

ASSESSING CLIMATE PROTECTION PERFORMANCE:
G20 COUNTRY PROFILE

European Union



This Country Profile assesses EU's past and present actions to help mitigate climate change, and its Intended Nationally Determined Contribution (INDC) towards future global action. The profile summarises the respective findings of the Climate Change Performance Index (CCPI)ⁱ and Climate Action Tracker (CAT)ⁱⁱ.

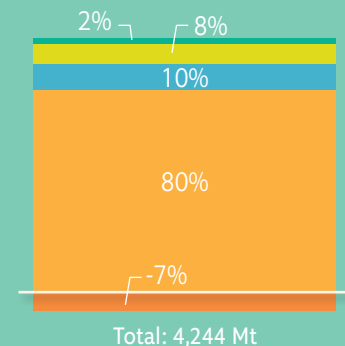
COUNTRY CHARACTERISTICS

KEY INDICATORS*	EU	G20
Population [million]	504	4,587
GDP per capita (PPP) [US\$]	28,064	14,505
Share of global GHG emissions	9.9%	74.2%
Share of global GDP	17.1%	80.3%
Share of global population	7.2%	64.7%
GHG per capita [t CO ₂ e/cap]	8.4	7.2
Energy intensity of the economy (TPES/GDP [MJ/US\$])	4.9	6.6
Carbon intensity of energy supply (CO ₂ /TPES [t CO ₂ /TJ])	50.9	63.1
Carbon intensity of the economy (CO ₂ /GDP [kg CO ₂ /US\$])	0.25	0.42
Share of fossil fuels in primary energy supply	73.4%	83.4%
Share of coal in electricity production	28.1%	35.7%
Share of renewables in primary energy supply	12.4%	11.1%

*year 2012 (unless stated otherwise)
GDP = gross domestic product
GHG = greenhouse gas emissions (net emissions including sinks from agriculture, forestry, and other land uses)
TPES = total primary energy supply
PPP = purchasing power parity in prices of 2005

EMISSIONS AND EMISSIONS TRENDS

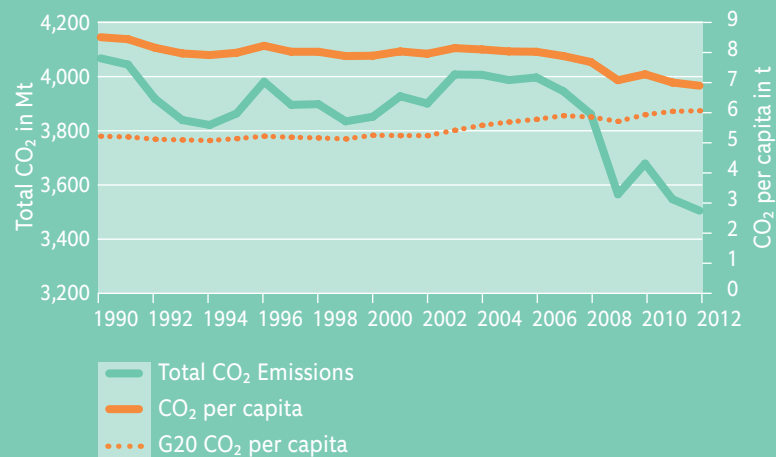
COMPOSITION OF GHG – EU 2012



■ F-Gases
■ N₂O**
■ CH₄**
■ CO₂**
■ CO₂ from LULUCF*

* from Energy & Industry
** including LULUCF

ENERGY-RELATED CO₂-EMISSIONS – EU



Source: UNFCCC 2015

Source: IEA 2014

In 2012, carbon dioxide (CO₂) accounted for some 80% of the EU's total 4,244Mt greenhouse gas (GHG) emissions. Total CO₂ emissions have fluctuated over the assessment period, with peaks in 1996 (3,981.89Mt) and 2003 (4,008.58Mt). Since 2006,

emissions have declined sharply. Overall, the EU reduced its total CO₂ emissions from 4,067.76Mt in 1990 to 3,504.88Mt in 2012. Per capita CO₂ emissions have fallen since 2003, but are still above the G20 average.

CCPI EVALUATION OF THE EU'S EMISSIONS

No CCPI evaluation available.

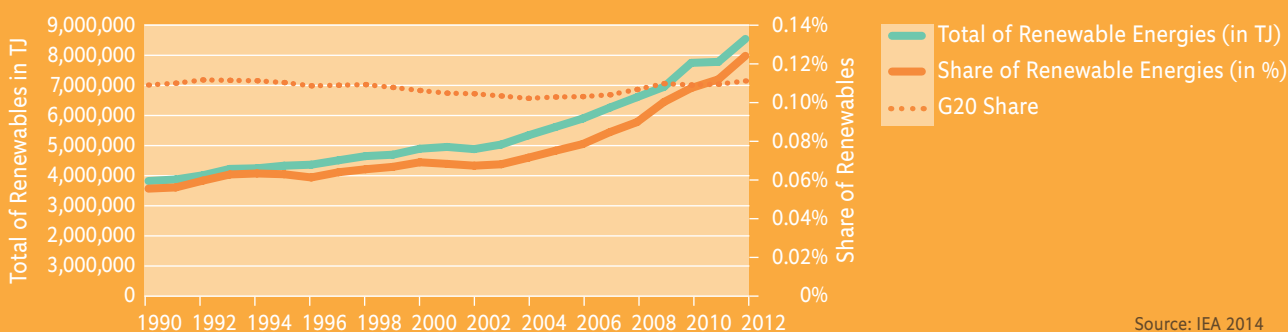
DECARBONISATION

Decarbonisation of the global economy will be a crucial element for staying below the 2°C threshold. Two important steps towards achieving such decarboni-

sation are a shift from fossil fuels to renewable energy sources, and a reduction in carbon and energy intensityⁱⁱⁱ.

RENEWABLE ENERGY

RENEWABLE ENERGY IN THE EU



Source: IEA 2014

The annual supply of renewable energy and its share in all energy production have constantly risen since 1990. Both scores doubled since 1990. In 2011, the

EU's share of renewable energy passed the G20 average of 11%.

CCPI EVALUATION OF THE EU'S RENEWABLE ENERGY

No CCPI evaluation available.

i Climate Change Performance Index is jointly published by Germanwatch and Climate Action Network Europe, a coalition of over 120 member organizations. The Index is 80% based on objective indicators of emissions trend and level, renewable energies and energy efficiency and 20% on national and international climate policy assessments by more than 300 experts from the respective countries. www.germanwatch.org/en/ccpi

ii Climate Action Tracker is an independent scientific analysis produced by four research organizations: Climate Analytics, Ecofys, the Potsdam Institute for Climate Impact Studies and the NewClimate Institute. www.climateactiontracker.org

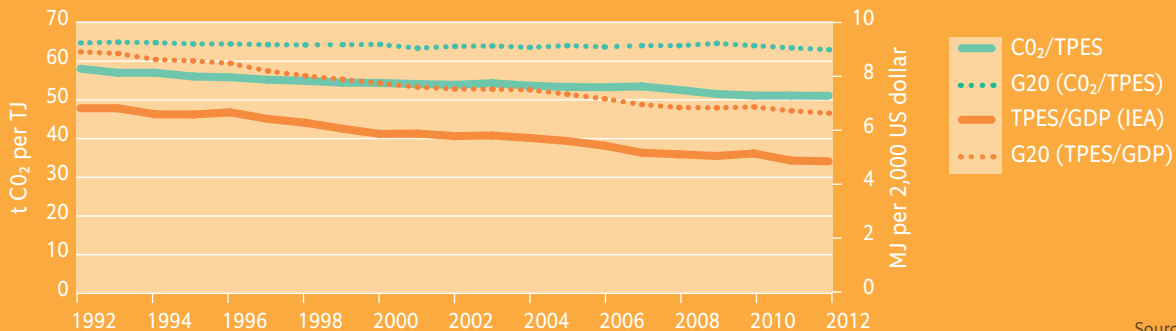
iii Another indicator is energy efficiency. However, energy efficiency is complex to measure, requiring a sector by sector analysis, where comparable data sources across G20 countries are not available at present.

ENERGY- AND CARBON INTENSITY

The measurement of carbon and energy intensity uses macroeconomic data. A country's progress towards decarbonisation is indicated by decoupling of its GDP growth from growth in carbon and energy

intensity. The latter are measured as CO₂ emissions per unit of Primary Energy Supply (CO₂/TPES) and Primary Energy Supply per unit of GDP (TPES/GDP) respectively.

ENERGY- AND CARBON INTENSITY IN THE EU



Source: IEA 2014

The energy intensity of the EU's economy (TPES/GDP) has gradually fallen over the assessment period. The carbon intensity of the energy supply

(CO₂/TPES) has also declined. EU levels of energy and carbon intensity are both below the G20 average.

CCPI EVALUATION OF THE EU'S ENERGY AND CARBON INTENSITY

No CCPI evaluation available.

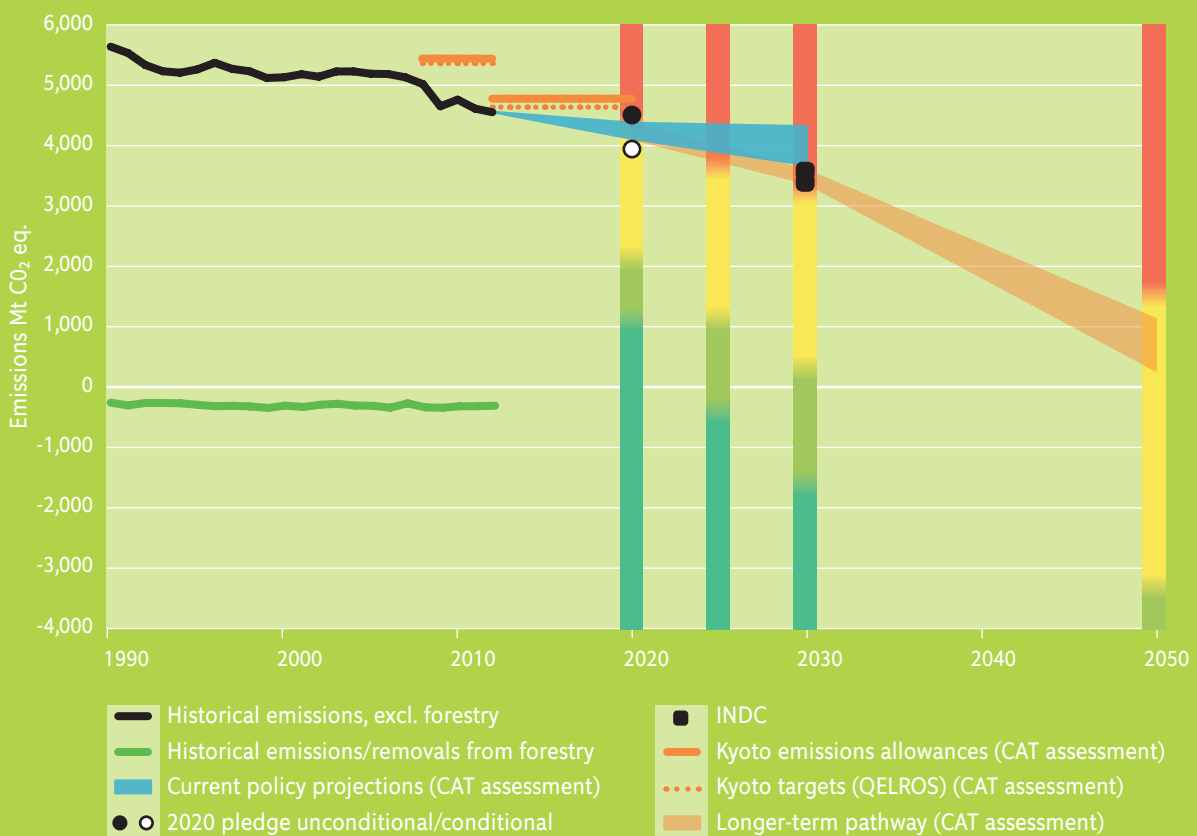
CLIMATE POLICY PERFORMANCE

EVALUATION OF RECENT CLIMATE POLICY

CCPI EVALUATION OF THE EU'S CLIMATE POLICY

No CCPI evaluation available.

COMPATIBILITY OF NATIONAL CLIMATE TARGETS WITH 2°C



Source: © www.climateactiontracker.org/Climate Analytics/Ecofys/ NewClimate/PIK

Under its INDC, the EU proposed on 6 March 2015 a binding, economy-wide target to cut domestic greenhouse gas emissions by at least 40% below 1990 levels in 2030. No individual EU member state has its own INDC, but some countries, such as Germany, may have more ambitious, domestic targets.

The Climate Action Tracker (CAT) rates the EU emissions target as “medium”, meaning that the INDC is not consistent with limiting warming below 2°C. It would require other countries to make a comparably greater effort and much deeper emissions reductions.

The overall level of GHG emissions reductions proposed in the INDC is not yet sufficient to fall within the range of approaches for fair and equitable emission reductions by the EU28. Current policies are projected to reduce domestic emissions by 23–35% below 1990 levels in 2030, and so do not yet put the EU on a trajectory towards meeting either its 2030 or 2050 targets. The EU’s Emissions Trading Scheme is the bloc’s most important instrument to achieve its 2020 and 2030 emissions reduction targets. However, an accumulated surplus of emissions allowances could dilute the 40% GHG target by 7% in 2030. It is therefore important that the EU creates a robust market reserve for eliminating that surplus, to keep in line with the 40% GHG target.

CAT EVALUATION OF THE EU’S INTENDED NATIONALLY DETERMINED CONTRIBUTIONS (INDC)

