

Climate change – international climate regime and politics

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International (UN) regime to fight climate change

- Actors benefit from the discharge of waste (GHGs) into the environment, at a cost to society as a whole.
- Global atmosphere as one of the global commons, the spaces beyond sovereign jurisdiction.
- Integrity of the climate as a „common good“, facing the „tragedy of commons“.
- Climate change as a market failure.
- UNFCCC regime as a tool to govern the climate without global governance (trying to solve the freeriding problem).

International (UN) regime to fight climate change

- Intergovernmental Panel on Climate Change – 1988.
- Rio Summit on Earth – 1992 (UN conference on environment and development)
 - UNFCCC (UN Framework convention on Climate Change) - consensus vs. 180/now 196 parties).
 - Existence of a generally accepted consensus on the climate change as well as the contribution of human activities to this change.
 - Common but differentiated responsibility – groups of countries with different treatment.

International (UN) regime to fight climate change

Noting that the largest share of historical and current global emissions of greenhouse gases has originated in developed countries, that per capita emissions in developing countries are still relatively low and that the share of global emissions originating in developing countries will grow to meet their social and development needs,

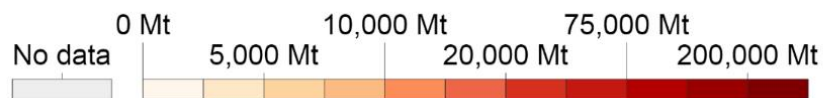
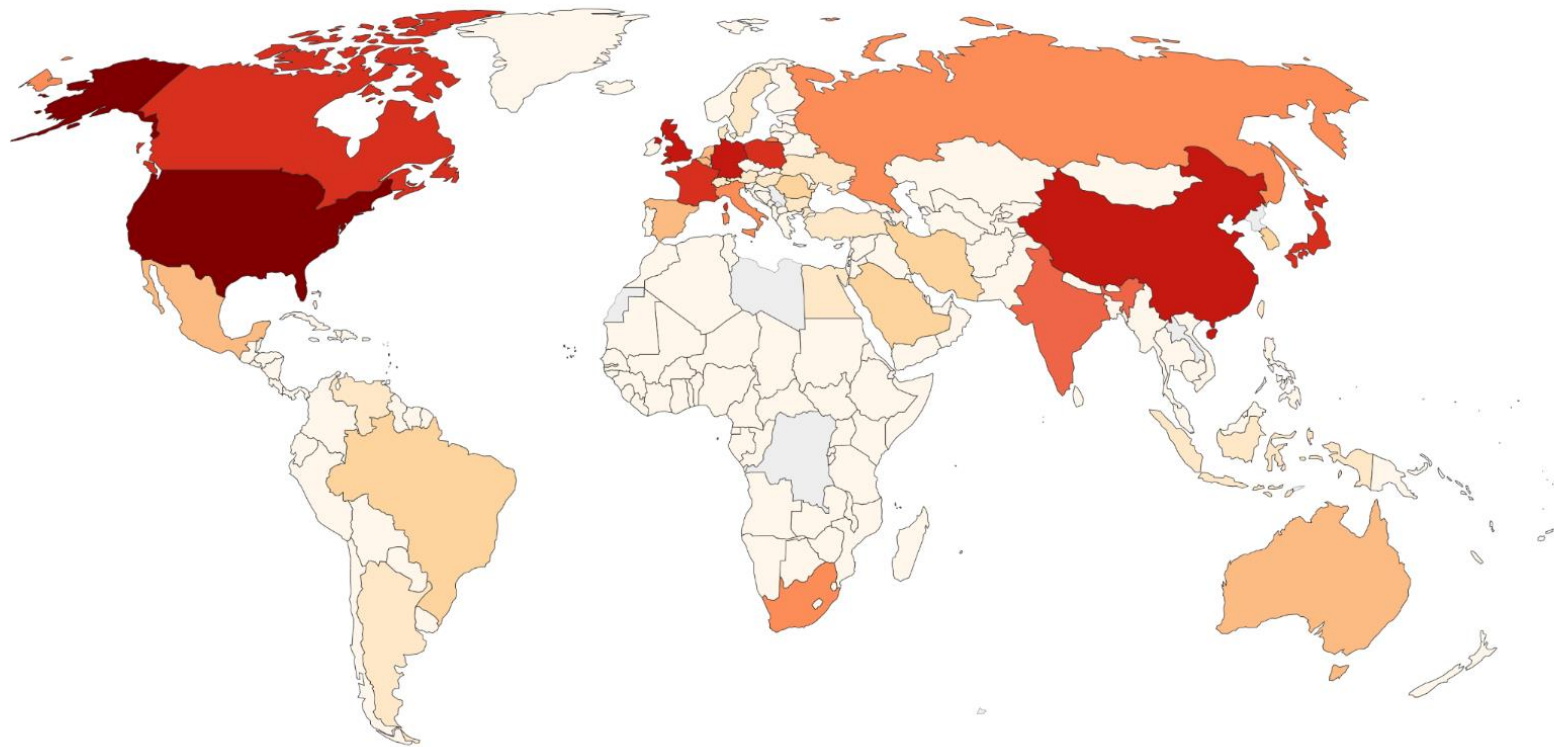
1. The Parties should protect the climate system for the benefit of present and future generations of humankind, on the basis of equity and in accordance with their common but differentiated responsibilities and respective capabilities. Accordingly, the developed country Parties should take the lead in combating climate change and the adverse effects thereof.

Kyoto Protocol

- Approved in 1997, in force 2005.
- 4 GHGs (carbon dioxide, methane, nitrous oxide, sulphur hexafluoride) + hydrofluorocarbons and perfluorocarbons.
- Annex I. countries (37 industrialized countries + EU15), Non-annex I. parties.
- Reduction of GHG emissions by 5,2 % for the first commitment period of 2008-2012. (4,2 % after USA left). Base year 1990.
- Flexible mechanisms – Emission trading, CDM, JI.
- First binding international treaty on climate change mitigation, with enforceable (to some extent) targets and schedule, channeling investments into low-carbon technologies.

Cumulative CO₂ emissions, 1997

Cumulative carbon dioxide (CO₂) emissions represents the total sum of CO₂ emissions since 1751, and is measured in million tonnes.

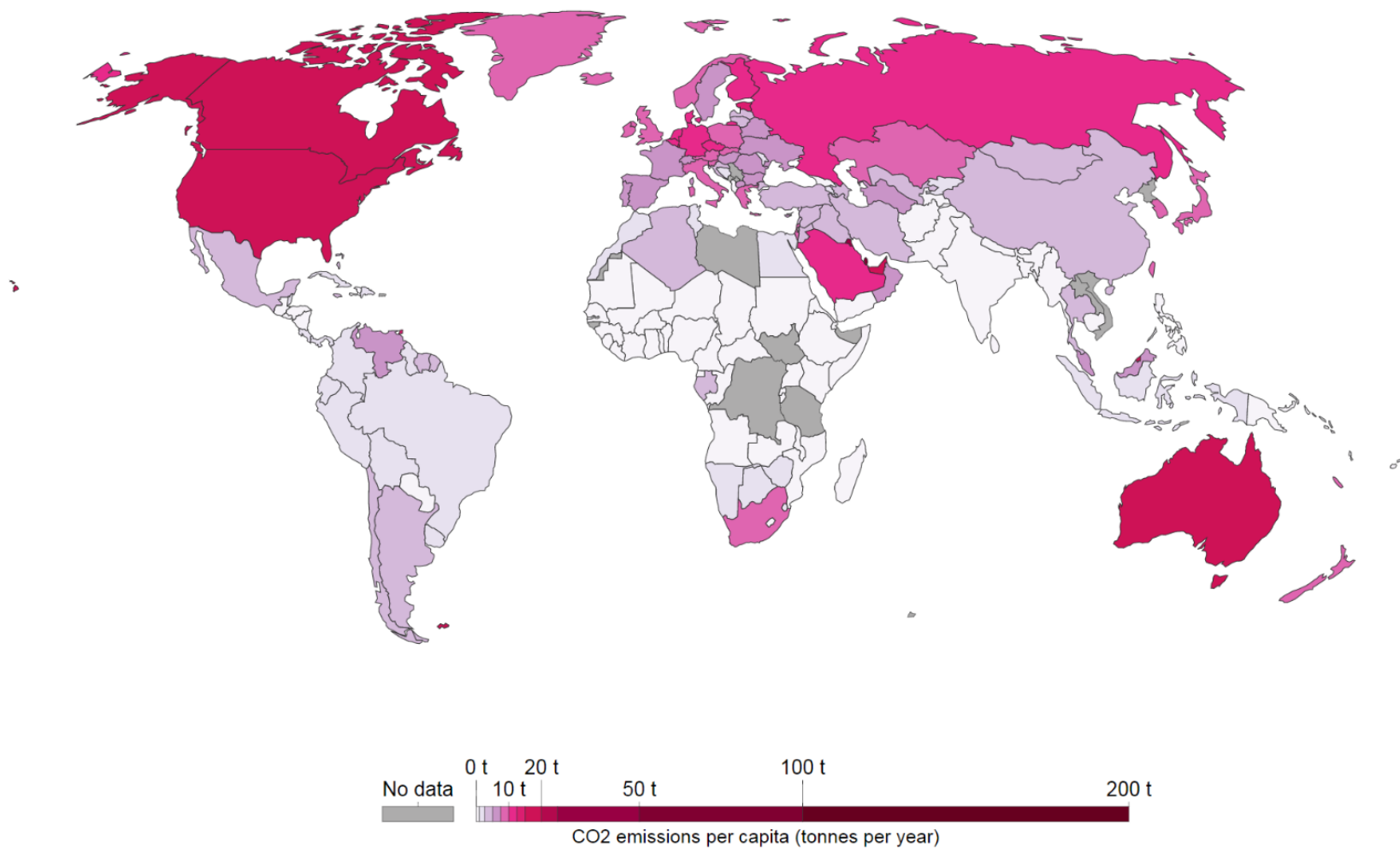


Source: Carbon Dioxide Information Analysis Centre (CDIAC)

OurWorldInData.org/co2-and-other-greenhouse-gas-emissions/ • CC BY-SA

CO₂ emissions per capita, 1997

Average carbon dioxide (CO₂) emissions per capita measured in tonnes per year



Source: CDIAC

OurWorldInData.org/co2-and-other-greenhouse-gas-emissions/ • CC BY-SA

Important Events in International Climate Change Negotiations

Year, Location Outcome

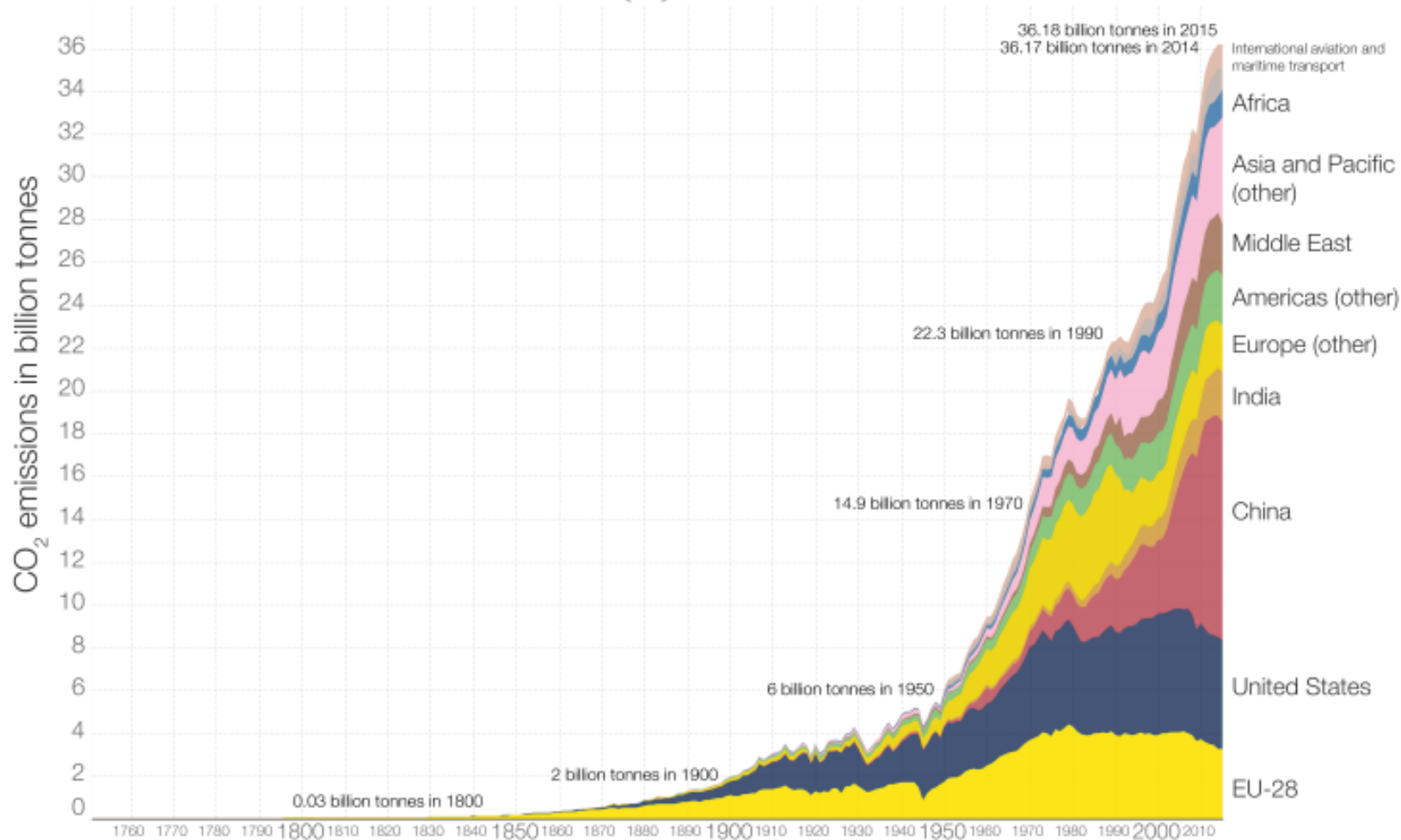
1992, Rio de Janeiro	UN Framework Convention on Climate Change (UNFCCC). Countries agree to reduce emissions with “common but differentiated responsibilities.”
1995, Berlin	The first annual Conference of the Parties to the framework, known as a COP. U.S. agrees to exempt developing countries from binding obligations.
1997, Kyoto	At the third Conference of the Parties (COP-3) the Kyoto Protocol is approved, mandating developed countries to cut greenhouse gas emissions relative to baseline emissions by 2008-2012 period.
2001, Bonn	(COP-6) reaches agreement on terms for compliance and financing. Bush administration rejects the Kyoto Protocol; U.S. is only an observer at the talks.
2009, Copenhagen	COP-15 fails to produce a binding post-Kyoto agreement, but declares the importance of limiting warming to under 2°C. Developed countries pledge \$100 billion in climate aid to developing countries.
2011, Durban	(COP-17) participating countries agreed to adopt a universal legal agreement on climate change as soon as possible, and no later than 2015, to take effect by 2020.
2015, Paris	COP-21 195 nations sign the Paris Agreement, providing for worldwide voluntary actions (INDC's) by individual countries.

Kyoto Protocol results

- In 2012, CO₂ emissions from fuel combustion across all Parties with KP targets were 14% below 1990 levels.
- Some industrialised countries had seen significant increases (Australia +48%), New Zealand (+44%), Spain (+30%).
- Despite extensive participation of 192 countries the KP limited in its potential – U.S. remained outside, developing countries did not have emission targets.
- The KP implied action on less than one-quarter of global CO₂ emissions.
- Flexibility mechanisms of KP has made CO₂ a tradable commodity, and had been a driver for the development of national emission trading schemes.

Global CO₂ emissions by world region, 1751 to 2015

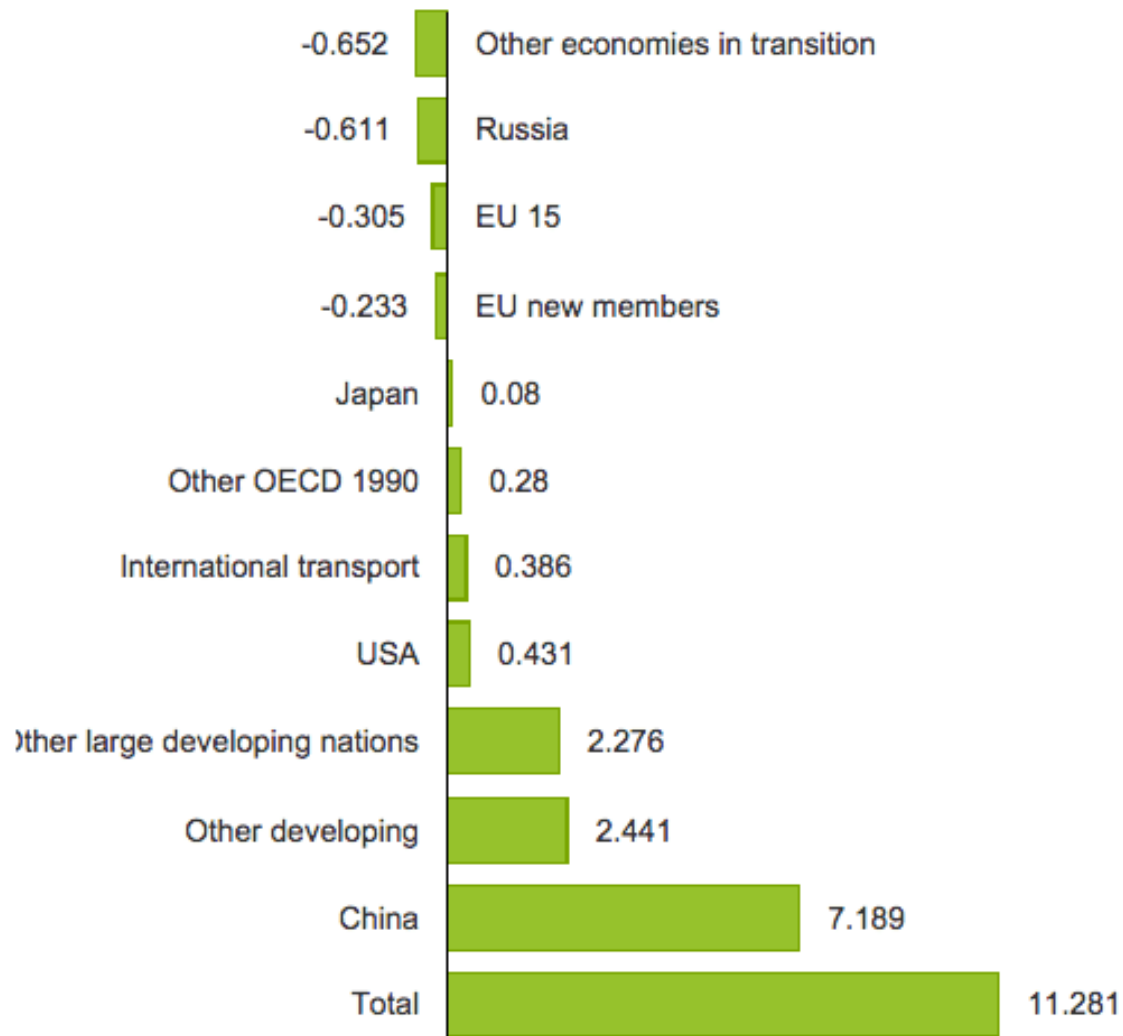
Annual carbon dioxide emissions in billion tonnes (Gt).



Data source: Carbon Dioxide Information Analysis Center (CDIAC); aggregation by world region by Our World In Data.
The interactive data visualization is available at OurWorldInData.org. There you find the raw data and more visualizations on this topic.

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Change in CO2 emissions (GT), 1990 to 2011



Run-up to Copenhagen (COP 15, 2009)

- EU's leadership-by-example approach aims at promoting its ideal vision of the global climate regime relying on enforceable, multilateral based structure.
 - EU's aims at a legally binding agreement (2°C). Global GHG emissions should start falling from 2020 and be reduced by at least 50% by 2050 (reference year 1990).
 - Emission reduction targets for everybody.
 - EU ETS as a model mechanism.

Run-up to Copenhagen (COP 15, 2009)

- Very limited success in bringing China to cooperate on UN climate regime (binding targets, etc.)
- Bush's administration reluctant to acknowledge climate change as a serious issue. More optimism with Obama, but effort to share the knowledge on EU ETS failed.
- India emphasizes equity, historical responsibilities, differentiation, climate finance, technology transfer.

= Apart from the EU major emitters not ready to allow a sovereignty transgression to internationally legally binding targets.

Copenhagen (COP15, 2009)

- Copenhagen Accord – disappointment. EU was sidelined (by U.S. and BASIC), a significant backlash for the EU international climate leadership.

= no binding agreement adopted to replace Kyoto protocol.

Post-Kyoto system

- Second commitment period of KP for 2013-2020 concluded in 2012 (COP 18 in Doha). Belarus, Canada, Japan, New Zealand, Russia, USA and Ukraine missing. Others reduction commitments covering 13% of global GHG emissions at 2010 levels.

Run-up to Paris (COP 21, 2015)

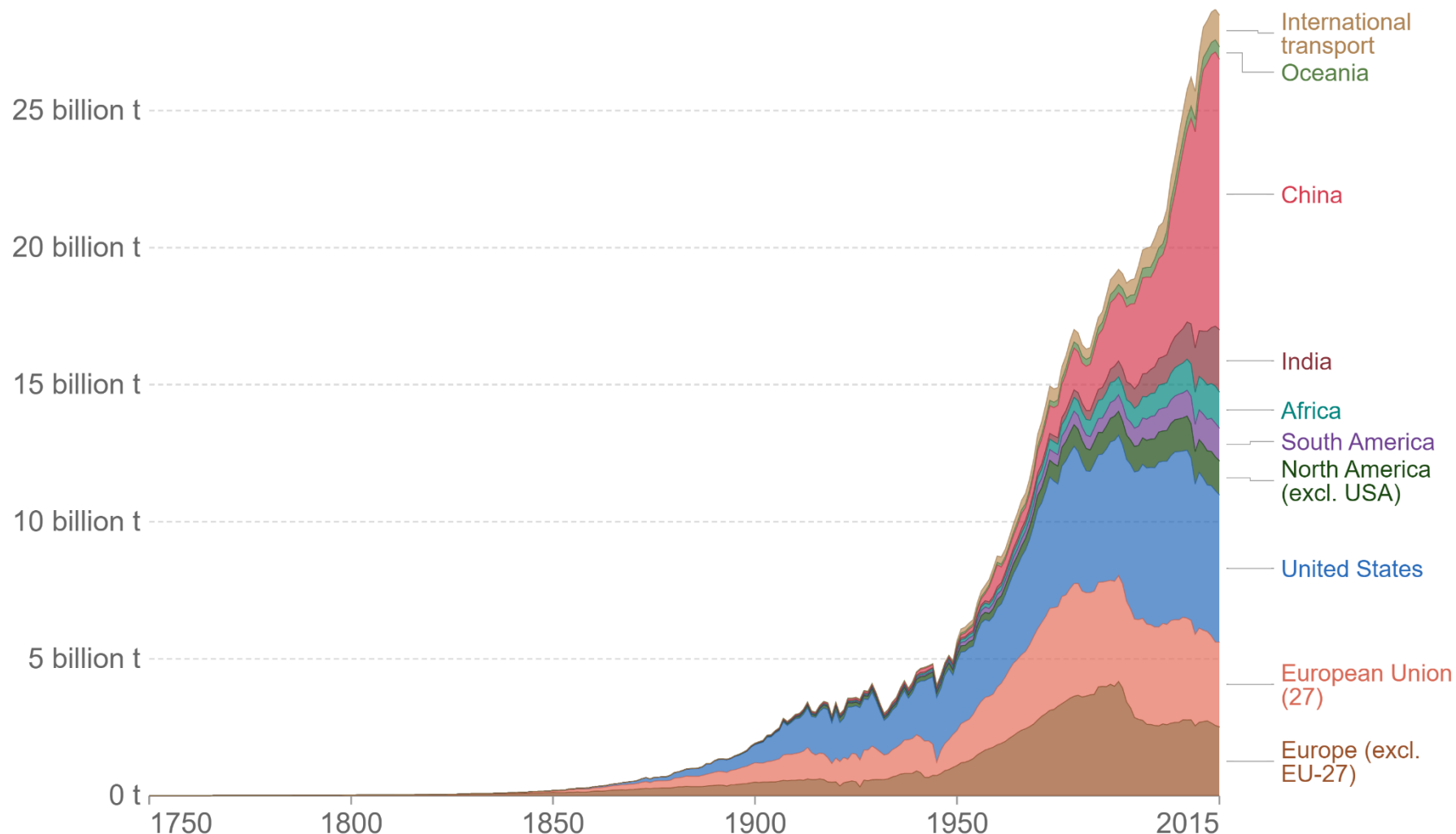
- EU acknowledges China's concern regarding national sovereignty, more focus on bottom-up regime.
- Domestic policy stalemates in the US drives EU to emerging economies (High Ambition Coalition). Communication improved during Obama's second term.
- In China, shift from heavy industry to service- and consumption-led economy, also new president Xi Jinping. China focused on cooperation with US.
- Narendra Modi's more open approach to the issue. Still focus on equity, differentiation and resources to rebuilt the economy. EU putting some pressure on India.
- Both China and India insists on developing-developed countries differentiation.

Run-up to Paris (COP 21, 2015)

- Reconciliation of the position of US-BASIC coalition around the NDC and EU's High Ambition Coalition emphasizing the 2°C goal and robust framework for reviewing the goals in the future.

Annual CO₂ emissions by world region

This measures fossil fuel and industry emissions¹. Land use change is not included.



Source: Our World in Data based on the Global Carbon Project (2022)

OurWorldInData.org/co2-and-other-greenhouse-gas-emissions • CC BY

1. Fossil emissions: Fossil emissions measure the quantity of carbon dioxide (CO₂) emitted from the burning of fossil fuels, and directly from industrial processes such as cement and steel production. Fossil CO₂ includes emissions from coal, oil, gas, flaring, cement, steel, and other industrial processes. Fossil emissions do not include land use change, deforestation, soils, or vegetation.

Paris agreement (COP21)

- Legally binding treaty with reduction commitments from 187 countries starting in 2020. It:
- Reaffirms the 2 degrees goal while urging efforts to limit the increase to 1.5 degrees.
- Establishes binding commitments by all parties to make “nationally determined contributions” (NDCs), and to pursue domestic measures aimed at achieving them.
- Commits all countries to report regularly on their emissions and “progress made in implementing and achieving” their NDCs, and to undergo international review.
- Commits all countries to submit new NDCs every five years, with the clear expectation that they will “represent a progression” beyond previous ones.

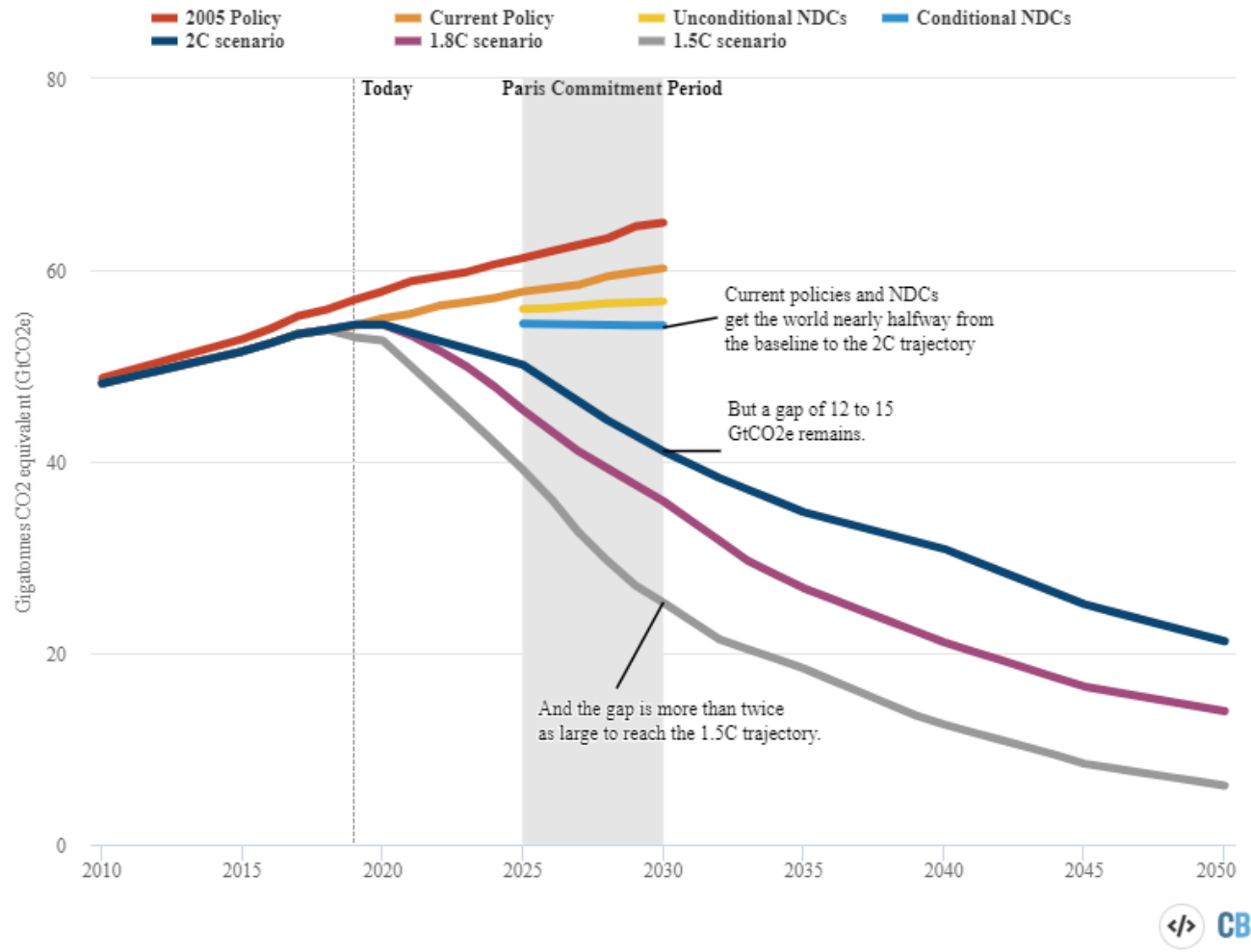
Paris agreement (COP21)

- Reaffirms the binding obligations of developed countries to support the efforts of developing countries, while for the first time encouraging voluntary contributions by developing countries too.
- Extends the current goal of mobilizing \$100 billion a year in support by 2020 through 2025, with a new, higher goal to be set for the period after 2025.
- Extends a mechanism to address “loss and damage”, which explicitly will not “involve or provide a basis for any liability or compensation“.

PA implementation

- China claims to reach net-zero emissions by 2060, increase investments in RES. EU China cooperation (EU-China leaders' Statement on Climate Change and Clean Energy).
- 2017 president Trump announces US withdrawal from the PA (reversed in 2021). The EU-Kanada cooperation fills the void.
- A growing acknowledgement of climate change issue in India's politics.

COP21 pledges vs. BaU scenario

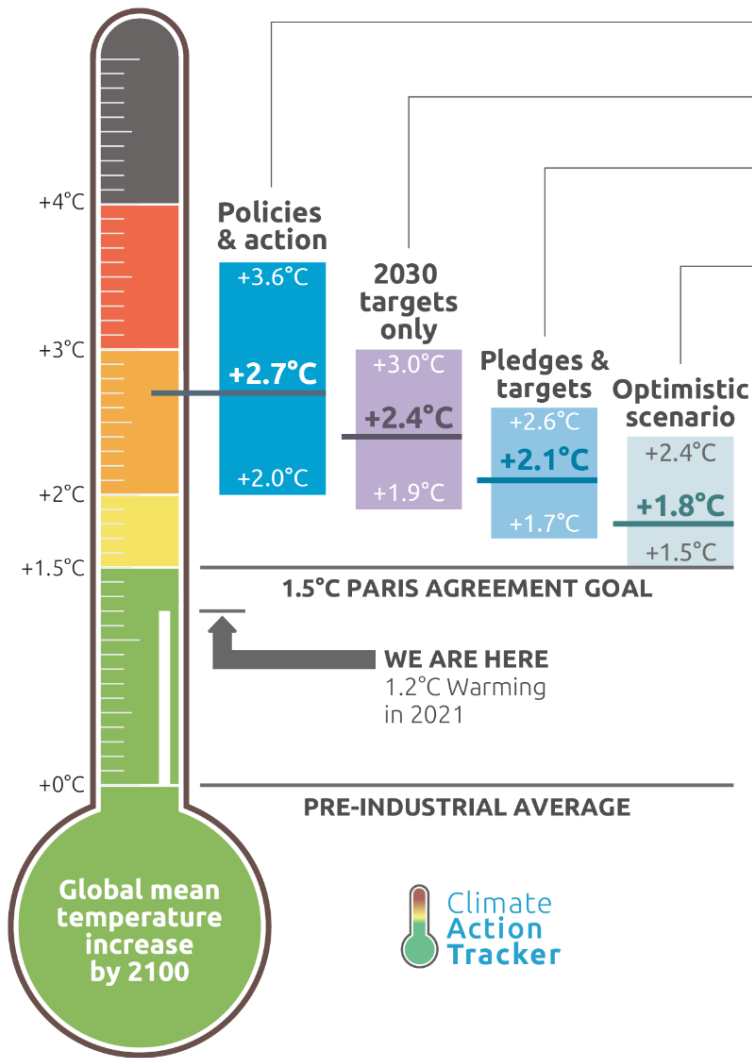


COP26 in Glasgow, 2021

- Poor pledges from some major emitters (Australia, China, SA, Brazil, Russia). Some have ambitious goals with no concrete plans (US).
- Parties expected to make enhanced commitments by the end of 2022 (Ratchet mechanism).
- (Weakened) promise to „phase-down“ coal (CCS?). And fossil fuel subsidies. And methane.
- Article 6 – rules for an international carbon market (as a part of Paris rulebook). Transparency.
- Deforestation promises.
- Climate finance.
- Financial companies aiming at zero portfolios by 2030 (USD130 trillion assets).

Main COP27 topics

- Closing the gap between pledges (should be updated by the end of 2022) and what is needed to stay on 1.5 – 2°C track.
- Climate finance + loss and damage.
- More focus on adaptation.



Policies & action

Real world action based on current policies

2030 targets only

Full implementation of 2030 NDC targets*

Pledges & targets

Full implementation of submitted and binding long-term targets and 2030 NDC targets*

Optimistic scenario

Best case scenario and assumes full implementation of all **announced** targets including net zero targets, LTSs and NDCs*

* If 2030 NDC targets are weaker than projected emissions levels under policies & action, we use levels from policy & action

CAT warming projections Global temperature increase by 2100

November 2021 Update

Loss and damage

„Africa today loses between \$7 billion and \$15 billion a year to climate change. And if things don't change, it will be \$50 billion a year by 2030. Africa doesn't have access to the financing it needs to adapt to climate change and meet nationally determined contributions. By 2030 Africa will need between \$1.3 to \$1.6 trillion.“ - Akinwumi Adesina, President of the African Development Bank.

- Africa's share on global CO₂ emissions – about 3-4% to date (vs. 18% of global population).
- Growing population (nearly 40% in extreme poverty).
- But climate demands (not to pollute) and pressures (loss and damages, mitigation, and adaptation).

Loss and damage

<https://interactive.carbonbrief.org/q-a-should-developed-nations-pay-for-loss-and-damage-from-climate-change/>

3. The Parties accordingly agree as follows:

- (a) The financial burden of loss and damage suffered by the most vulnerable small island and low-lying developing countries (hereinafter referred to as "Group 1 countries") as a result of sea level rise shall be distributed in an equitable manner amongst the industrialized developed countries (hereinafter referred to as "Group 2 countries") by means of a Pool;

Source: 1991 call of the Alliance of Small Island States

Loss and damage

- Compensations vs. insurance
- Existing vs. new (additional) money.

Article 8

1. Parties recognize the importance of averting, minimizing and addressing loss and damage associated with the adverse effects of climate change, including extreme weather events and slow onset events, and the role of sustainable development in reducing the risk of loss and damage.

Source: Paris Agreement

Sources

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