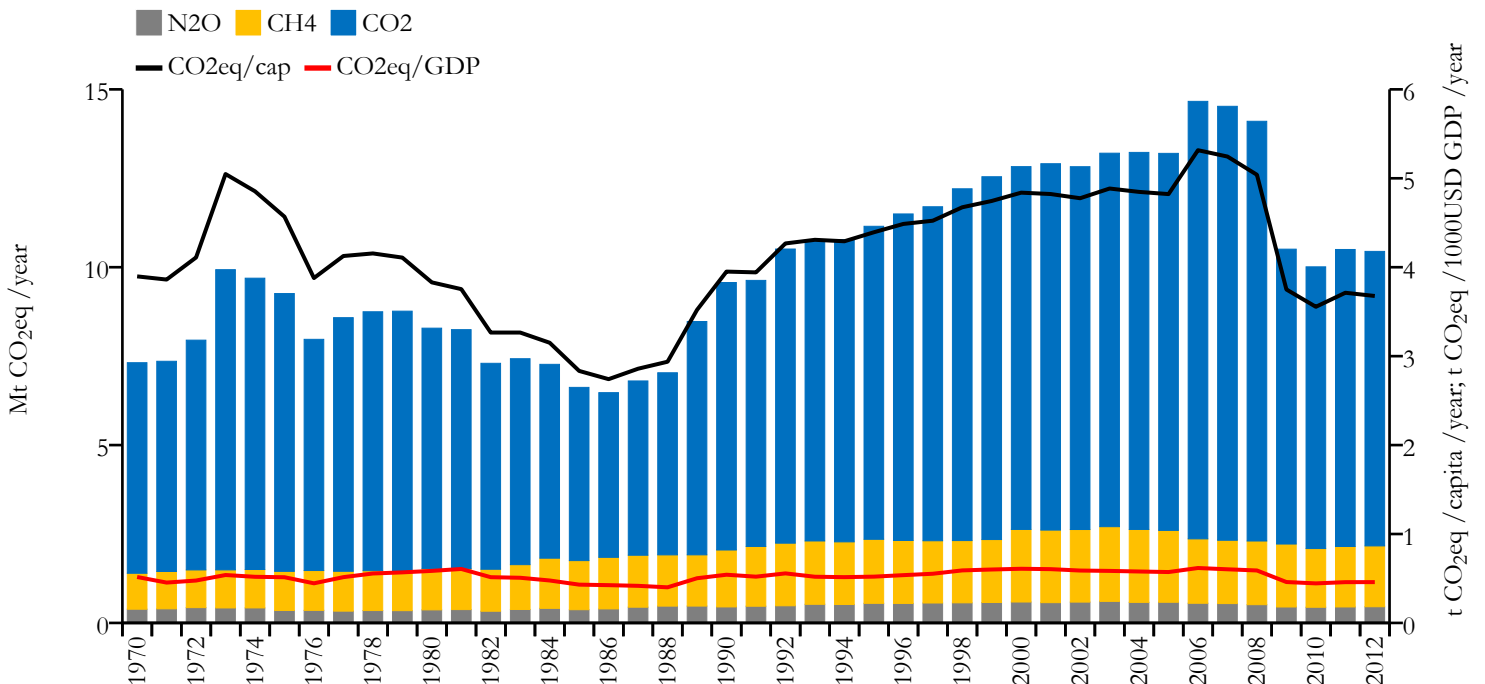
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	8.947	3.106	0.379	2881355
1990	7.508	3.103	0.424	2424242

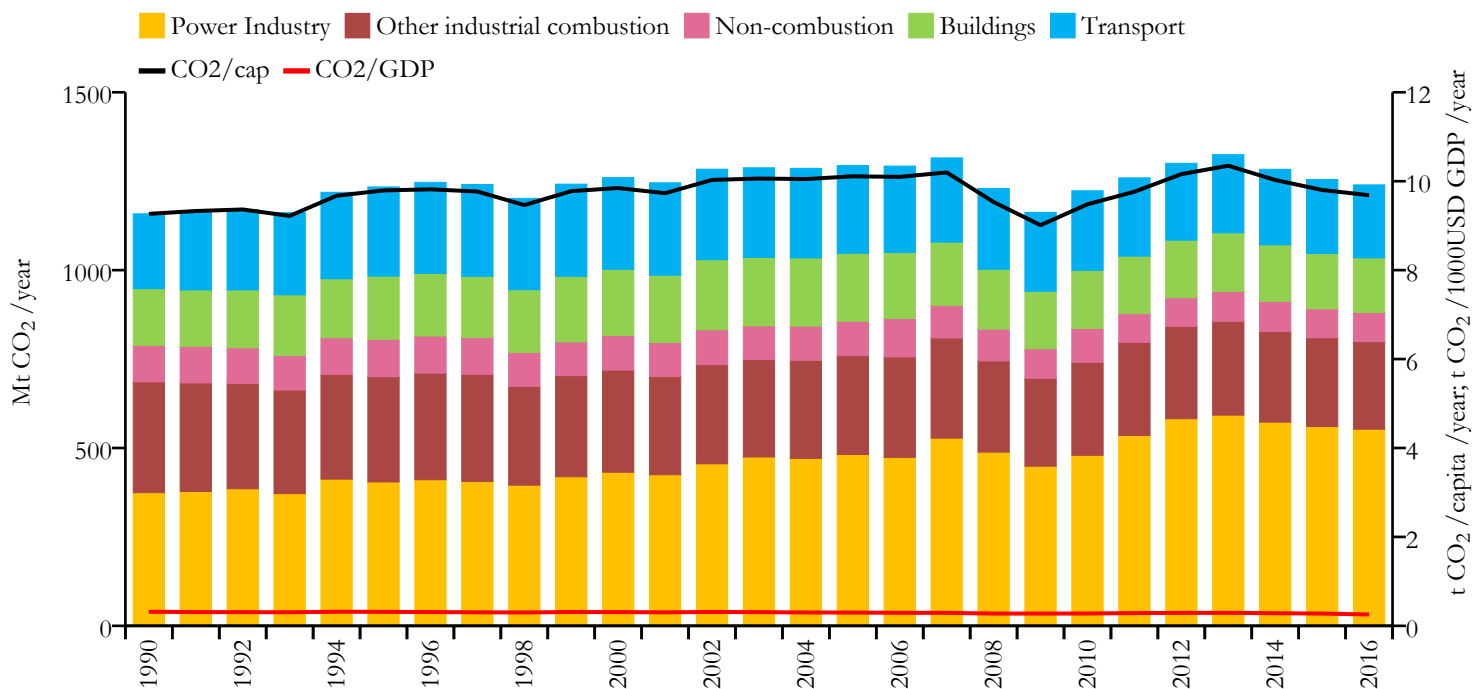


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





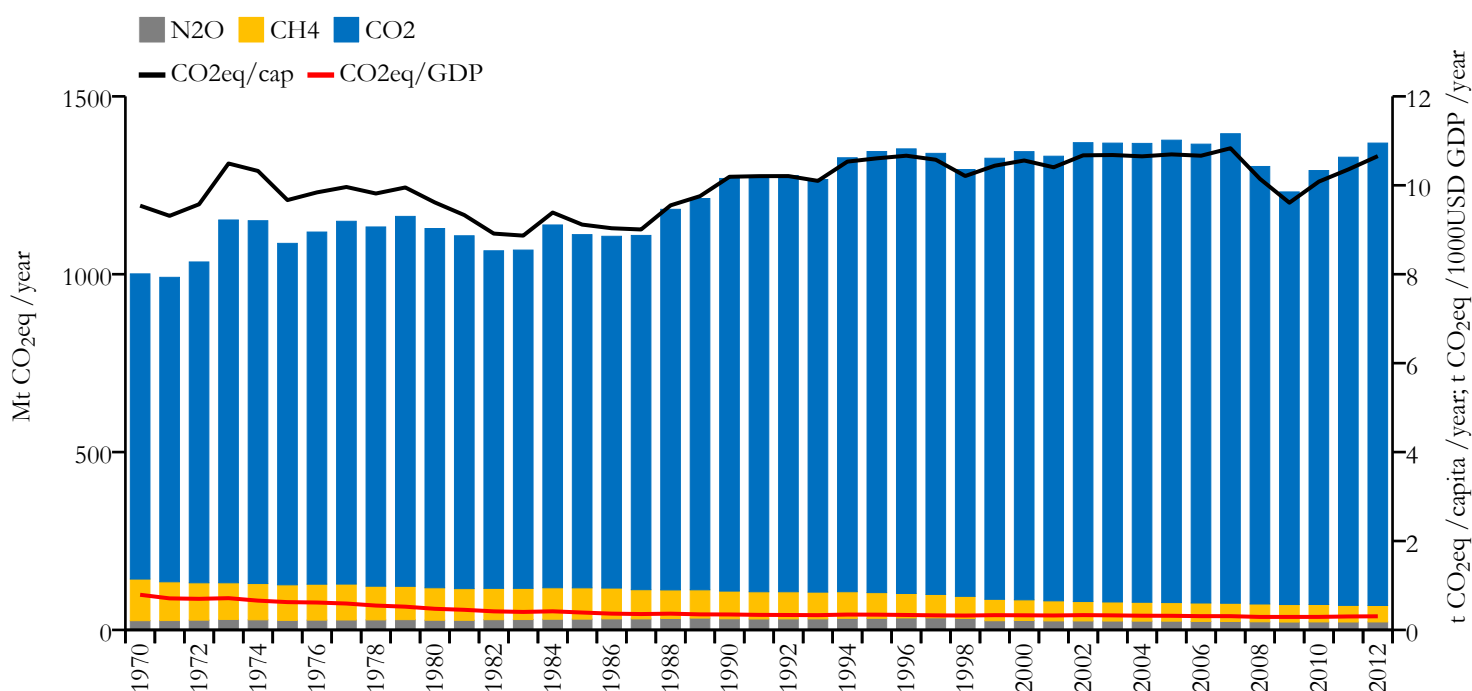
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



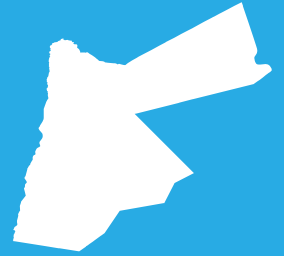
Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	1239.592	9.684	0.255	127748513
1990	1158.222	9.266	0.317	124515561



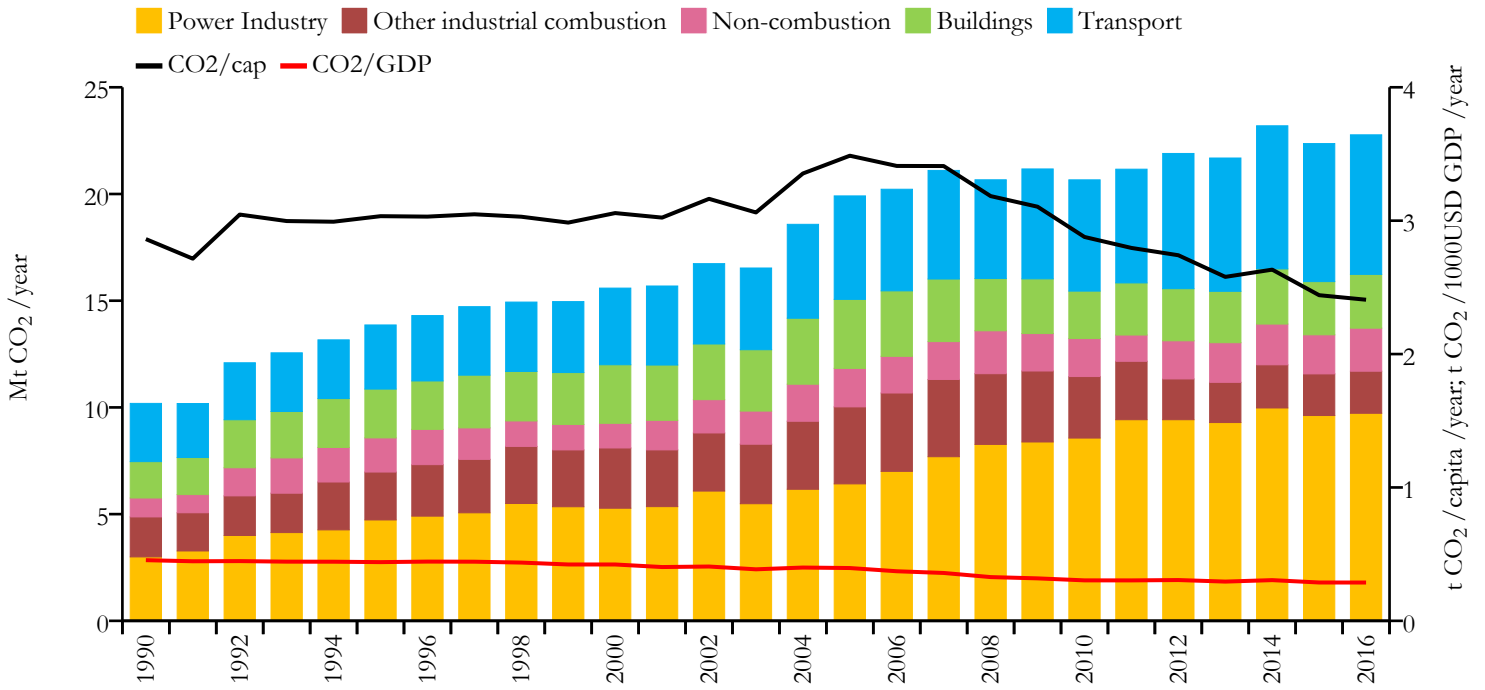
## Greenhouse gas emissions (EDGARv4.3.2 dataset)



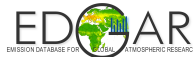




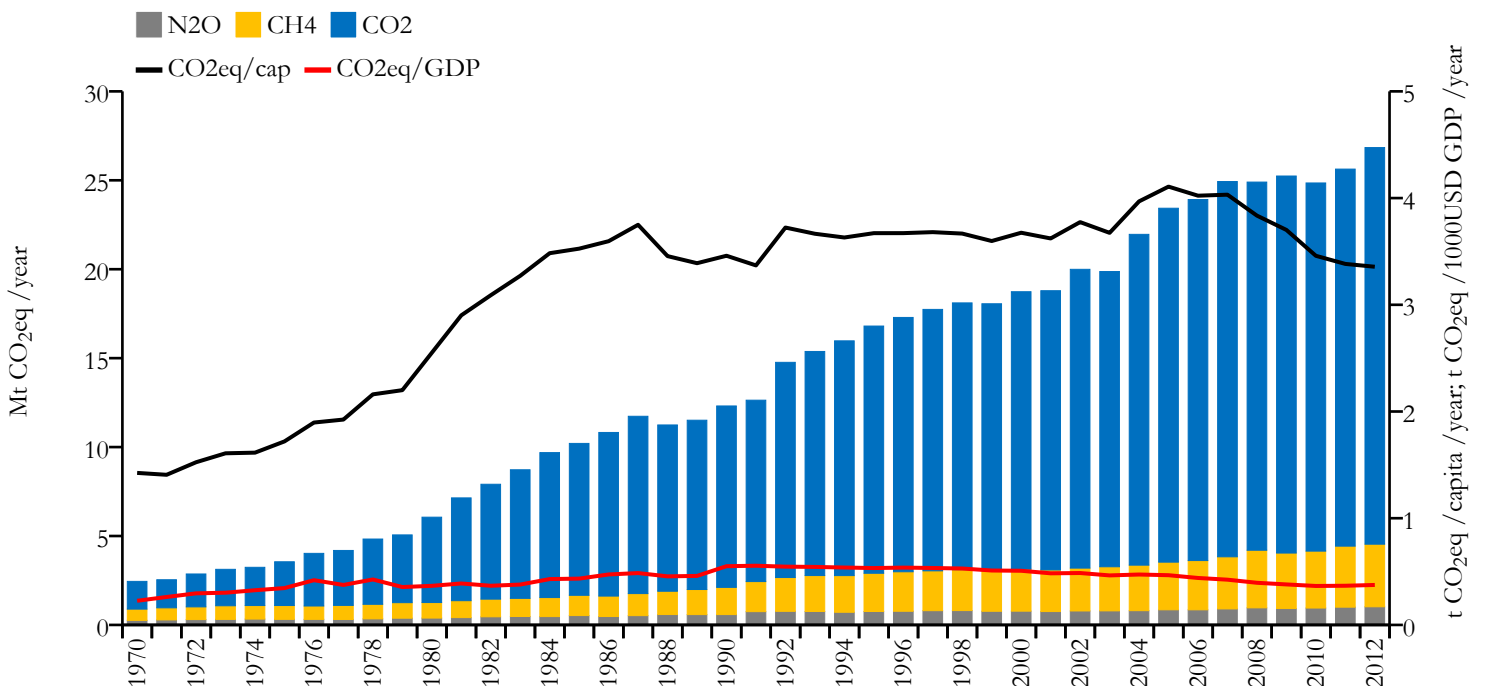
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	22.772	2.407	0.287	9455802
1990	10.189	2.862	0.455	3560582

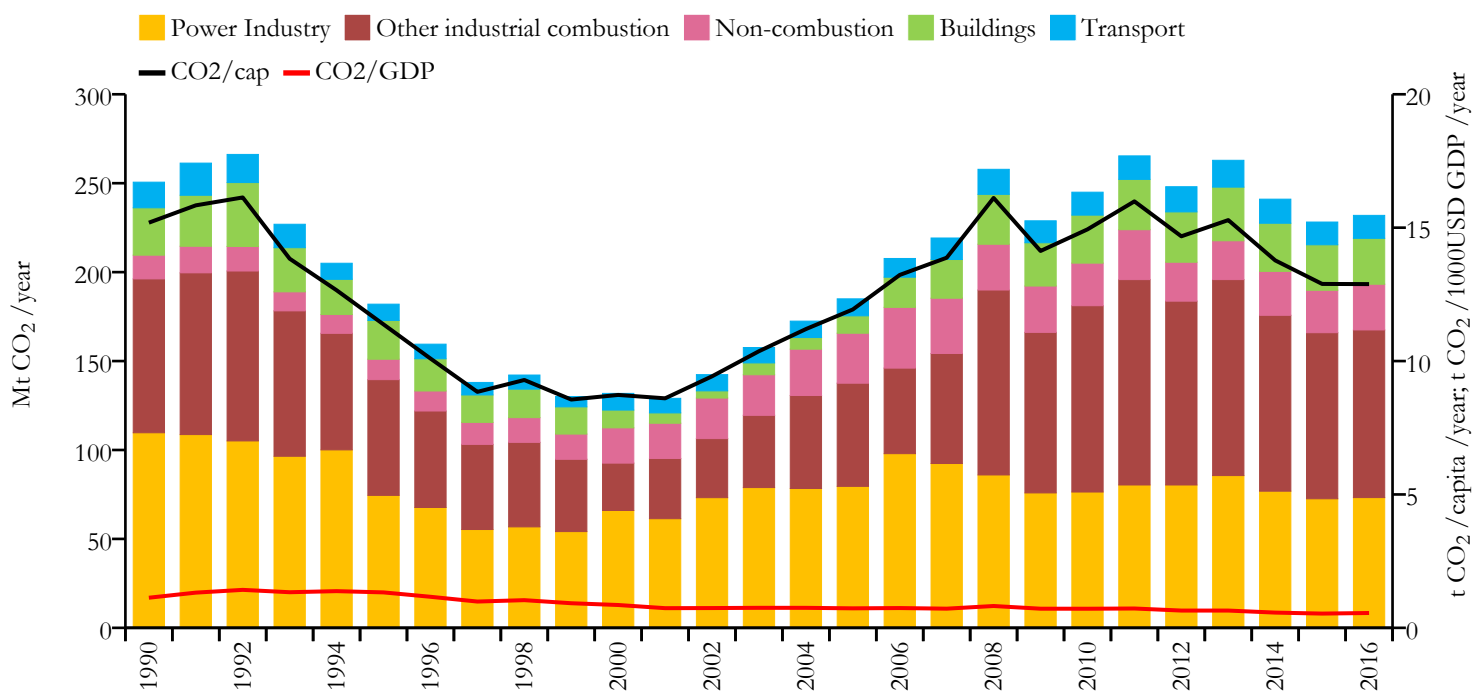


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





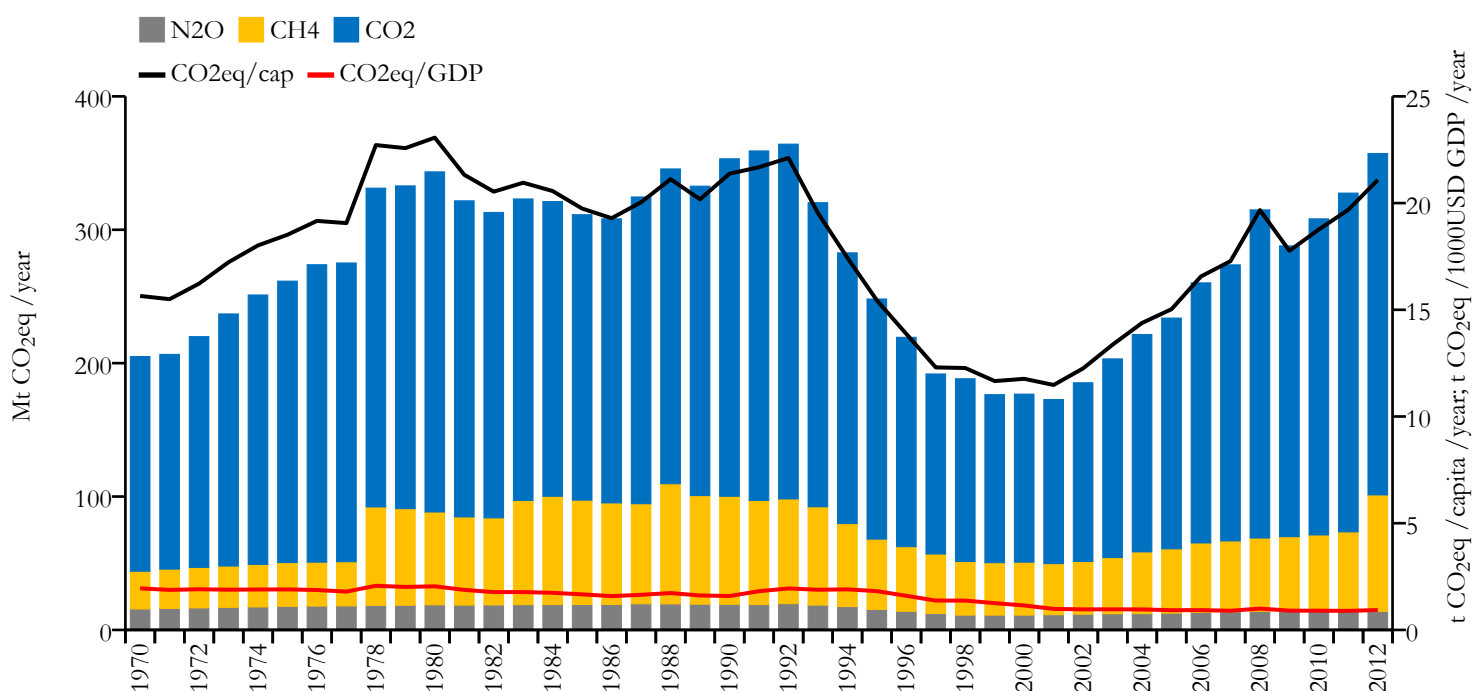
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	231.920	12.884	0.556	17987736
1990	250.590	15.187	1.129	16540258

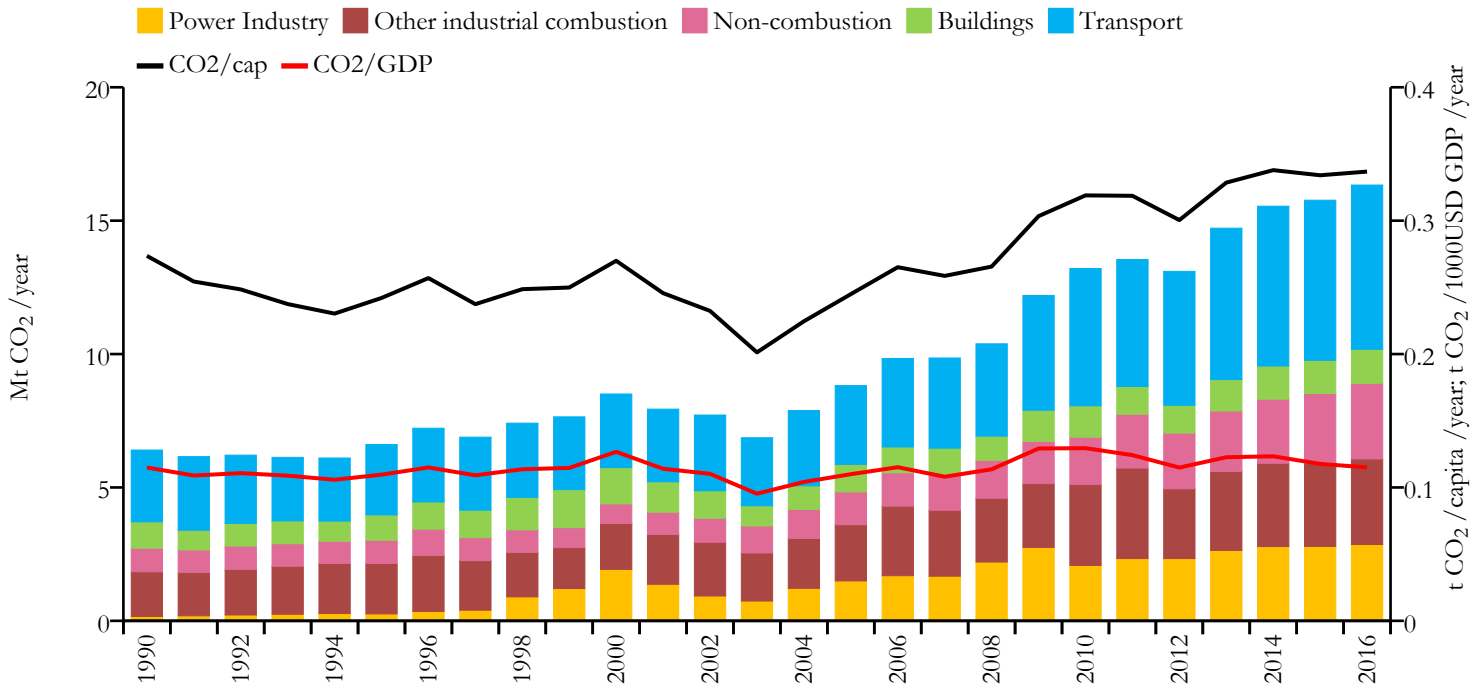


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





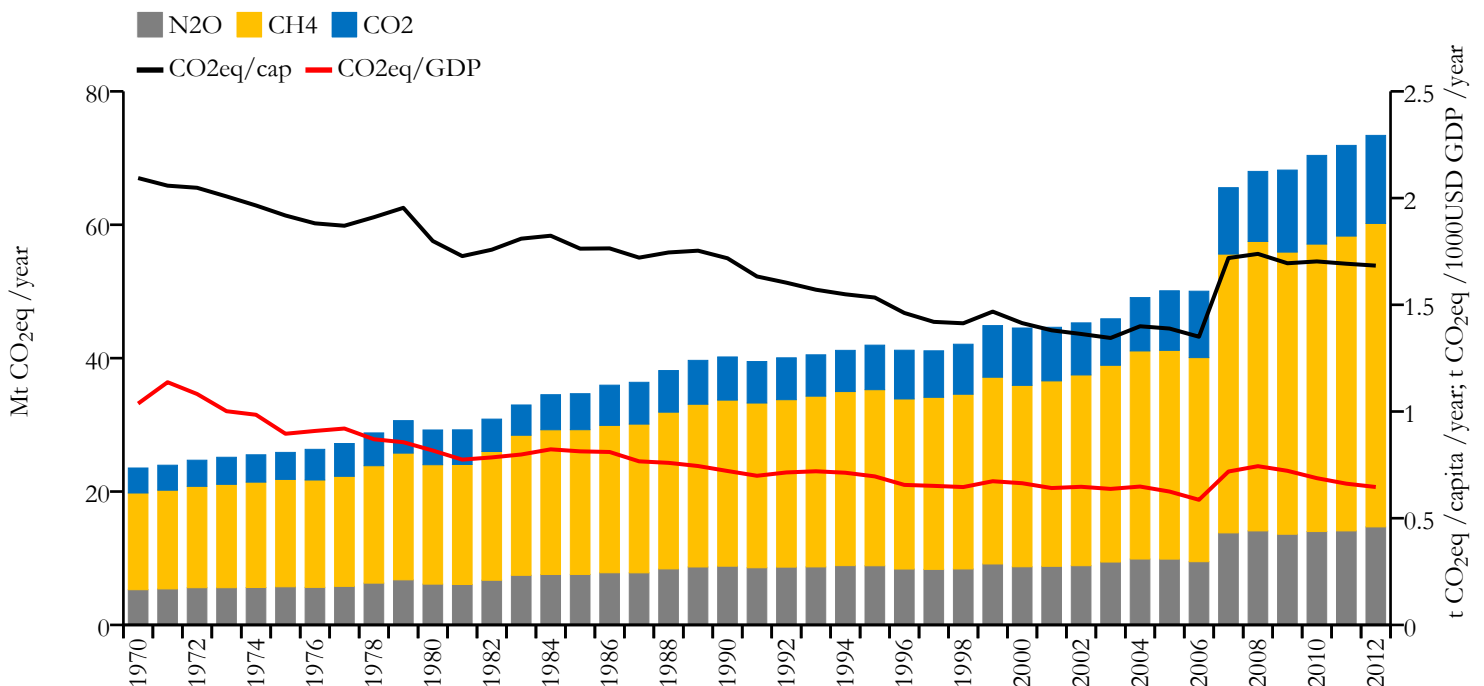
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	16.335	0.337	0.115	48461567
1990	6.402	0.274	0.115	23402507

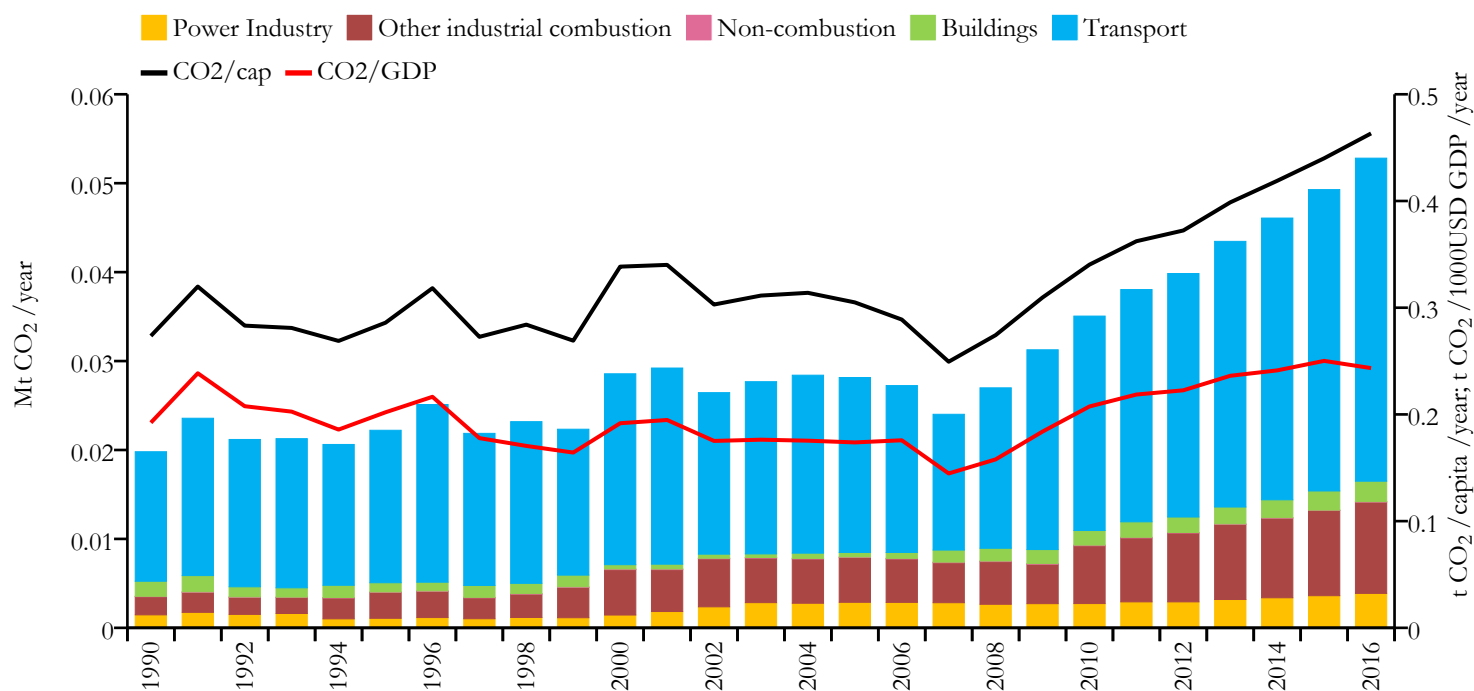


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





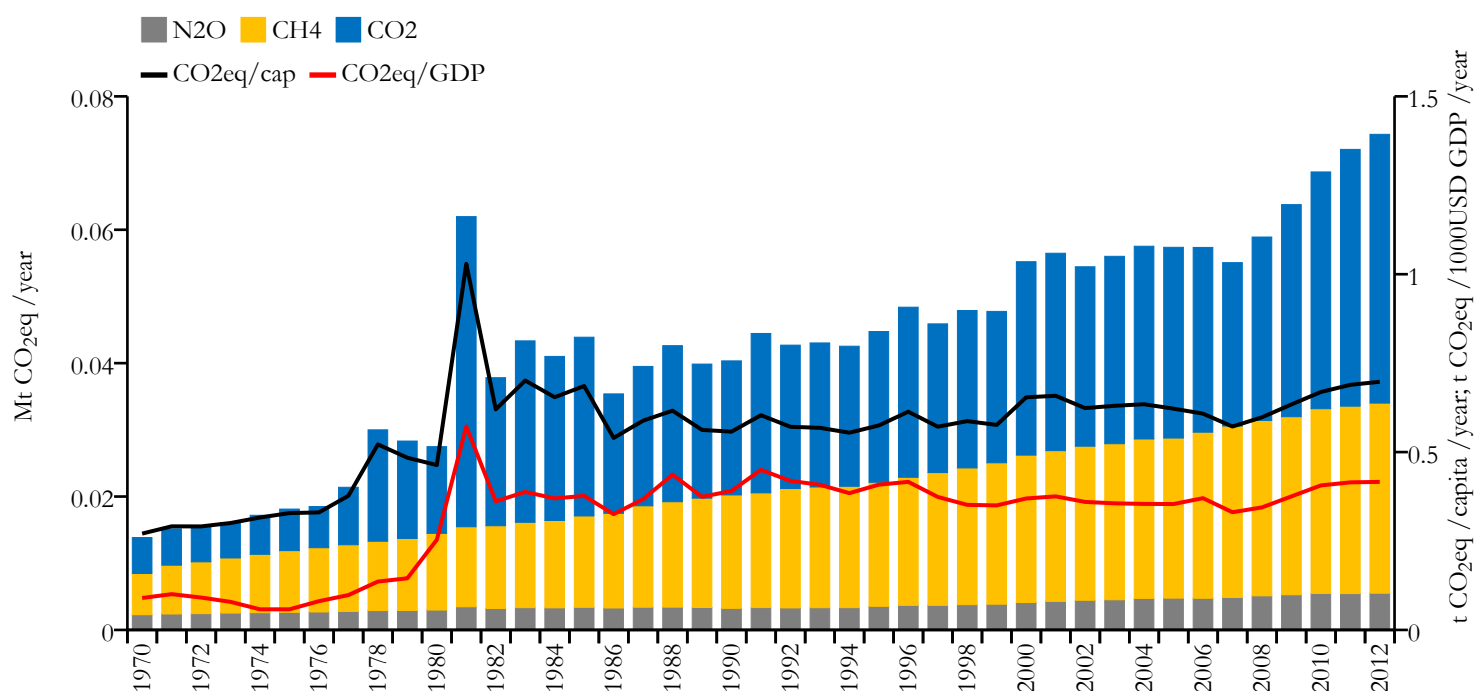
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	0.053	0.463	0.243	114395
1990	0.020	0.274	0.192	72412

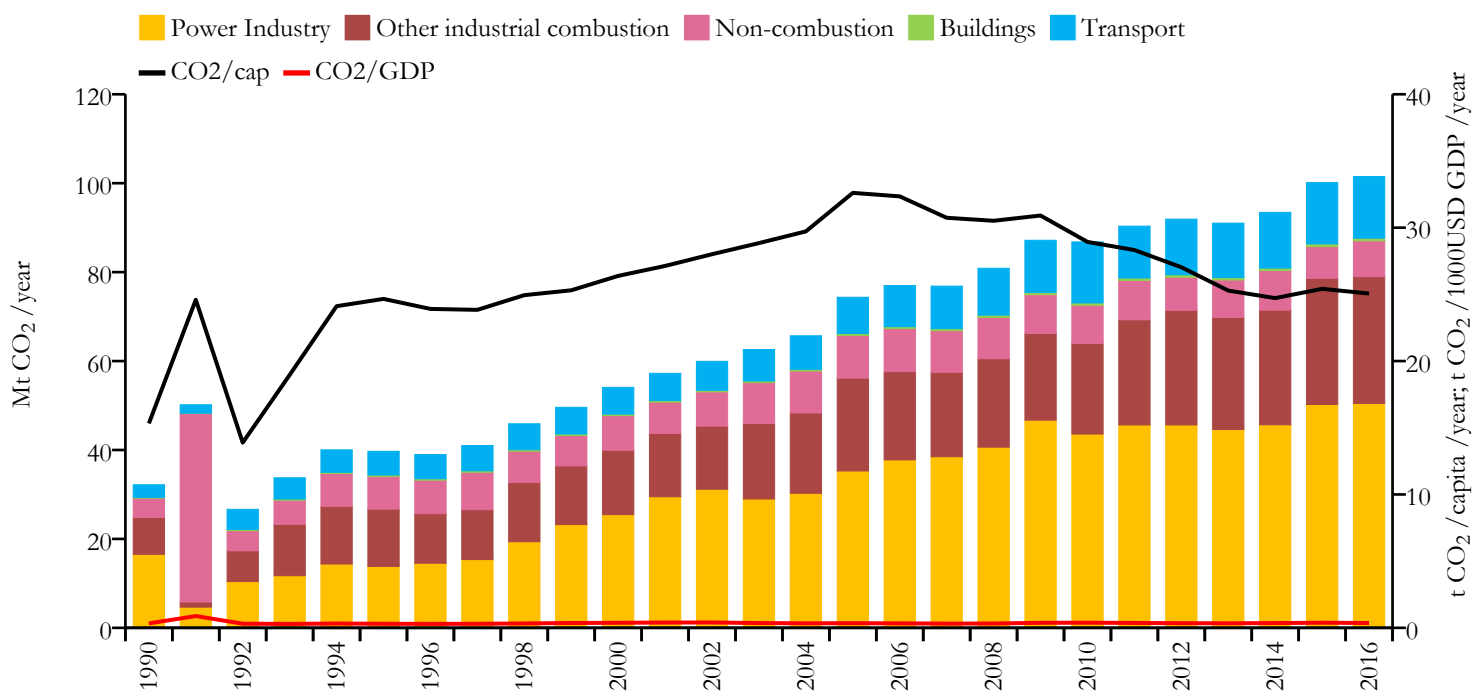


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





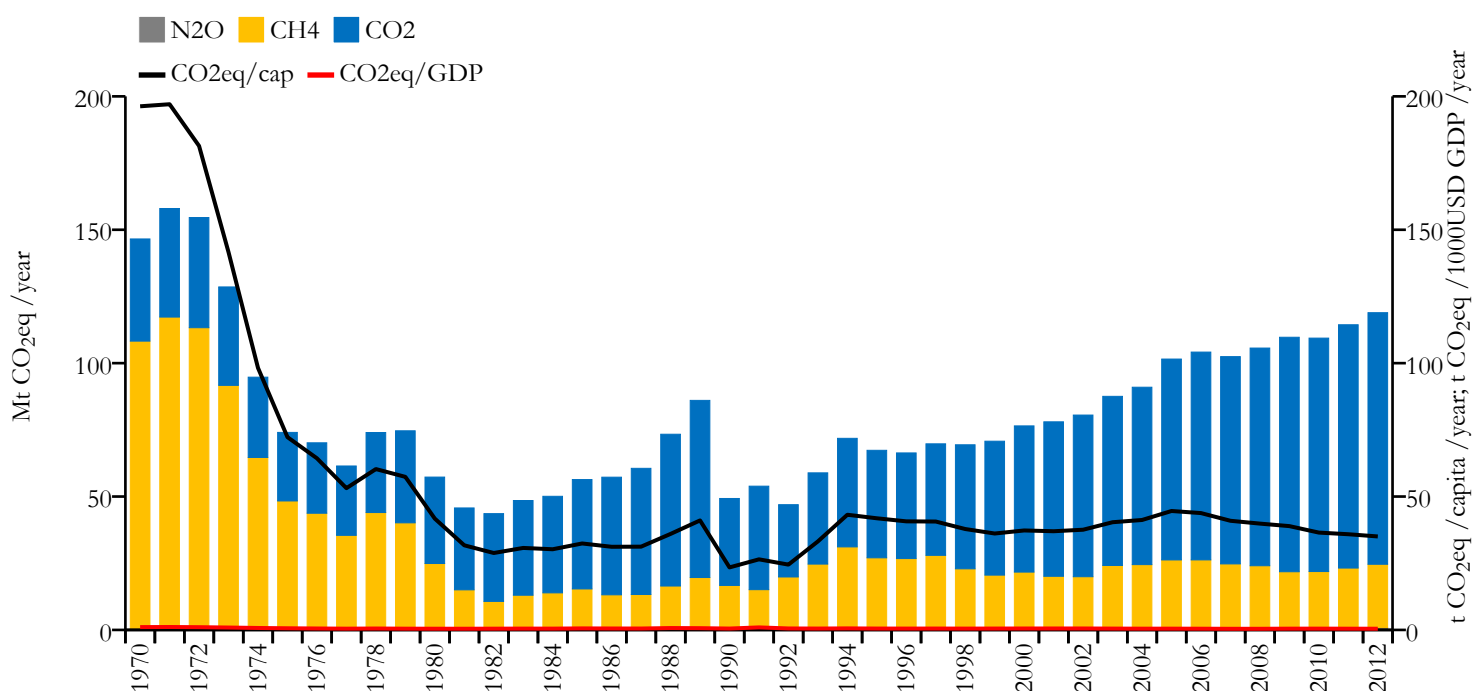
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	101.492	25.060	0.362	4052584
1990	32.178	15.323	0.334	2099615

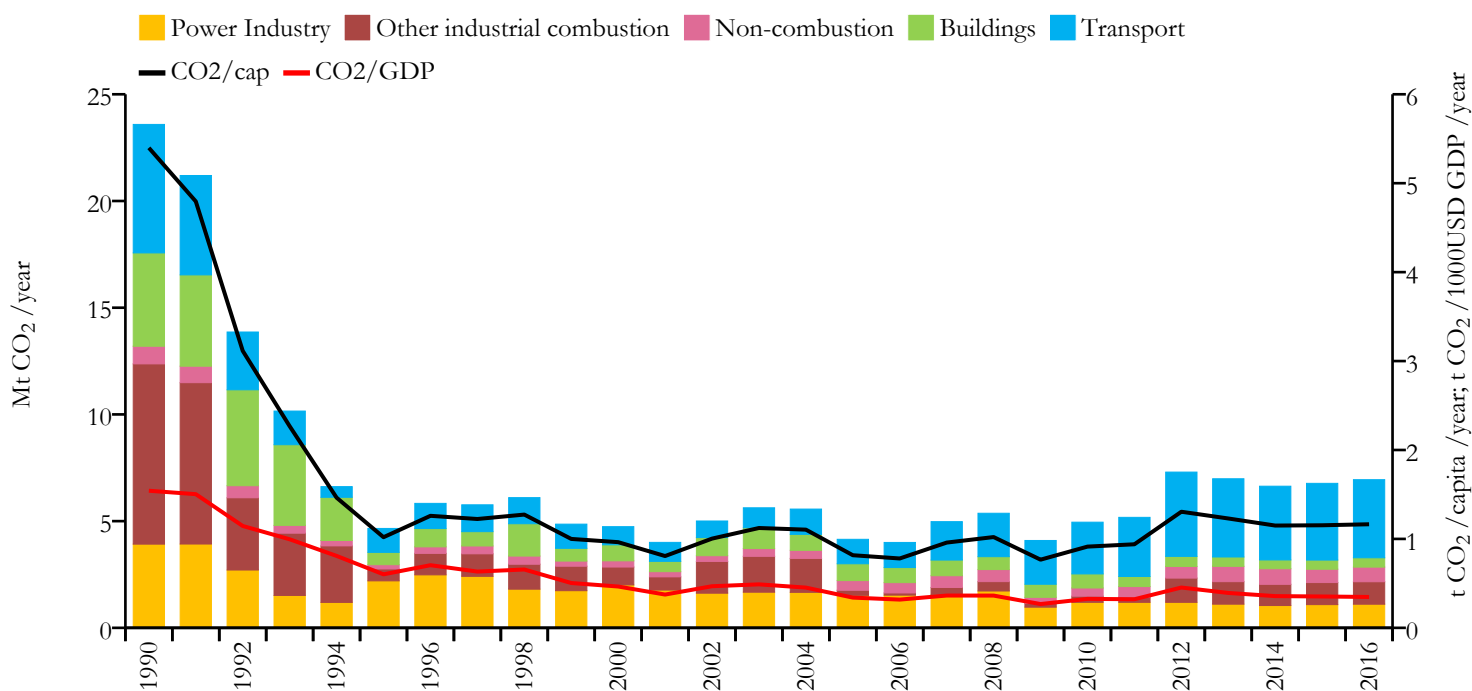


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





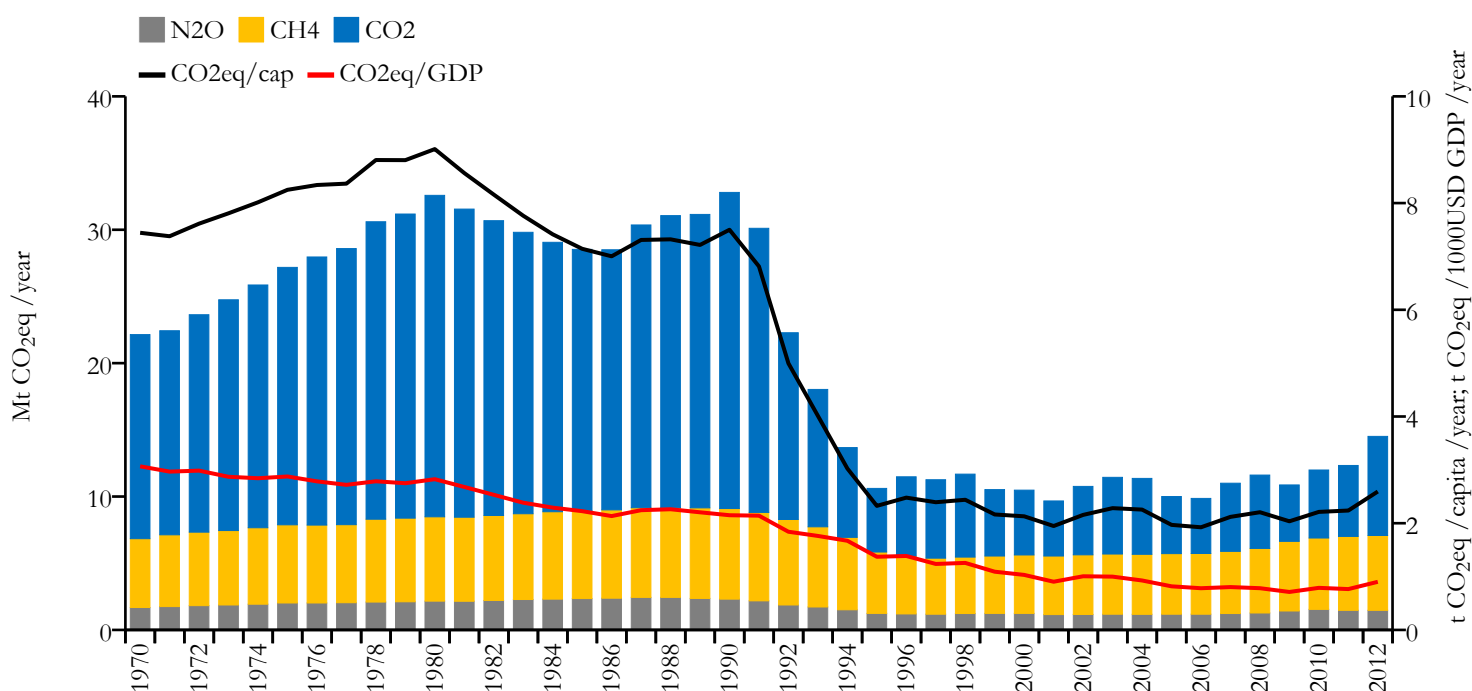
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	6.942	1.165	0.347	5955734
1990	23.588	5.398	1.542	4372890

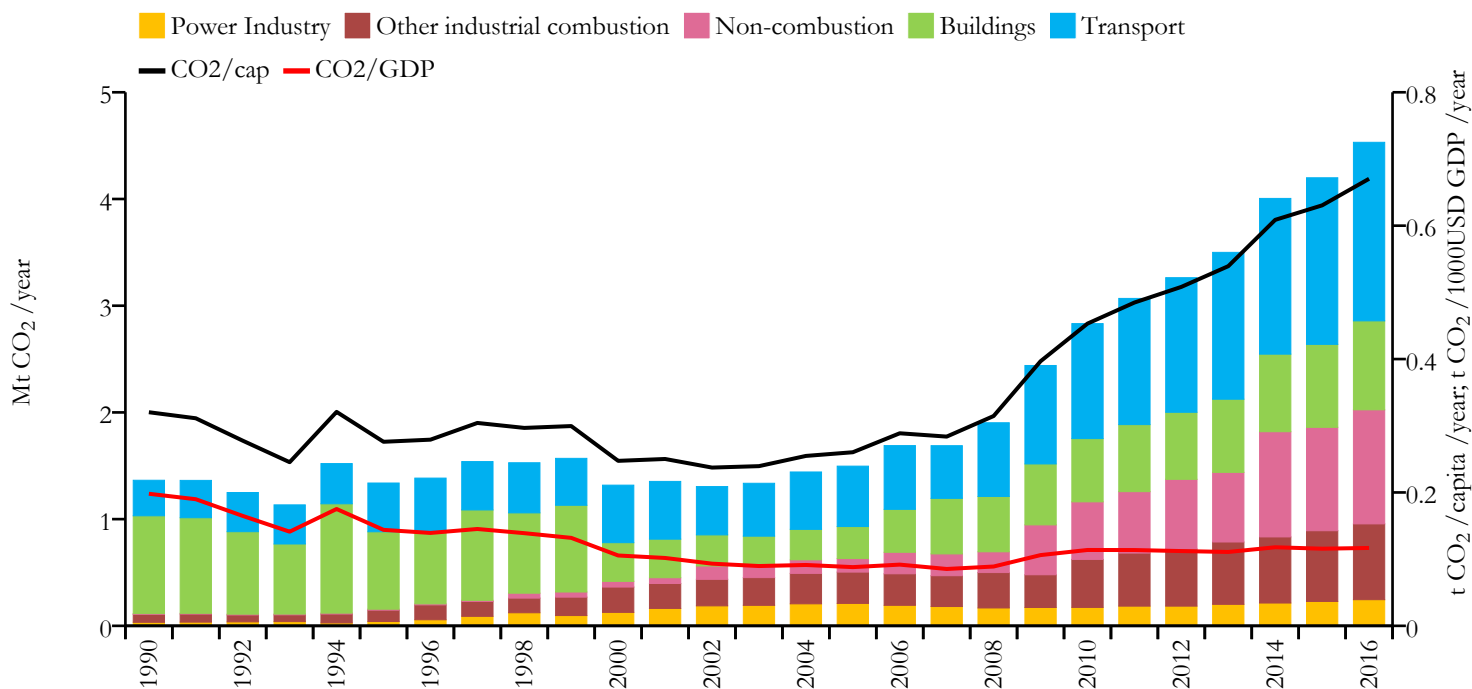


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





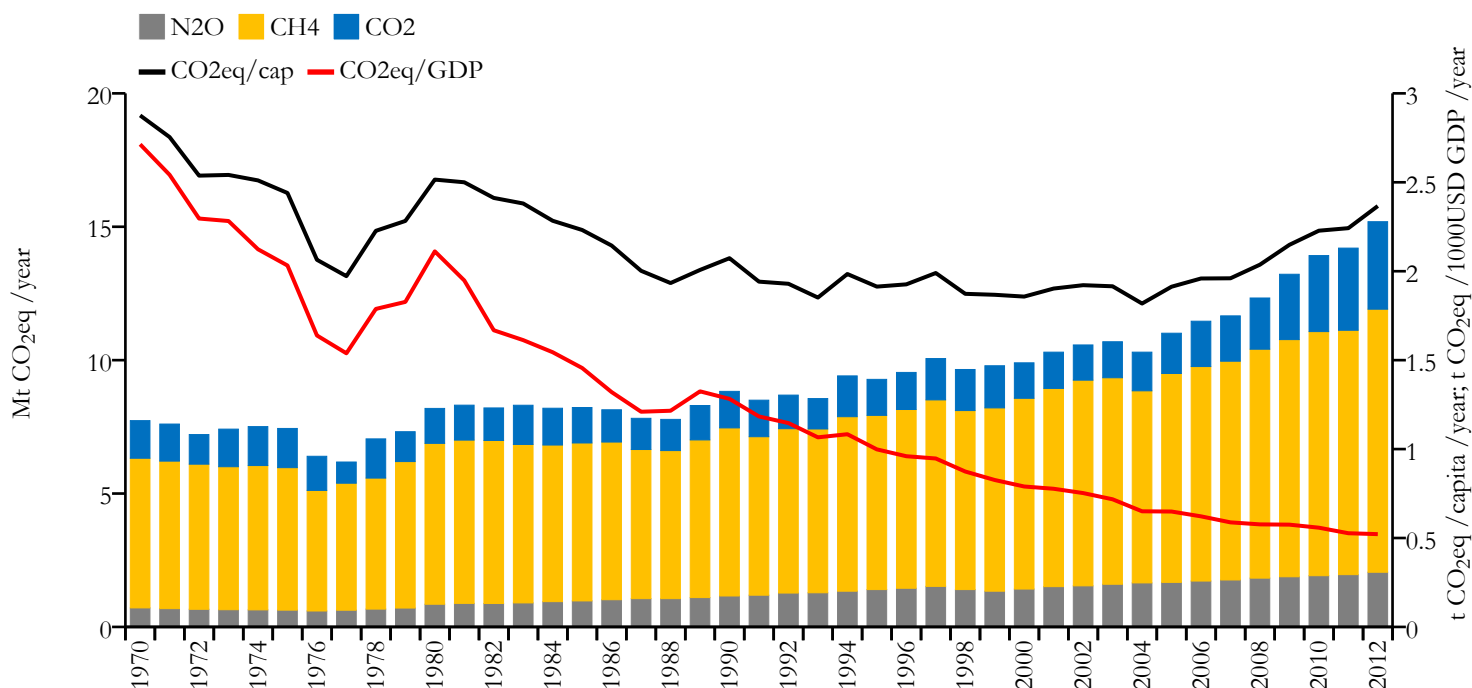
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	4.531	0.670	0.117	6758353
1990	1.364	0.320	0.198	4258472

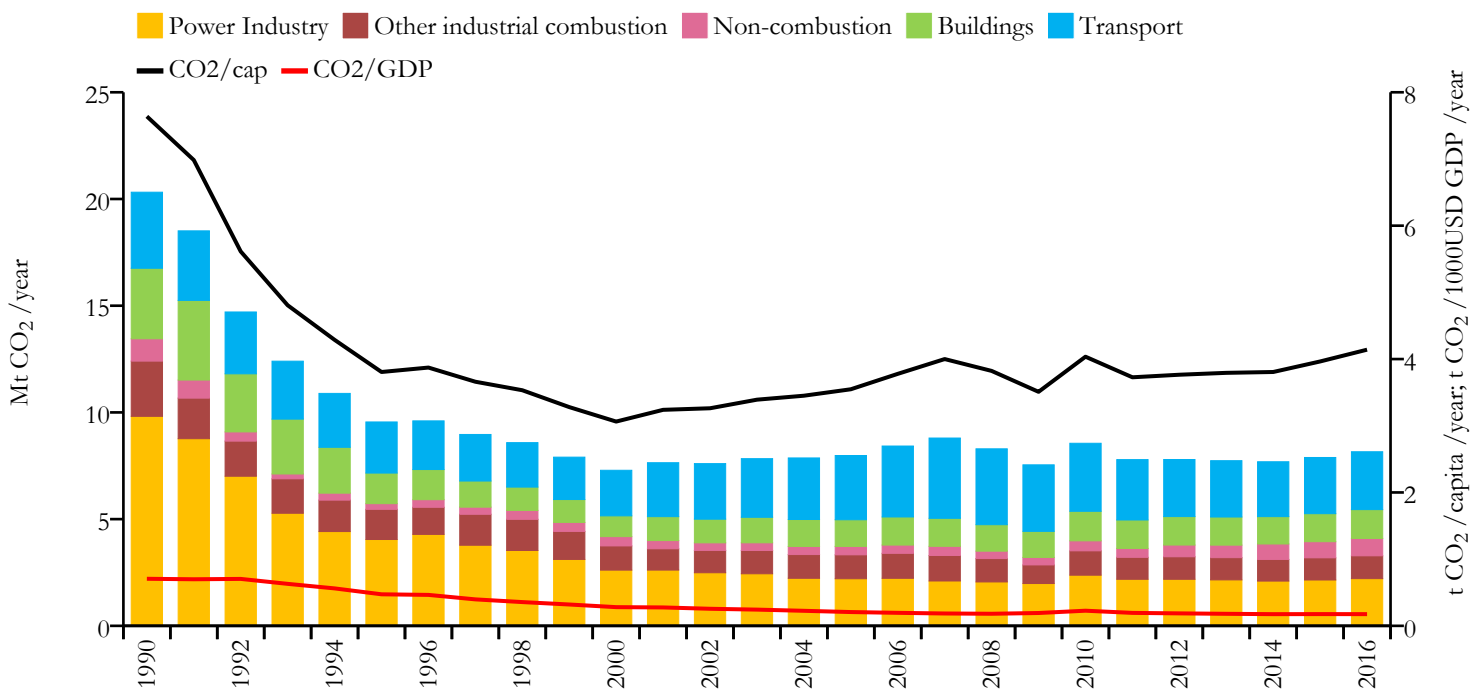


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





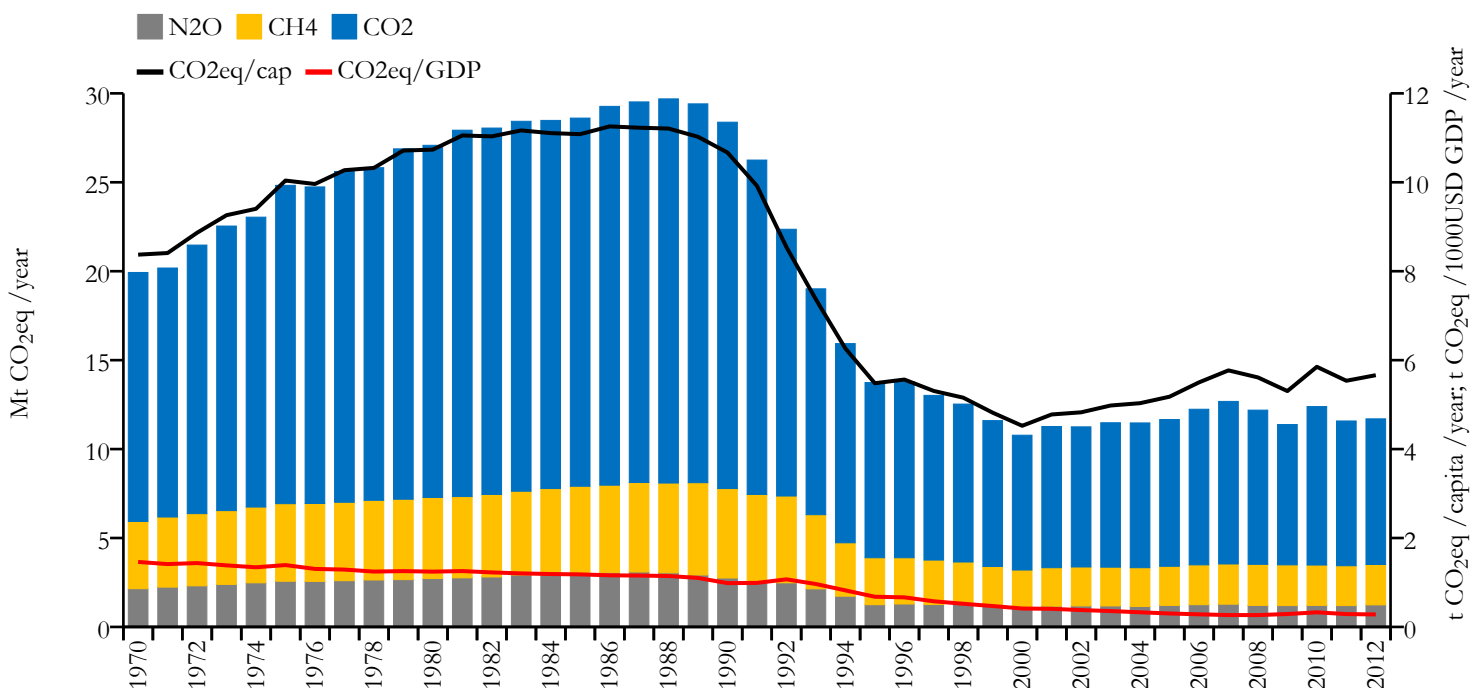
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	8.157	4.141	0.175	1970530
1990	20.319	7.639	0.706	2664432



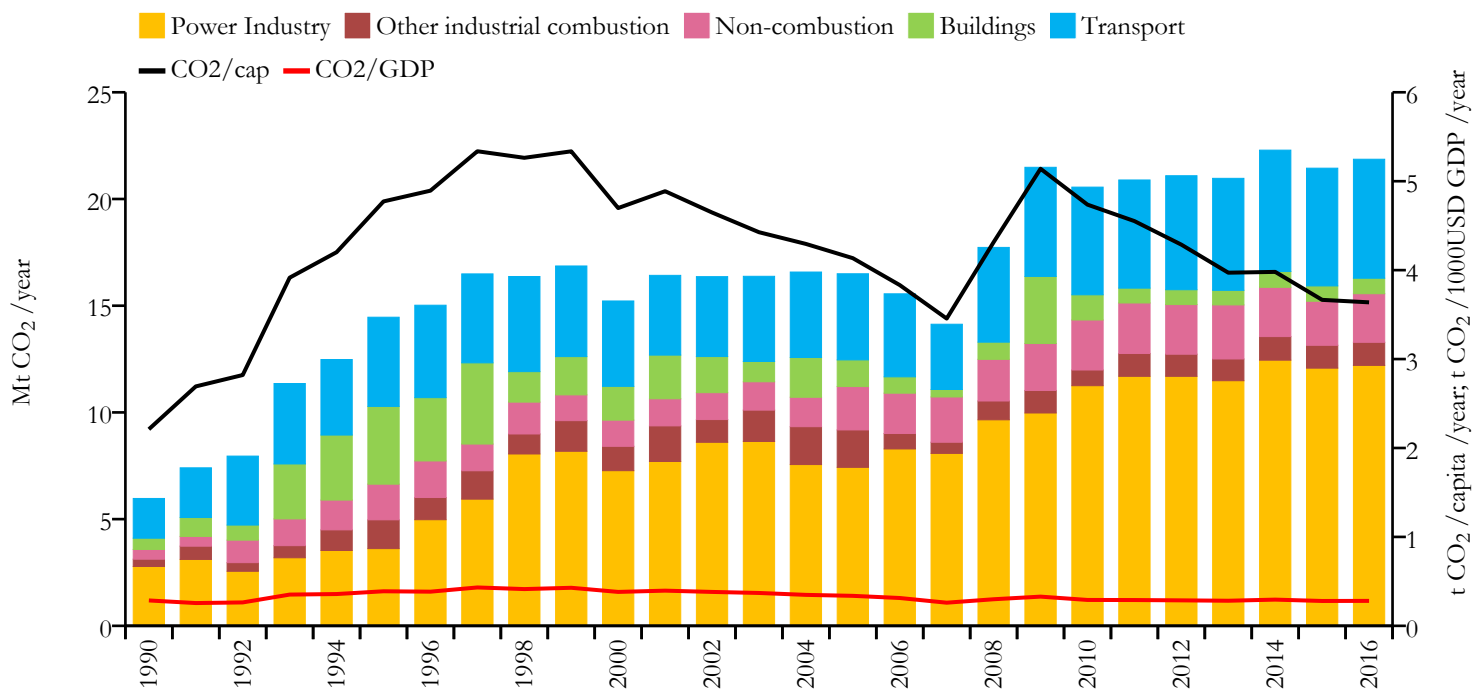
## Greenhouse gas emissions (EDGARv4.3.2 dataset)







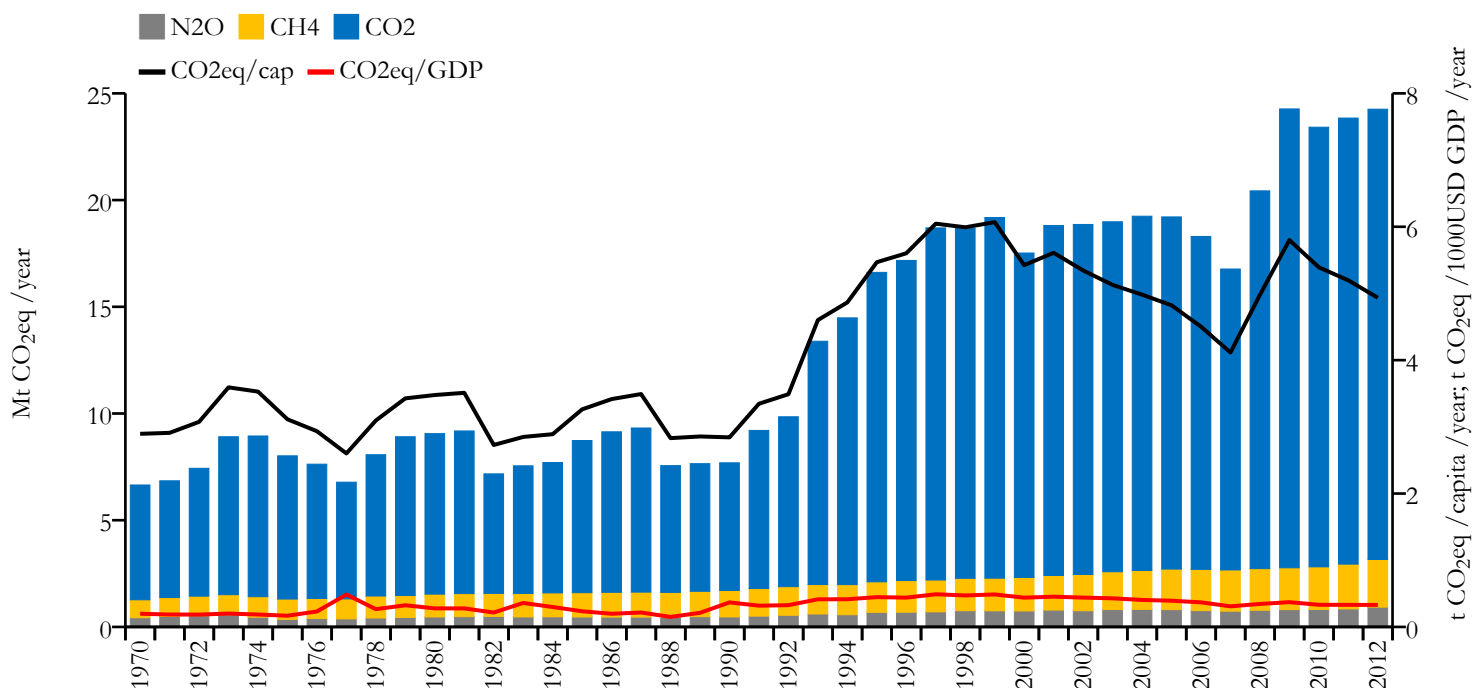
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)

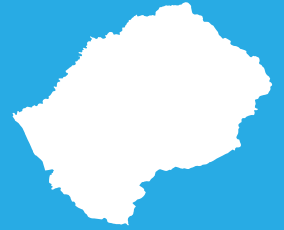


Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	21.863	3.638	0.281	6006668
1990	5.969	2.211	0.286	2703016

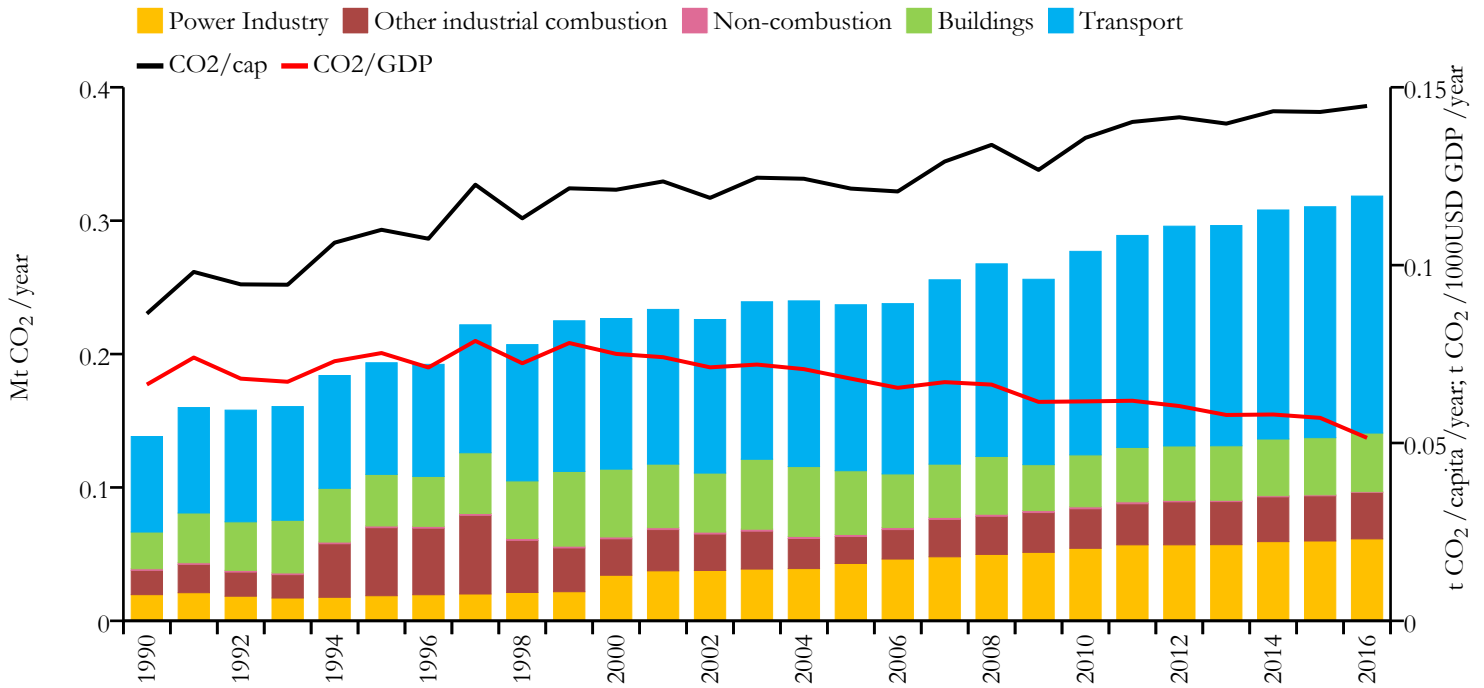


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





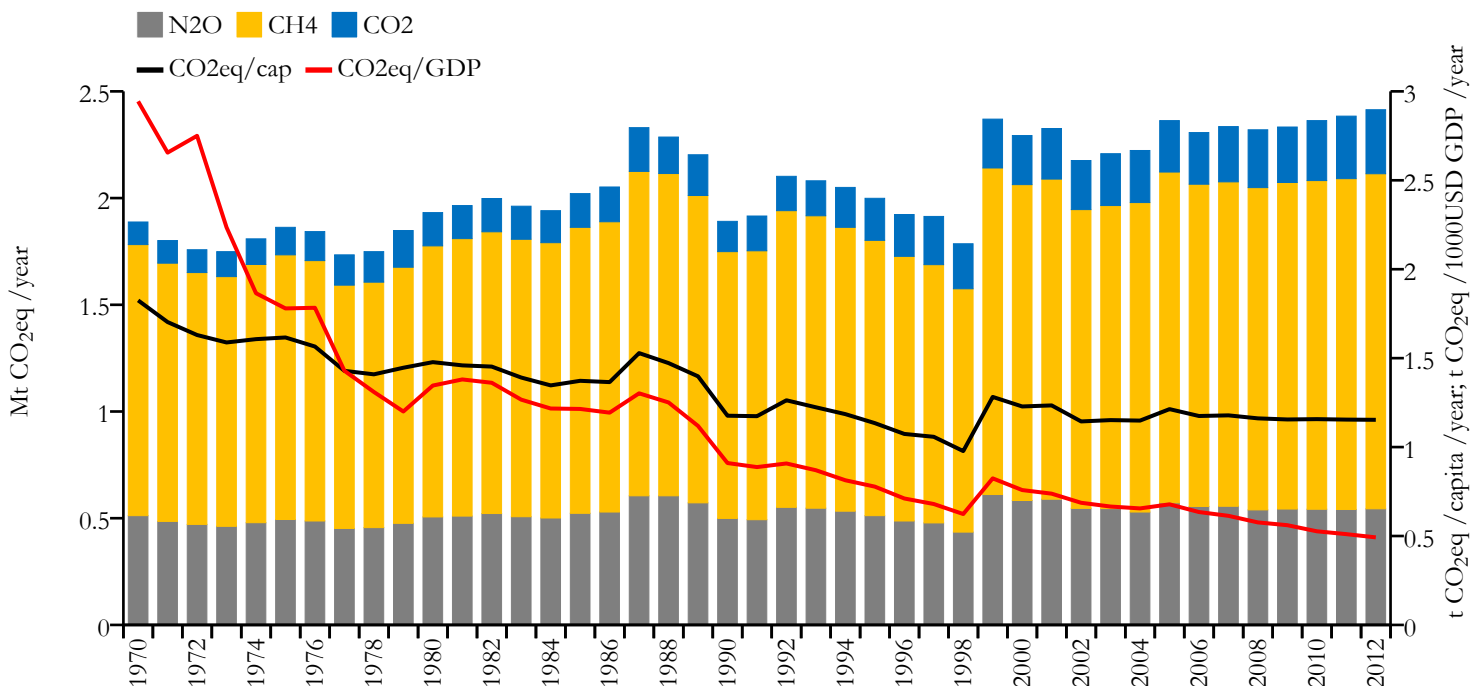
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	0.318	0.145	0.051	2203821
1990	0.138	0.086	0.066	1603938

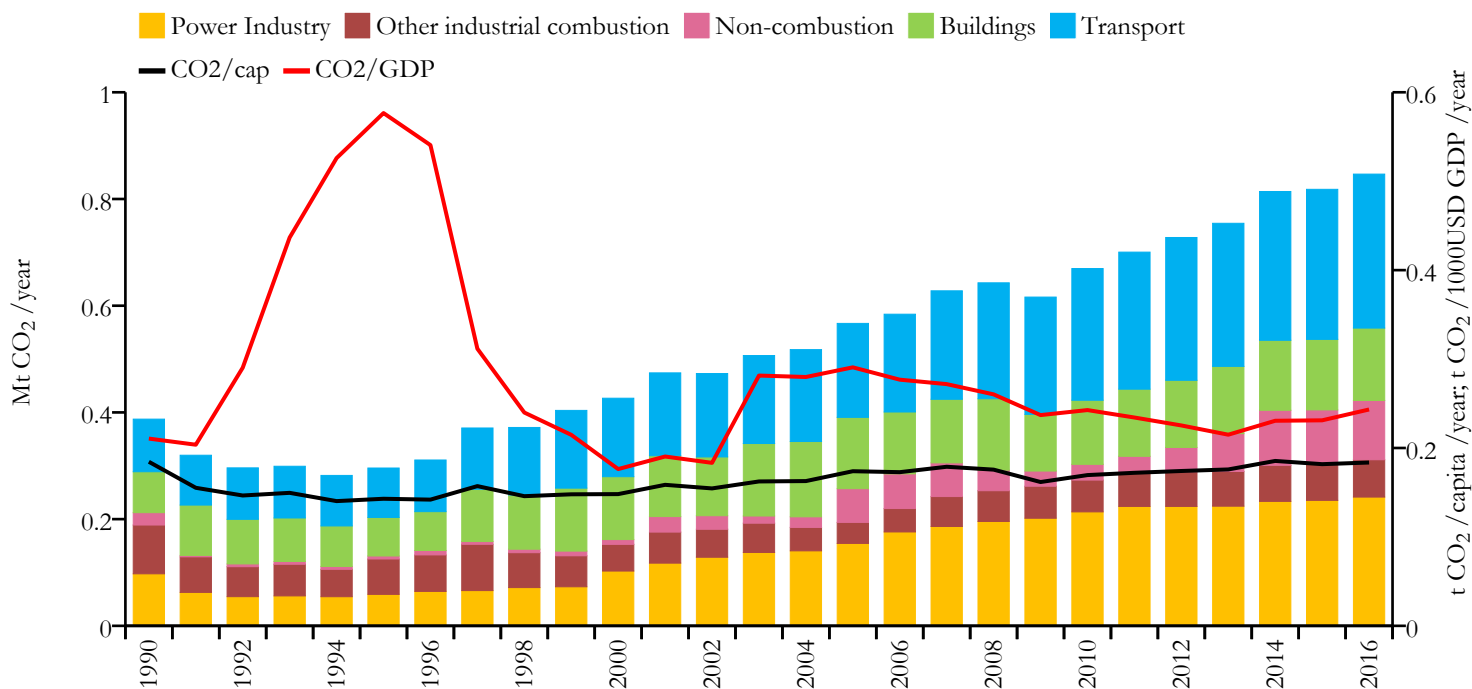


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





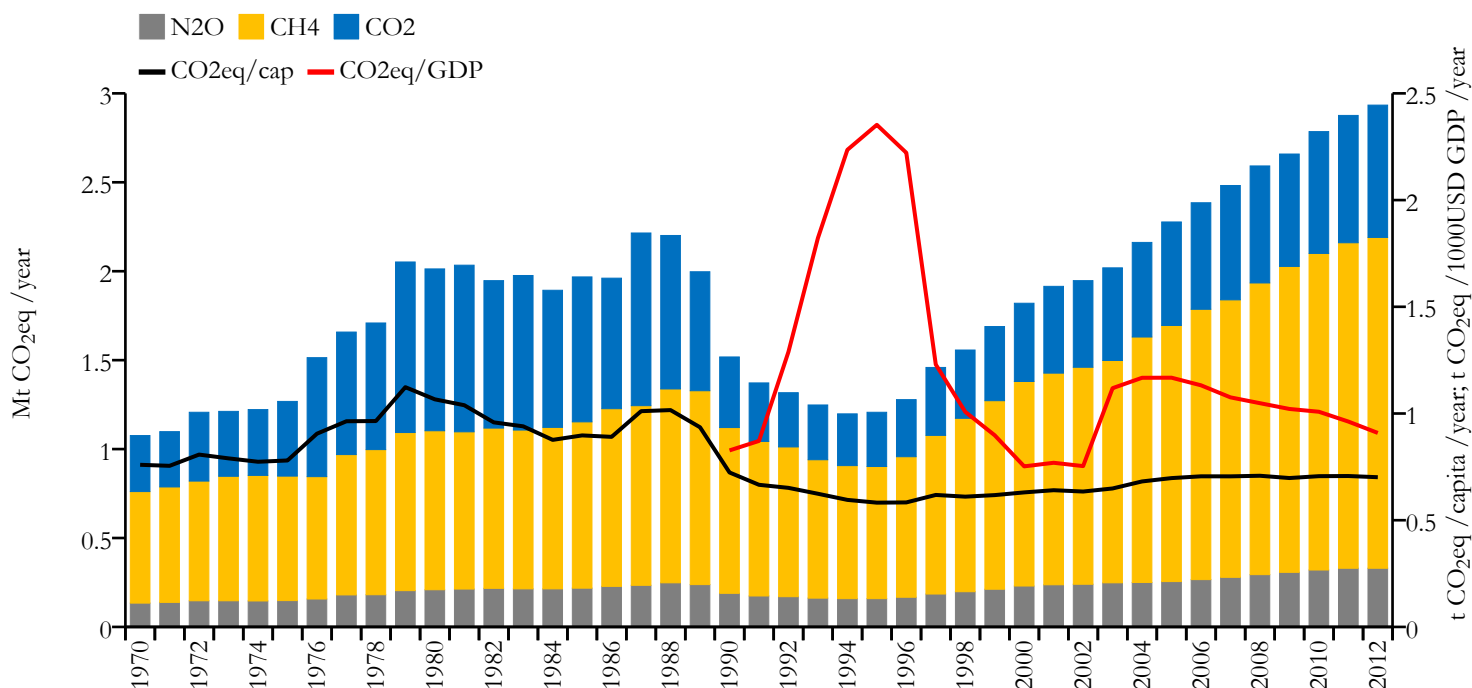
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	0.847	0.184	0.243	4613823
1990	0.387	0.184	0.211	2097232

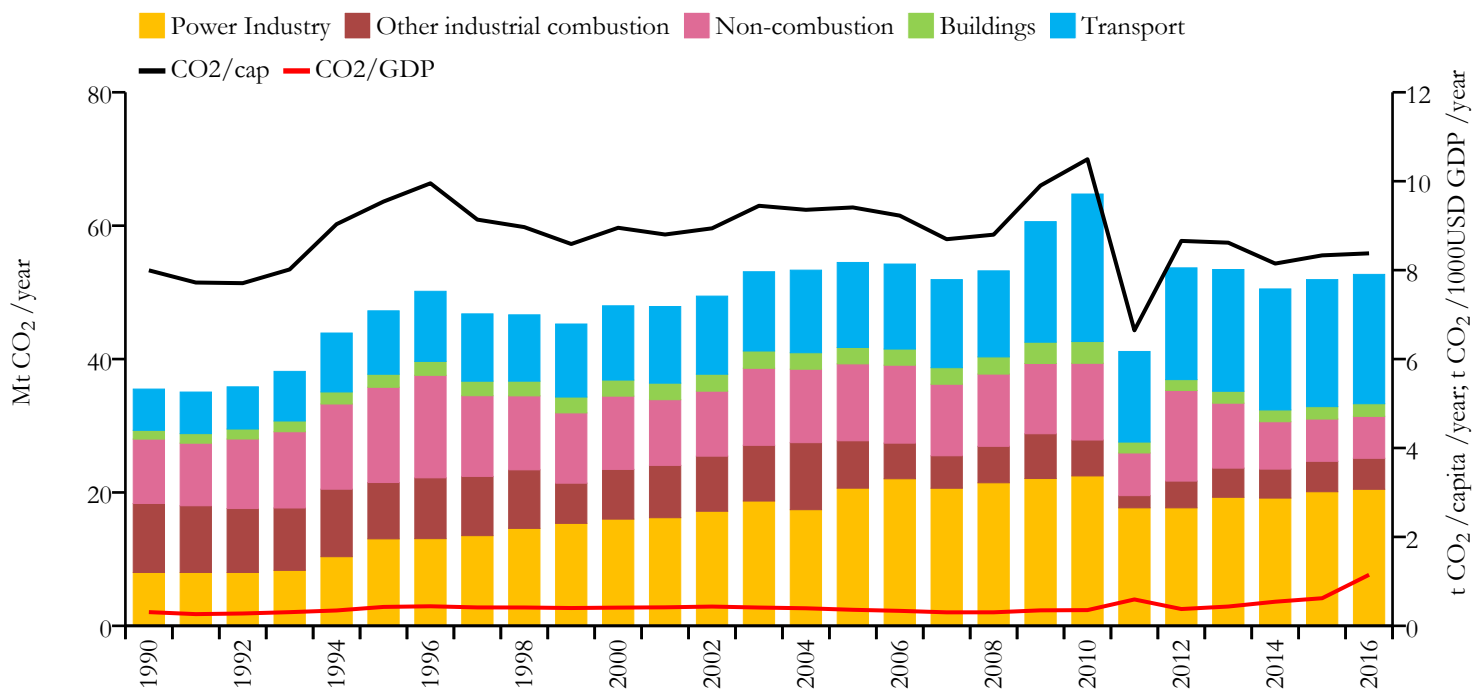


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





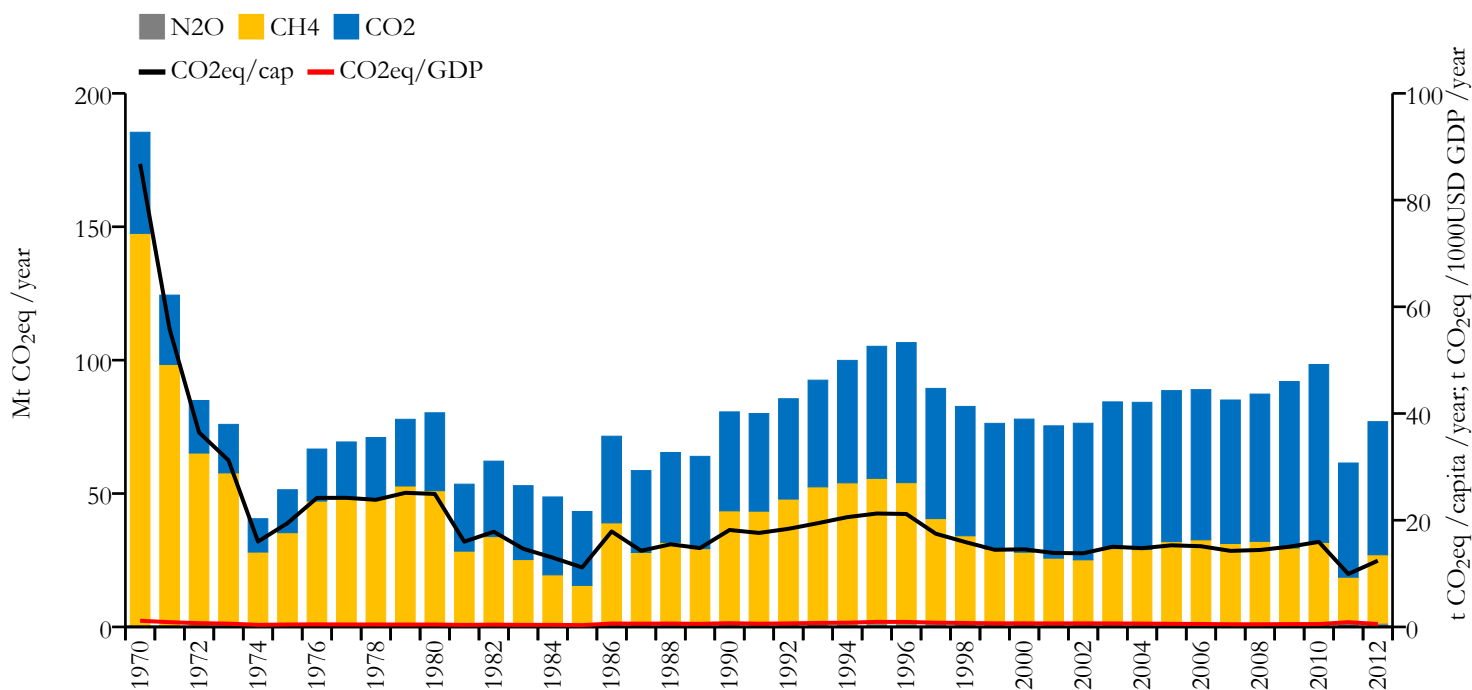
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	52.696	8.378	1.148	6293253
1990	35.500	7.996	0.309	4436661

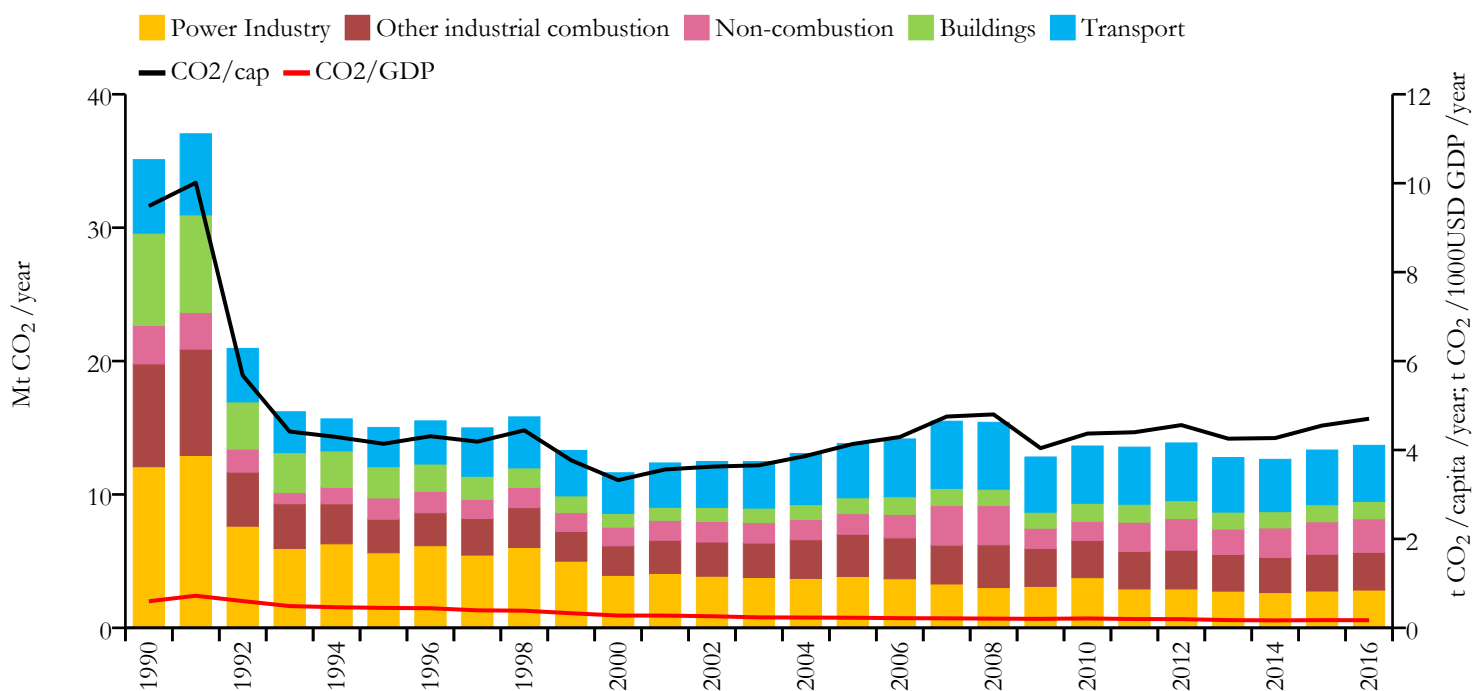


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





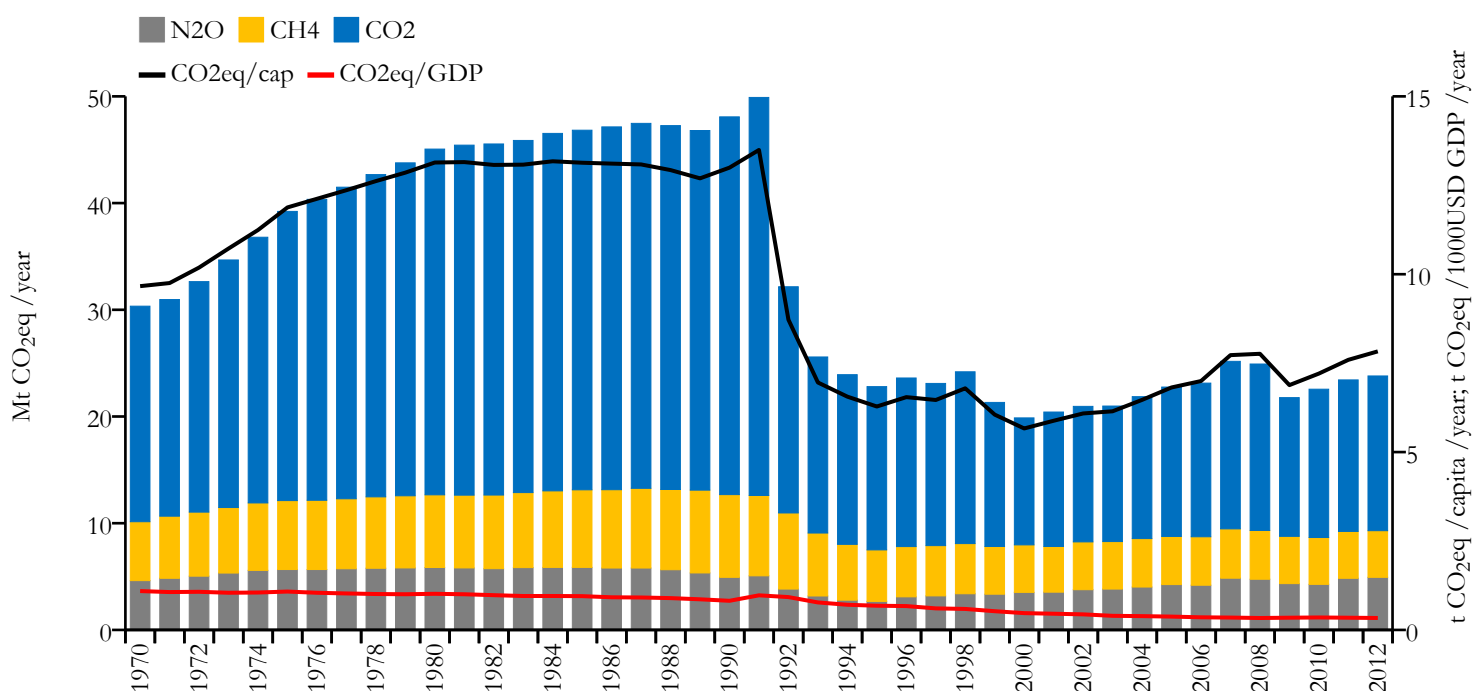
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)

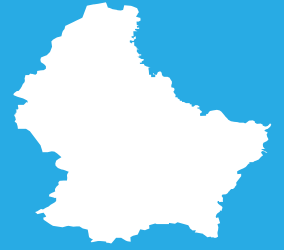


Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	13.685	4.703	0.171	2908249
1990	35.099	9.486	0.598	3696034

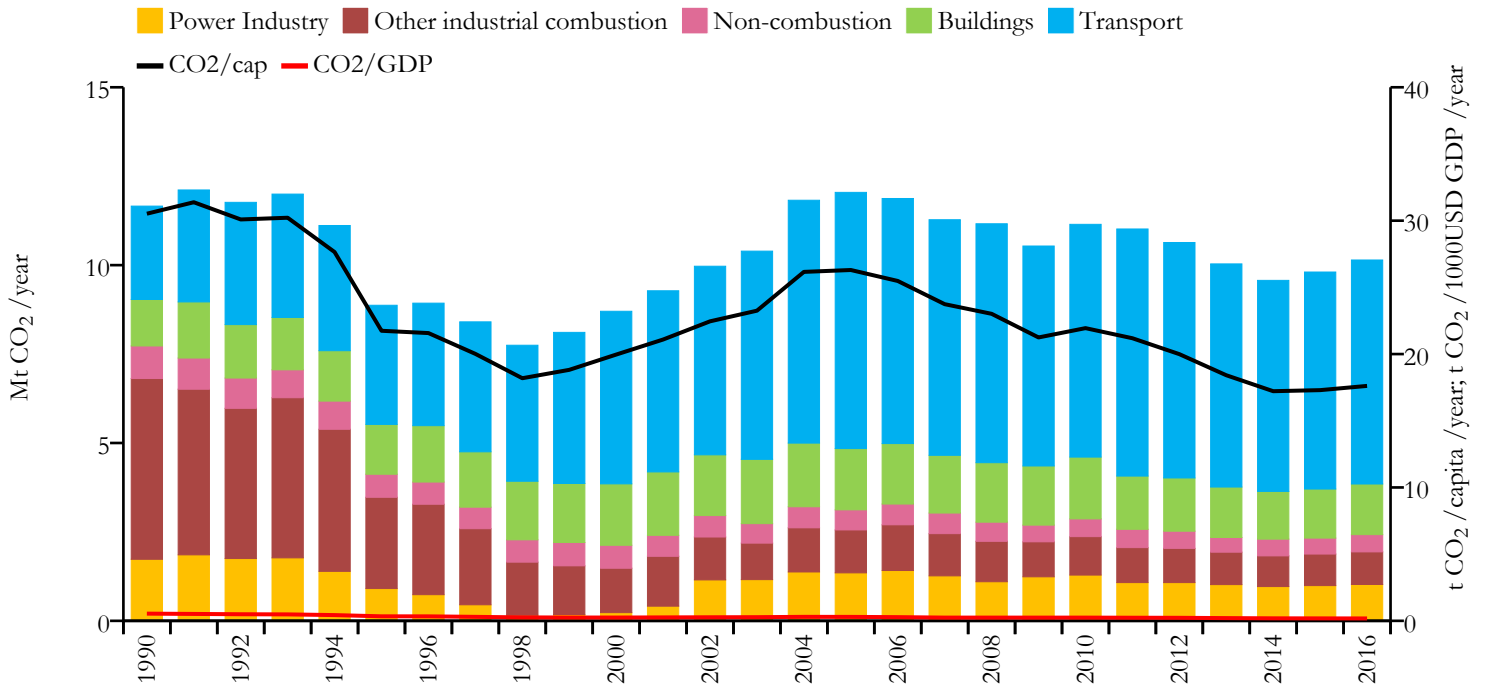


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





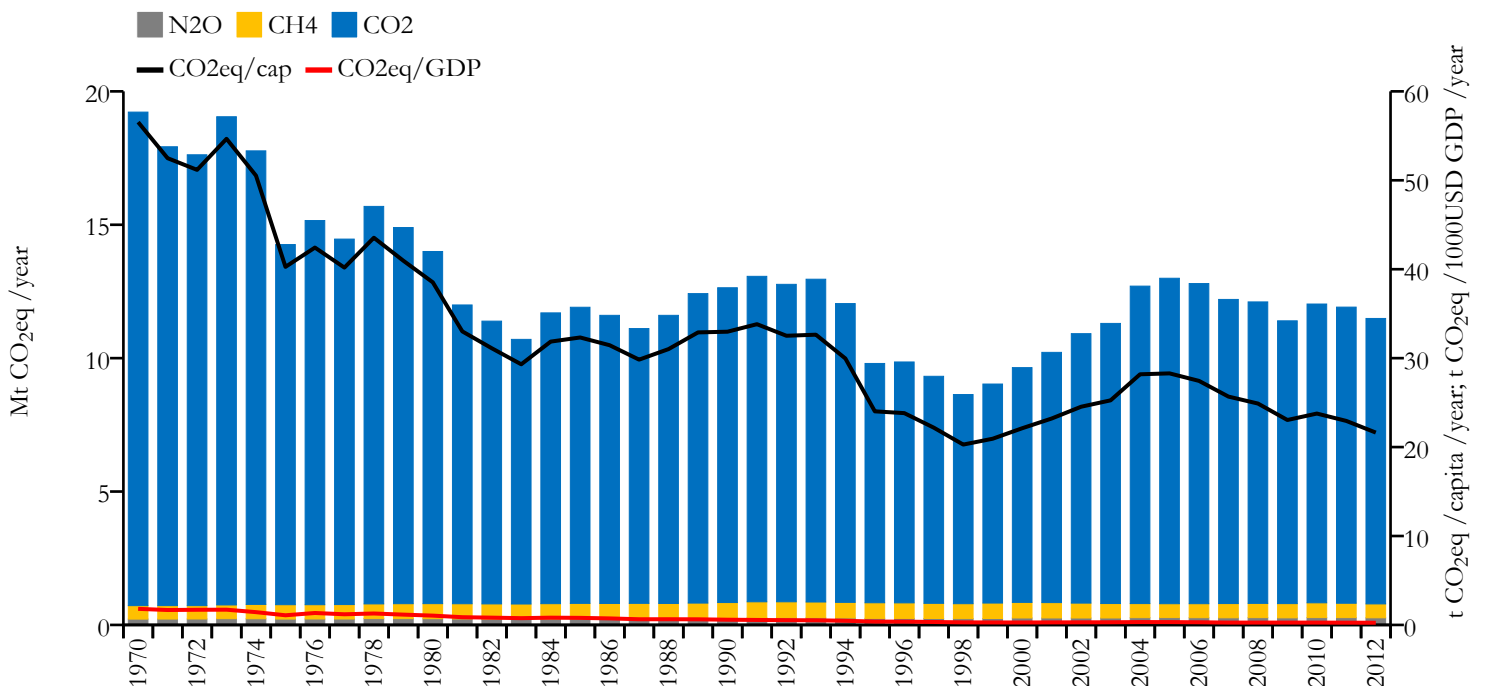
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	10.145	17.612	0.179	575747
1990	11.660	30.522	0.540	381791

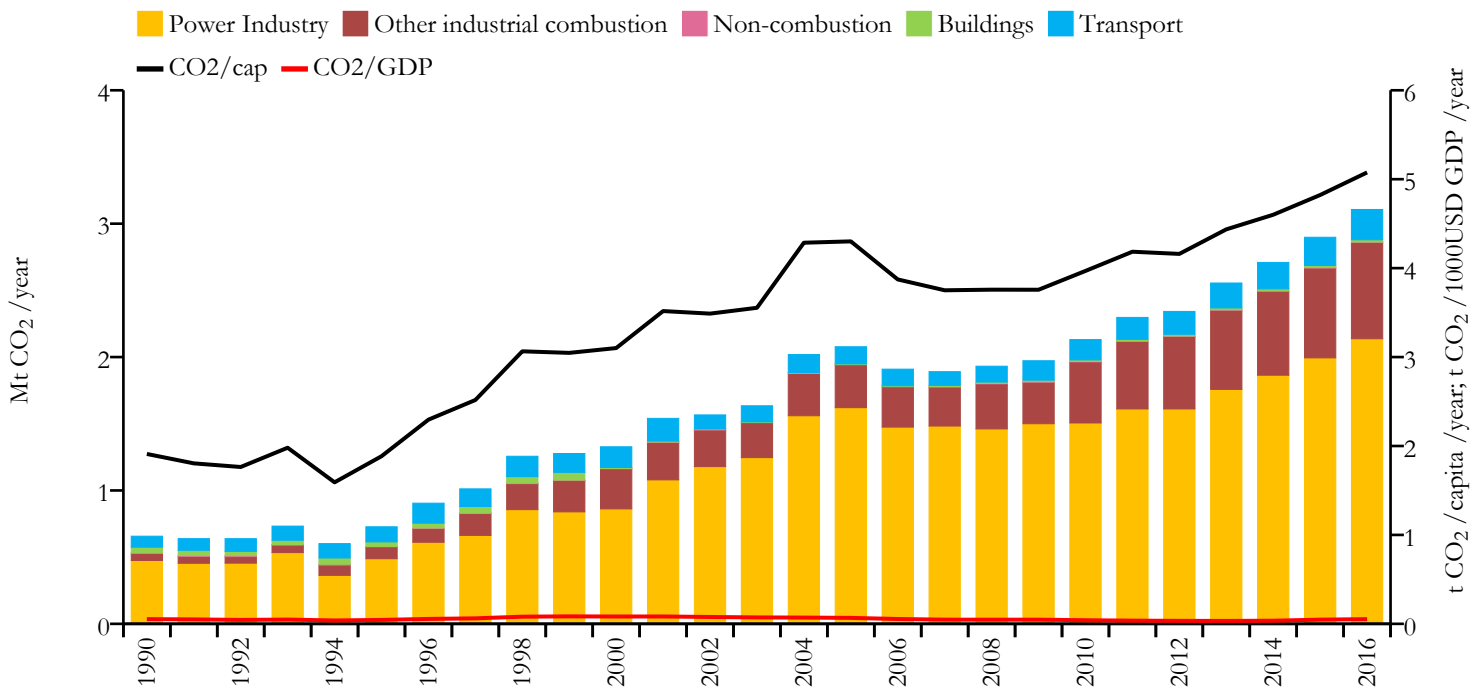


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





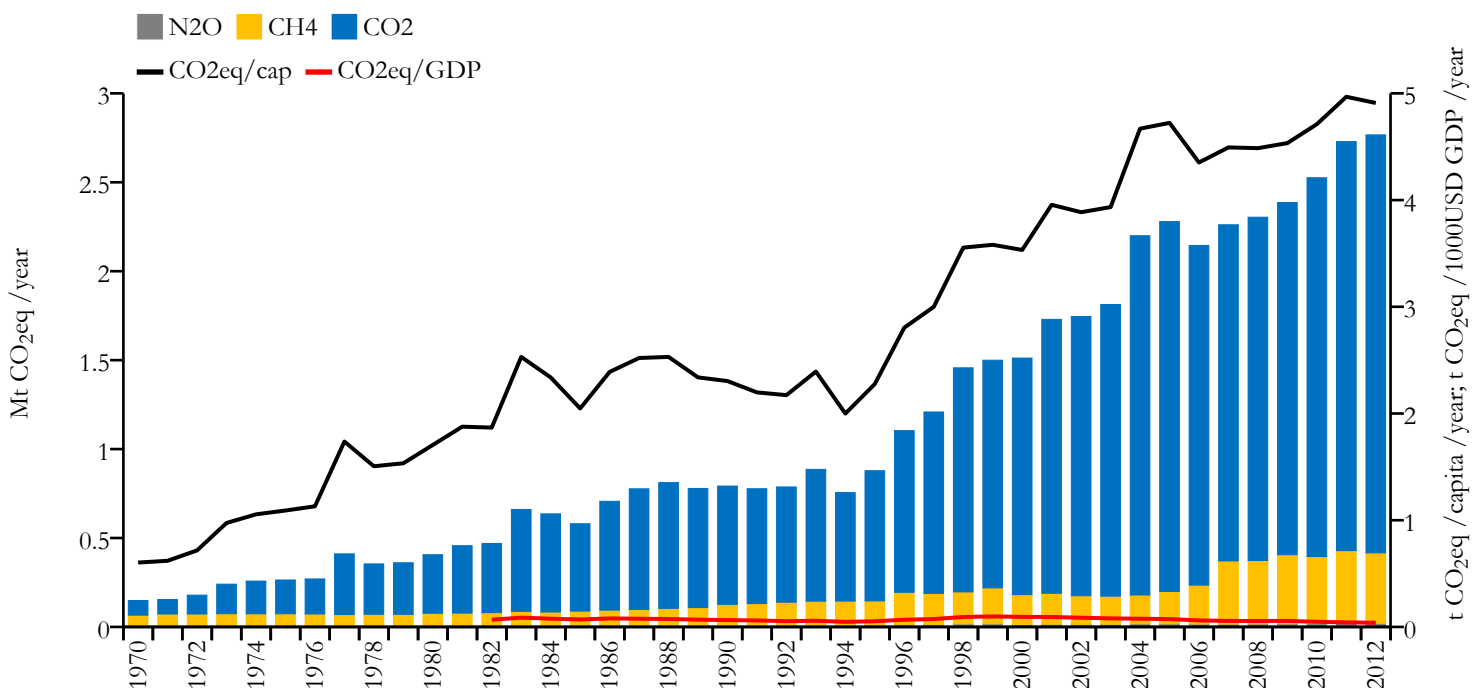
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	3.107	5.076	0.053	612167
1990	0.657	1.910	0.053	343935



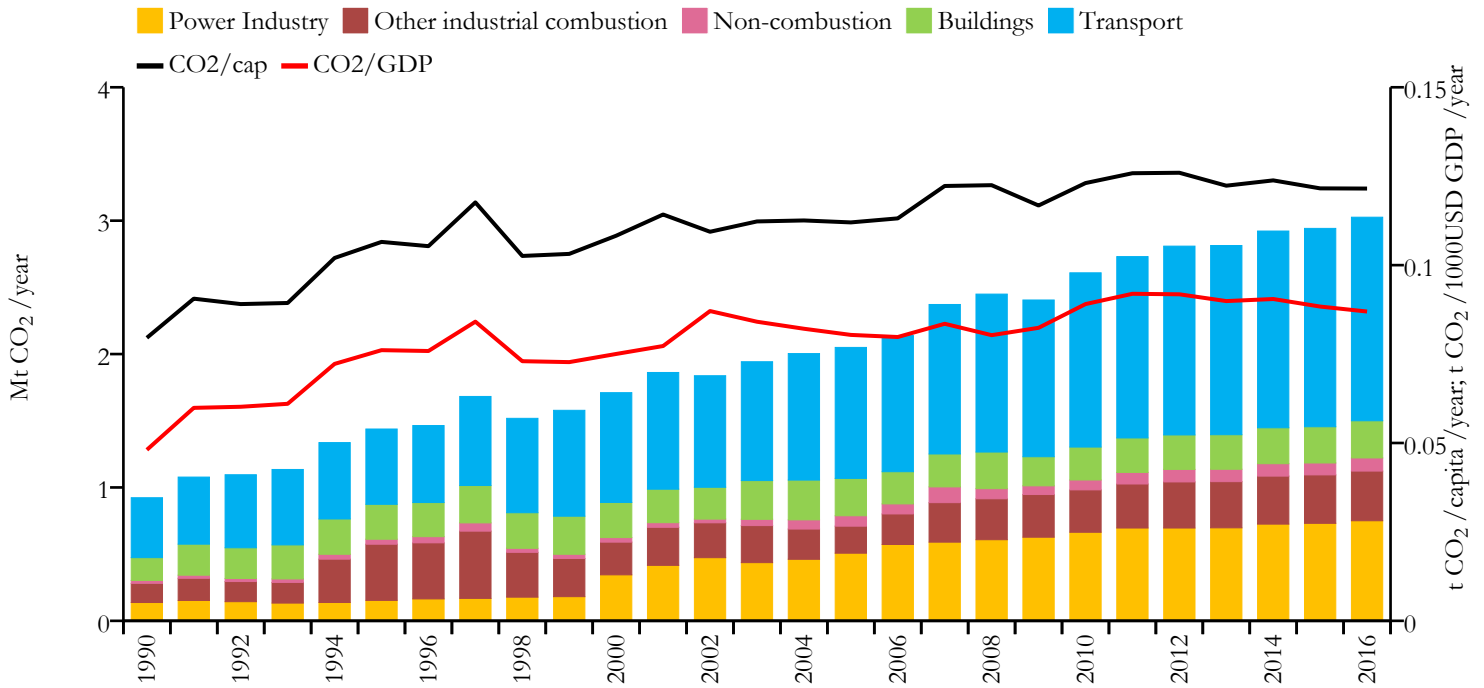
## Greenhouse gas emissions (EDGARv4.3.2 dataset)



# Madagascar



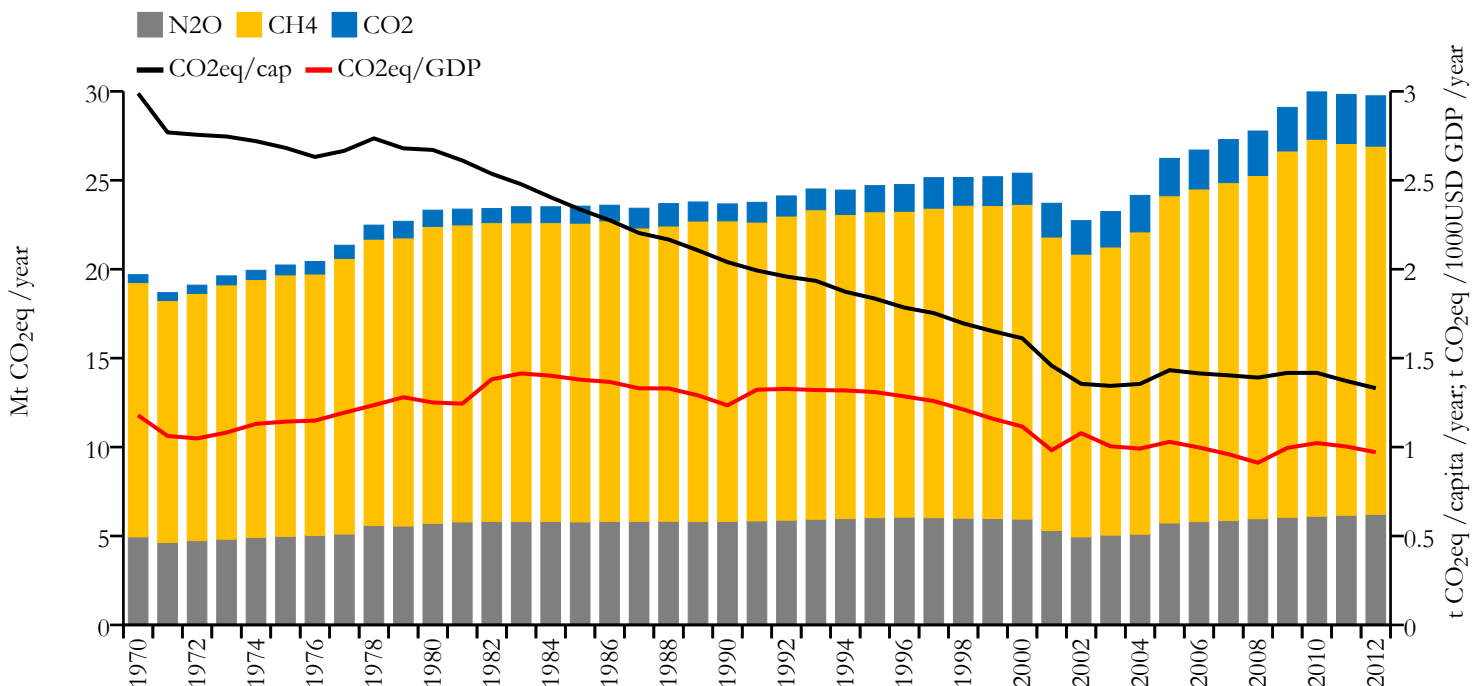
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	3.026	0.122	0.087	24894551
1990	0.923	0.080	0.048	11598633



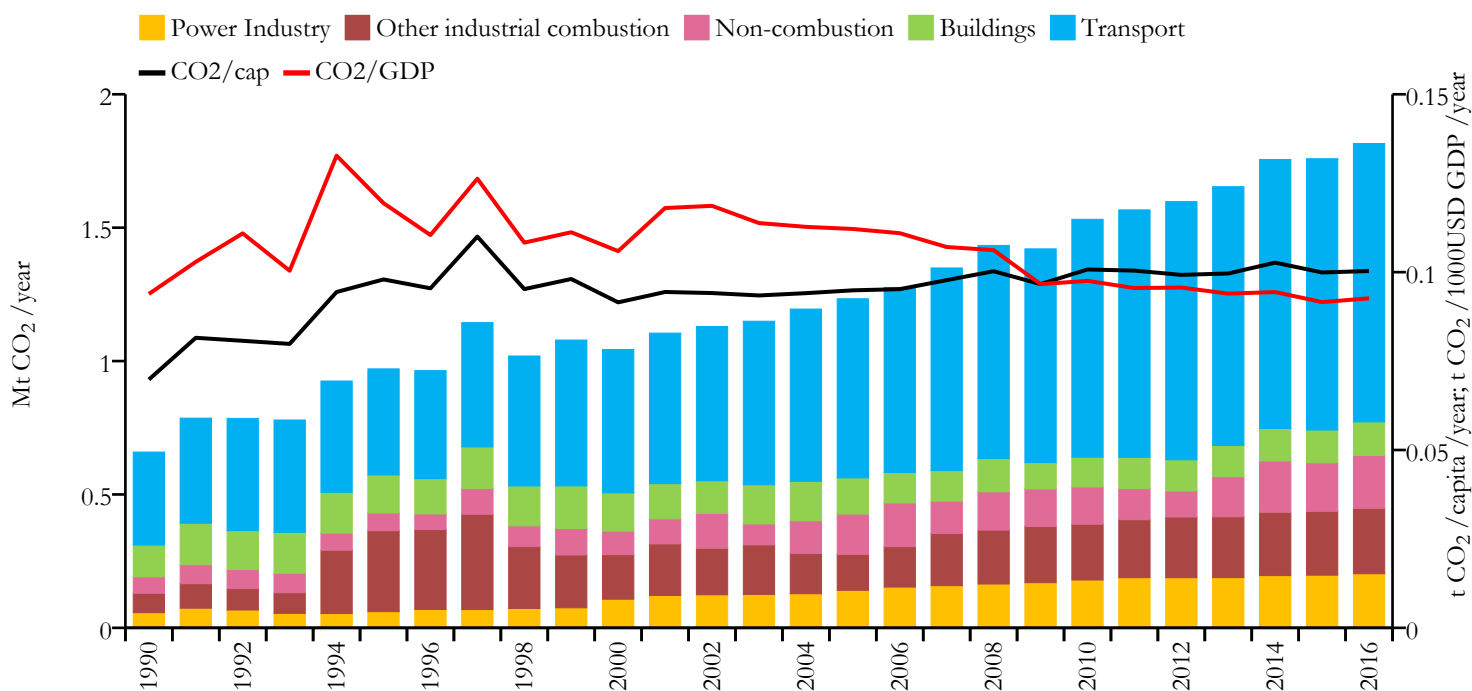
## Greenhouse gas emissions (EDGARv4.3.2 dataset)







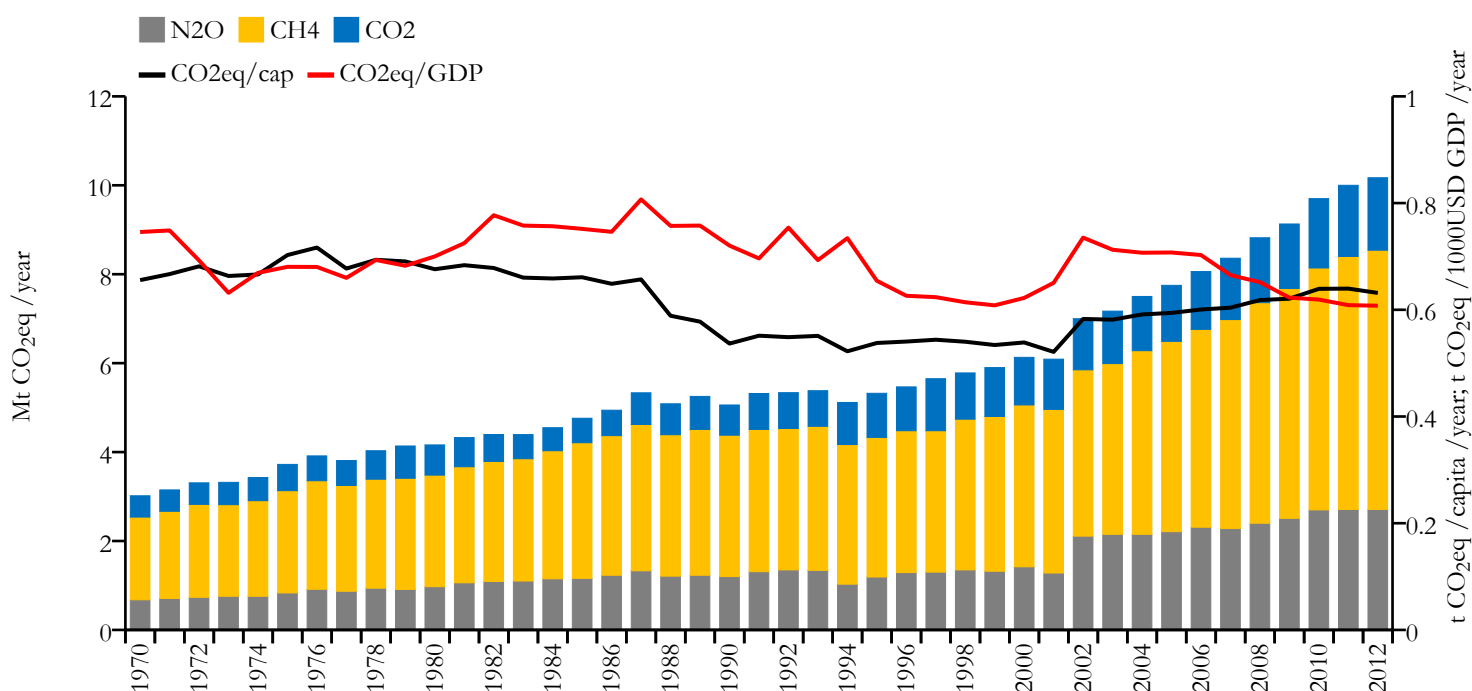
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	1.816	0.100	0.093	18091575
1990	0.659	0.070	0.094	9437553

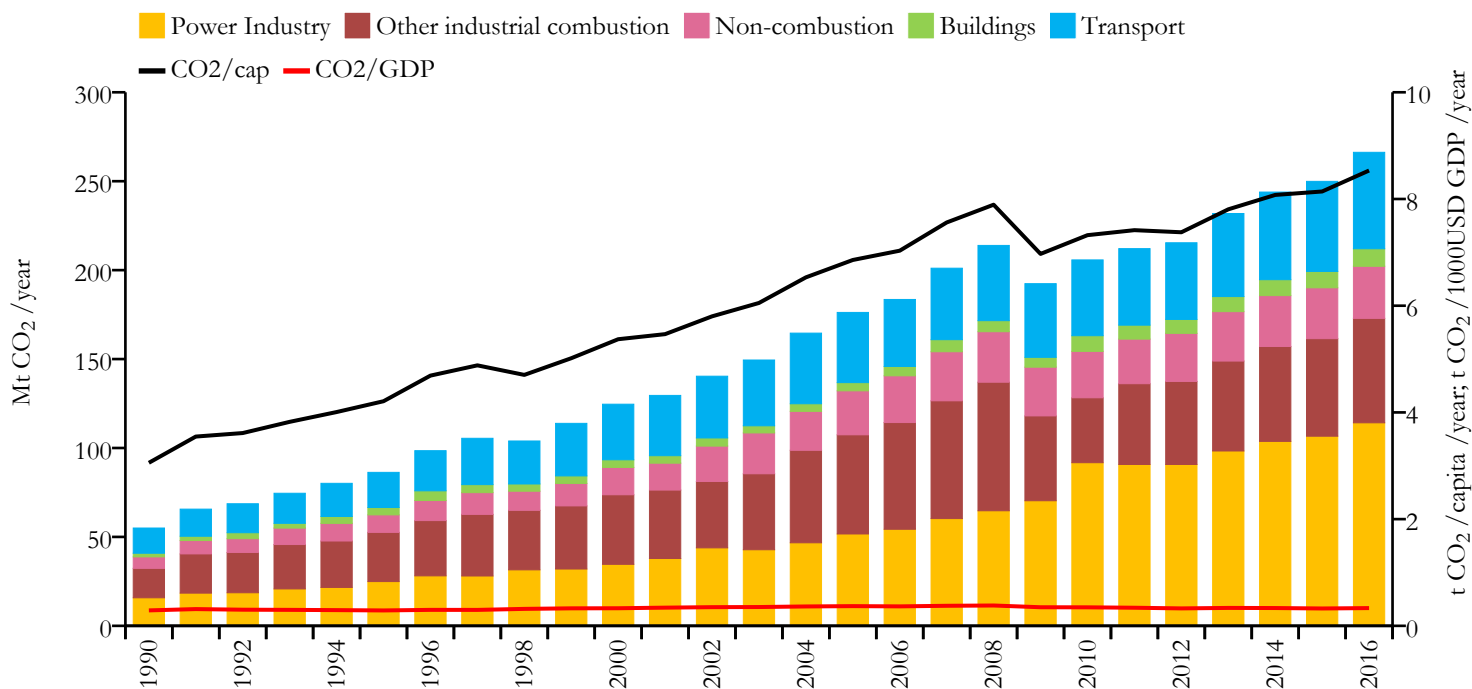


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





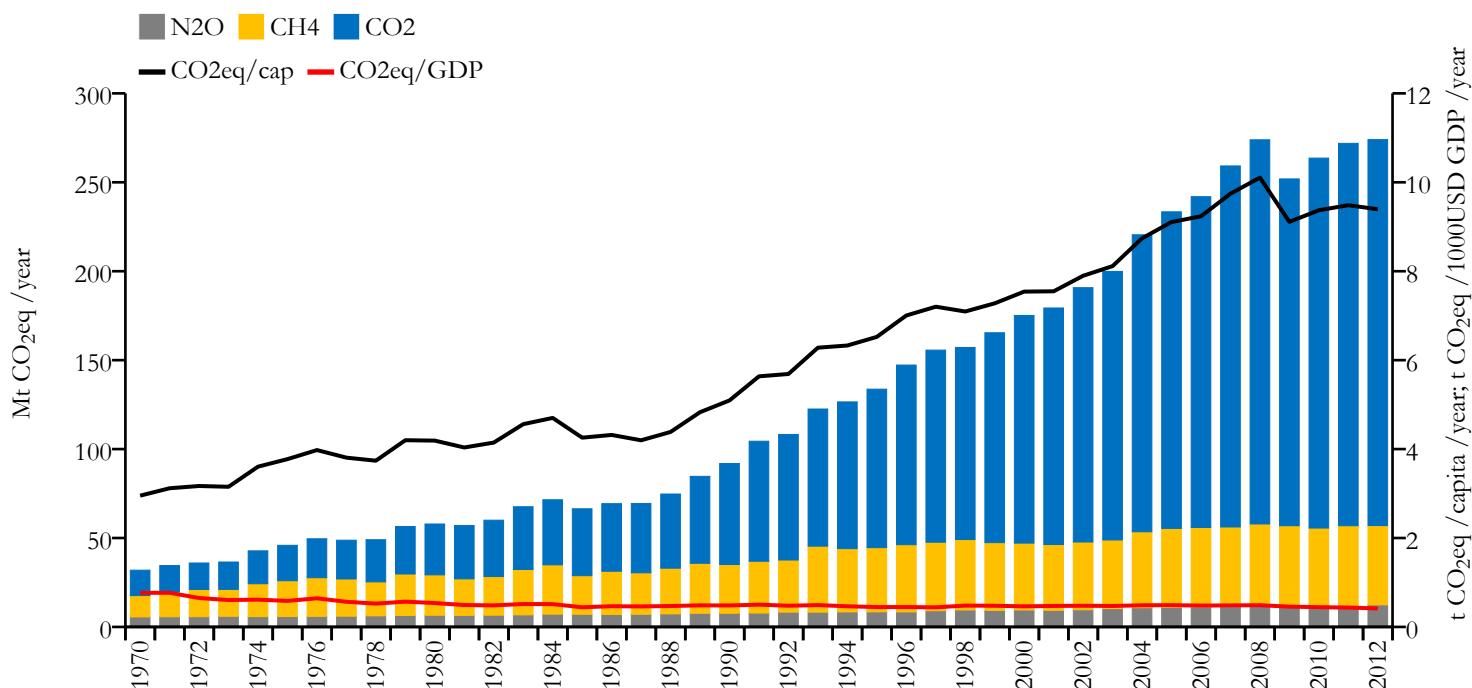
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	266.252	8.534	0.333	31187265
1990	55.004	3.056	0.289	18038321

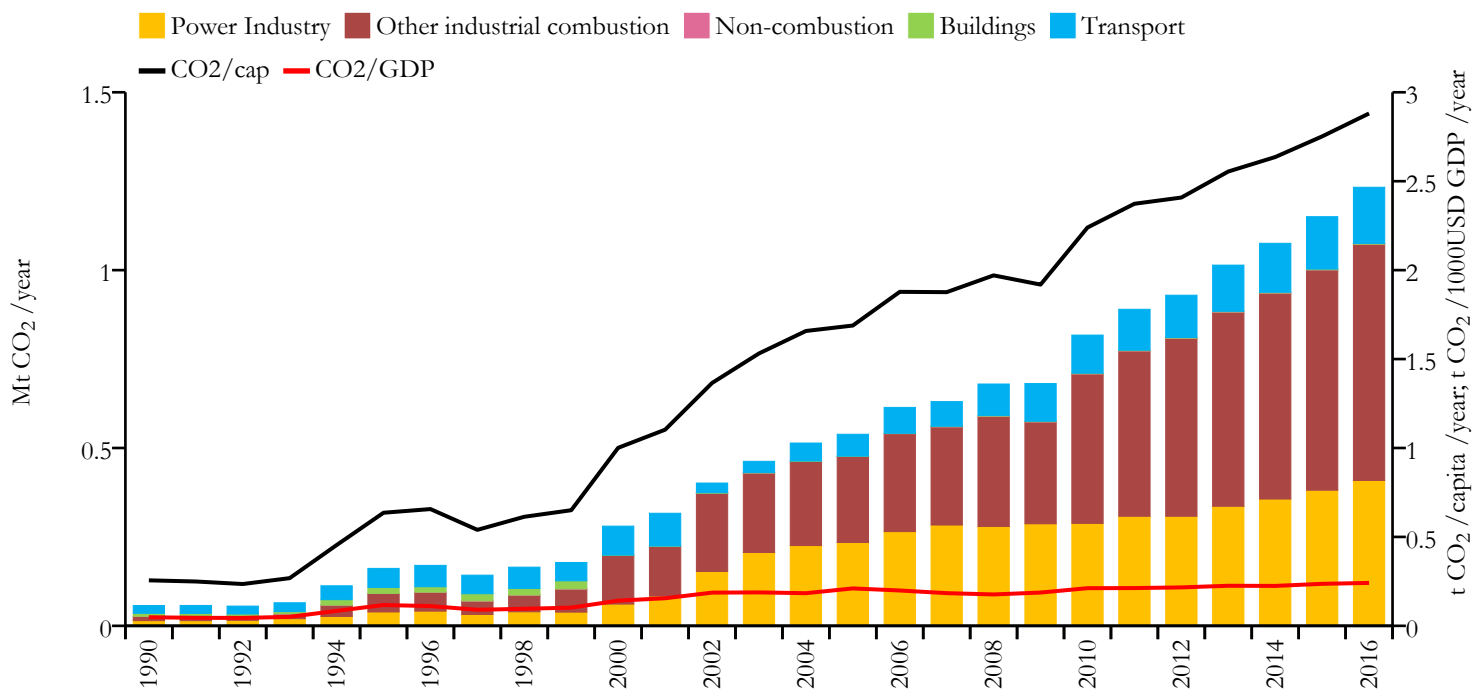


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





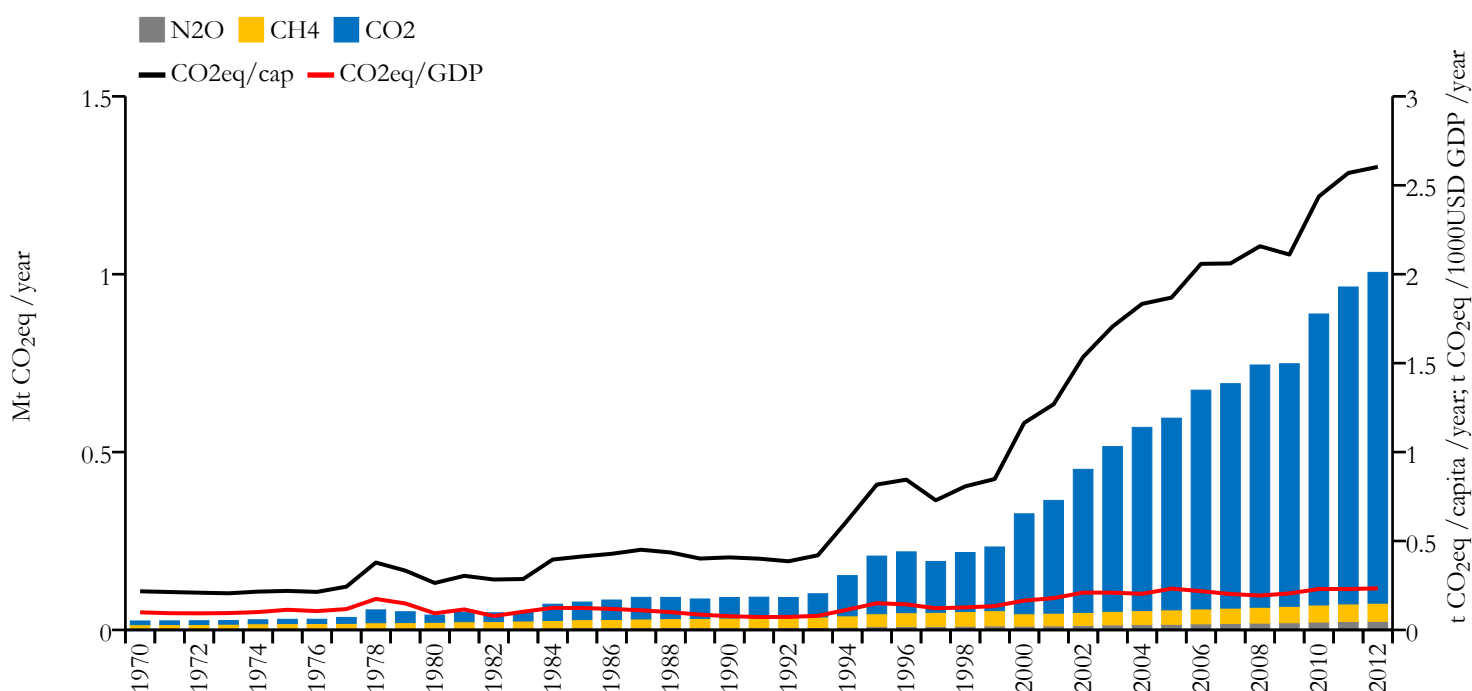
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)

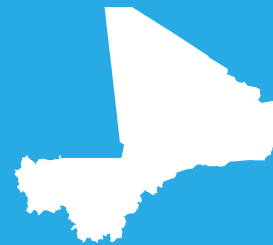


Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	1.233	2.881	0.241	427756
1990	0.057	0.256	0.048	223215

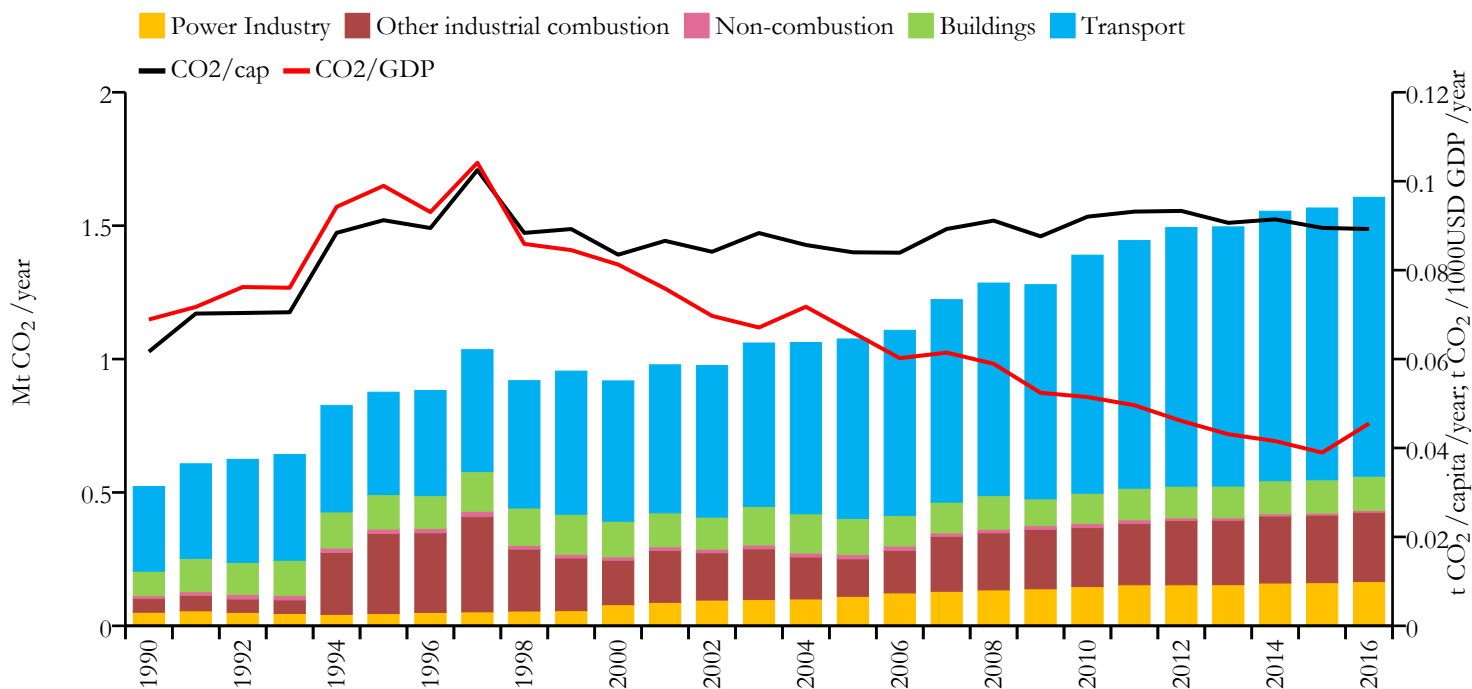


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





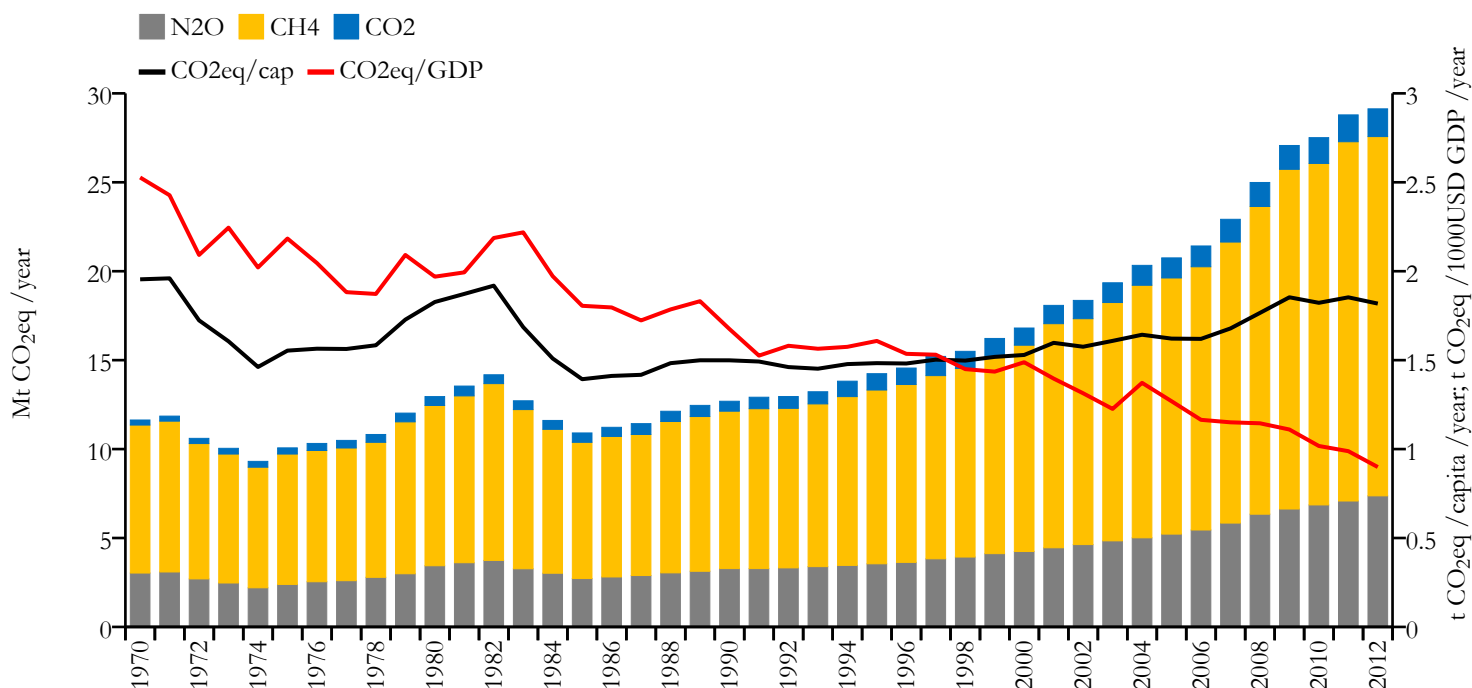
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)

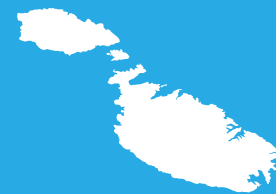


Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	1.606	0.089	0.046	17994837
1990	0.522	0.062	0.069	8465188

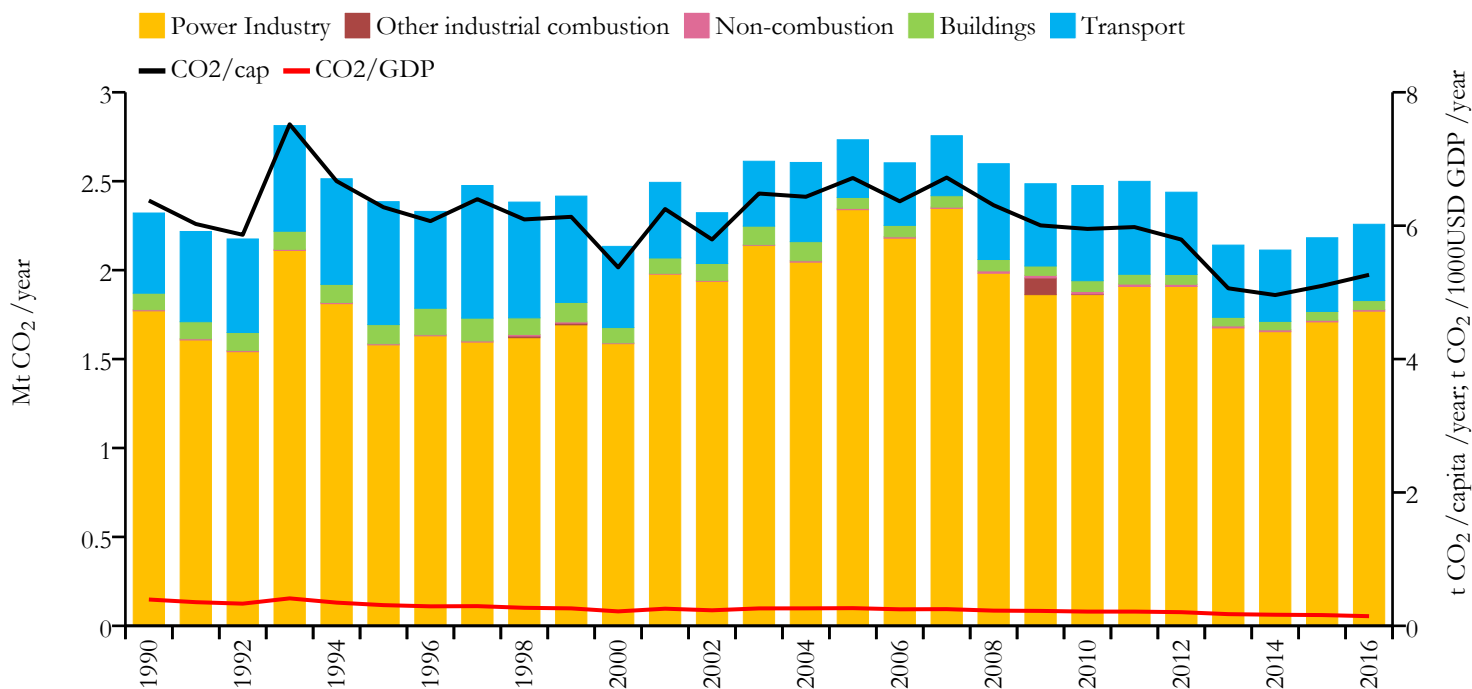


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





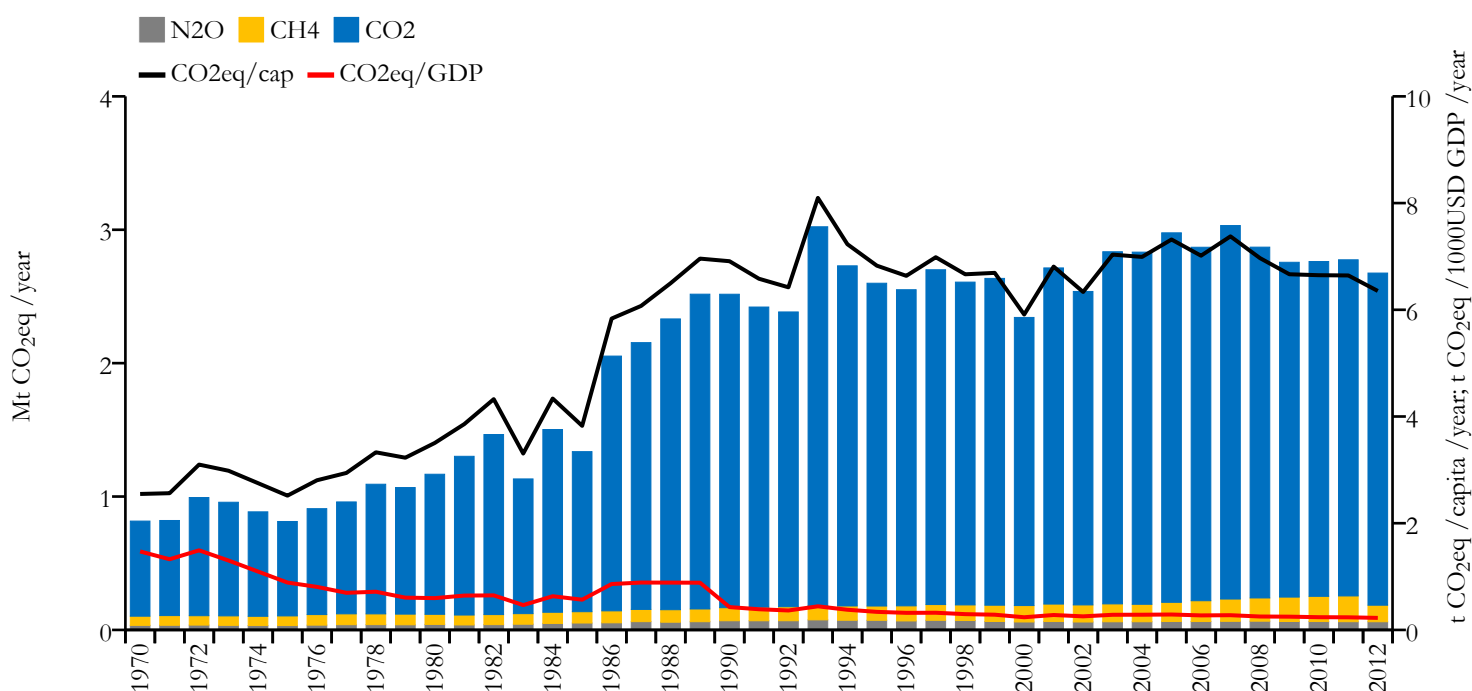
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)

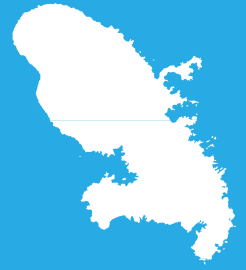


Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	2.258	5.263	0.145	429362
1990	2.321	6.377	0.395	364431

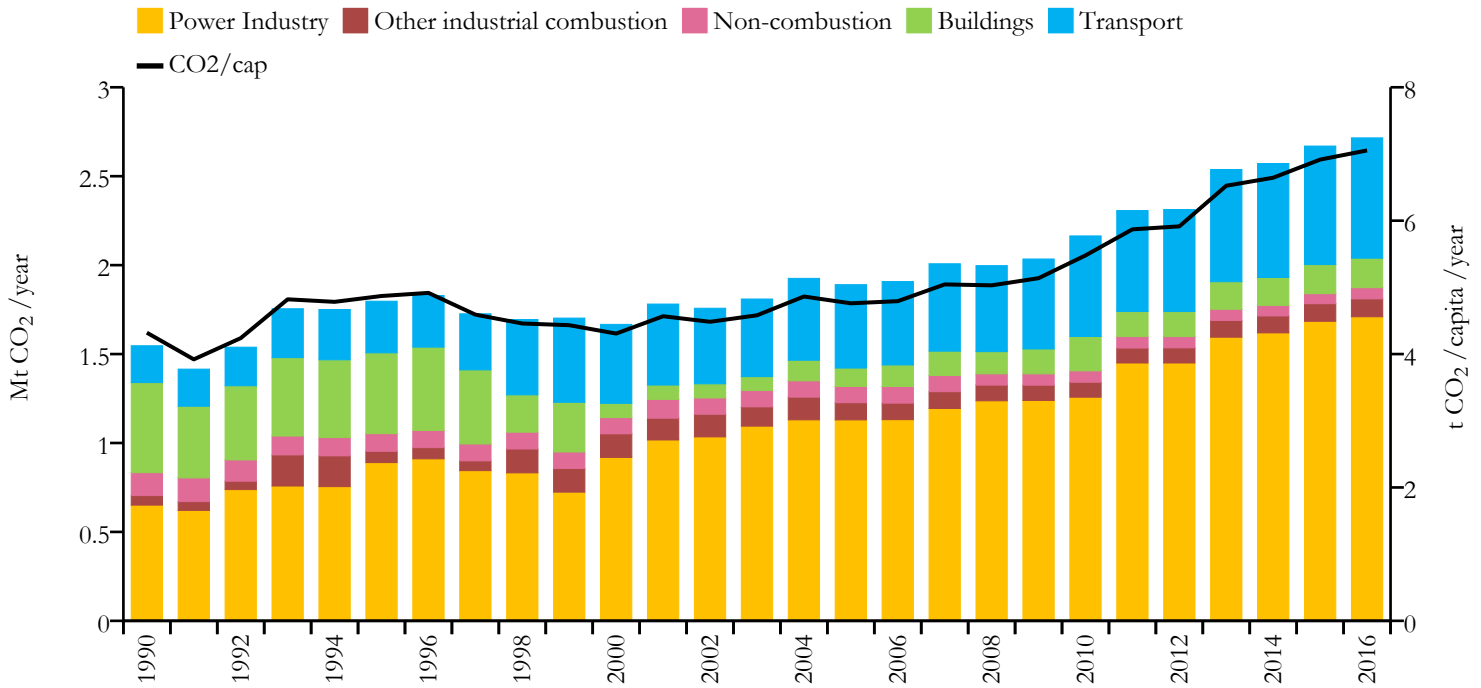


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





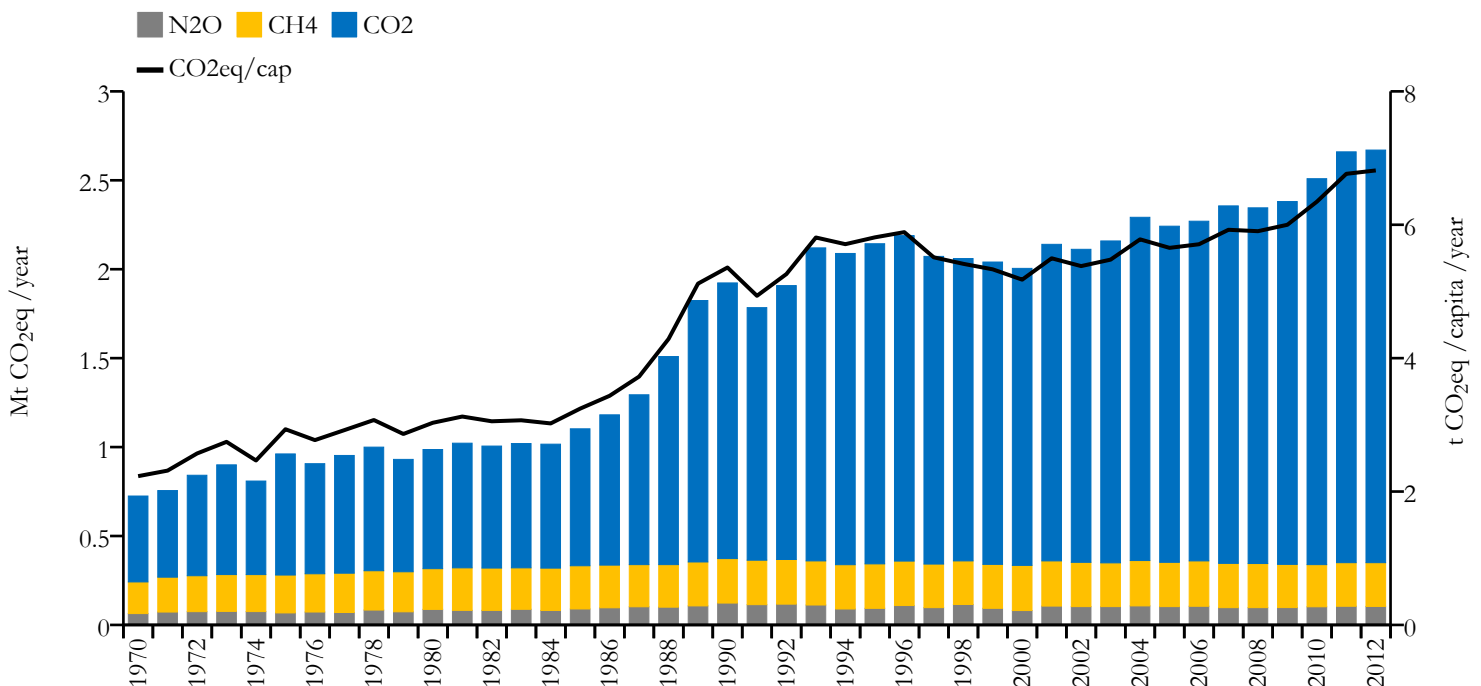
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	2.715	7.053	n/a	385103
1990	1.547	4.320	n/a	358449

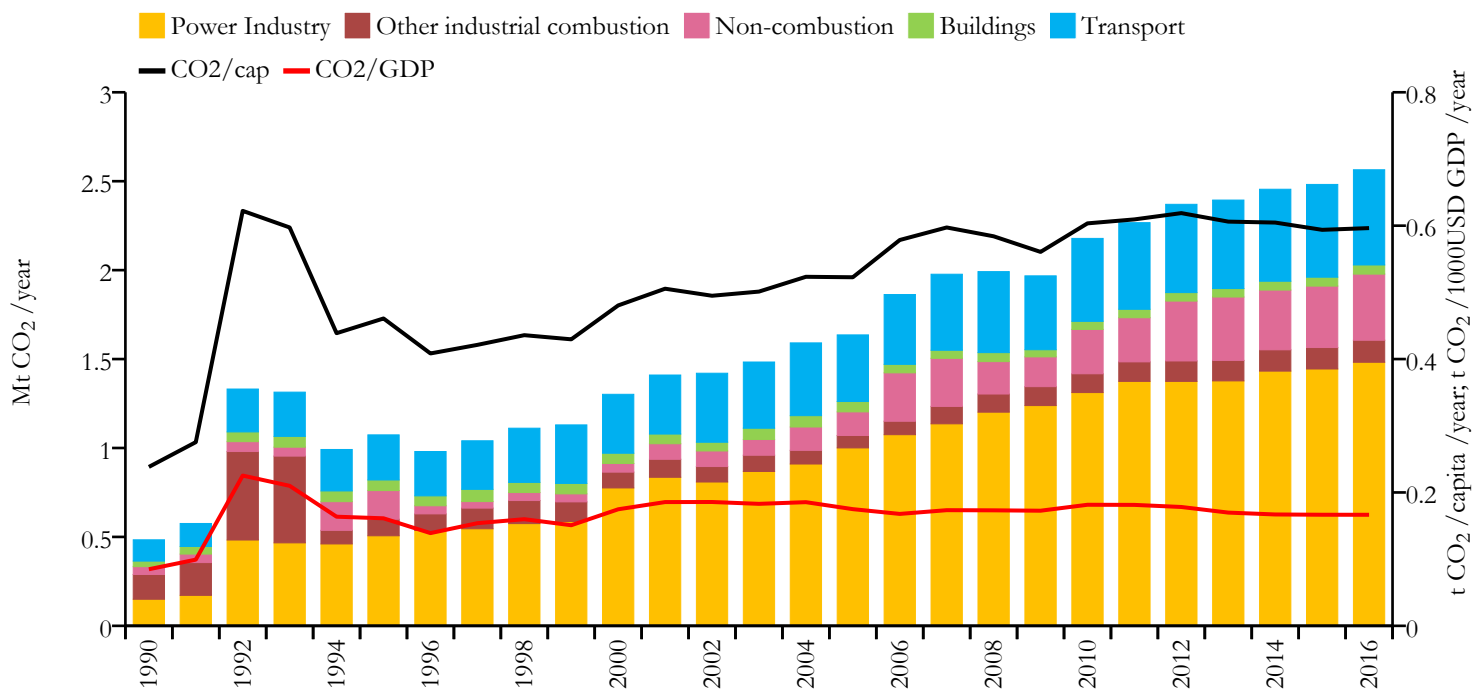


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





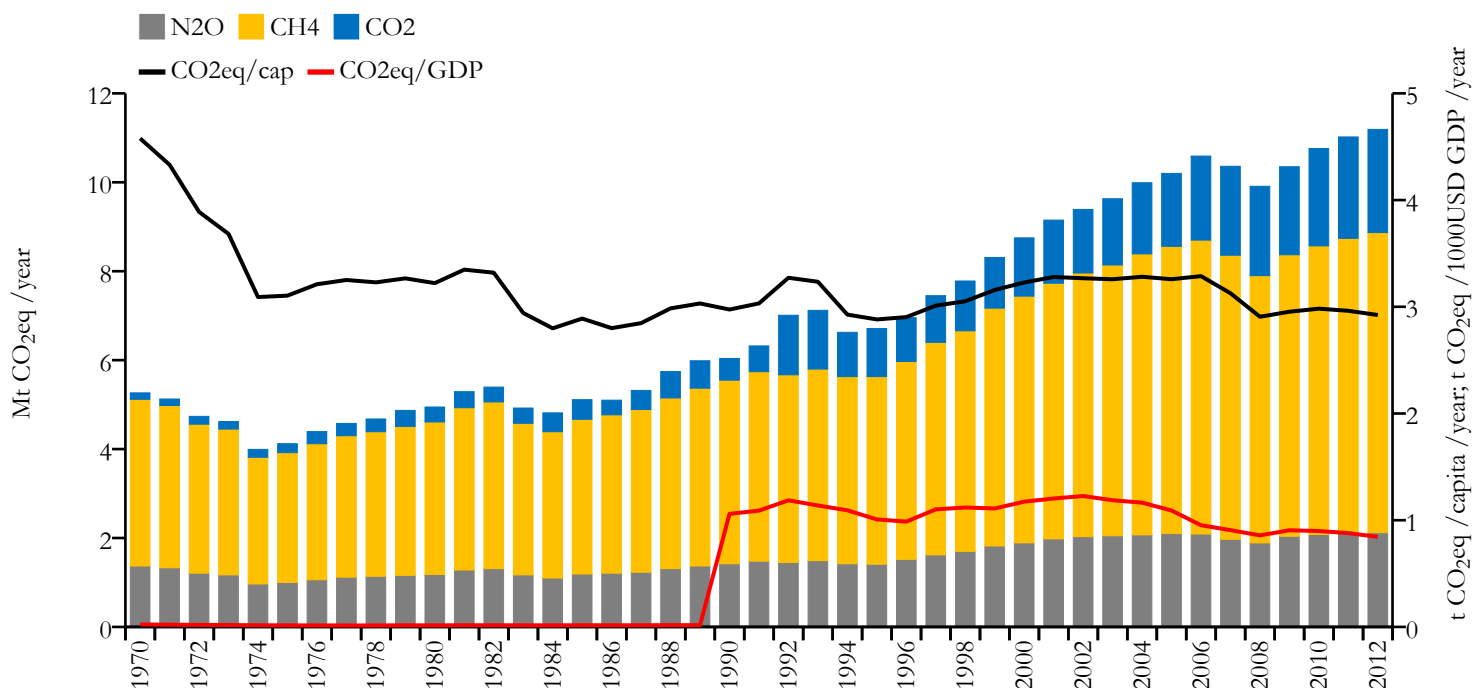
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	2.564	0.596	0.167	4301018
1990	0.484	0.238	0.085	2030140



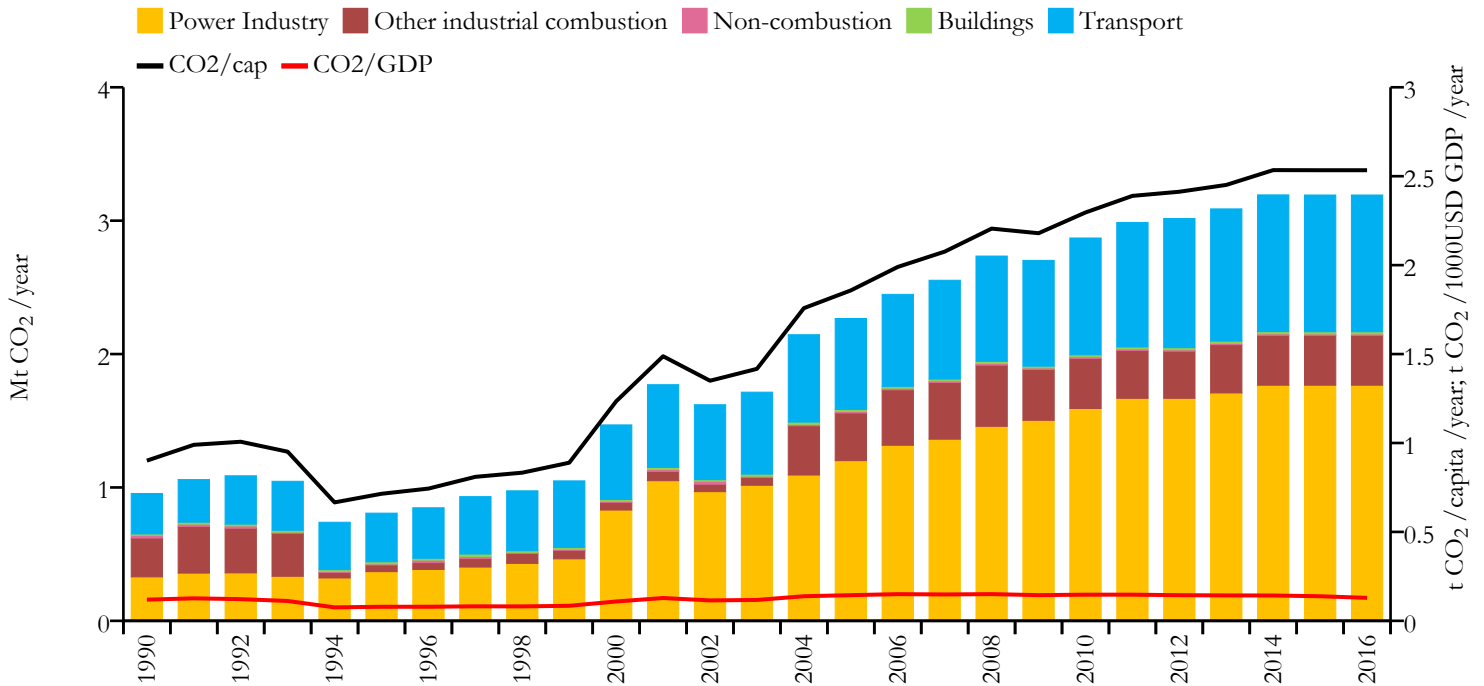
## Greenhouse gas emissions (EDGARv4.3.2 dataset)



# Mauritius



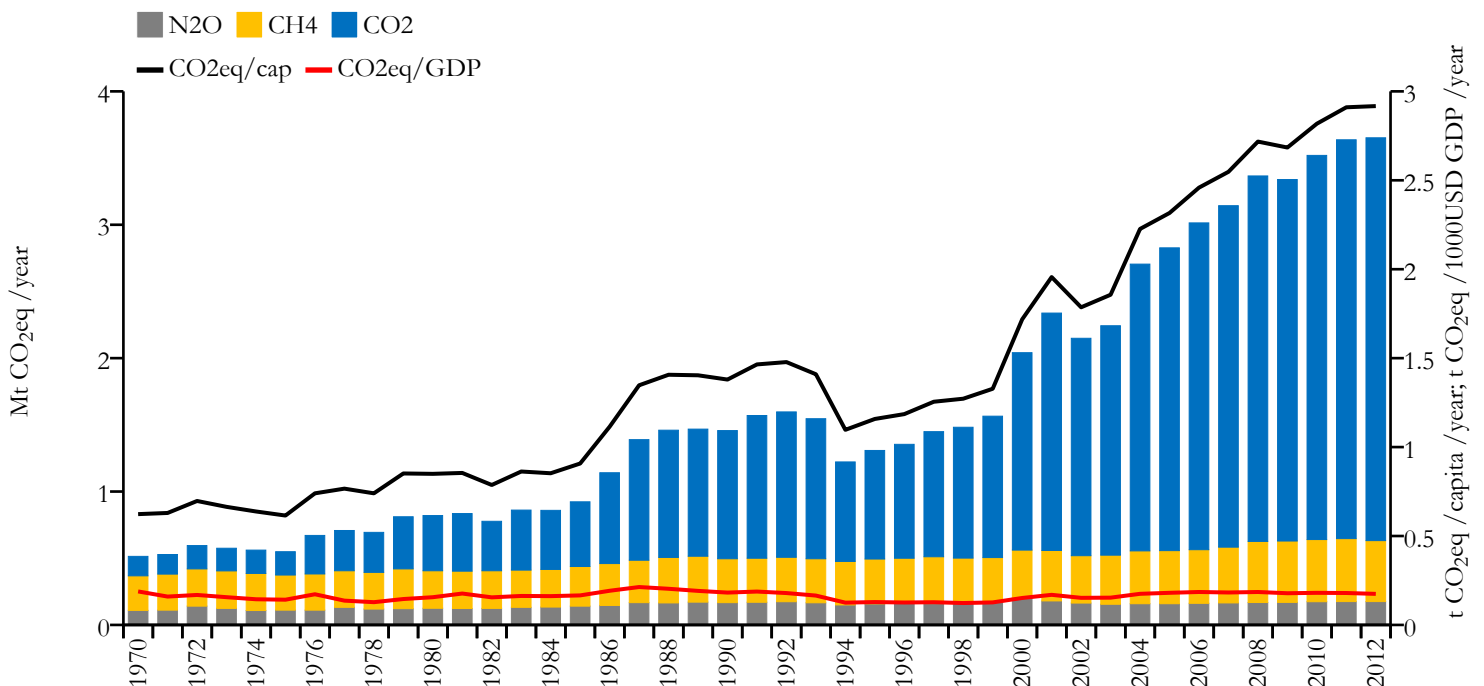
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	3.192	2.534	0.129	1262132
1990	0.955	0.901	0.119	1055868



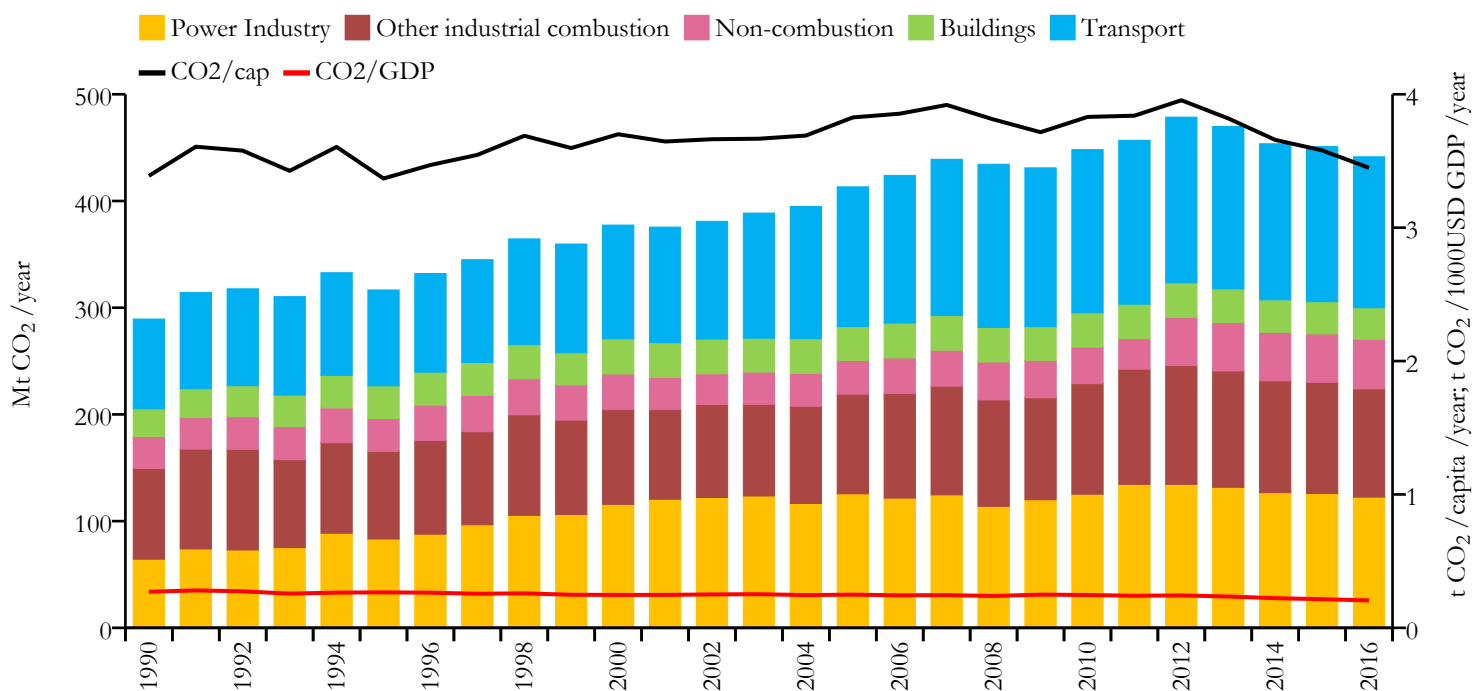
## Greenhouse gas emissions (EDGARv4.3.2 dataset)







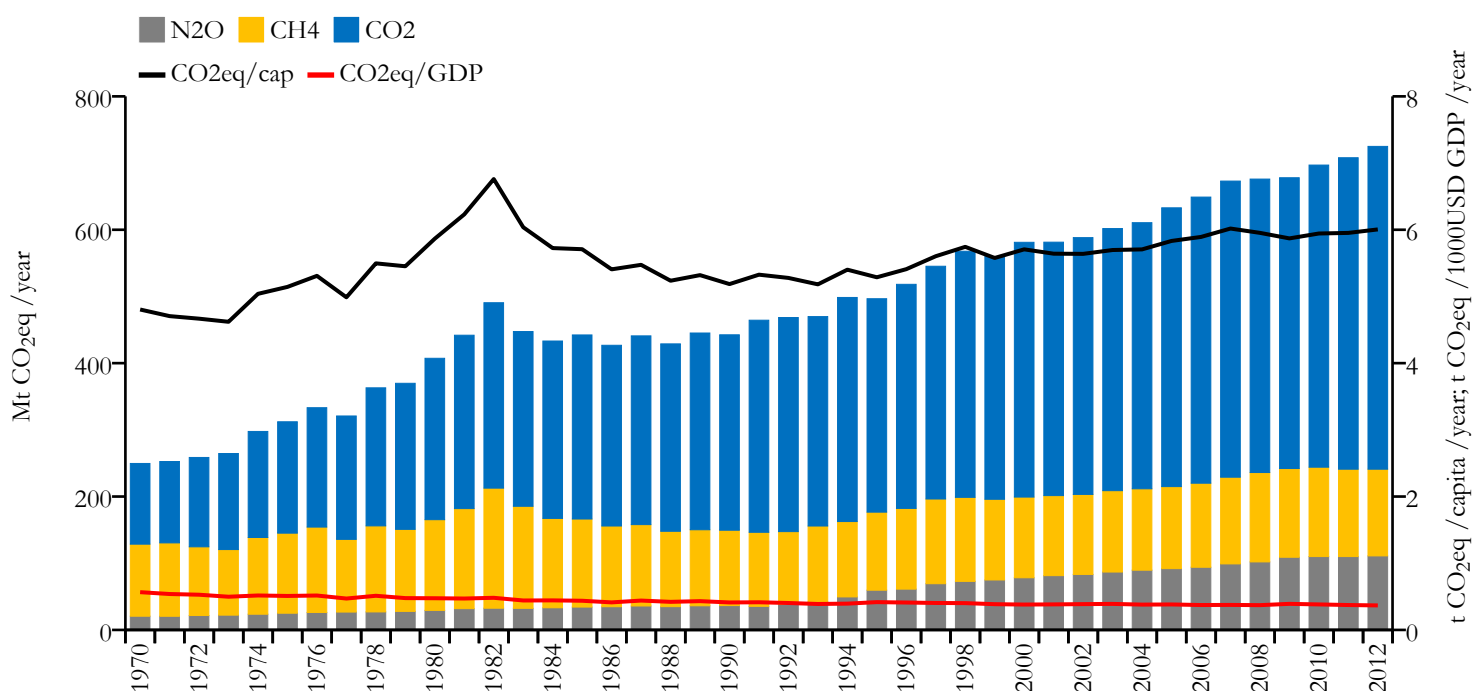
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)

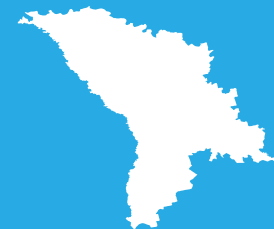


Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	441.413	3.449	0.205	127540423
1990	289.350	3.388	0.270	85357874

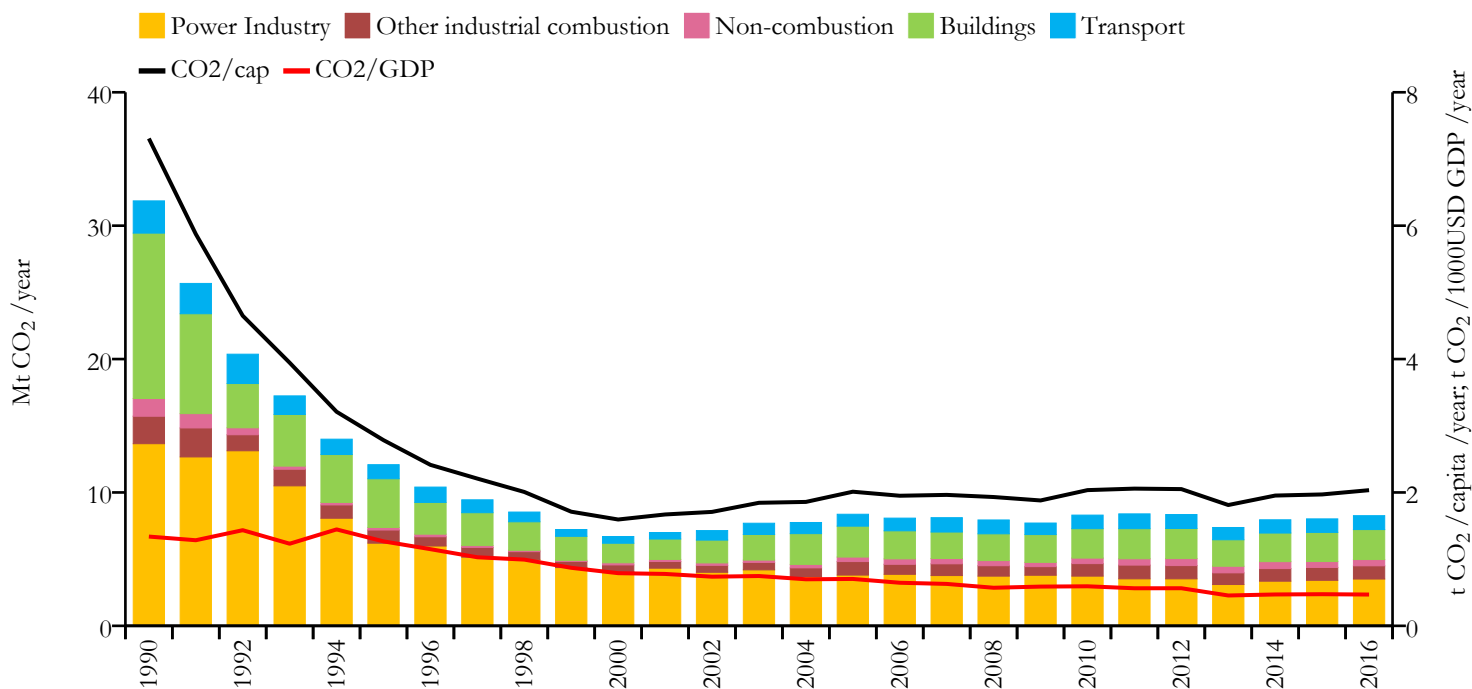


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





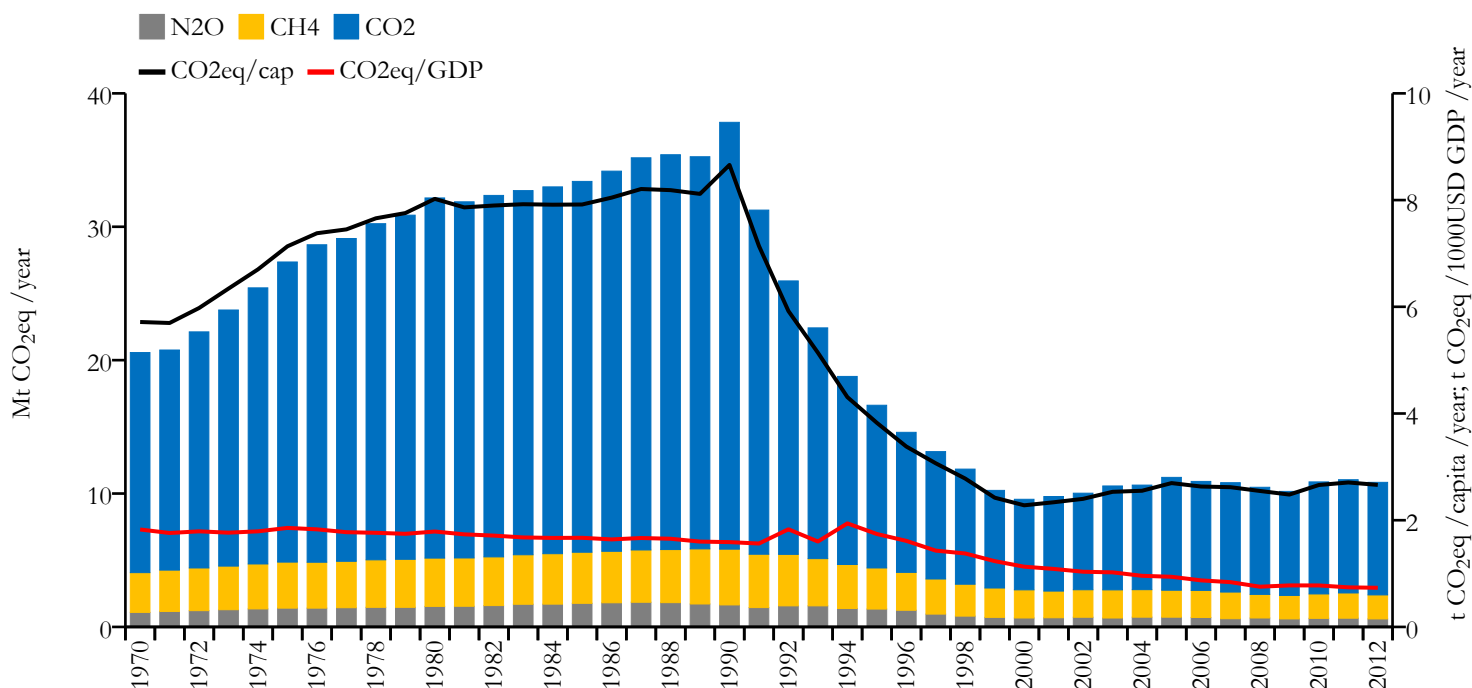
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	8.259	2.034	0.469	4059608
1990	31.858	7.307	1.339	4364116

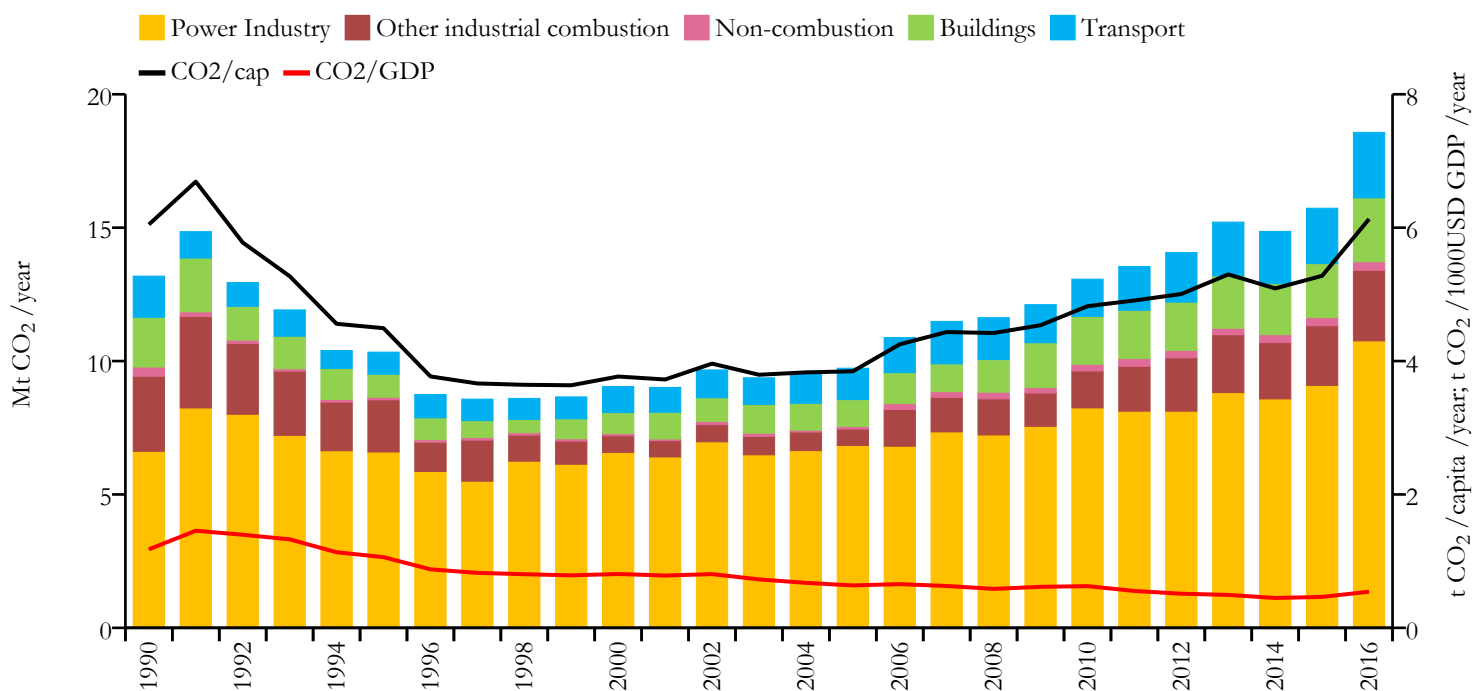


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





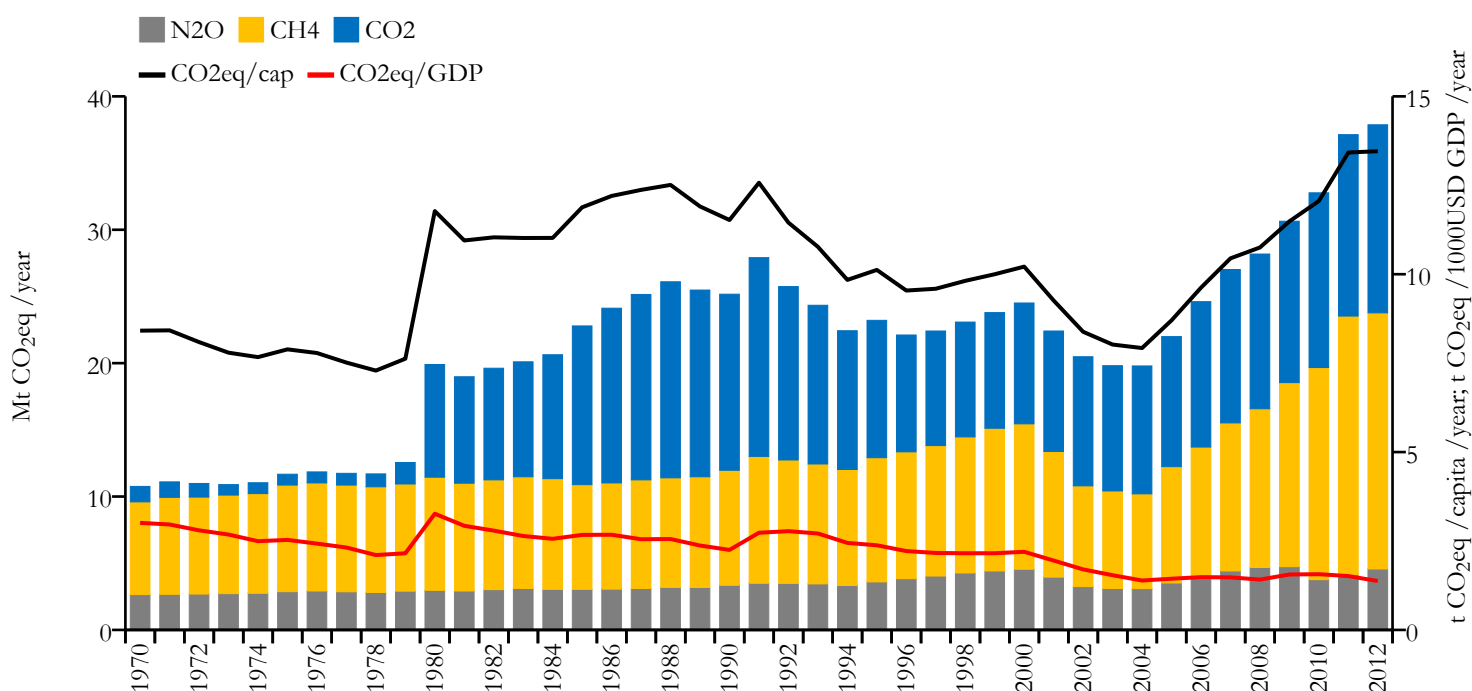
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	18.574	6.130	0.542	3027398
1990	13.183	6.047	1.177	2184145

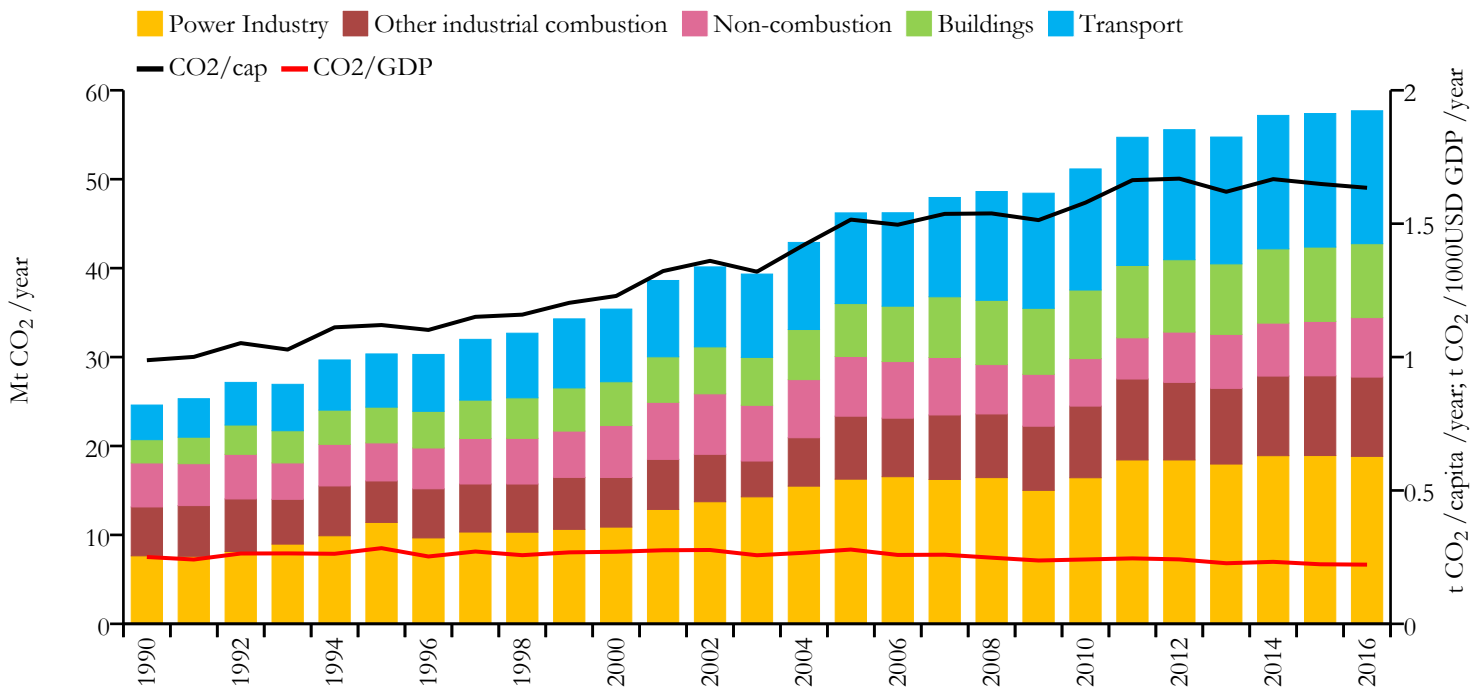


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





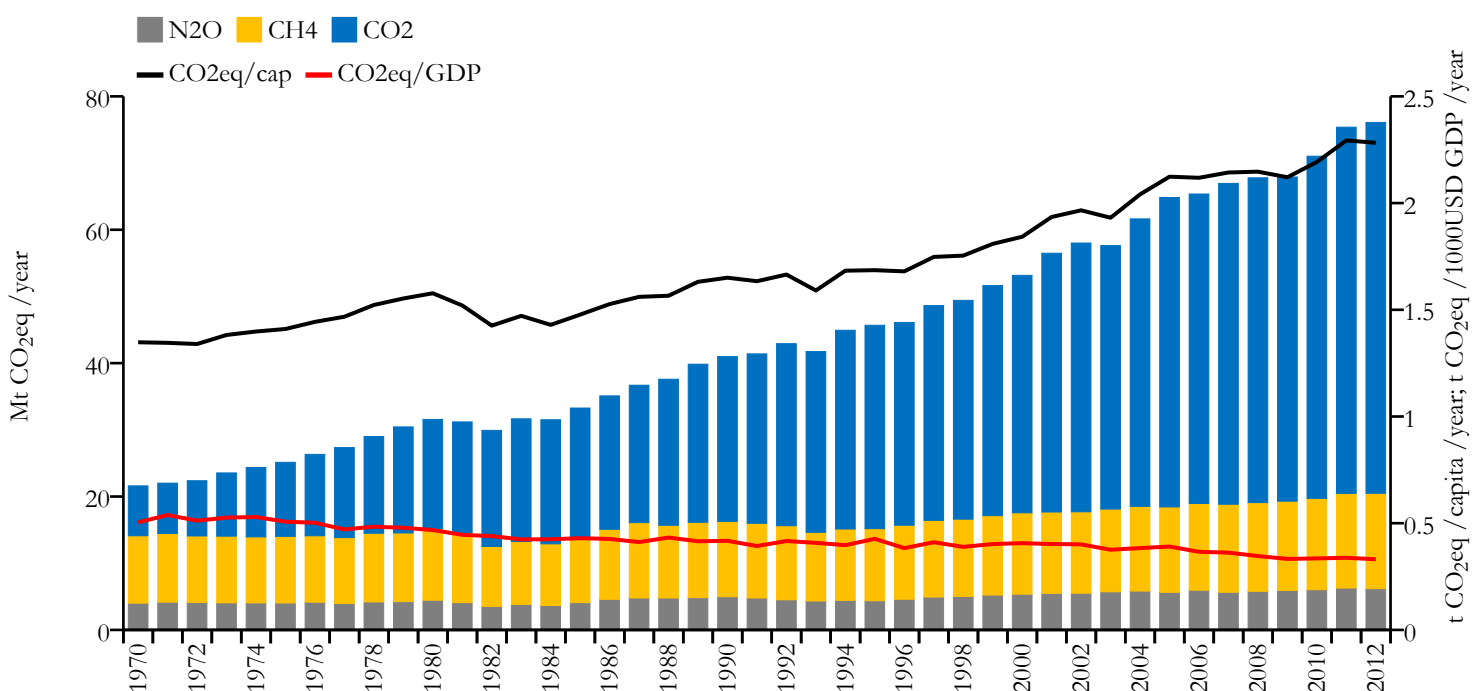
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	57.694	1.634	0.222	35276786
1990	24.604	0.988	0.251	24879136



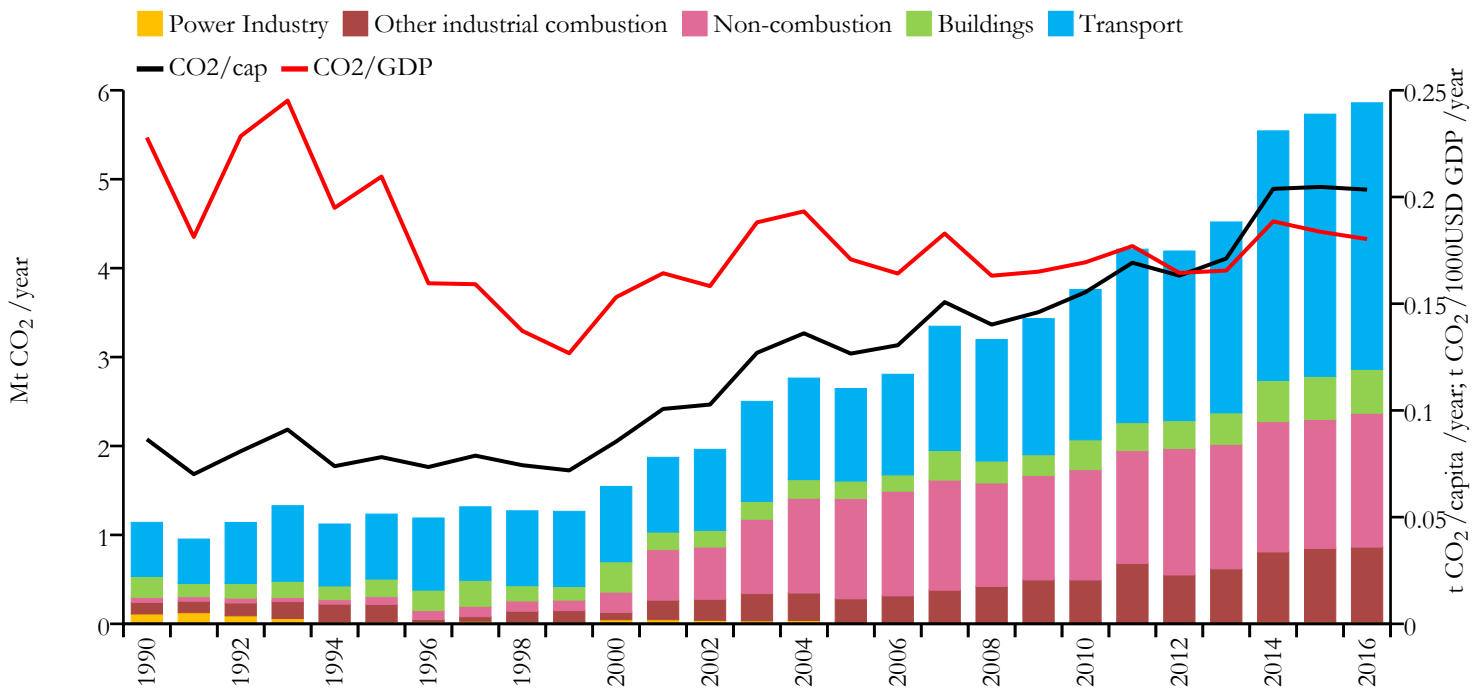
## Greenhouse gas emissions (EDGARv4.3.2 dataset)



# Mozambique



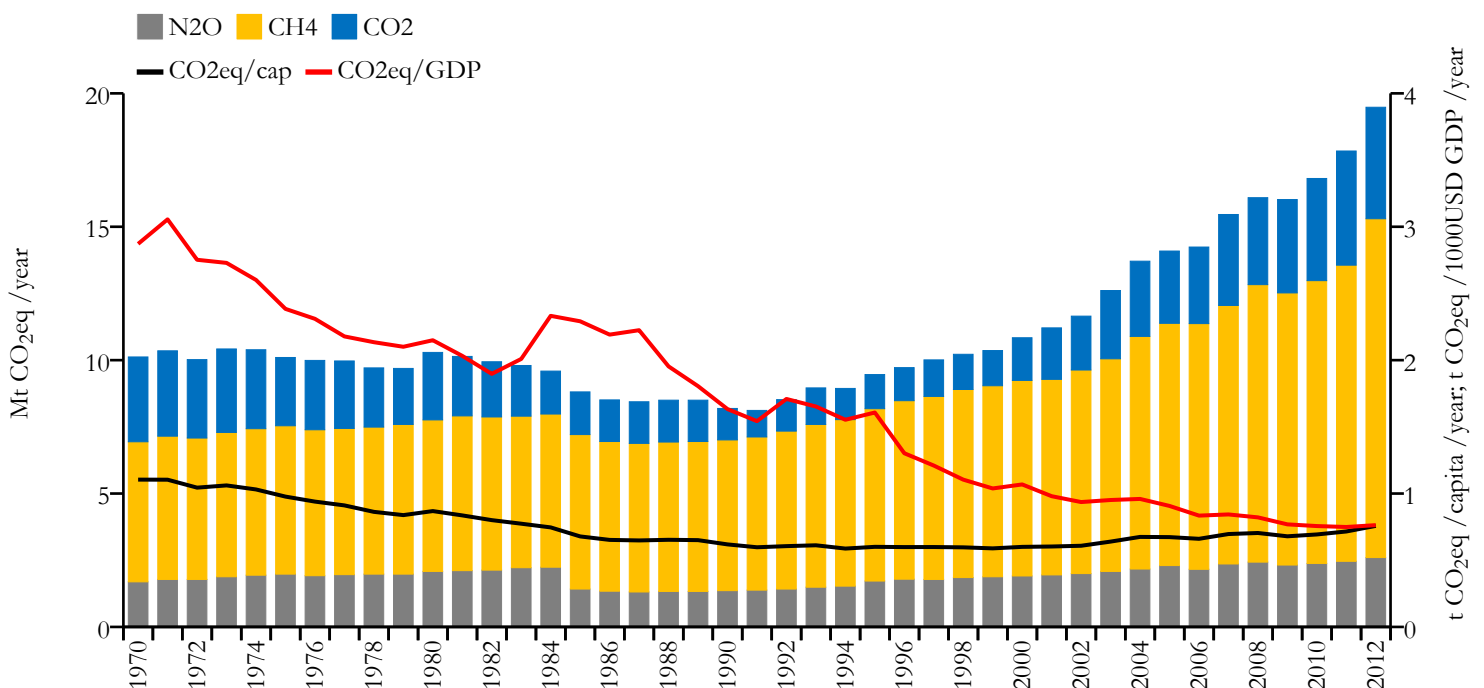
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	5.859	0.203	0.180	28829476
1990	1.141	0.086	0.228	13247649

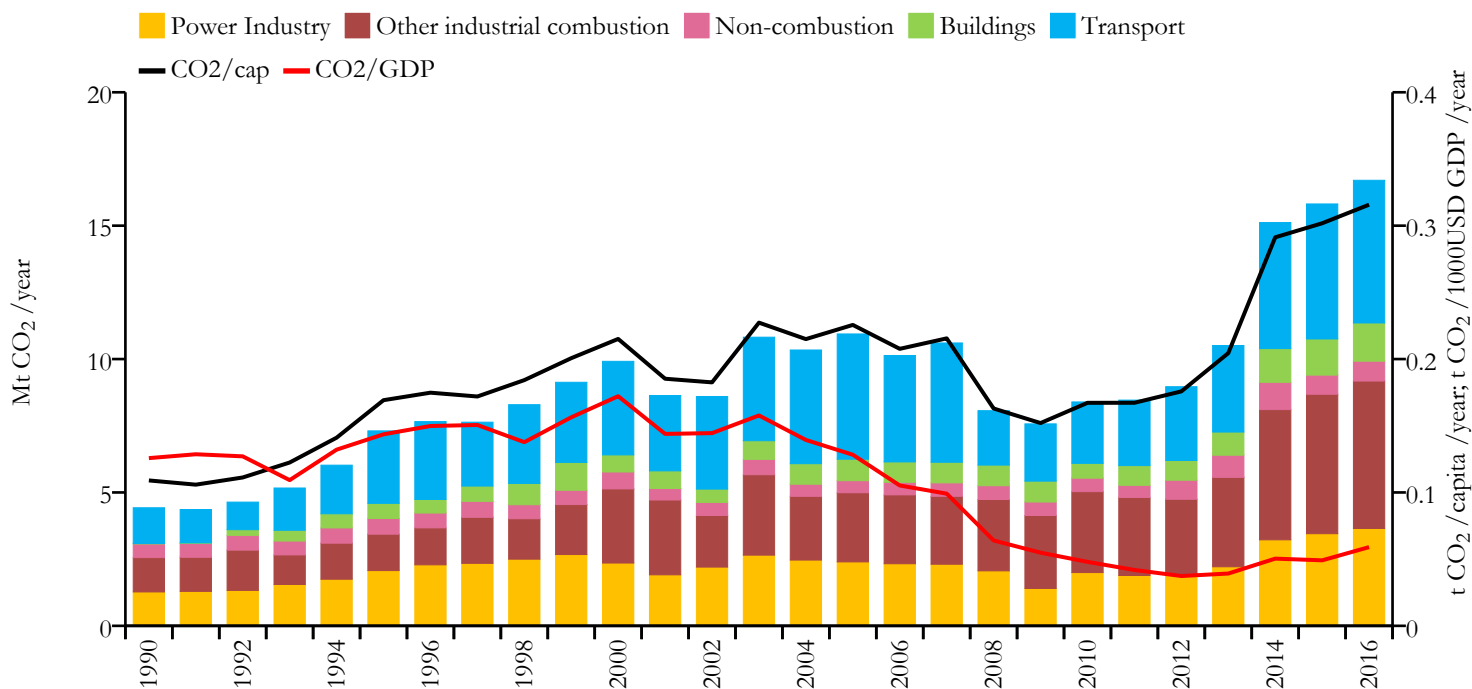


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





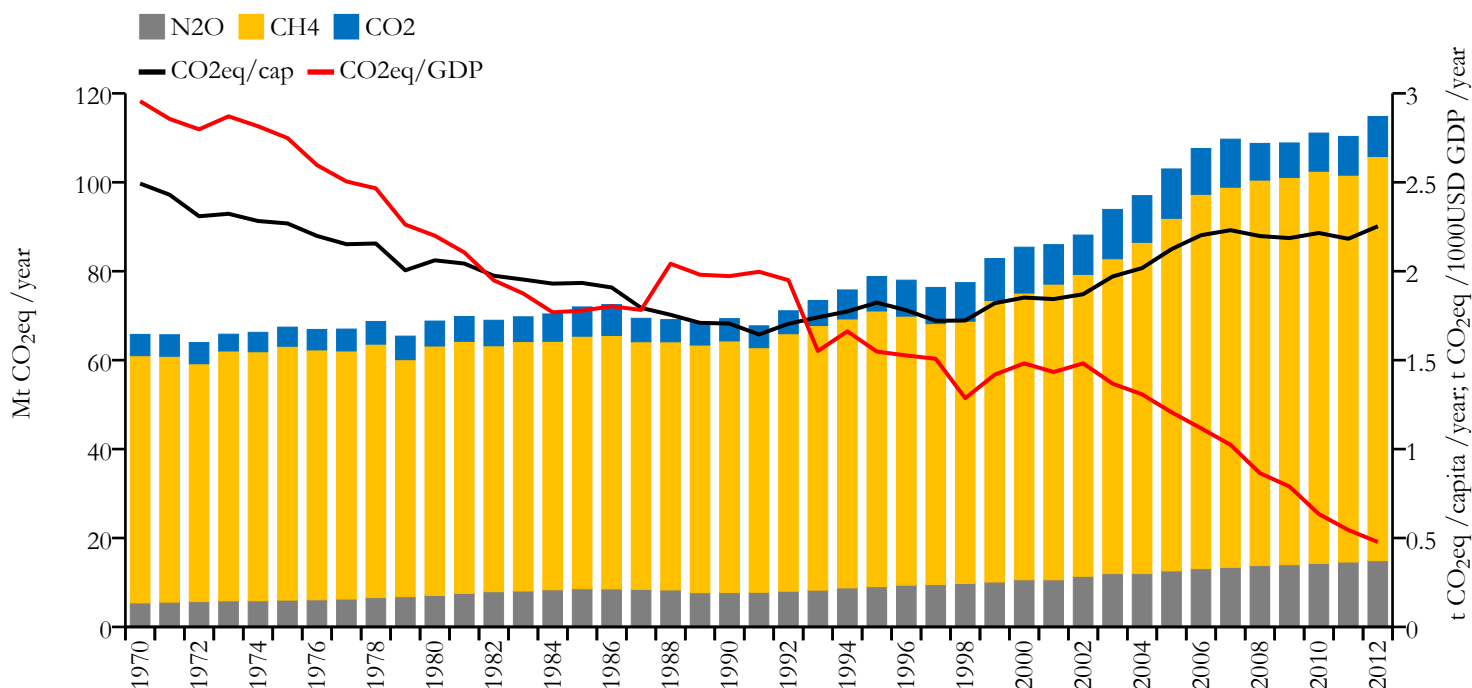
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	16.702	0.316	0.059	52885223
1990	4.426	0.109	0.126	40626250

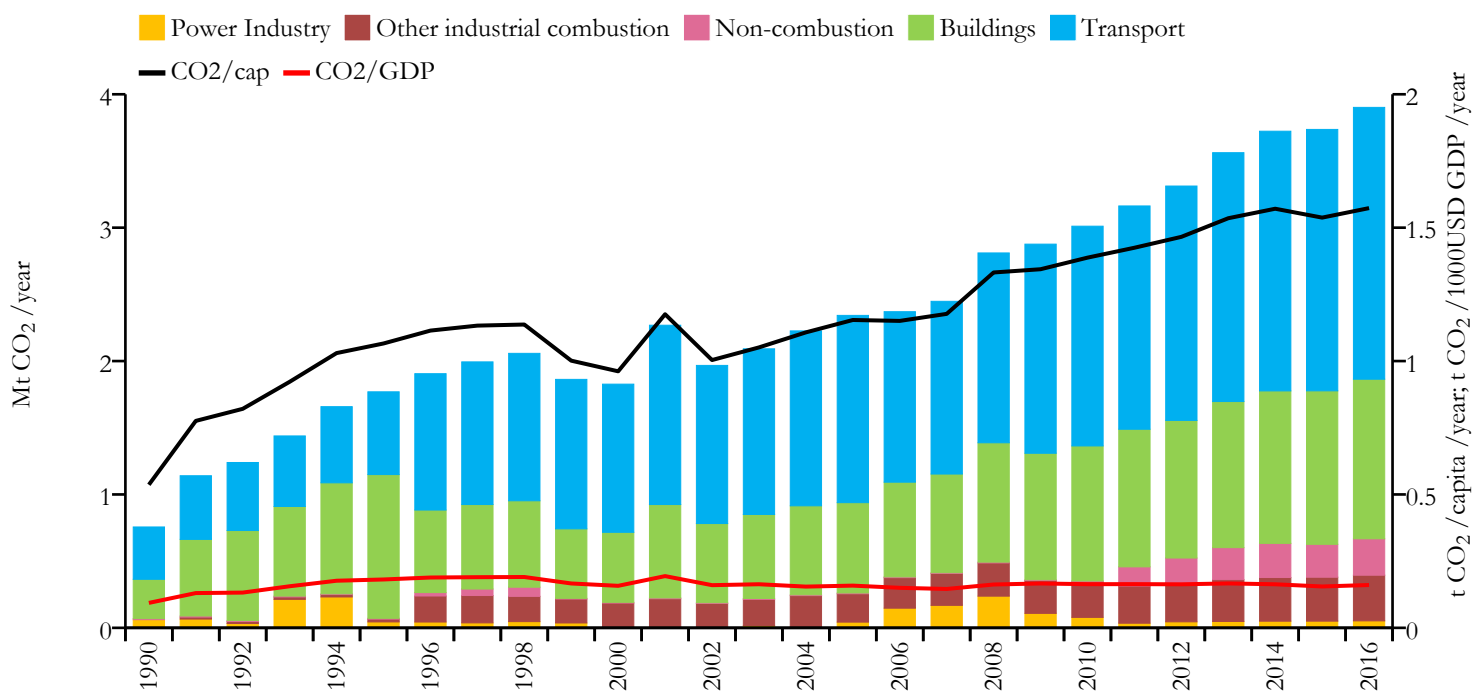


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





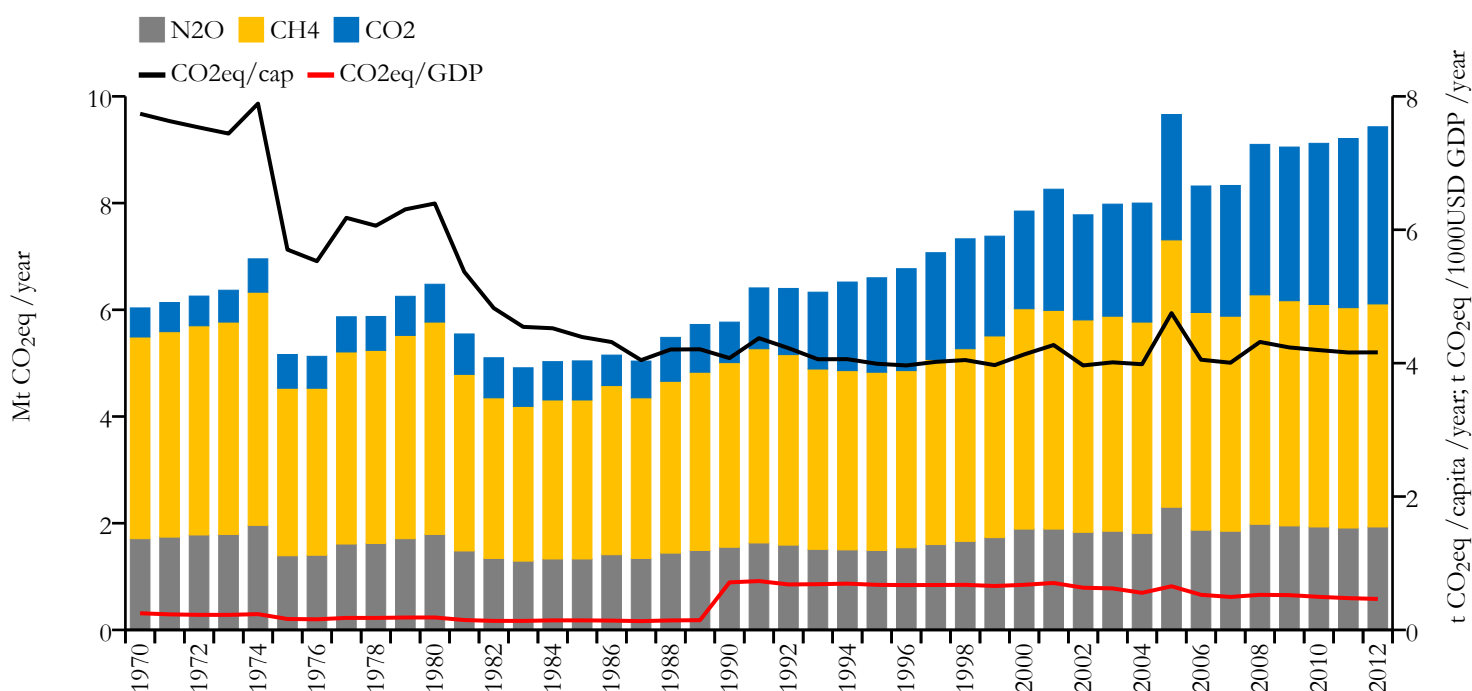
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	3.902	1.573	0.161	2479713
1990	0.756	0.536	0.093	1414692

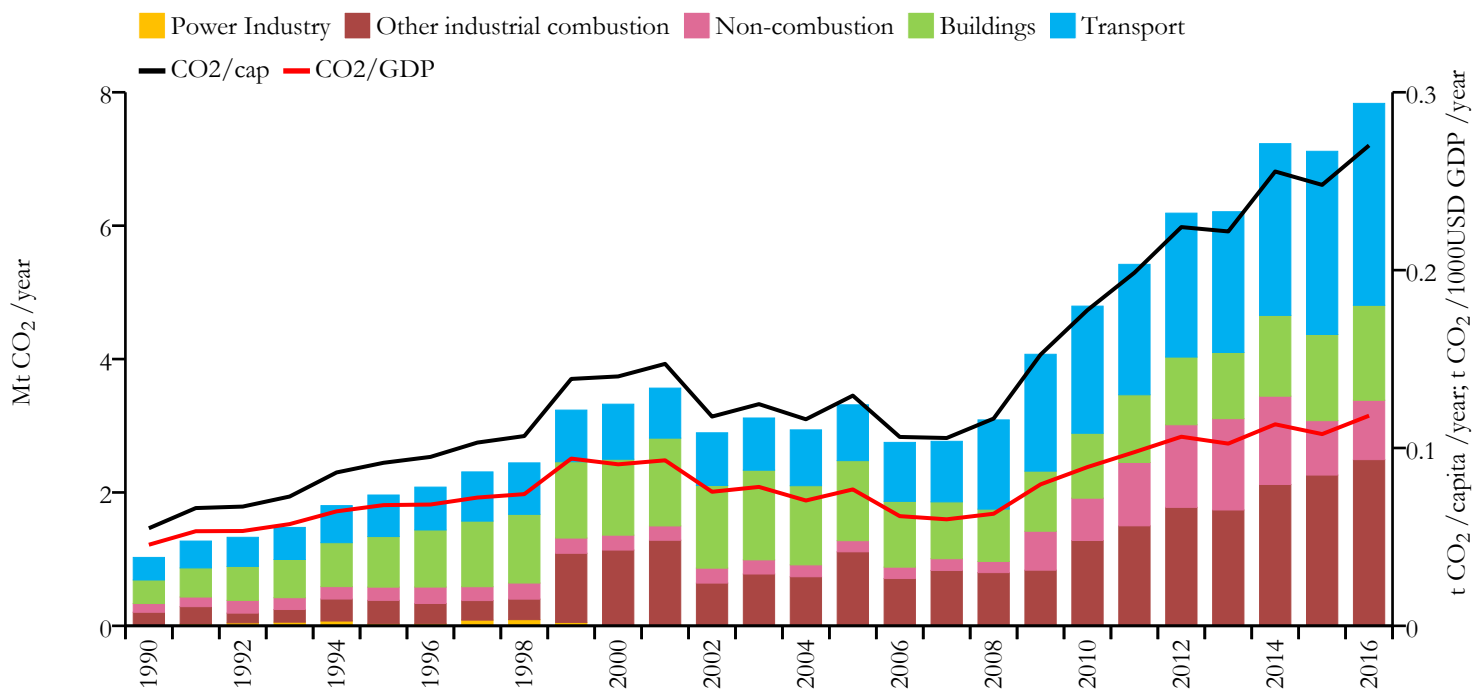


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





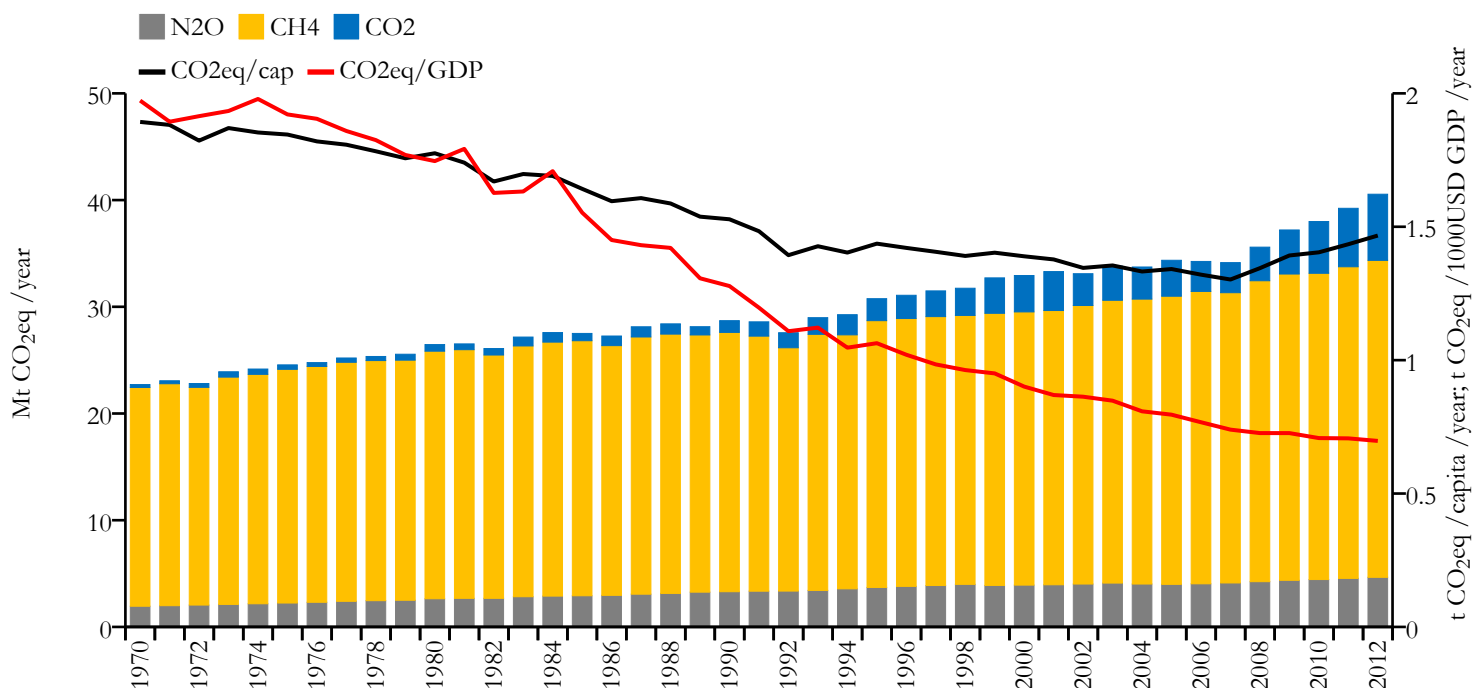
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	7.834	0.270	0.118	28982771
1990	1.026	0.055	0.046	18749406



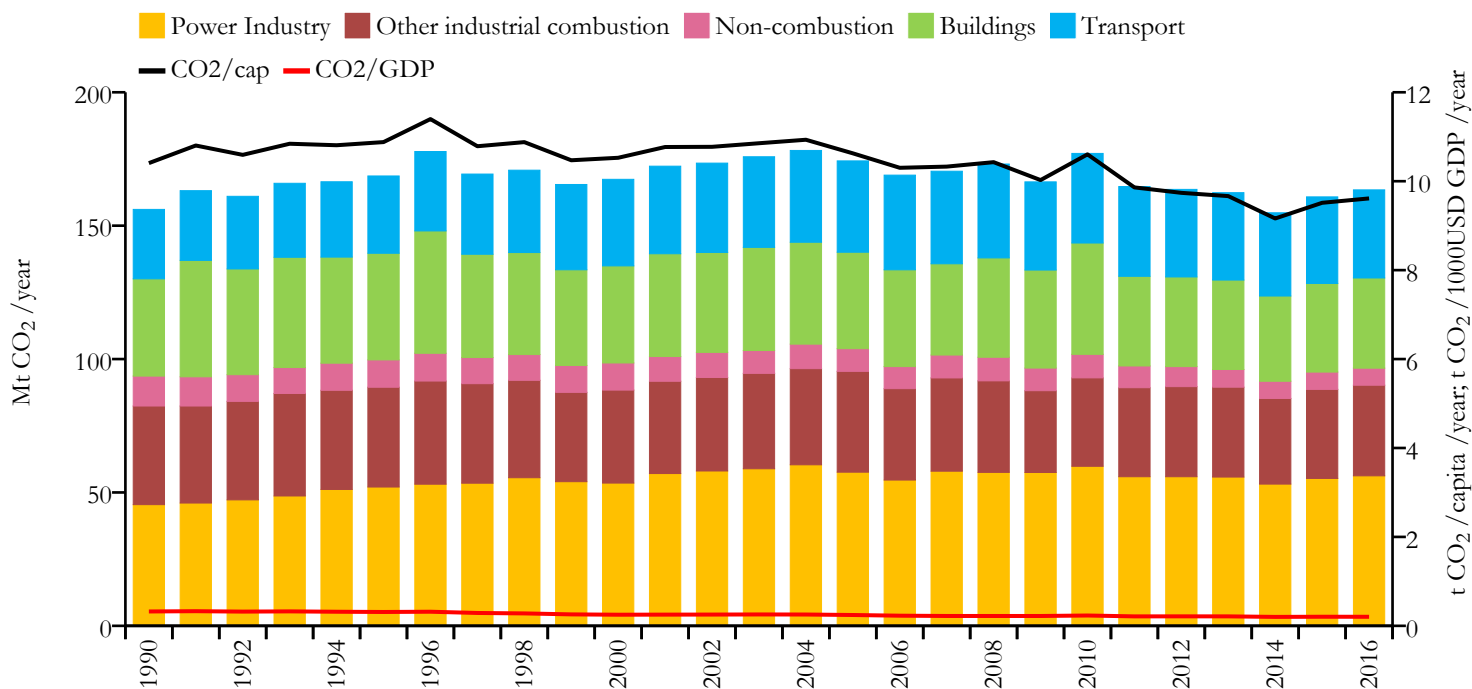
## Greenhouse gas emissions (EDGARv4.3.2 dataset)







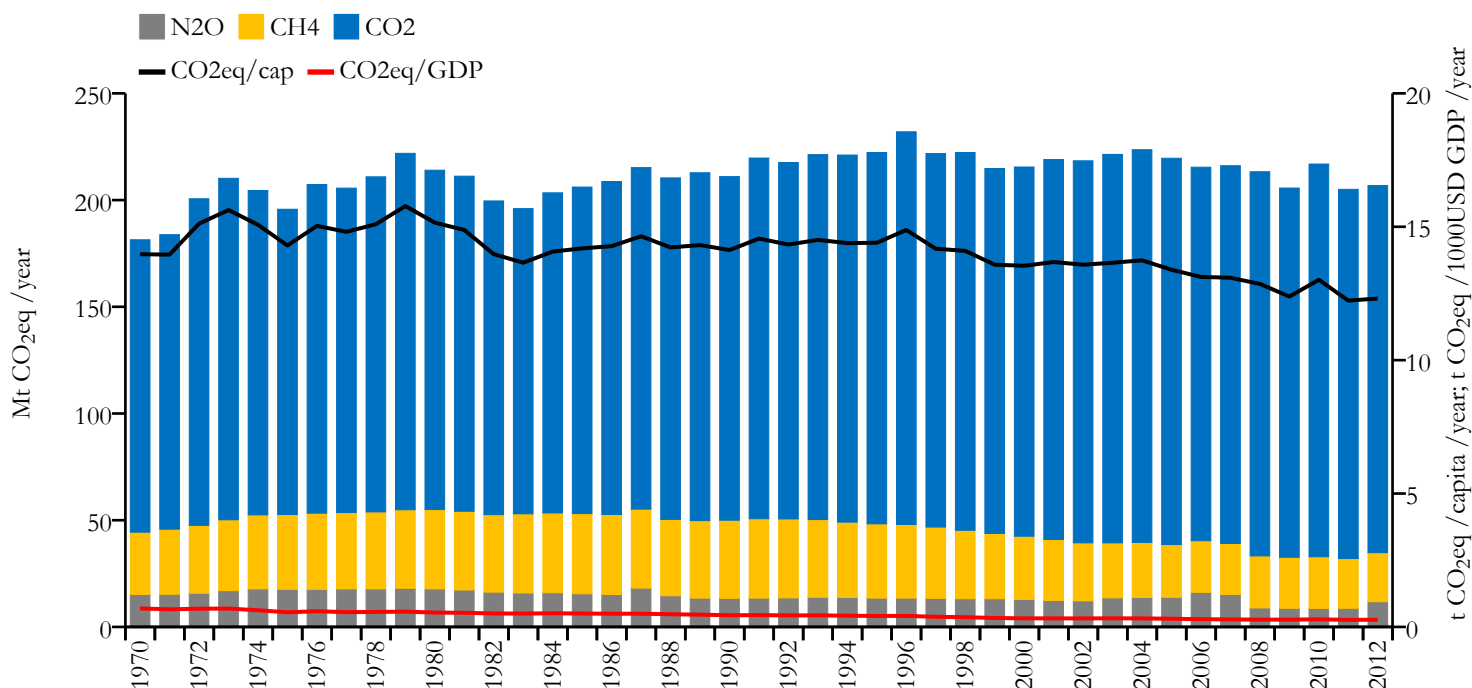
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	163.419	9.613	0.204	16987330
1990	156.099	10.407	0.323	14965448



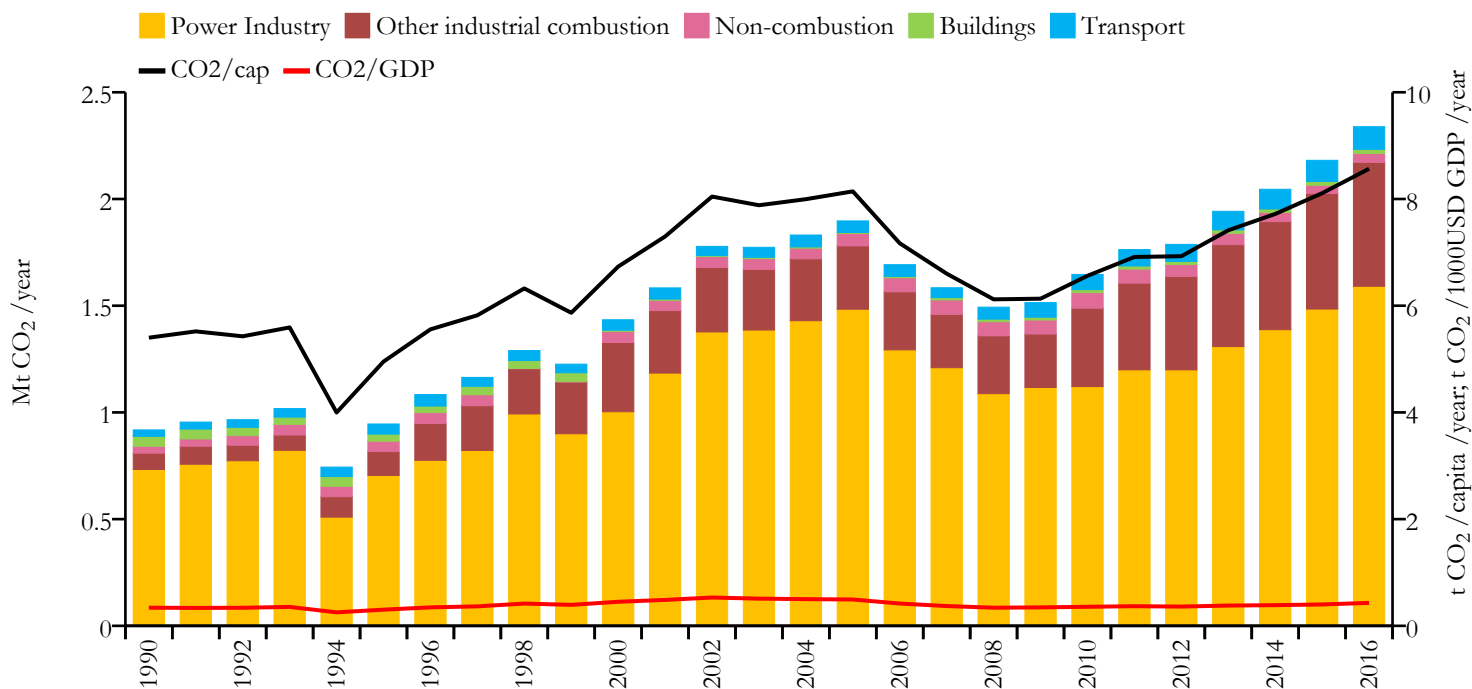
## Greenhouse gas emissions (EDGARv4.3.2 dataset)



# New Caledonia



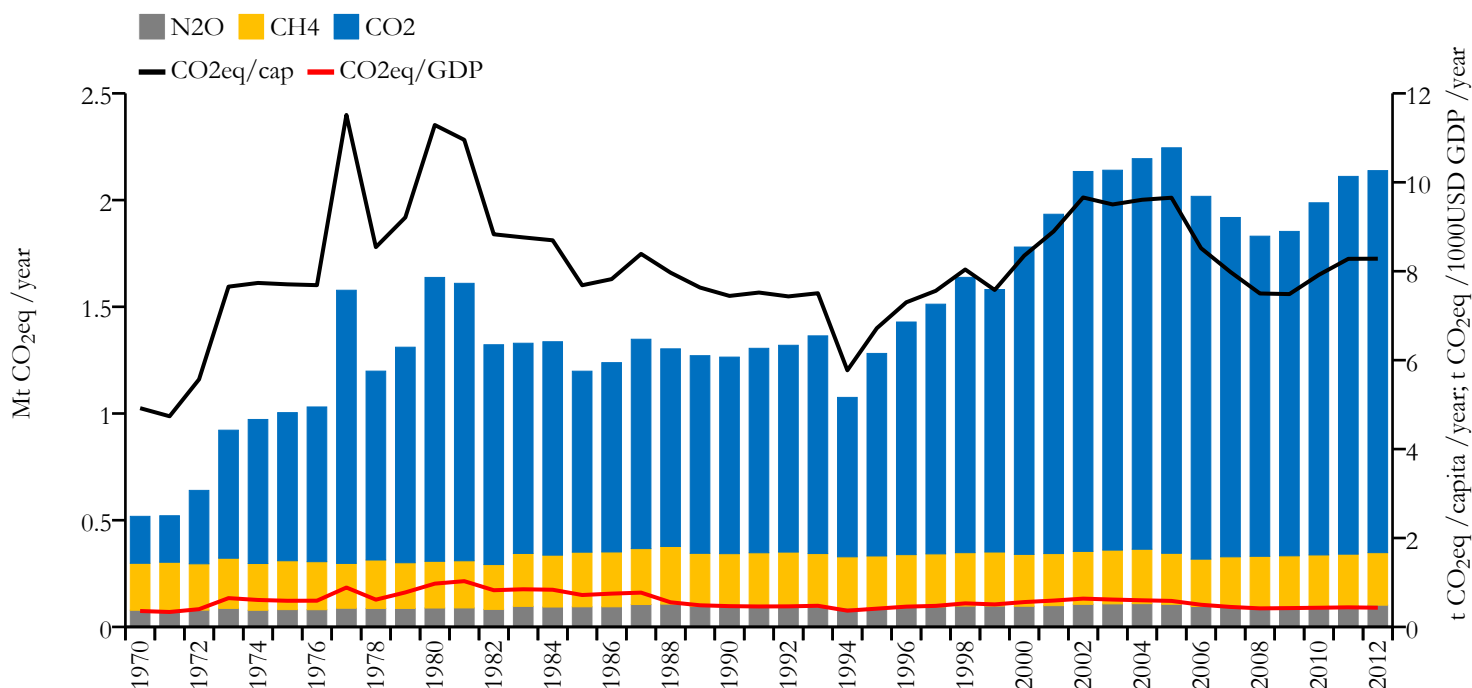
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	2.339	8.567	0.430	272677
1990	0.918	5.400	0.340	169787



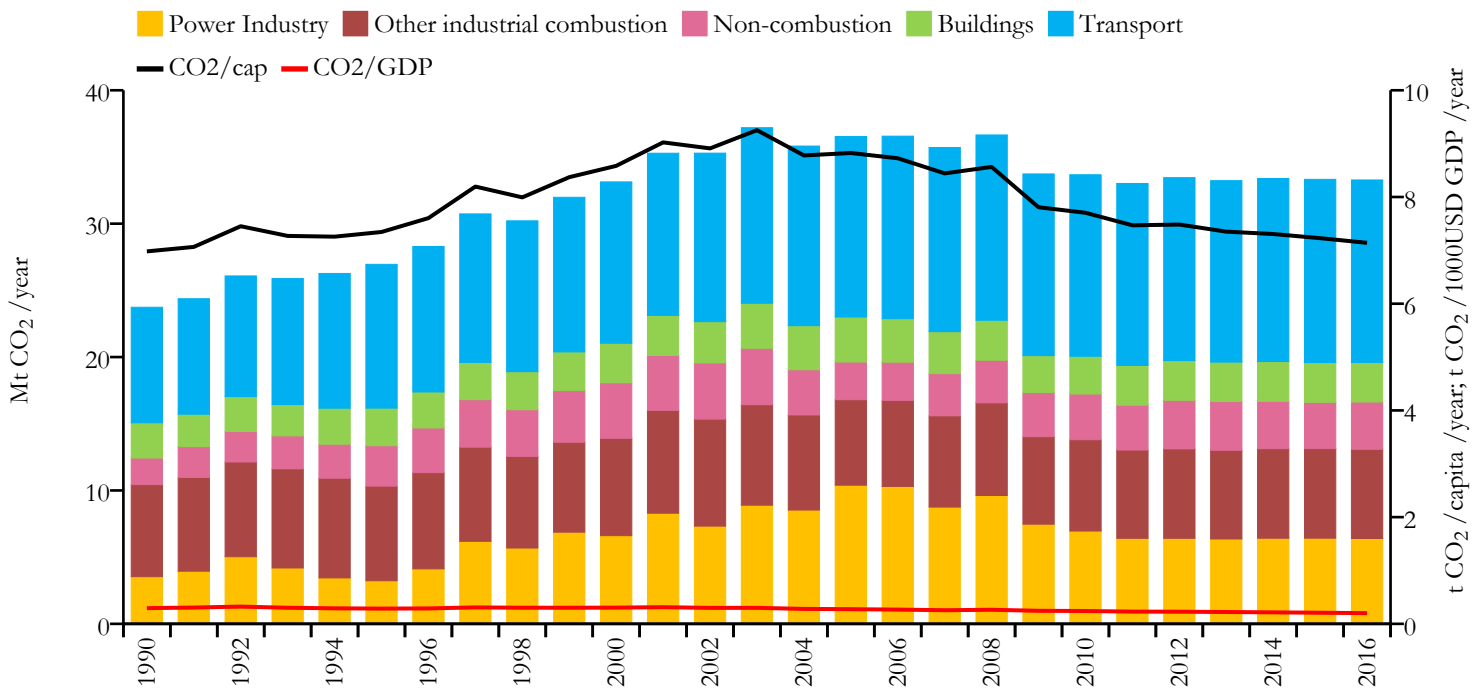
## Greenhouse gas emissions (EDGARv4.3.2 dataset)



# New Zealand



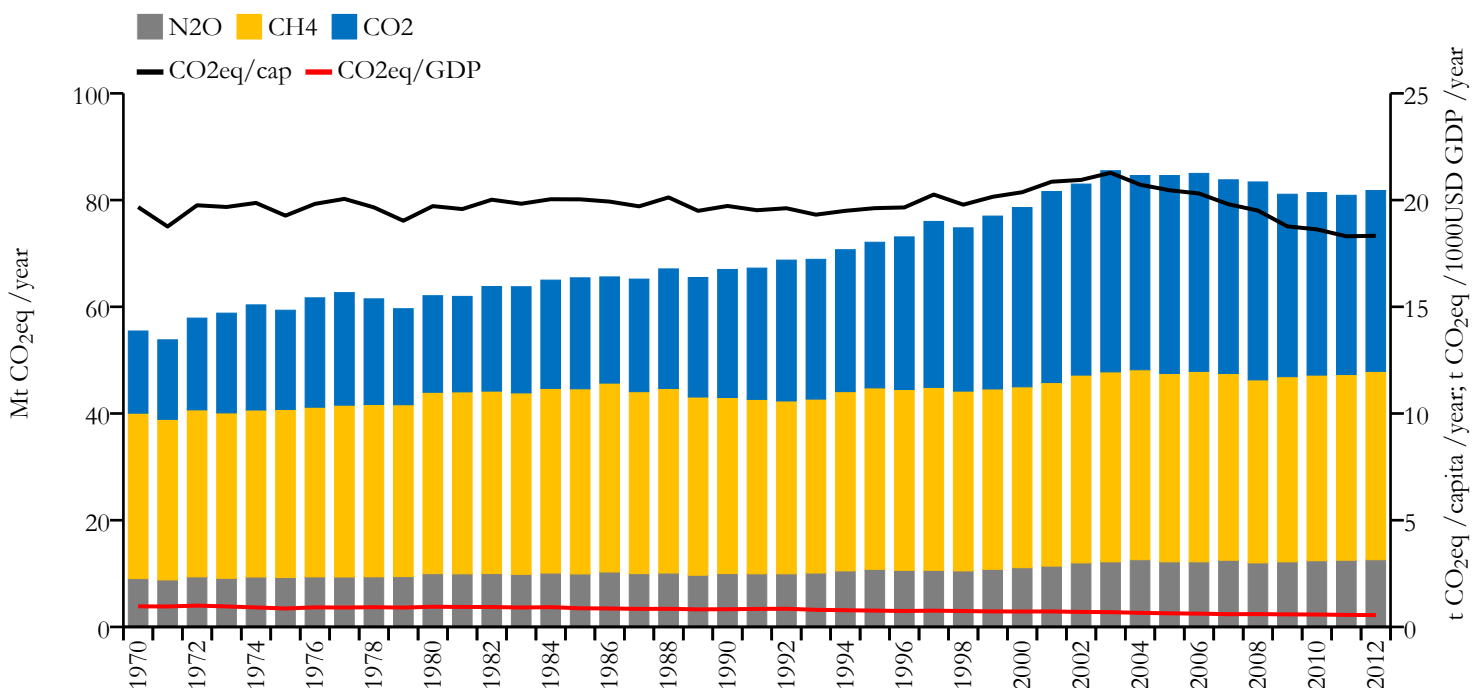
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	33.276	7.141	0.200	4660833
1990	23.734	6.981	0.294	3398172

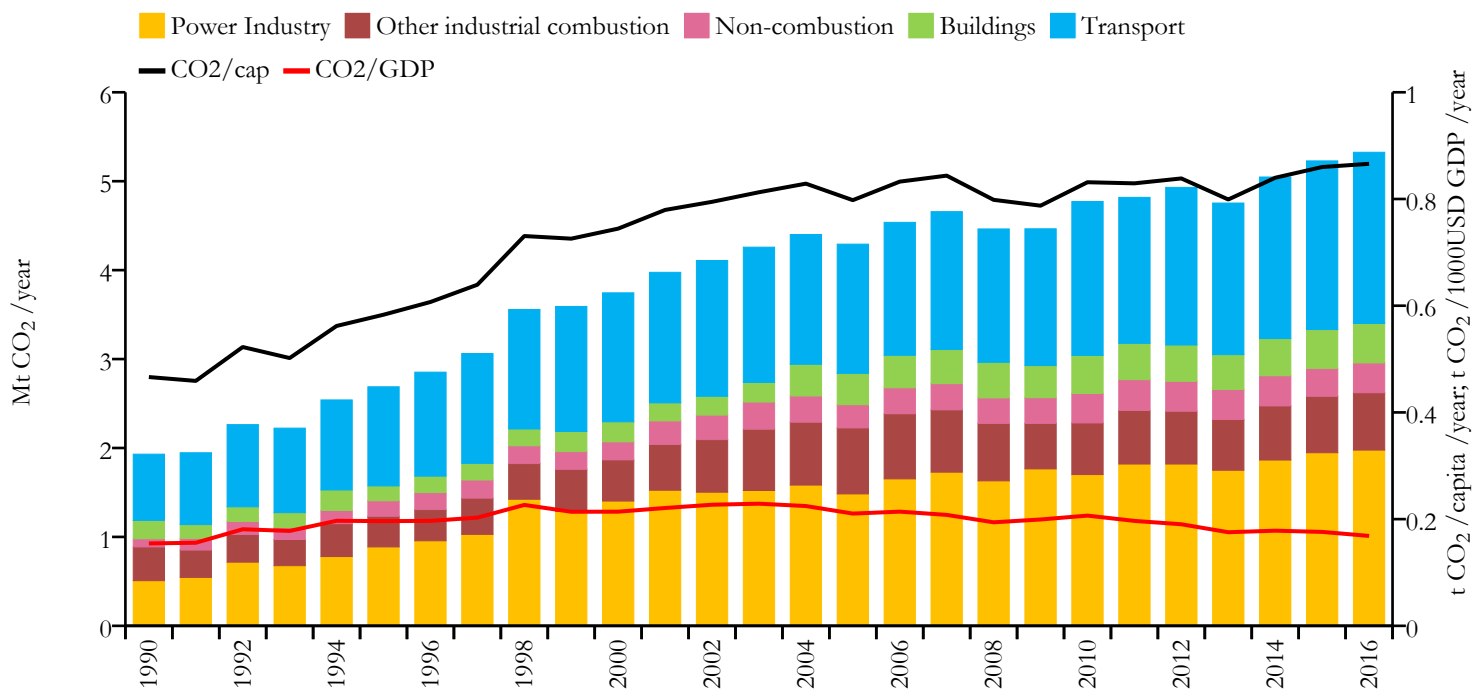


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





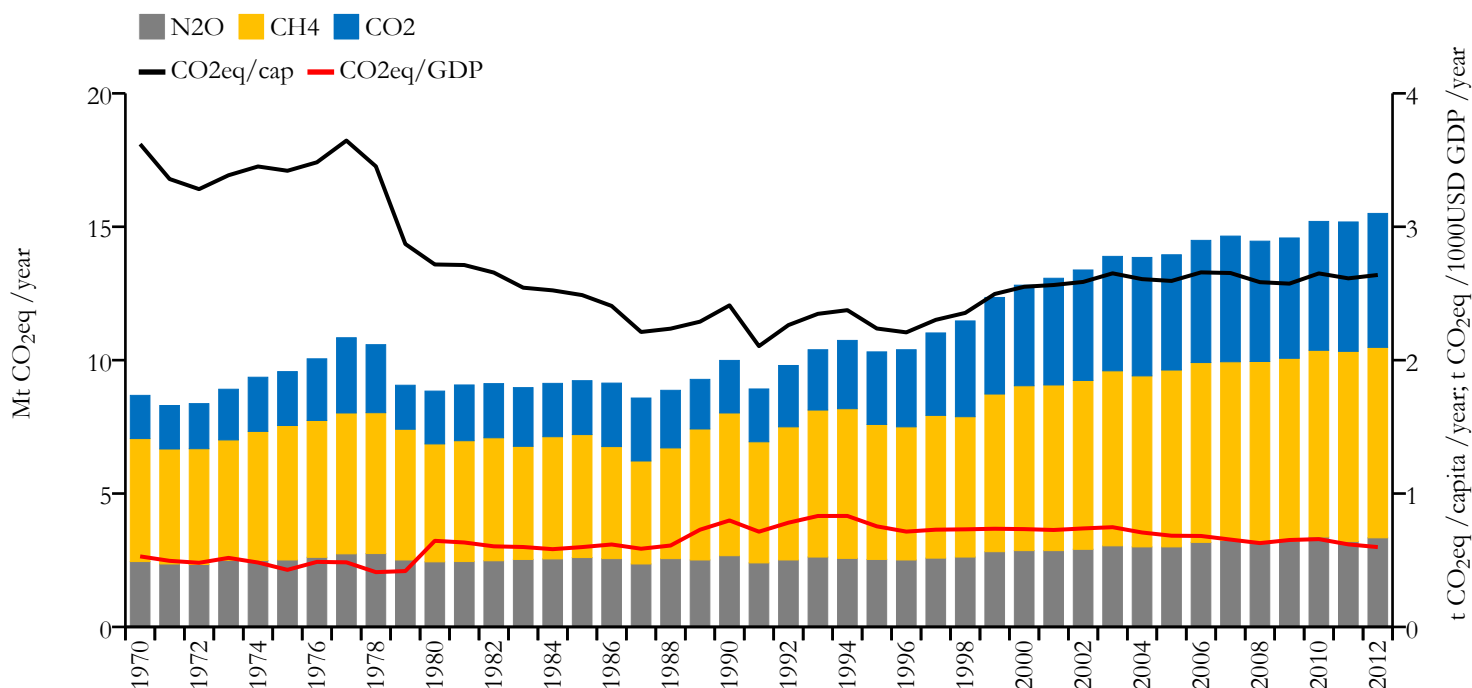
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	5.325	0.866	0.169	6149928
1990	1.930	0.466	0.154	4144565

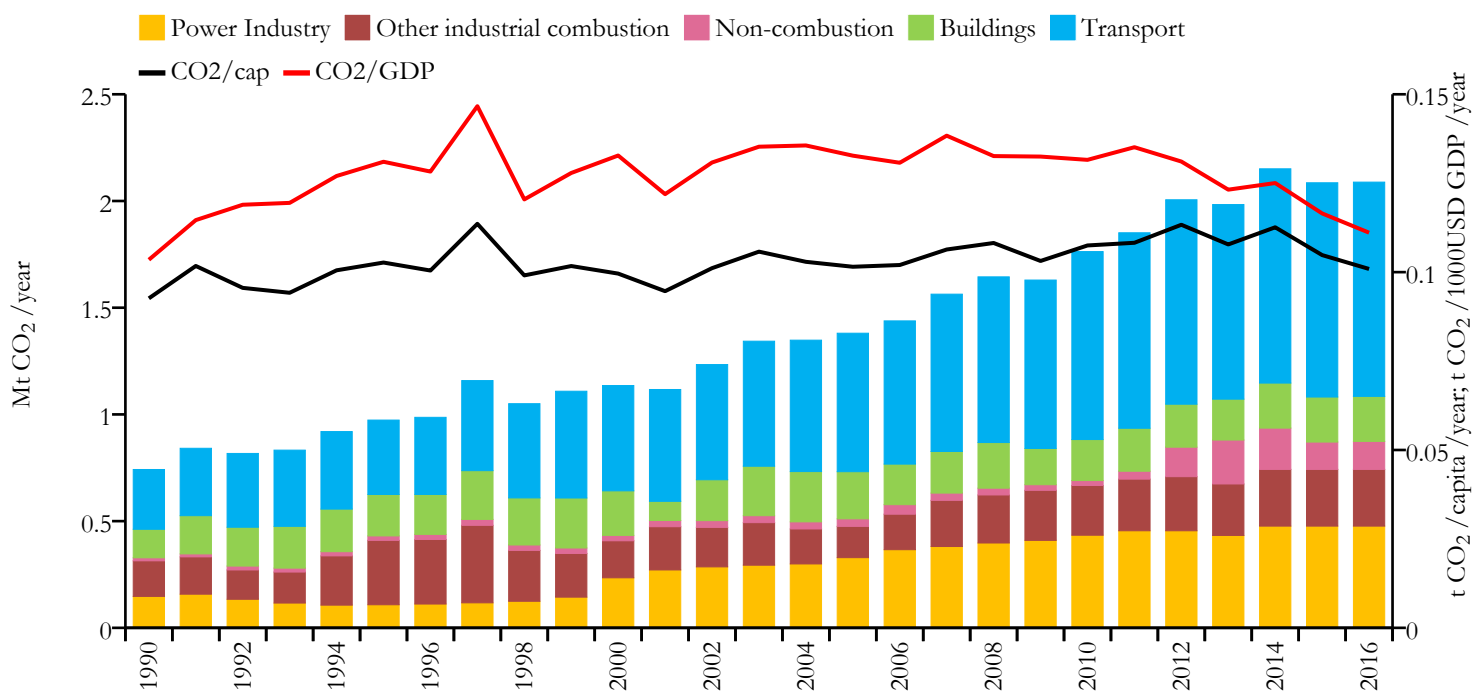


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





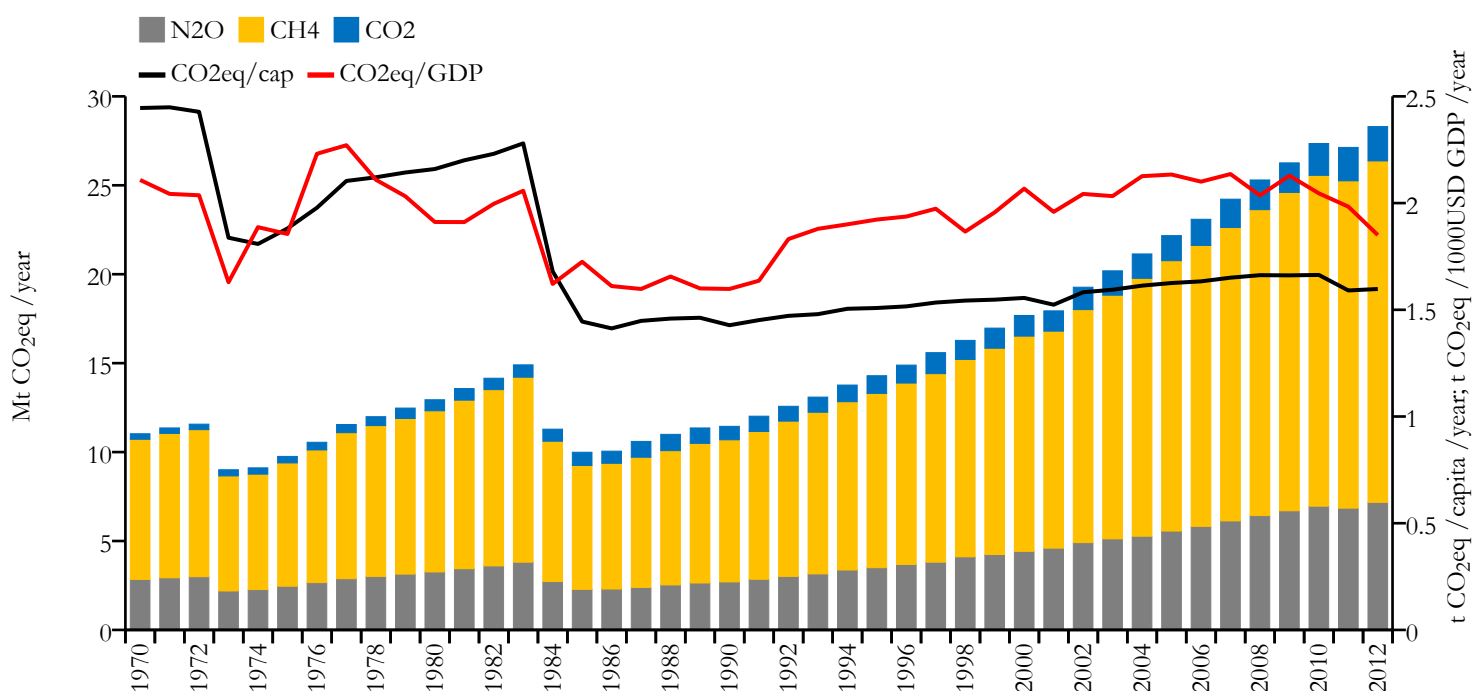
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	2.088	0.101	0.111	20672987
1990	0.742	0.093	0.103	8012861

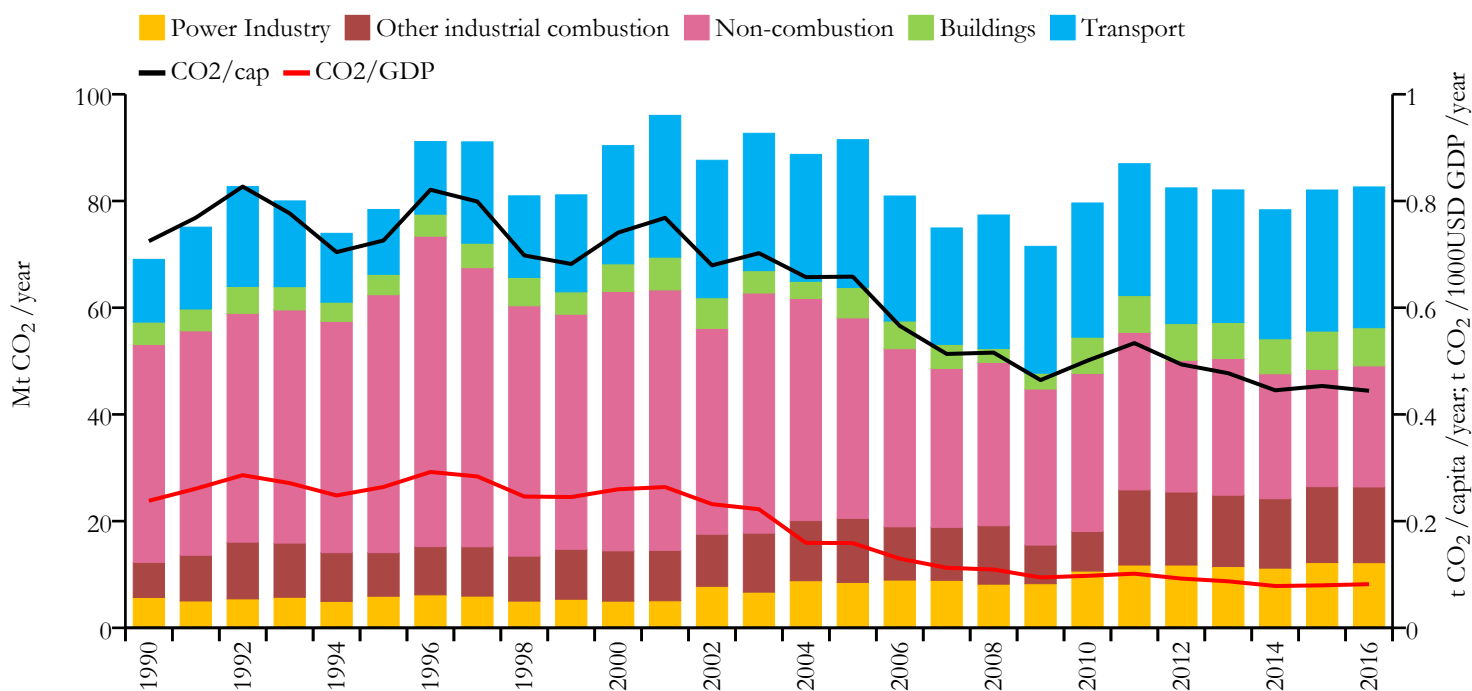


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





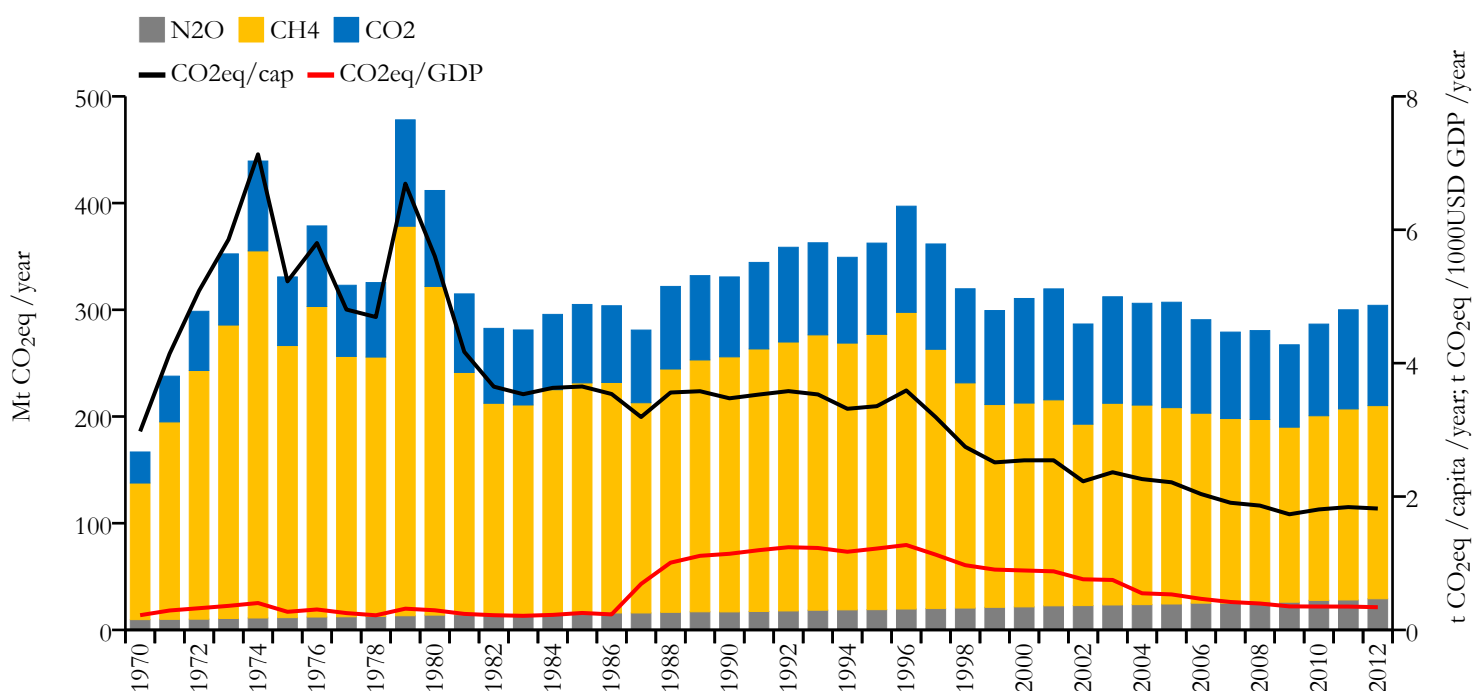
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)

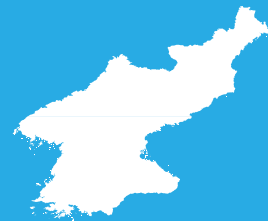


Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	82.634	0.444	0.082	185989640
1990	69.062	0.725	0.238	95269988

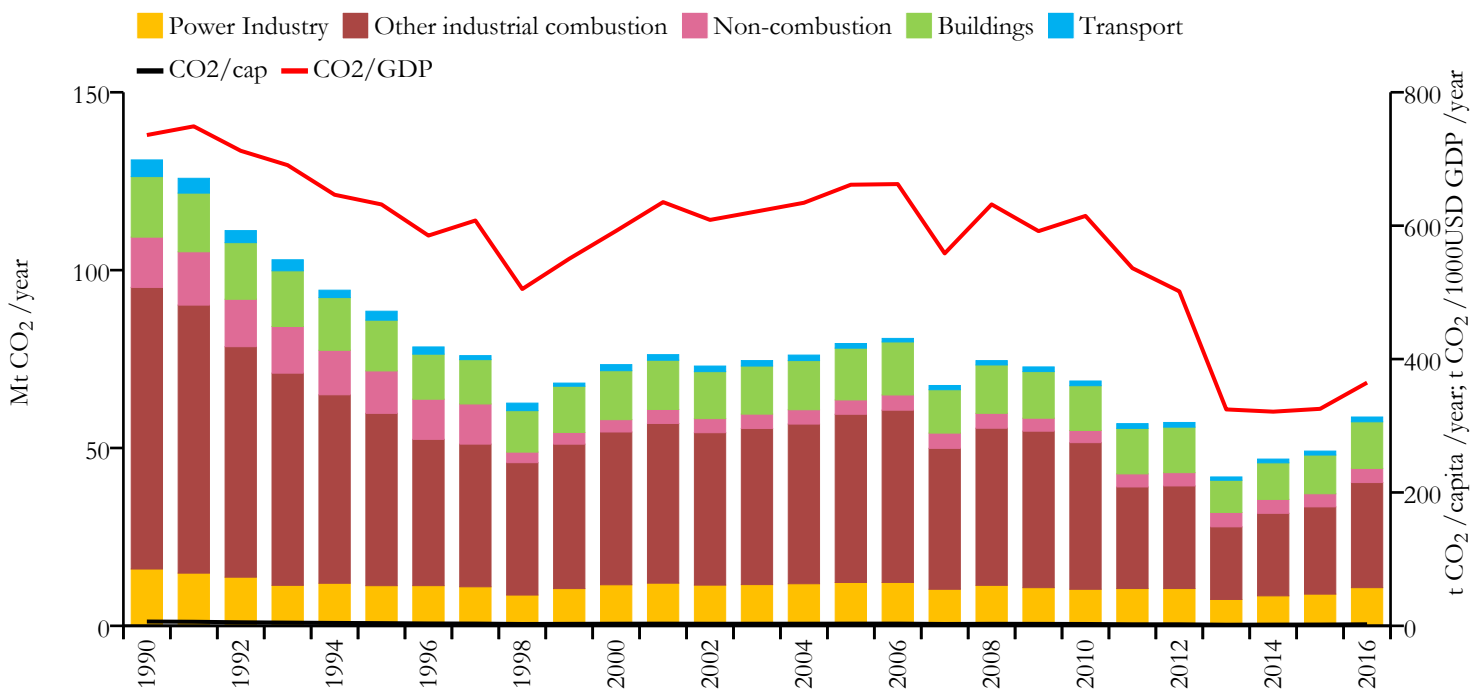


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





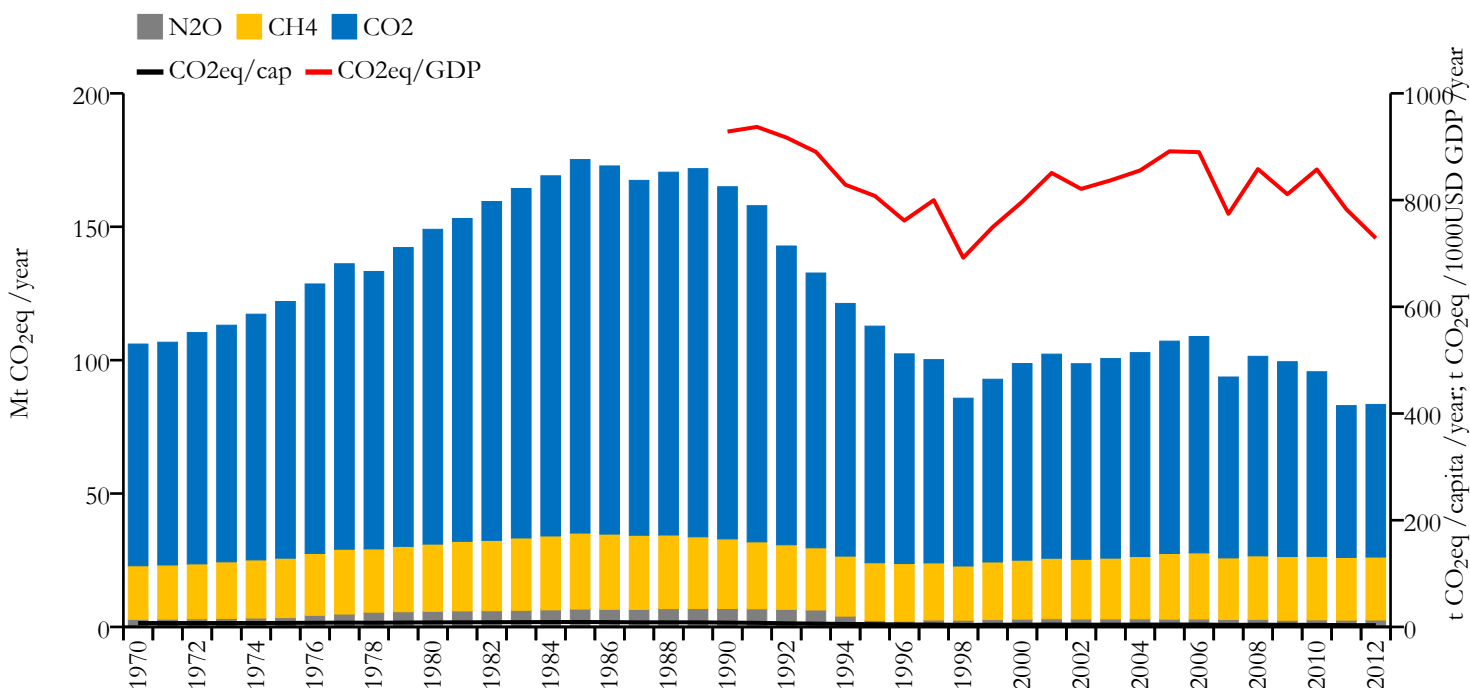
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	58.709	2.311	364.651	25368620
1990	130.986	6.453	735.878	20293054

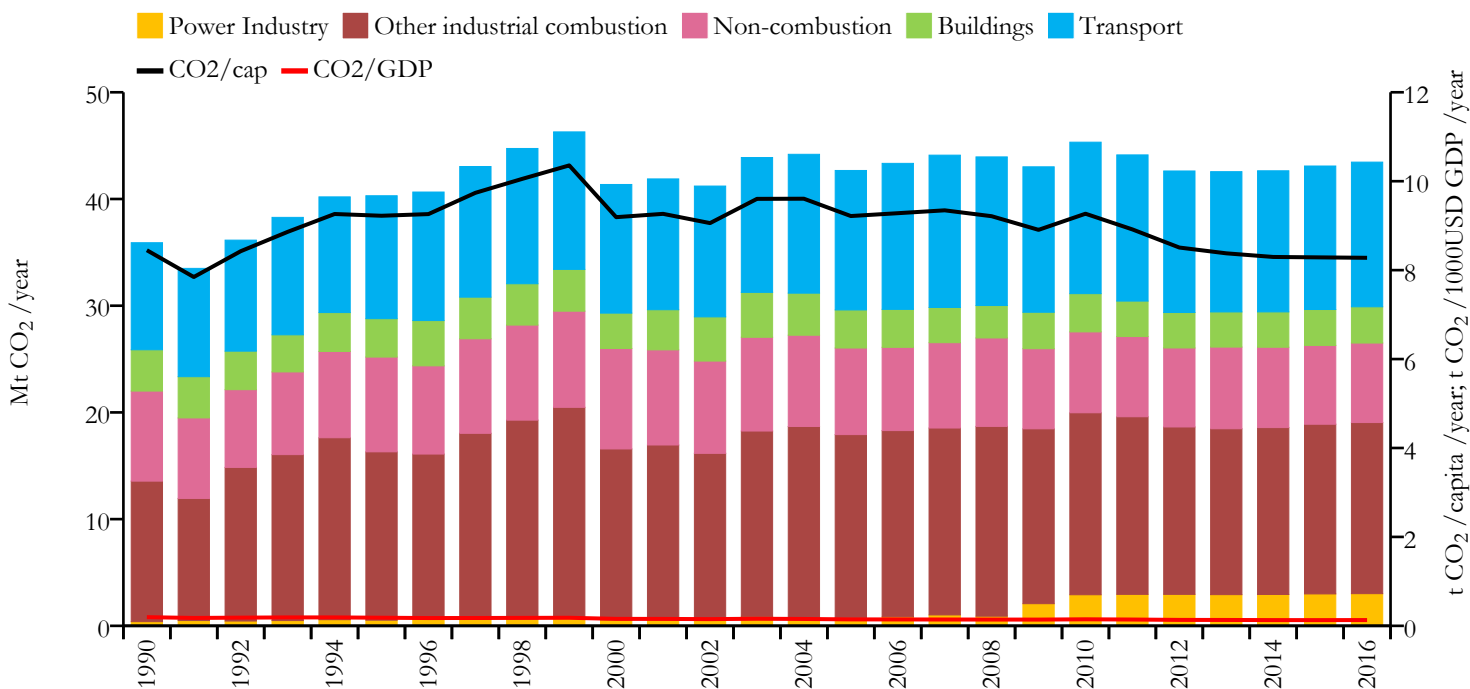


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





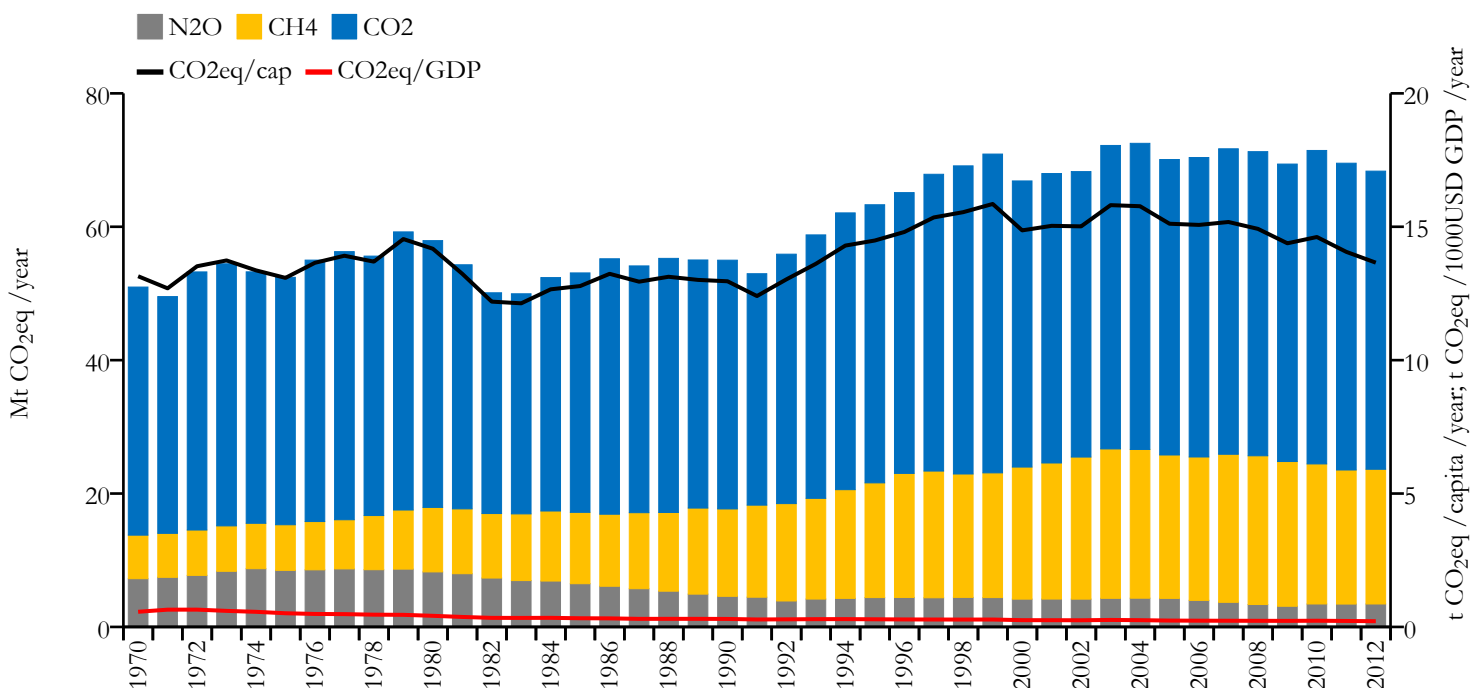
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	43.456	8.277	0.130	5254694
1990	35.903	8.448	0.195	4247285



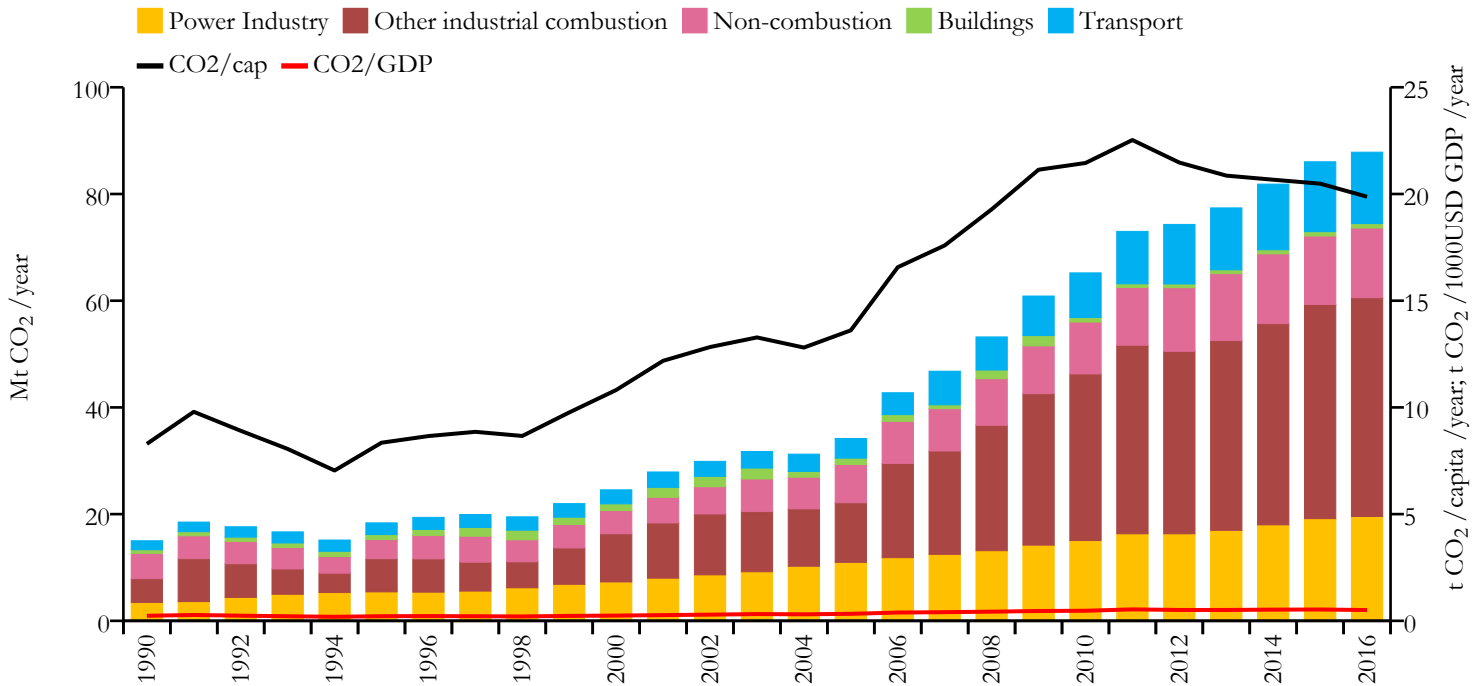
## Greenhouse gas emissions (EDGARv4.3.2 dataset)







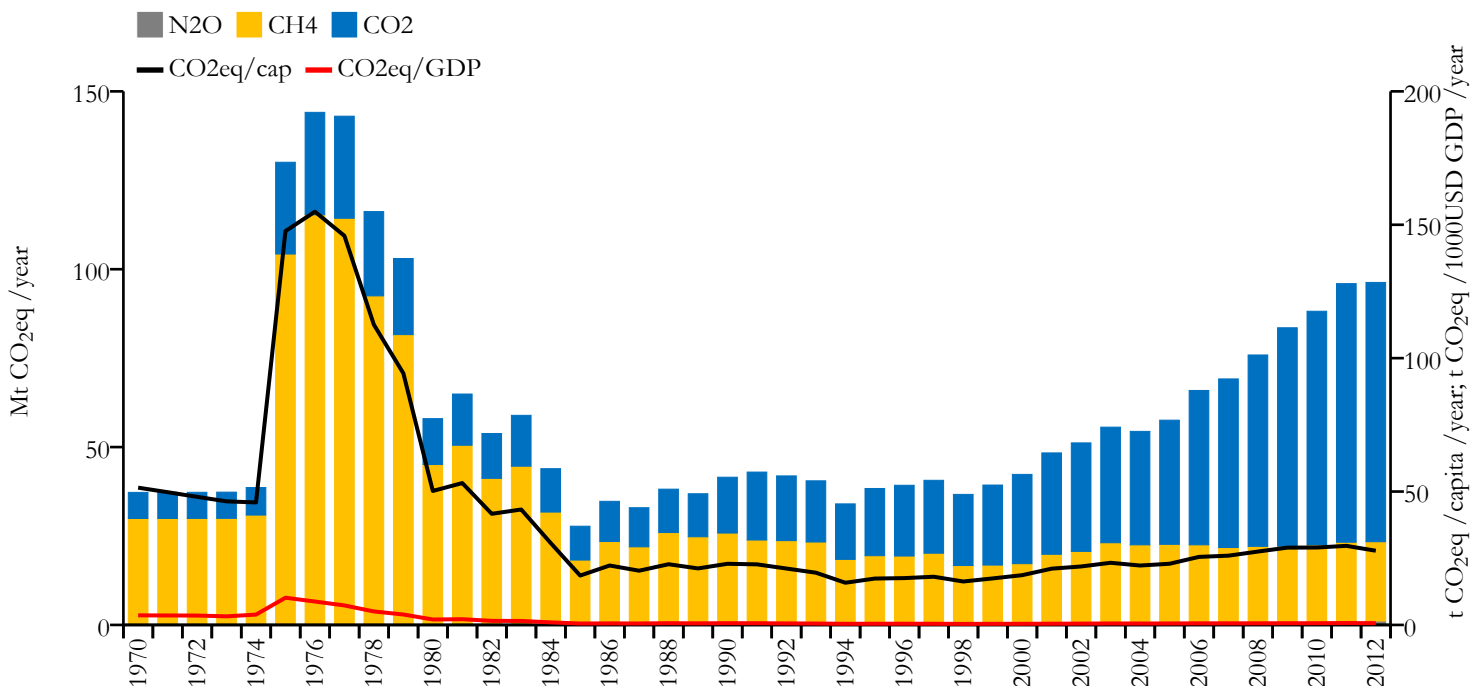
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)

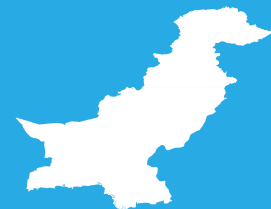


Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	87.836	19.872	0.505	4424762
1990	15.008	8.292	0.236	1812160

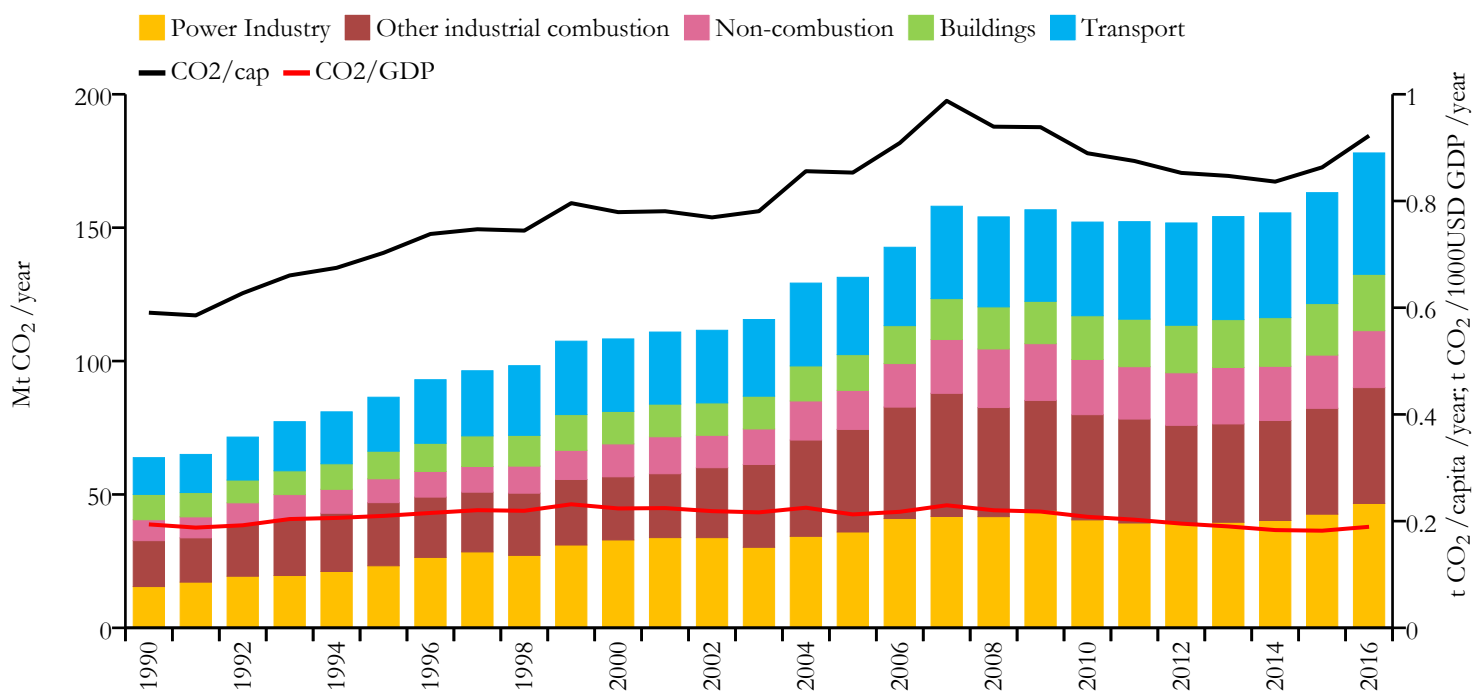


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





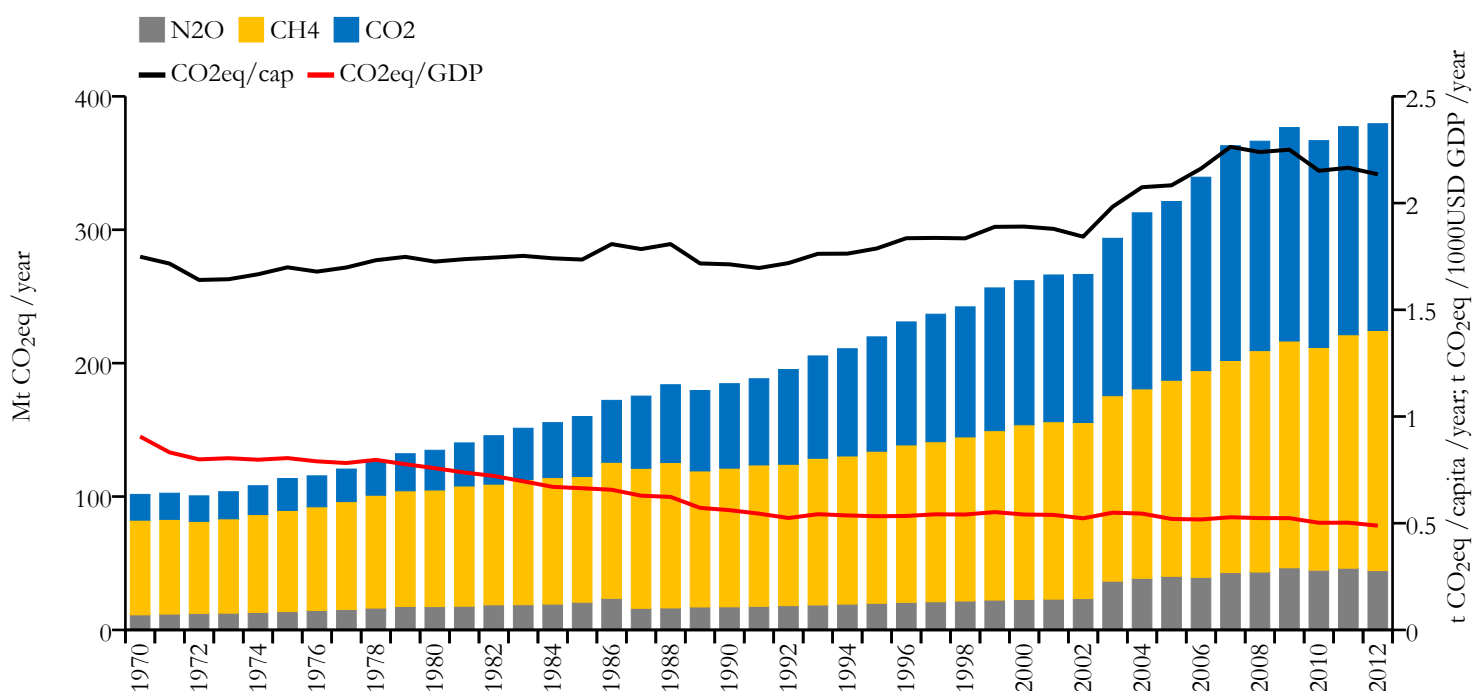
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	178.014	0.922	0.189	193203476
1990	63.791	0.591	0.194	107678614

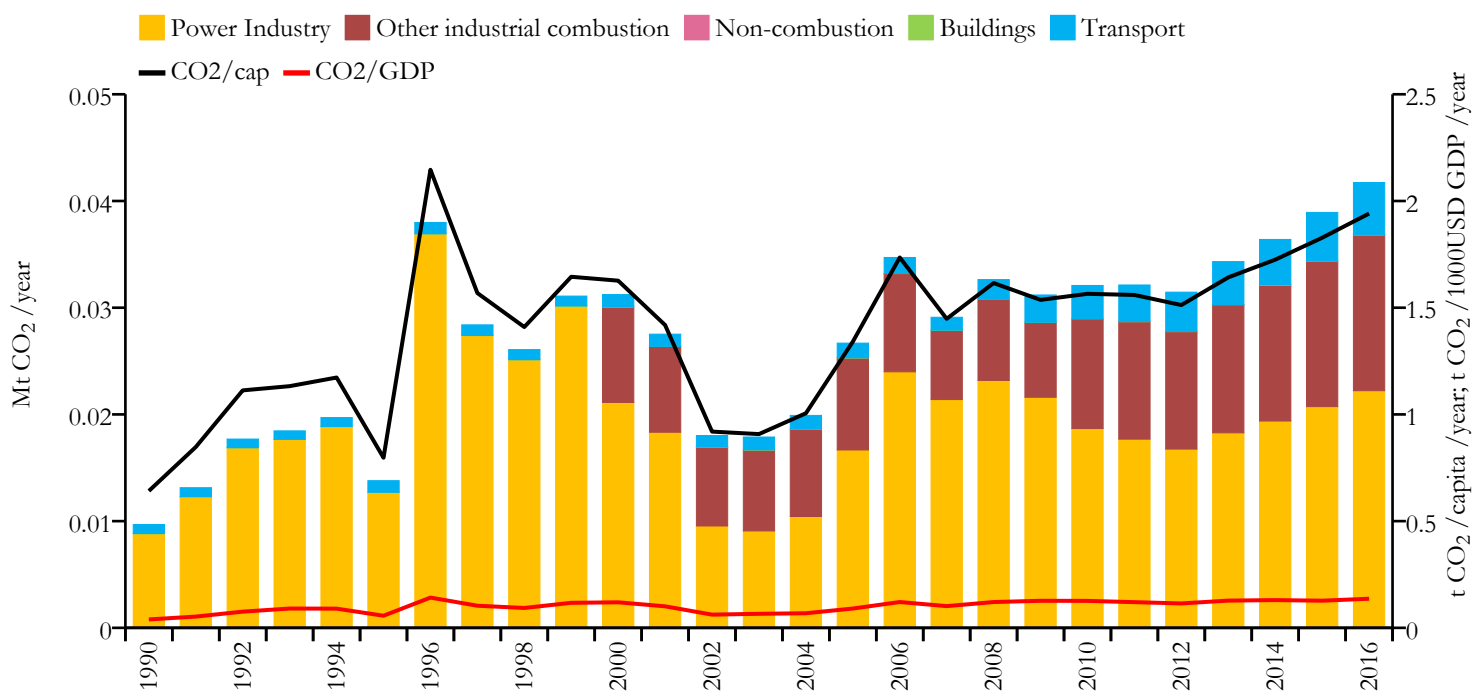


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





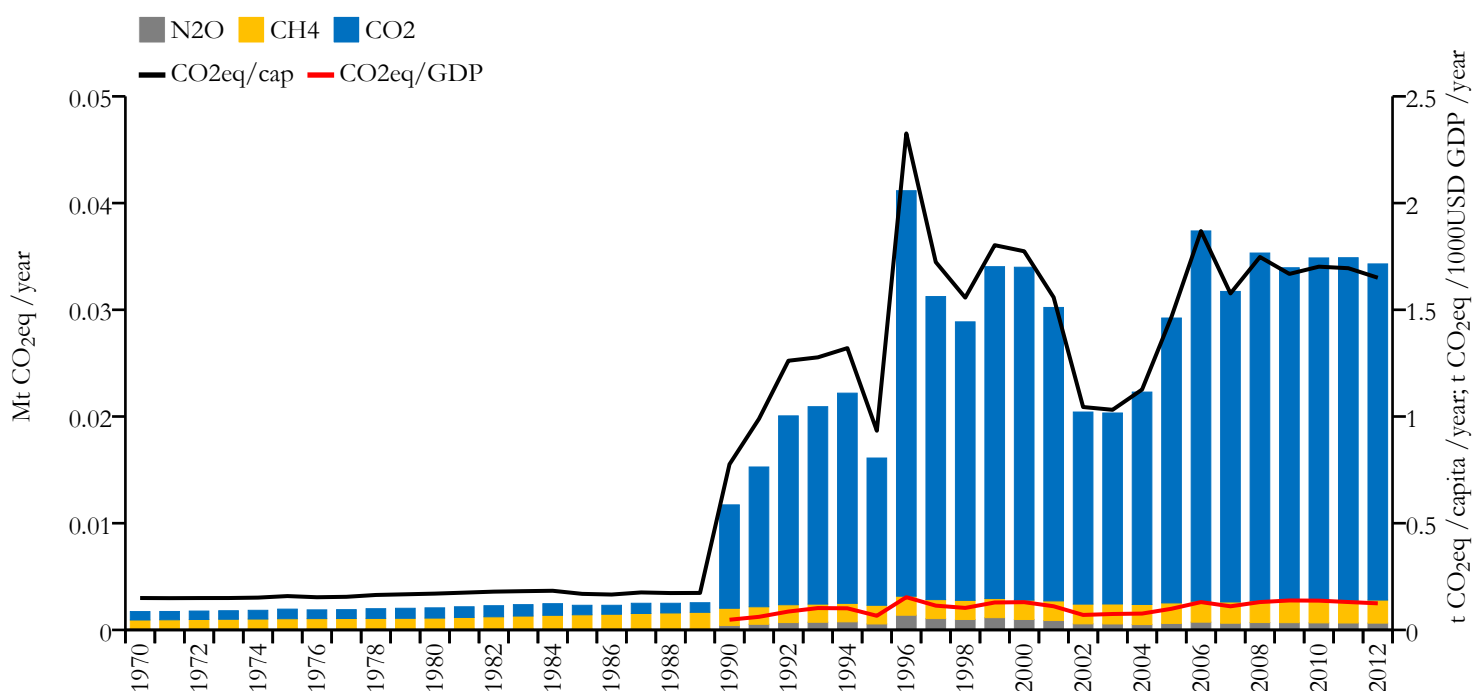
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	0.042	1.941	0.136	21503
1990	0.010	0.641	0.039	15088

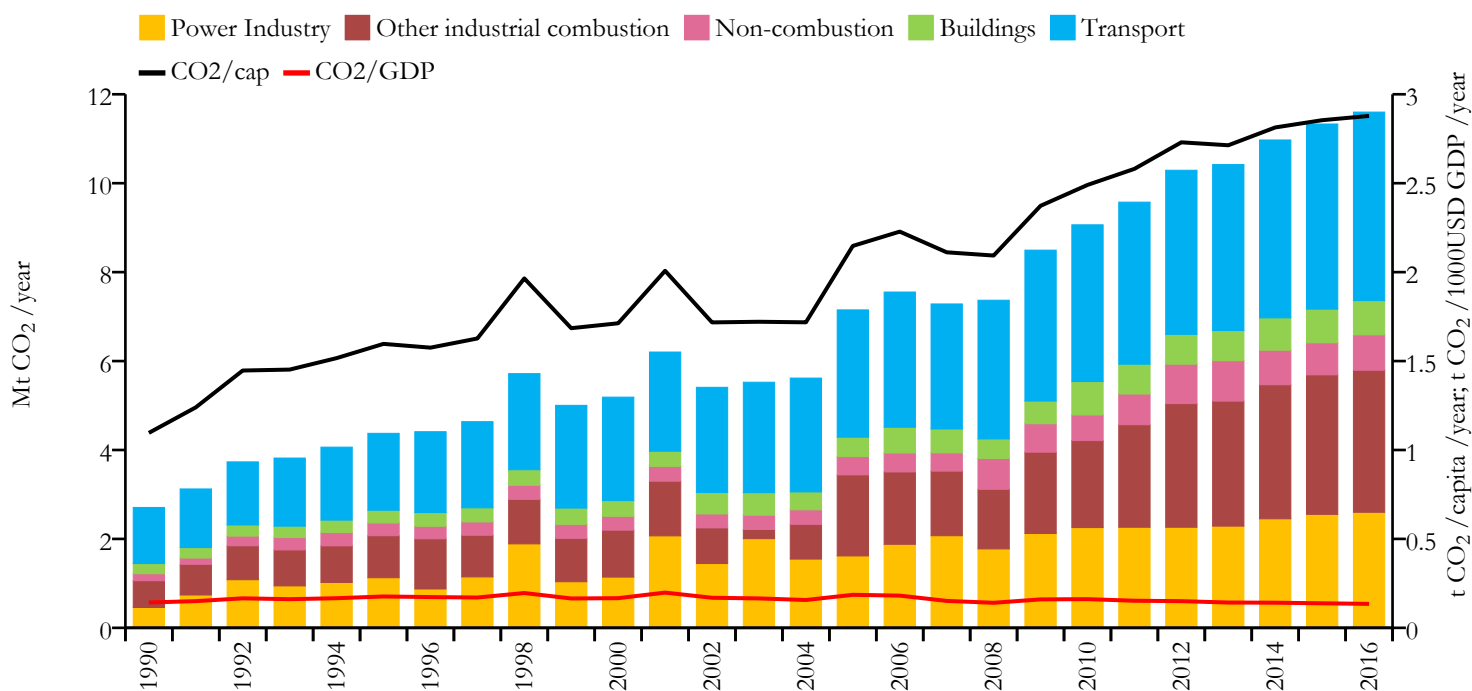


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





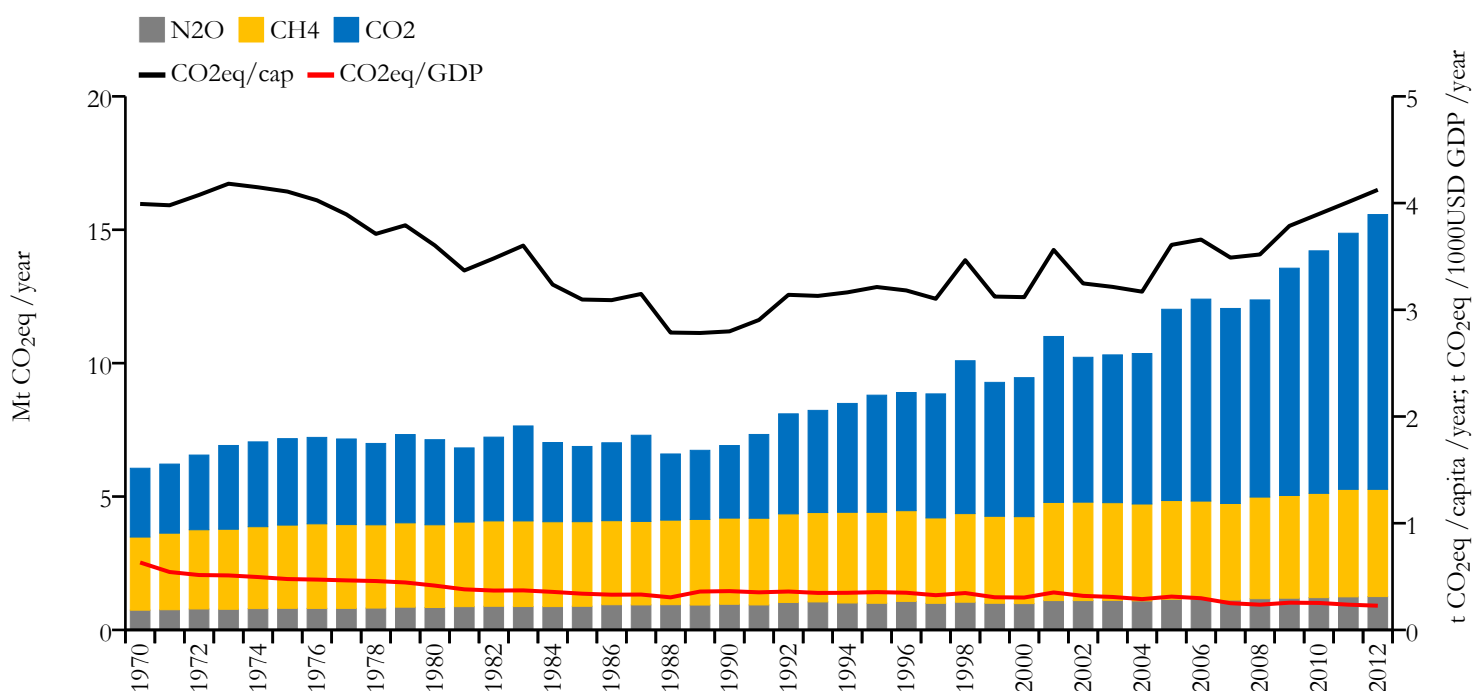
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	11.600	2.878	0.135	4034119
1990	2.708	1.096	0.143	2471009

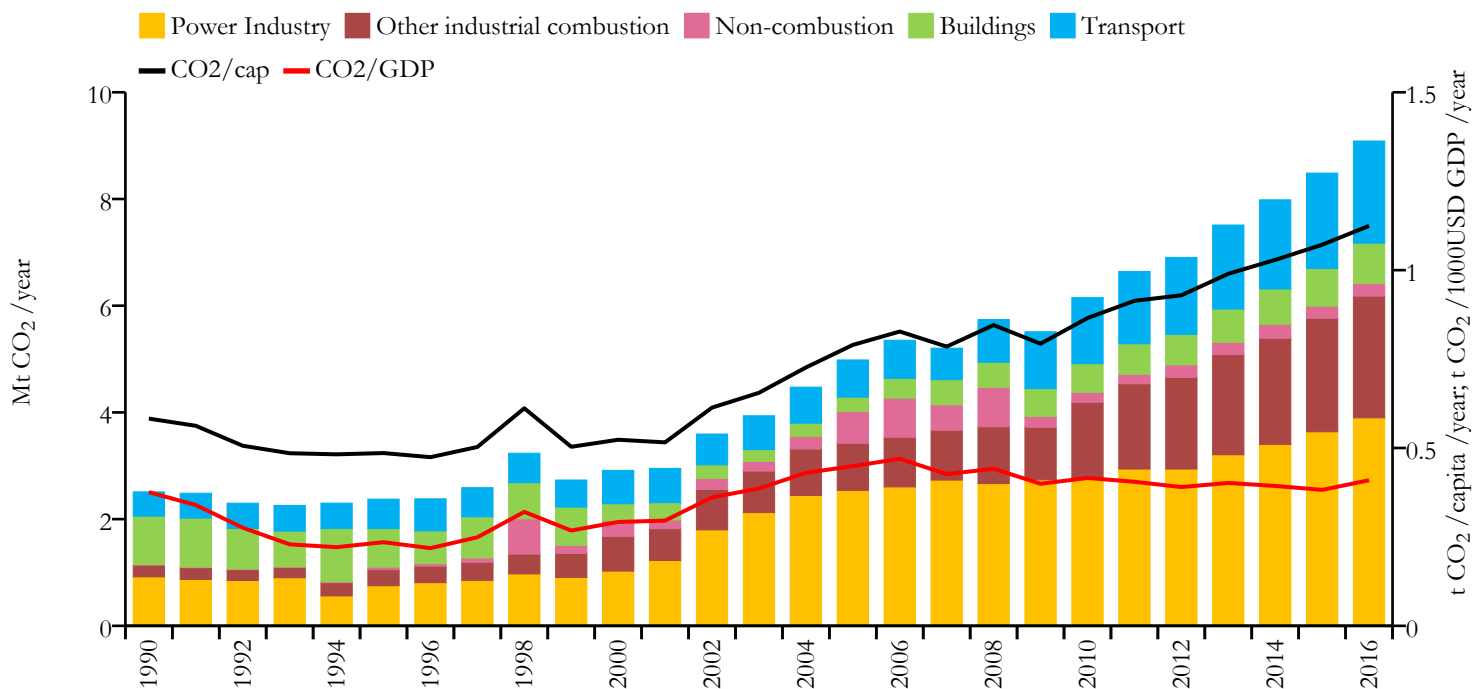


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





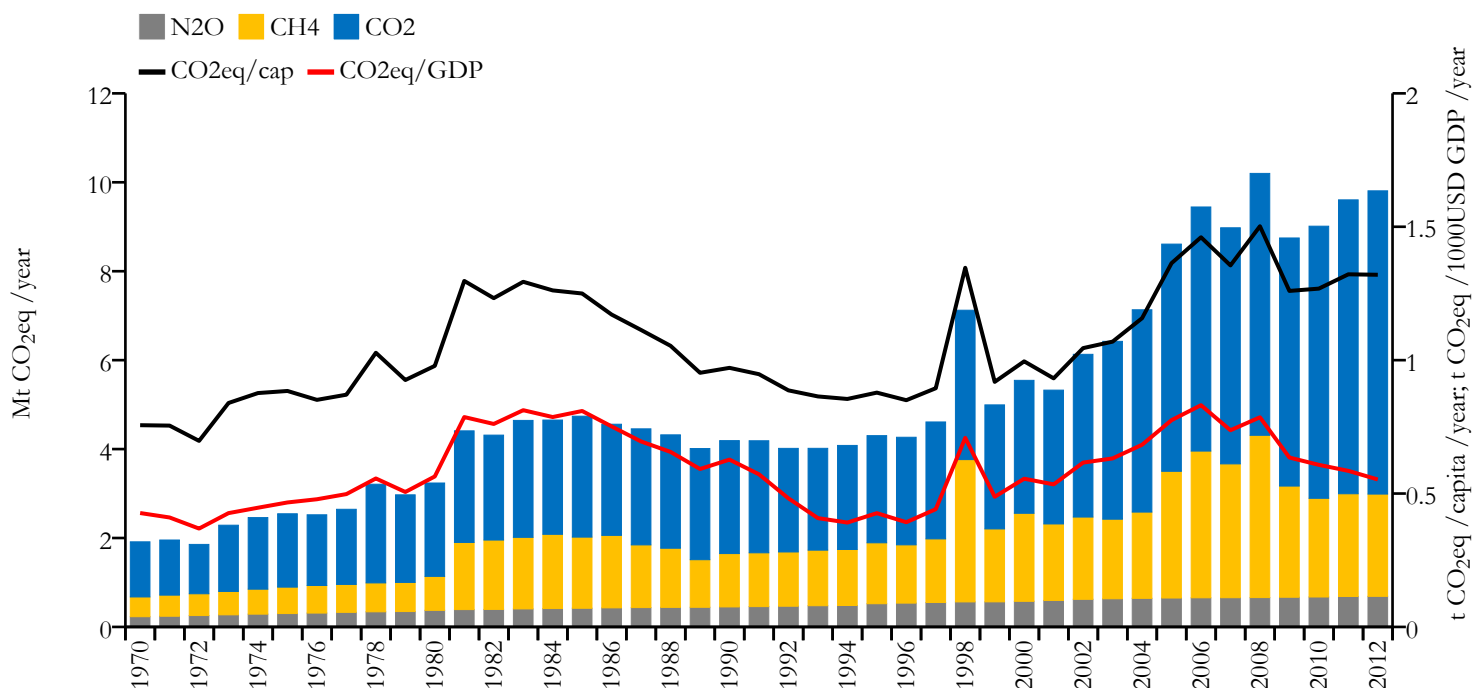
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	9.087	1.125	0.409	8084991
1990	2.511	0.583	0.376	4313059

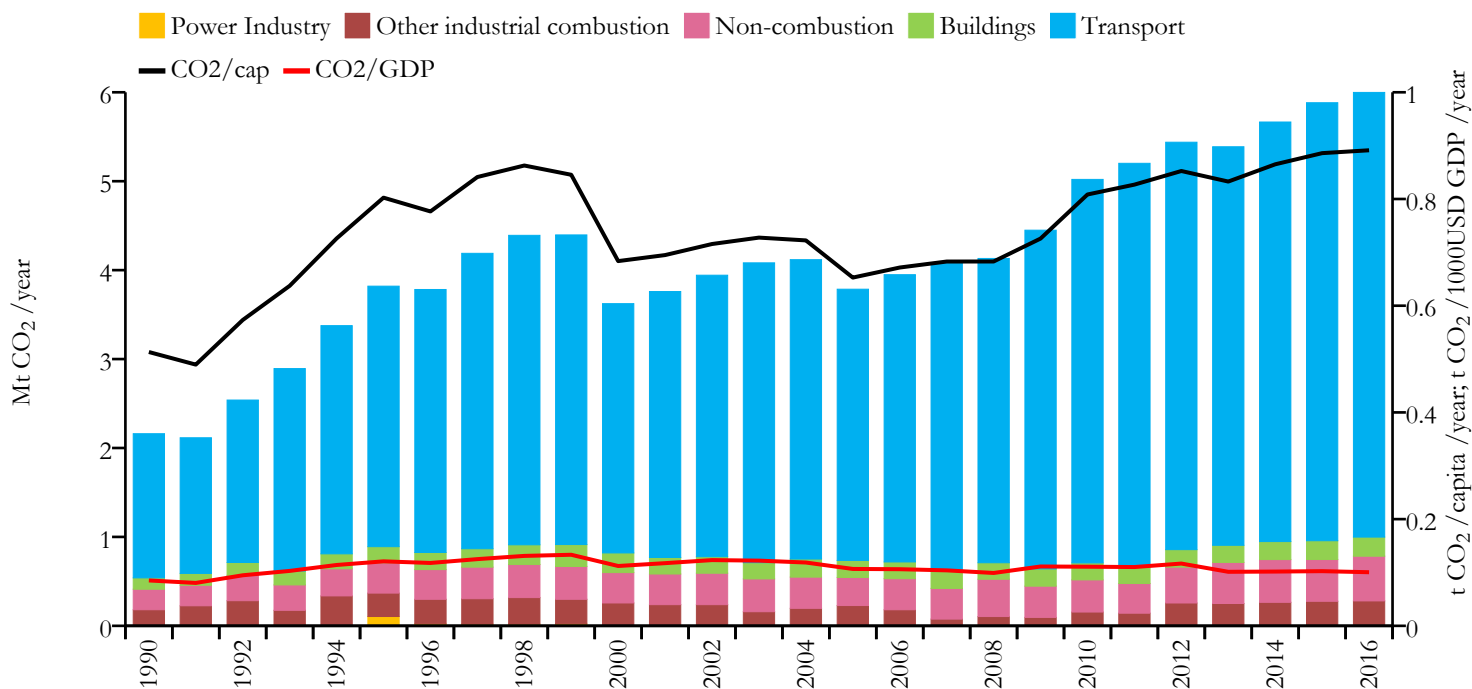


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





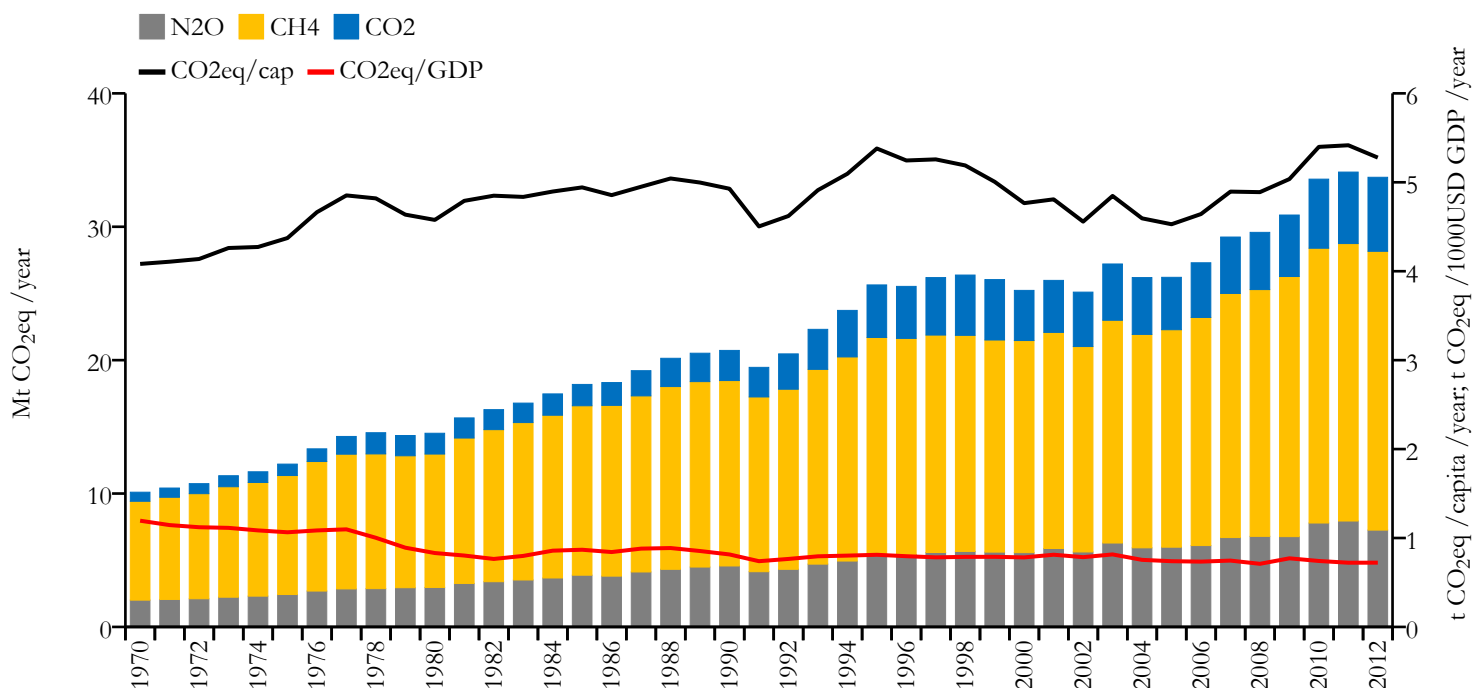
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	5.998	0.891	0.100	6725308
1990	2.161	0.513	0.085	4213742

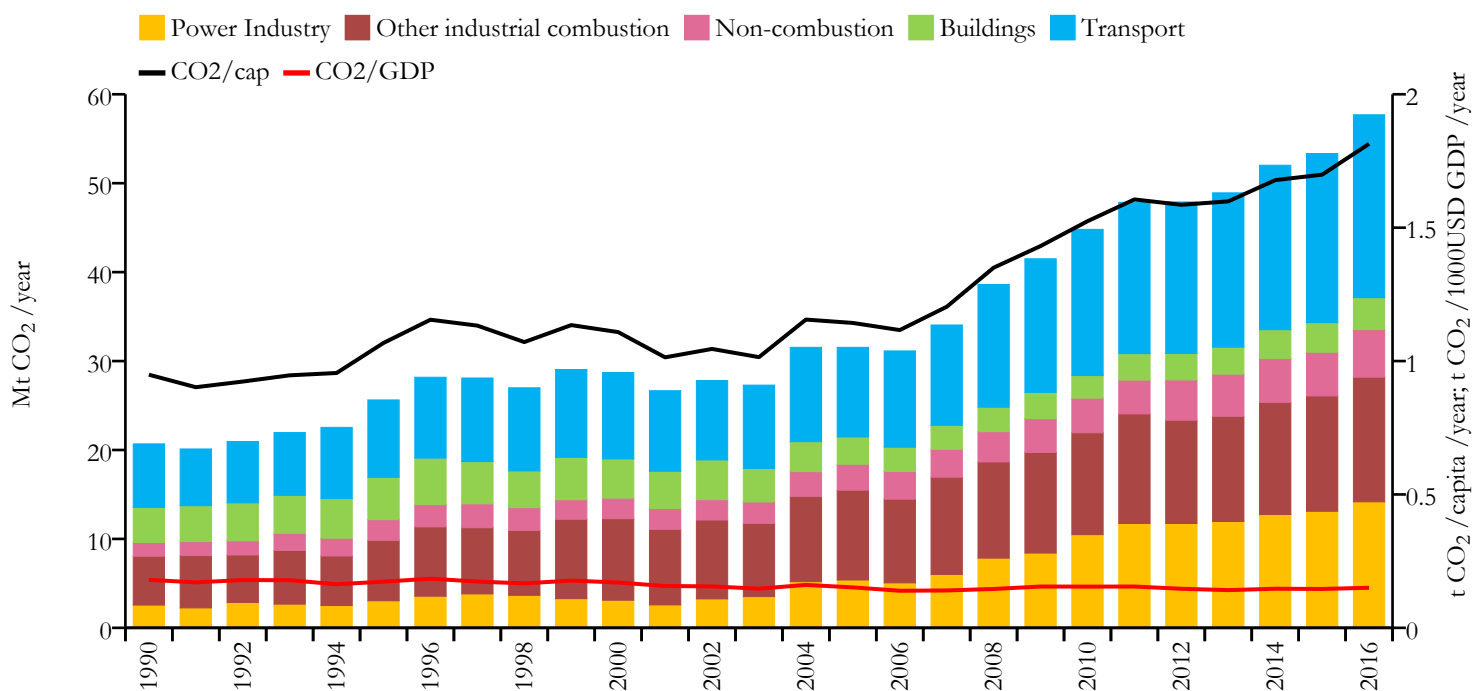


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





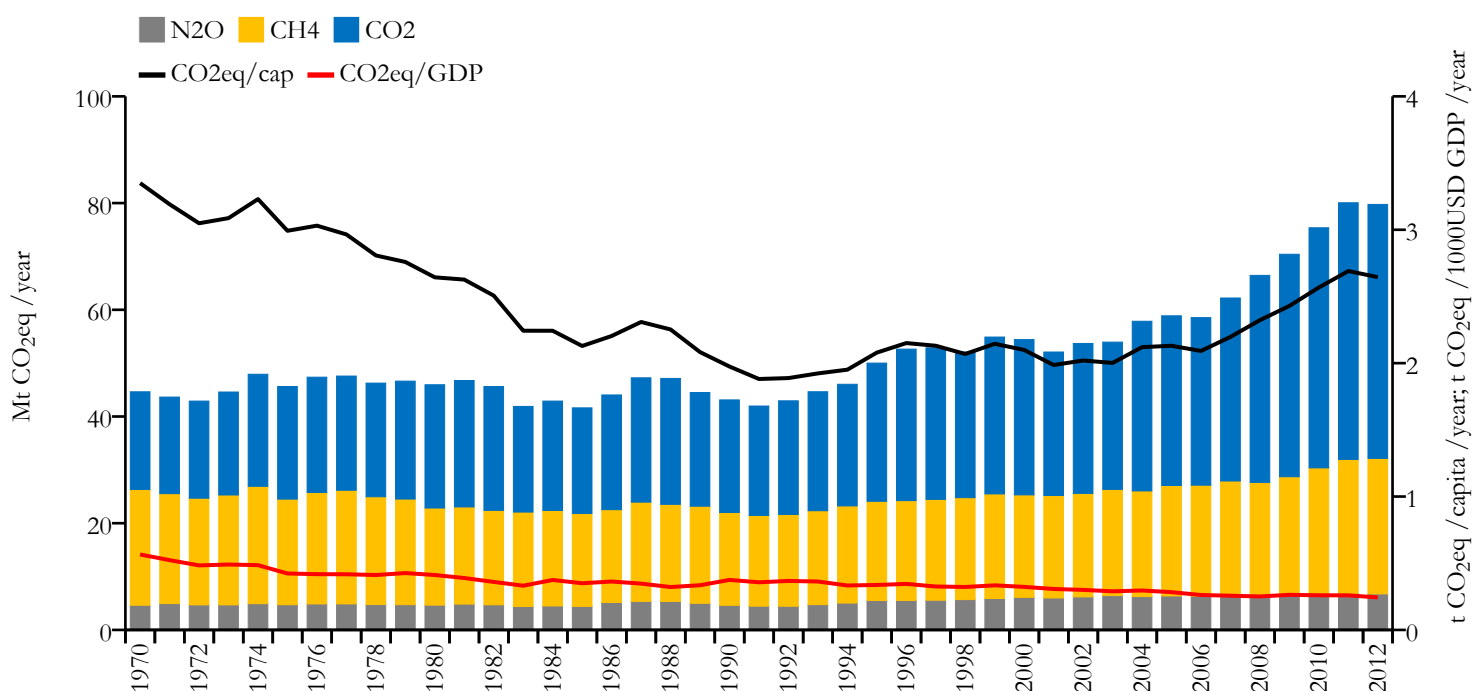
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	57.693	1.814	0.150	31773839
1990	20.687	0.949	0.180	21826658

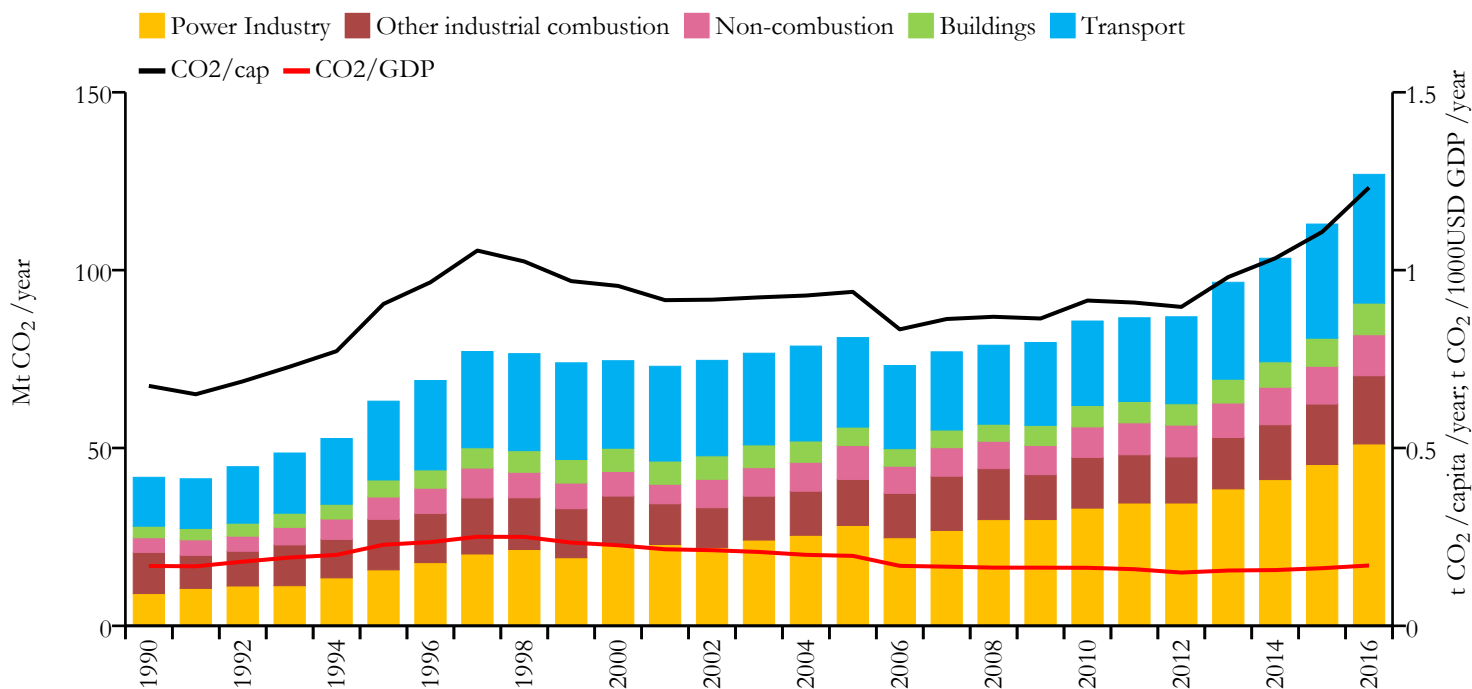


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





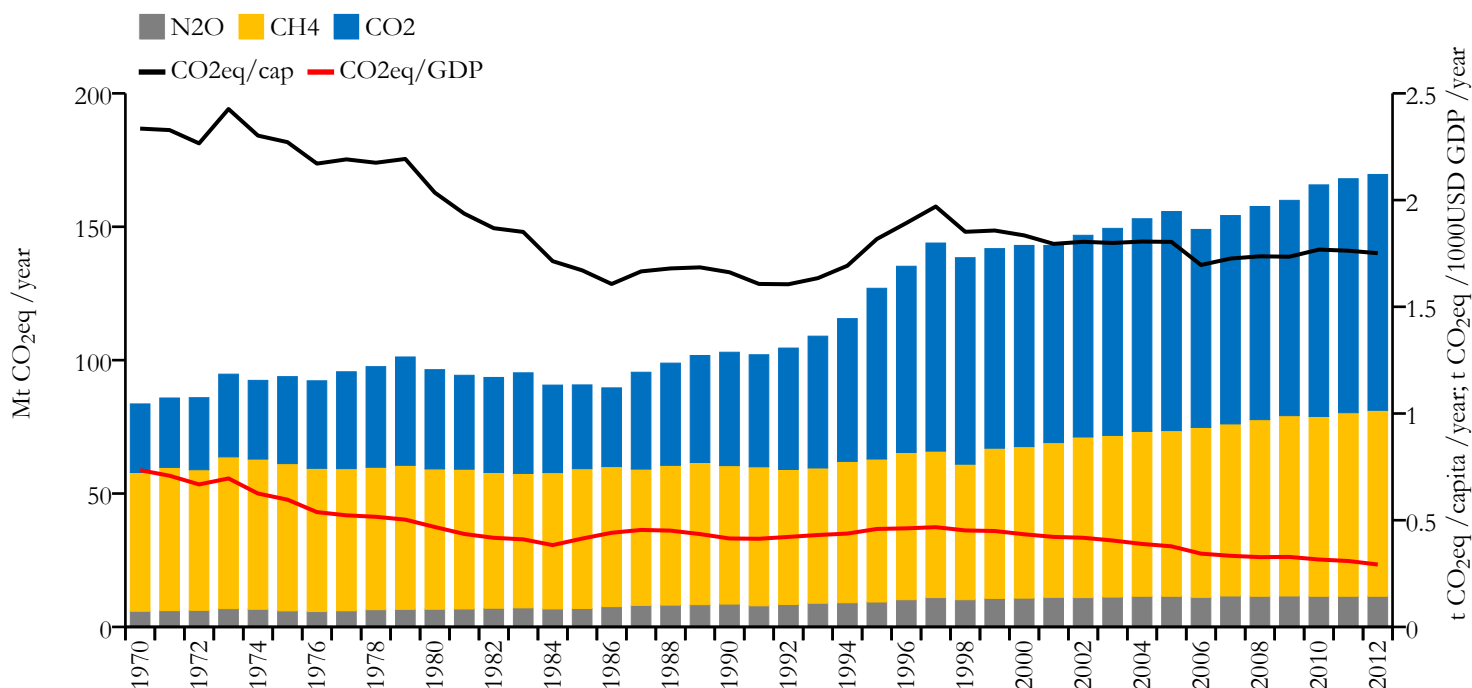
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	126.923	1.232	0.170	103320222
1990	41.757	0.675	0.168	61947348



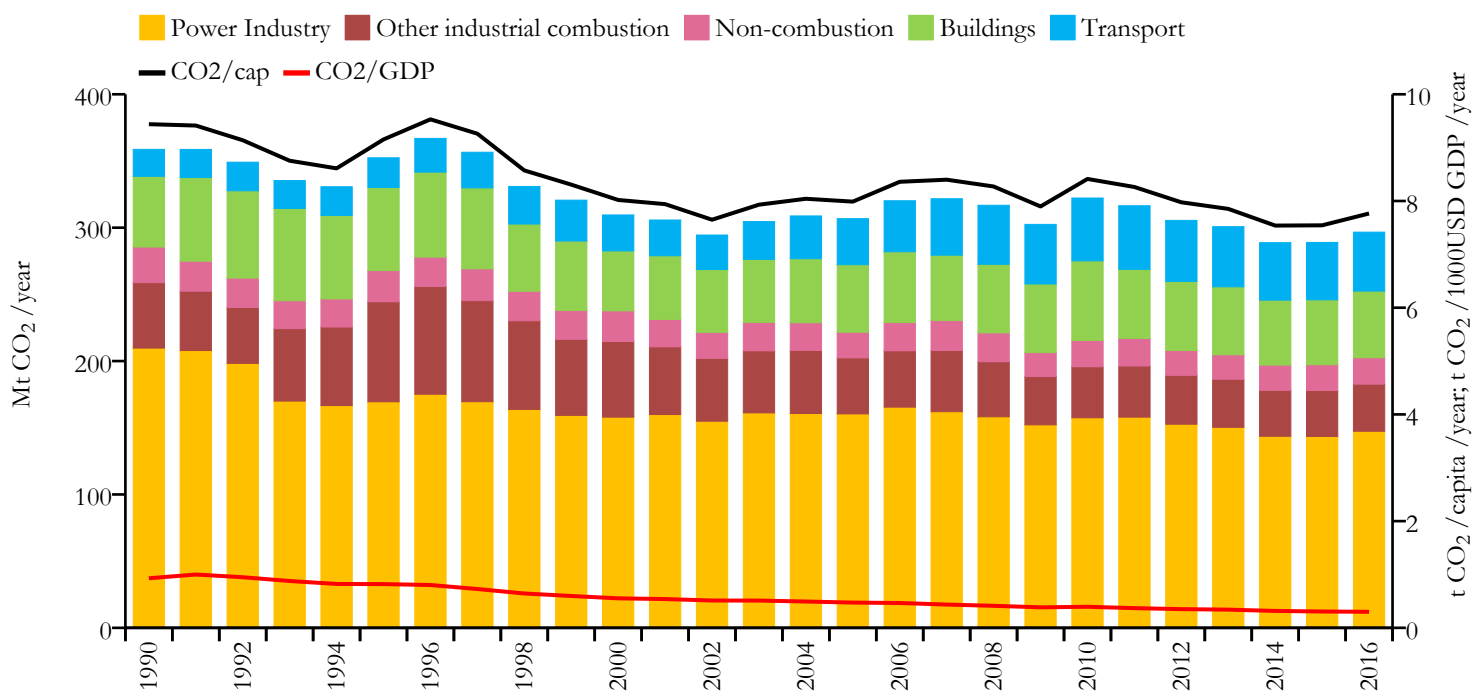
## Greenhouse gas emissions (EDGARv4.3.2 dataset)







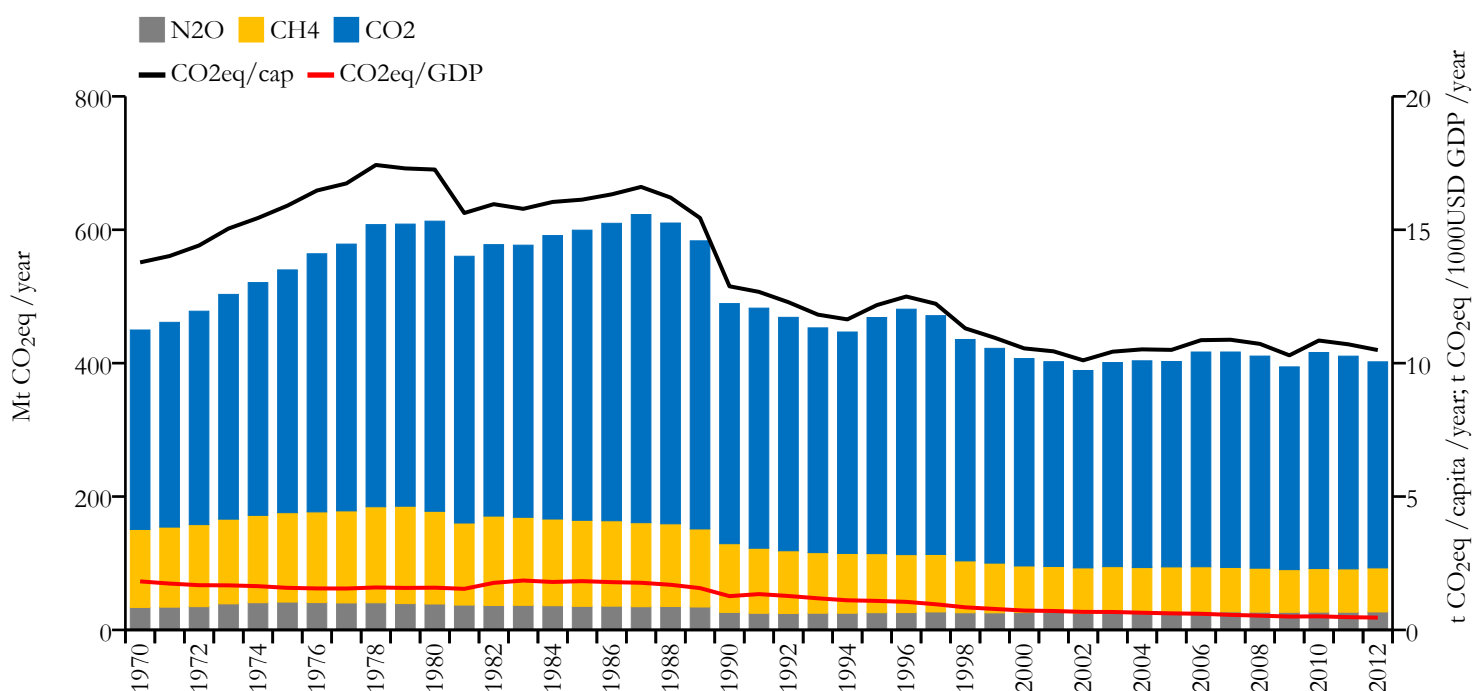
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	296.660	7.766	0.301	38224410
1990	358.700	9.439	0.929	37954553

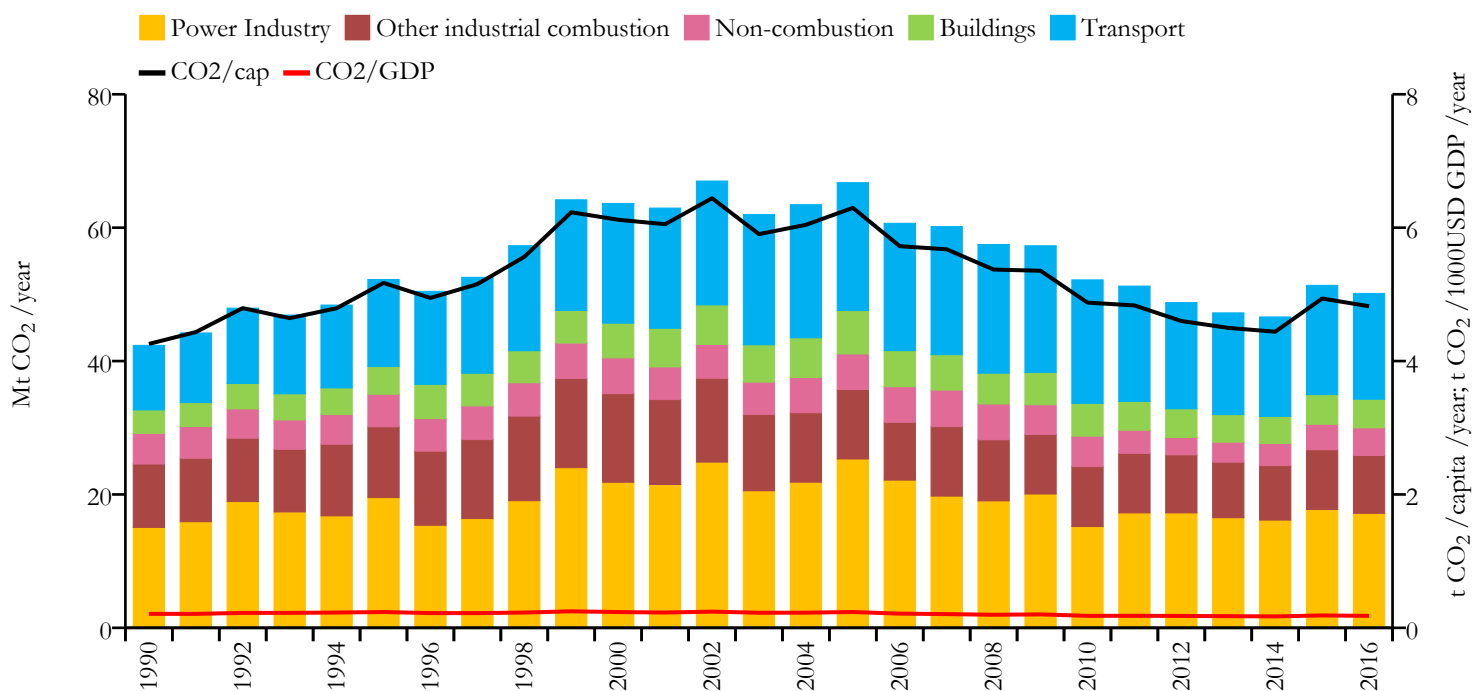


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





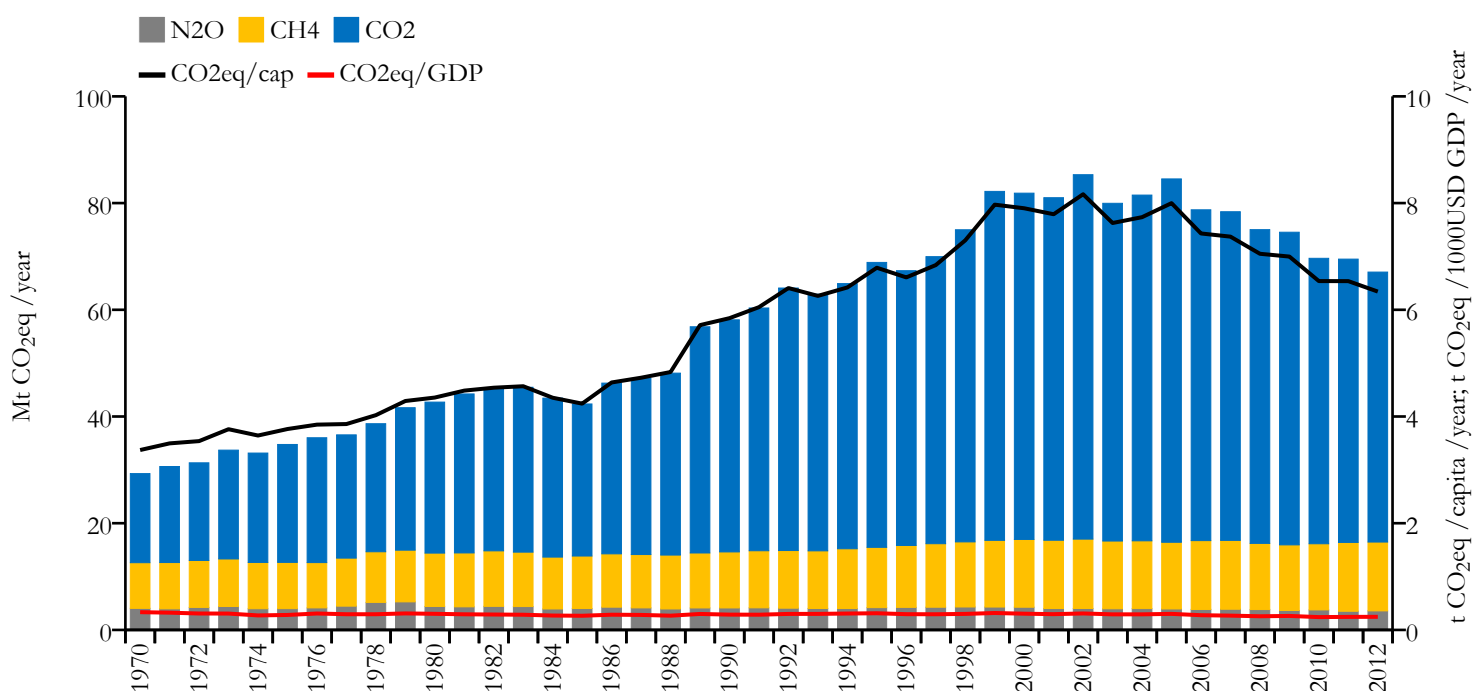
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	50.143	4.821	0.180	10371627
1990	42.355	4.257	0.210	9953327



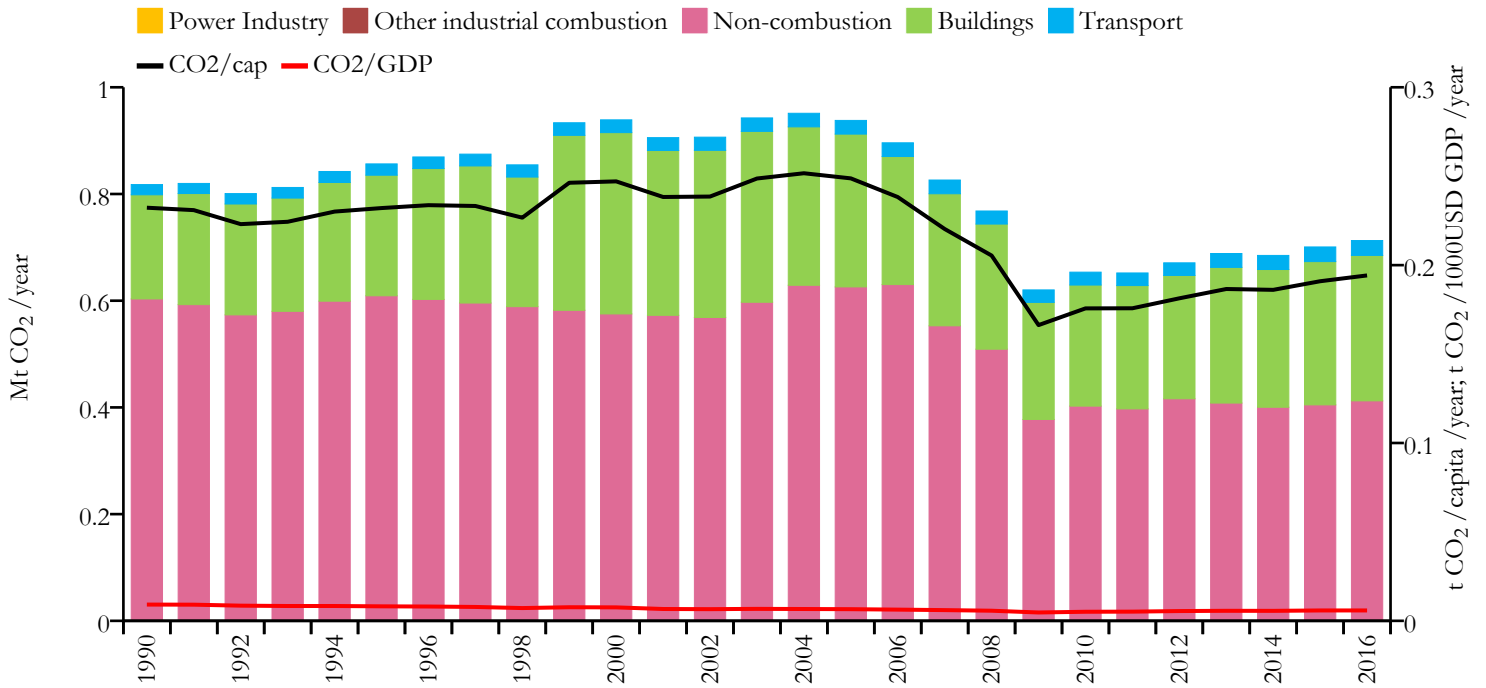
## Greenhouse gas emissions (EDGARv4.3.2 dataset)



# Puerto Rico



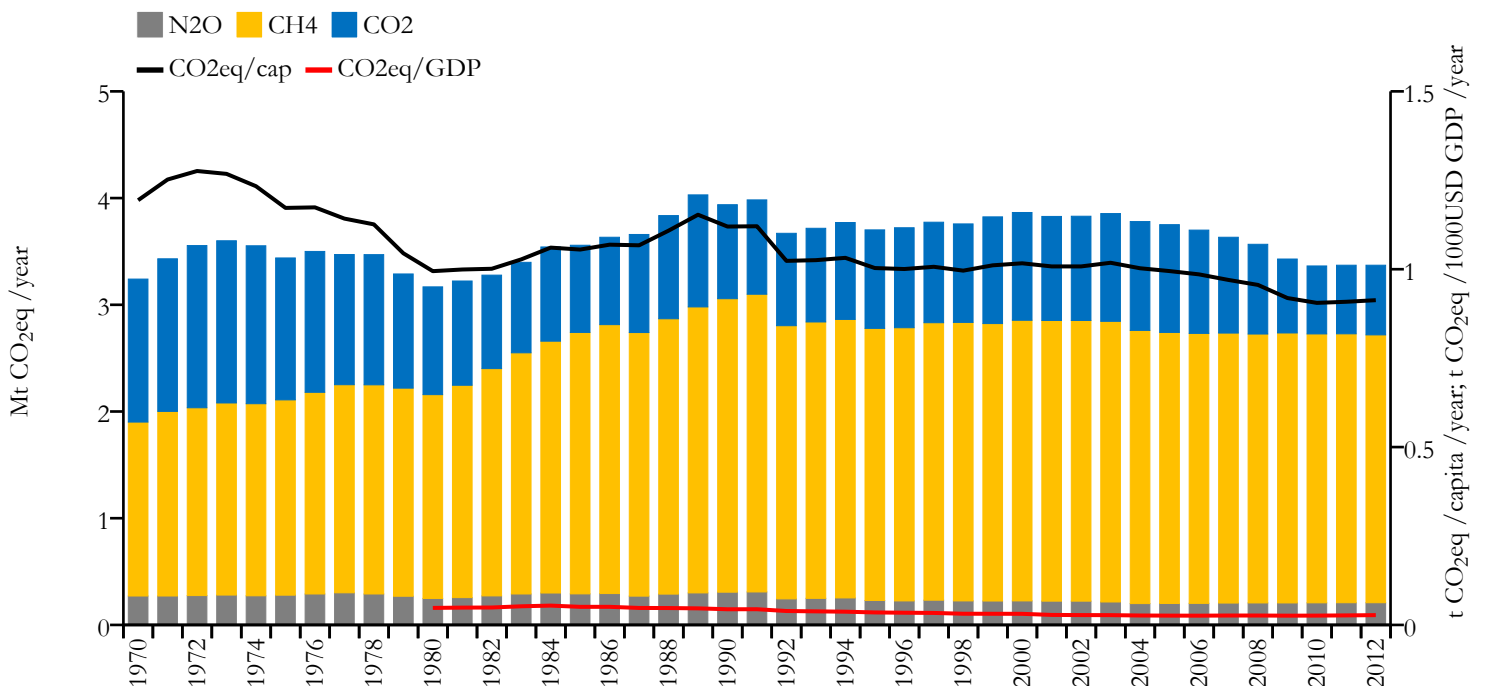
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	0.713	0.194	0.006	3667903
1990	0.818	0.232	0.009	3517975

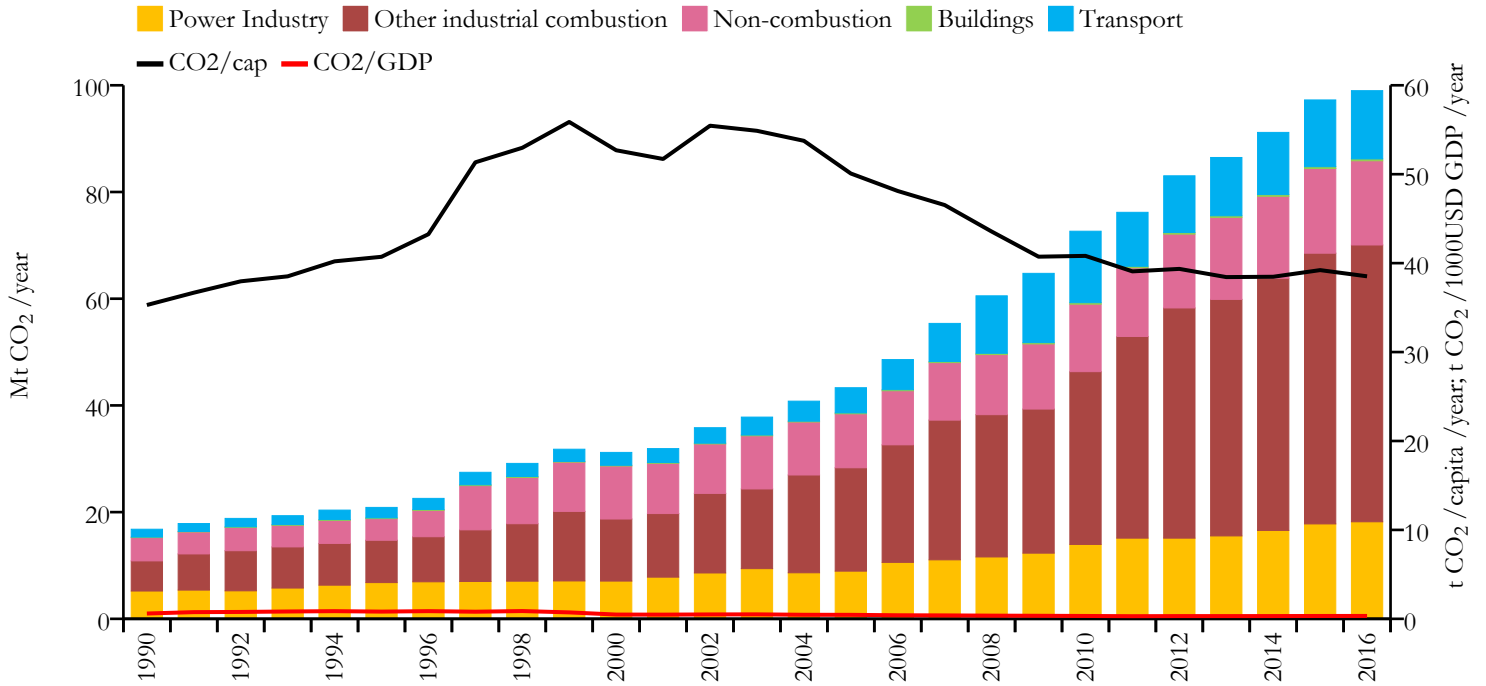


## Greenhouse gas emissions (EDGARv4.3.2 dataset)

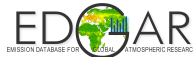




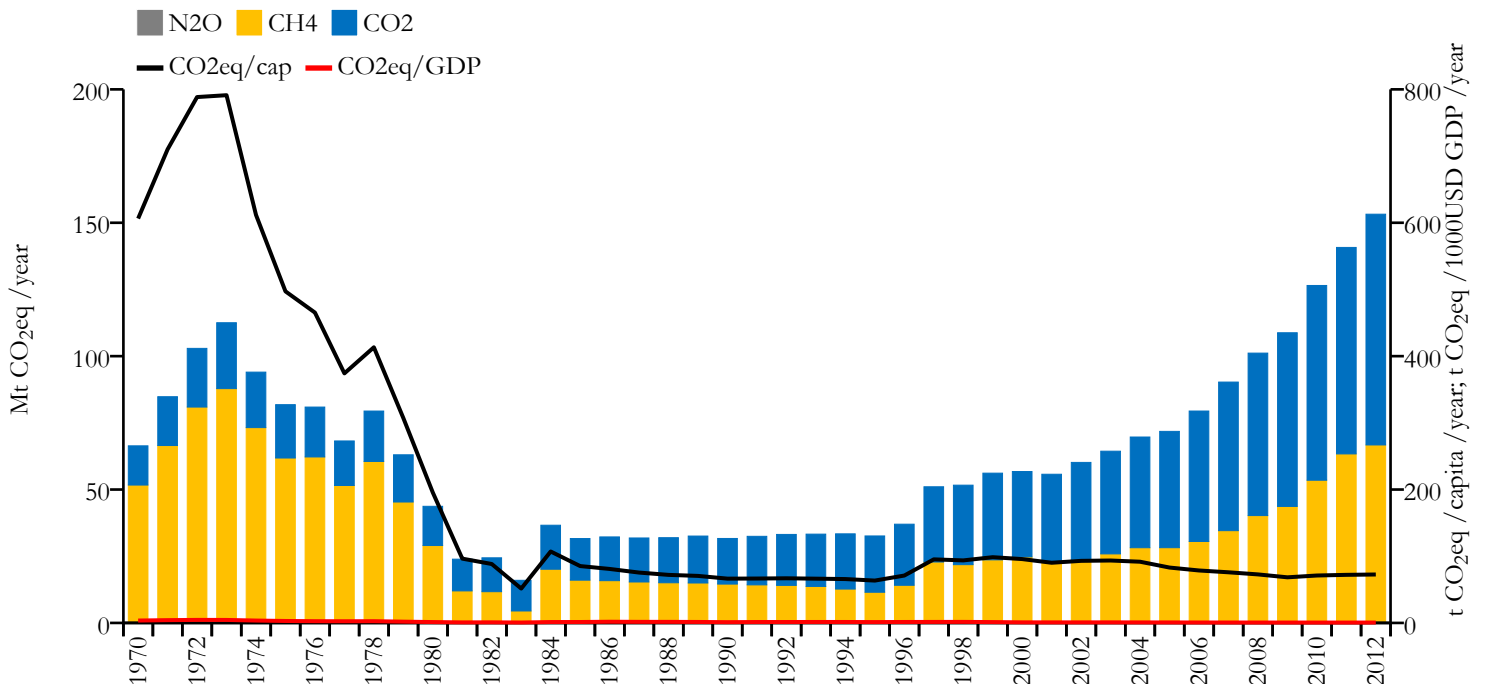
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)

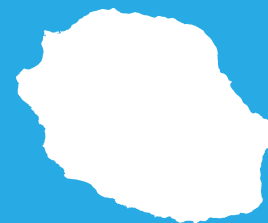


Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	98.990	38.518	0.326	2569804
1990	16.798	35.290	0.598	476445

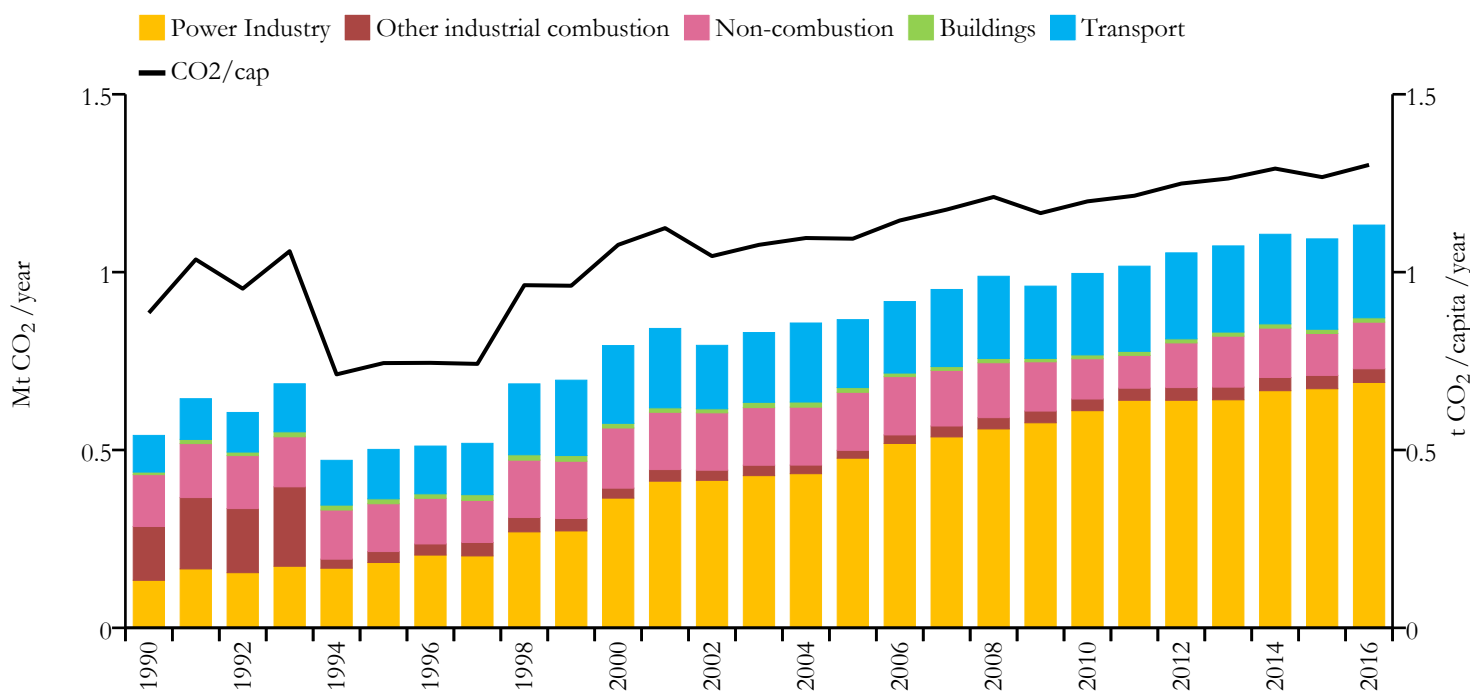


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





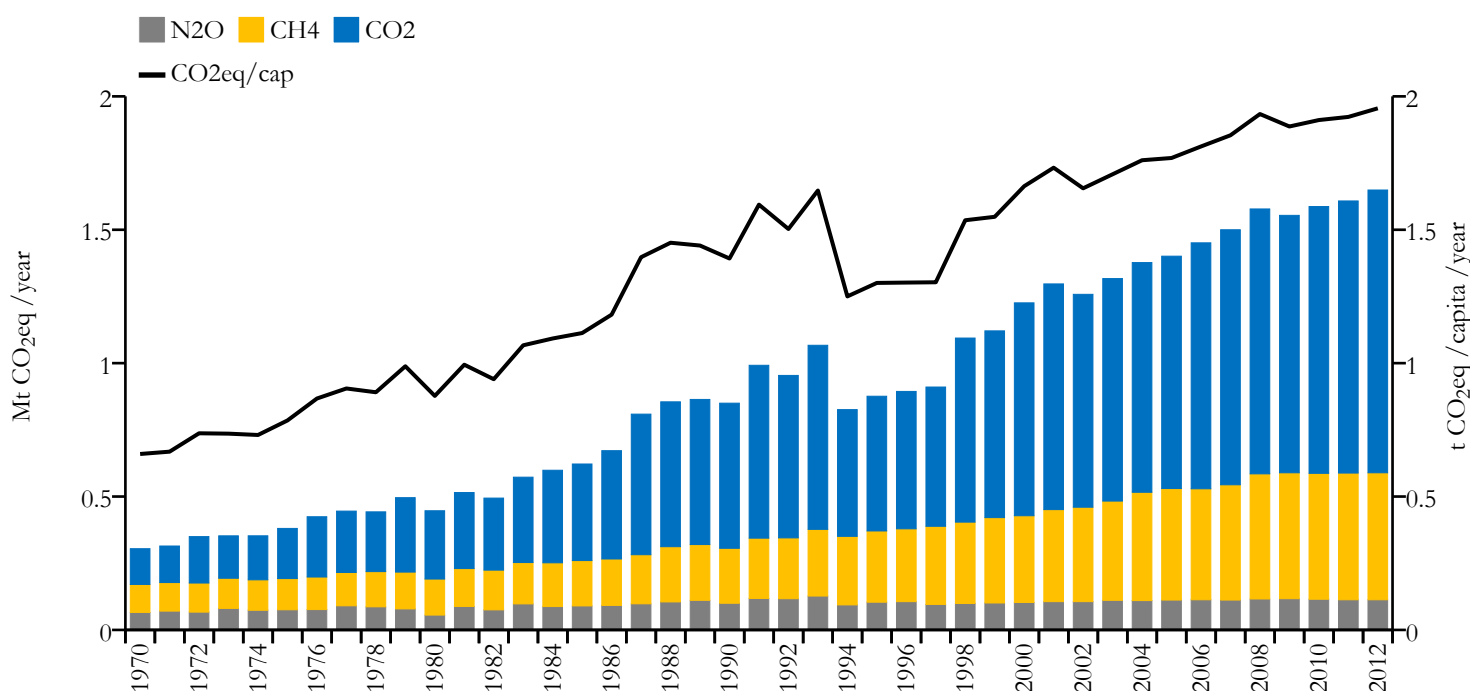
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	1.132	1.302	n/a	869925
1990	0.541	0.885	n/a	610582

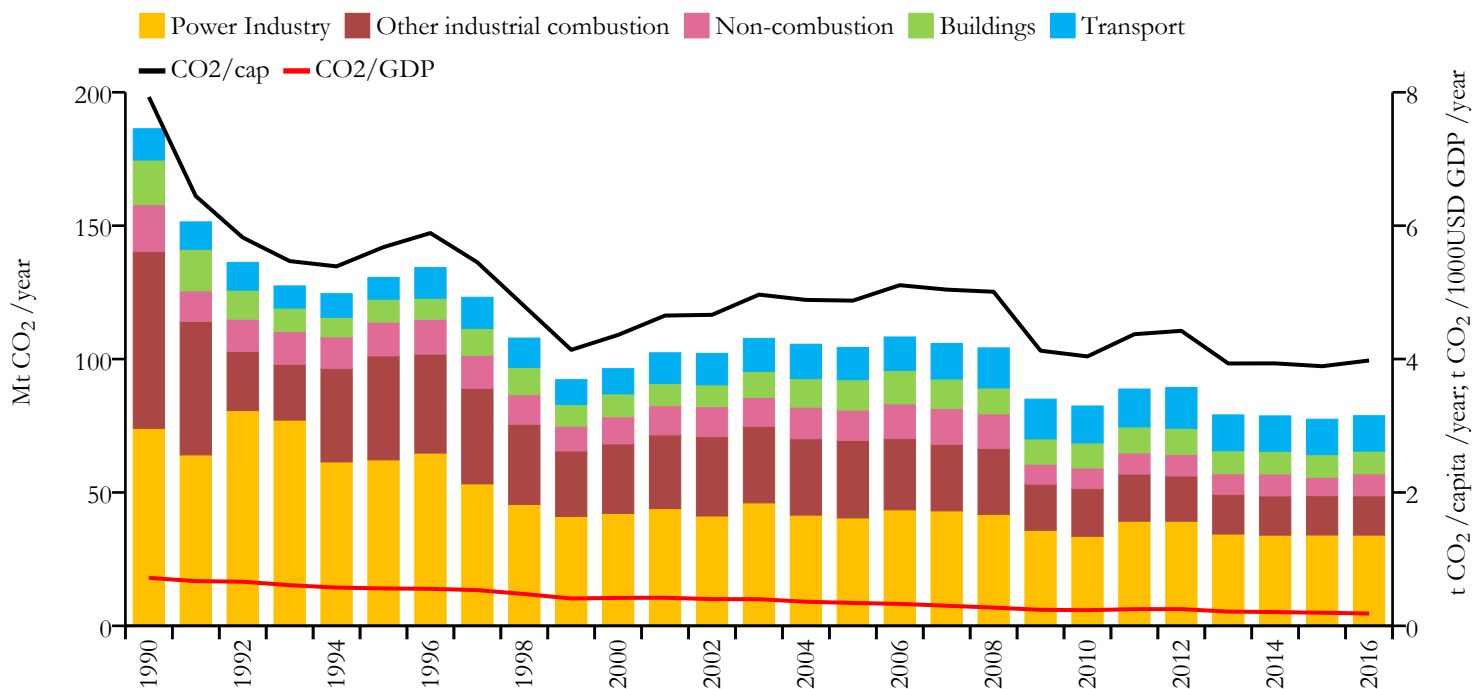


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





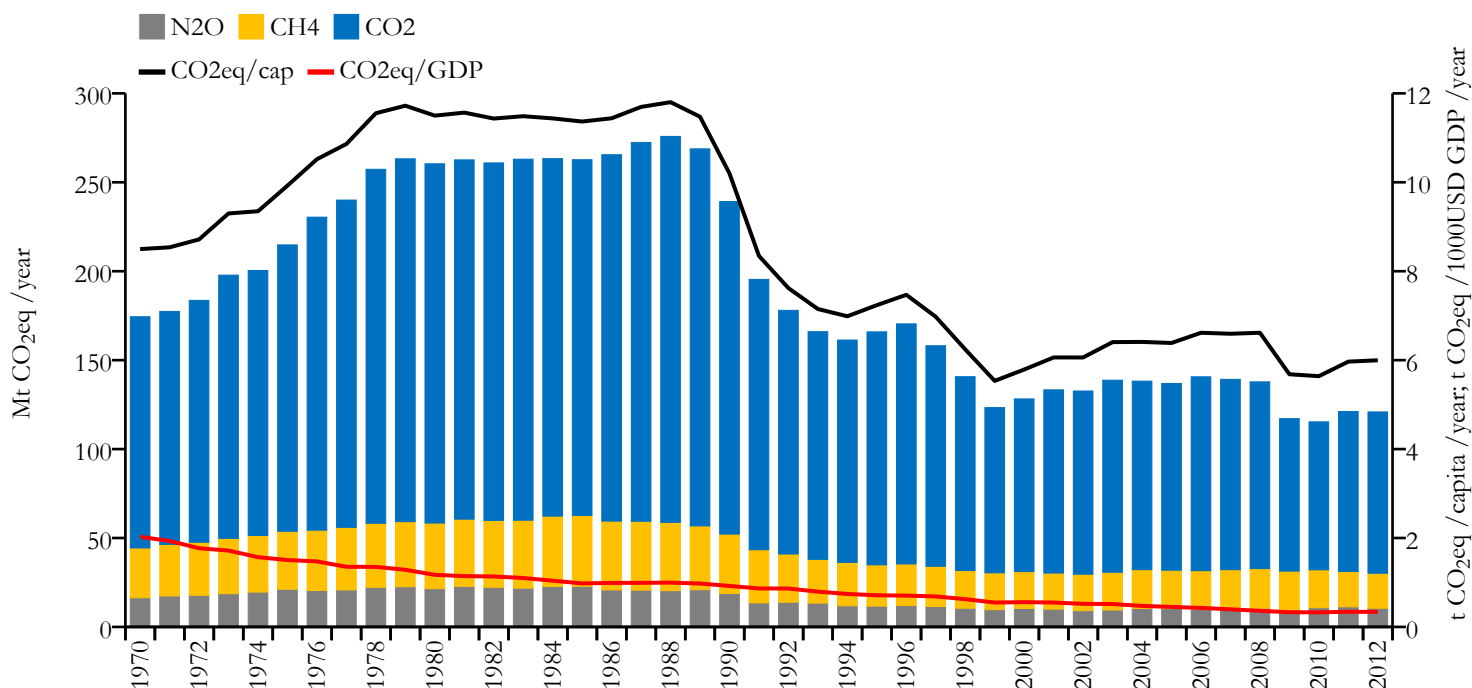
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	78.771	3.978	0.184	19778083
1990	186.341	7.929	0.719	23489373

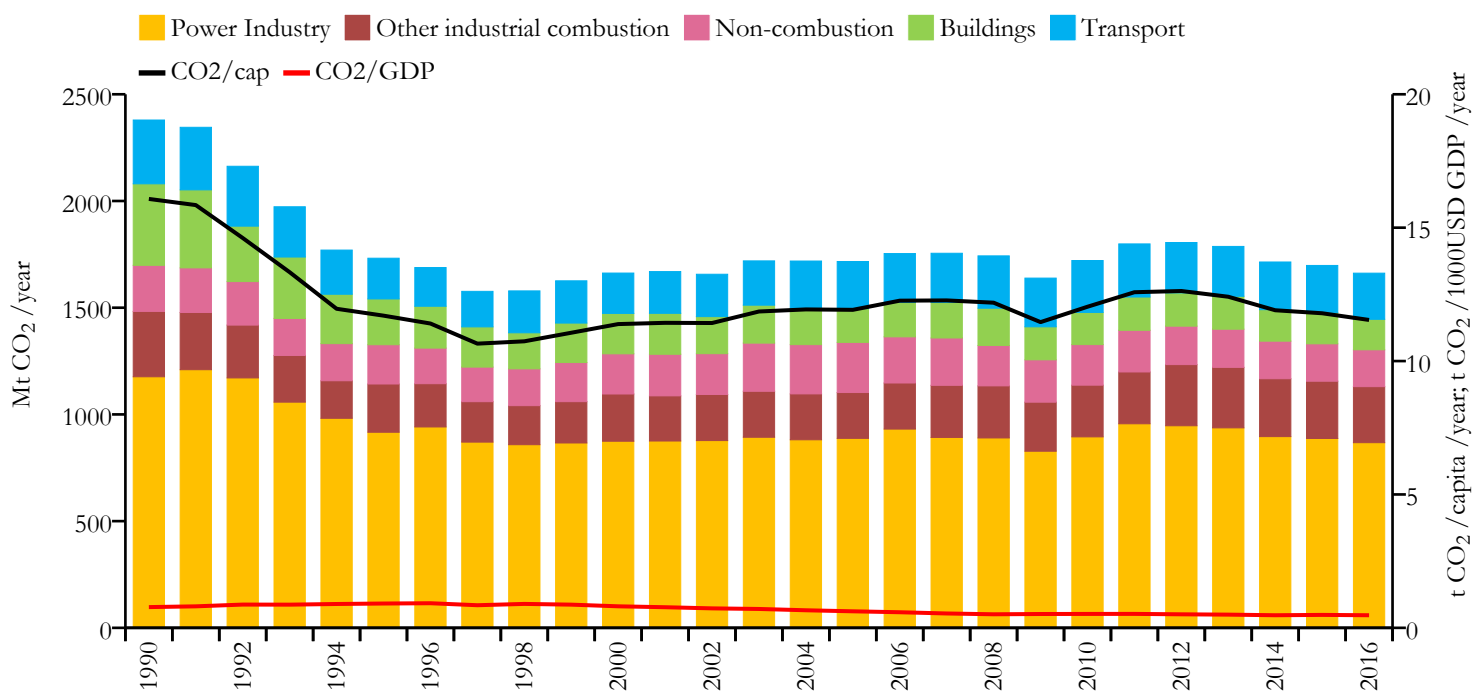


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





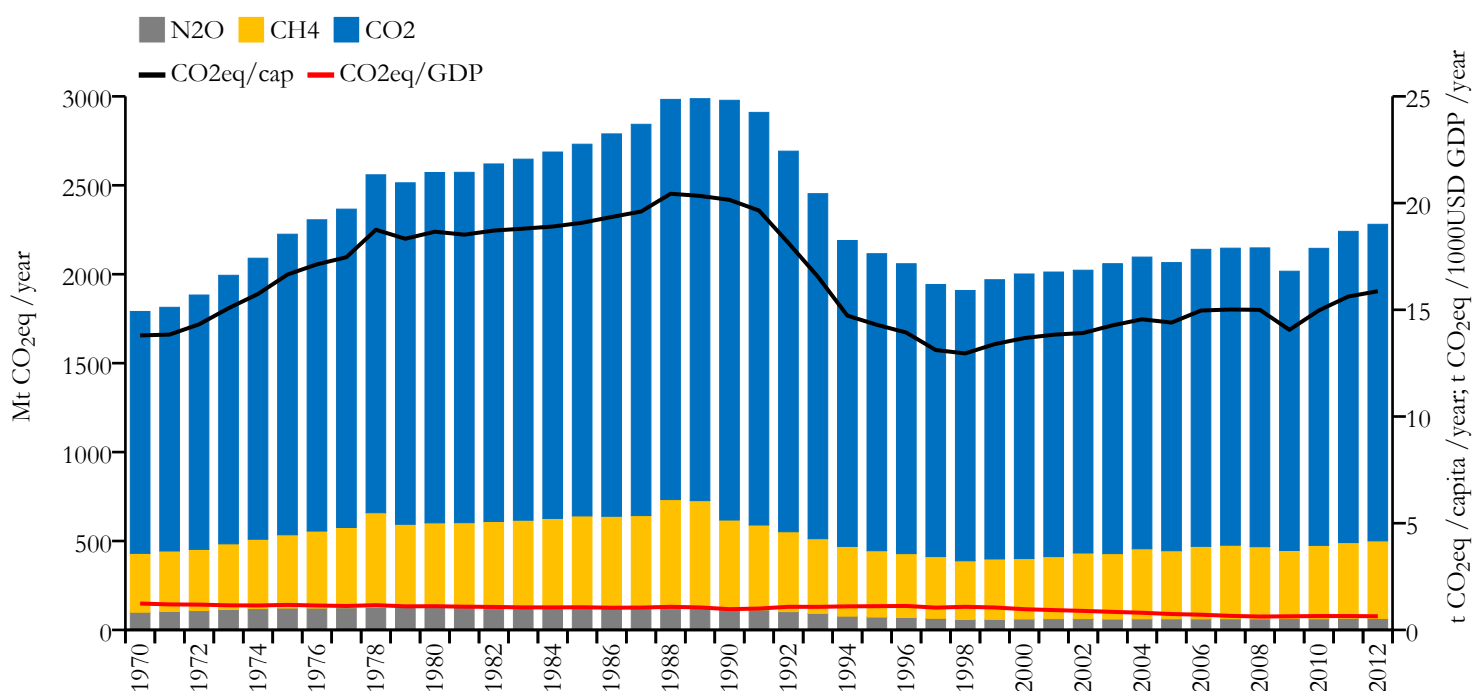
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	1661.899	11.541	0.472	143964513
1990	2379.433	16.077	0.778	147564066

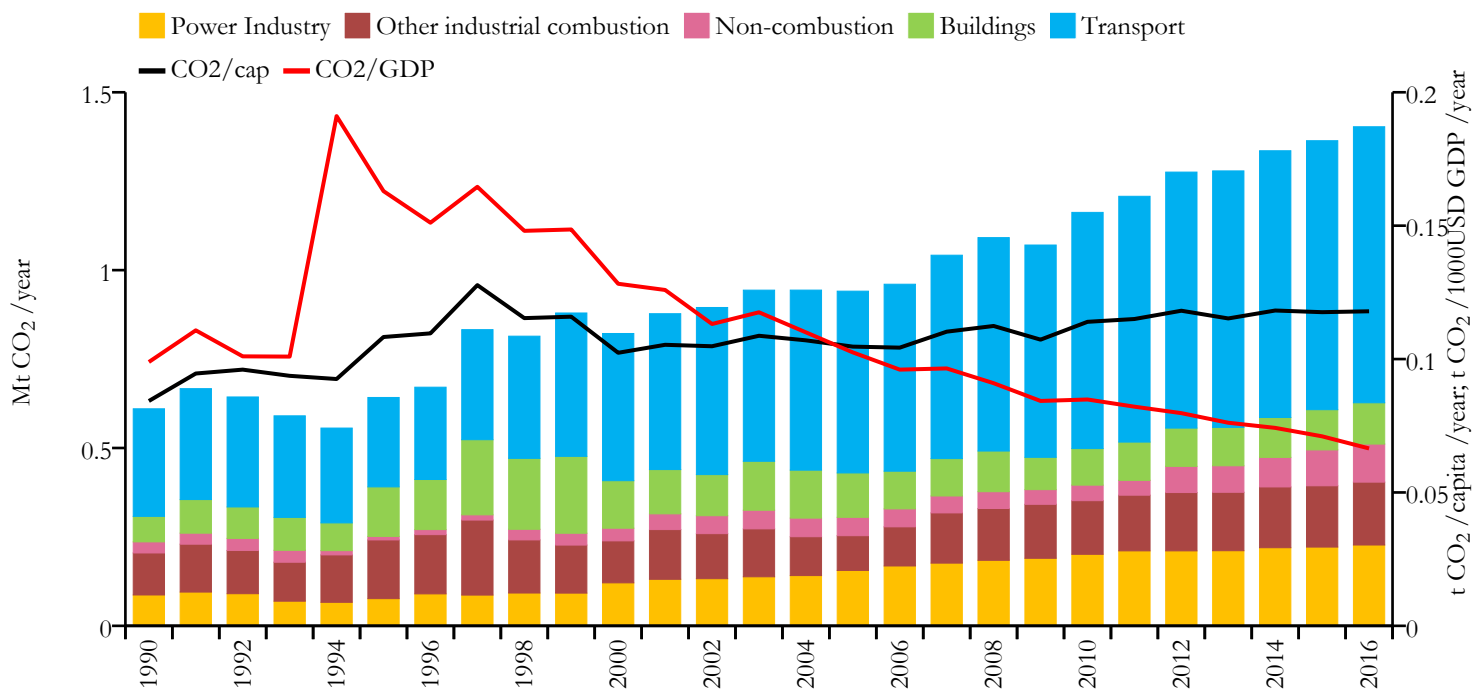


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





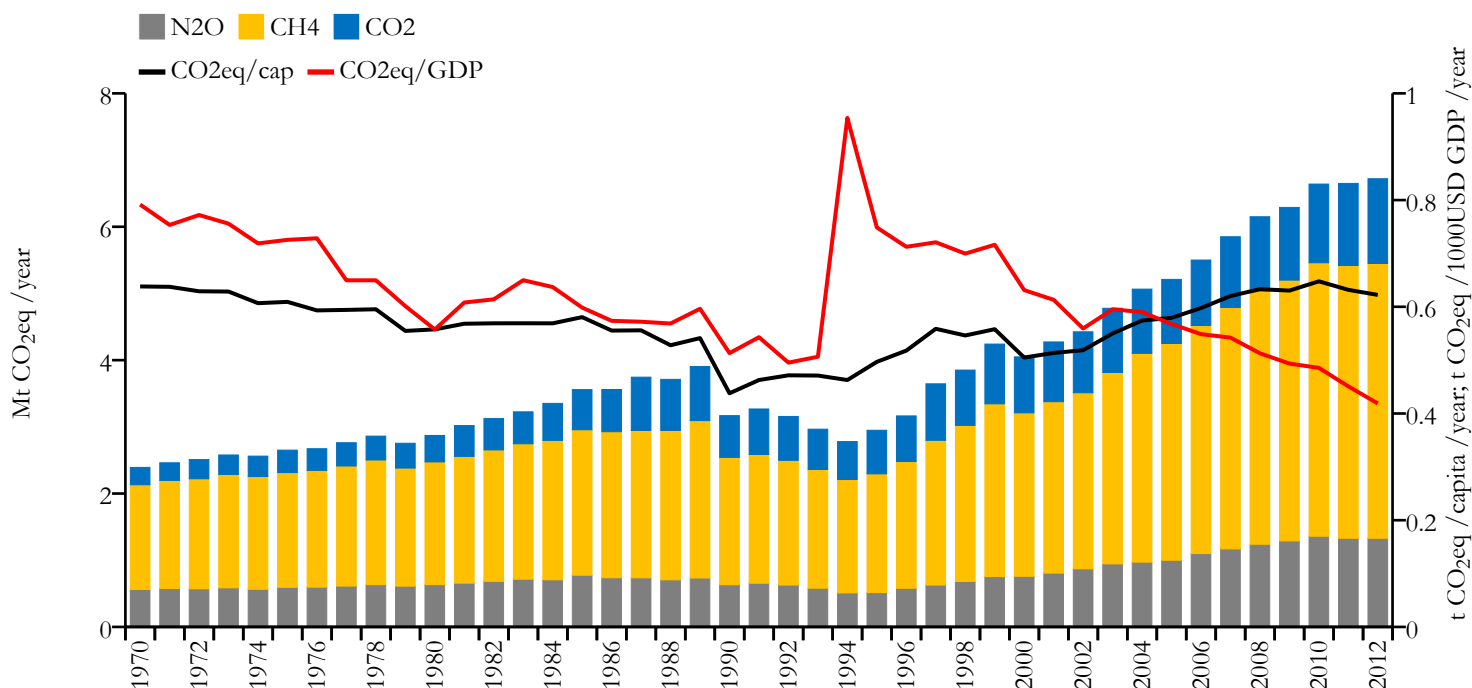
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	1.403	0.118	0.066	11917508
1990	0.610	0.084	0.099	7235798



## Greenhouse gas emissions (EDGARv4.3.2 dataset)

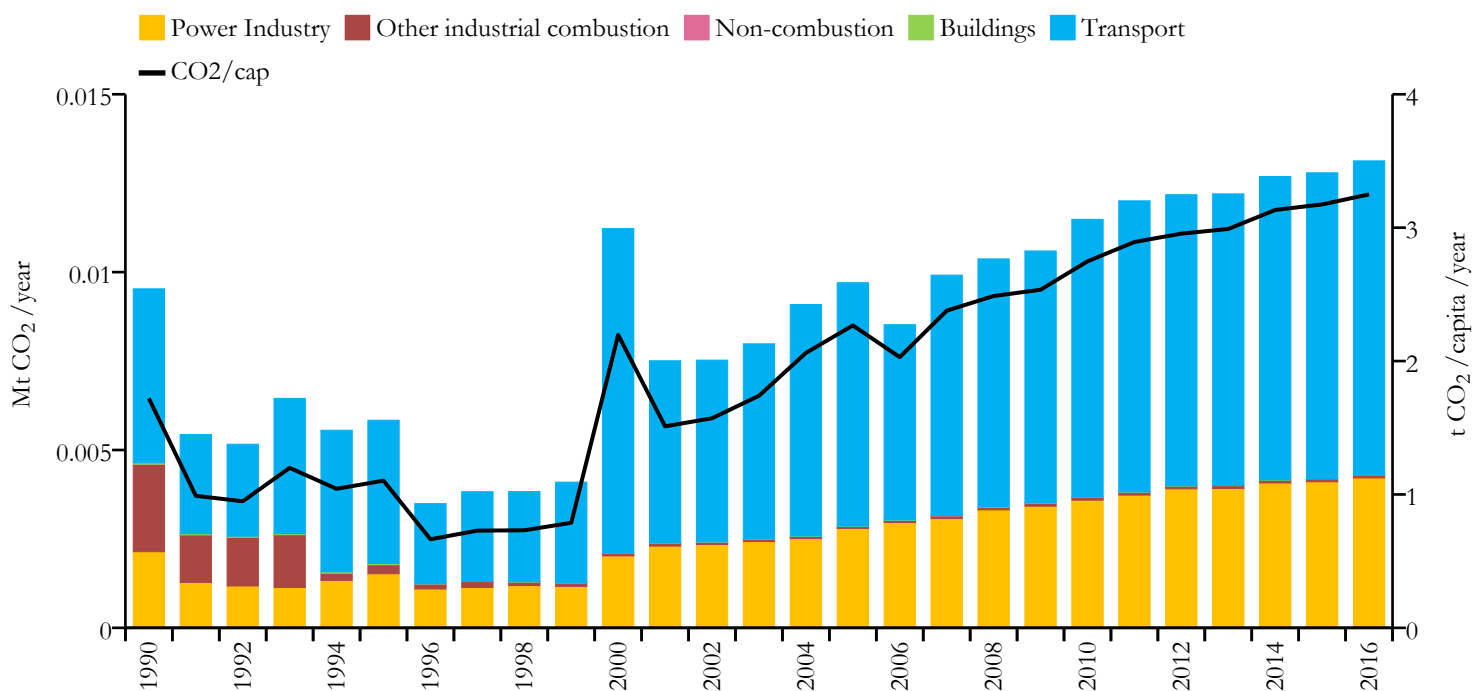




# Saint Helena, Ascension and Tristan da Cunha



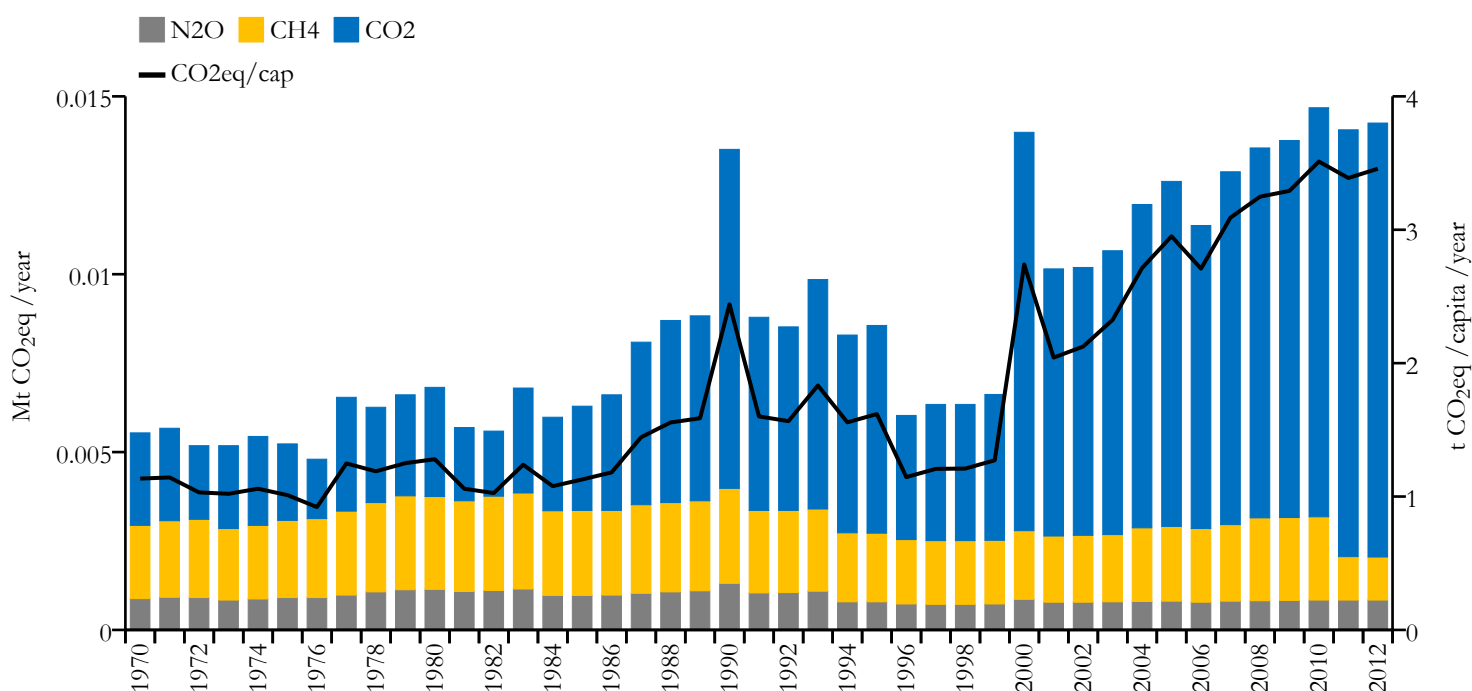
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



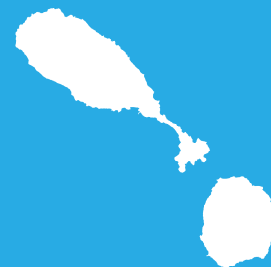
Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	0.013	3.250	n/a	4035
1990	0.010	1.720	n/a	5535



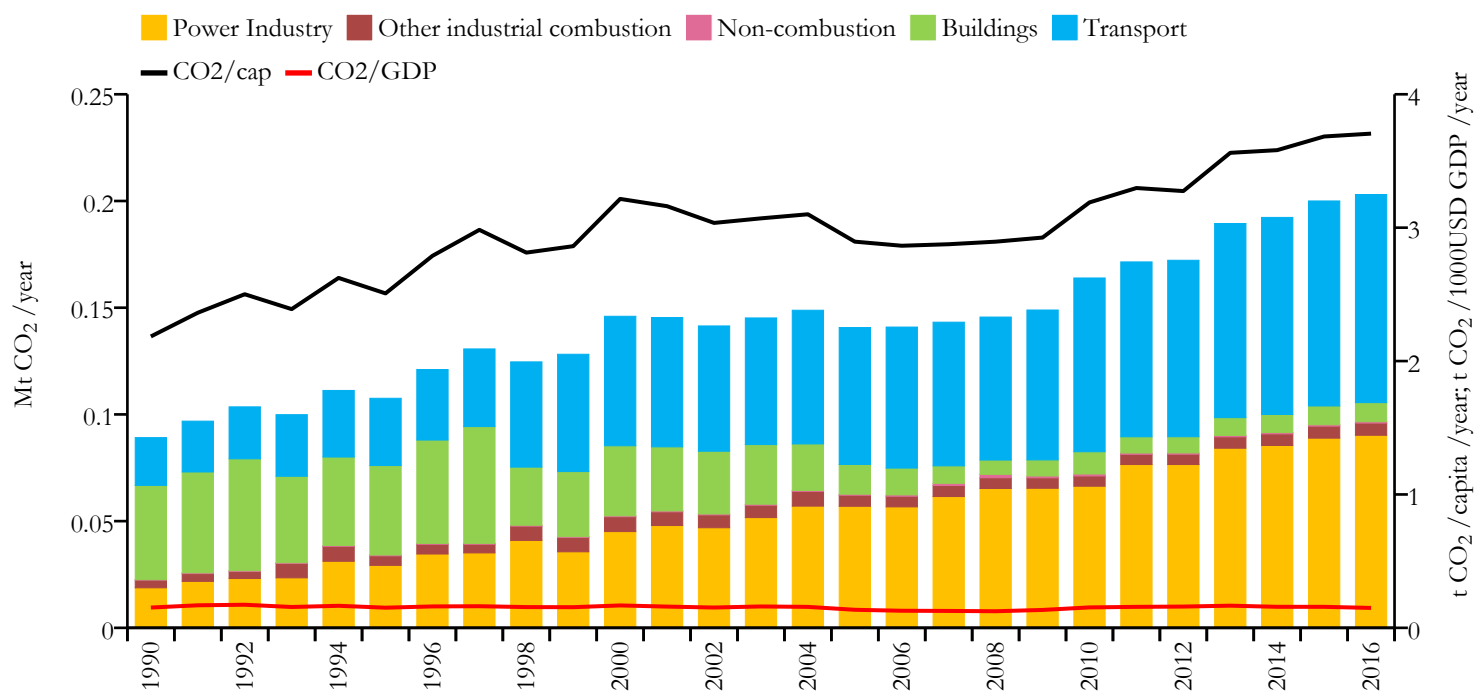
## Greenhouse gas emissions (EDGARv4.3.2 dataset)



# Saint Kitts and Nevis



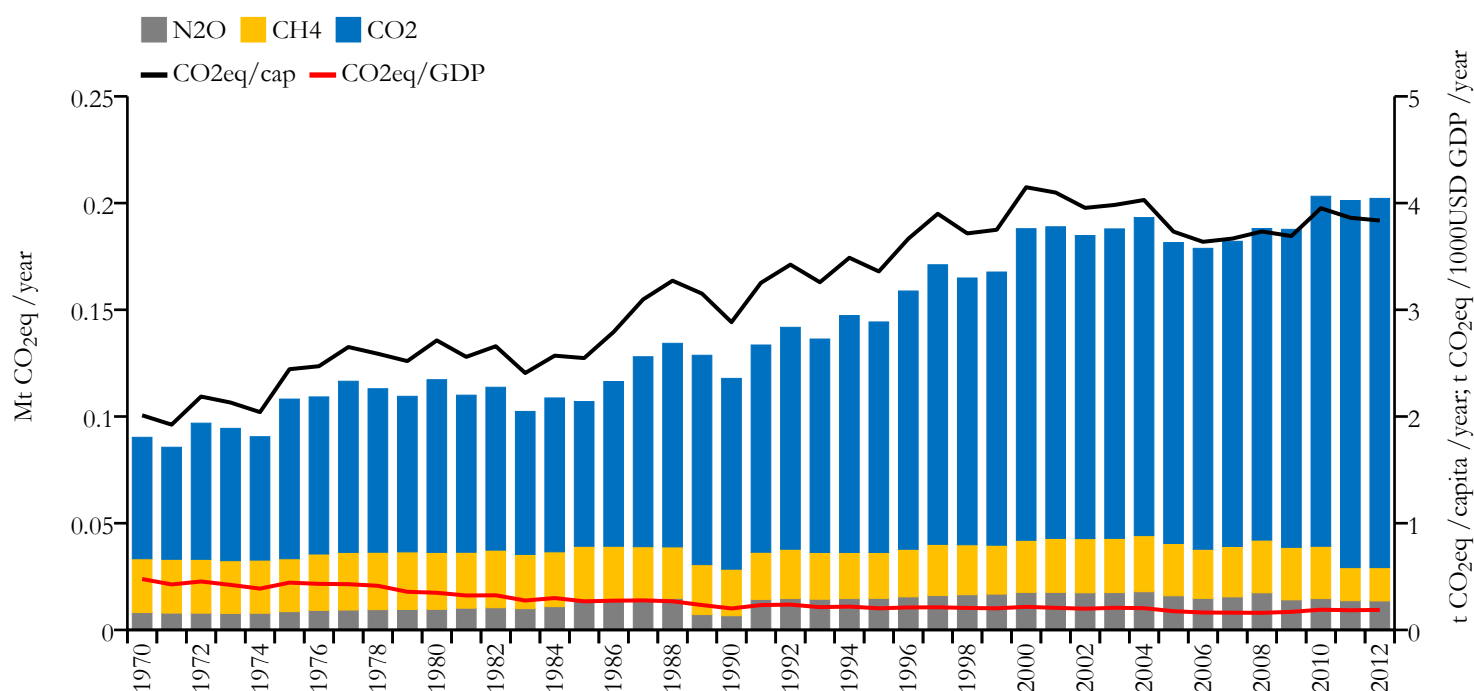
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	0.203	3.705	0.149	54821
1990	0.089	2.184	0.152	40834

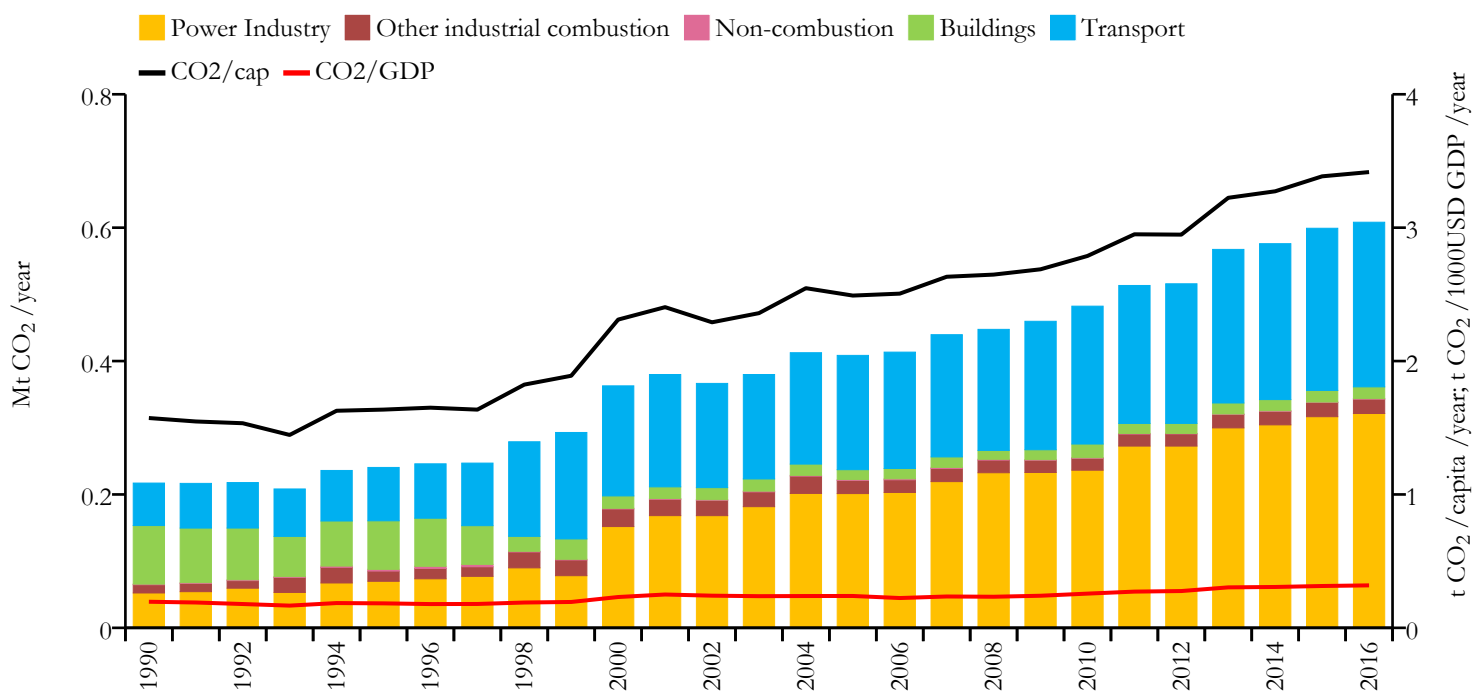


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





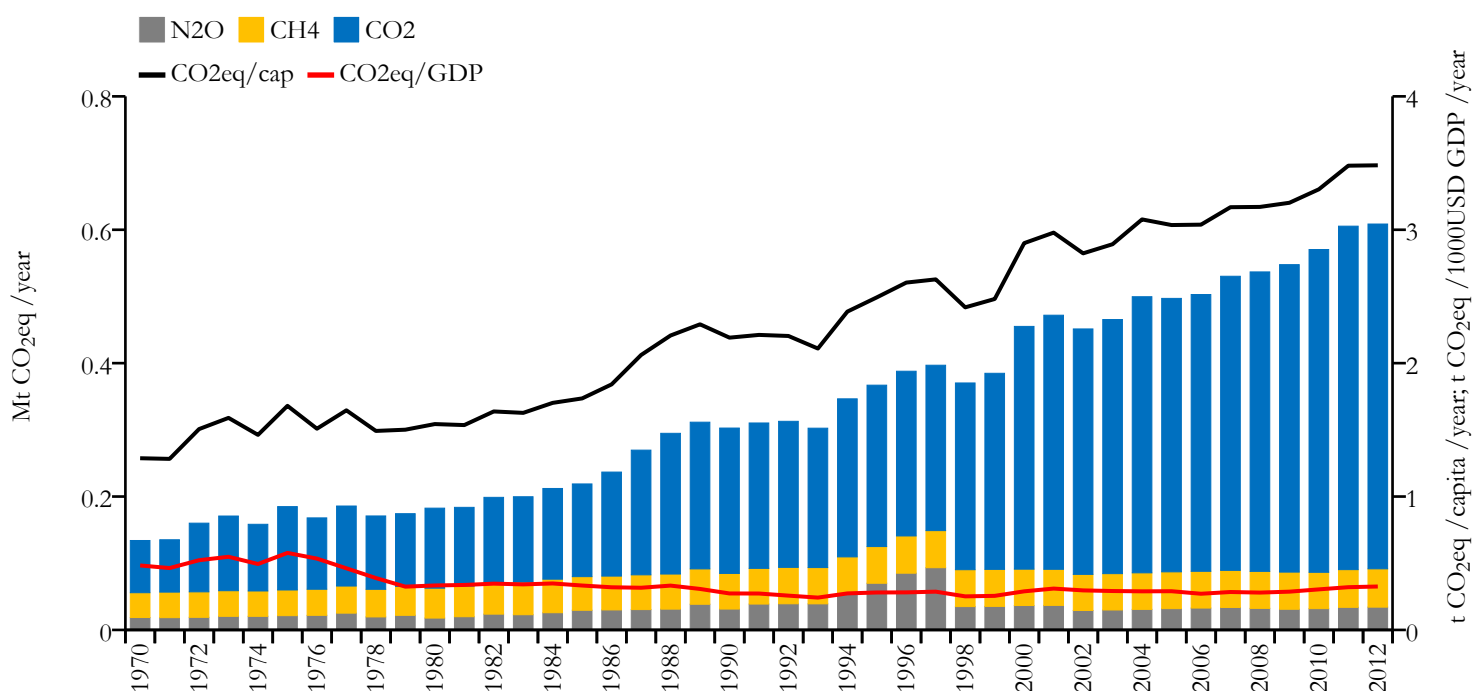
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	0.608	3.417	0.318	178015
1990	0.217	1.573	0.196	138185



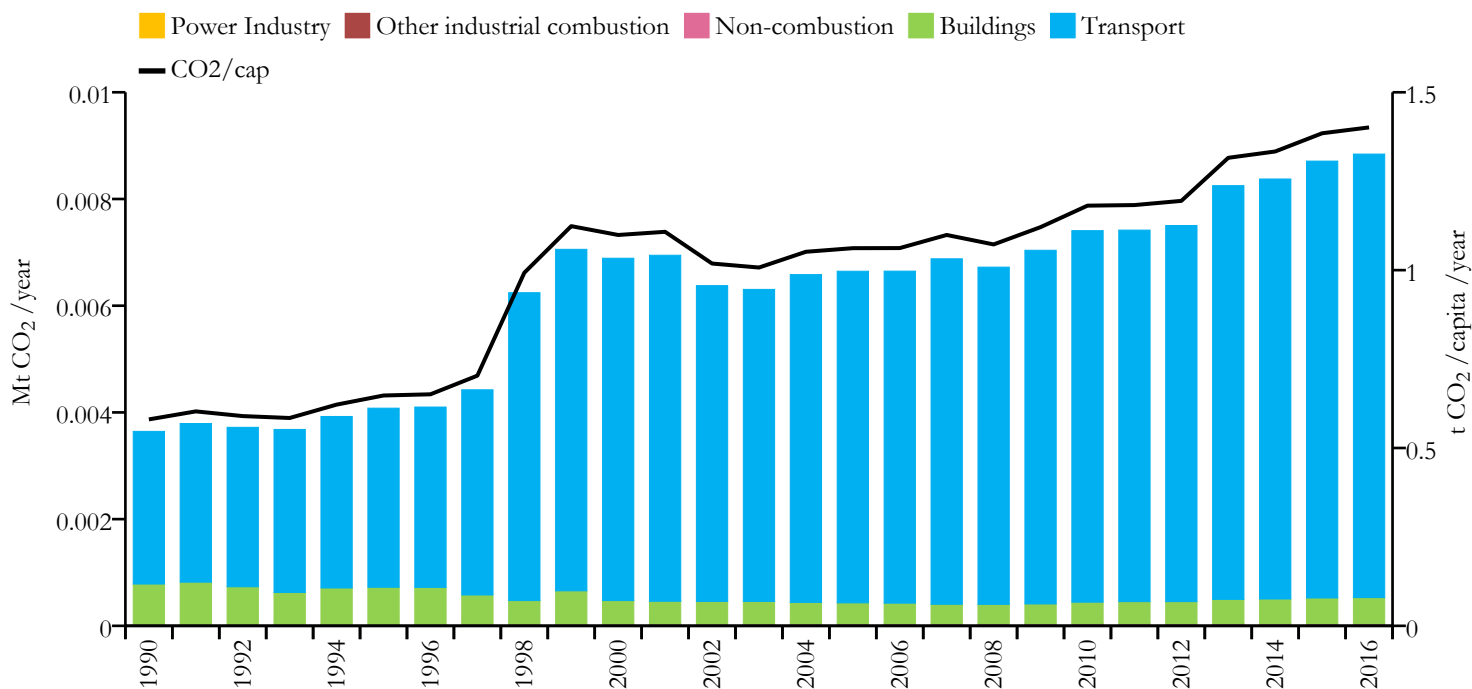
## Greenhouse gas emissions (EDGARv4.3.2 dataset)



# Saint Pierre and Miquelon



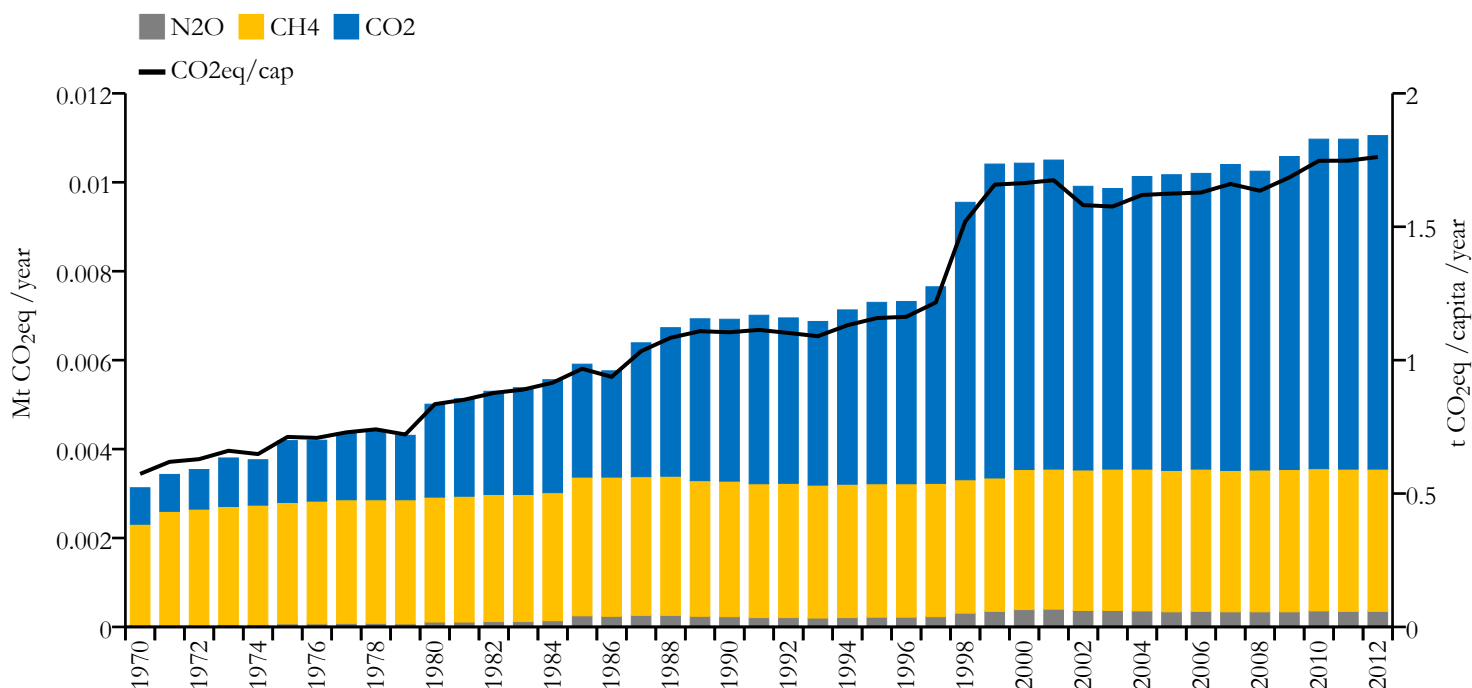
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	0.009	1.401	n/a	6305
1990	0.004	0.580	n/a	6276



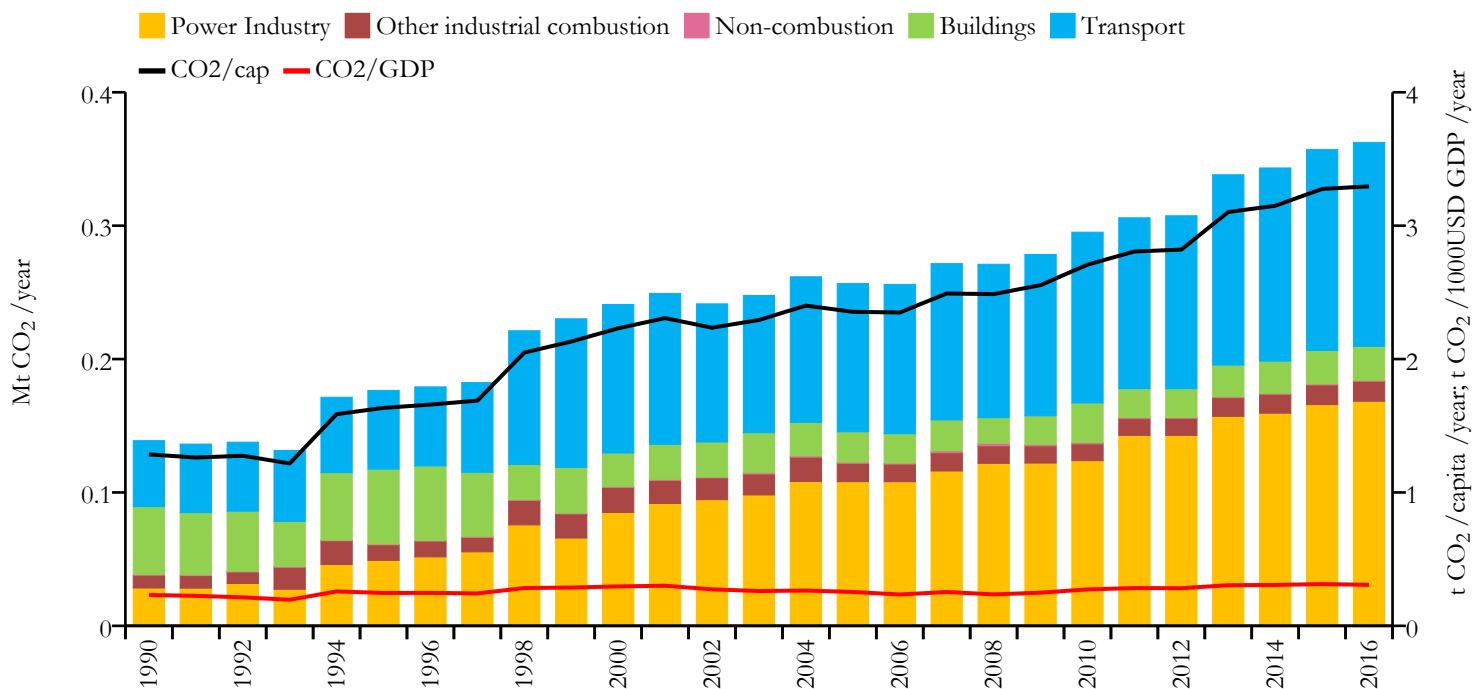
## Greenhouse gas emissions (EDGARv4.3.2 dataset)



# Saint Vincent and the Grenadines



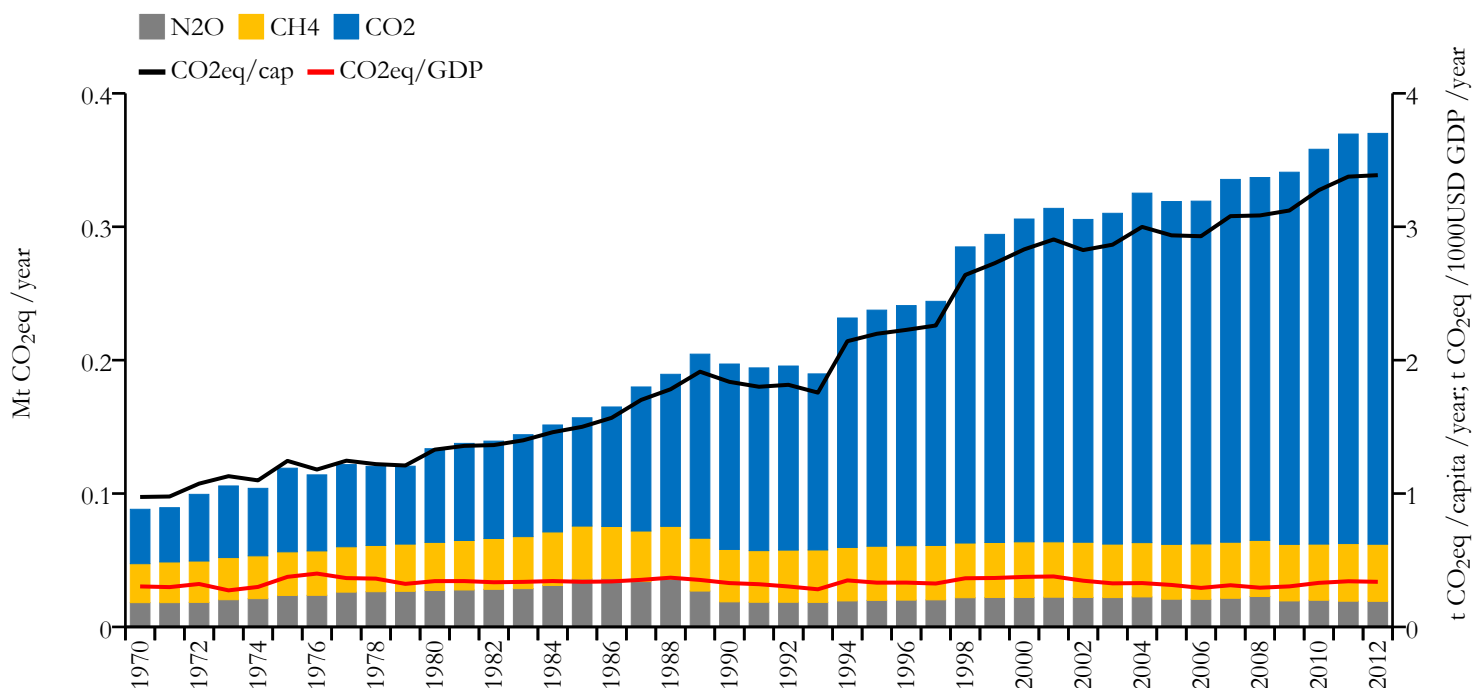
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	0.362	3.295	0.307	109643
1990	0.139	1.285	0.231	107505

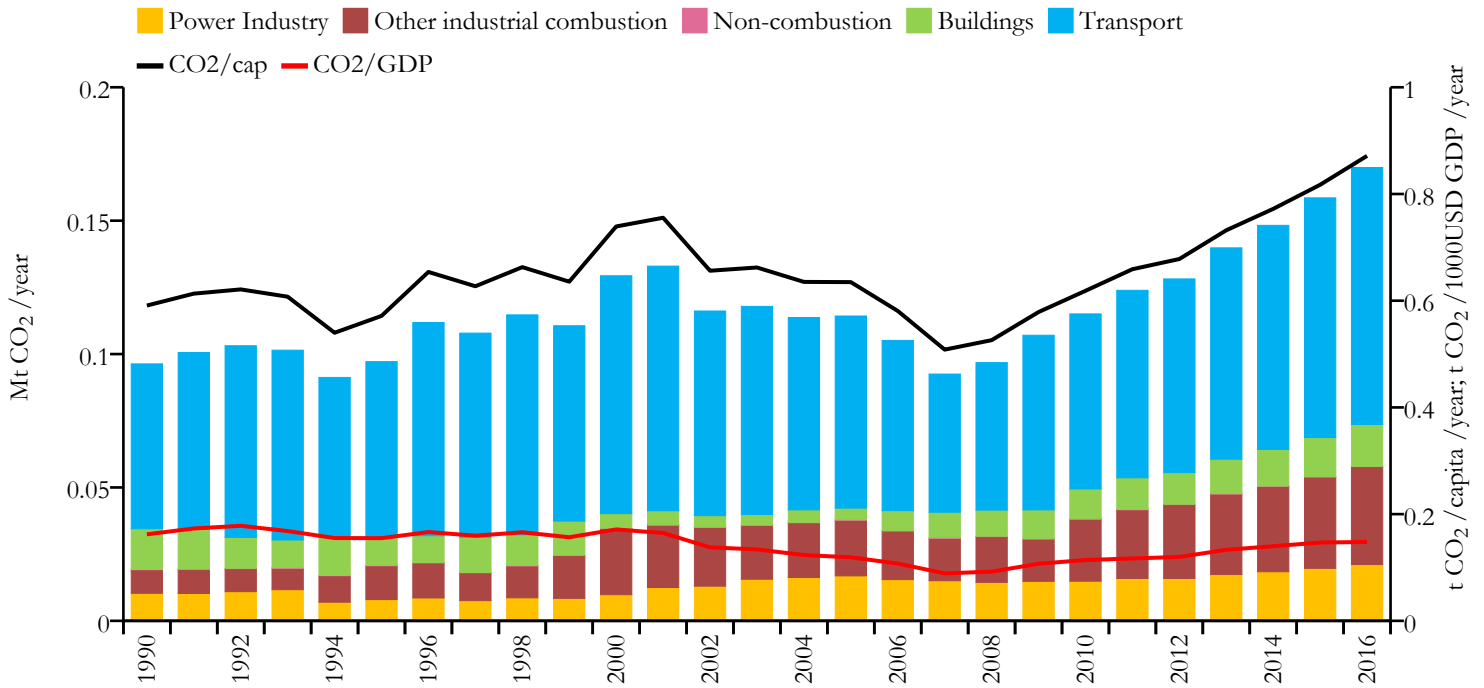


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





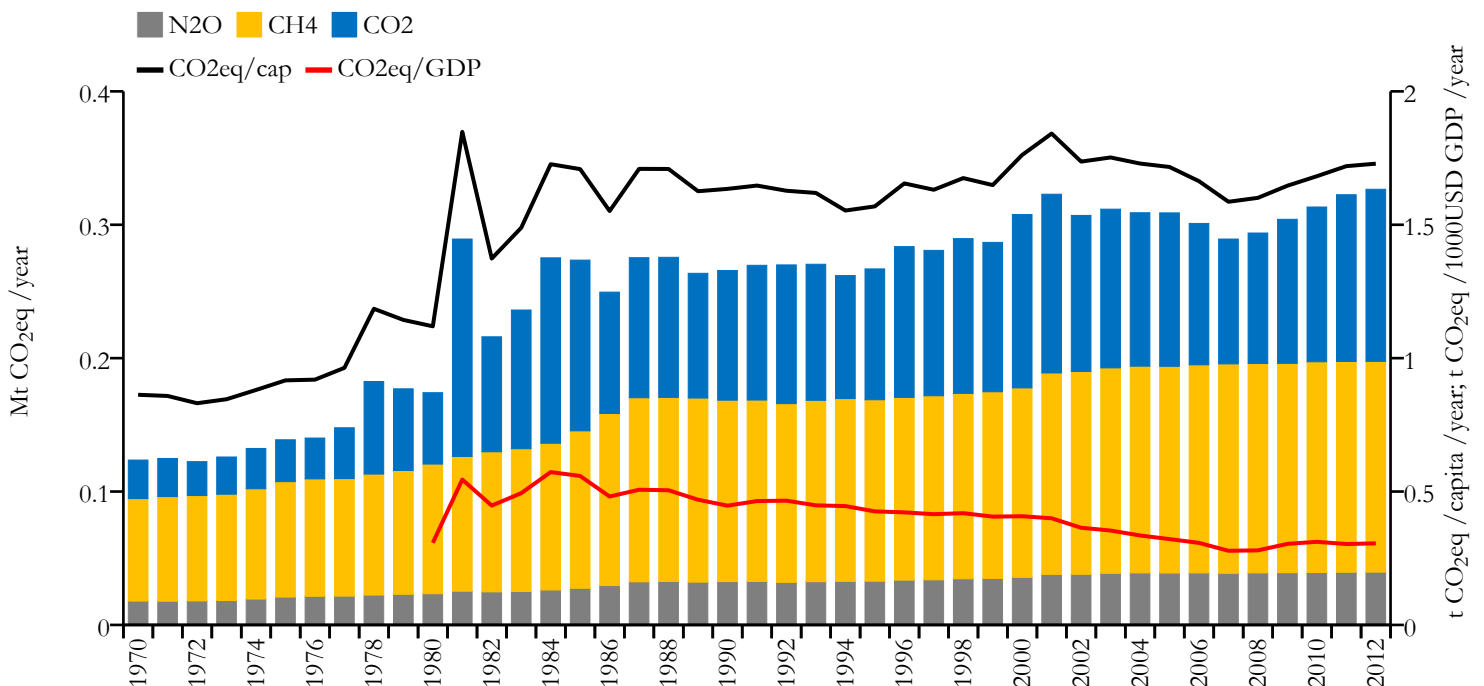
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	0.170	0.871	0.148	195125
1990	0.096	0.591	0.162	162866



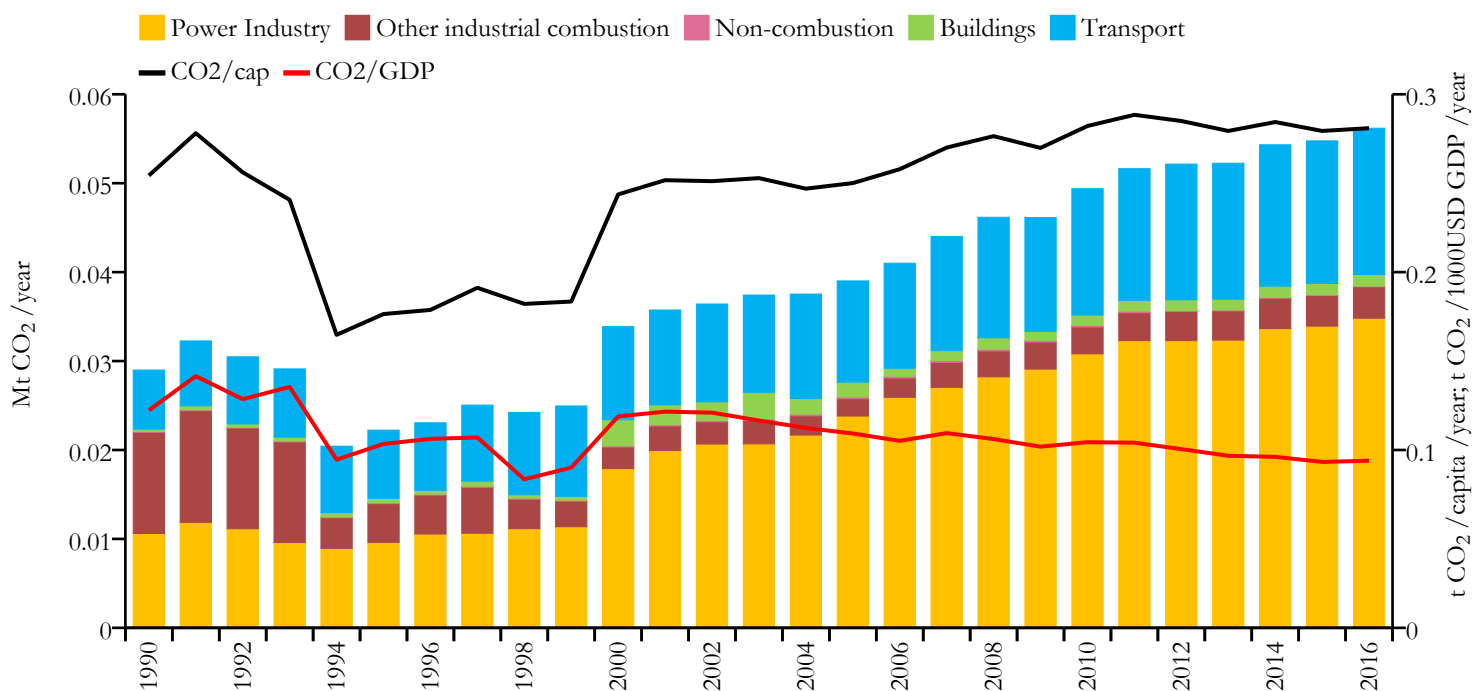
## Greenhouse gas emissions (EDGARv4.3.2 dataset)



# São Tomé and Príncipe



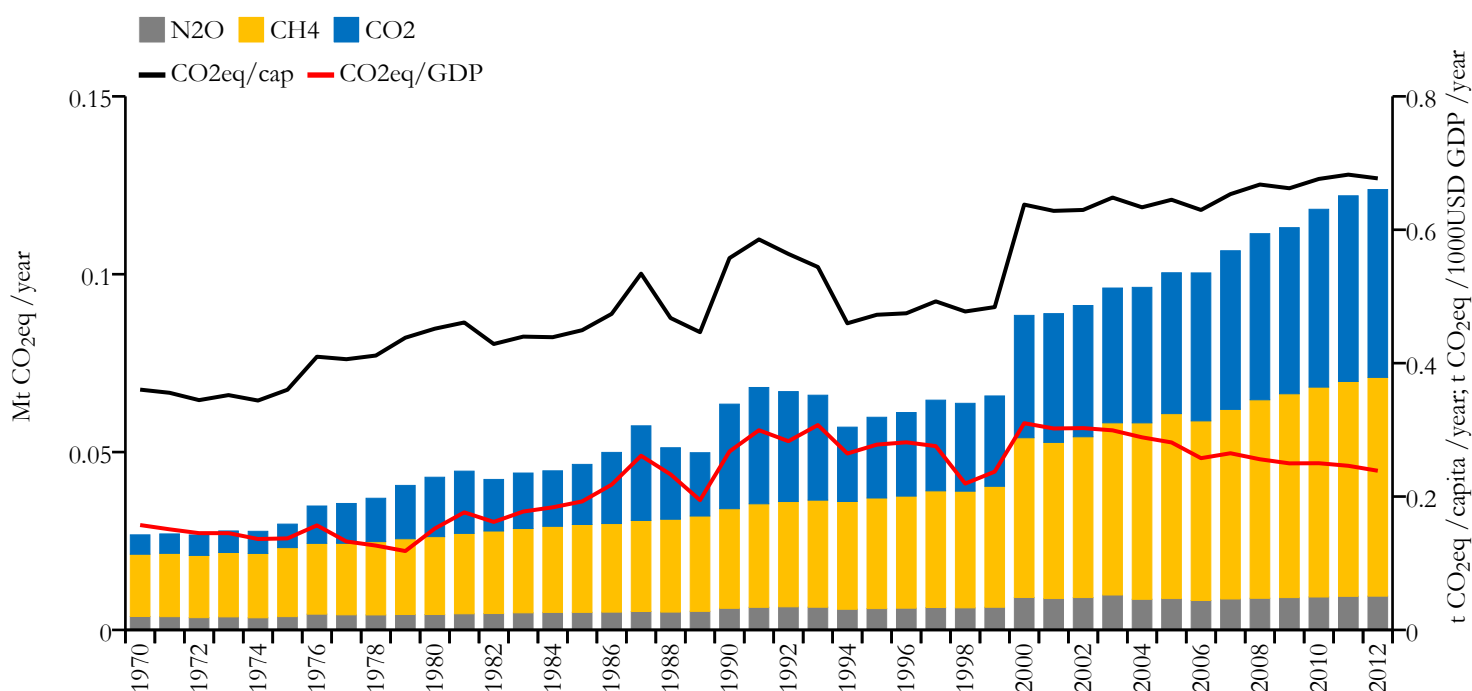
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	0.056	0.281	0.094	199910
1990	0.029	0.254	0.122	113893

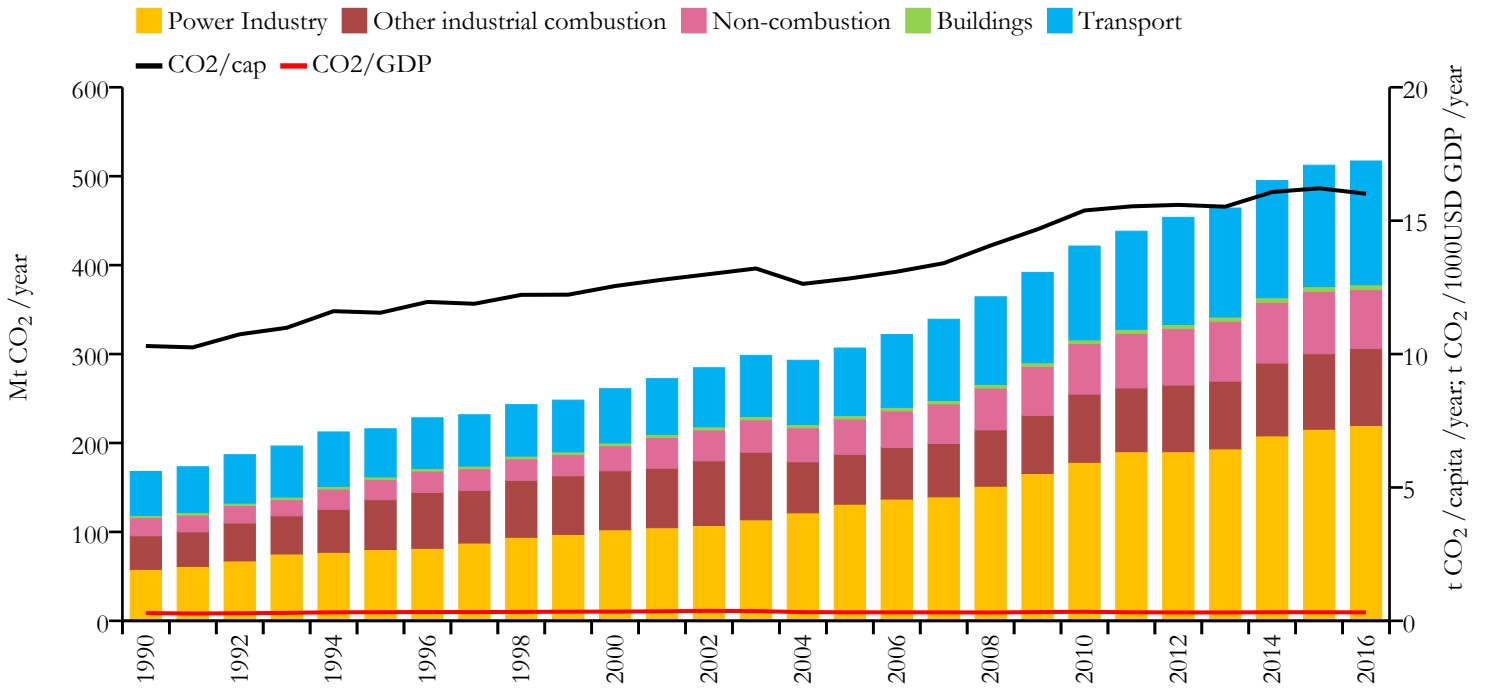


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





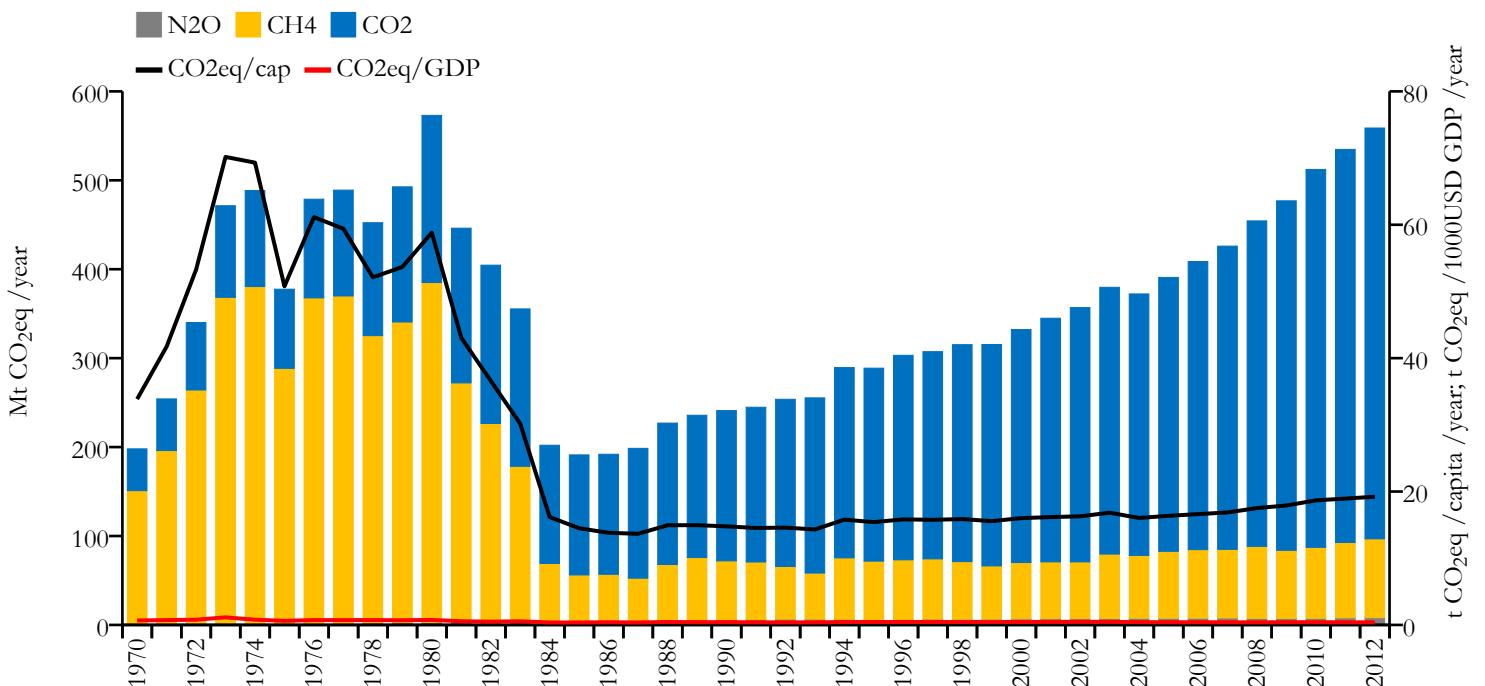
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



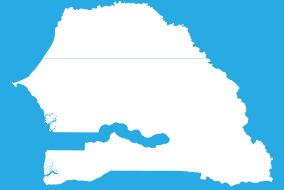
Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	517.079	16.009	0.317	32275687
1990	167.929	10.302	0.291	16326815



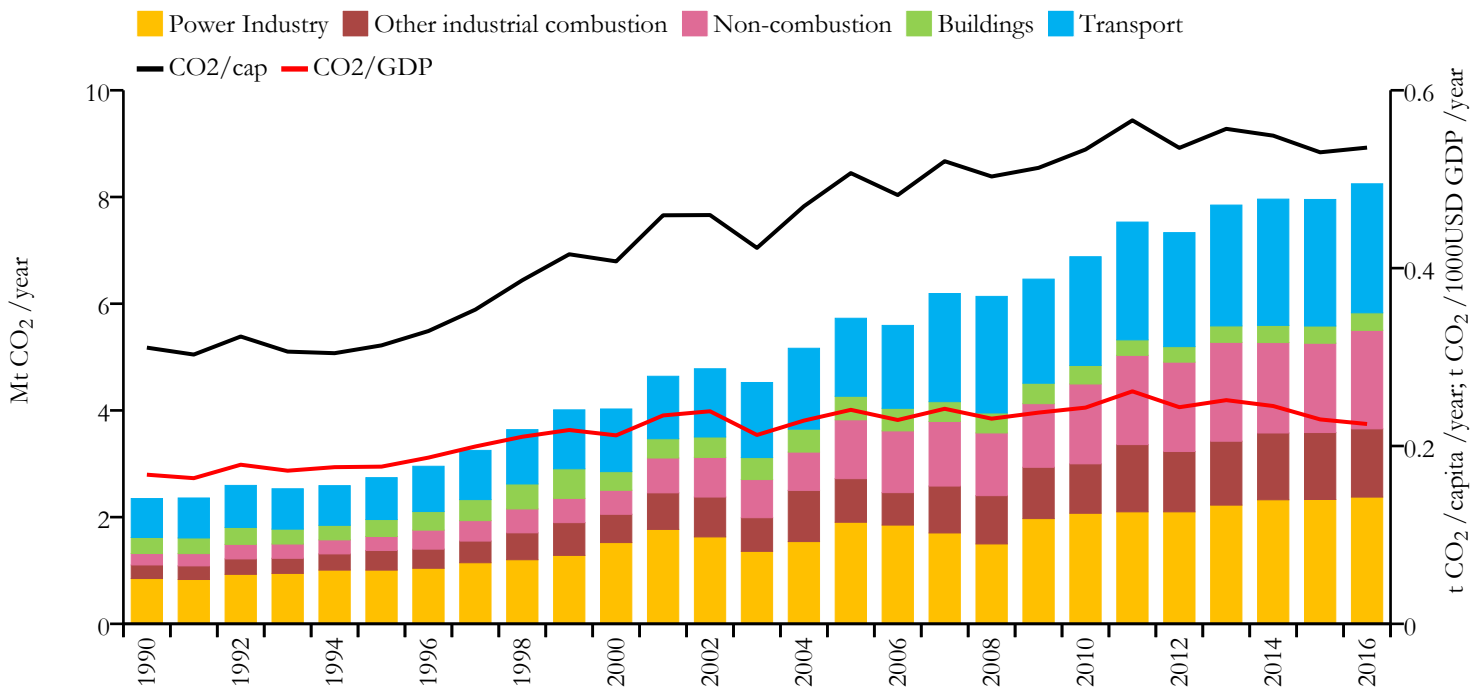
## Greenhouse gas emissions (EDGARv4.3.2 dataset)







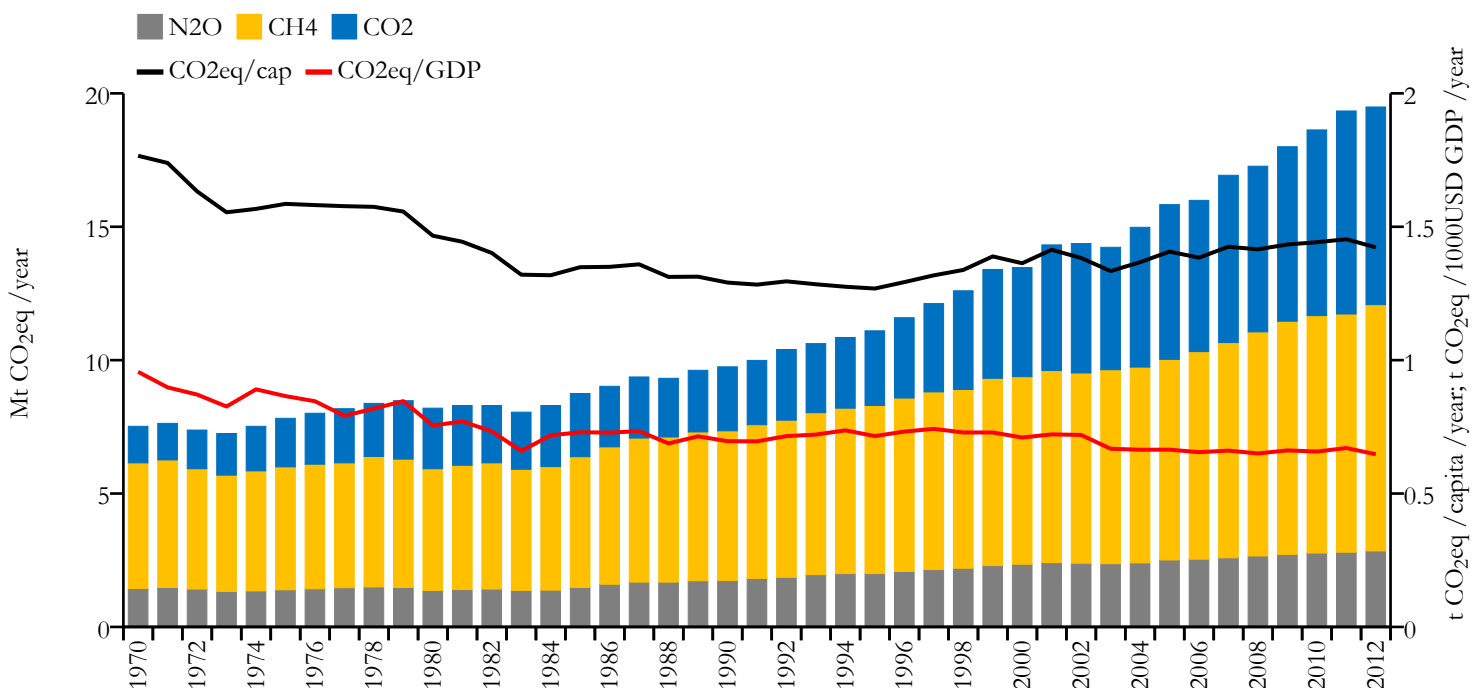
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



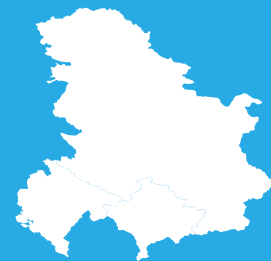
Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	8.247	0.536	0.225	15411614
1990	2.348	0.311	0.168	7555617



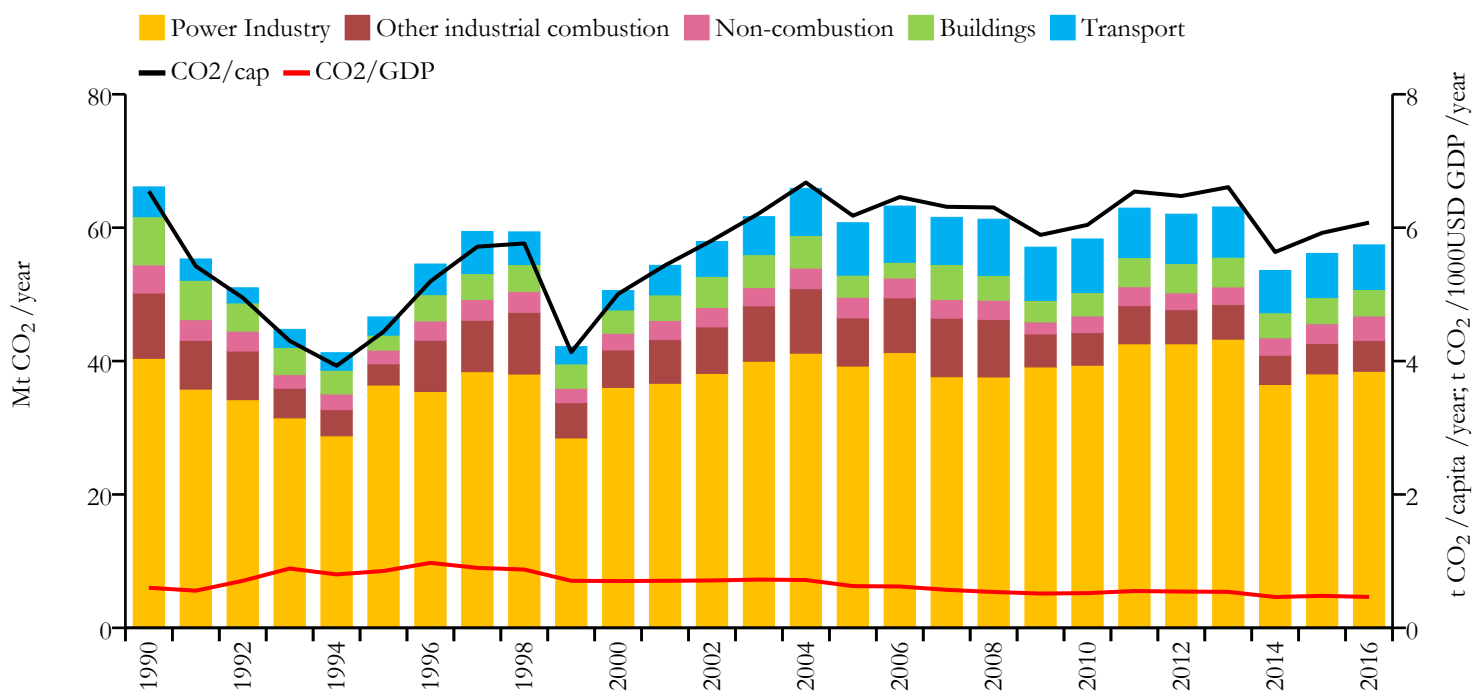
## Greenhouse gas emissions (EDGARv4.3.2 dataset)



# Serbia and Montenegro



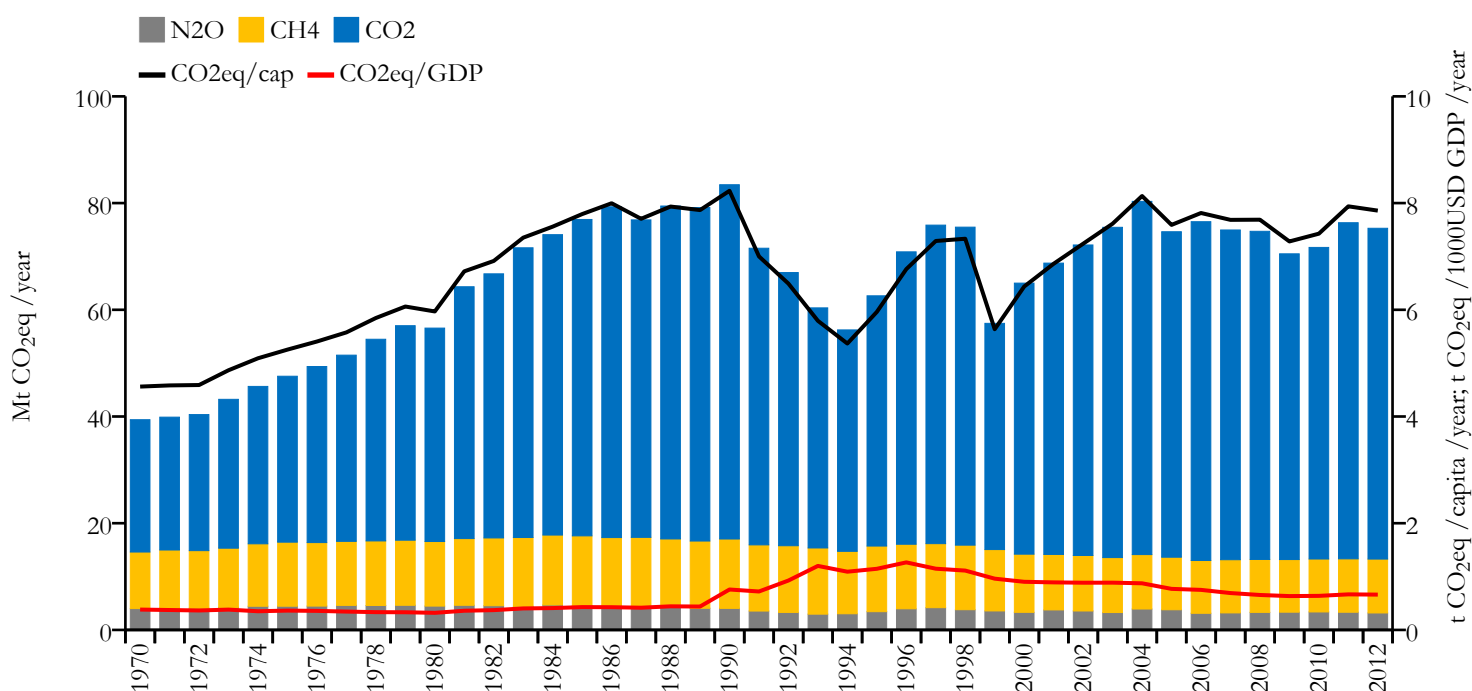
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	57.417	6.076	0.463	9448698
1990	66.111	6.546	0.601	10132676

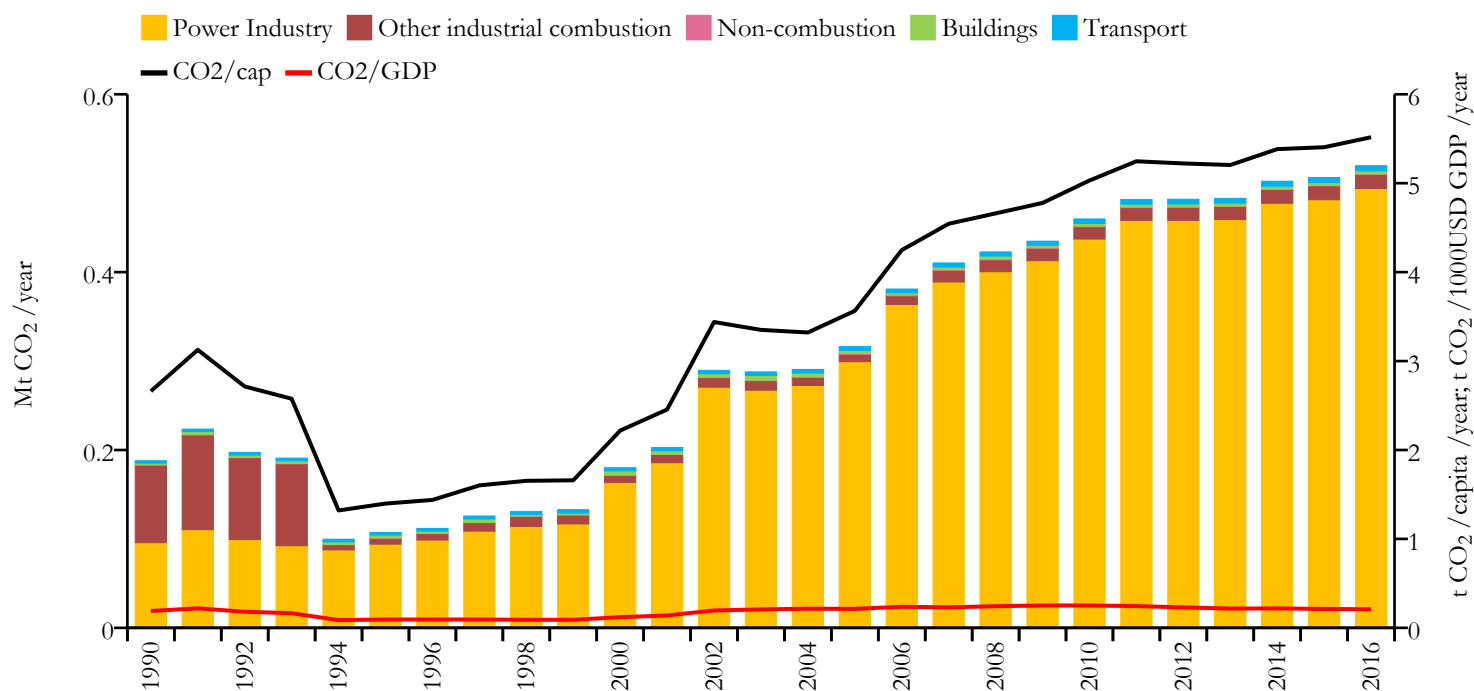


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





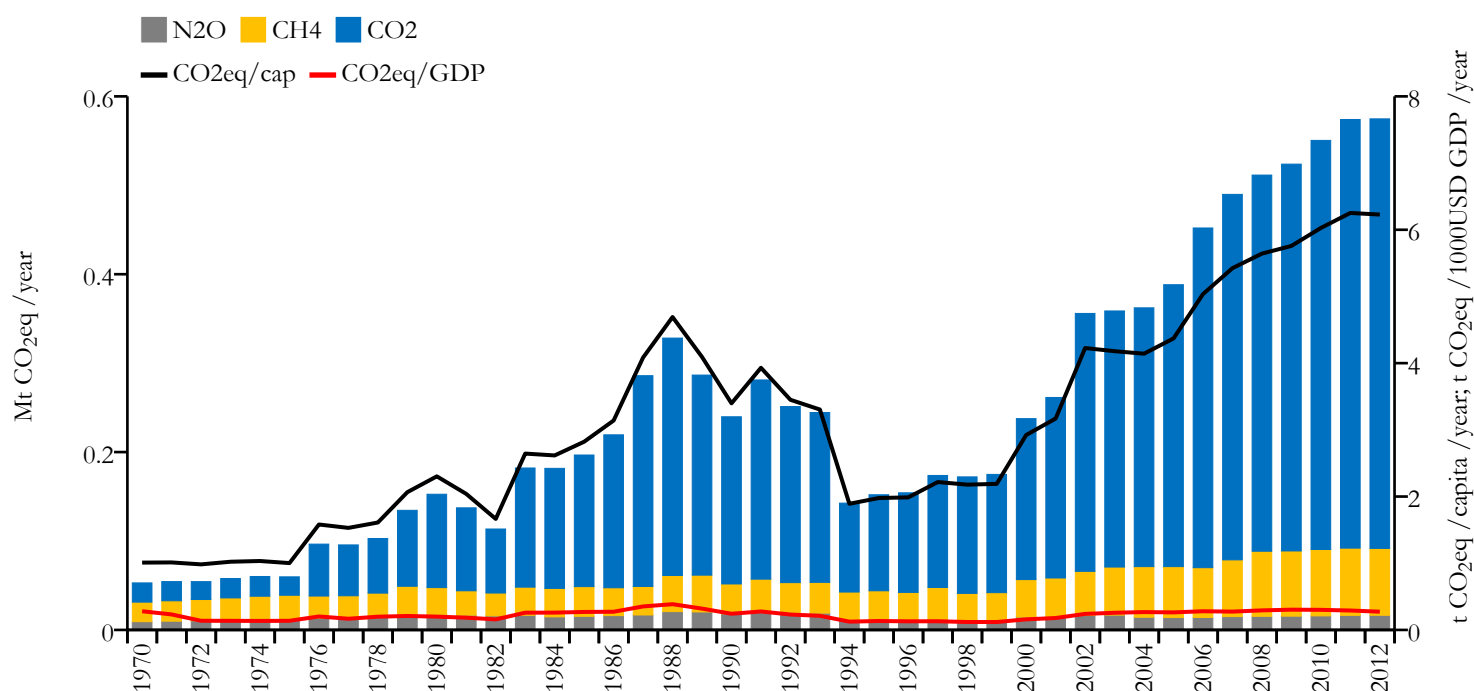
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)

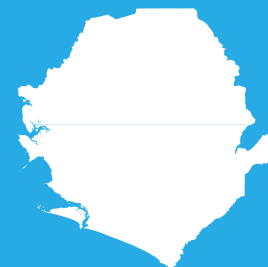


Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	0.520	5.517	0.209	94228
1990	0.188	2.661	0.190	70624

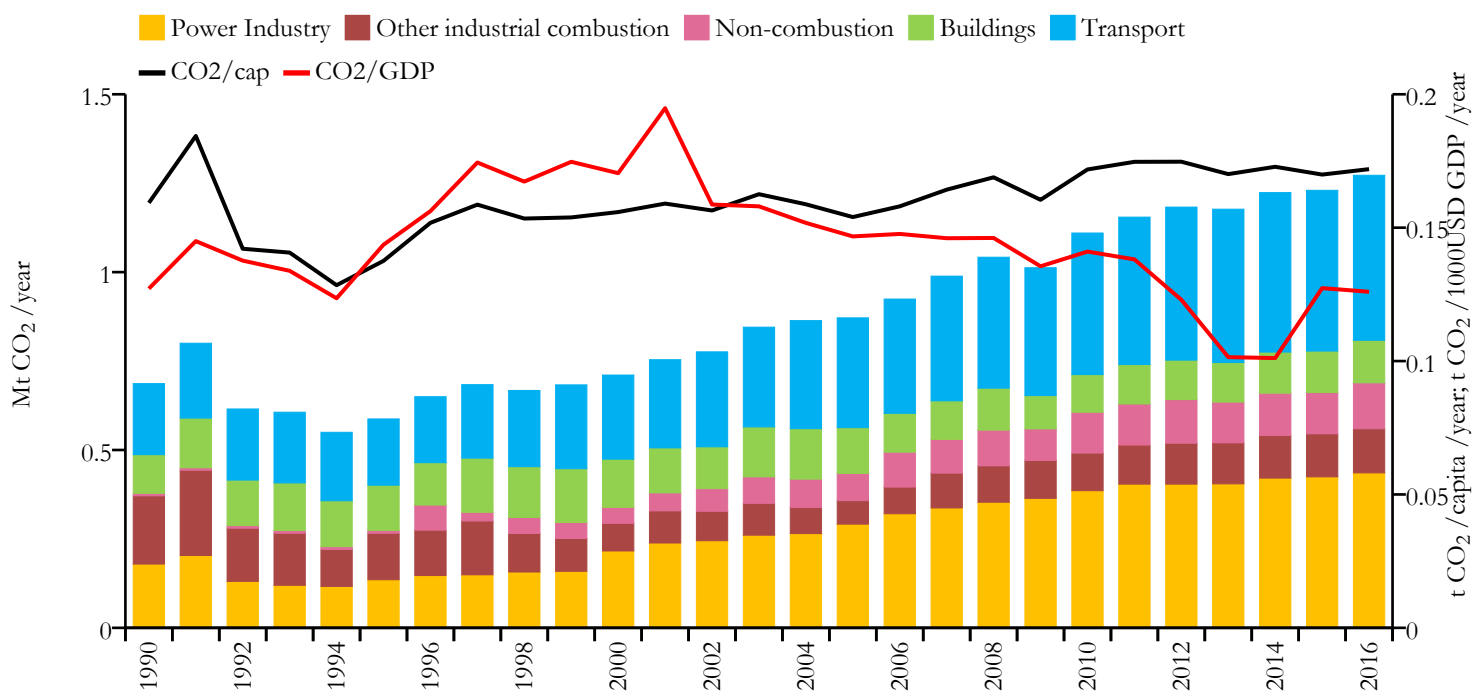


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





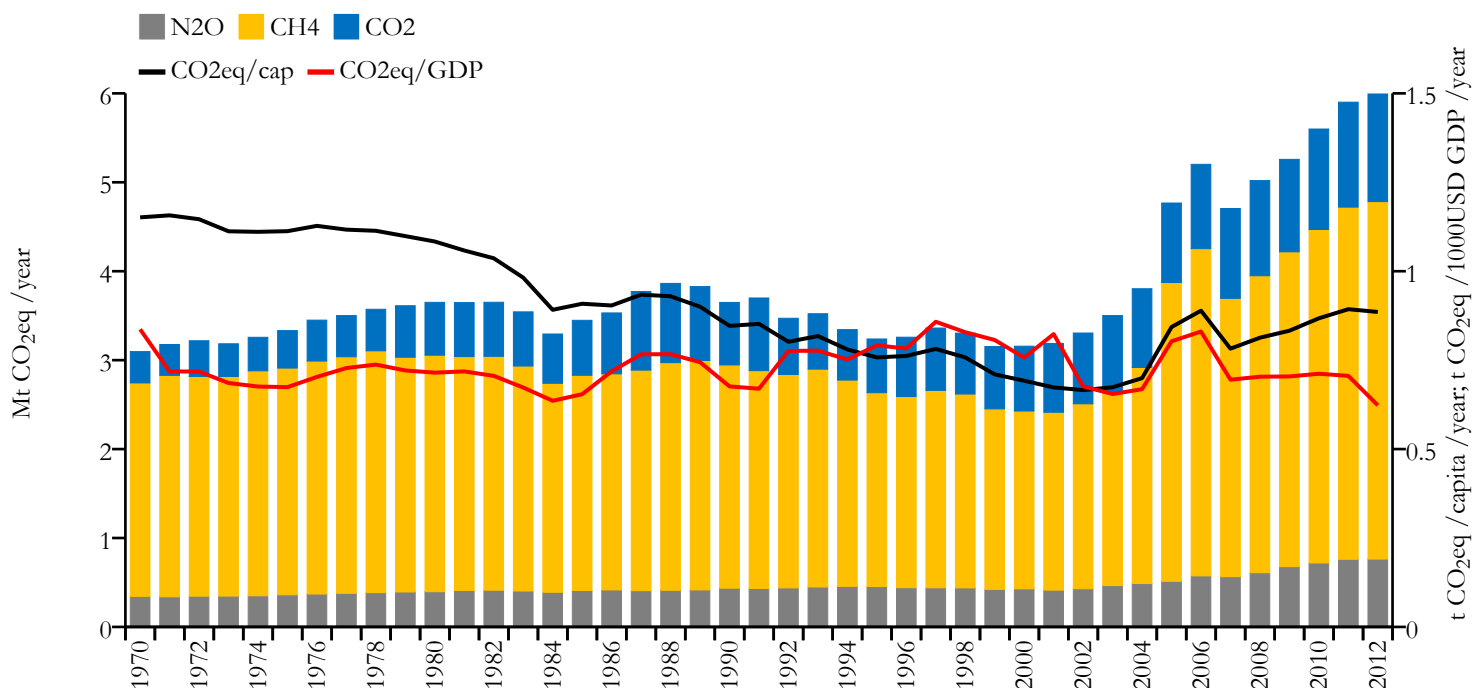
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	1.272	0.172	0.126	7396190
1990	0.687	0.159	0.127	4312246

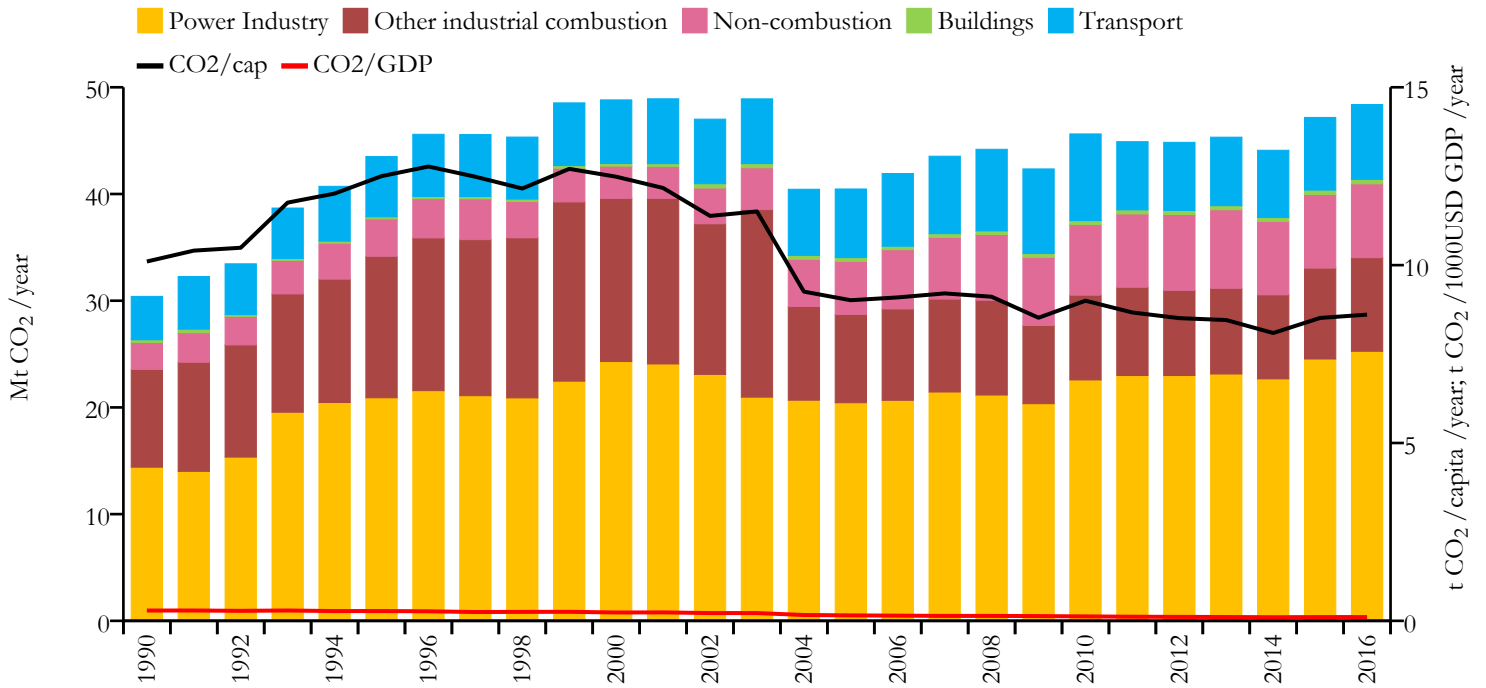


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





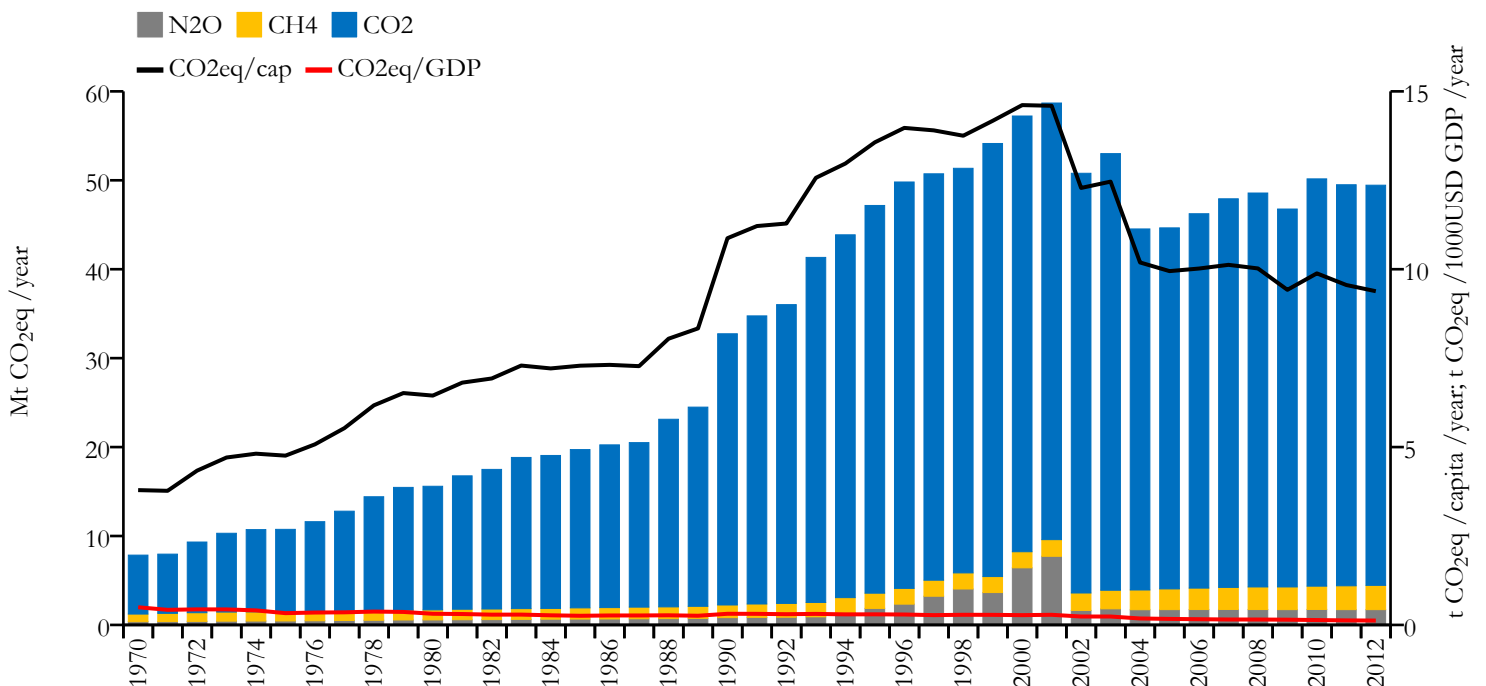
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	48.382	8.609	0.106	5622455
1990	30.407	10.102	0.290	3012953

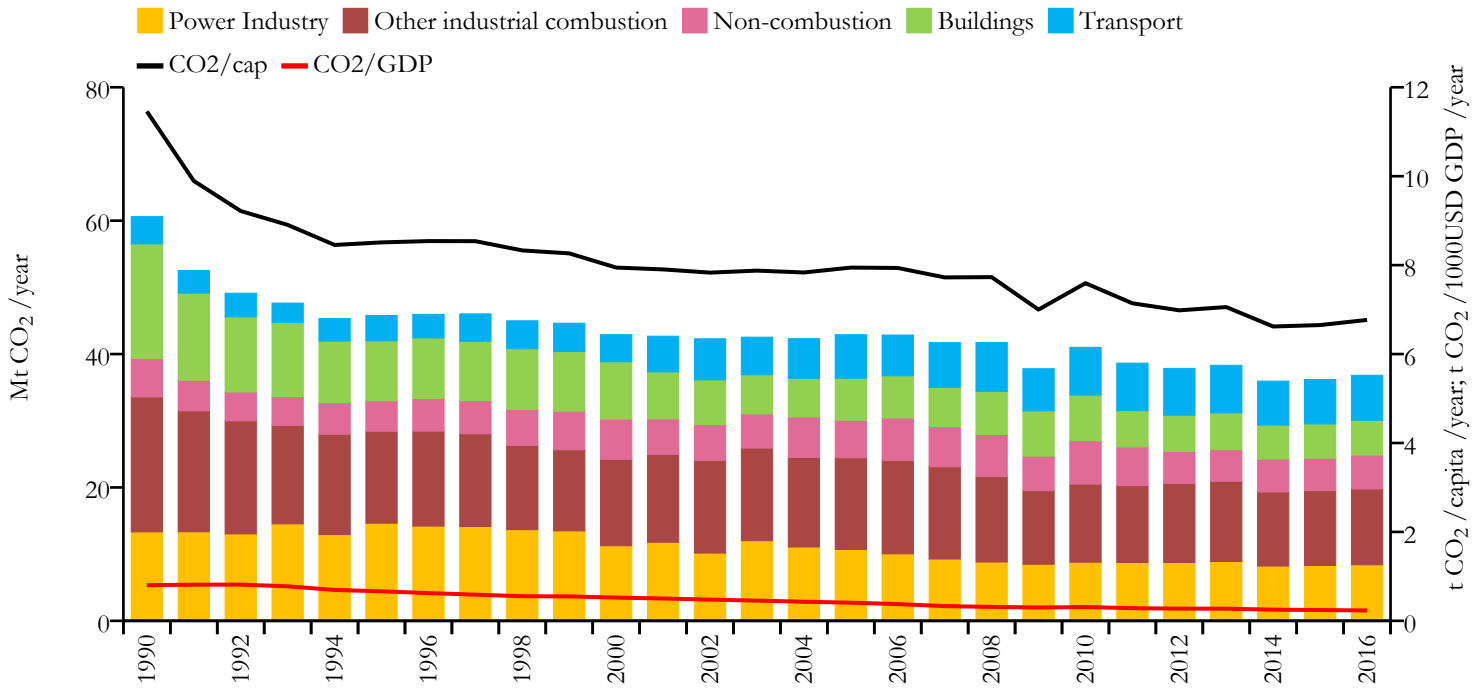


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





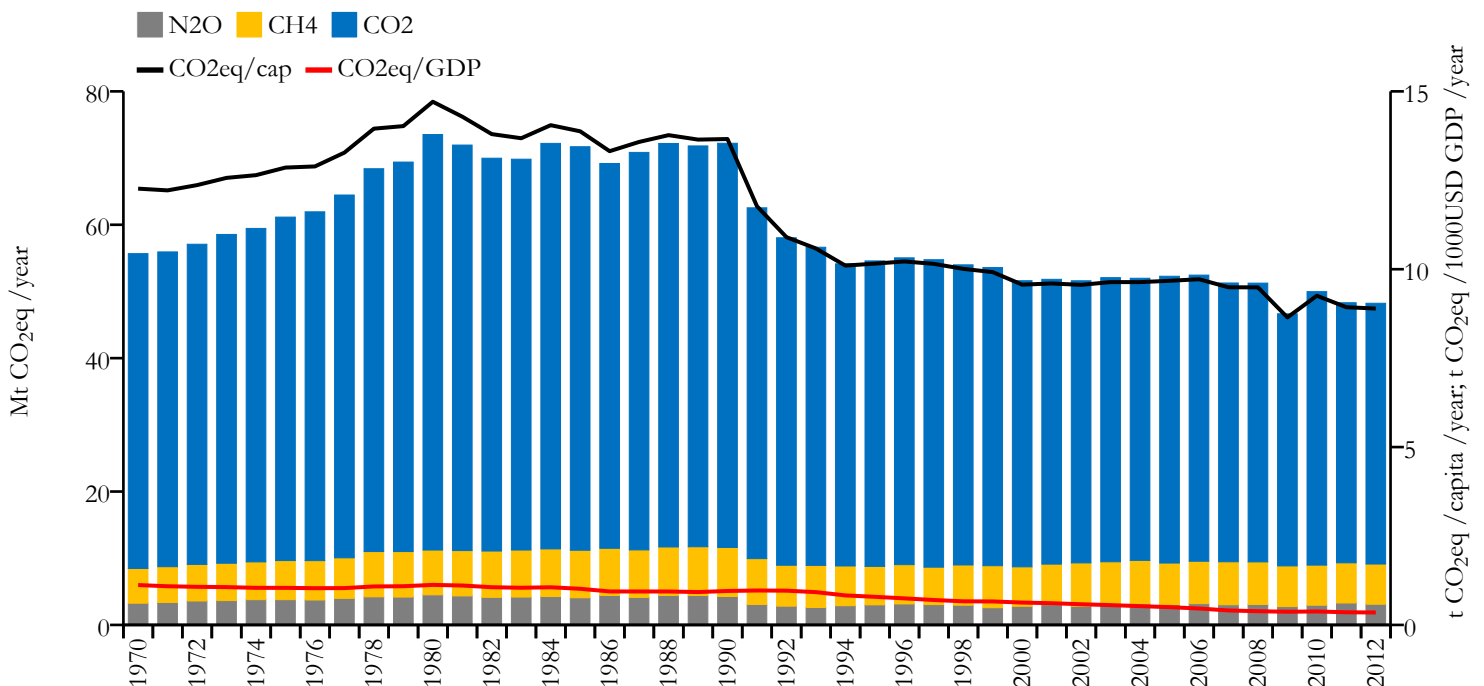
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	36.817	6.768	0.233	5444218
1990	60.608	11.457	0.802	5288454

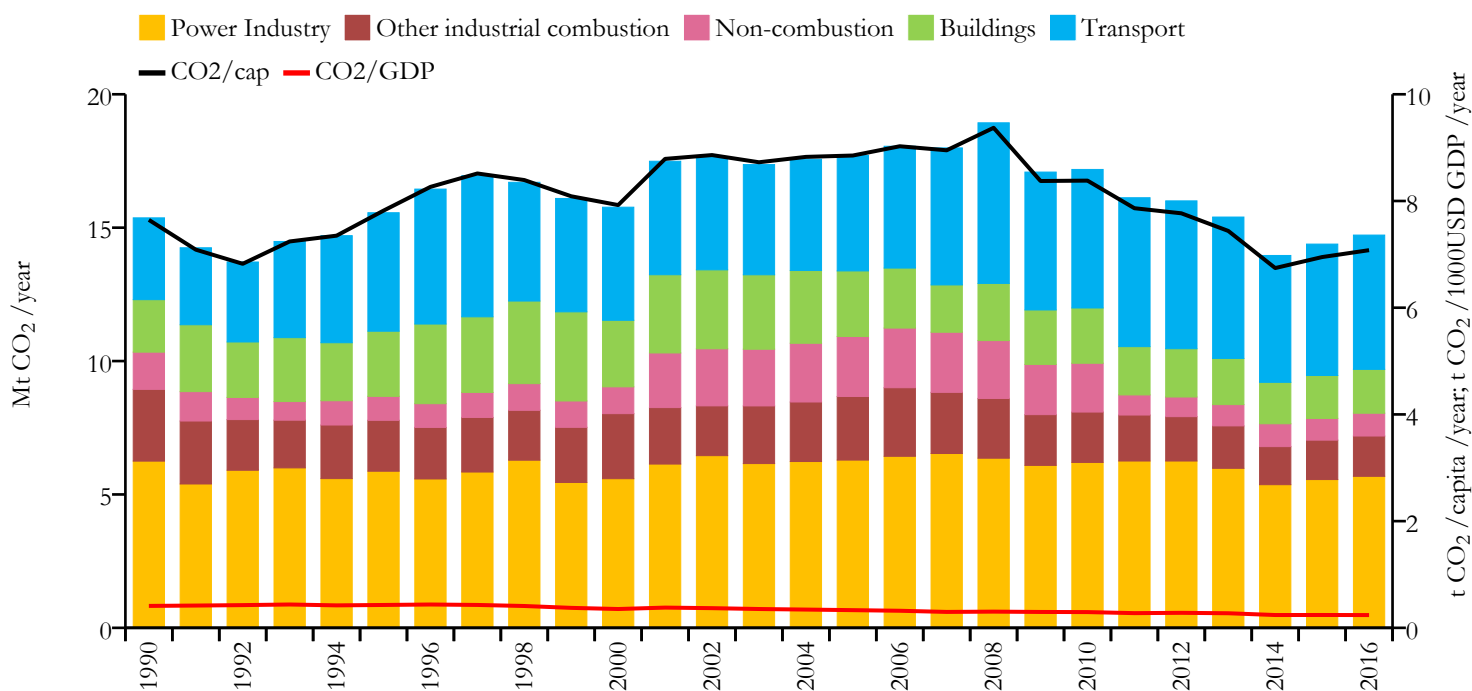


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





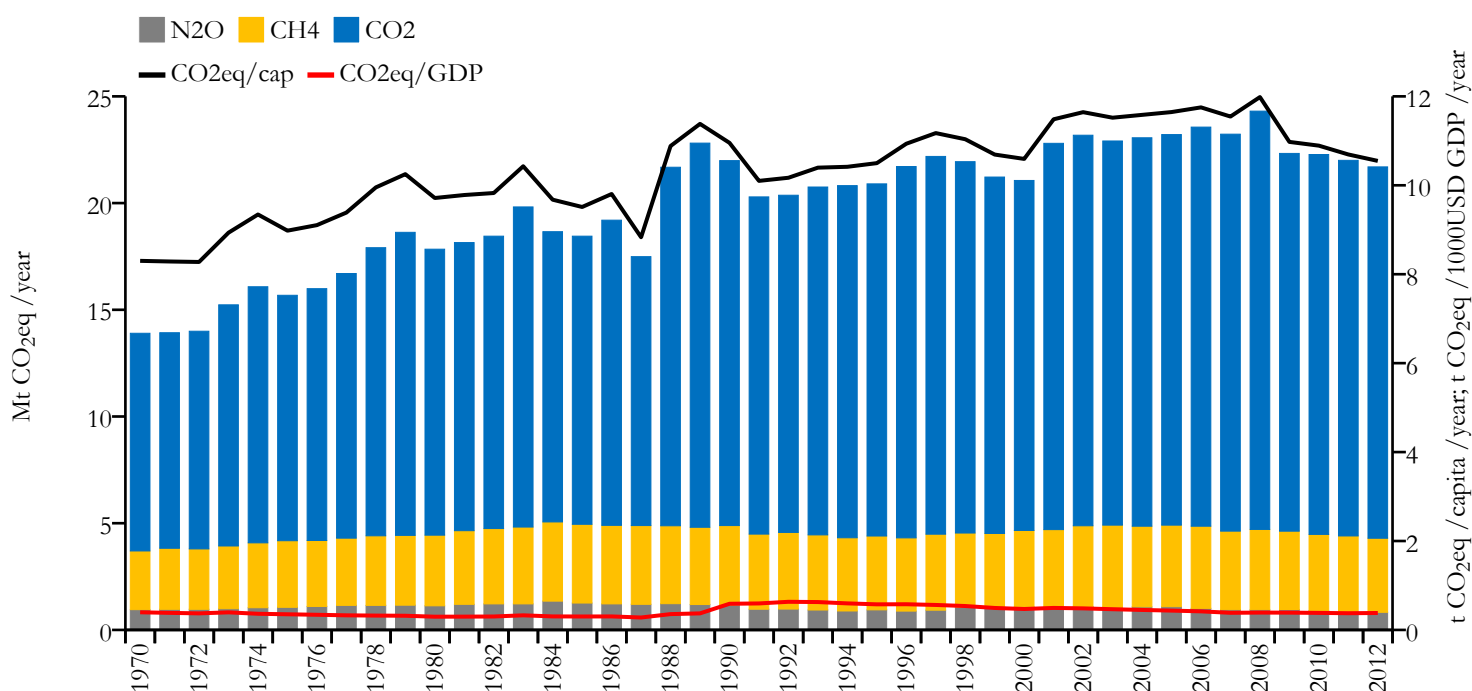
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	14.723	7.078	0.239	2077862
1990	15.368	7.646	0.411	2006479



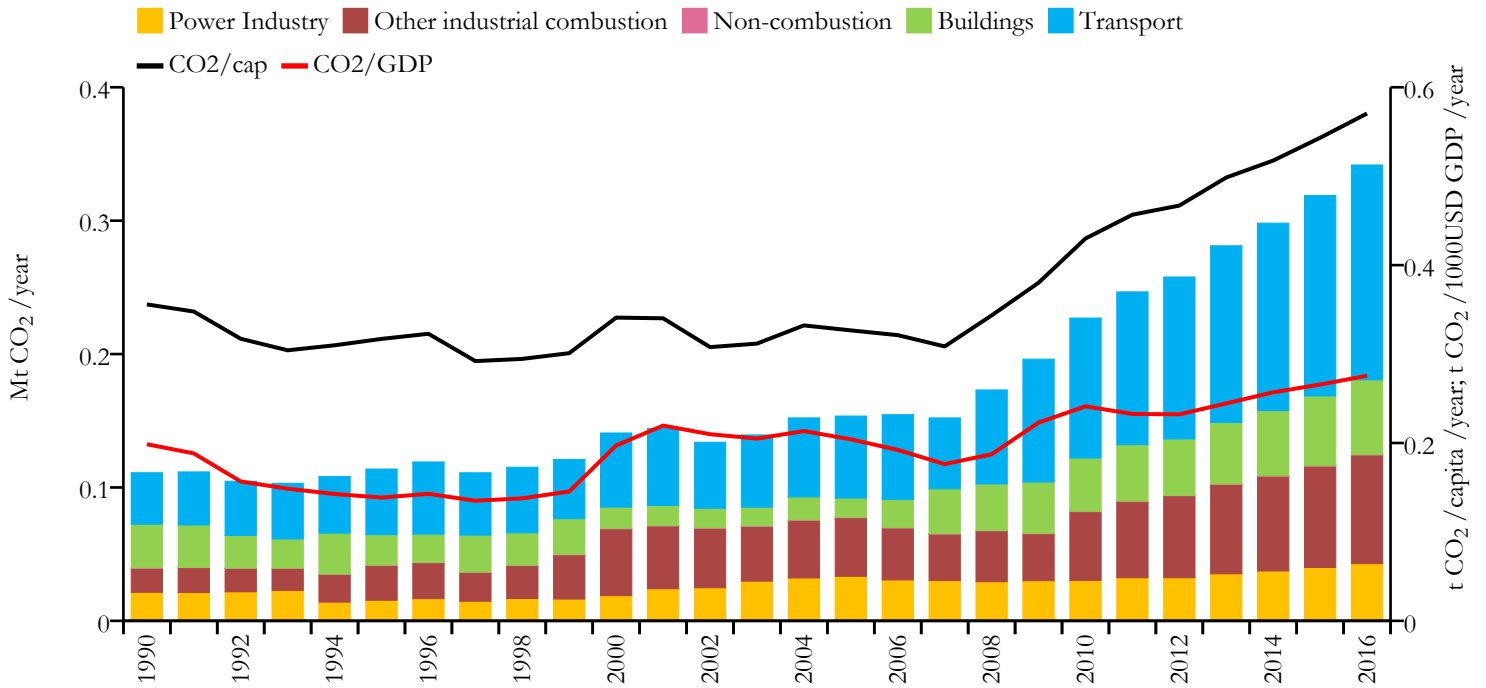
## Greenhouse gas emissions (EDGARv4.3.2 dataset)



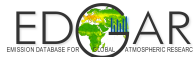
# Solomon Islands



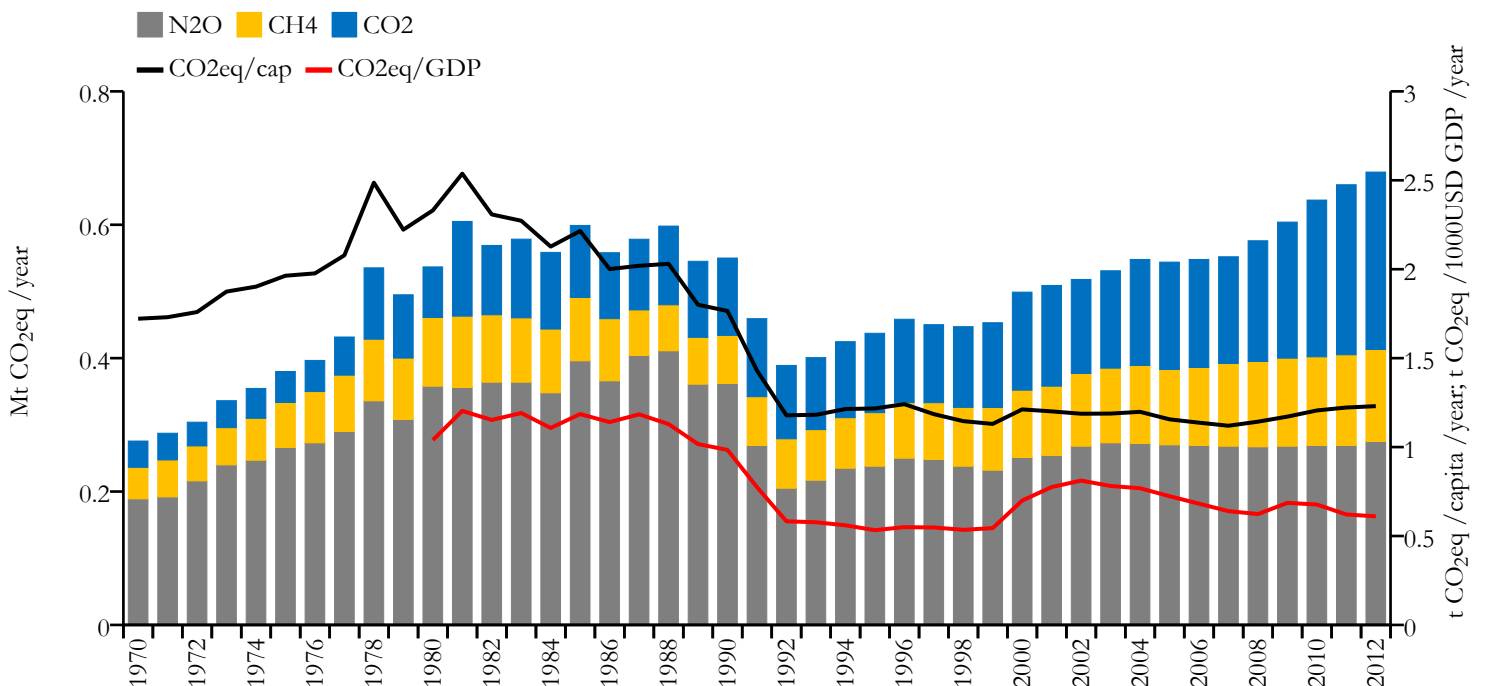
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



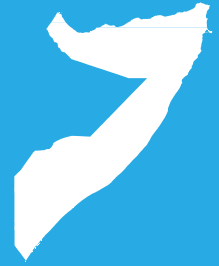
Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	0.342	0.571	0.276	599419
1990	0.111	0.356	0.199	311840



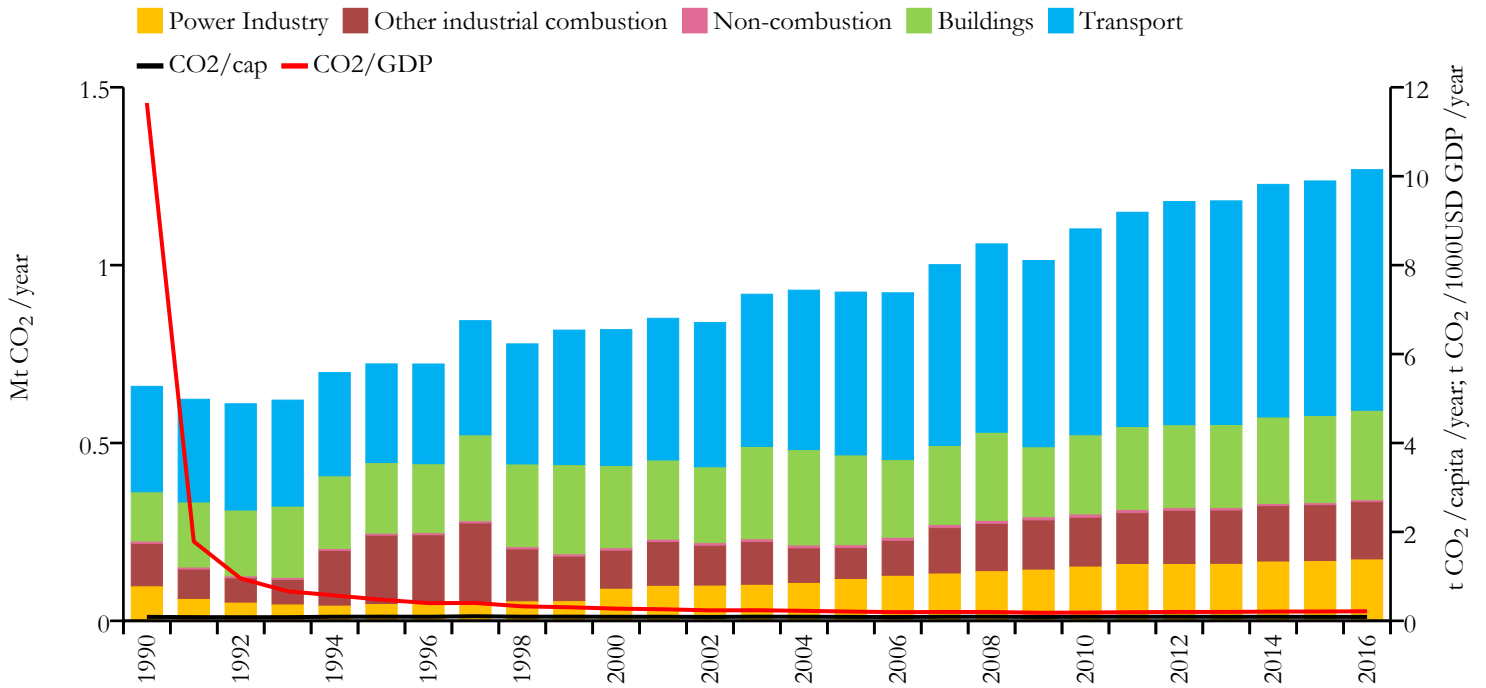
## Greenhouse gas emissions (EDGARv4.3.2 dataset)







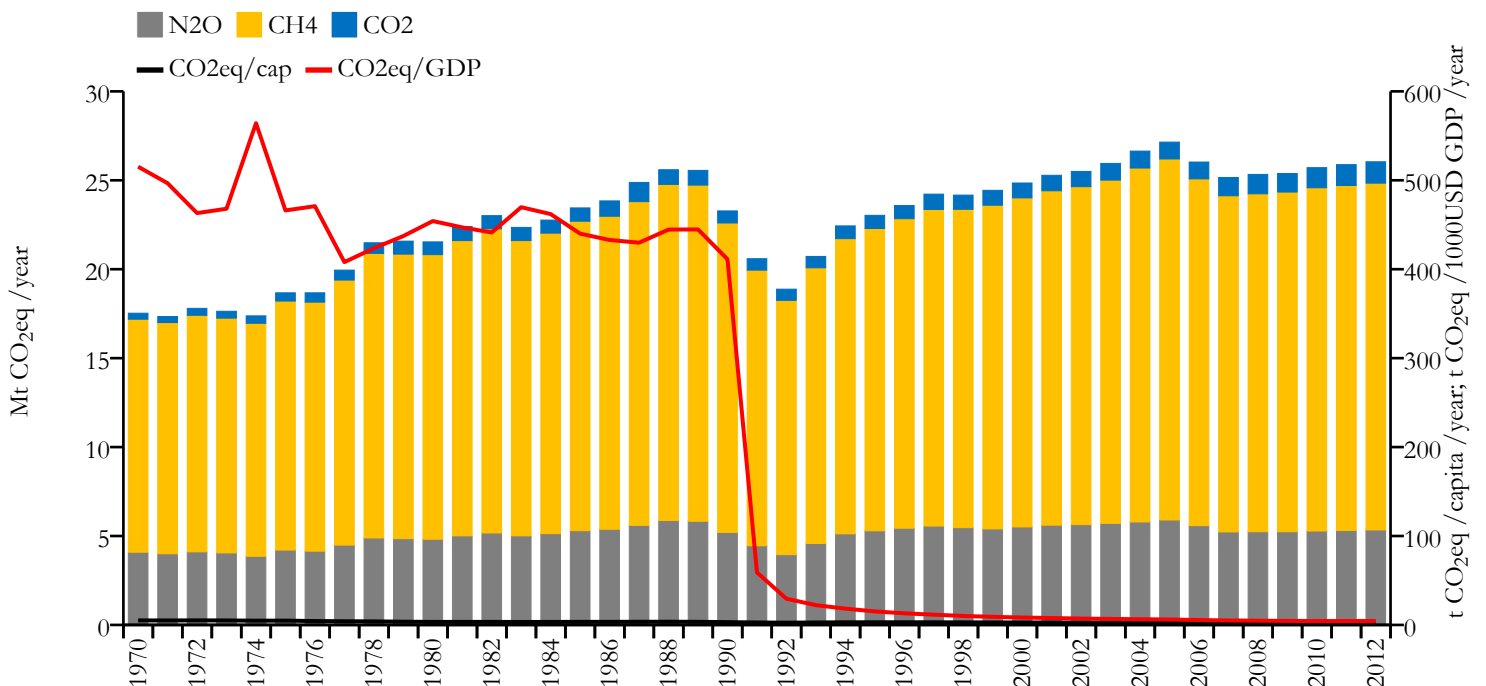
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	1.268	0.089	0.215	14317996
1990	0.659	0.089	11.646	7397347

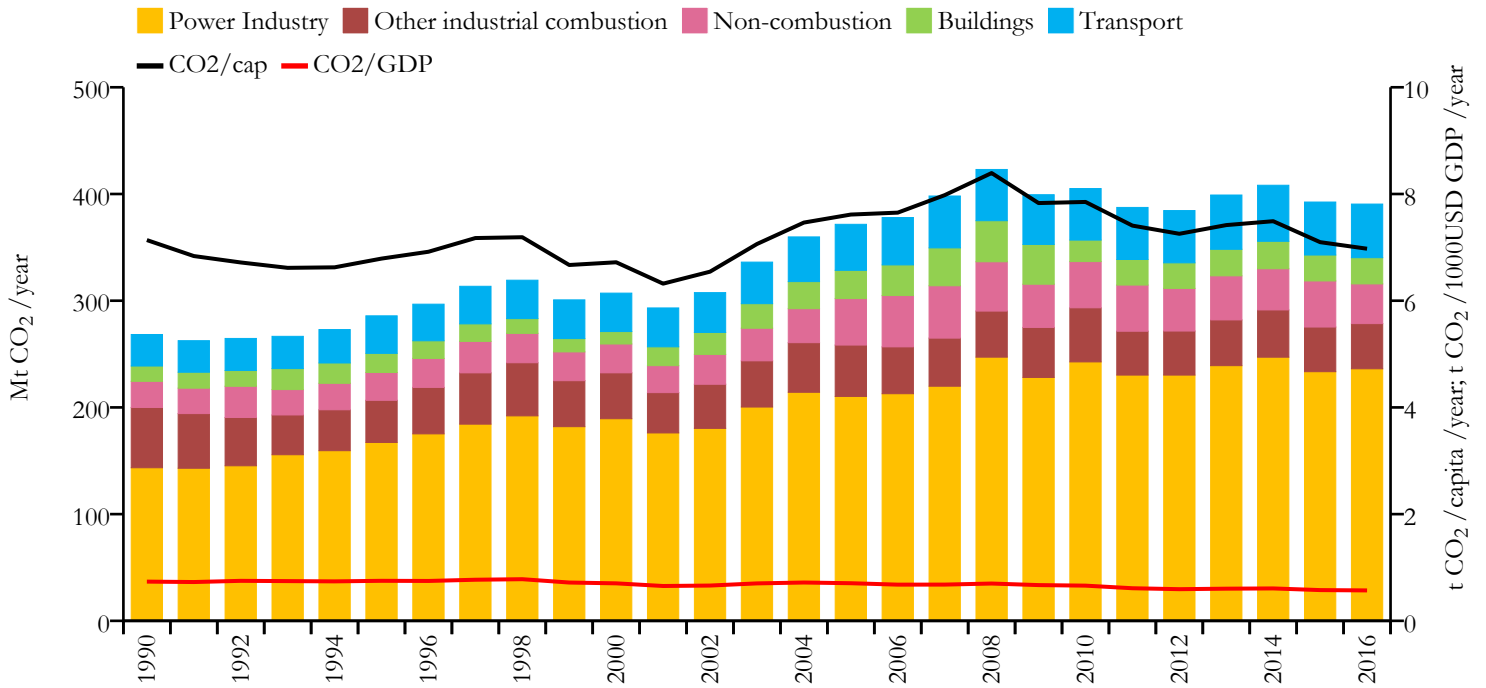


## Greenhouse gas emissions (EDGARv4.3.2 dataset)

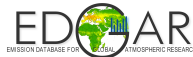




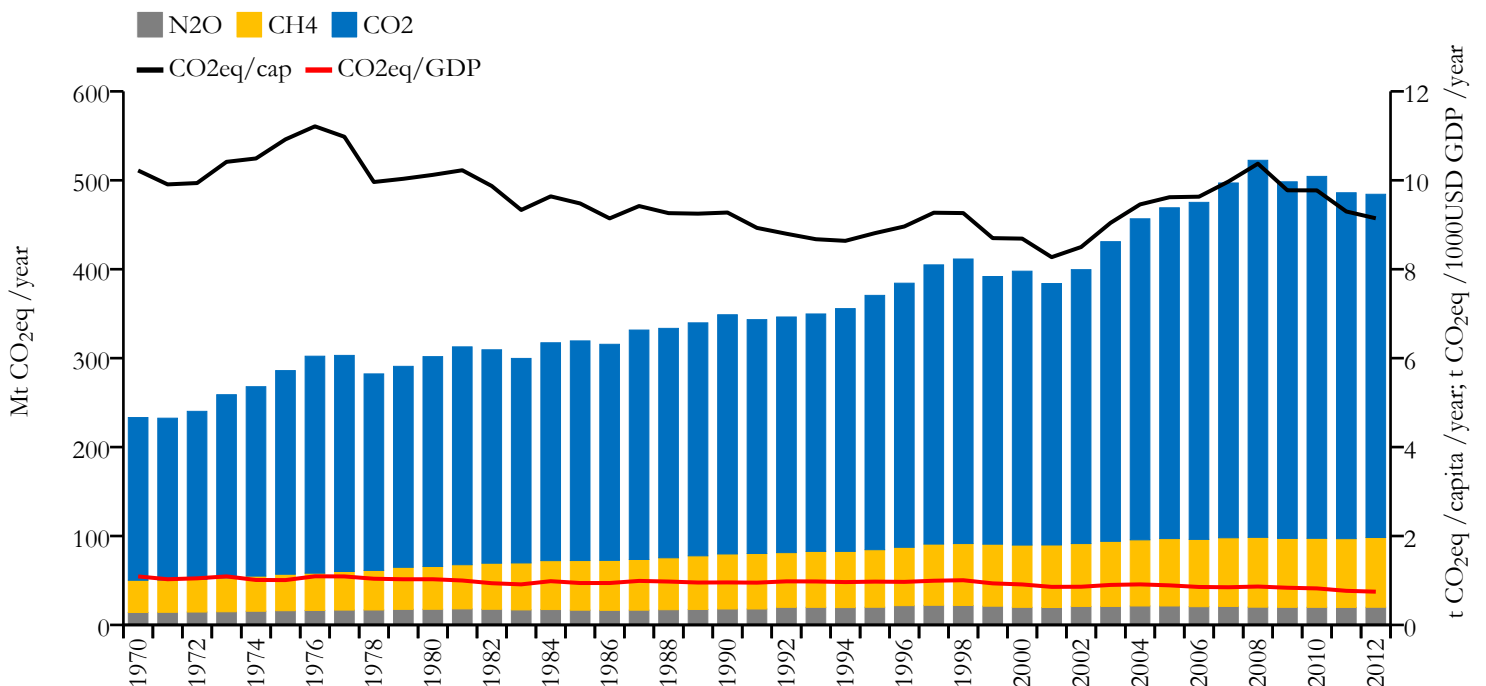
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



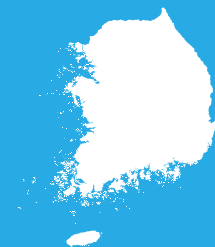
Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	390.558	6.974	0.570	56015473
1990	268.333	7.137	0.735	37560525



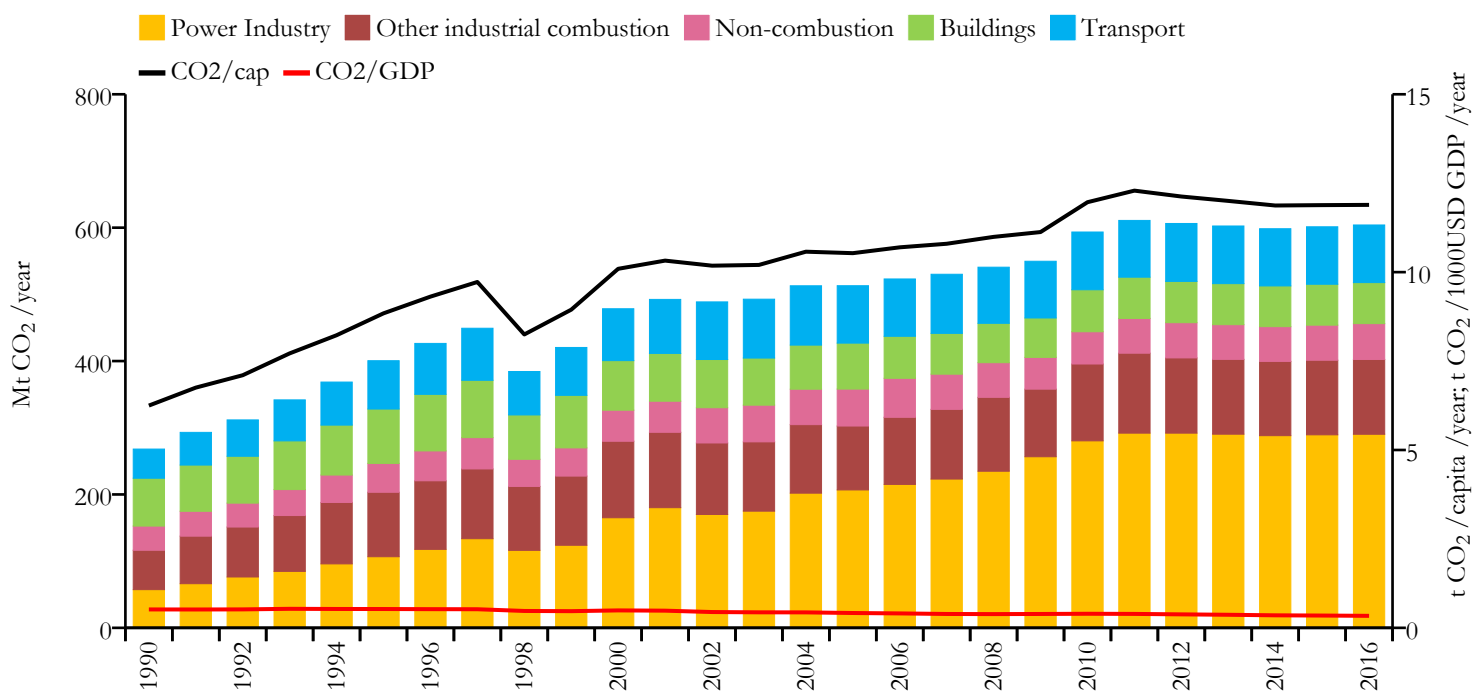
## Greenhouse gas emissions (EDGARv4.3.2 dataset)



# South Korea



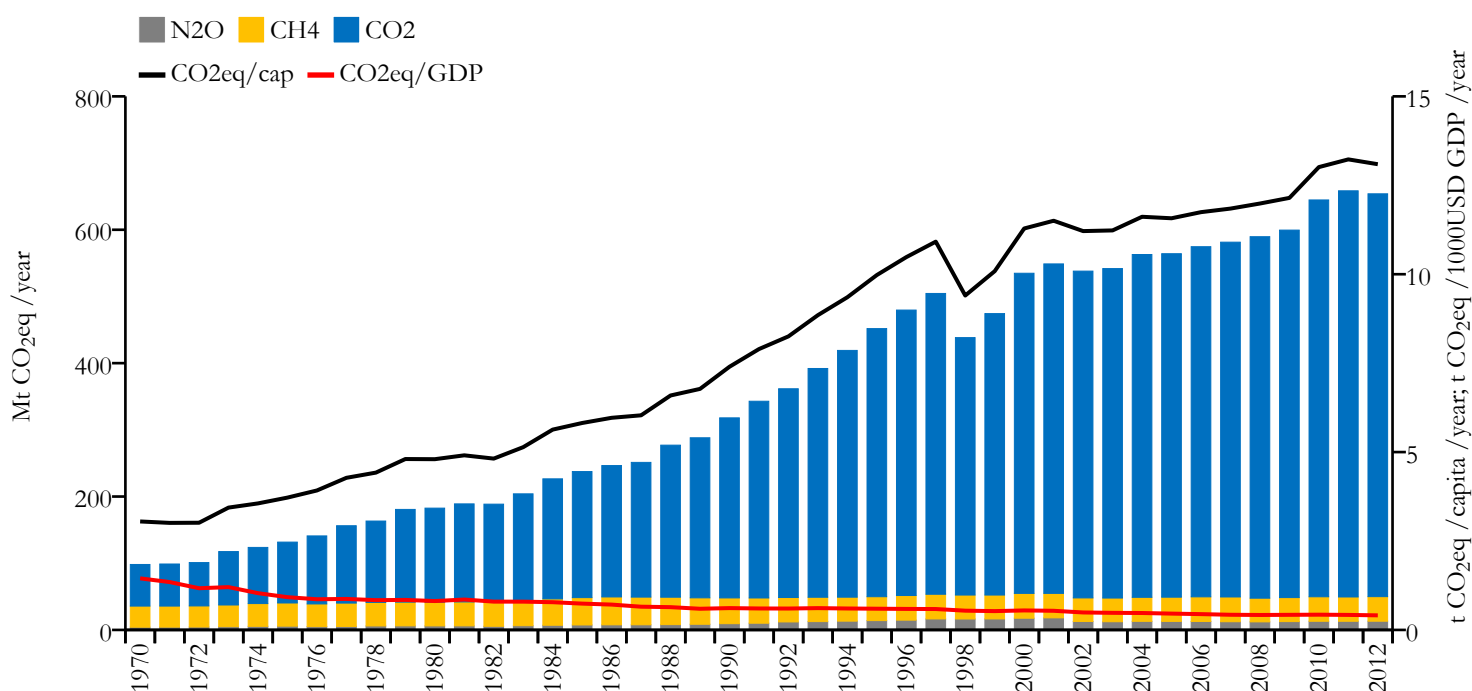
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	604.044	11.891	0.337	50791919
1990	268.057	6.248	0.517	42923131



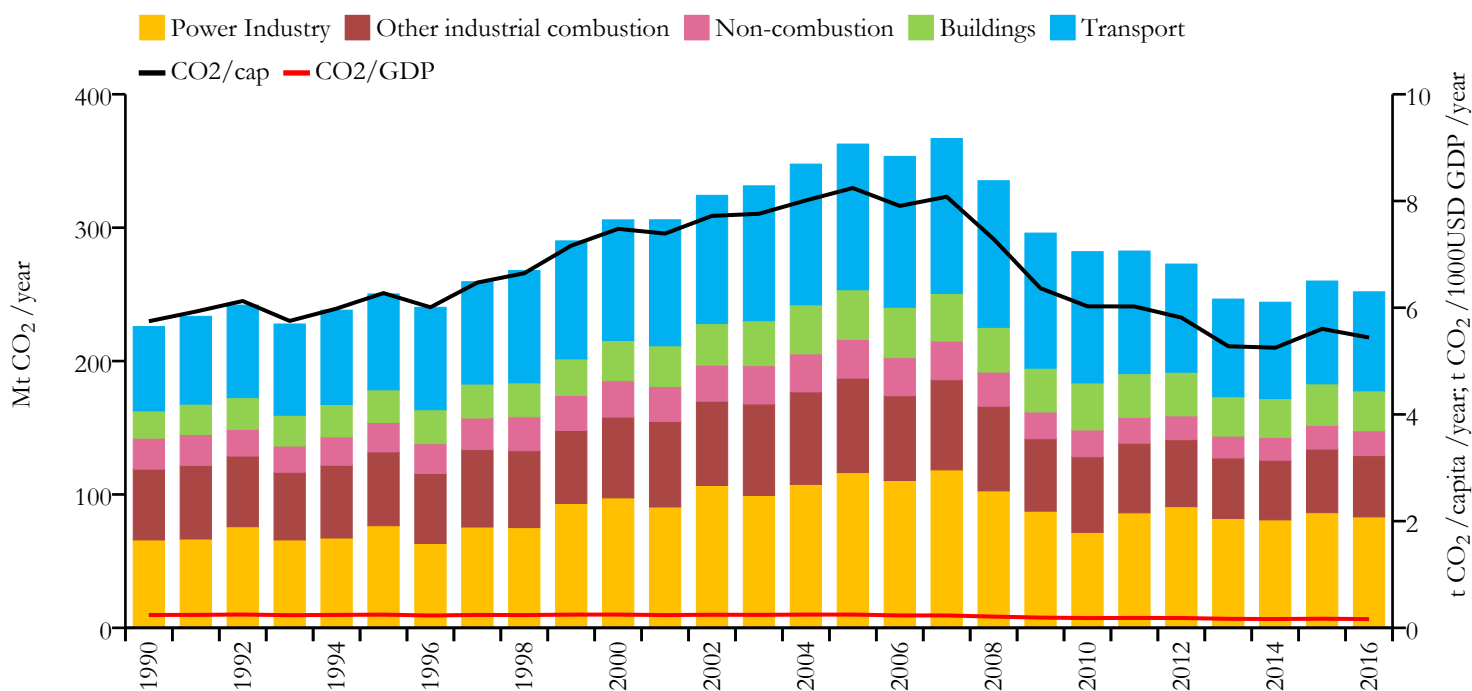
## Greenhouse gas emissions (EDGARv4.3.2 dataset)



# Spain and Andorra



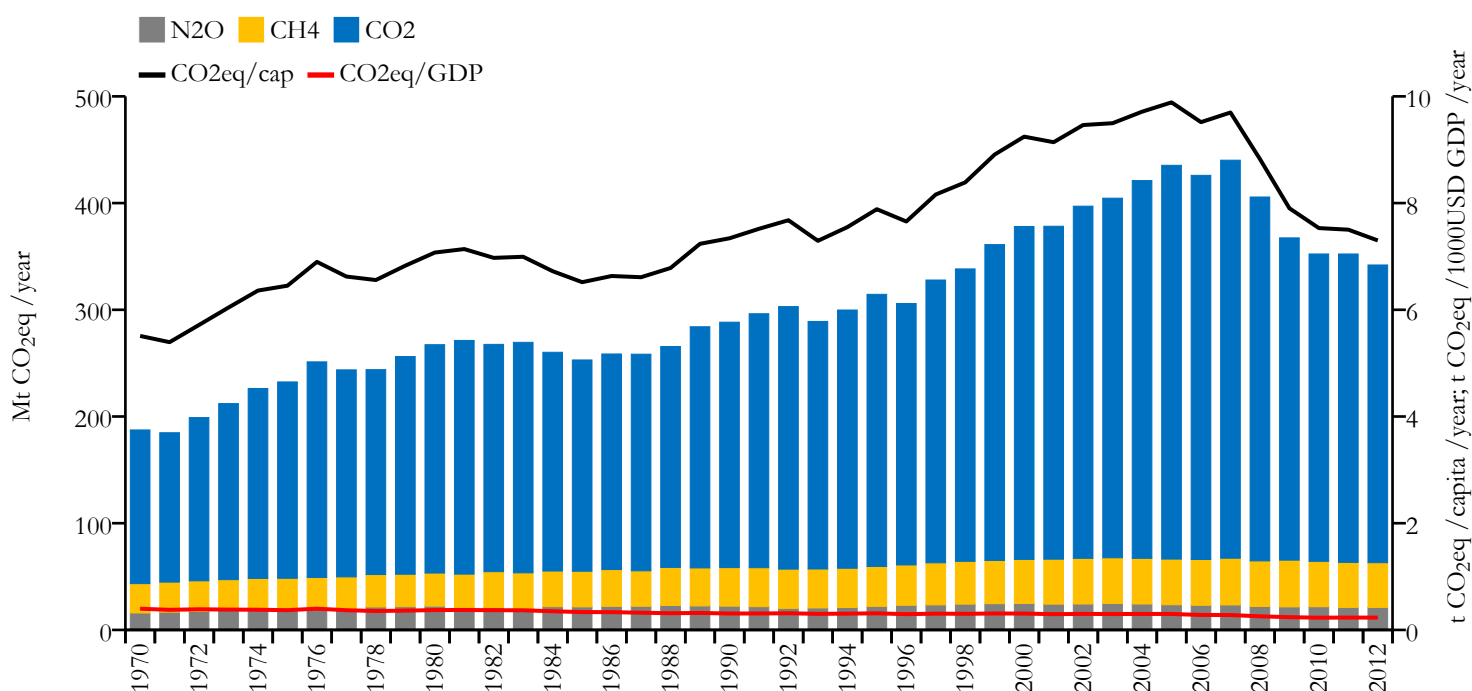
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	251.892	5.440	0.164	46347576
1990	225.833	5.746	0.241	39306102

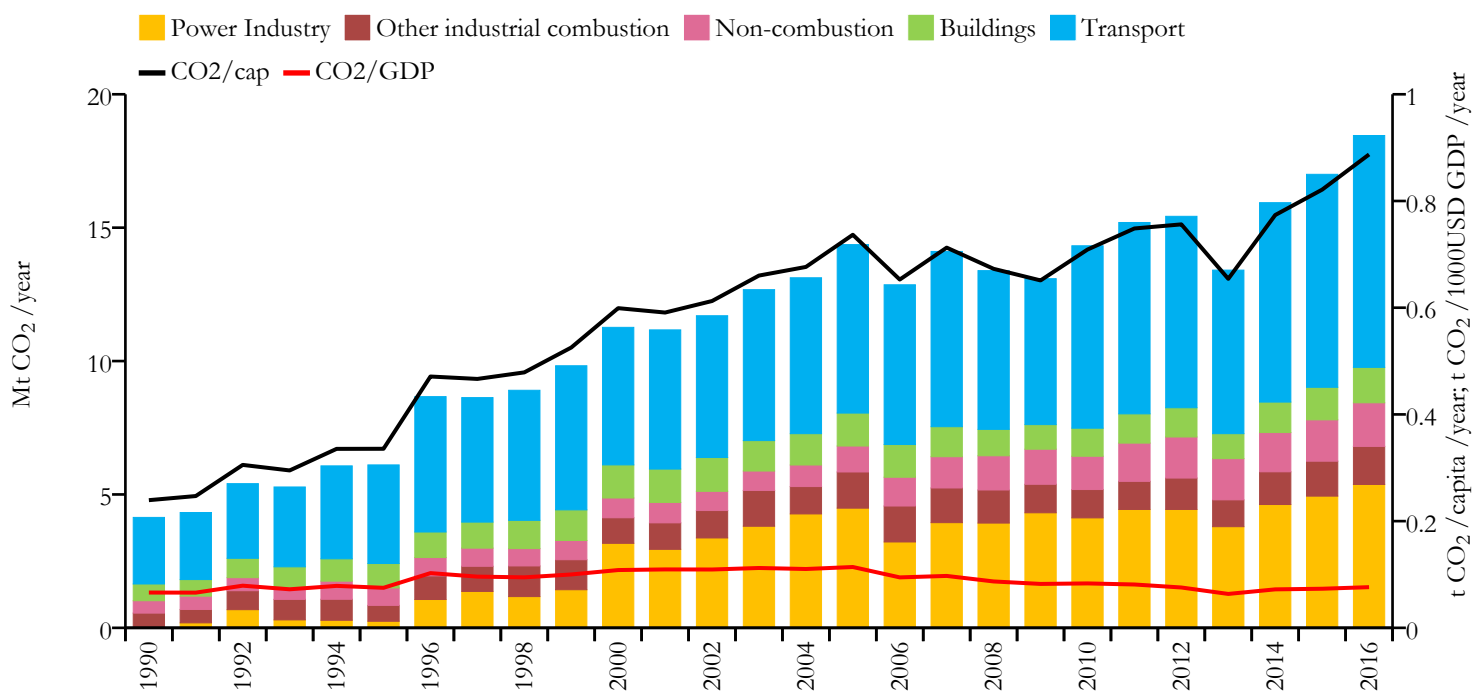


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





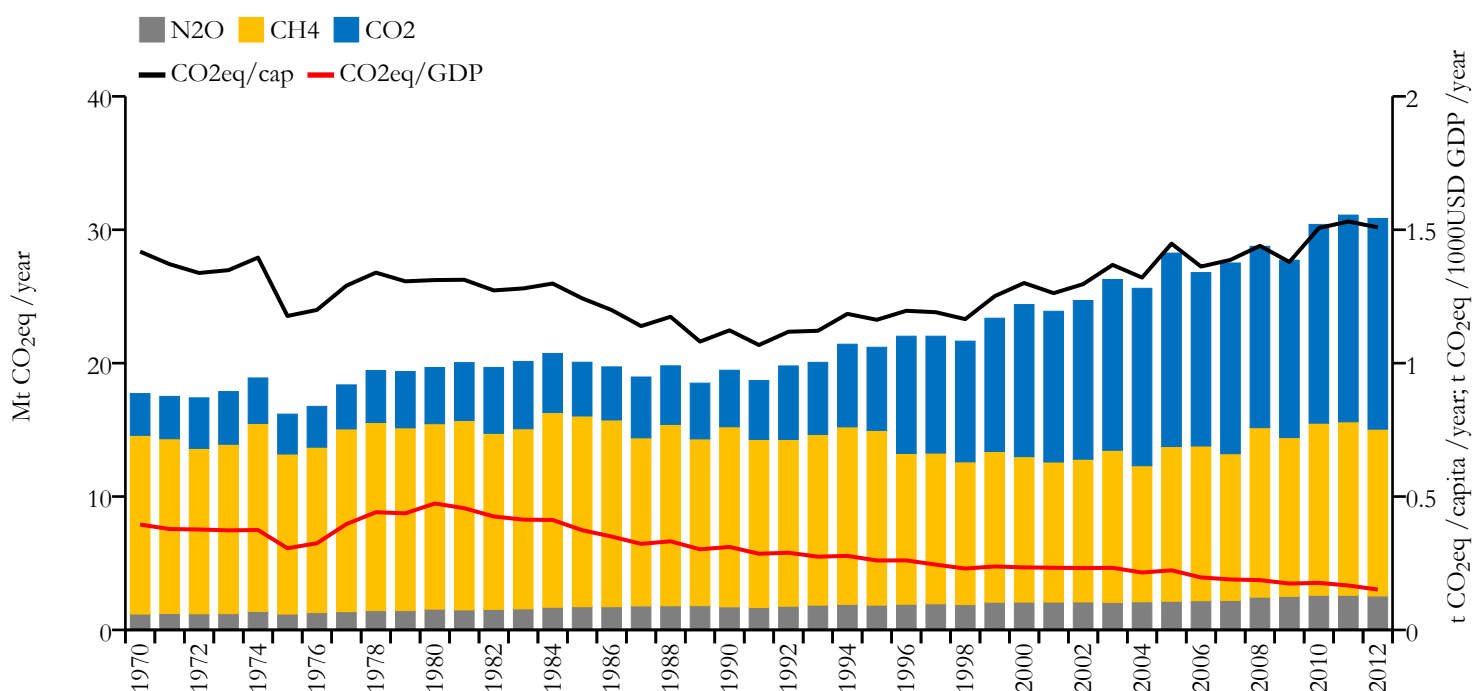
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	18.455	0.887	0.076	20798492
1990	4.140	0.239	0.066	17329713



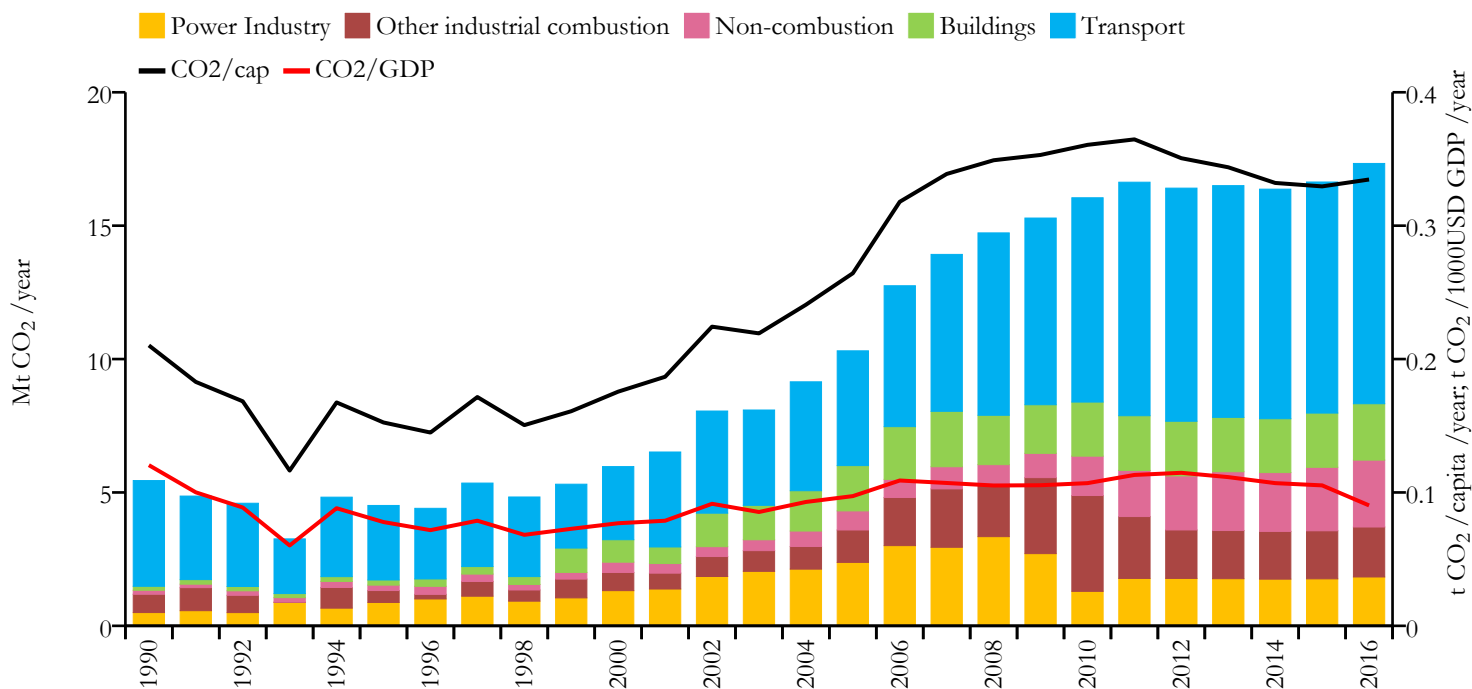
## Greenhouse gas emissions (EDGARv4.3.2 dataset)



# Sudan and South Sudan



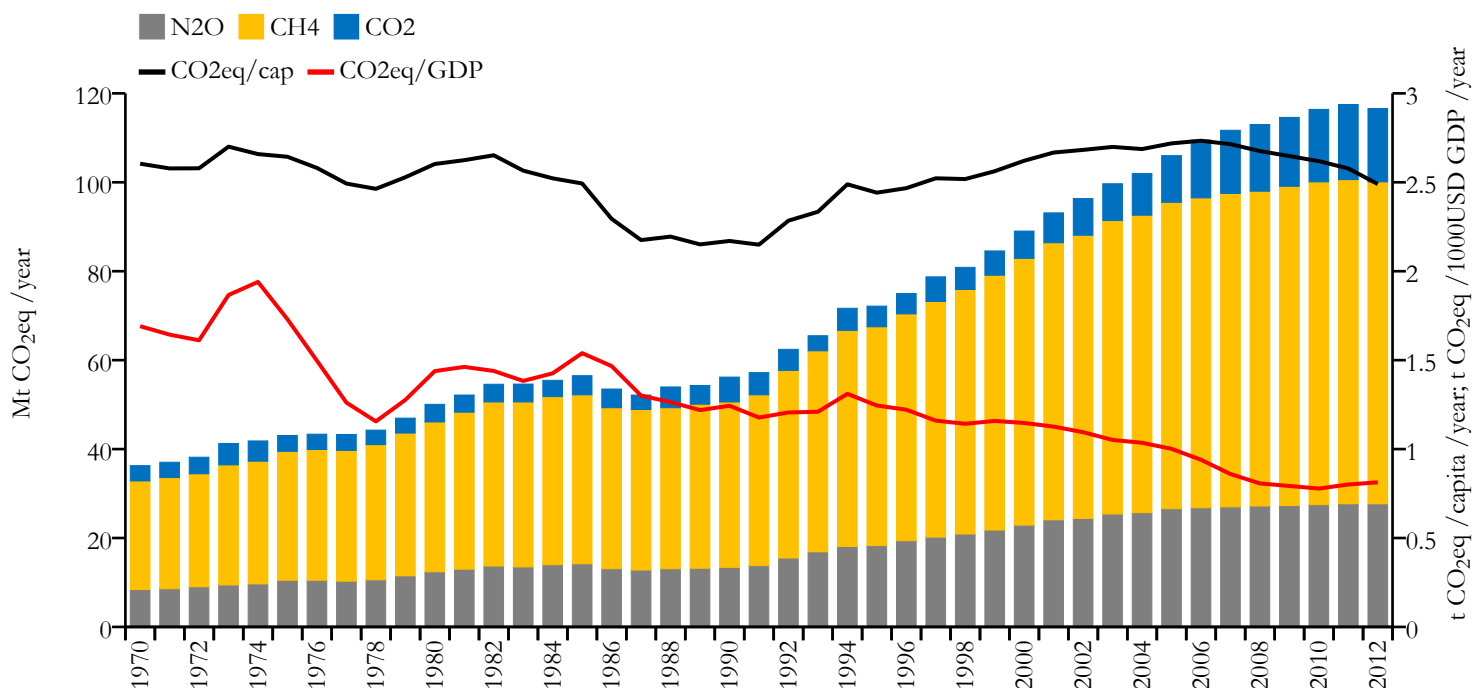
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	17.333	0.335	0.090	51809558
1990	5.445	0.210	0.120	25916071

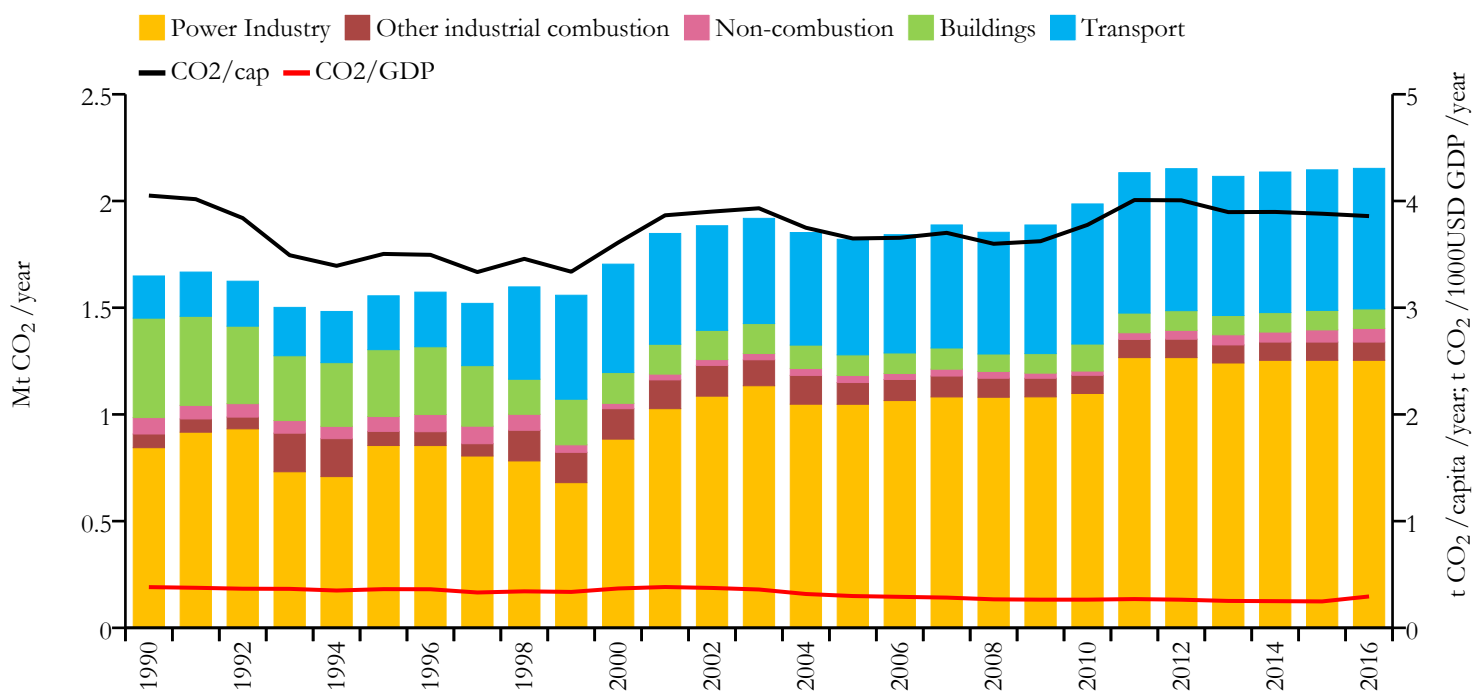


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





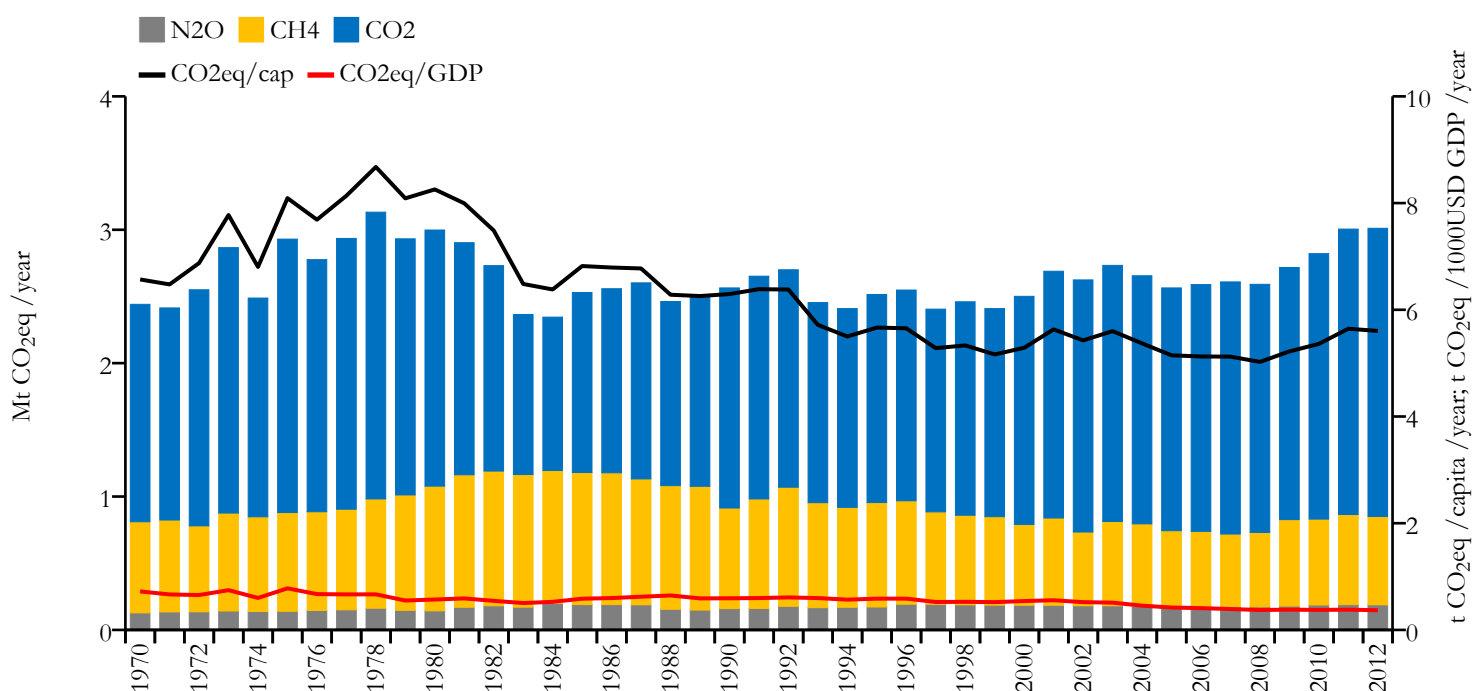
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	2.153	3.858	0.294	558368
1990	1.649	4.051	0.382	407472

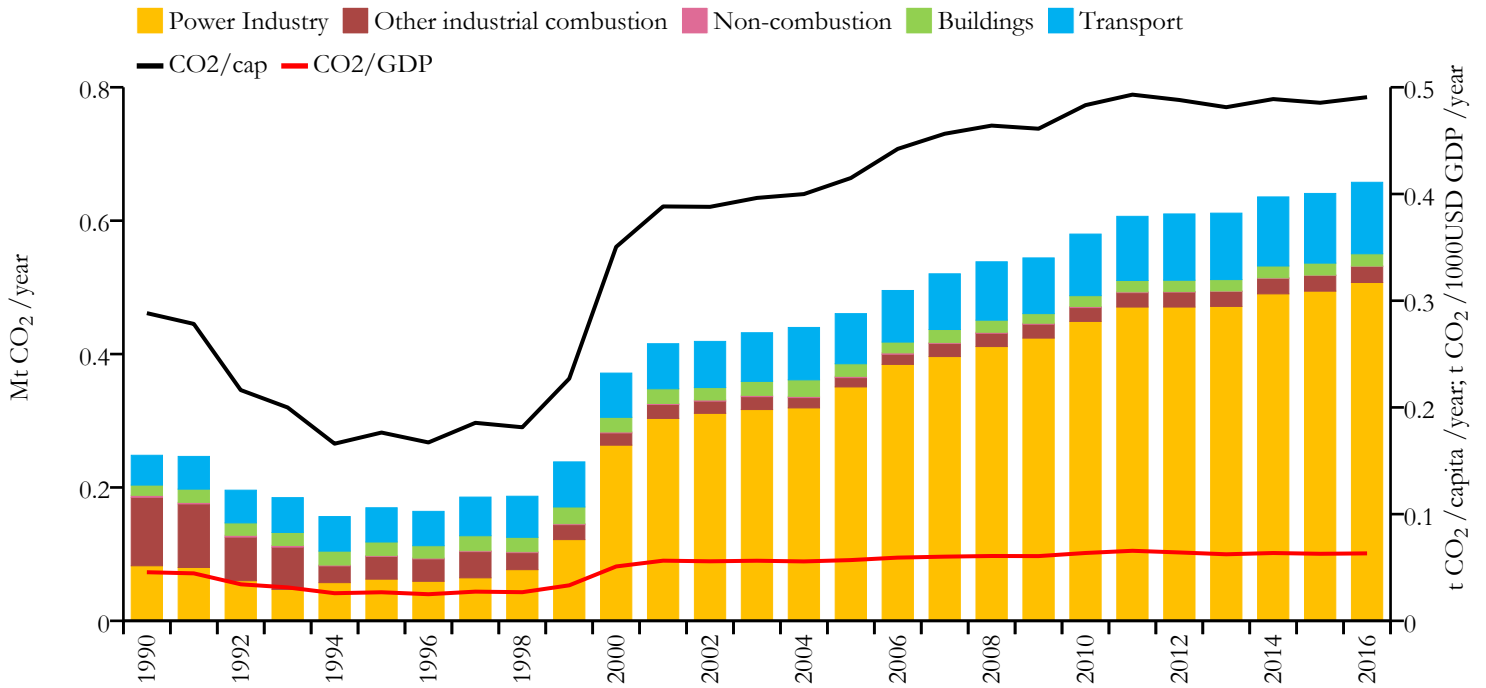


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





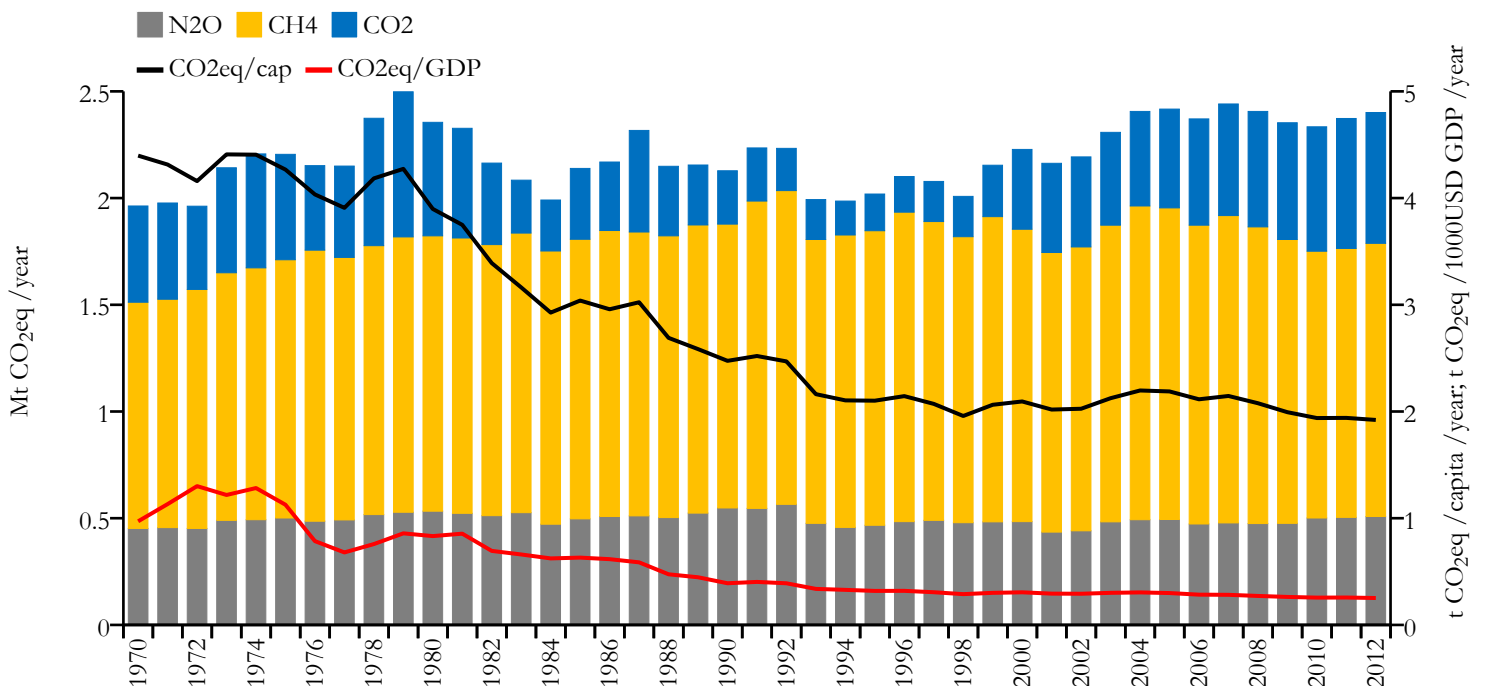
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



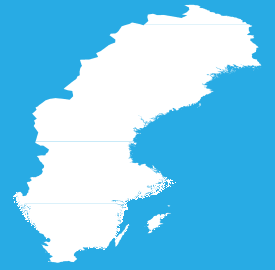
Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	0.658	0.491	0.063	1343098
1990	0.248	0.288	0.046	861373



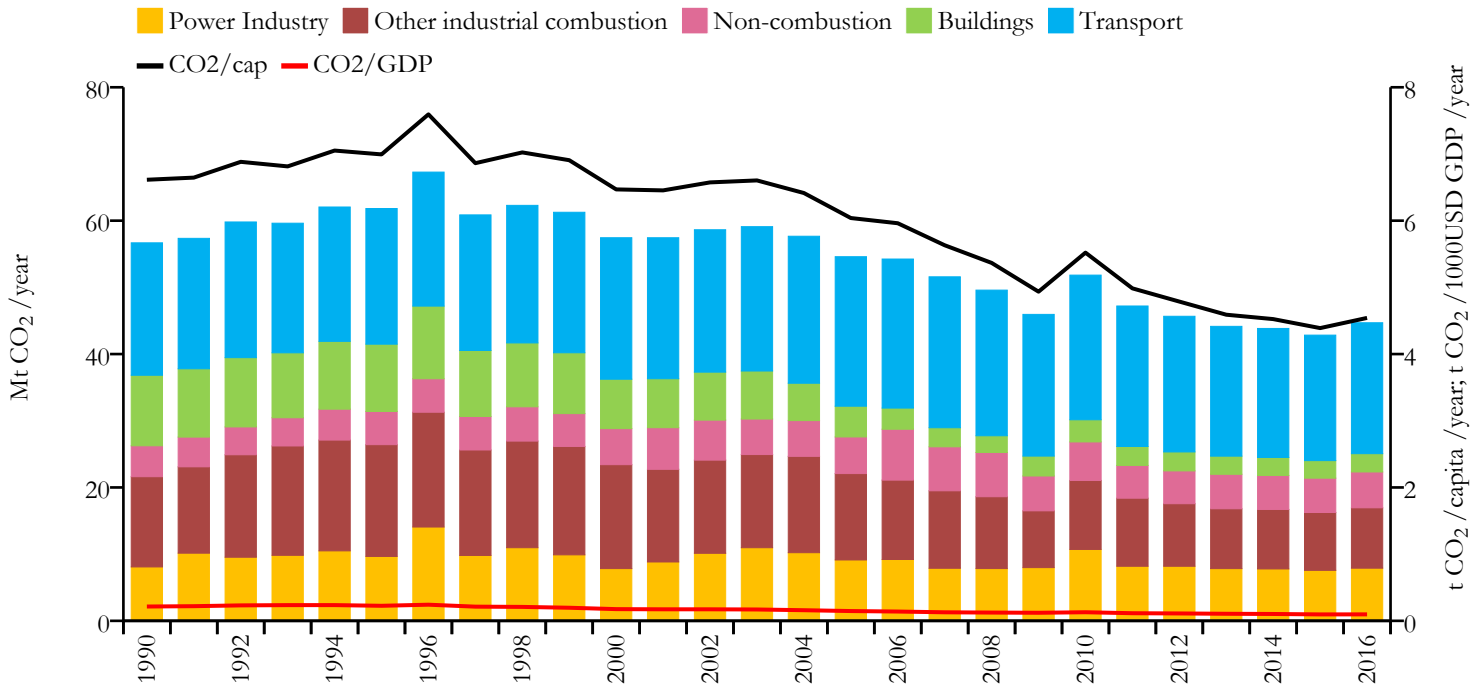
## Greenhouse gas emissions (EDGARv4.3.2 dataset)







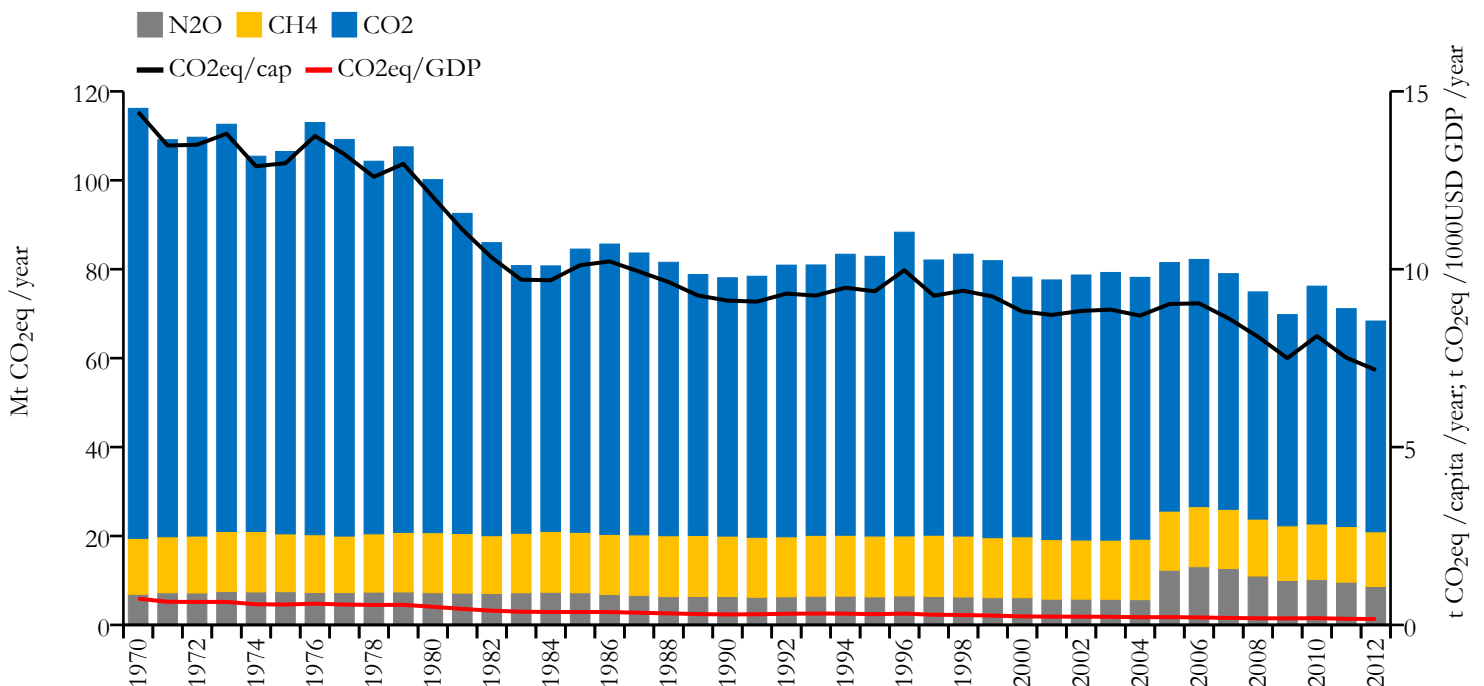
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



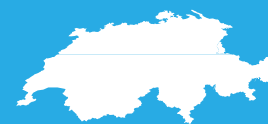
Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	44.694	4.542	0.097	9837533
1990	56.678	6.614	0.215	8567384



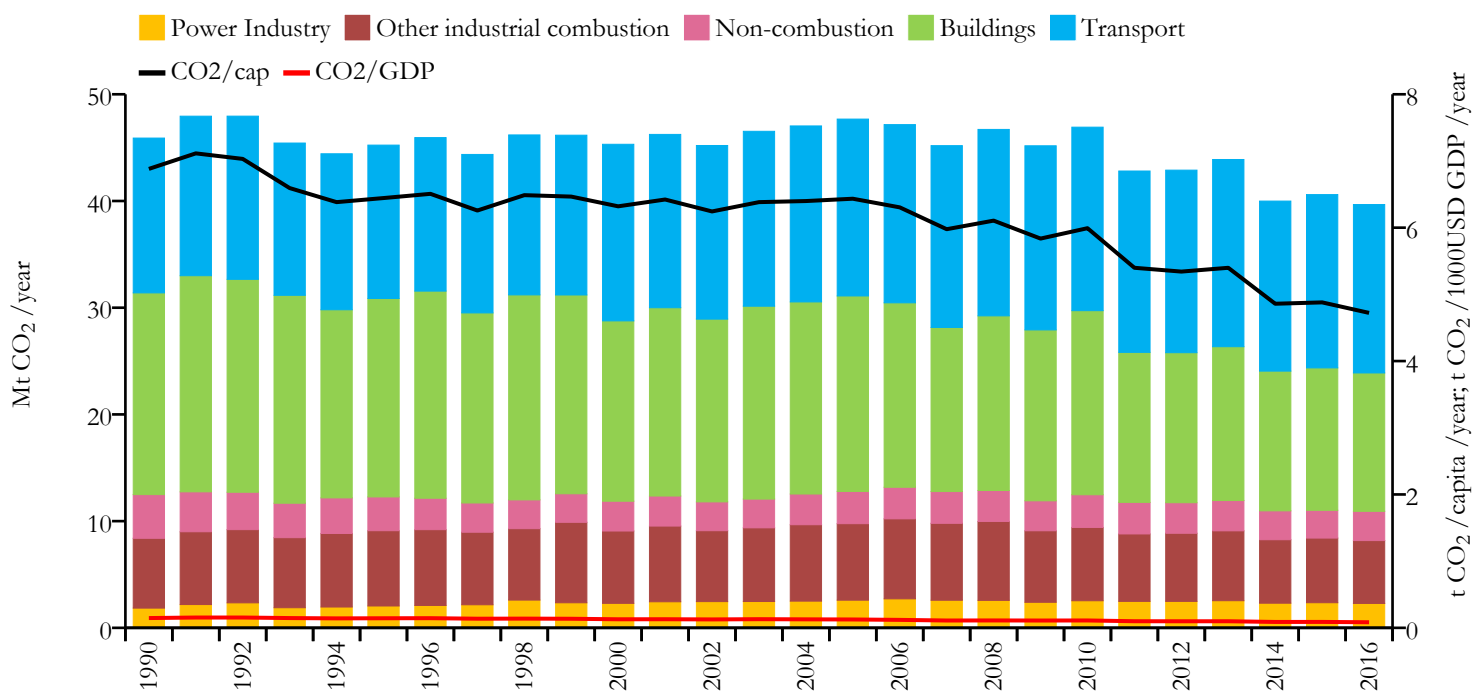
## Greenhouse gas emissions (EDGARv4.3.2 dataset)



# Switzerland and Liechtenstein



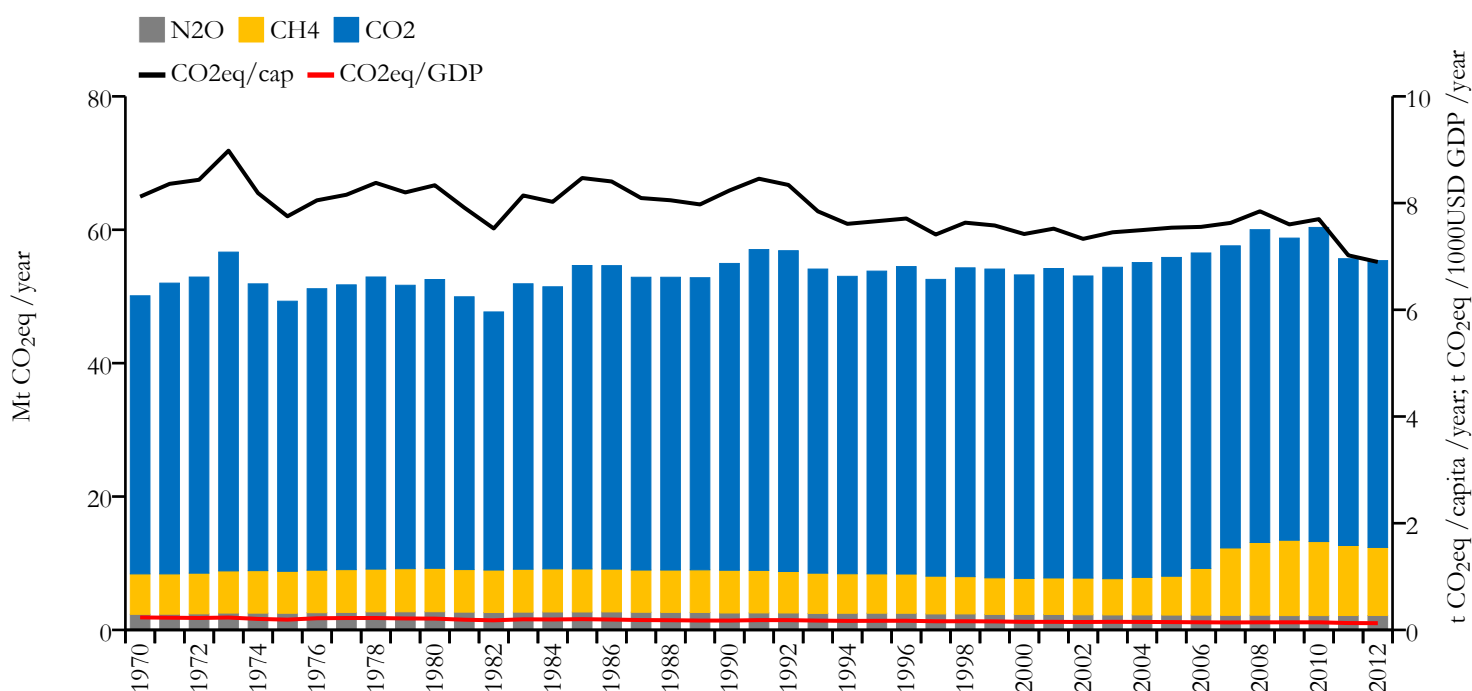
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	39.667	4.722	0.084	8401739
1990	45.897	6.881	0.147	6674890

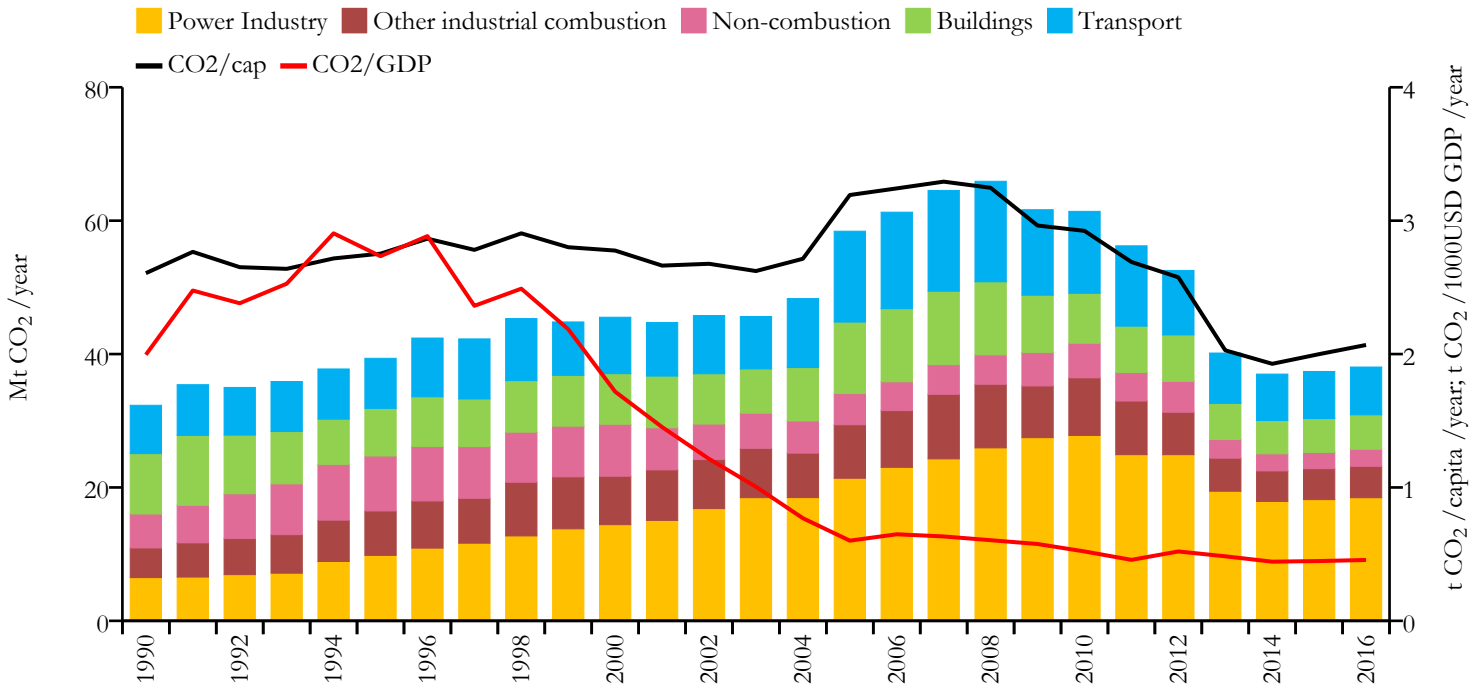


## Greenhouse gas emissions (EDGARv4.3.2 dataset)

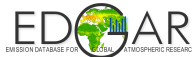




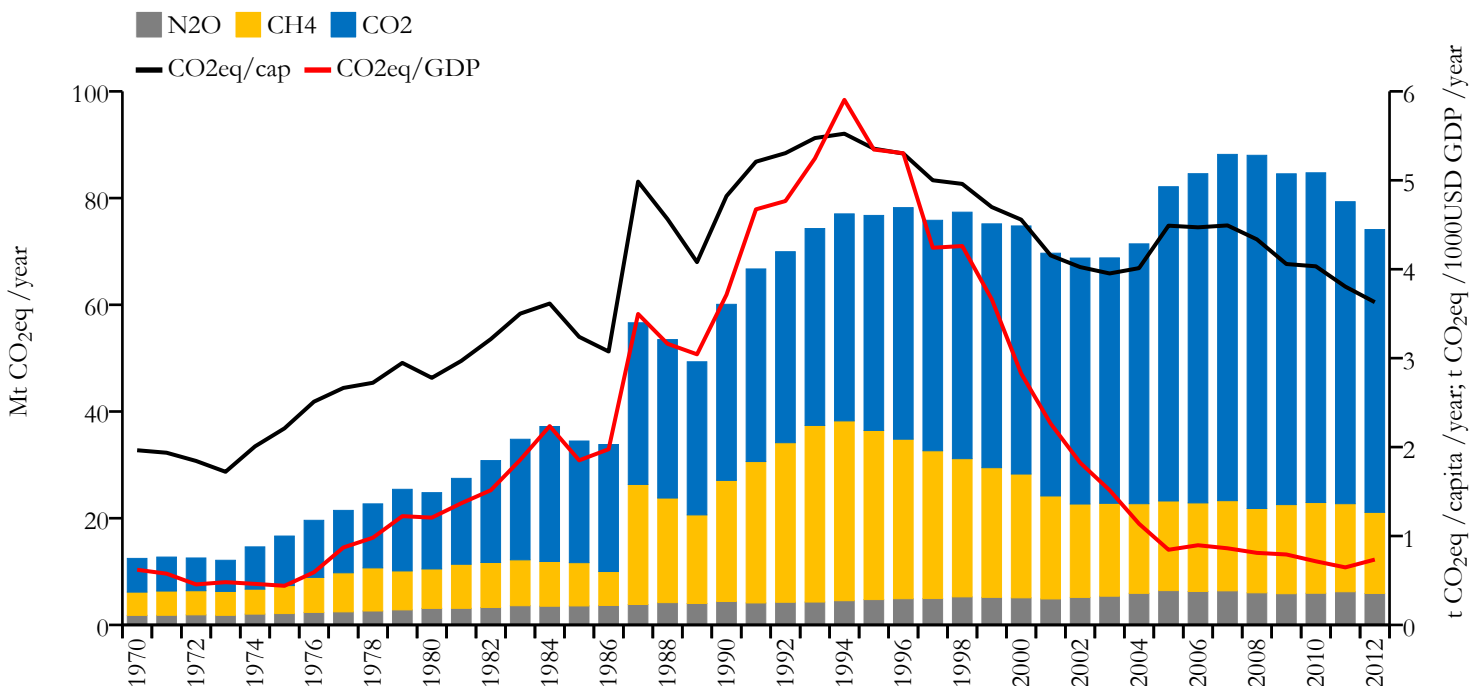
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	38.055	2.068	0.456	18430453
1990	32.319	2.606	1.995	12446171

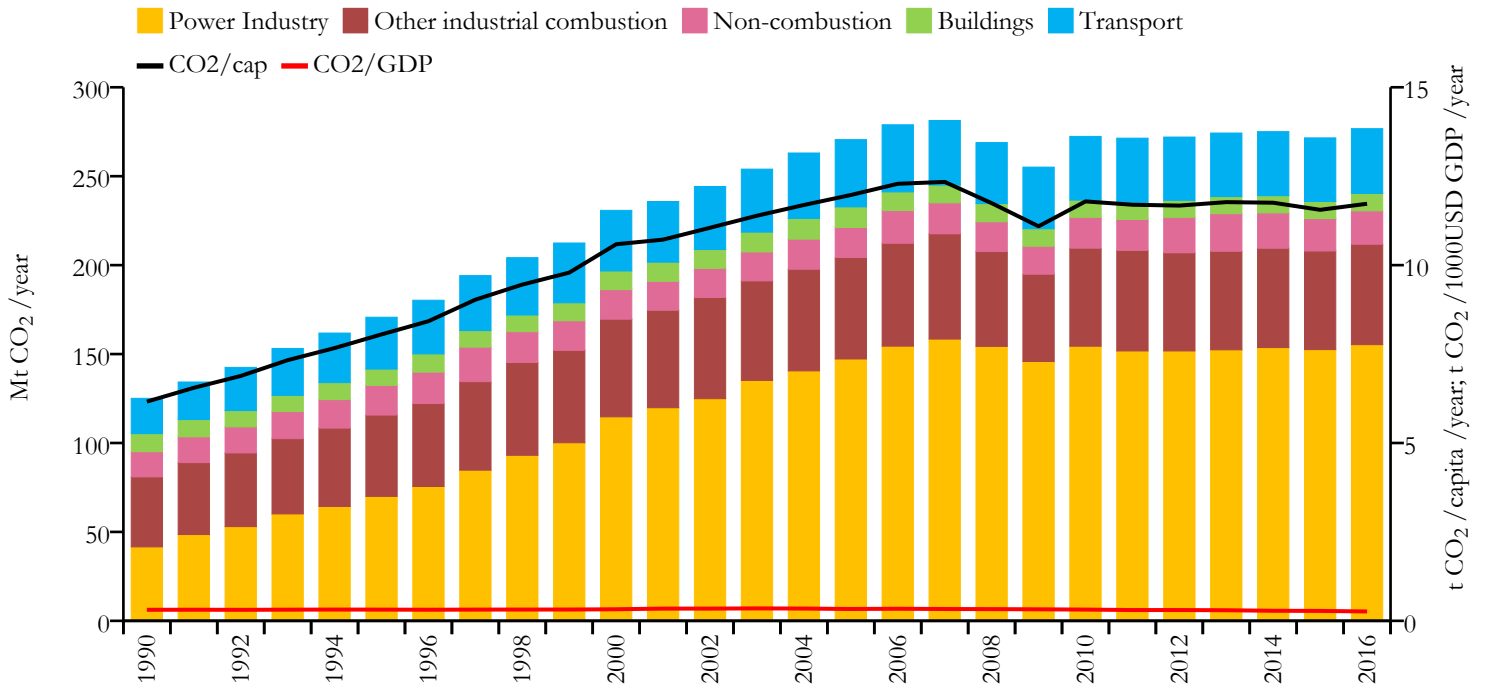


## Greenhouse gas emissions (EDGARv4.3.2 dataset)

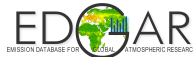




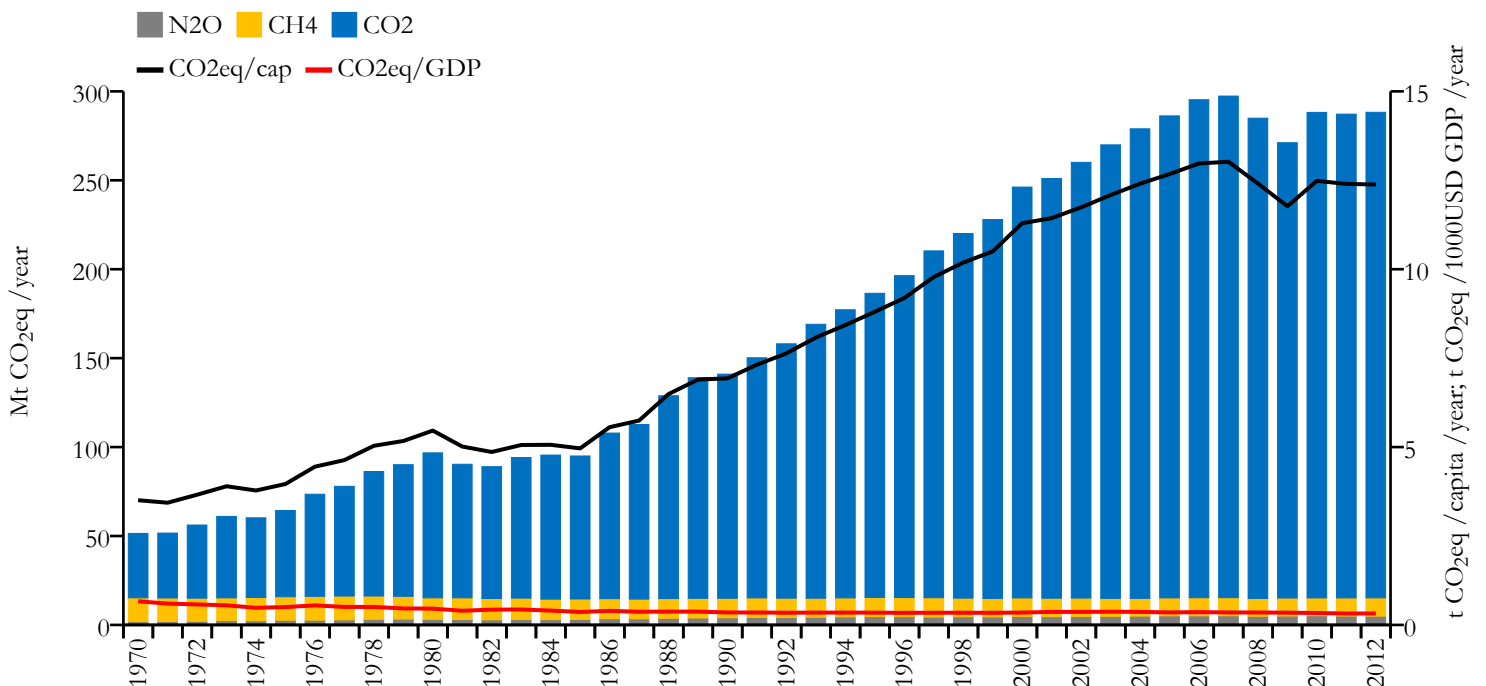
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	276.725	11.726	0.264	23556706
1990	125.109	6.163	0.310	20311698

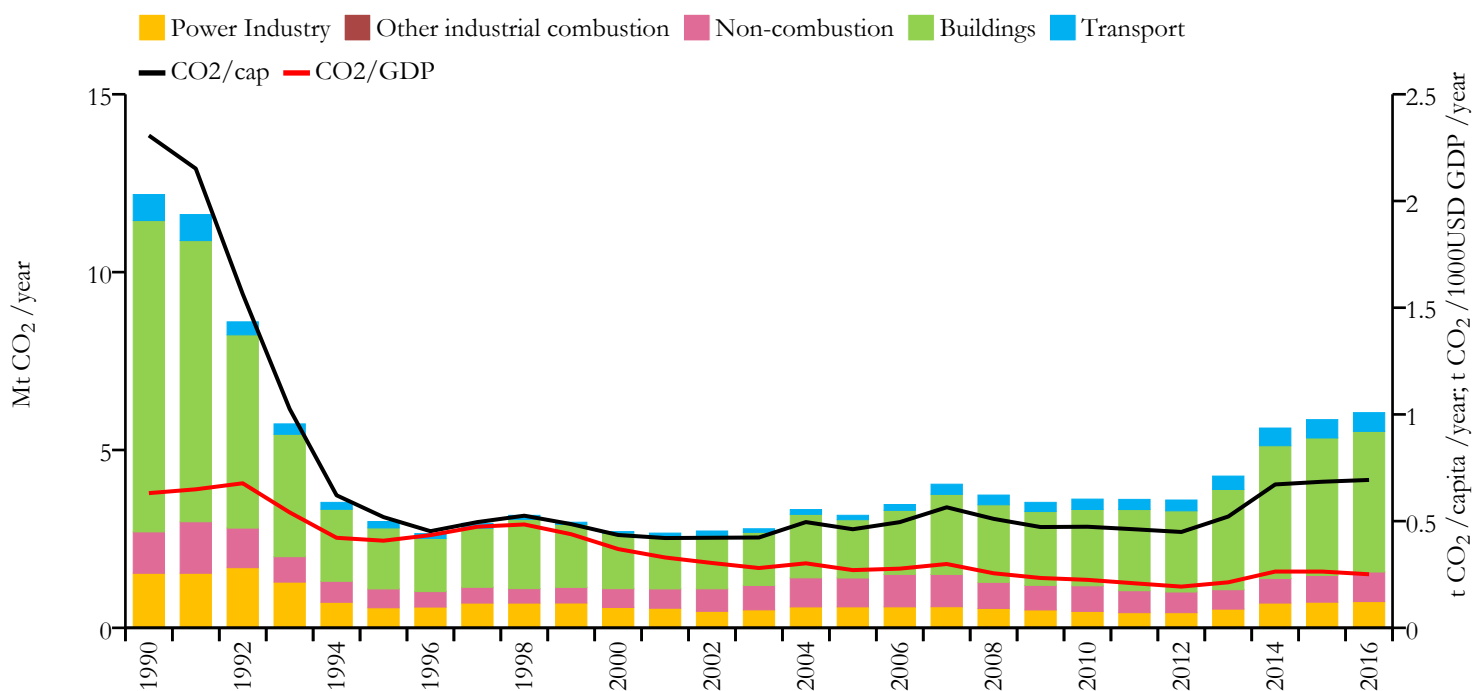


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





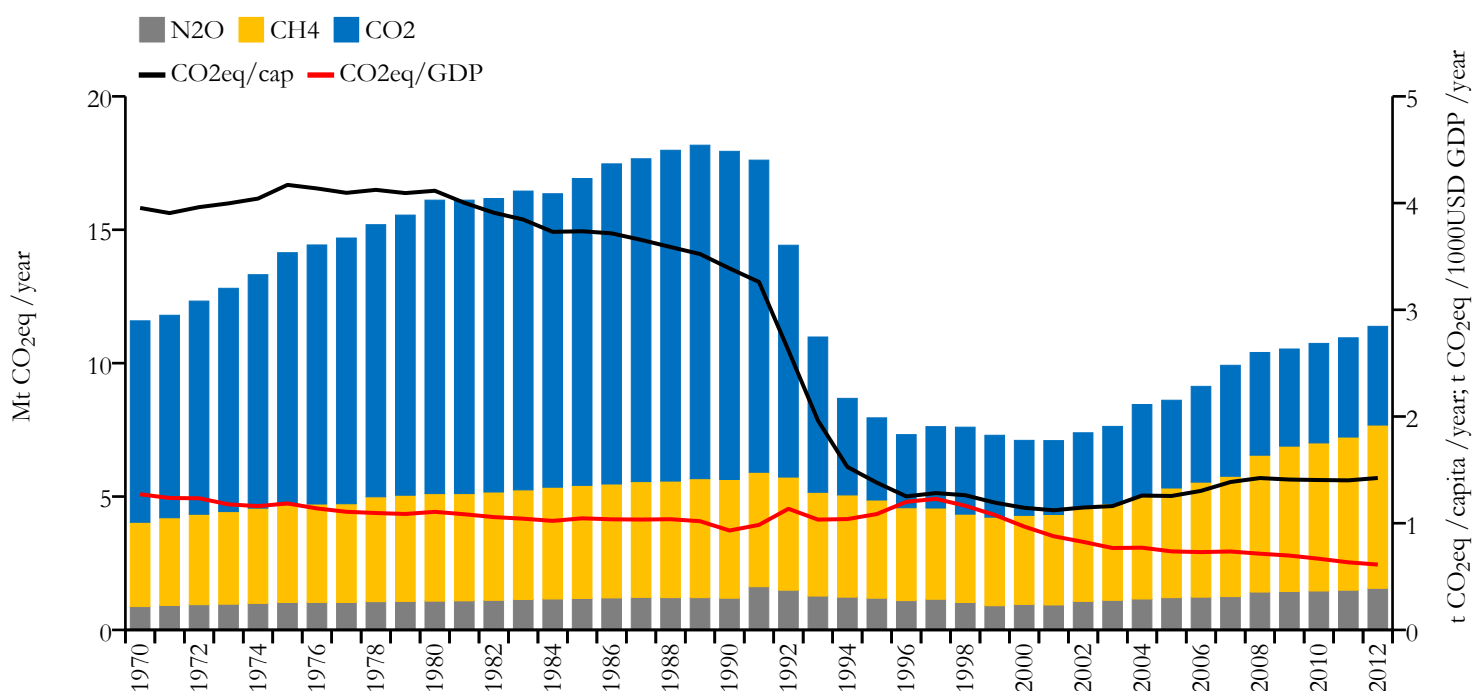
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	6.050	0.693	0.251	8734951
1990	12.181	2.307	0.631	5283728

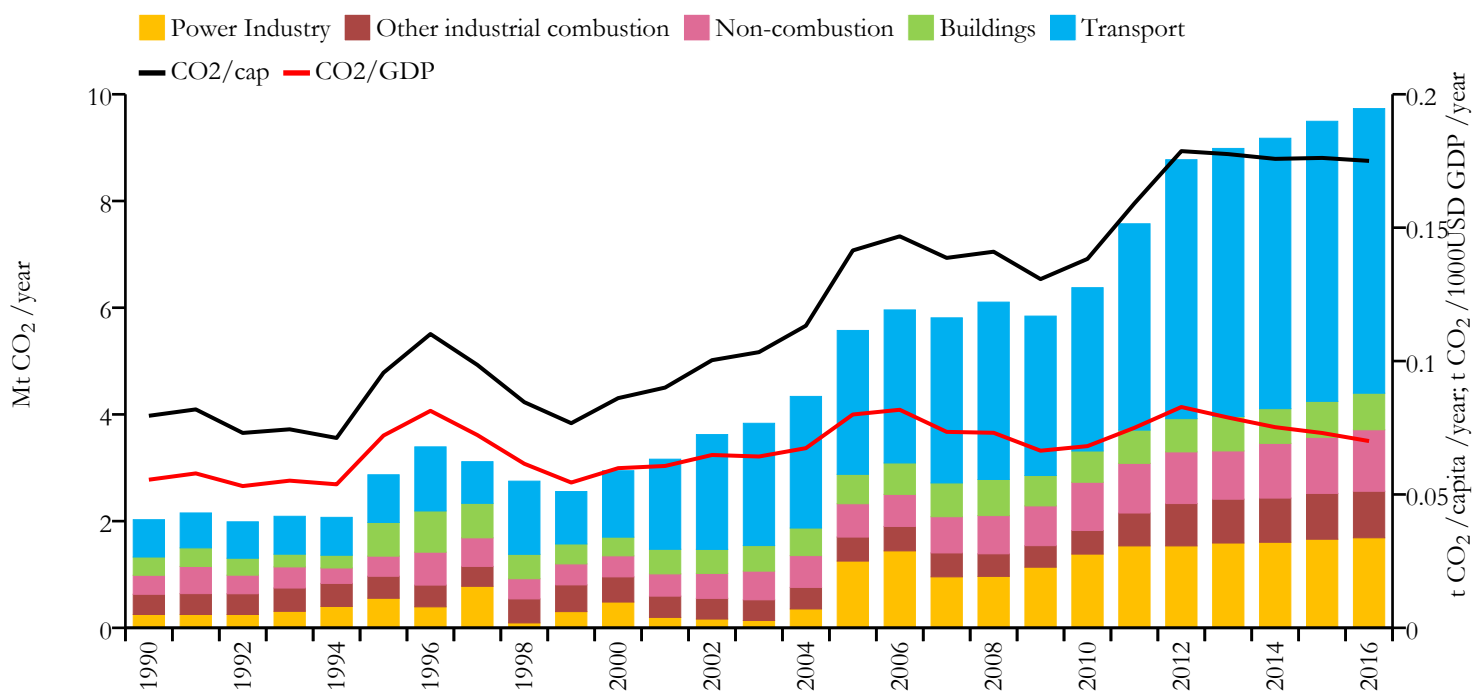


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





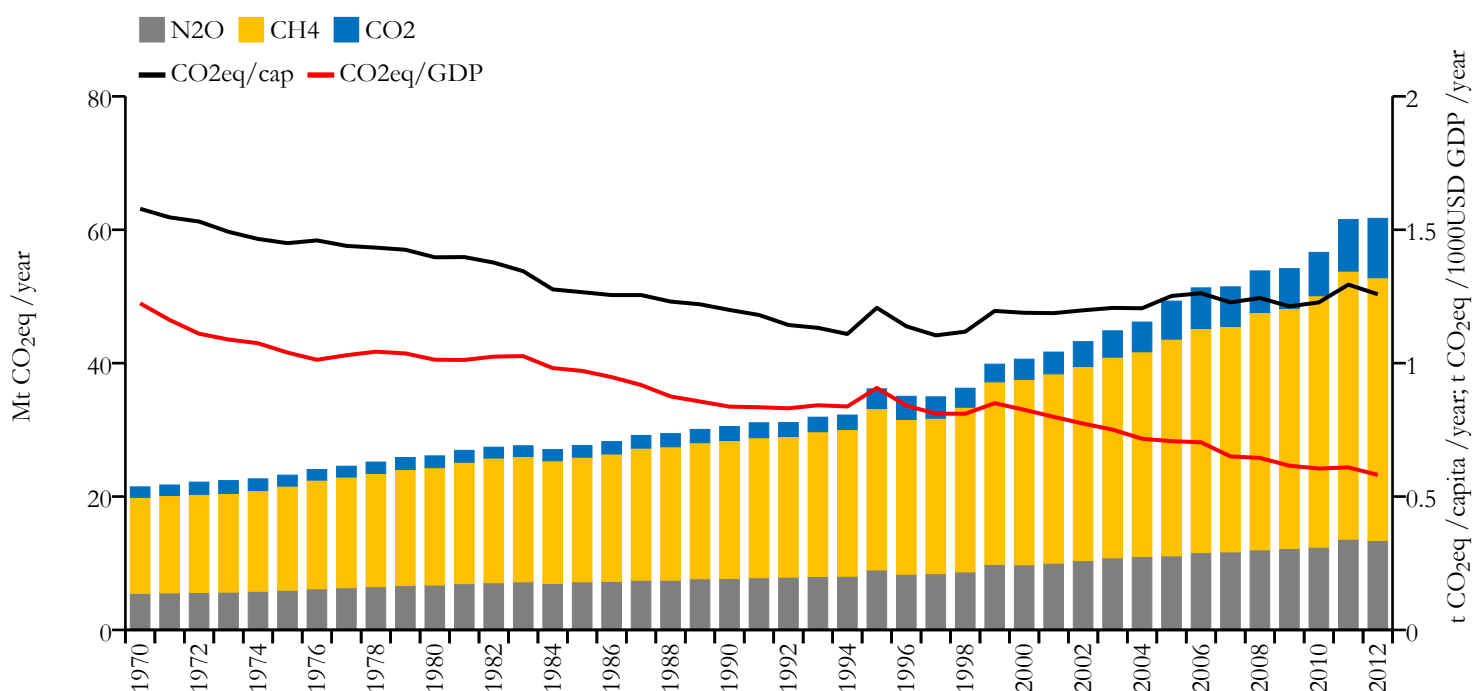
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	9.732	0.175	0.070	55572201
1990	2.027	0.079	0.056	25459604

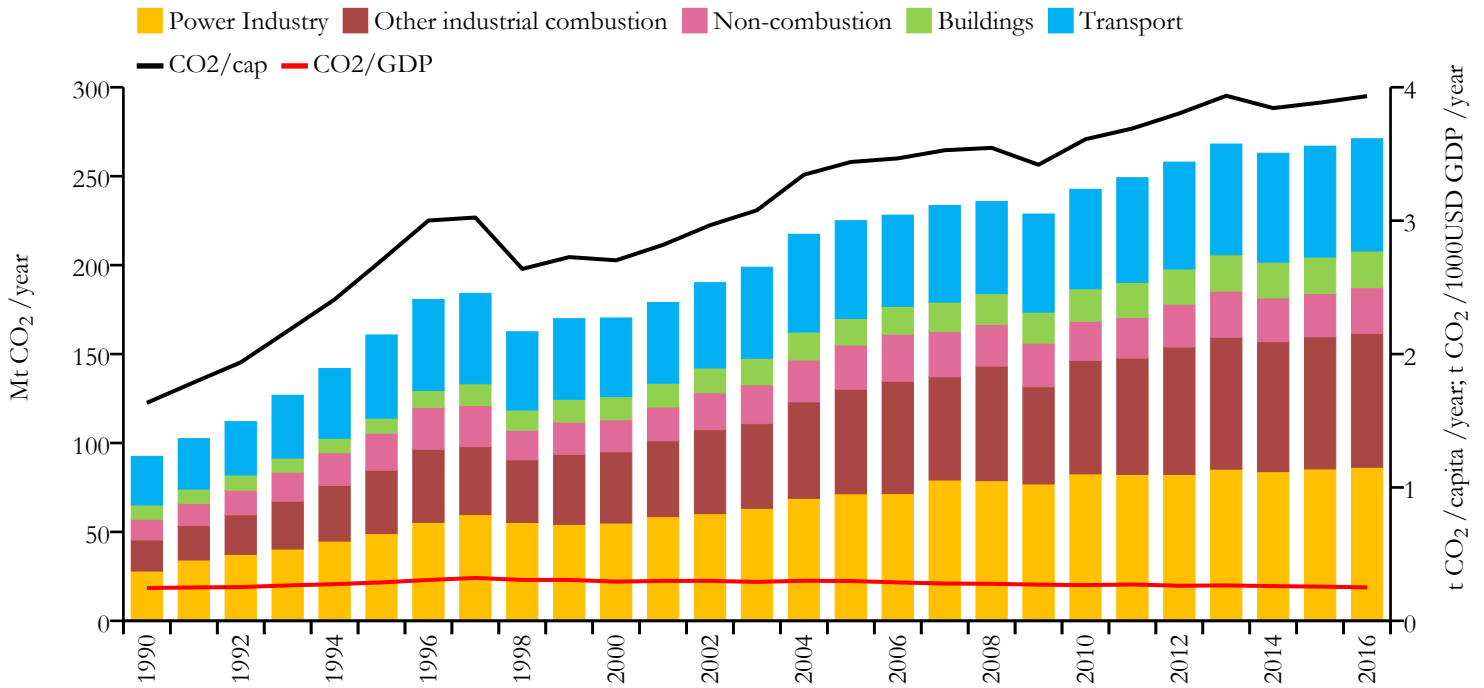


## Greenhouse gas emissions (EDGARv4.3.2 dataset)

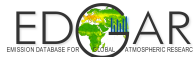




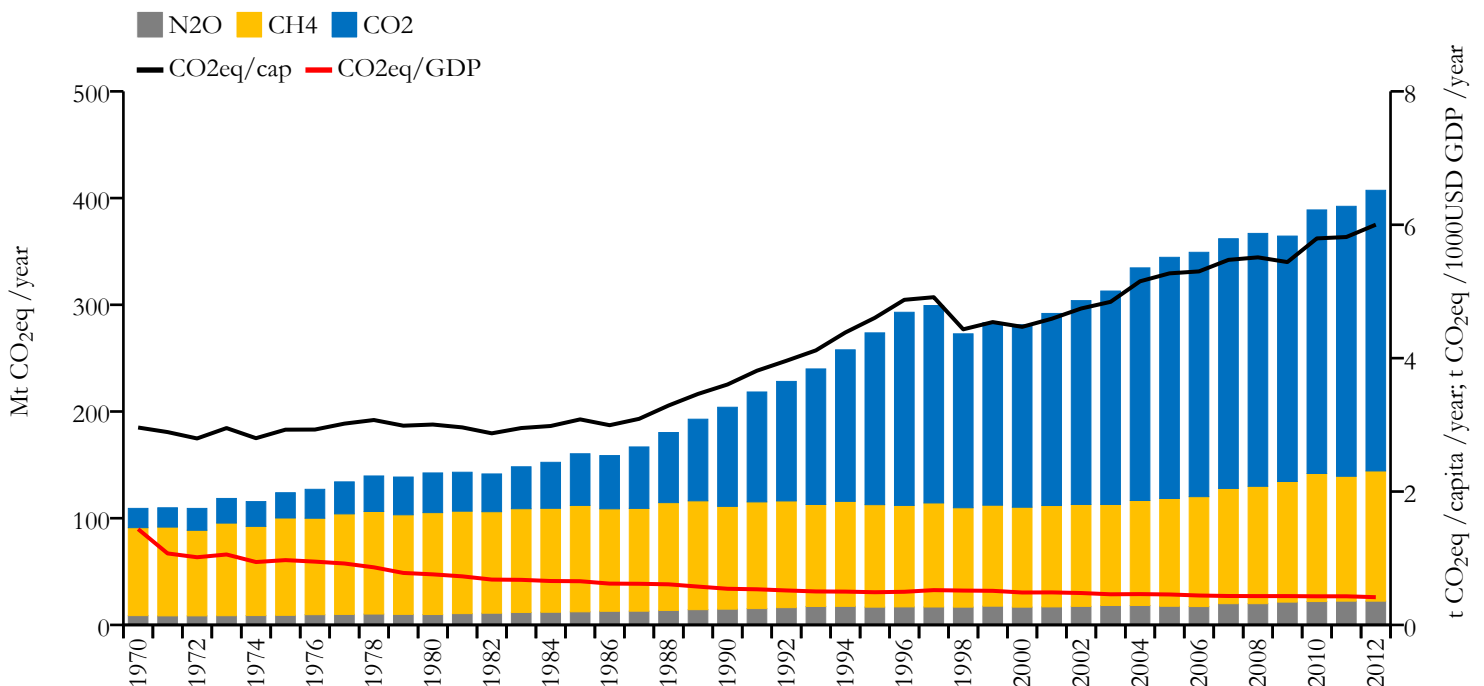
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	271.040	3.934	0.251	68863514
1990	92.500	1.634	0.246	56582821

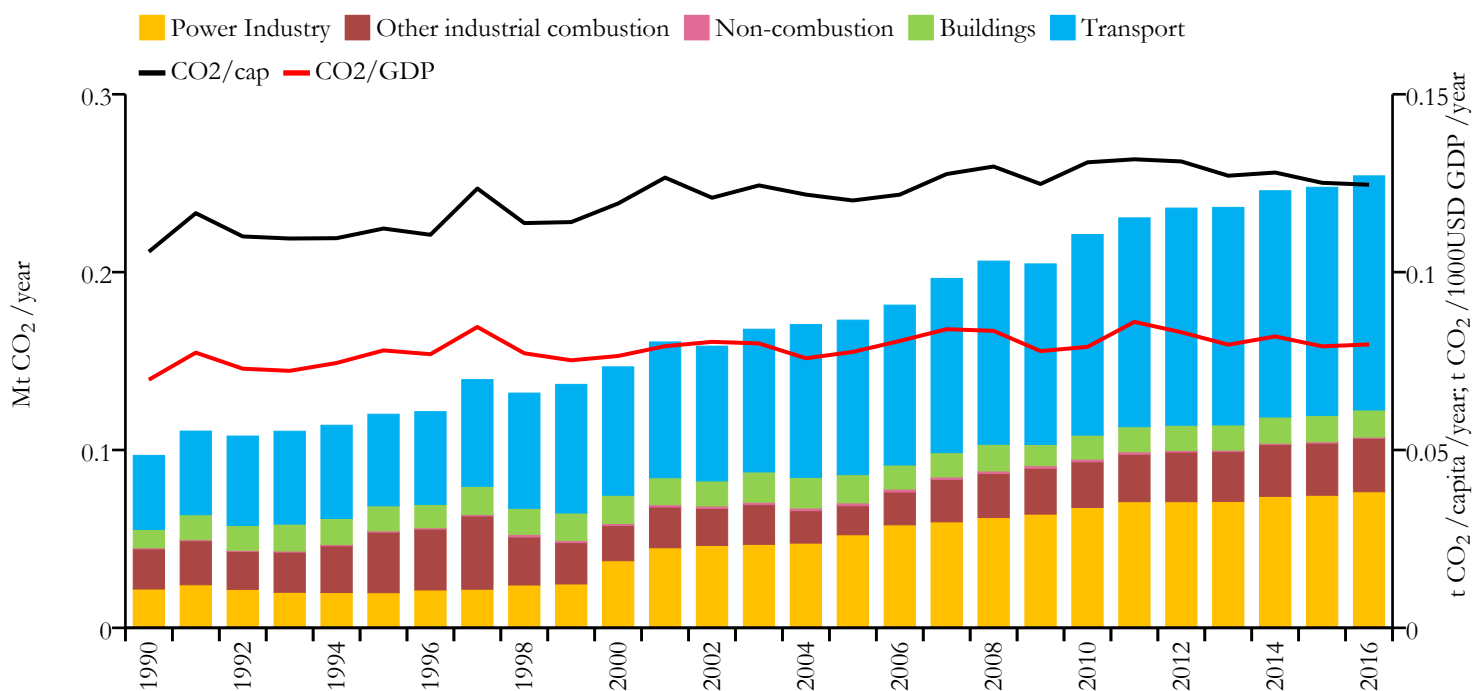


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





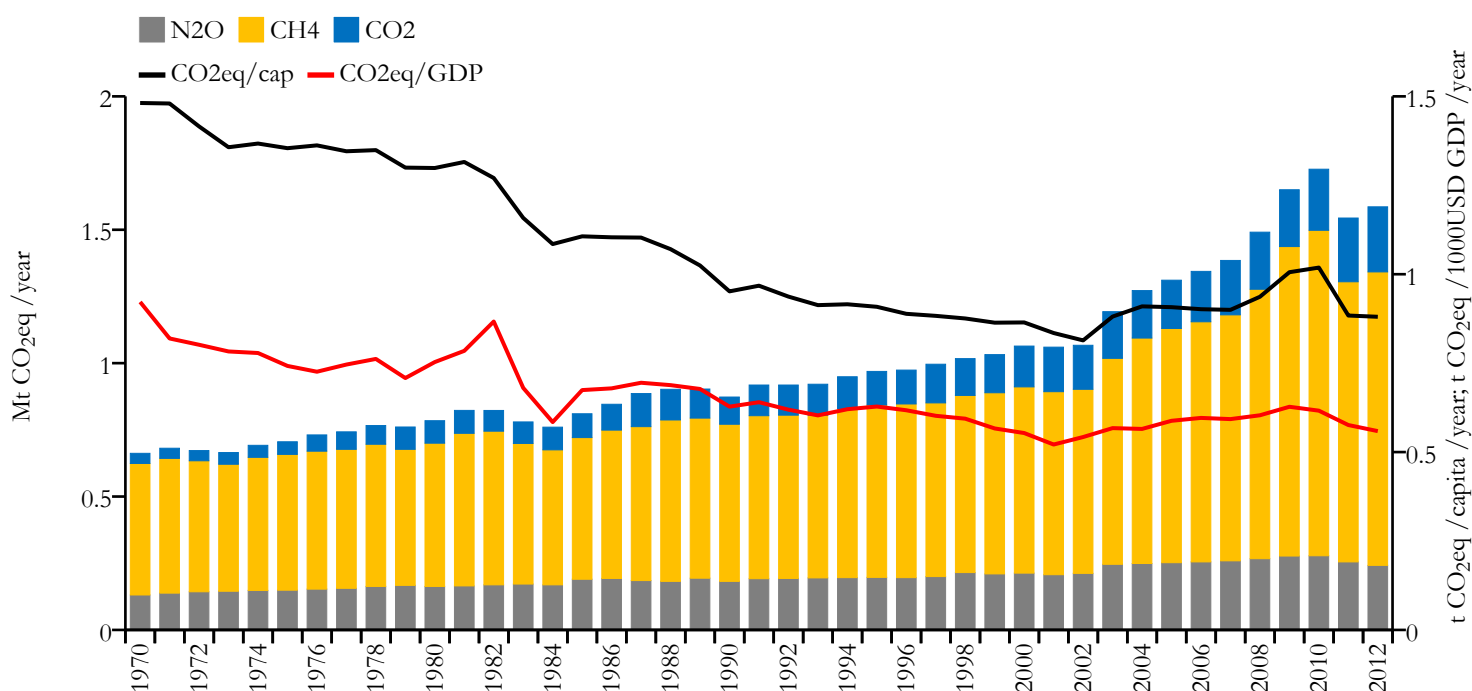
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	0.254	0.125	0.080	2038501
1990	0.097	0.106	0.070	916808



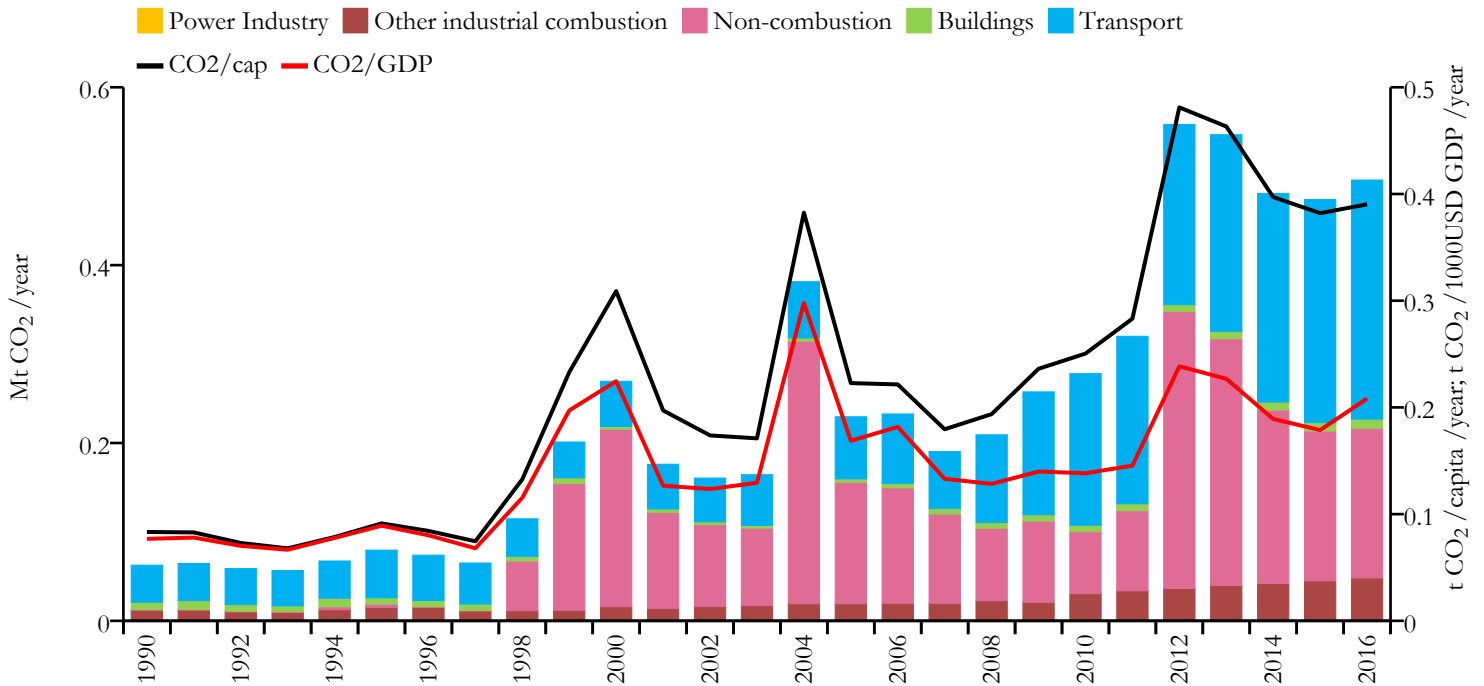
## Greenhouse gas emissions (EDGARv4.3.2 dataset)







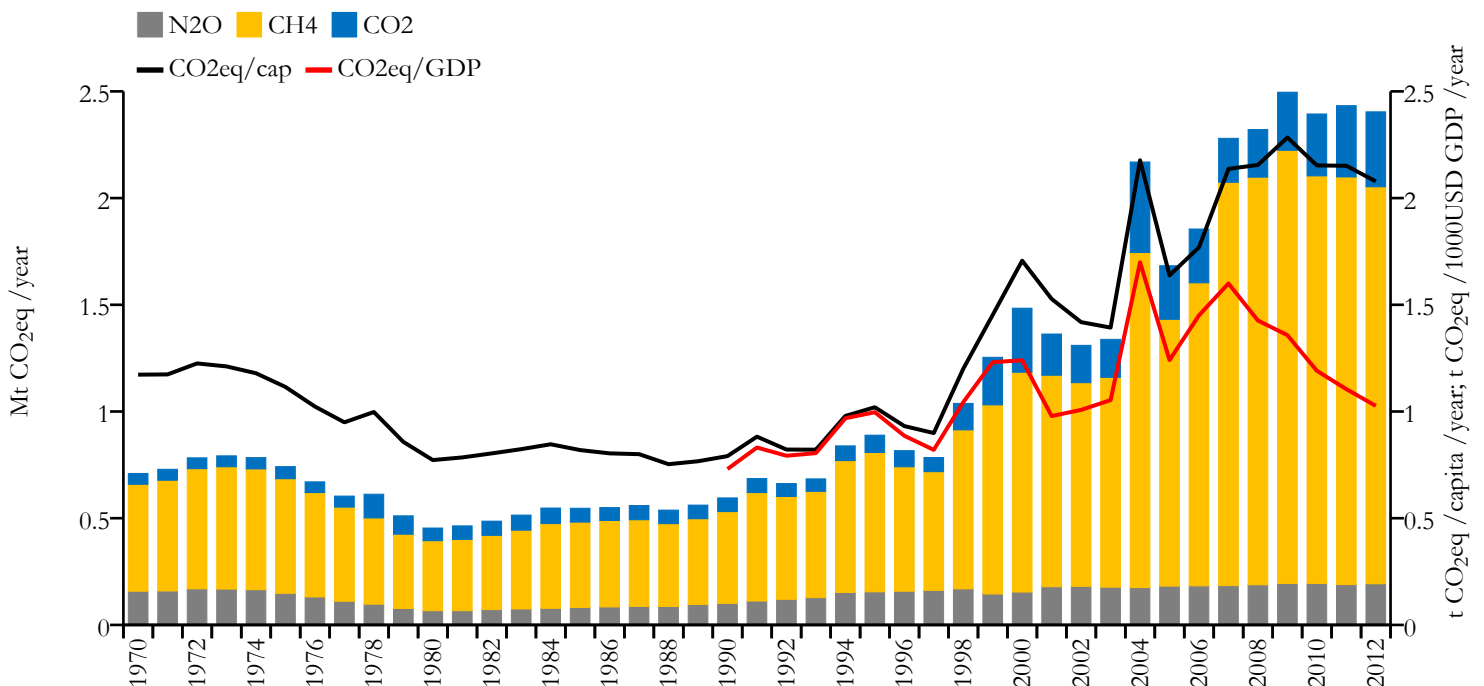
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	0.496	0.390	0.208	1268671
1990	0.063	0.083	0.077	751933

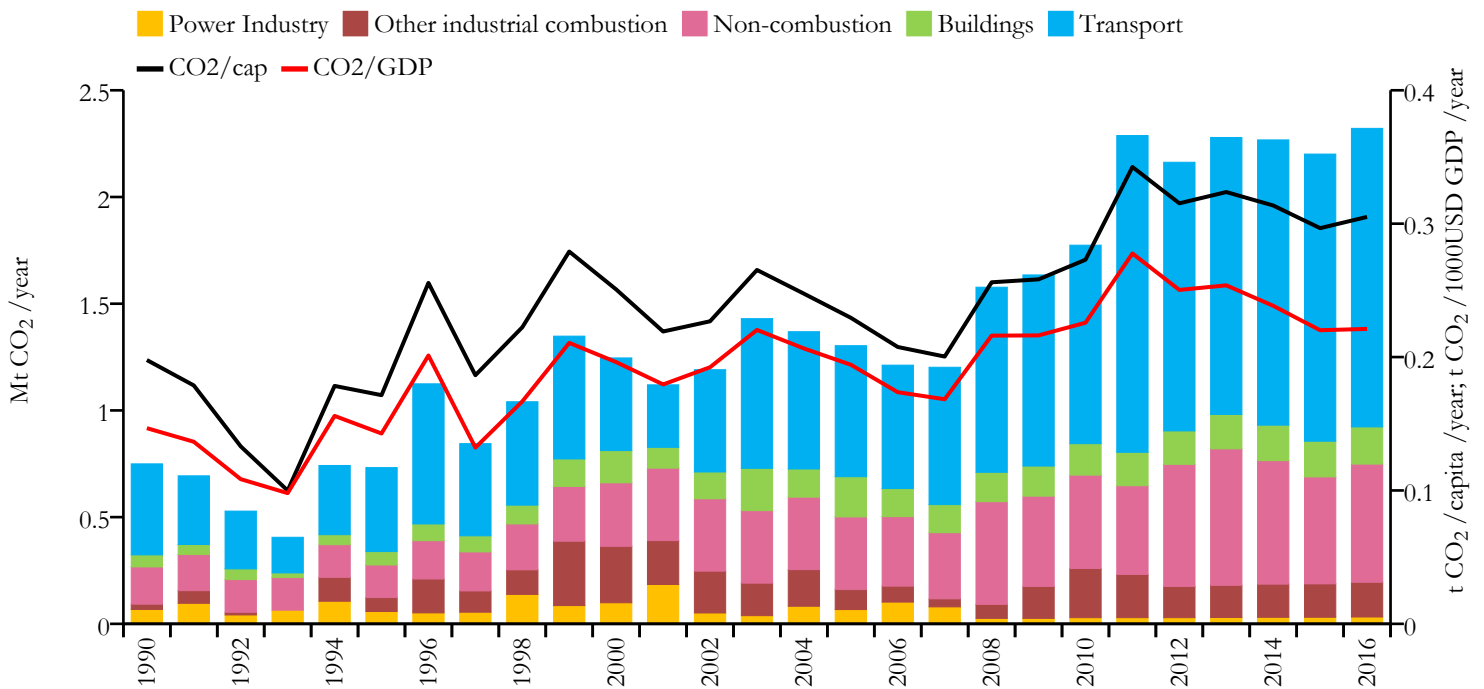


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





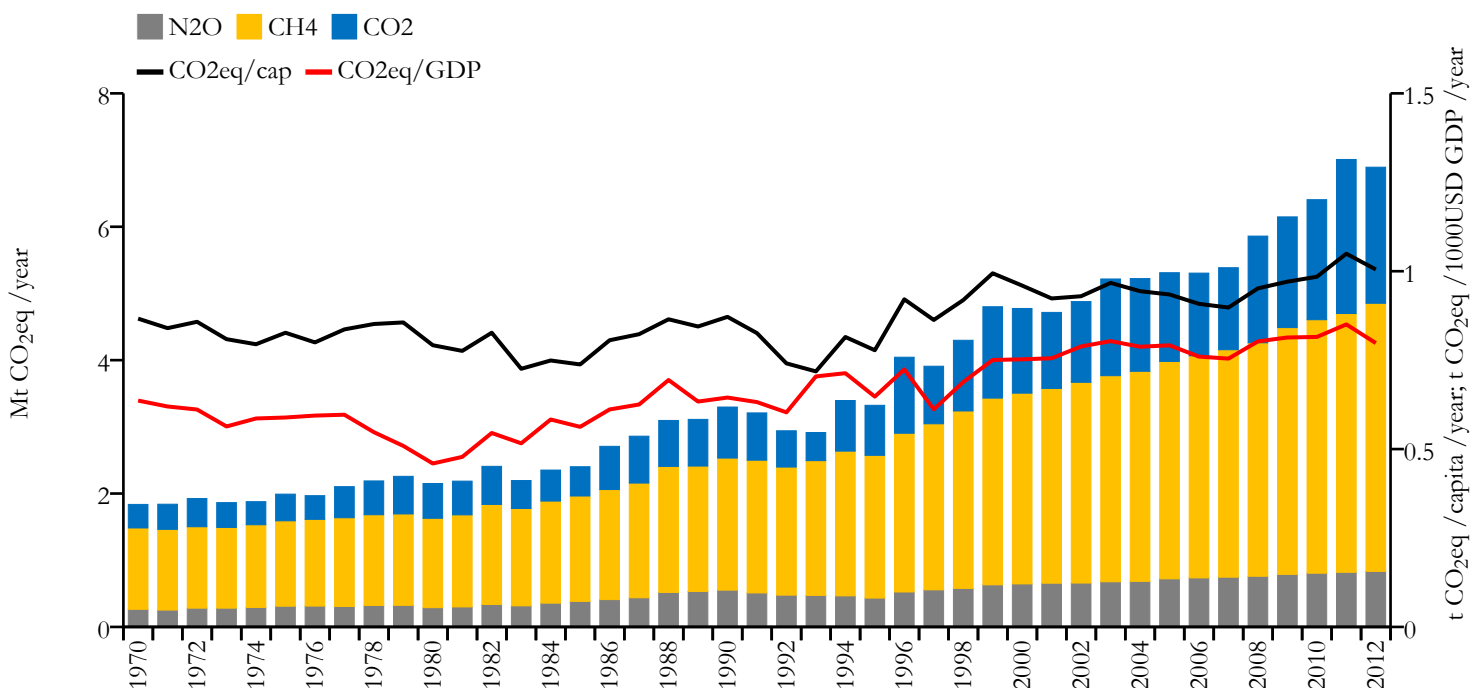
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	2.322	0.305	0.221	7606374
1990	0.750	0.198	0.147	3786940

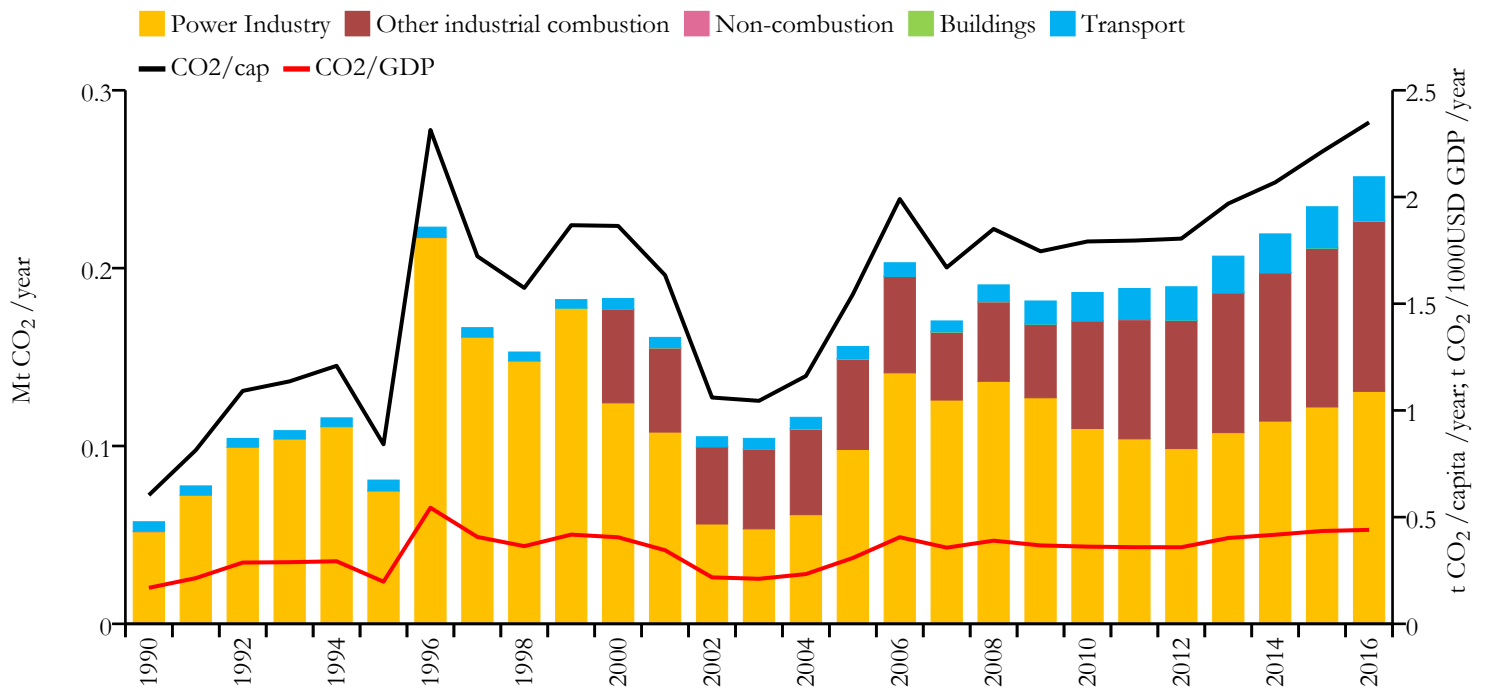


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





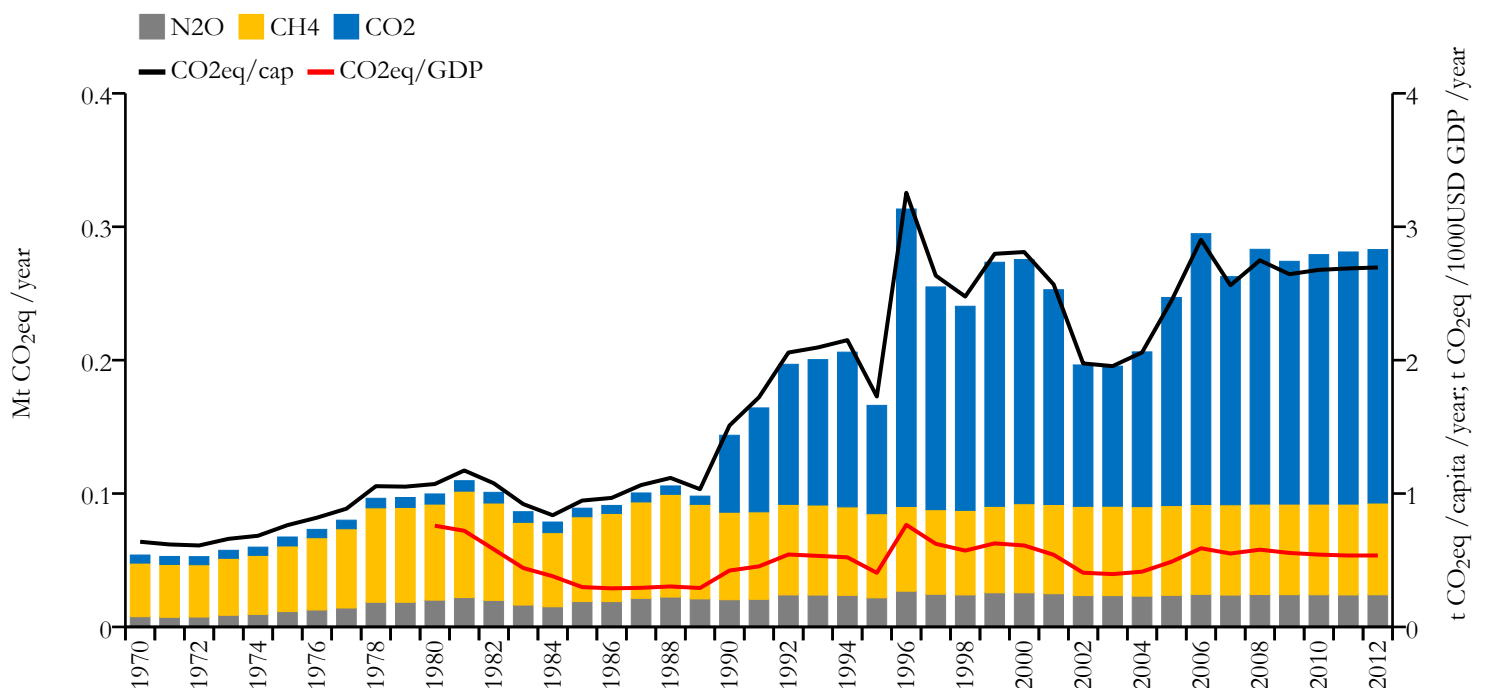
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



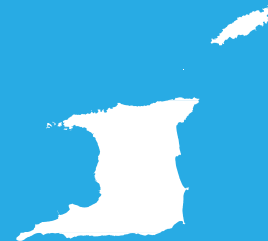
Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	0.251	2.349	0.440	107122
1990	0.057	0.603	0.169	95153



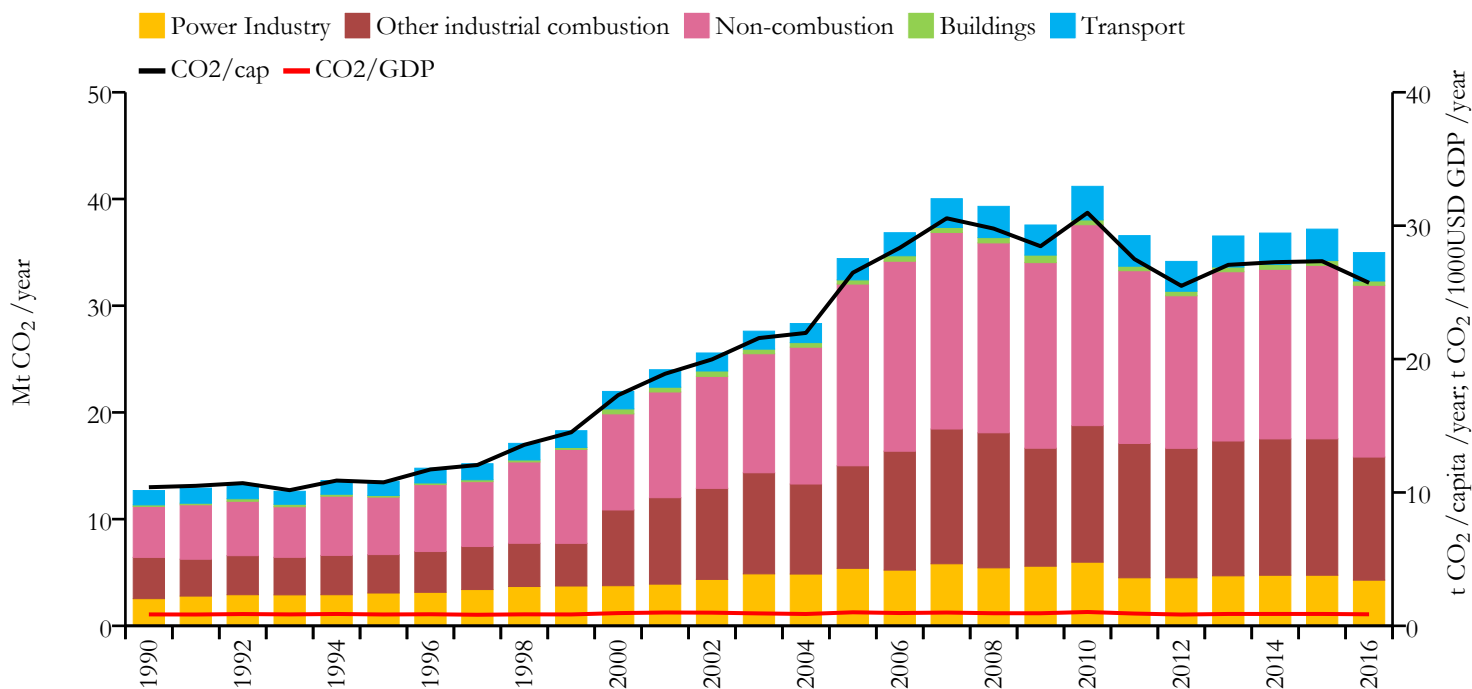
## Greenhouse gas emissions (EDGARv4.3.2 dataset)



# Trinidad and Tobago



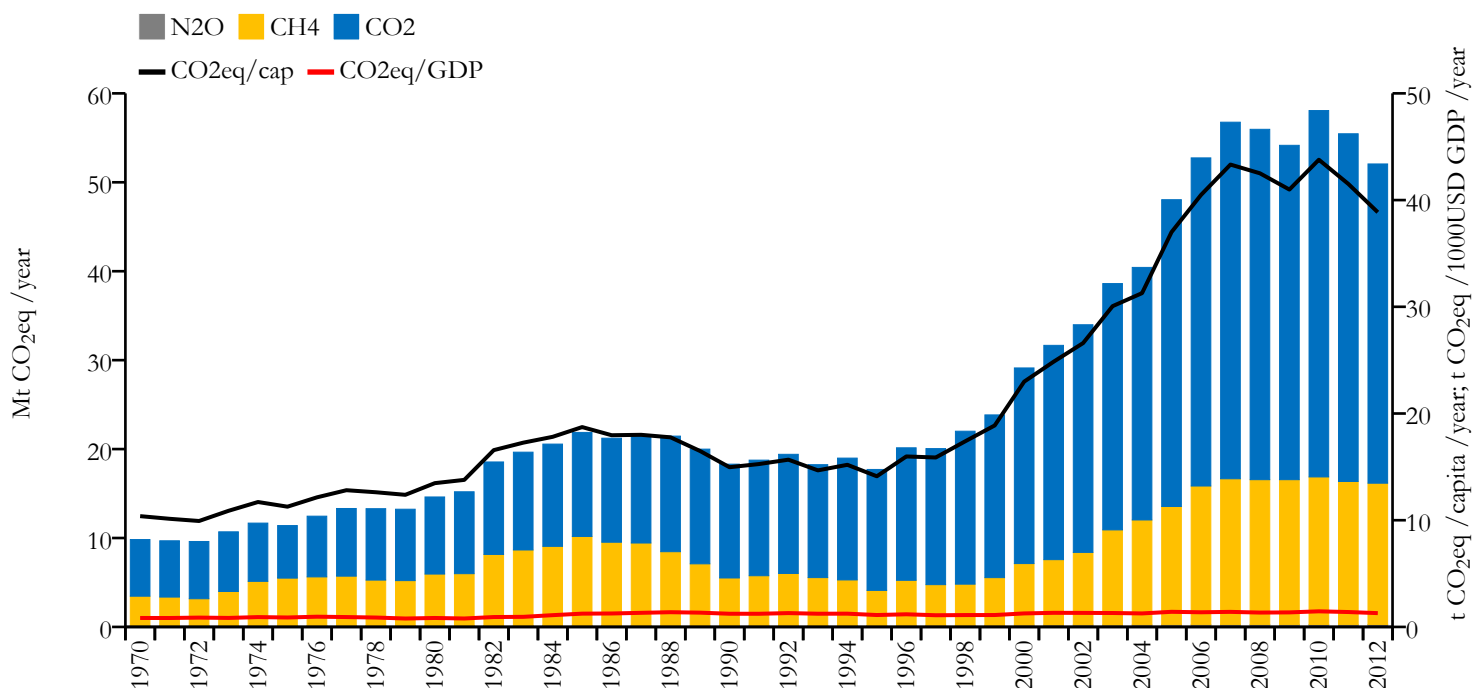
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	34.974	25.716	0.866	1364962
1990	12.678	10.392	0.857	1221900

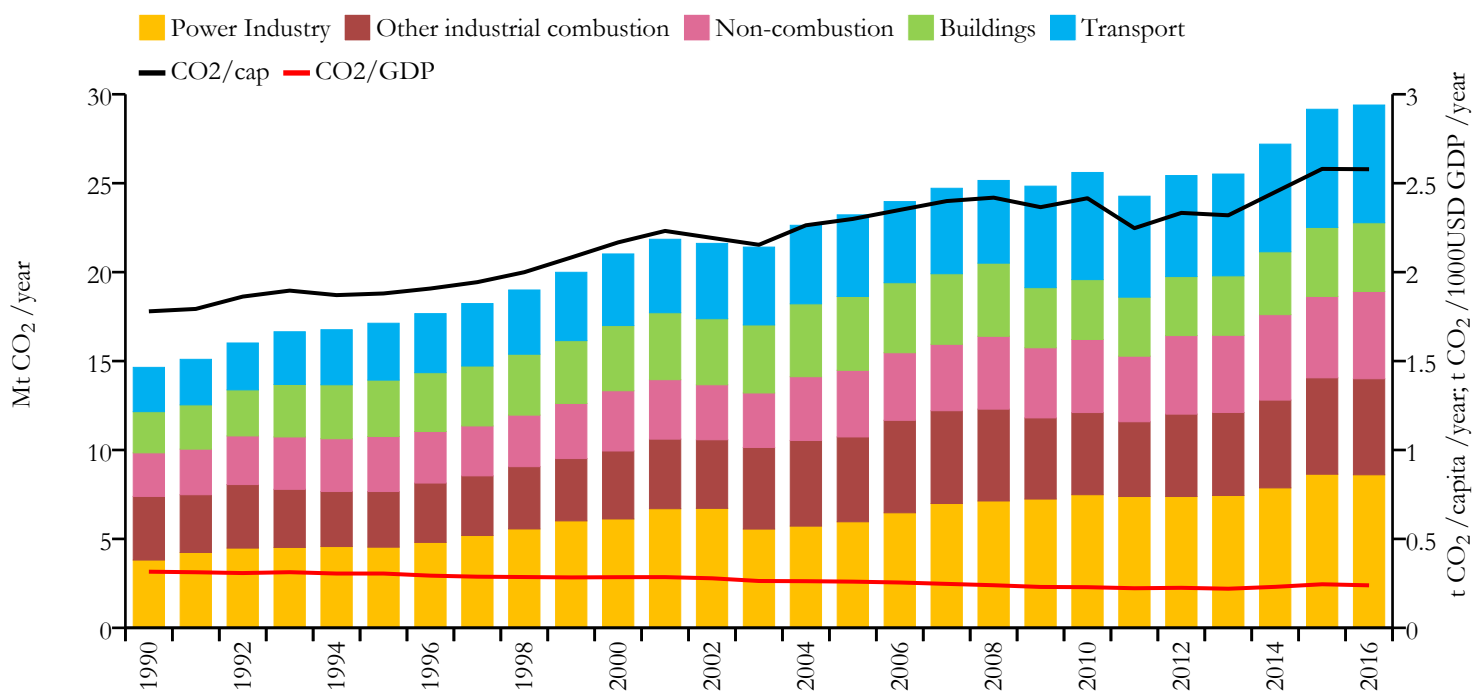


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





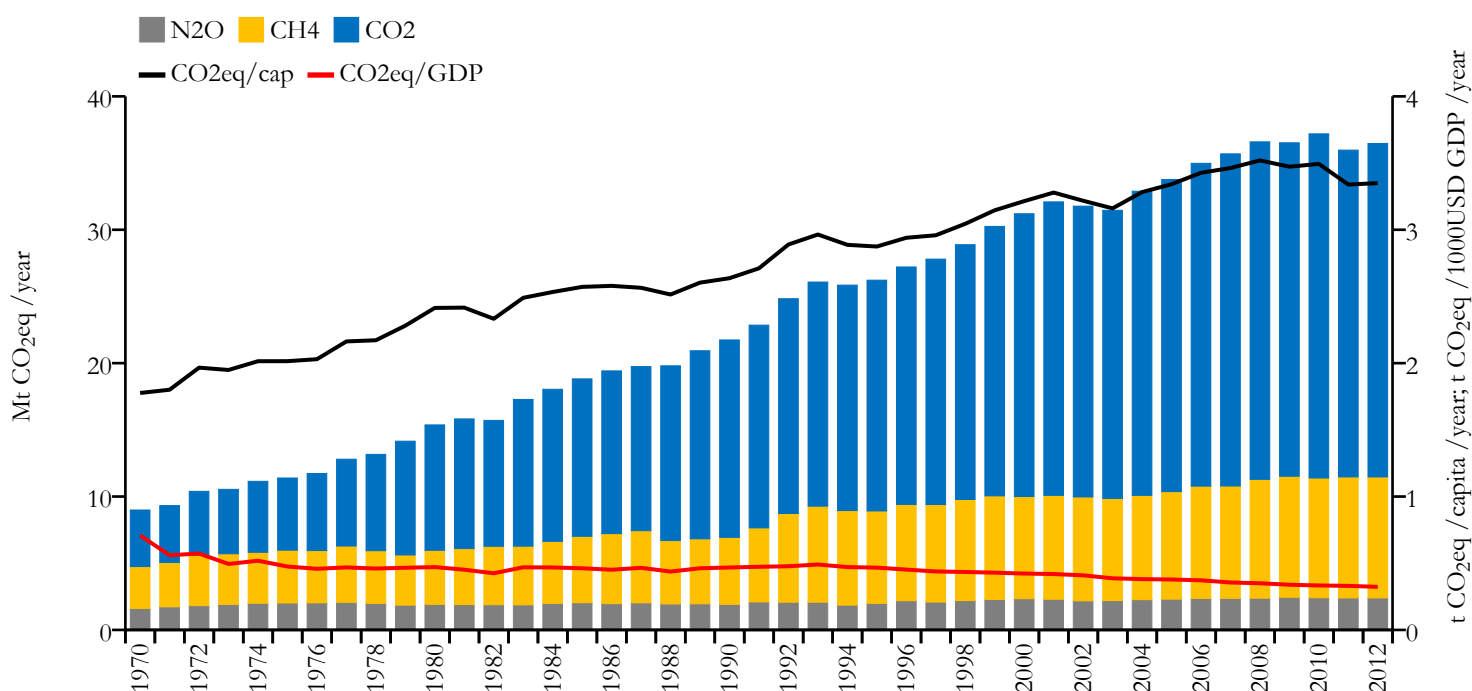
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	29.396	2.579	0.239	11403248
1990	14.646	1.780	0.316	8232797

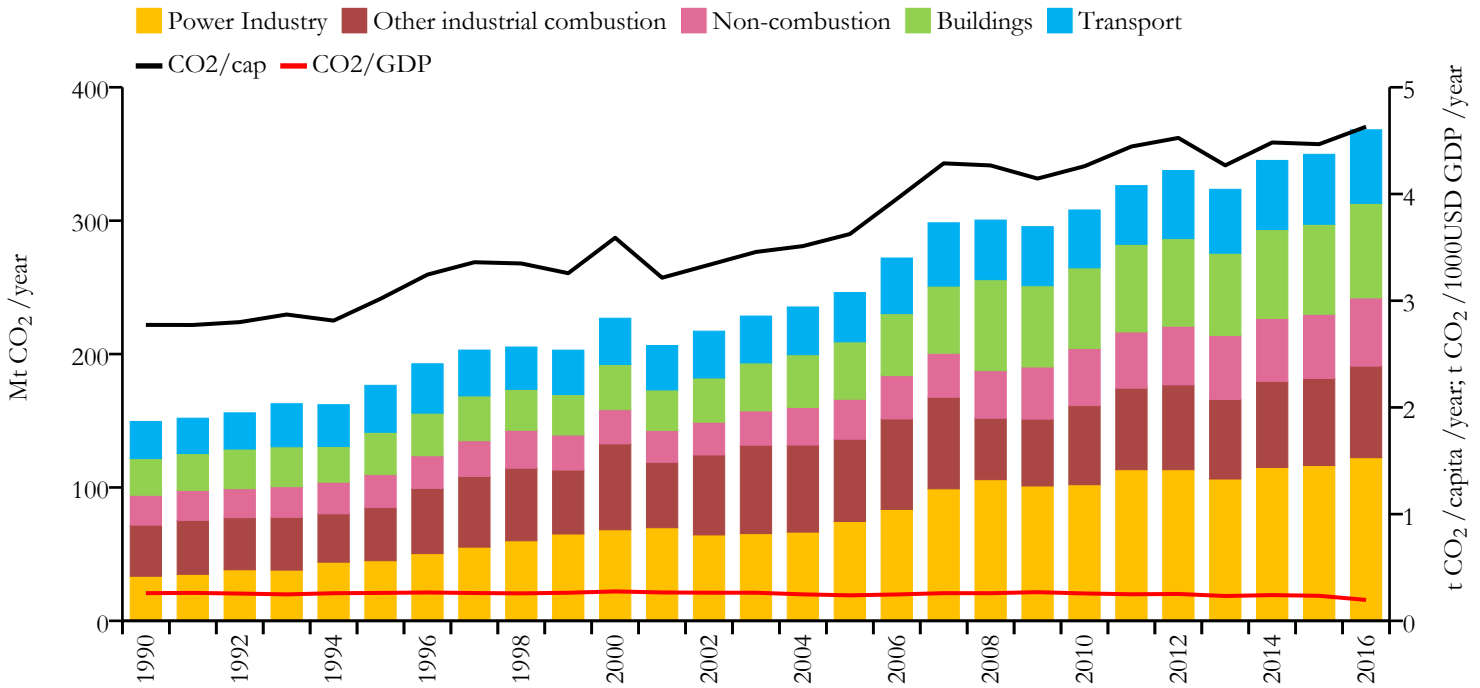


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





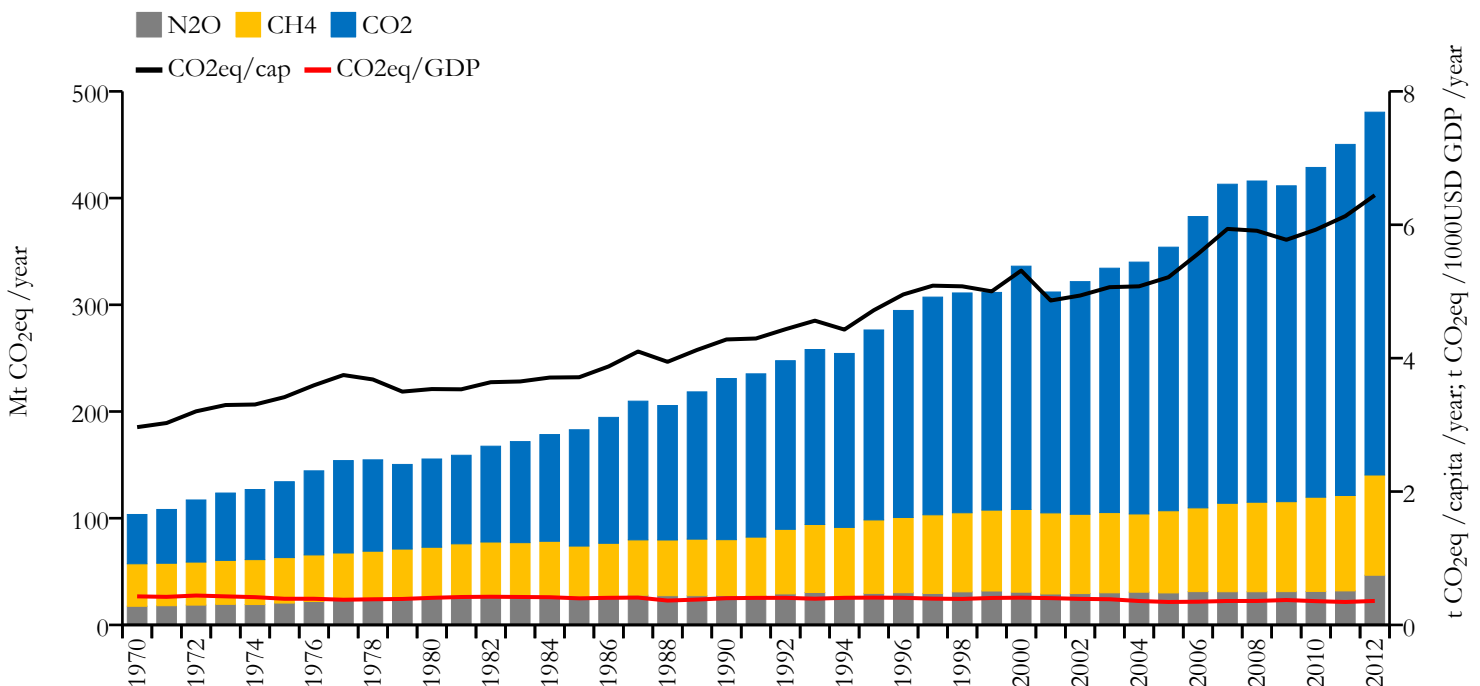
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	368.123	4.630	0.196	79512426
1990	149.477	2.773	0.260	53921699

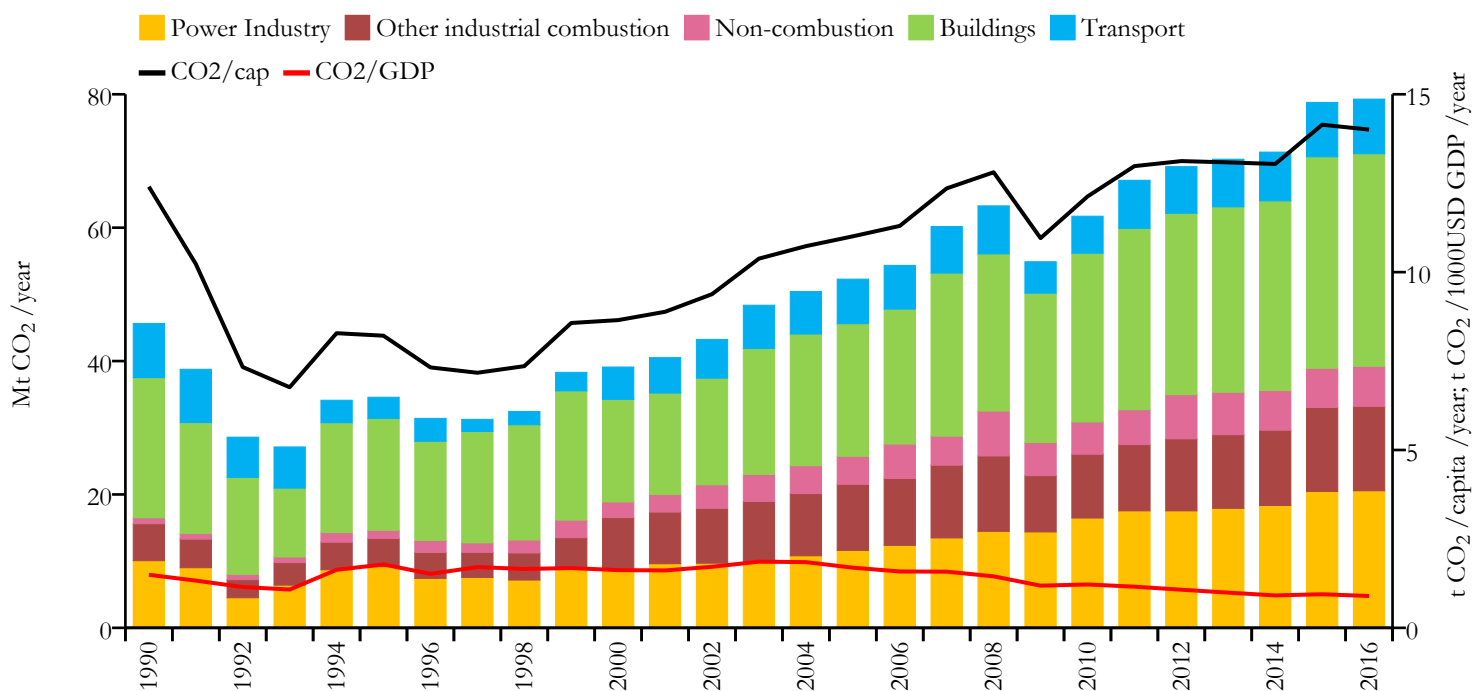


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





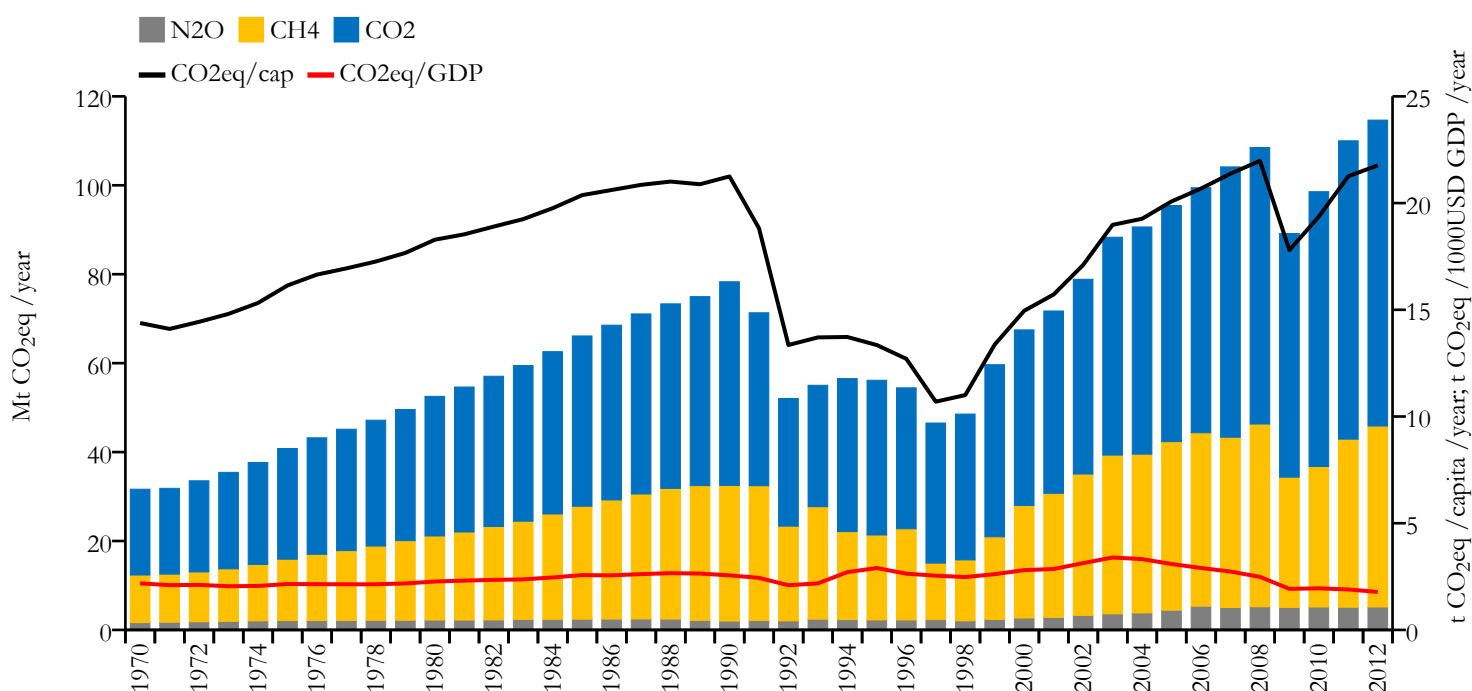
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	79.279	14.007	0.895	5662544
1990	45.641	12.403	1.492	3683966



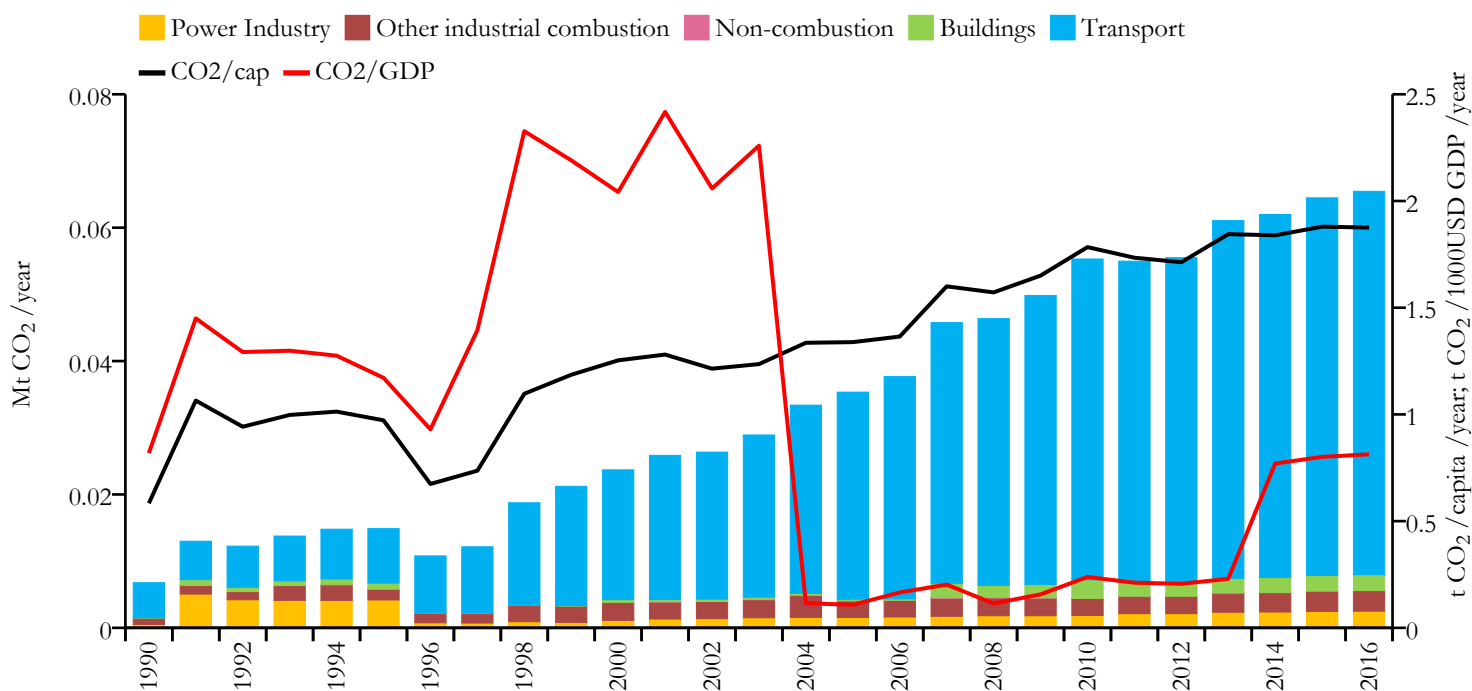
## Greenhouse gas emissions (EDGARv4.3.2 dataset)



# Turks and Caicos Islands



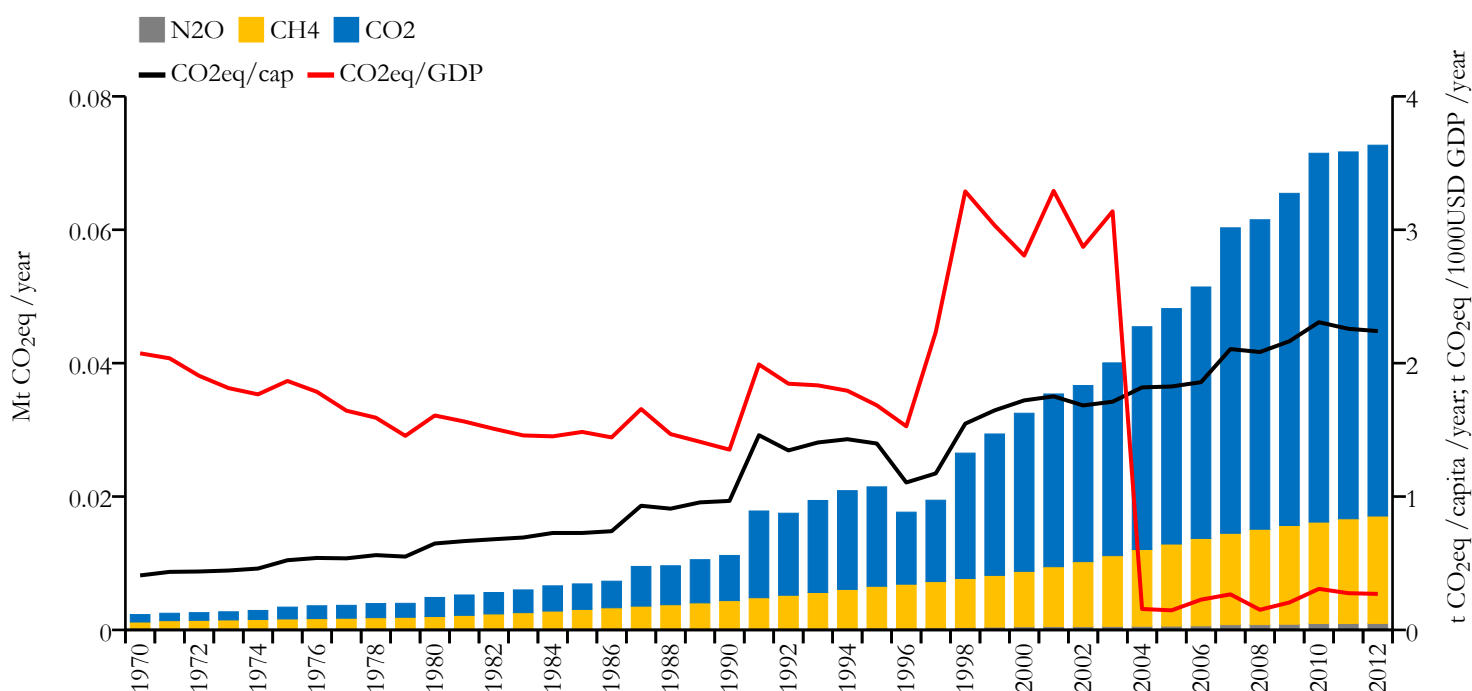
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	0.065	1.875	0.813	34900
1990	0.007	0.584	0.819	11552



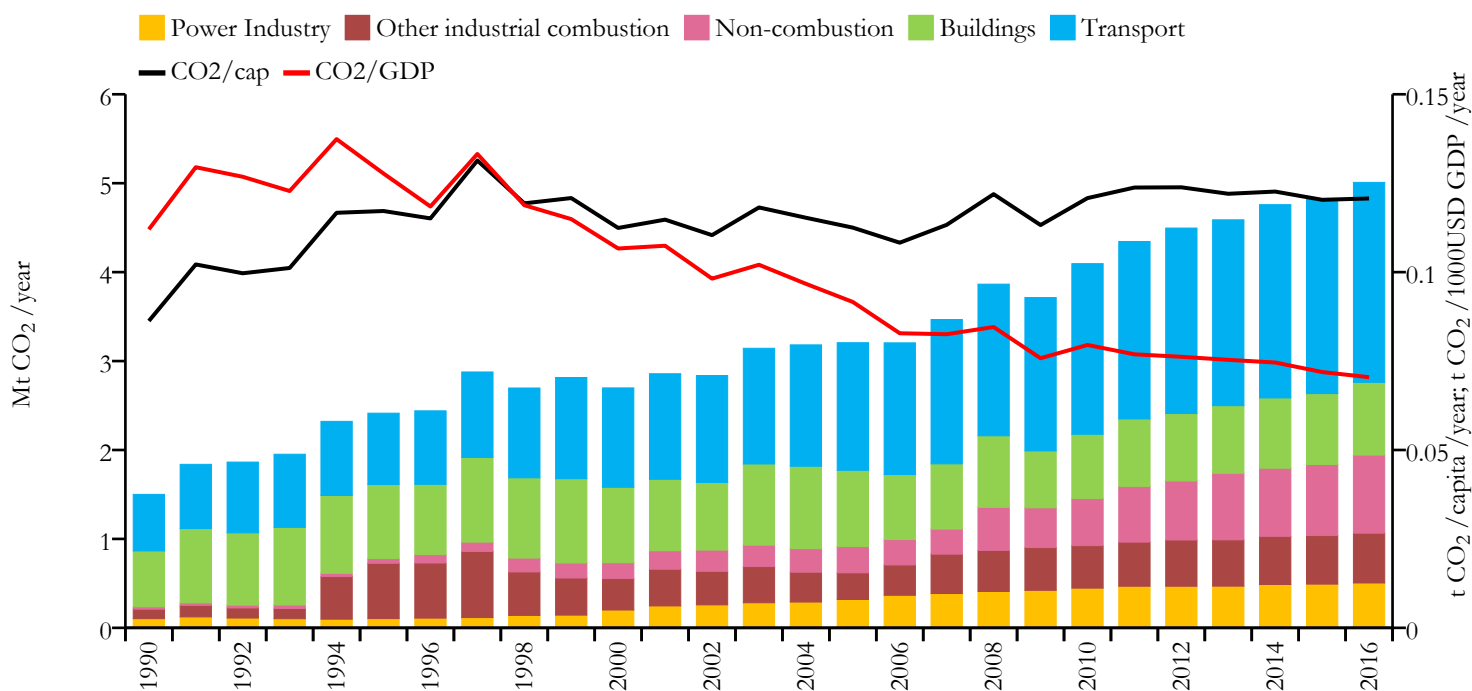
## Greenhouse gas emissions (EDGARv4.3.2 dataset)







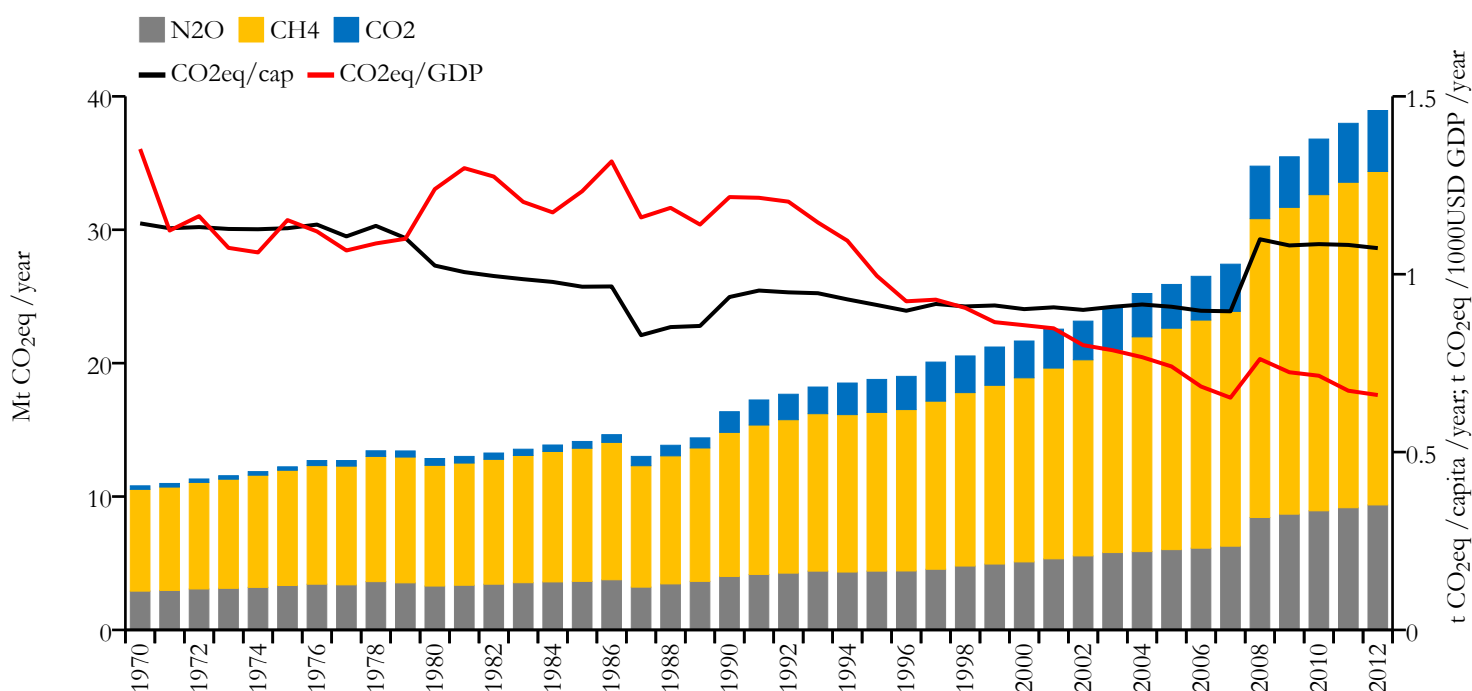
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	5.009	0.121	0.070	41487965
1990	1.501	0.086	0.112	17438907

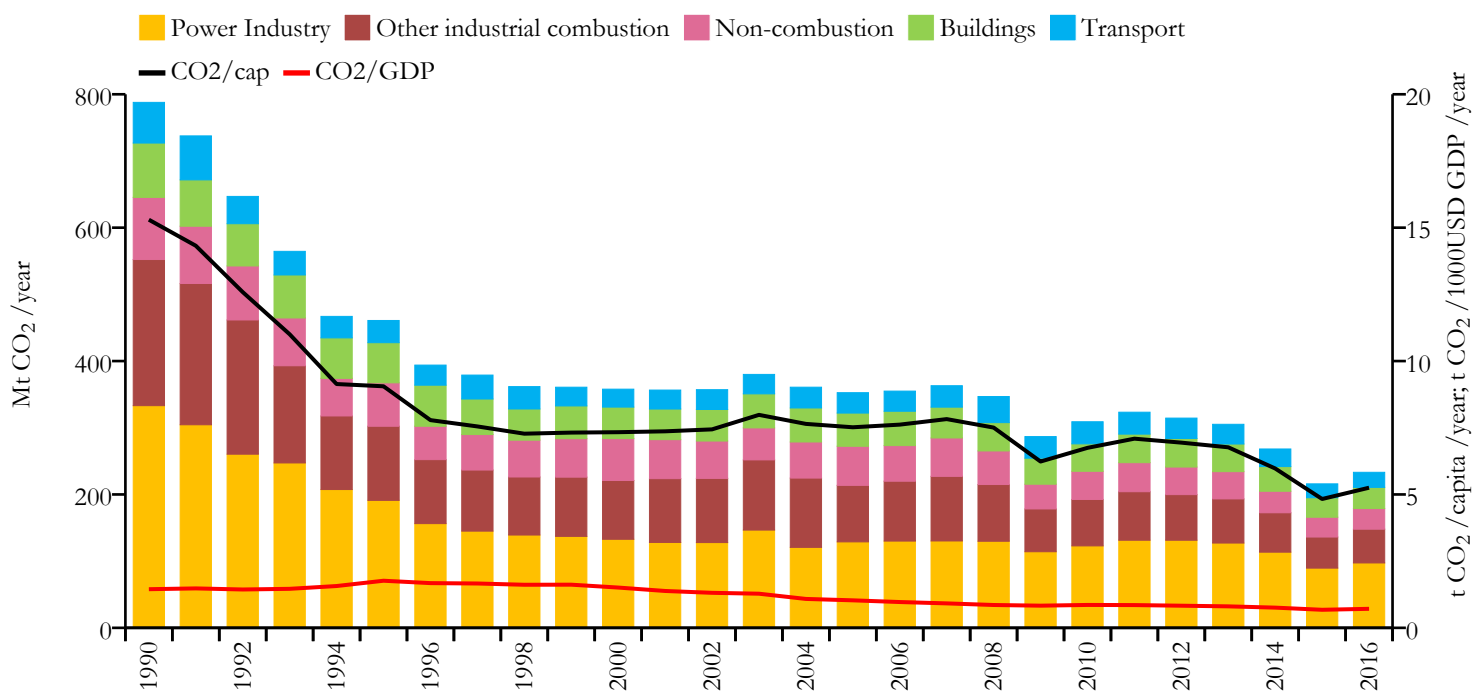


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





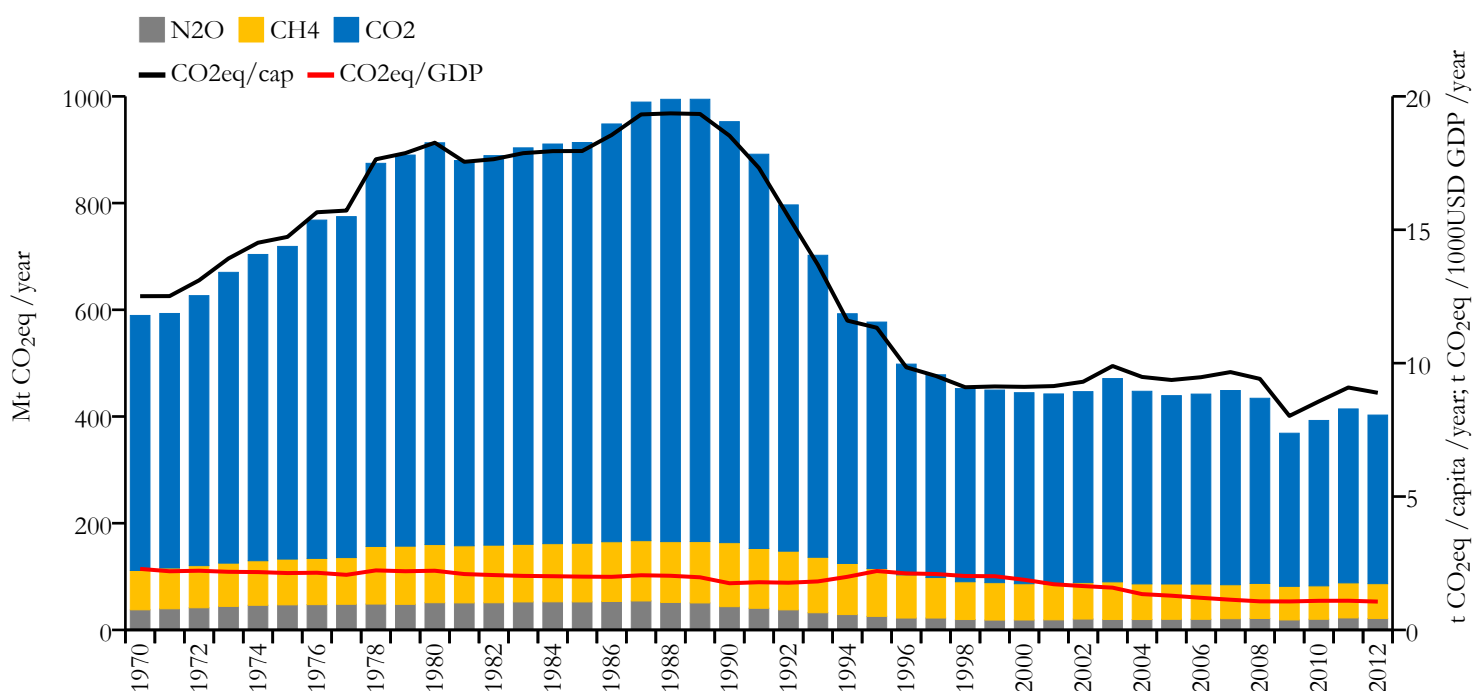
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	233.220	5.253	0.713	44438625
1990	787.880	15.299	1.448	51464348



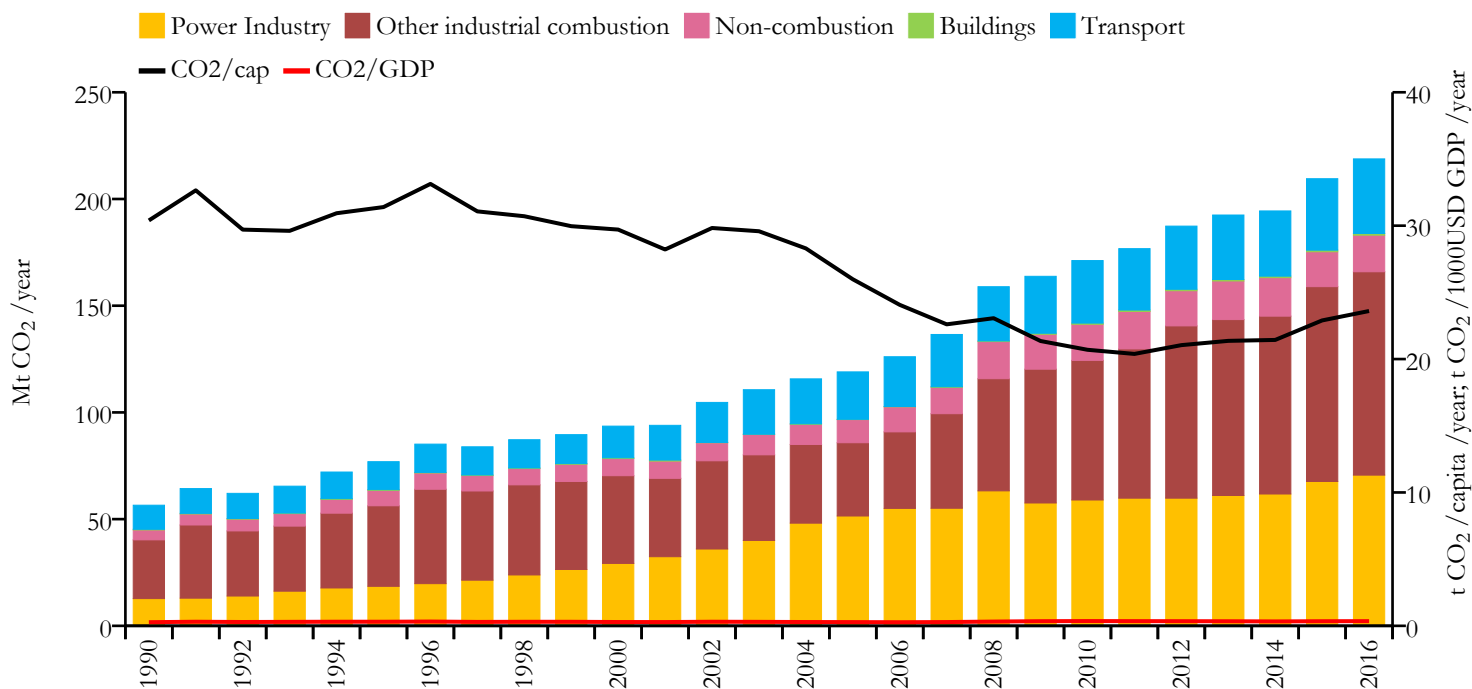
## Greenhouse gas emissions (EDGARv4.3.2 dataset)



# United Arab Emirates



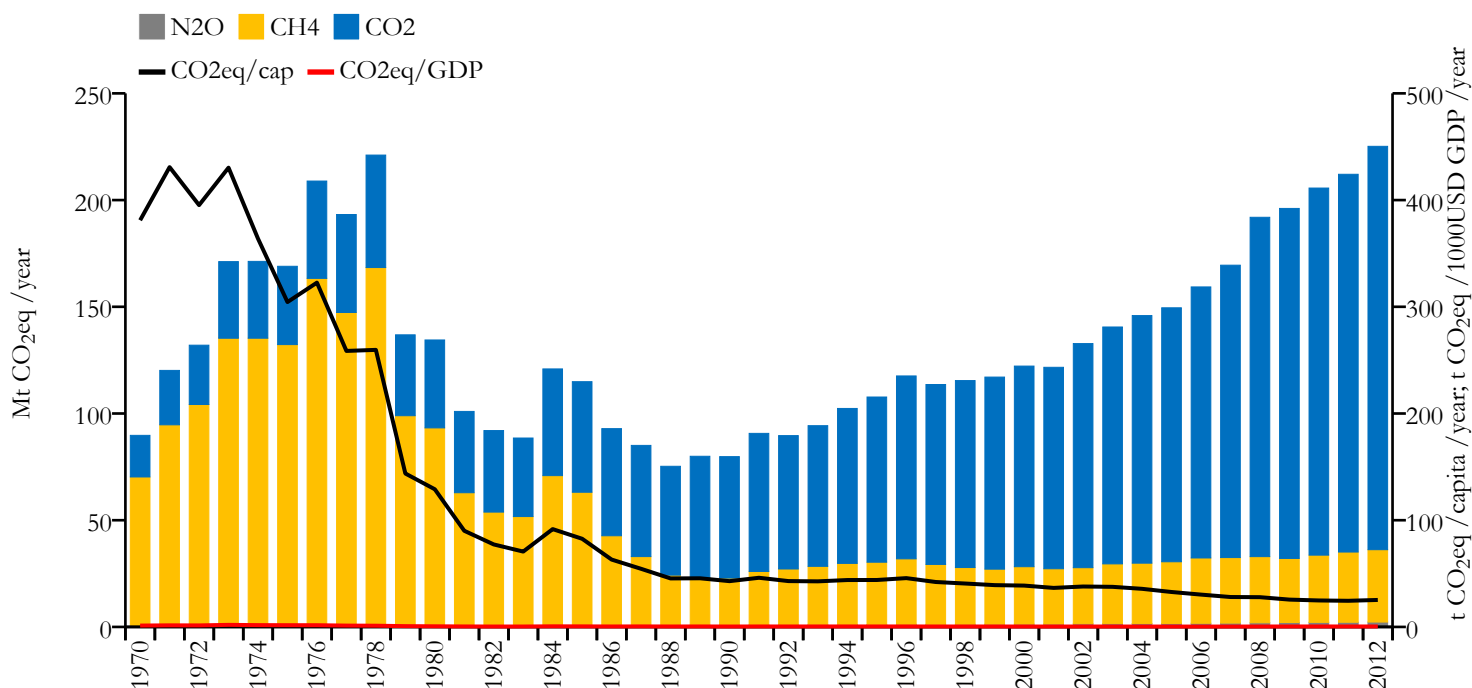
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	218.789	23.602	0.352	9269612
1990	56.528	30.391	0.273	1860174



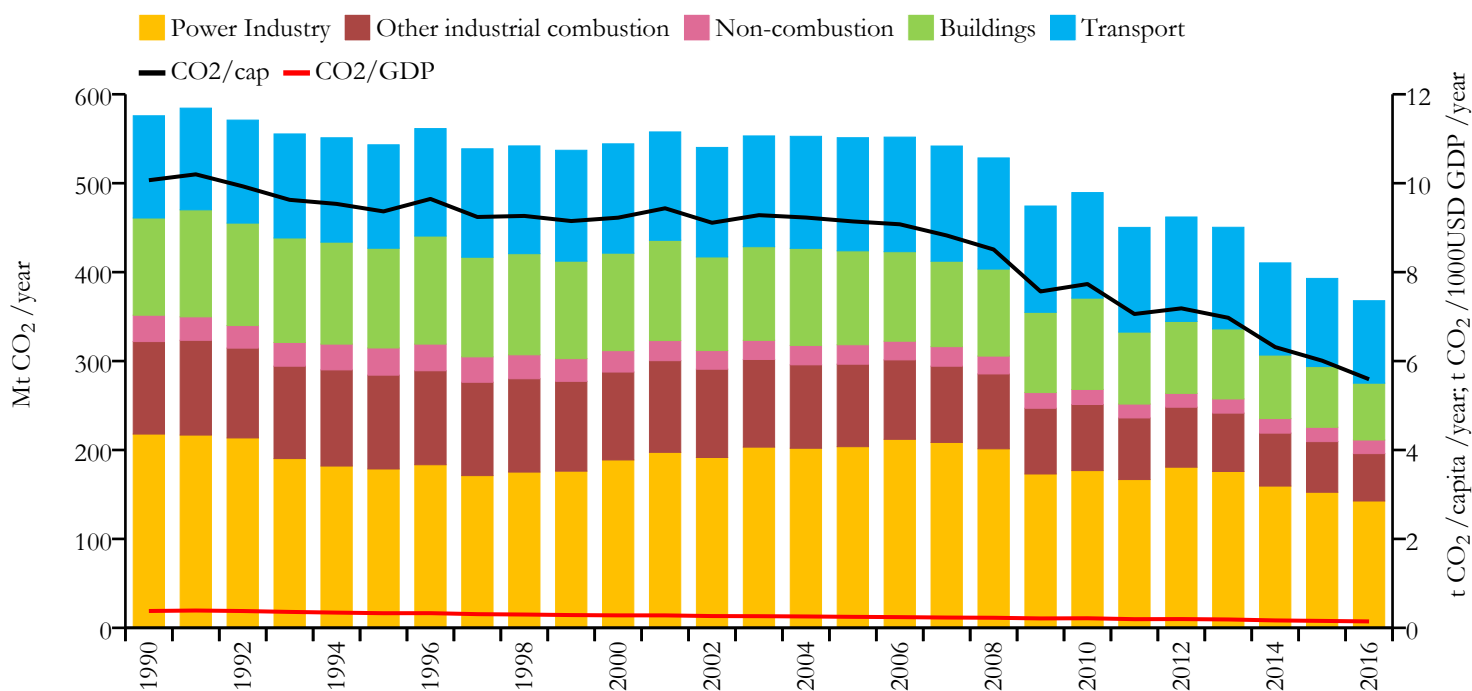
## Greenhouse gas emissions (EDGARv4.3.2 dataset)



# United Kingdom



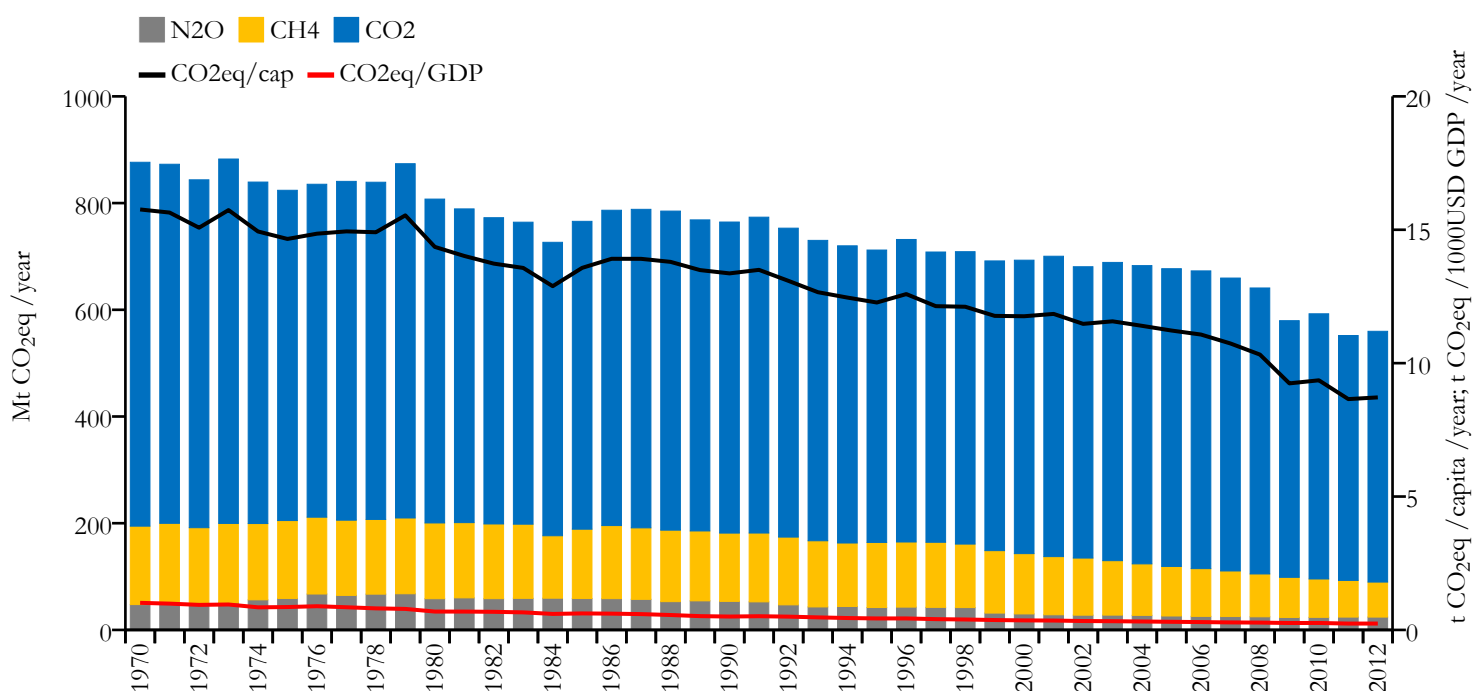
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	367.860	5.591	0.144	65788574
1990	575.834	10.067	0.379	57183331



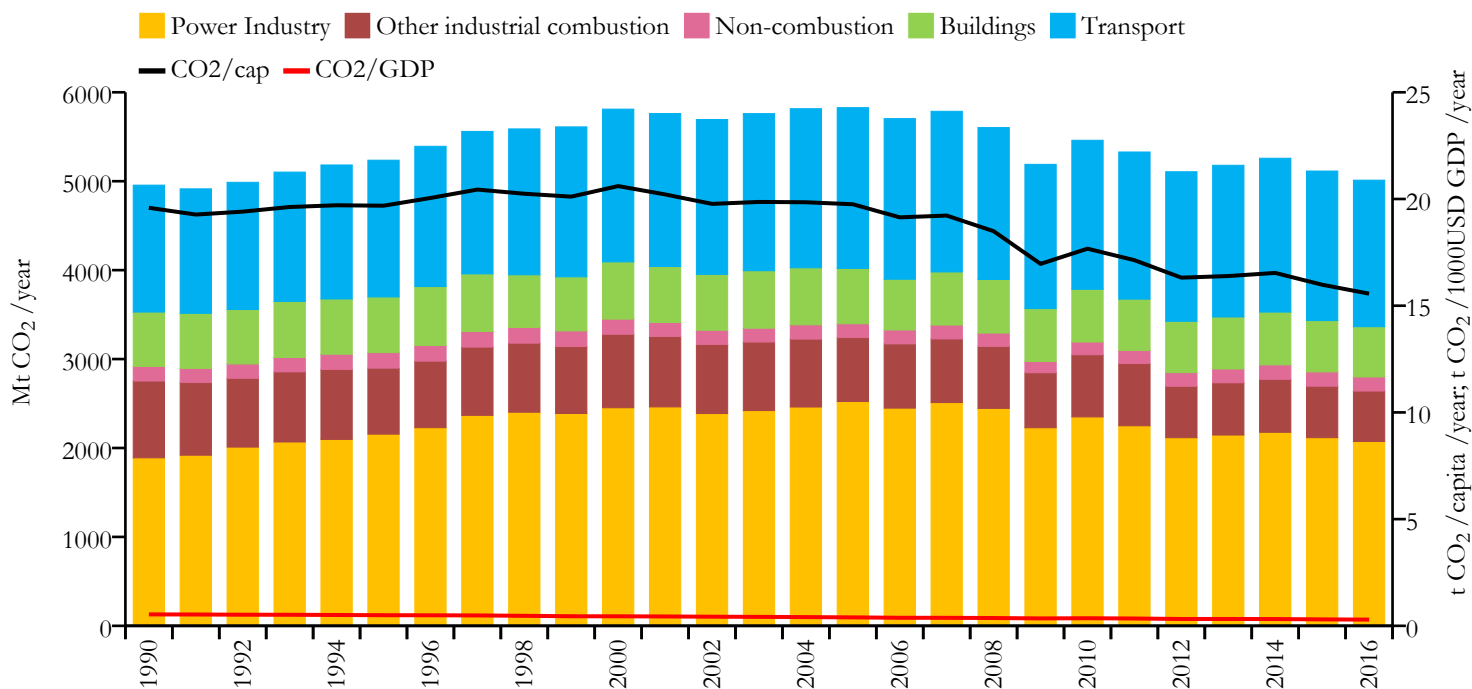
## Greenhouse gas emissions (EDGARv4.3.2 dataset)



# United States



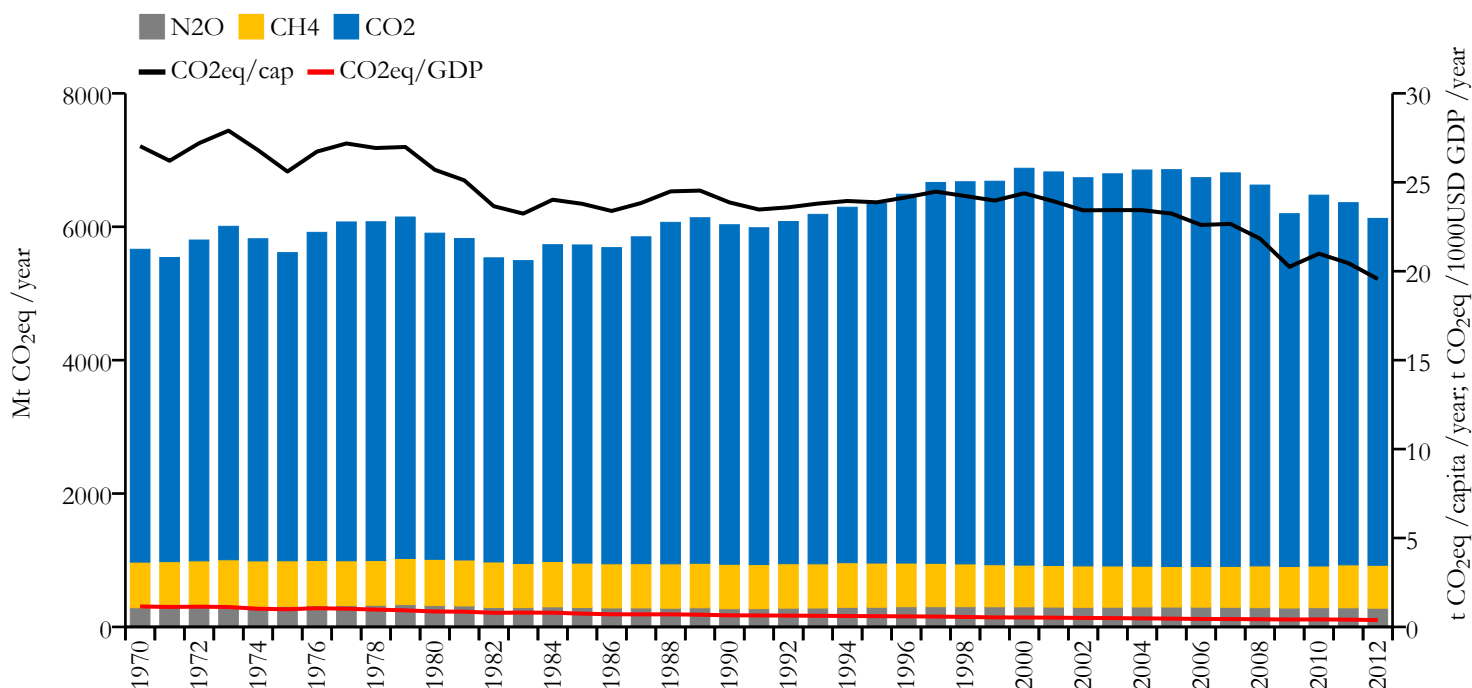
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	5011.687	15.564	0.291	322179605
1990	4955.641	19.588	0.536	252529950

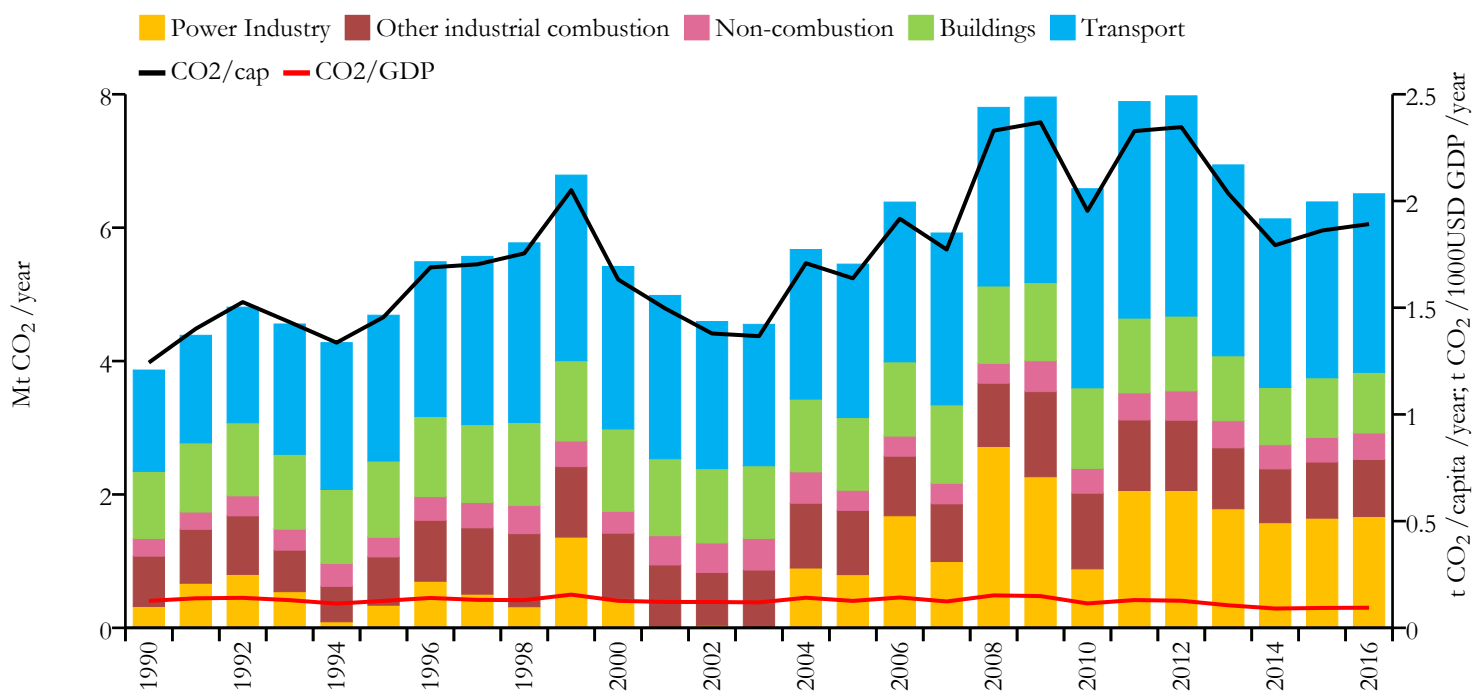


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





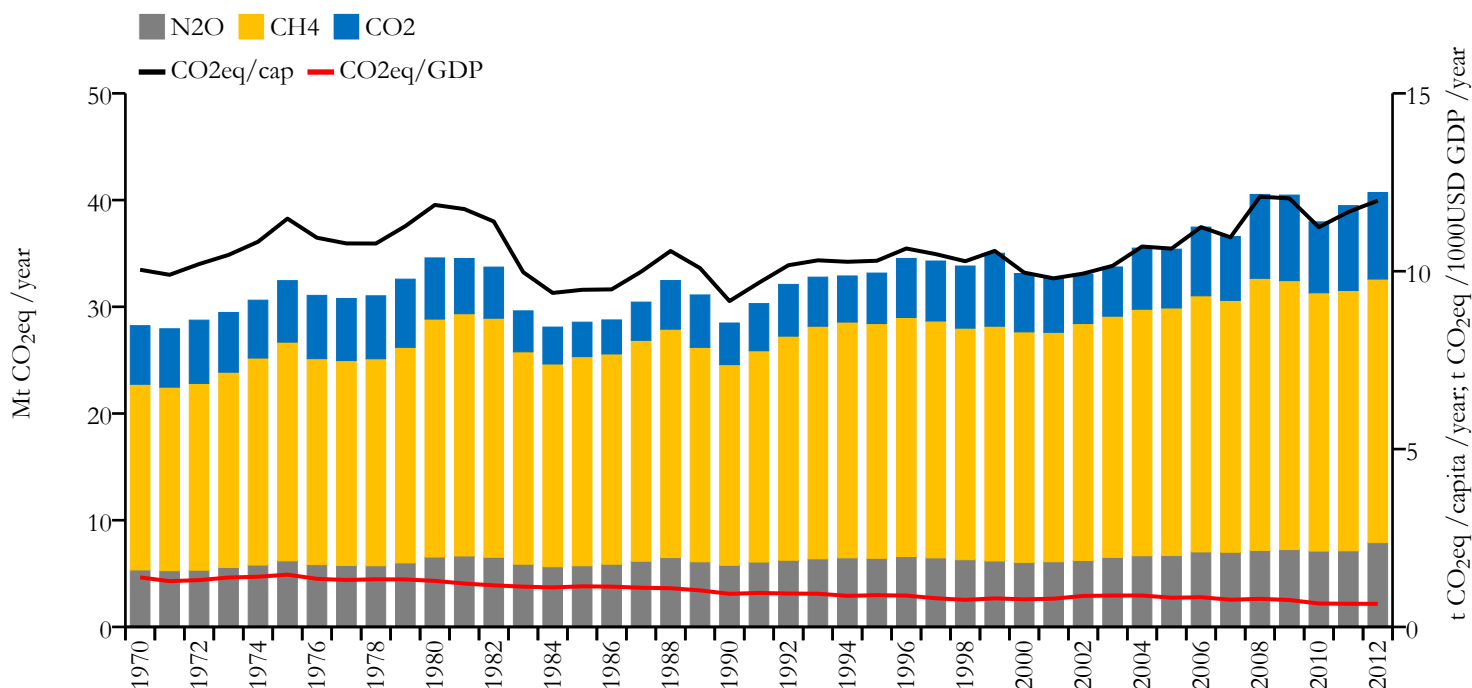
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	6.508	1.892	0.094	3444006
1990	3.865	1.243	0.126	3109989

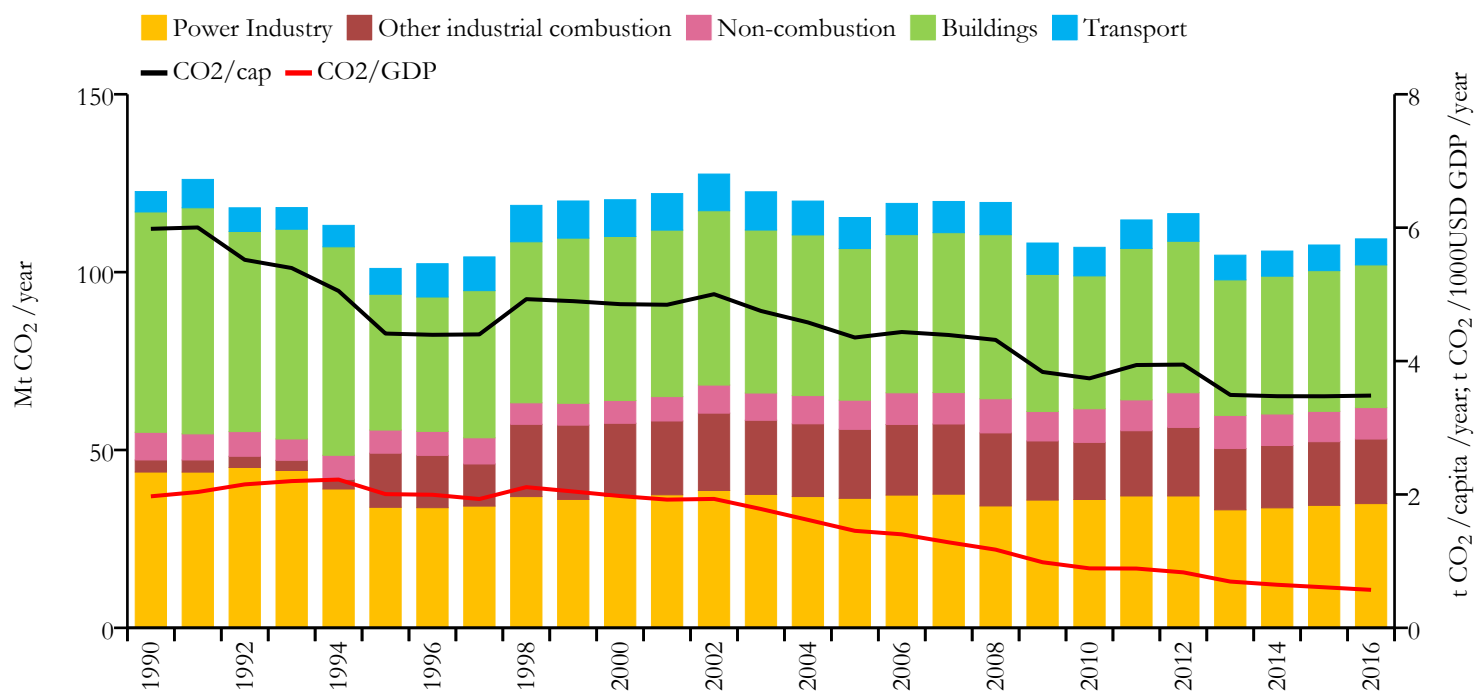


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





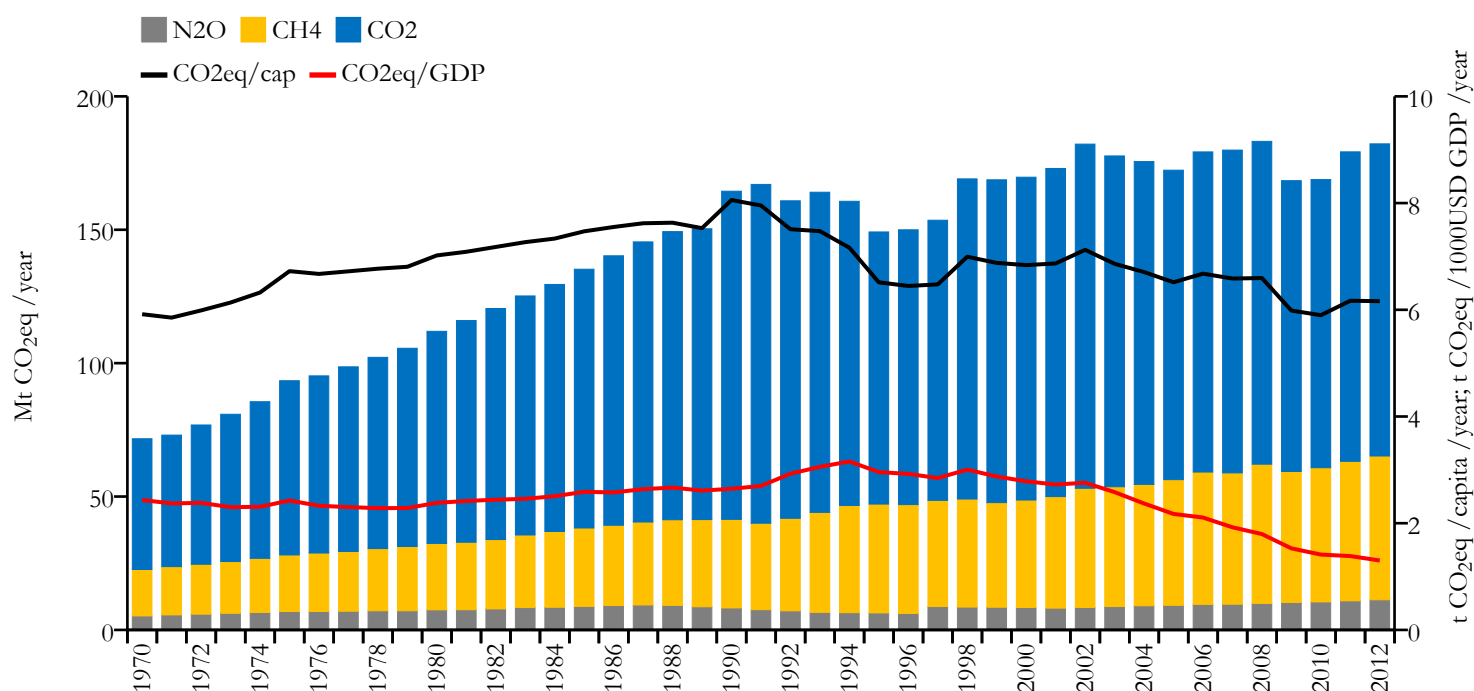
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	109.347	3.482	0.570	31446795
1990	122.643	5.983	1.972	20462463

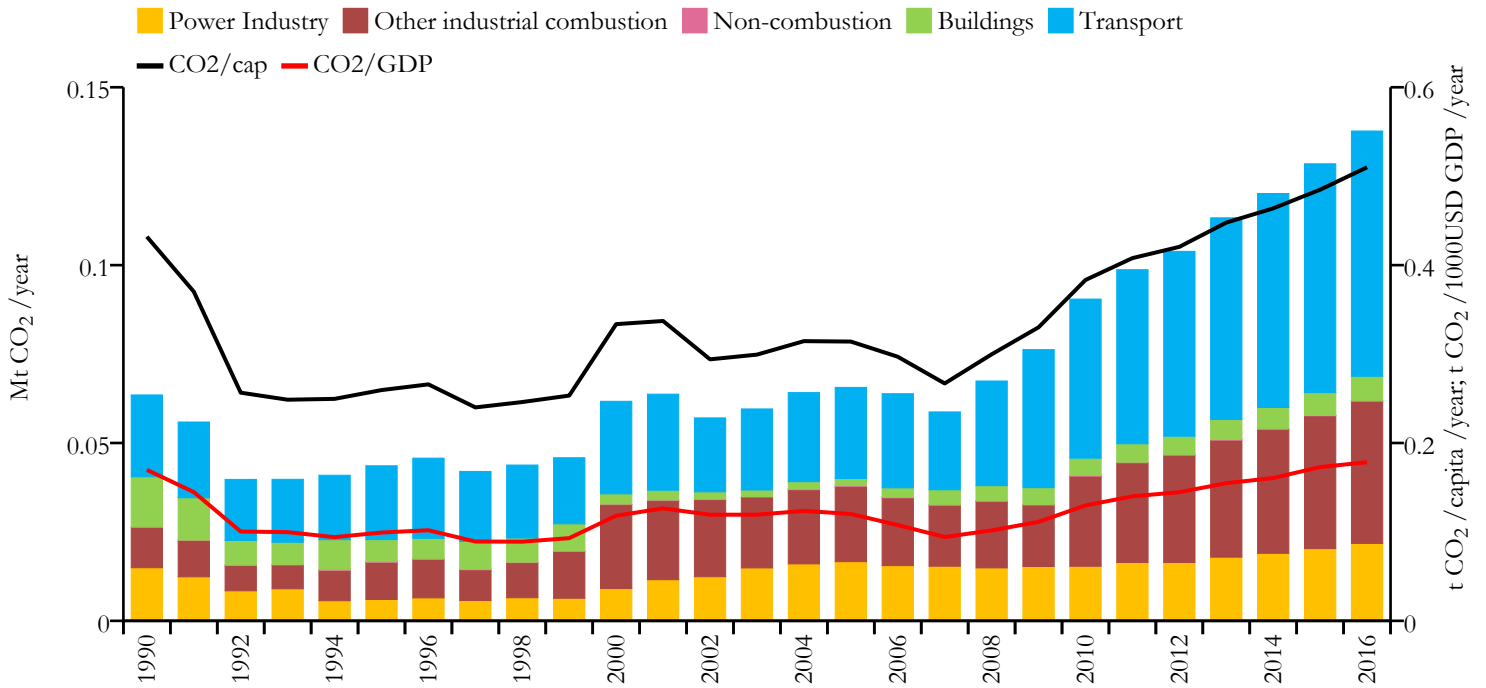


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





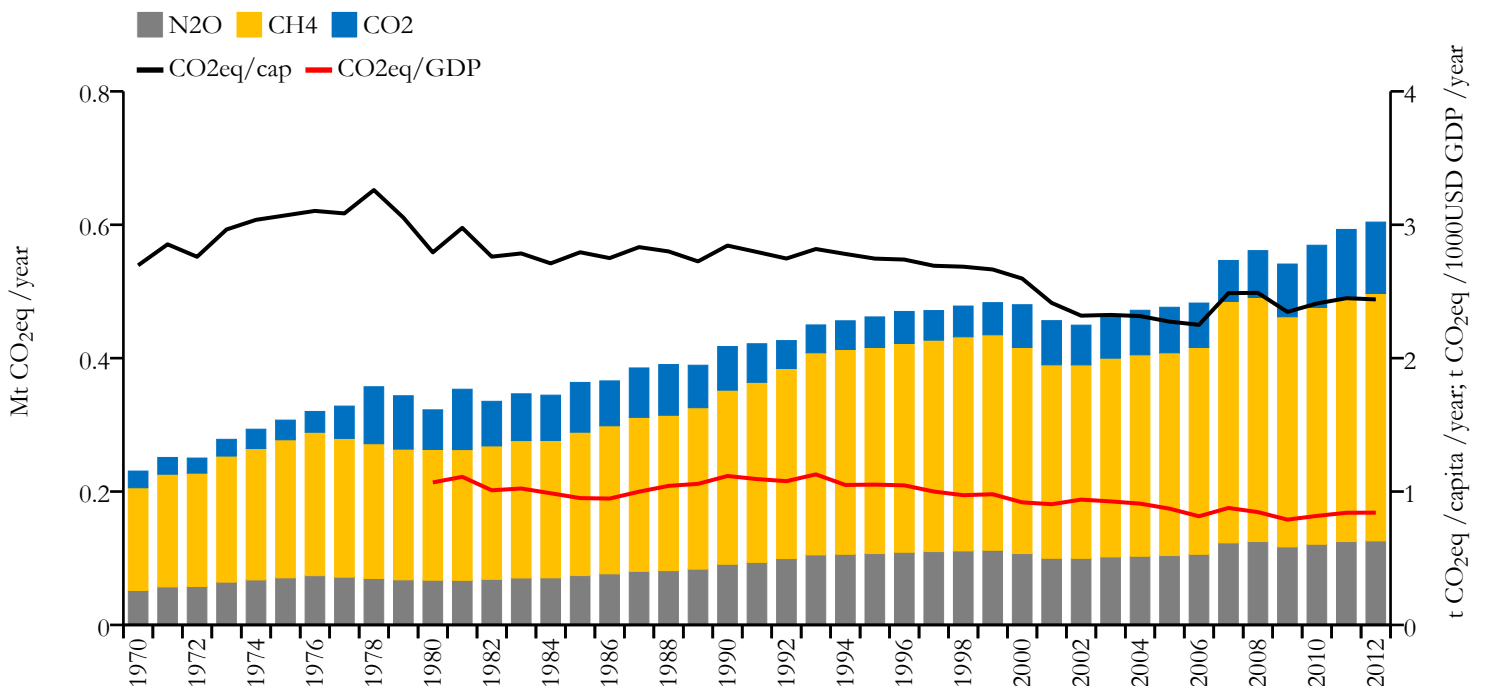
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	0.138	0.510	0.178	270402
1990	0.064	0.432	0.170	146634



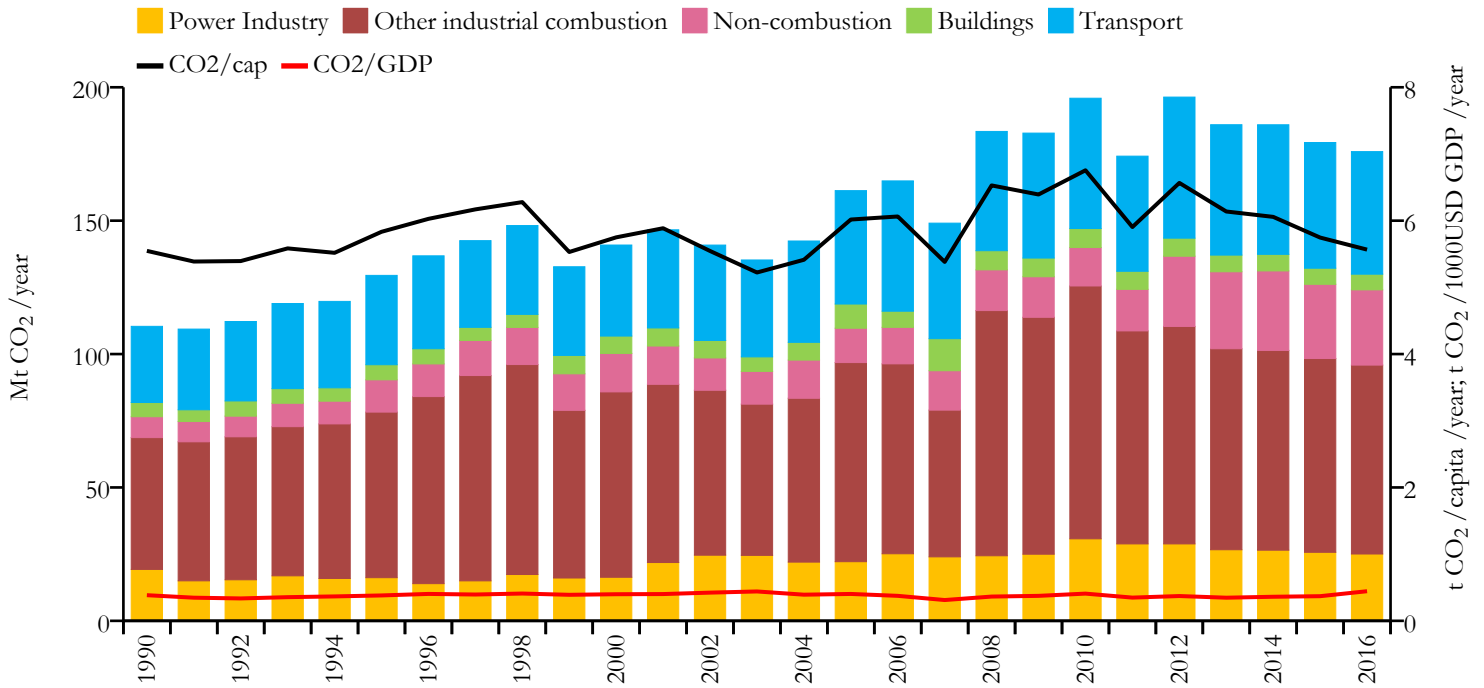
## Greenhouse gas emissions (EDGARv4.3.2 dataset)







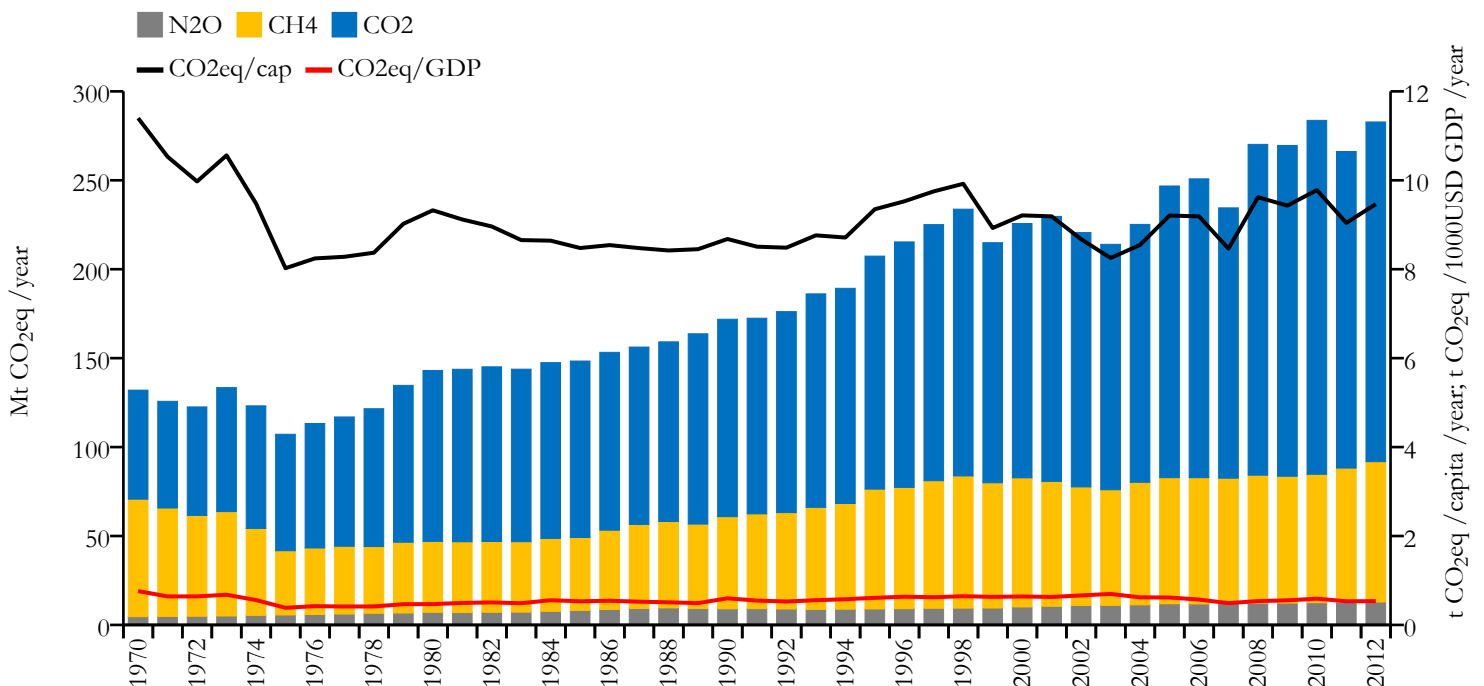
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	175.884	5.566	0.444	31568179
1990	110.392	5.547	0.385	19861956

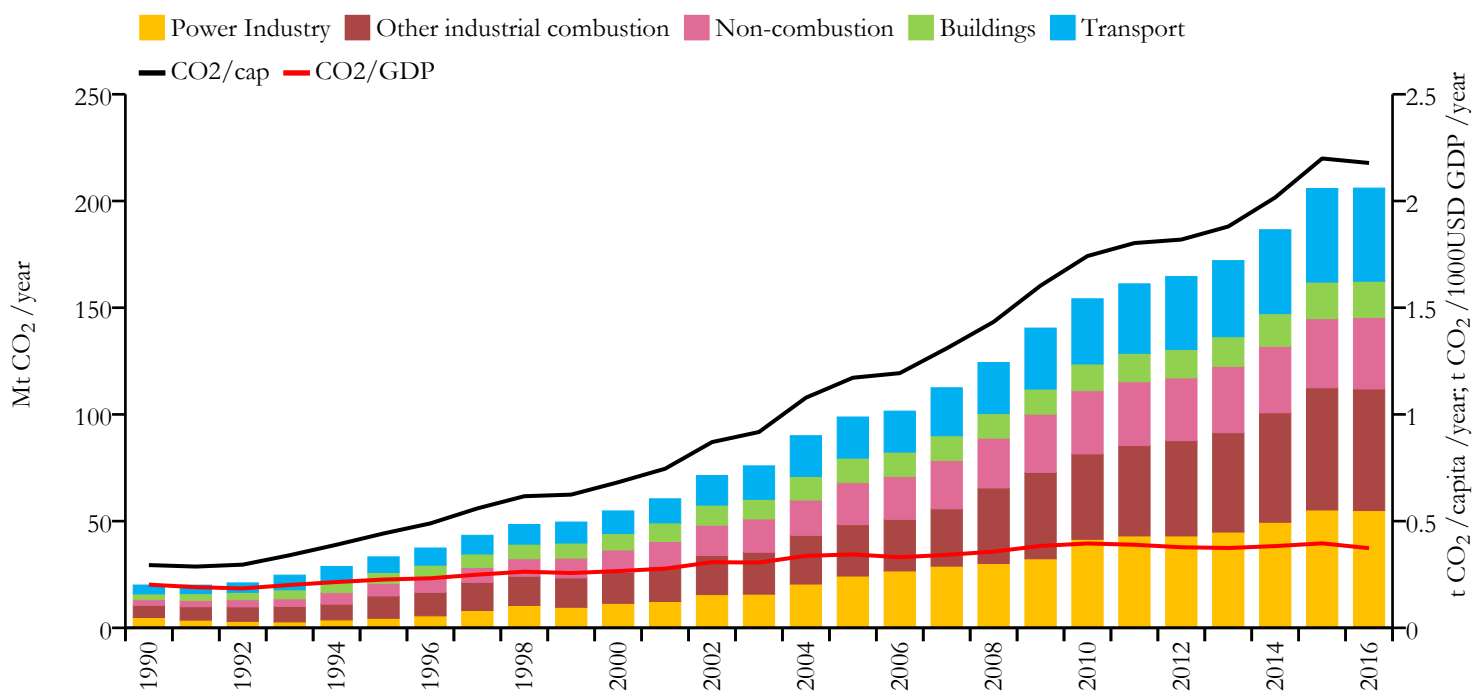


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





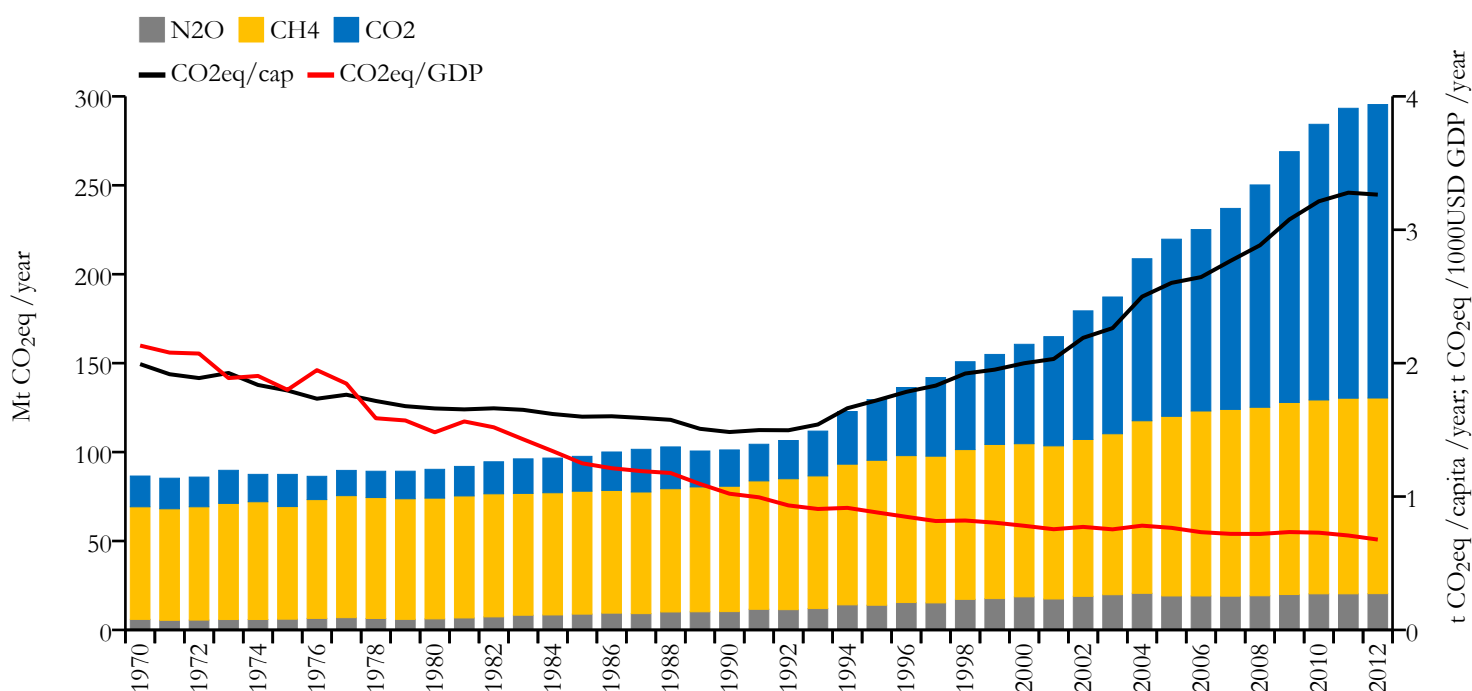
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	206.042	2.178	0.373	94569072
1990	20.056	0.294	0.202	68209605



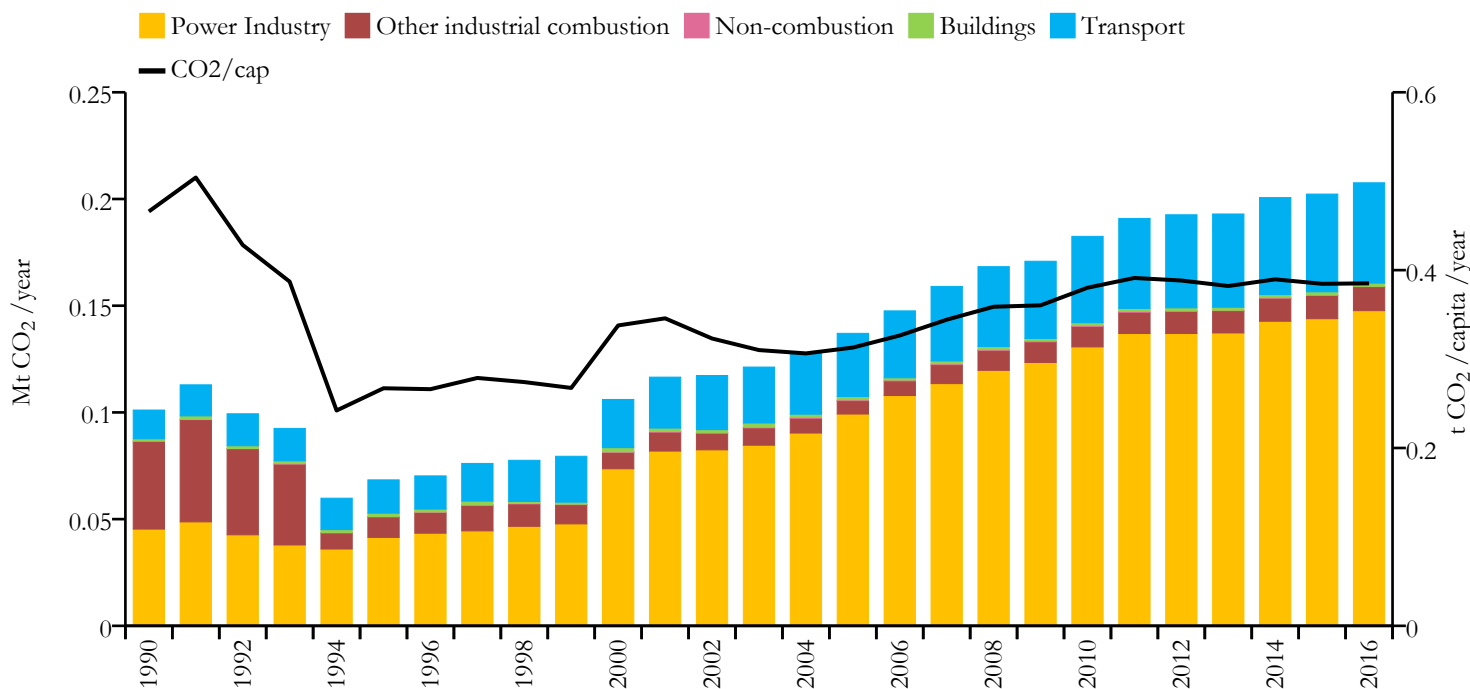
## Greenhouse gas emissions (EDGARv4.3.2 dataset)



# Western Sahara



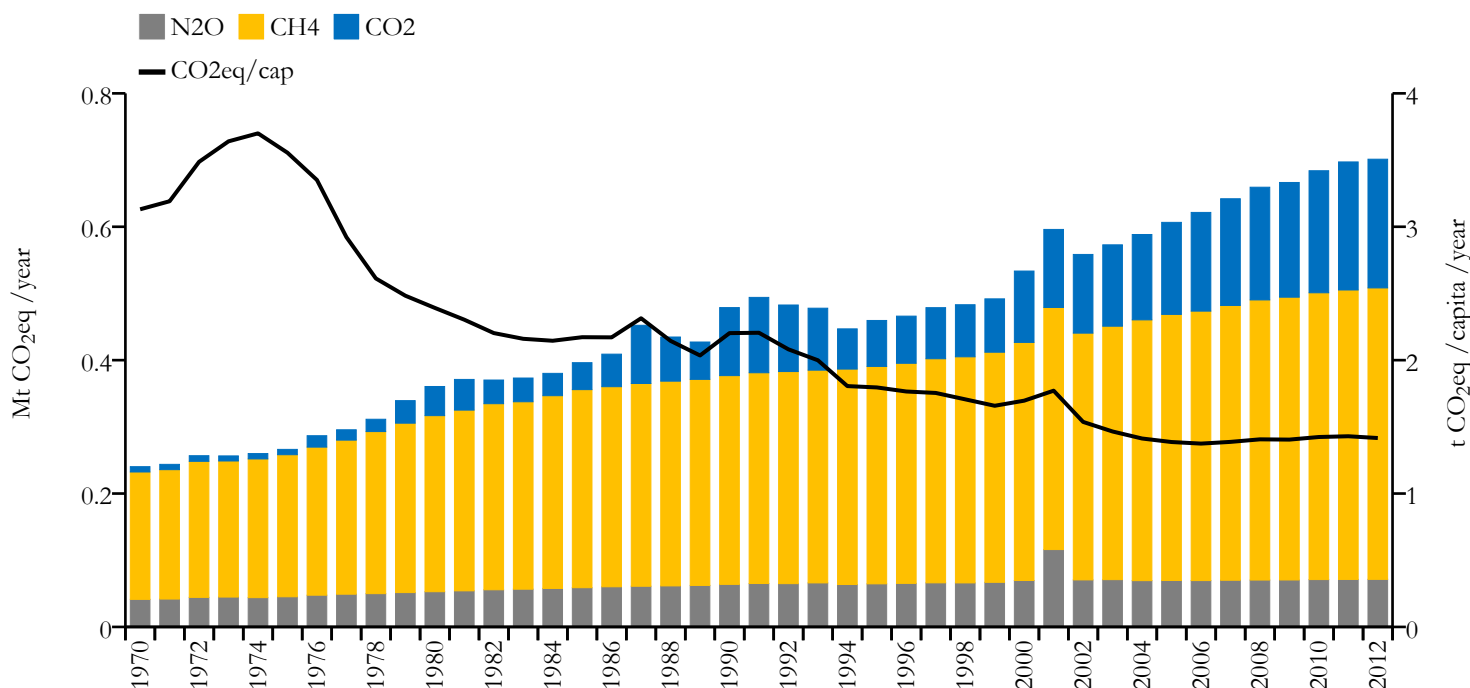
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	0.208	0.385	n/a	538755
1990	0.101	0.466	n/a	217258

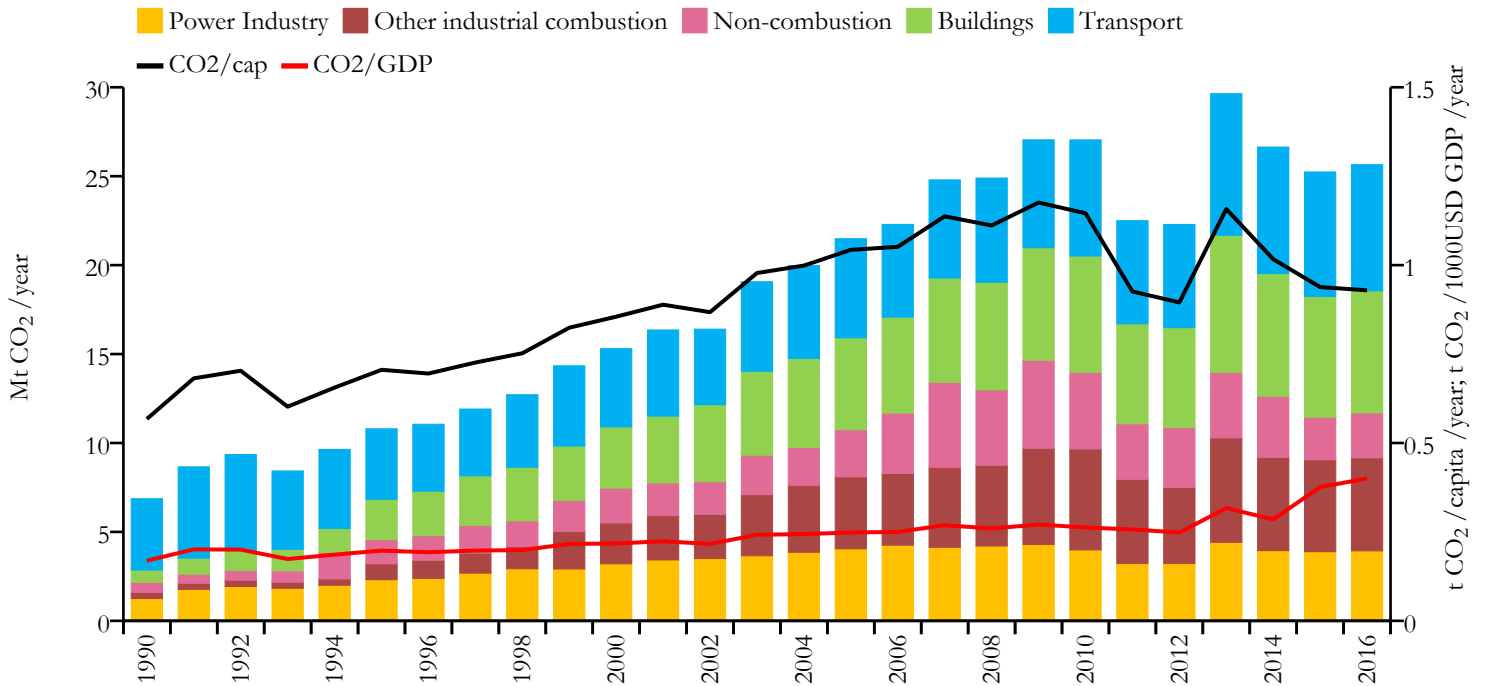


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





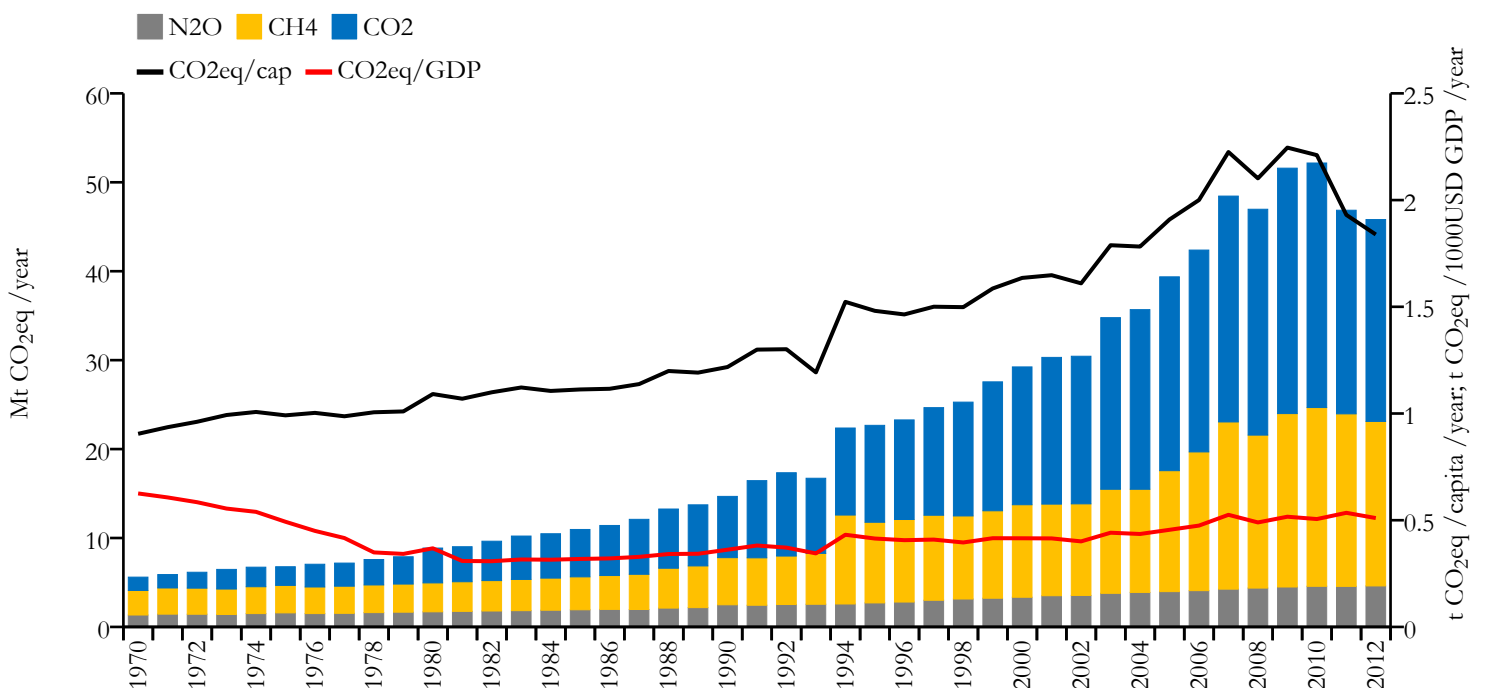
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	25.648	0.929	0.400	27584213
1990	6.867	0.567	0.169	12057039

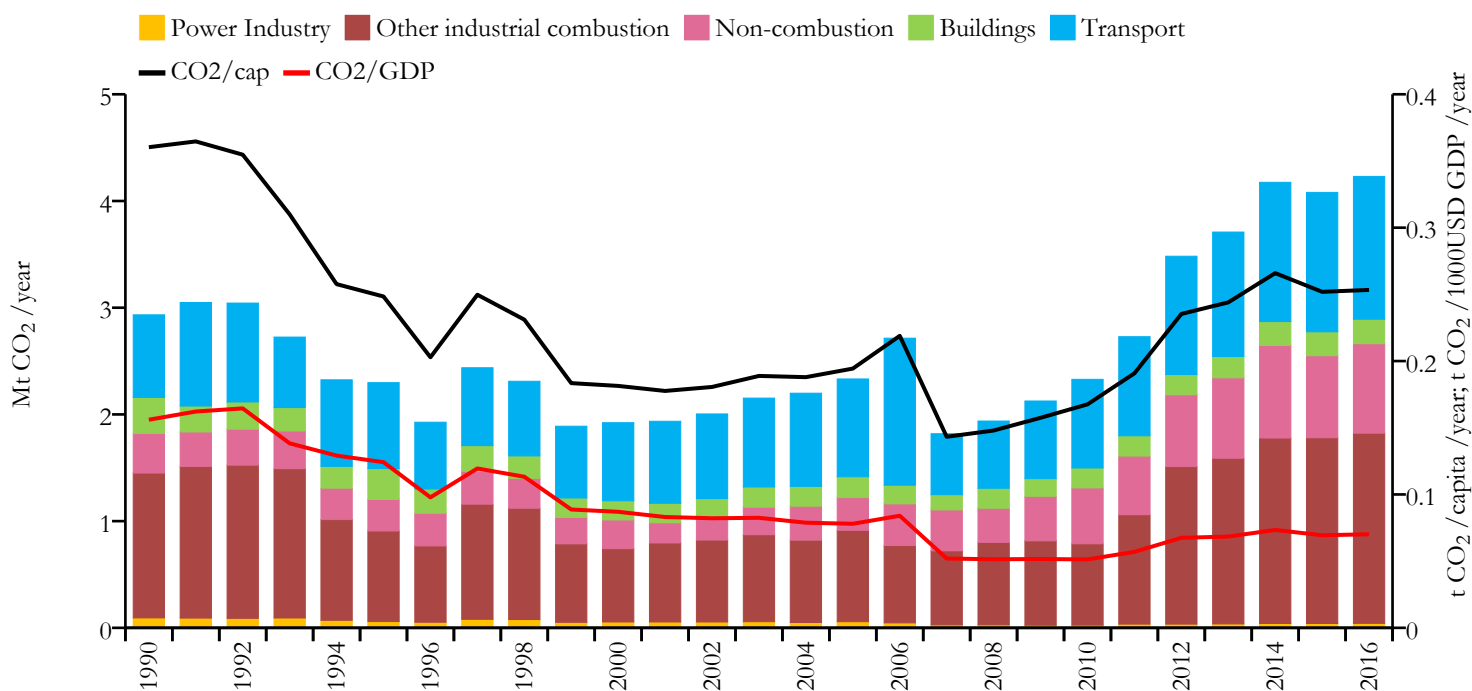


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





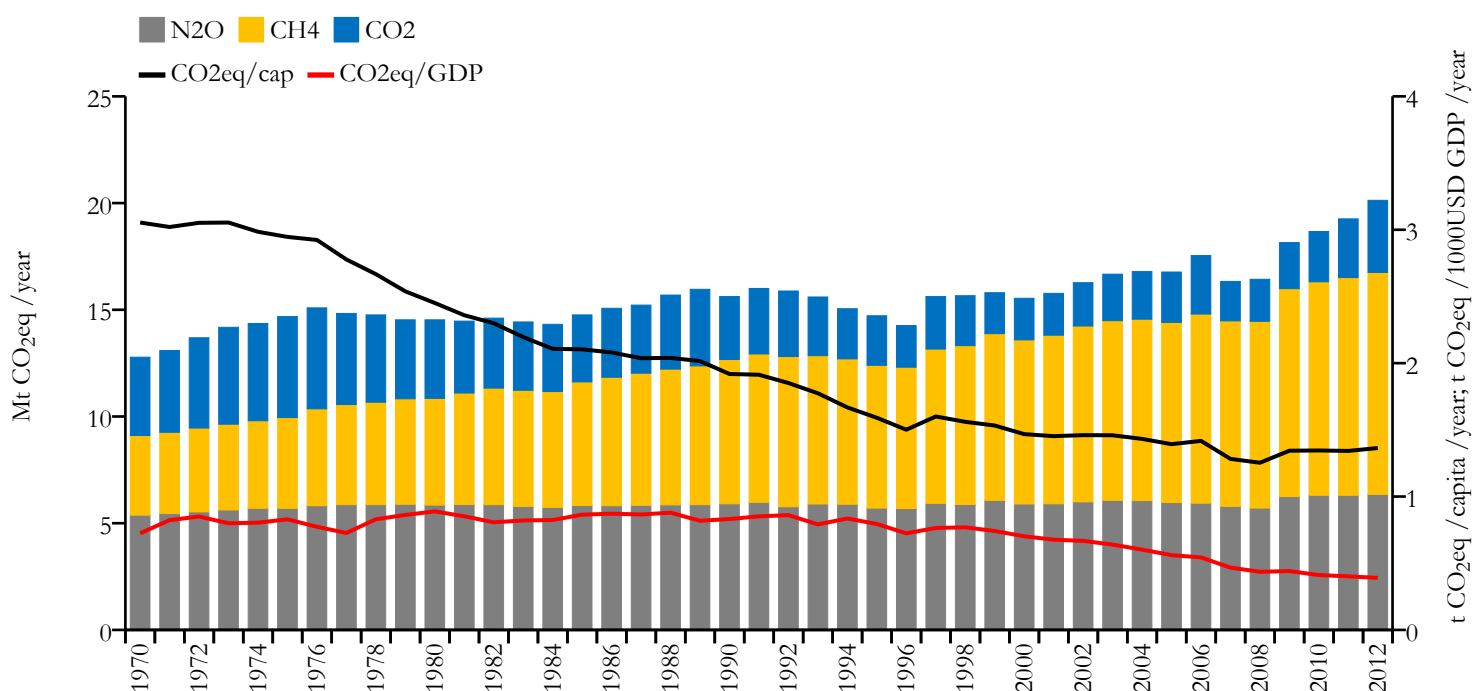
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	4.231	0.253	0.070	16211800
1990	2.933	0.360	0.156	8143140

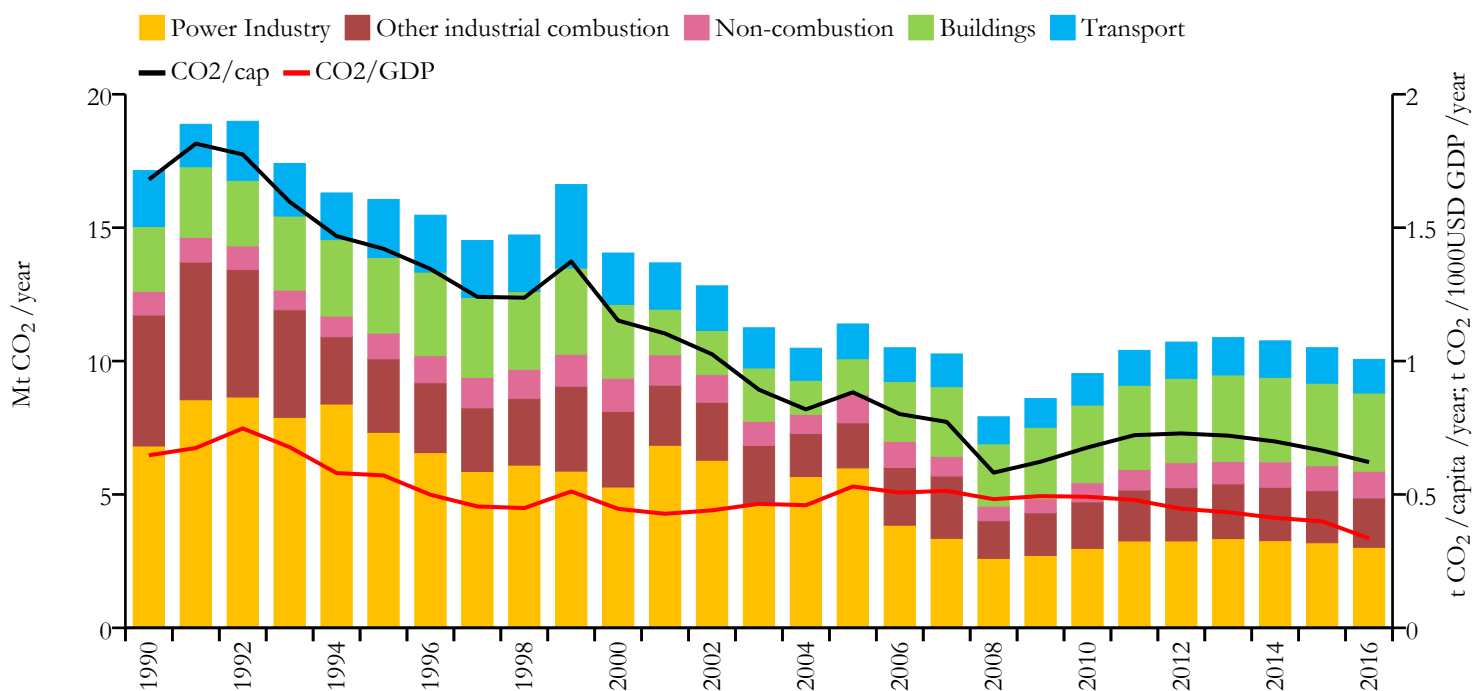


## Greenhouse gas emissions (EDGARv4.3.2 dataset)





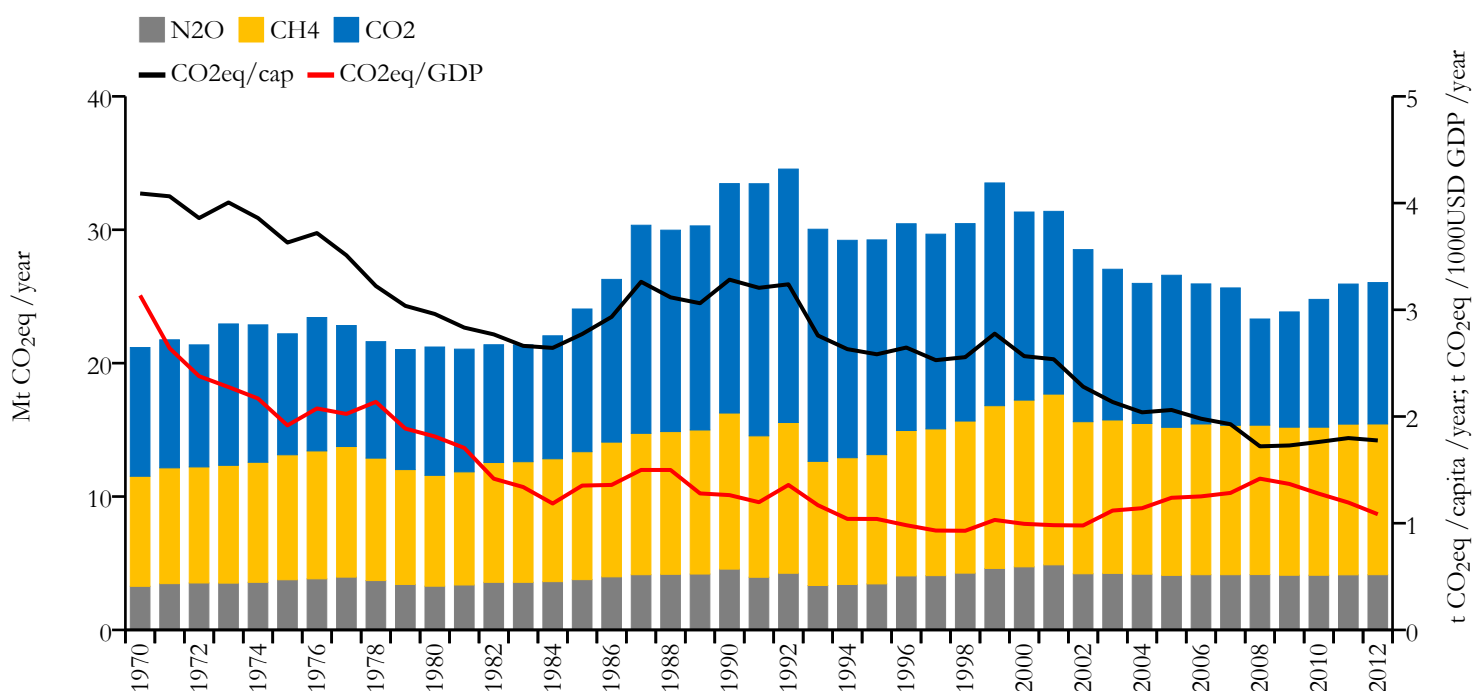
## Fossil CO<sub>2</sub> emissions by sector (EDGARv4.3.2\_FT2016 dataset)



Year	Mt CO <sub>2</sub> /yr	t CO <sub>2</sub> /cap/yr	t CO <sub>2</sub> /kUSD/yr	population
2016	10.063	0.621	0.335	16150362
1990	17.138	1.680	0.647	10183113



## Greenhouse gas emissions (EDGARv4.3.2 dataset)



## Bottom-up Methodology for the Emissions Compilation

The basis for the data time series presented in this report is the EDGAR v4.3.2 database of JRC/PBL, covering the period 1970-2012, documented by Janssens-Maenhout et al. (2017), which applies a consistent bottom-up technology-based emission factor approach for all countries. Emissions per country and compound are calculated on an annual basis and sector wise by multiplying the country-specific activity and technology mix data by country-specific emission factors and reduction factors for installed abatement for each sector. EDGAR v4.3.2 uses international activity data, principally energy balance statistics of IEA (2014, 2016 for China) and agricultural statistics of FAO (2014). For the emission factors the recommendations of the IPCC 2006 guidelines were followed as default and where recommended, region-specific values were applied.

The time series are extended for the period 2013-2016 using relative changes in activity data compared to 2012, reported in recent data sources:

### **For energy:**

for 2012–2014, the IEA (2016) temporal changes are used, whereas the BP Review of World Energy 2017 is used to calculate the relative changes for 2015-2016. For CO<sub>2</sub> emissions from fossil-fuel combustion in China between 2000 and 2012, IEA (2016) is used instead of IEA (2014) because the former includes the significant revisions of coal statistics that China has made for this period. For oil consumption, BP figures are corrected for biofuel (fuel ethanol and biodiesel) which are included in the BP oil consumption data for road transport. For the change in international transport, we apply the reported change in oil consumption per country according to BP for the most contributing countries to global marine and aviation fuel sales.

### **For the fugitive emissions:**

the CO<sub>2</sub> emissions from coke production follow the same relative change as reported for the crude steel production of WSA (2016), while CO<sub>2</sub> flared at oil and gas extraction is based on the total amount of gas flared derived from satellite observation of the intensity of flaring lights for the most important countries (NOAA, 2016) and kept constant from 2014 onwards.

**For non-metallic minerals:**

cement clinker production is calculated from cement production reported by the USGS (2016) and the decreasing clinker-to-cement ratio based on the clinker production data from UNFCCC (2014) for Annex I countries and on the China Cement Almanac (CCA, 2015) for China. For other countries, we use ratios from the Cement Sustainability Initiative of the World Business Council for Sustainable Development. The changes in the lime production from USGS (2016) are applied to extrapolate CO<sub>2</sub> emissions from all other carbonate uses (glass production etc.)

**For the feedstock use for chemicals production:**

ammonia production from USGS (2016) is used, except for urea production, for which data are provided by the International Fertiliser Industry Association IFA, (2016). It is assumed that the small soil liming emissions follow the gross ammonia production trend.

**For the metal industry:**

the largest contribution is from blast furnaces, which in addition to the CO<sub>2</sub> emissions from blast furnace gas combustion accounted under the energy sector, emit also CO<sub>2</sub> from the coke/coal input as reducing agent. Here the crude steel production changes reported by WSA (2016) are used. In addition iron production of WSA (2016) is used for the changes in the production of ferric alloys (accounting for the anode consumption CO<sub>2</sub>). Non-ferrous metals follow the USGS (2014) trend which is kept constant for later years.

**For the other sources:**

indirect CO<sub>2</sub> emissions from consumption of lubricants and paraffin waxes and solvent use, as well as the relatively very small emissions of waste incineration, underground coal fires (mainly in China and India) and oil and gas fires (1992, in Kuwait) are based on EDGAR v4.3.2 and extrapolated under a zero growth assumption.



## Conclusions

The Emissions Inventory for Global Atmospheric Research (EDGAR) is a comprehensive database of anthropogenic emission time series from 1970 until 2016 for CO<sub>2</sub> and until 2012 for the other GHGs. A bottom-up emissions calculation methodology is consistently applied to all countries, demonstrating that inventories can be developed for all countries in a consistent way within the limitations of the quality of the available statistical data. Although most of Annex I countries have a good statistical data infrastructure and regular reporting system to the UNFCCC, EDGAR may provide useful information to countries with less strong statistical data infrastructure for their future inventory requirements. In particular the time series of EDGAR v4.3.2 can complete the emission trends for non-Annex I countries to produce the comprehensive picture needed for the UNFCCC's global stock take of 2023.

EDGAR v4.3.2 provides an important input to the analysis of global GHG trends with its 42 years long time series. Since the beginning of the 21<sup>st</sup> century GHG emissions increased compared to the three decades before, mainly driven by the increase in CO<sub>2</sub> emissions from countries with emerging economies. Conversely, in EU28 the GHG emissions trend is decreasing due to a rather stable CO<sub>2</sub> and a smooth but continuously decreasing CH<sub>4</sub> contribution.

EDGAR v4.3.2 FT2016 revealed that global CO<sub>2</sub> emissions from anthropogenic activities, excluding biomass burning and the land use, land-use change and forestry sector are for the third year in a row plateauing with no further increase to a total of 35.8 Gton CO<sub>2</sub> in 2016. The 0.3% increase in 2016 compared to 2015 is due to the extra day in the leap year of 2016. For the two largest emitting countries and the EU it was observed that CO<sub>2</sub> emissions in the US reduced with 2% in 2016 compared to 2015, but there was a status quo in emissions in China with -0.3% change in 2016 compared to 2015 and in the EU28 with +0.2% change. The EU28 emissions mainly decreased over the past two decades reaching in 2016 a total of 3.4 Gton CO<sub>2</sub>, representing reduction levels of 20.8% compared to 1990 and 17.9% compared to 2005. This yields since 2015 a constant EU share to the global total of 9.6% and an averaged 6.8 ton CO<sub>2</sub>/cap/yr.

Even though the overall global uncertainty in total emissions has increased because of the increasing share of GHG emissions from emerging economy countries, at the European scale the uncertainty has decreased because of the progress in inventory compilation and the decrease in more uncertain CH<sub>4</sub> emissions.

The purpose of the EDGAR database is providing useful information to the scientific and policy communities involved in field of GHG emissions and budget, in the compilation of national inventories, the UNFCCC global stock take, the analysis of co-benefits between air pollution and GHG emission mitigation strategies, the interpretation of satellite data and the understanding of emission uncertainties.

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## List of abbreviations and definitions

AR4 - Fourth Assessment Report of IPCC  
BP -BP plc (energy company; formerly British Petroleum Company plc)  
cap - capita (head)  
CCA - China Cement Association  
CSA - China Statistical Abstract  
CH<sub>4</sub> – Methane, greenhouse gas with GWP-100 = 25 under AR4  
CO<sub>2</sub> - Carbon dioxide  
CO<sub>2</sub>eq - CO<sub>2</sub> equivalent (using the GWP-100 metric of AR4)  
DG CLIMA - Directorate General Climate Action, European Commission  
EC - European Commission  
EDGAR Emissions Database for Global Atmospheric Research  
EIA - Energy Information Administration (of the U.S.)  
EU28 - European Union with 28 Member States  
FT - Fast Track  
GDP - Gross domestic product  
GHG - Greenhouse Gas  
Gt - Gigatonnes (1000 megatonnes = 10<sup>9</sup> metric tonnes)  
GWP-100 - Global Warming Potential over a 100 years period  
IEA - International Energy Agency of the OECD (Paris)  
IFA - International Fertiliser Association  
IMF - International Monetary Fund  
IPCC - Intergovernmental Panel on Climate Change  
ISO - International Organization for Standardization  
JRC - Joint Research Centre of the European Commission  
kUSD - 1000 US Dollar GDP  
LULUCF - Land use, land-use change and forestry  
Mt - Megatonnes (10<sup>6</sup> ton or 1 teragramme) mass of a given (greenhouse gas) substance  
NBSC - National Bureau of Statistics of China  
NOAA - U.S. National Oceanic and Atmospheric Administration  
N<sub>2</sub>O - Nitrous oxide, greenhouse gas with GWP-100 = 298 under AR4  
n/a - Not Available  
OECD - Organisation for Economic Co-operation and Development  
PBL - PBL Netherlands Environmental Assessment Agency  
PPP - Purchasing Power Parity  
t – tonnes (1 ton or 1 megagramme) mass of a given (greenhouse gas) substance  
TPES - Total Primary Energy Supply  
UNFCCC - United Nations Framework Convention on Climate Change  
UNPD - United Nations Population Division  
USD - U.S. Dollar  
USGS - United States Geological Survey  
WSA - World Steel Association

## **Definition of the legends in the fact sheets**

Power Industry - Power and heat generation plants (public & autoproducers)

Other industrial combustion - Combustion for industrial manufacturing and fuel production

Non-combustion – Industrial process emissions & agriculture & waste

Buildings – Non-industrial stationary combustion

Transport – Mobile combustion (road & rail & ship & aviation)

GDP - Gross domestic product corrected for the 2011 purchasing power parity

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