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Limiting global warming: What can we learn from COP24?

December-20, 2018

Overview

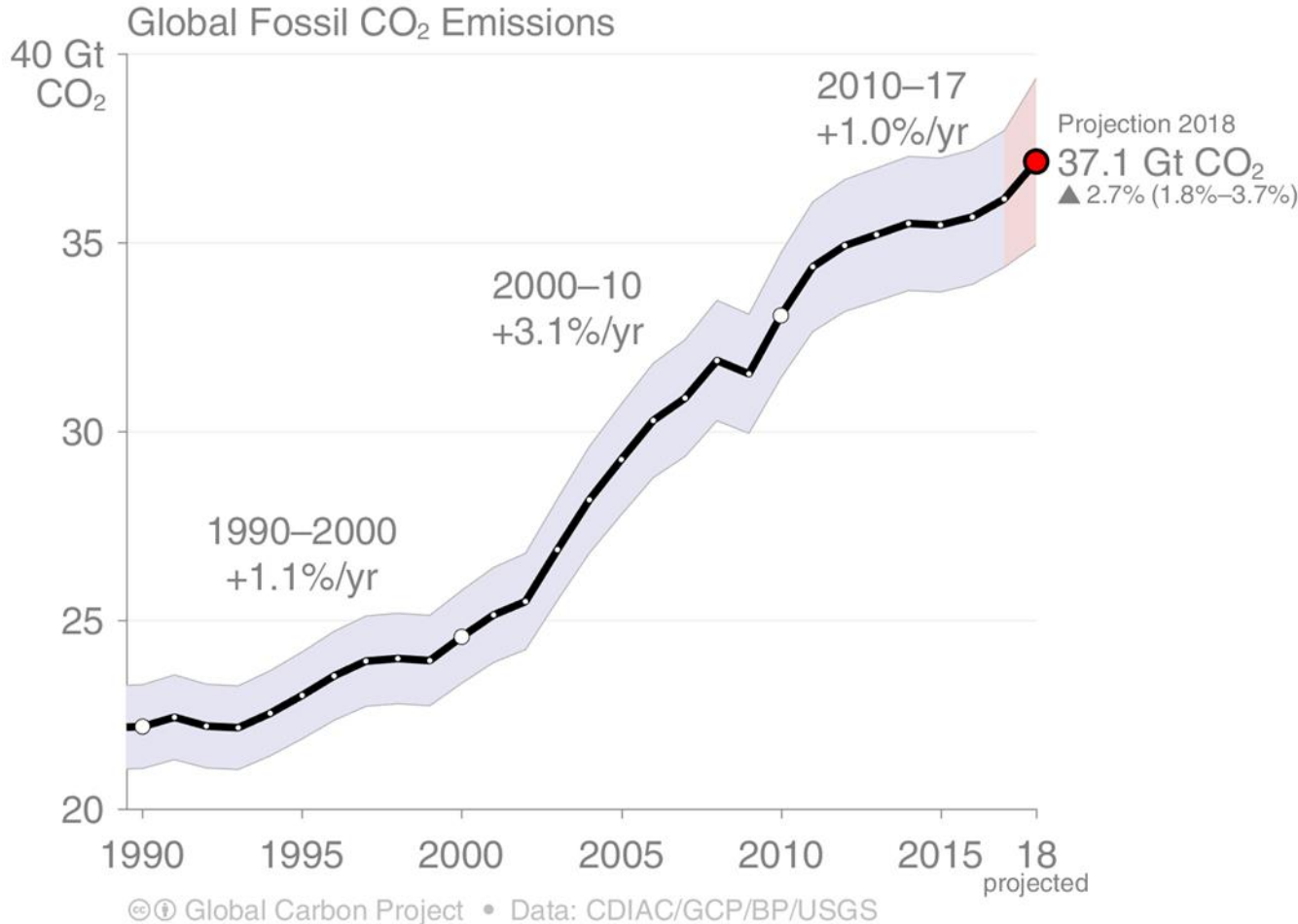


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1. Global emissions
2. ... and climate change impacts
3. 101 history of UNFCCC
4. The road through Paris
5. Katowice: Where, how and why?
6. The “Katowice rule book” ...
7. ... and the “Katowice package”
8. What can we learn from COP24?

Global emissions

CO₂ from fossil fuels



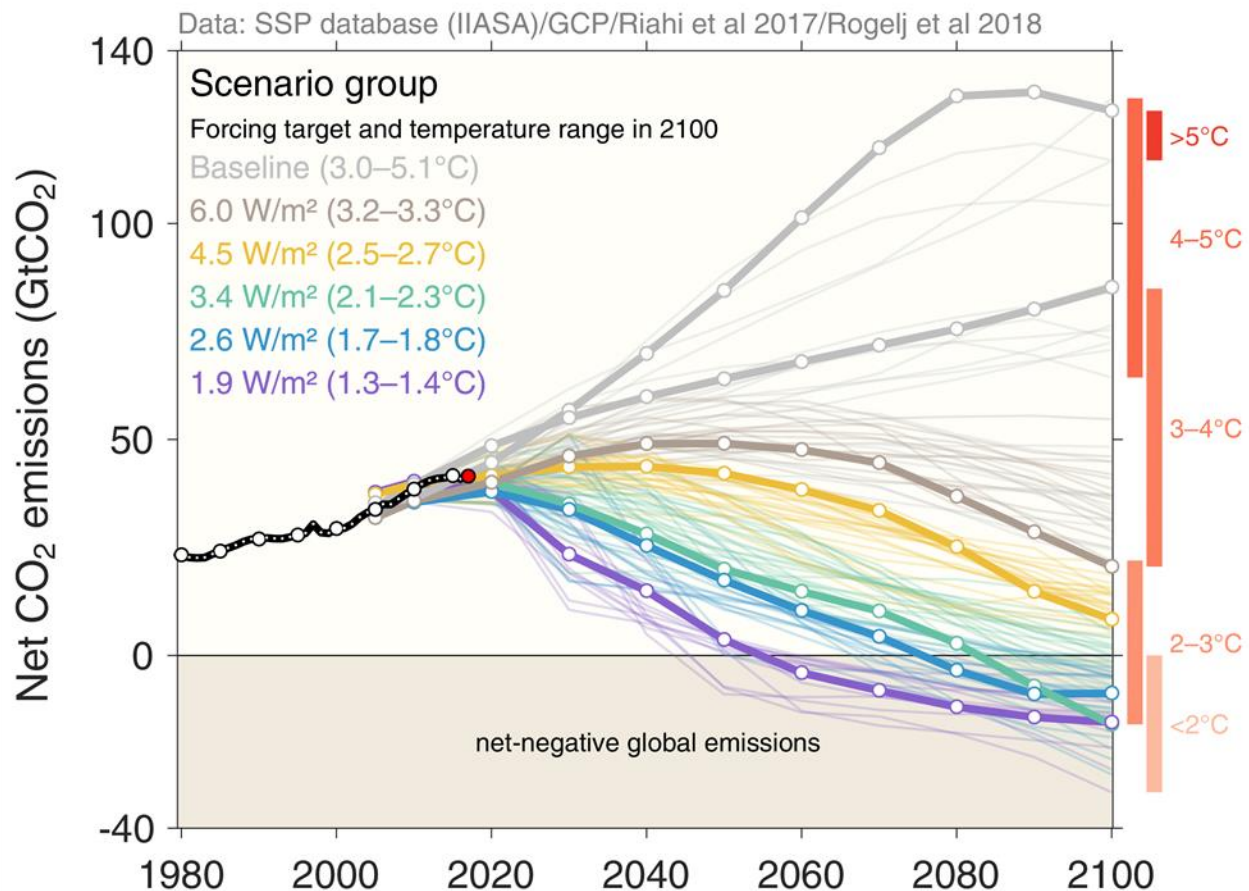
2017:
 Global fossil CO₂ emissions: **36.2 ± 2 Gt**
 63% over 1990
Projection for 2018:
37.1 ± 2 GtCO₂, 2.7% higher than 2017
 (range 1.8% to 3.7%)
 Uncertainty is ±5% for one standard deviation



1 Gigatonne (Gt) = 1 billion tonnes = 1×10^{15} g = 1 Petagram (Pg)
 1 kg carbon (C) = 3.664 kg carbon dioxide (CO₂)
 1 GtC = 3.664 billion tonnes CO₂ = 3.664 GtCO₂

<http://www.globalcarbonproject.org/>
 Source: [Le Quéré et al 2018](#); [CDIAC Data](#)

Worst case scenario



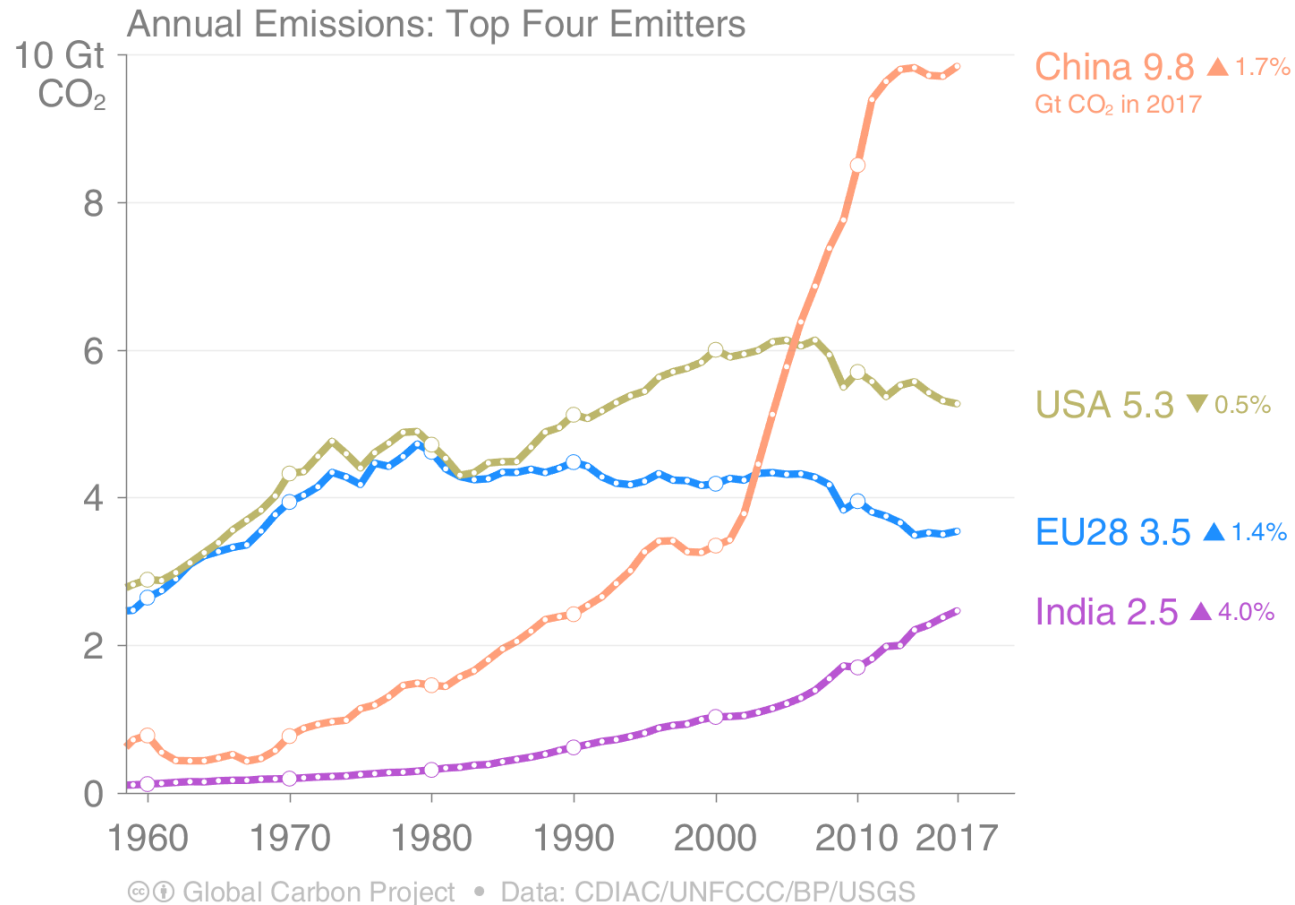
The Shared Socioeconomic Pathways (SSPs) lead to a broad range in baselines (grey), with more aggressive mitigation leading to lower temperature outcomes (grouped by colours)

Net emissions include those from land-use change and bioenergy with CCS.

Source: Riahi et al. 2016; Rogelj et al. 2018; IIASA SSP Database; IAMC; Global Carbon Budget 2018

Top Fossil Fuel Emitters (Absolute)

Top four emitters in 2017 covered $\approx 58\%$ of global emissions
China (27%), United States (15%), EU28 (10%), India (7%)



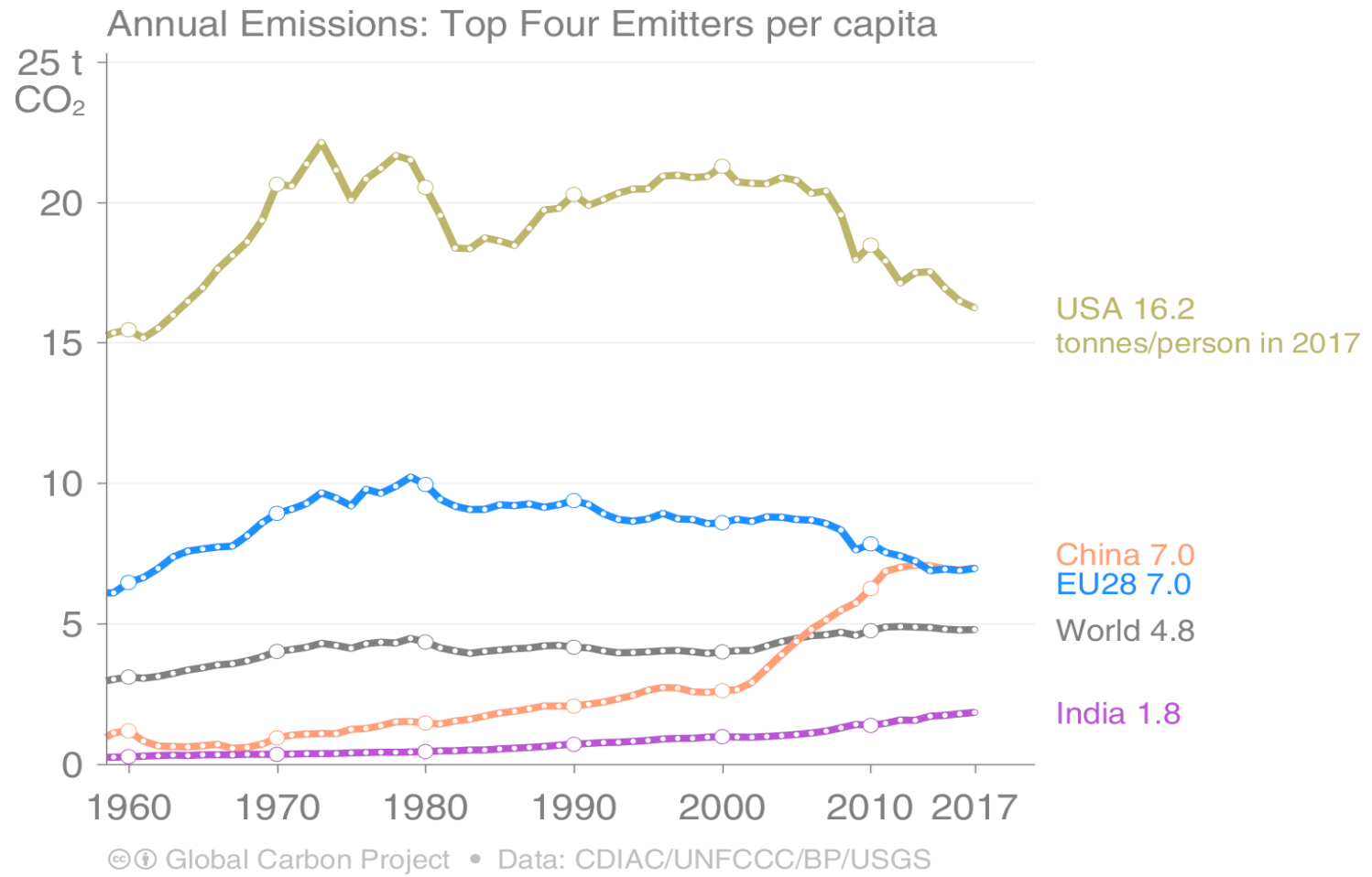
Bunker fuels, used for international transport, are 3.2% of global emissions.

Statistical differences between the global estimates and sum of national totals are 0.7% of global emissions.

Source: CDIAC; Le Quéré et al 2018; Global Carbon Budget 2018

Top Fossil Fuel Emitters (Relative)

Broad range of per capita emissions



Source: [CDIAC](#); [Le Quéré et al 2018](#); [Global Carbon Budget 2018](#)

Fossil CO2 emissions growth: 2016–2017

Emissions in the China, India, and Turkey increased most in 2017
Emissions in USA declined, while all other countries combined increased

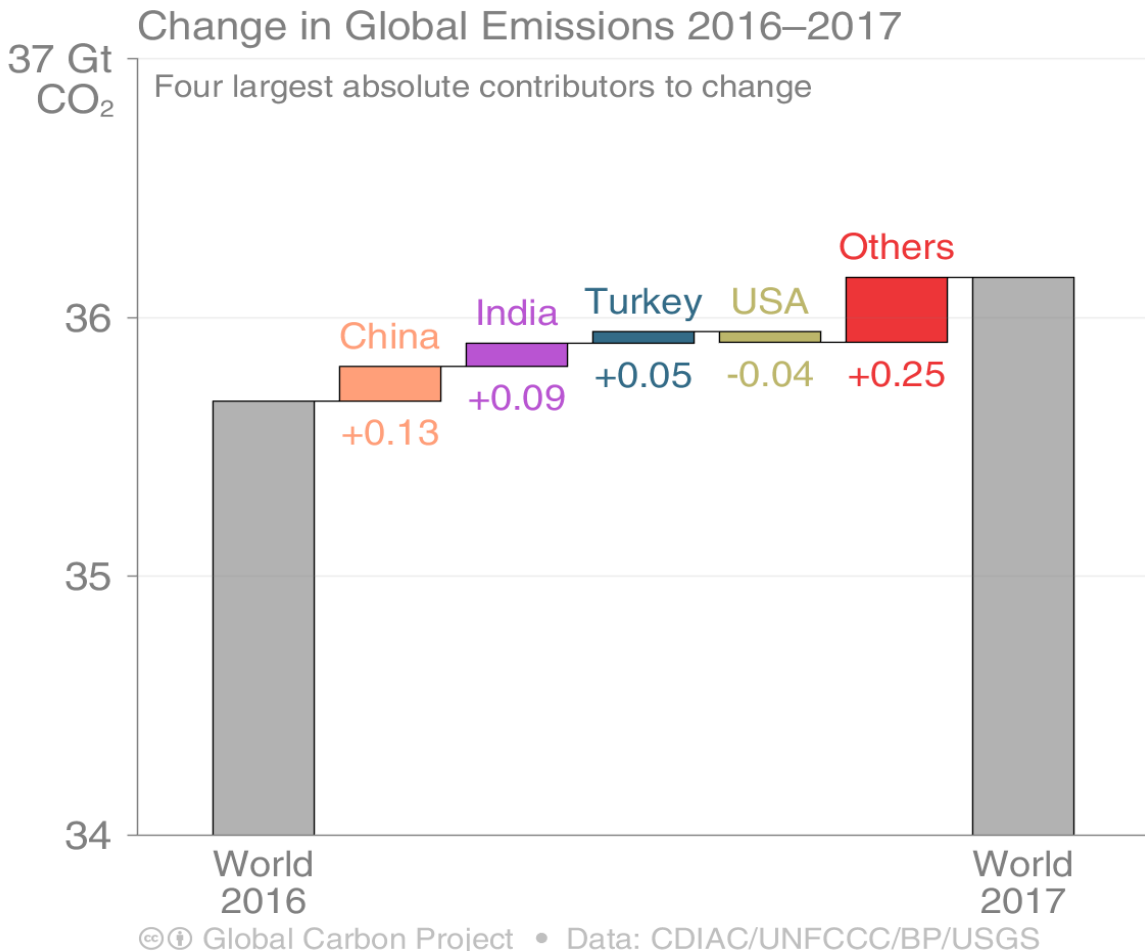
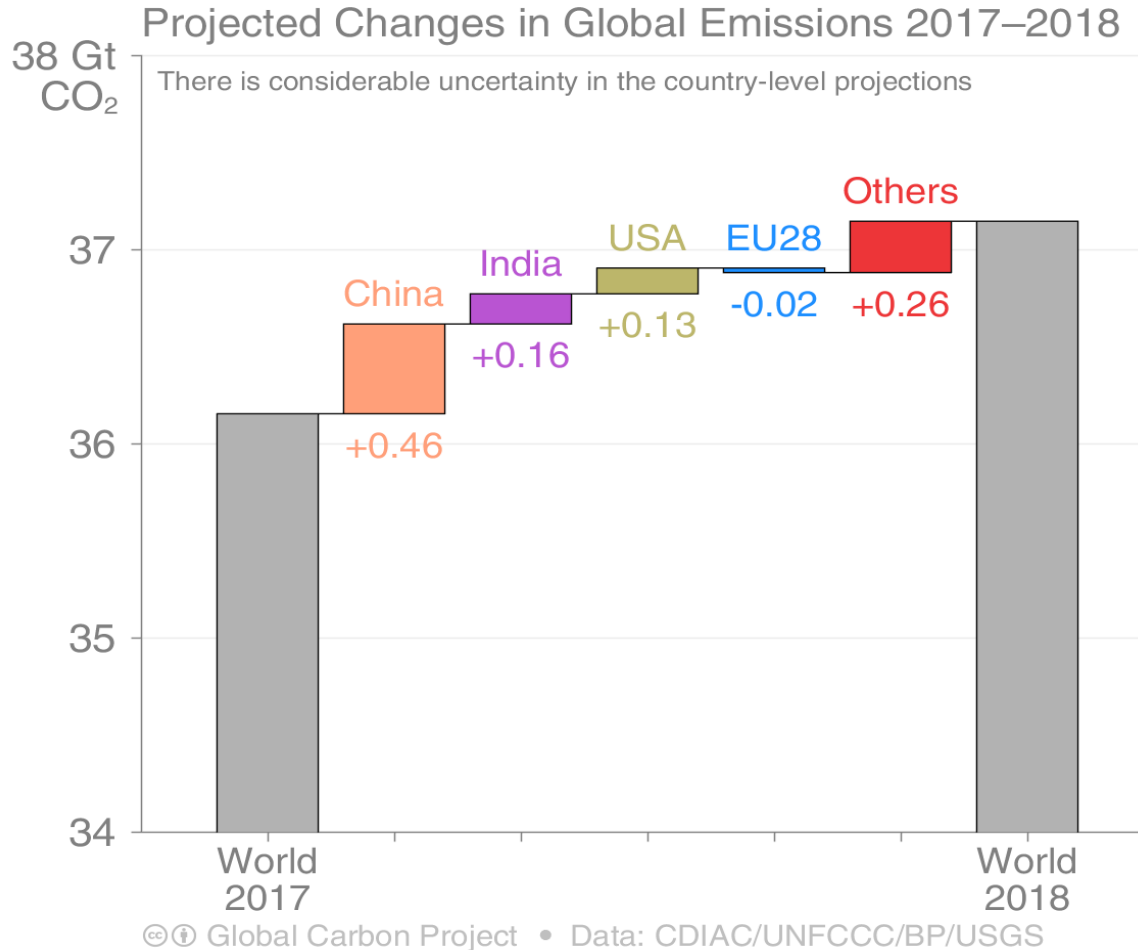


Figure shows the top four countries contributing to emissions changes in 2017
Source: [CDIAC](#); [Le Quéré et al 2018](#); [Global Carbon Budget 2018](#)

Fossil CO₂ emissions growth: 2018 projection

Emissions in China, India, and the US are expected to increase in 2018, while emissions in the EU28 are expected to decline, and all other countries combined will most likely increase



Our projection considers China, USA, EU28, and India independently; Others as aggregated “Rest of World”

Source: [CDIAC](#); [Le Quéré et al 2018](#); [Global Carbon Budget 2018](#)



Our climate change impacts



Polar Regions

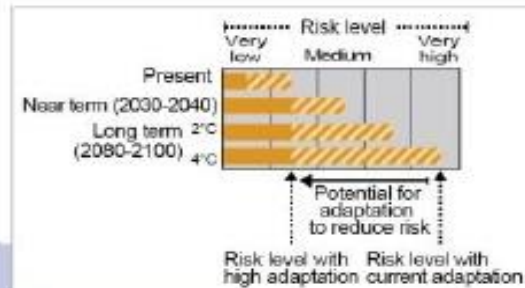
Risks for ecosystems



Risks for health and well-being

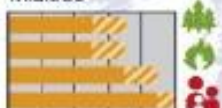


Unprecedented challenges, especially from rate of change



North America

Increased risks from wildfires



Heat-related human mortality



Damages from river and coastal urban floods



Europe

Increased flood losses and impacts



Increased water restrictions



Increased losses and impacts from extreme heat events

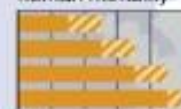


Asia

Increased flood damage to infrastructure, livelihoods, and settlements



Heat-related human mortality



Increased drought-related water and food shortage



The Ocean

Distributional shift and reduced fisheries catch potential at low latitudes



Increased mass coral bleaching and mortality



Coastal inundation and habitat loss



Central and South America

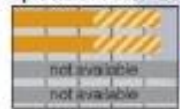
Reduced water availability and increased flooding and landslides



Reduced food production and quality

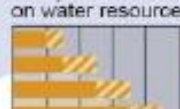


Spread of vector-borne diseases



Africa

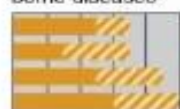
Compounded stress on water resources



Reduced crop productivity and livelihood and food security



Vector- and water-borne diseases



Small islands

Loss of livelihoods, settlements, infrastructure, ecosystem services, and economic stability



Risks for low-lying coastal areas



Australasia

Significant change in composition and structure of coral reef systems



Increased flood damage to infrastructure and settlements



Increased risks to coastal infrastructure and low-lying ecosystems



Physical Systems



Glaciers, snow, ice, permafrost



Rivers, lakes, floods, drought



Coastal erosion, sea level effects

Biological Systems



Terrestrial ecosystems



Wildfire



Marine ecosystems

Human & Managed Systems



Food production



Livelihoods, health, & economics

Future key risks and potential for risk reduction

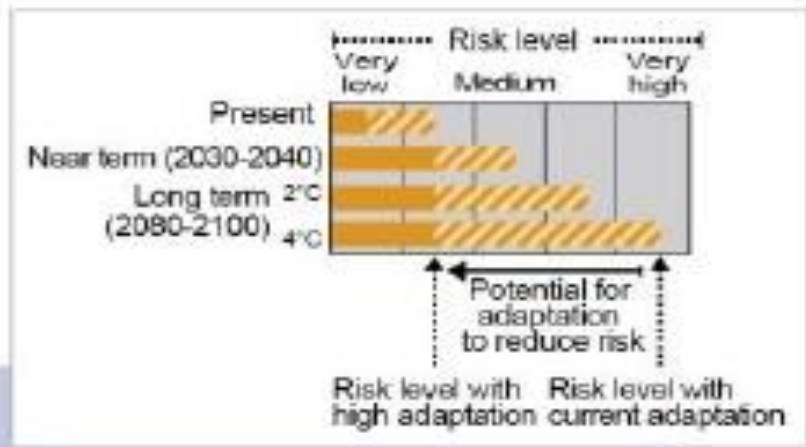
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Increased flood losses and impacts



Increased losses and impacts from extreme heat events

Increased water restrictions

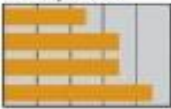




Small Island Developing States (**SIDS**) form the **AOSIS** (Alliance of Small Island State)

Polar Regions

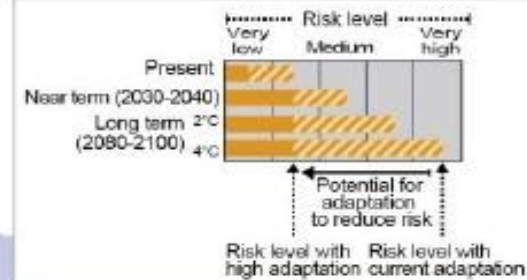
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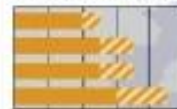


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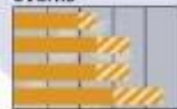
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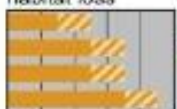
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Coastal inundation and habitat loss



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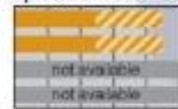
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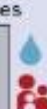
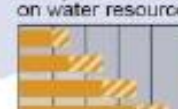


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Livelihoods, health, & economics

COP21 „expressed appreciation“ for IPCC AR5 and called for IPCC SR1.5 (UNFCCC mandate!)



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History of UNFCCC

3. History of international climate negotiations

1992

1. UN-Framework Convention on Climate Change

- Stabilizing atmospheric concentrations of GHGs to avoid “dangerous anthropogenic interference” with the climate system (Art. 2, UNFCCC)
- Principle of common but differentiated responsibilities (CBDR, Art. 3, UNFCCC)

1997

2. Kyoto-Protocol

- Legally binding commitments of 37 developed countries (Annex B) to emissions reductions of 6 GHGs until 2012 (EU: -8% until 2012 cp. 1990)

2009

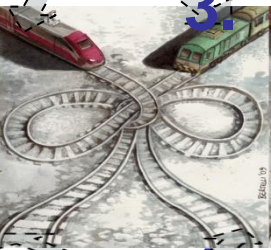
3. (H)openhagen

- 2°C-goal (1.5°C?)
- Scaled up, new funding (\$30 bill from 2010-2012, \$100 bill p.a. by 2020)

2015

4. Paris Agreement

- 2°C-goal (1.5°C?) and Green Climate Fund
- Nationally Determined Contributions (NDCs) (Art. 4, PAWP = “Rule book”)
- (Common) Accounting Framework(s) & Global stock take (Art. 4, PAWP)
- Ratcheting & Transparency Mechanism (Art. 13, PAWP)





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4. The road through Paris

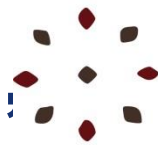
Ratcheting and Transparency Mechanisms



No sanctions *but* „**Naming & Shaming**“ (Bottom-Up!)

Transparency regime: Monitoring based on a (flexibly) Unified Reporting System

2016/2017:



TALANOA DIALOGUE

FOR CLIMATE AMBITION



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The **Talanoa Dialogue** is a process designed to help countries implement and enhance their Nationally Determined Contributions by 2020. The Dialogue was mandated by the Parties to the United Nations Framework Convention for Climate Change to take stock of the collective global efforts to reduce the emissions of greenhouse gases, in line with the goals of the Paris Agreement, which is to limit the rise in average global temperature to 2°C above pre-industrial levels, and to pursue efforts to limit the increase to 1.5°C.

The **Talanoa Dialogue** was launched at COP 23 under the Presidency of the Republic of Fiji (Bonn/Fiji), and is a year-long process that will culminate in political discussions at COP 24 in Katowice, Poland, where political leaders will be expected to signal their commitment to increasing the ambition of their NDCs. ([Source: Wikipedia | Talanoa Dialogue](#))

Talanoa is a traditional word used in Fiji and across the Pacific to reflect a process of inclusive, participatory and transparent dialogue. The purpose of Talanoa is to share stories, build empathy and to make wise decisions for the collective good. The process of Talanoa involves the sharing of ideas, skills and experience through storytelling ([Source: 2018 Talanoa Dialogue Platform](#))

2017/2018: Road map to Katowice



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Important Dates

Preparatory Phase

Political Phase

Online Platform Launches
and Submissions Open

26
January

May Sessions

30–10
April May

Potential
Extra Session

Deadline for the submission
of inputs for discussions in
conjunction with COP24.

29
October

COP24

3–14
December



2
April

Deadline for the submission
of inputs for discussions in
conjunction with the May Sessions.

8
October

IPCC 1.5 Report

23–24
October

Pre-COP24

Synthesis
Report

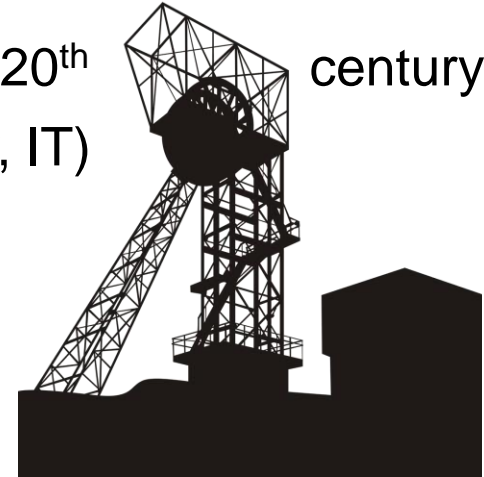


Source: Presidency Releases Guidance for Parties on Talanoa Dialogue Inputs

5. Katowice: Where, how & why?

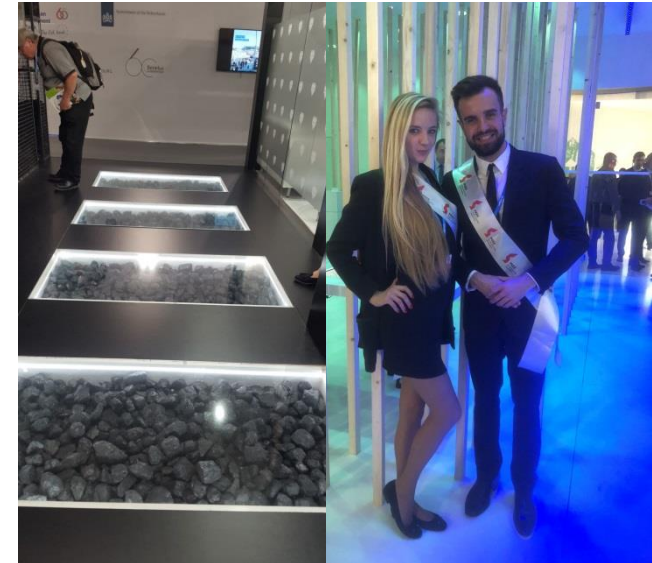


- Katowice – capital city of Silesian region in southern Poland
- Long history as a coal mining and steel centre since the early 20th
- Undergoing painful structural change (→ Smart grid, eMobility, IT)



- City chosen as a “transition city”
- National Polish government used the city as proof for its claim that the coal industry and sustainable development are not mutually exclusive
- Most interviewees complained about the air quality when asked about the conference
- Visible street protest was limited by recently passed laws which prohibited spontaneous gatherings





- Less than 20.000 participants
- COP-conferences are complex “worlds” (COP negotiations, national initiatives, exhibitions, side events, etc.)
- Dominating narrative seems to oscillate between awareness of urgency of enhanced ambition and a “corporate” optimism of political progress
- Conference location strategically selected by host country
- But negotiations seemed much detached from the city
- Conference sponsoring by the coal sector made the strategy of the Polish government somewhat dubious
- > **National Initiative: “Silesia Just Transition Declaration” succeeded to the “Kattowice package” though; was adopted by acclamation of 45 countries’ representatives**
- > **Polish president, Andrzej Duda, Dec-16: SUCCESS!**

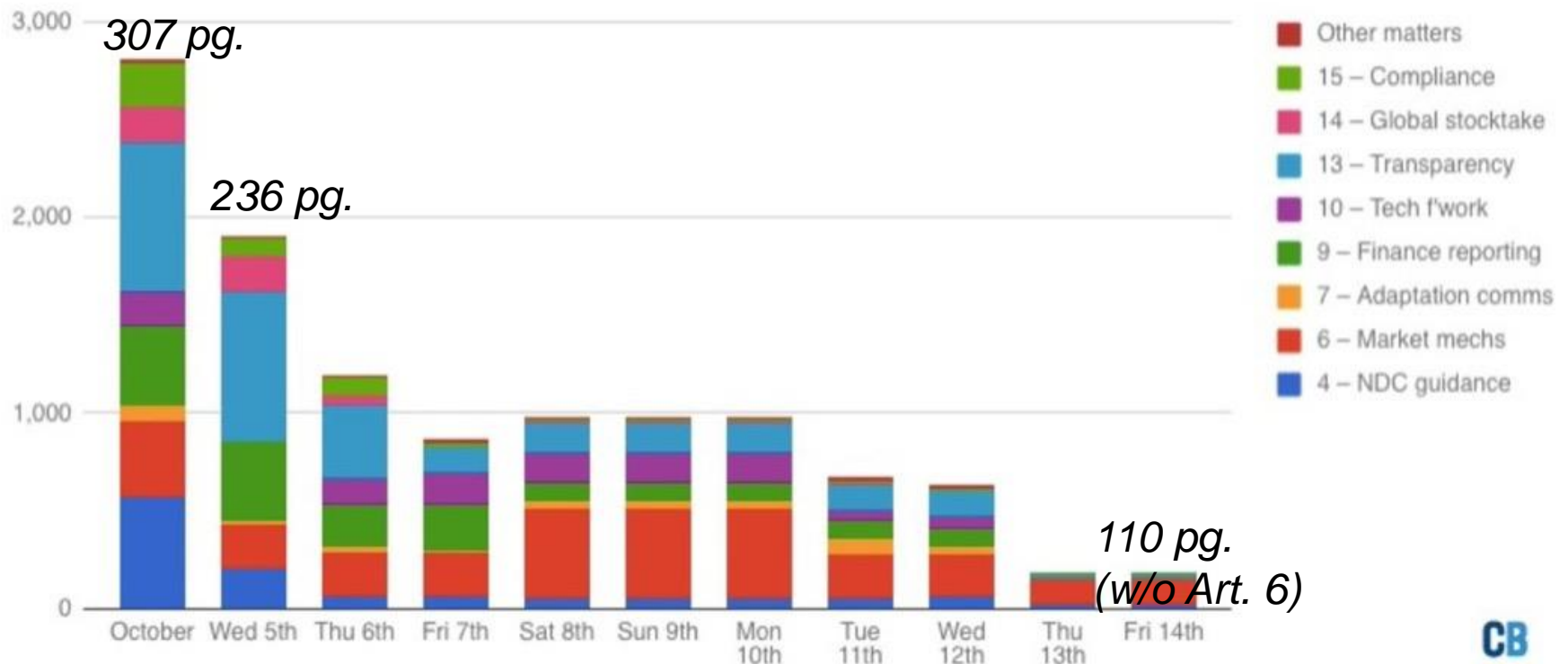


6. The „Katowice rulebook“



COP24: Progress on the Paris Agreement "rulebook" text

Number of brackets remaining in text covering each Article of the deal



7. The „Katowice Package“



1. Paris Agreement work programme („Rule book“)
2. High level ministerial dialogue on climate finance
 - **Doubling of finance (GCF and Adaptation Fund) by Germany and Norway**
3. Talanoa Dialogue
 - **Parties to consider outcomes „to generate confidence, courage and ambition“**
4. Special Report of IPCC
 - **„Takes note / Welcomes /...“ IPCC SR1.5** [Level of GHGs in 2030: 25-30 GtCO₂eq]
 - **Invites Parties to make use of the information in all subsidiary bodies.**
5. Pre-2020 implementation and ambition
 - **Parties' acceptance of Doha Amendment and repeated stocktake at COP25**
6. Leader's Summit and UN Climate Summit
 - **Parties to “demonstrate through participation their increased ambition in action.”**
 - **Solidarity and Just Transition Silesia Declaration (“Imperative of ... quality jobs”)**



8. What can we learn from COP24?

- **Rulebook for Paris** (*mostly celebrated*)
- **Market mechanisms & “Loss and Damage** (*postponed to COP25 in Chile, Nov. 2019*)
- **1,5°C-goal** (*acknowledged but no mid-term goals*)
- **Ambitions of both NDCs & Pre-2020** (*few positive signs of DE/NO and WBG/EBRD; mostly postponed to the UN-SG climate summit, Sept. 2019*)
- **Winds of change?** (China and U.S. very active; open opposition of Brasil, OPEC and Russia?)
- **War of Narratives?** (Polish-drafted “Just Transition Silesia” vs. AOSIS-led “Talanoa dialogues”)

Hurdles overcome! ... Once more



COP24 • KATOWICE
UNITED NATIONS CLIMATE CHANGE CONFERENCE
POLAND 2018



DEPUTY EXECUTIVE SECRETARY

EXECUTIVE SECRETARY

PRESIDENT

SECRETARY TO THE GOVERNING BODIES



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