



1. Presentation of findings of the Climate Transparency's South Africa Country Profile Report. (Caitlin Bergh)
2. SATIMGE-2020 – the linked SATIM energy and Economy model. (Bruno Merven)
3. Low Carbon Transport Futures for South Africa. (Fadiel Ahjum)
4. Hydrogen for Iron and Steel in South Africa. (Bryce McCall)

CLIMATE TRANSPARENCY REPORT

COMPARING G20 CLIMATE ACTION AND RESPONSES TO THE COVID-19 CRISIS



CORONAVIRUS RECOVERY

Includes 2020 emissions data and projections, analysis of stimulus responses, and insights for a Greener Recovery.

2020

The Climate Transparency Report:

Comparing G20 Climate Action and
Responses to the COVID-19 Crisis

Caitlin Bergh
25 November 2020

Climate Transparency report

- ▶ The Climate Transparency Report consists of the summary report and an in depth country profile for each of the G20 countries.
- ▶ The country profiles, as well as a technical note on data sources and methodology, can be found at:

www.climate-transparency.org

- ▶ The report is *the world's most comprehensive annual review of G20 climate action*, providing concise and comparable information on mitigation, finance and vulnerability.
- ▶ The report enables learning across the G20 and offers insights into what can and must be done to safeguard our common future.

Global Partnerships

PARTNERS

- CENTRO CLIMA: CENTER FOR INTEGRATED STUDIES ON CLIMATE CHANGE AND THE ENVIRONMENT - COPPE / UFRJ
- CLIMATE ANALYTICS
- University of Cape Town
- ESRG
- FARN: FUNDACIÓN AMBIENTE Y RECURSOS NATURALES
- GERMANWATCH
- icm: INSTITUTO CIBERÉTICO DE INVESTIGACIONES
- IESR: INSTITUTE FOR ENERGY SYSTEMS RESEARCH
- IGES: INSTITUTE FOR GLOBAL ENVIRONMENTAL STUDIES
- IDDRI: INSTITUTE FOR DEVELOPMENT AND ENVIRONMENT
- NEW CLIMATE INSTITUTE
- HUMBOLDT-WAERDENHAUSEN: Governance Platform
- ISI
- teri: TERRESTRIAL ENVIRONMENTAL RESEARCH INSTITUTE

DATA PARTNERS

- Agora
- Climate Action Tracker
- CCPI: Climate Change Performance Index
- Enerdata

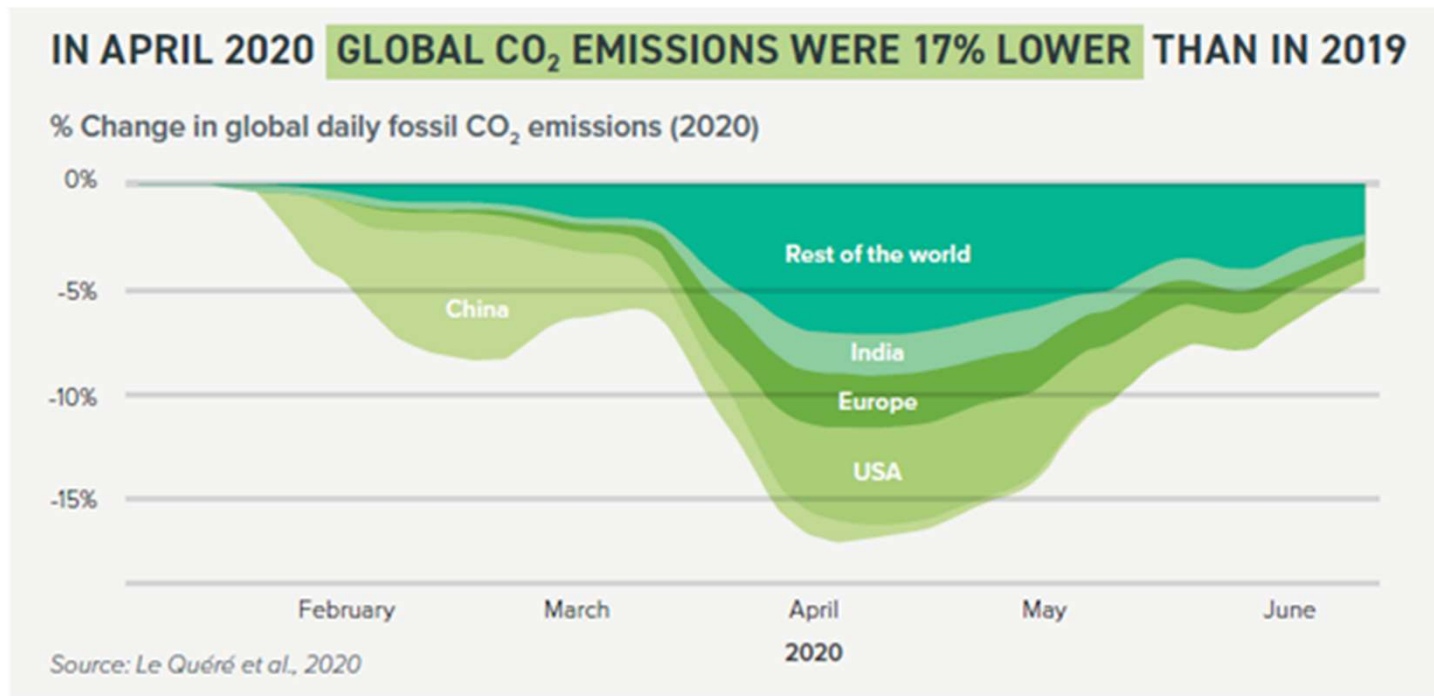
FUNDERS

- climateworks FOUNDATION
- Supported by: Federal Ministry for the Environment, Nature Conservation and Nuclear Safety
- European Climate Foundation
- WORLD BANK GROUP

based on a decision of the German Bundestag

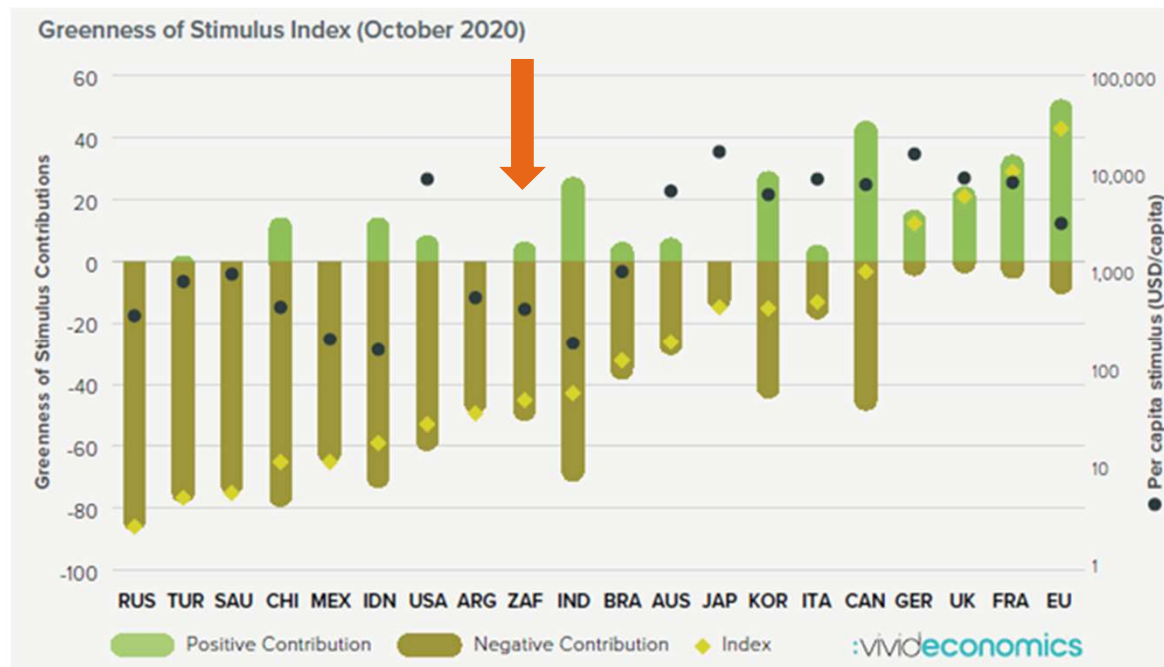
Our global partnership brings together experts from research organisations and NGOs in the majority of the G20 countries.

Impacts of the COVID 19 Crisis on CO2 Emissions



Impacts of the COVID 19 Crisis on CO2 Emissions

- ▶ Governments across the world have responded to the COVID-19 economic crisis with financial packages that far outstrip the most recent comparable economic event – the 2008/09 financial crisis recession.
- ▶ Vivid Economics' **Greenness of Stimulus Index (GSI)**³⁷ provides an overview of stimulus spending in all G20 countries and assesses the “greenness” of responses.



SOUTH AFRICA

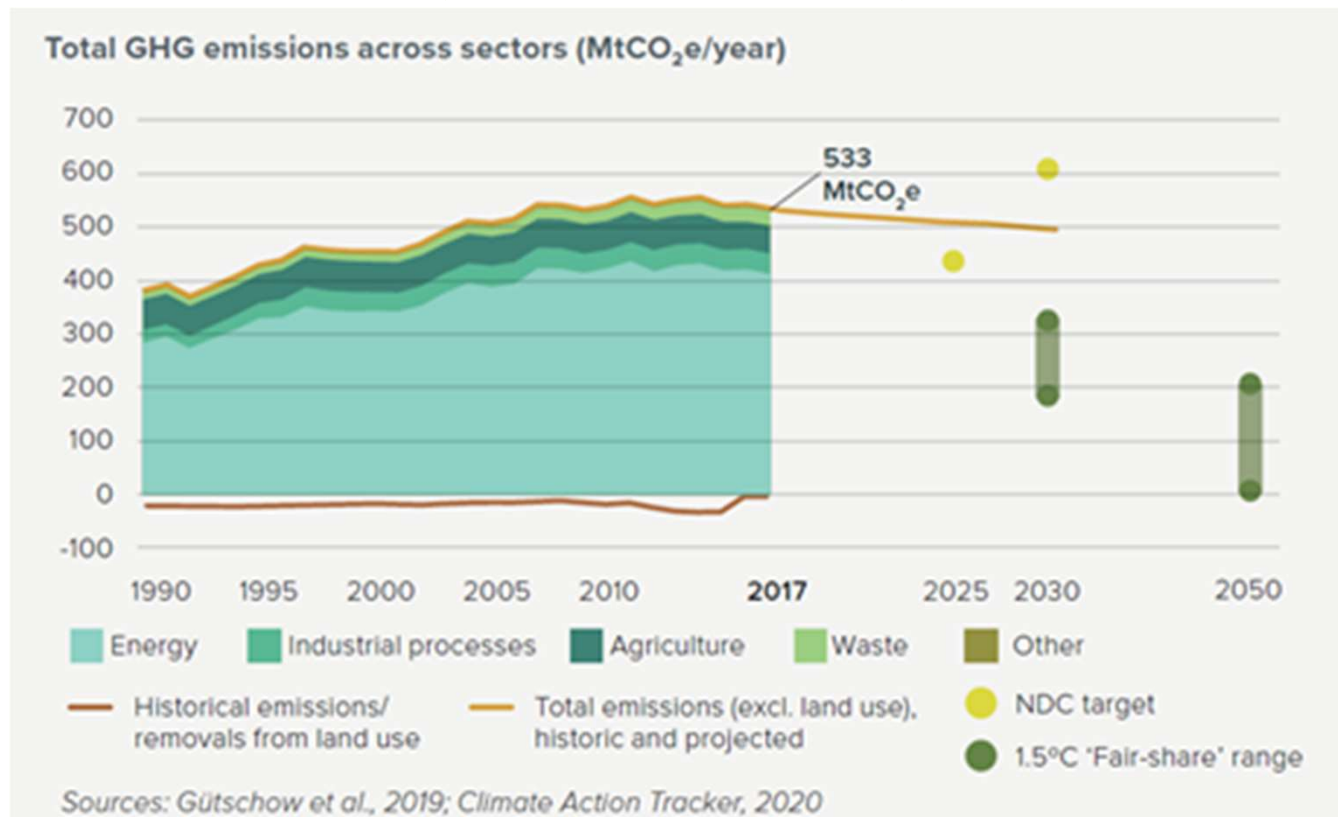


CLIMATE TRANSPARENCY REPORT COMPARING G20 CLIMATE ACTION AND RESPONSES TO THE COVID-19 CRISIS

South Africa Country Profile

Key Findings

GHG emissions across sectors and CAT 1.5°C 'fair-share' range (MtCO₂e/year)



Status of Decarbonisation

- ▶ South Africa's energy sector is the most coal dependent in the G20.
- ▶ According to the report, fossil fuels still account for 92% of South Africa's total energy mix, with more than 85% of electricity coming from coal.
- ▶ South Africa's emissions intensity of the power sector is almost double that of the G20 average.

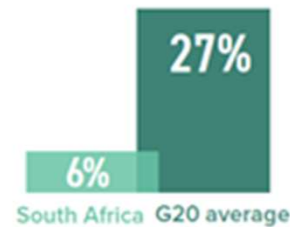


Emissions intensity of the power sector
Country vs G20 average (gCO₂/kWh)



Source: Enerdata 2020

Share of renewables in power generation
(incl. large hydro)



Source: Enerdata, 2020

Industry

- ▶ South Africa has the highest industrial emissions intensity in the G20, in large part due to the emissions intensity of the power sector.
- ▶ Upstream decarbonisation will be necessary to reduce the emissions intensity of South African industry.

1.5°C BENCHMARKS TO LIMIT GLOBAL WARMING



To meet the 1.5°C goal, industrial emissions need to be reduced by 65-90% from 2010 levels by 2050.



All new installations in emissions-intensive industries must be low-carbon after 2020. Very low or zero-emissions production technologies need to be developed by 2030-2040 for steel, iron, cement, and concrete.

Own evaluation based on IPCC SR15; Kuramochi et al., 2017; Bataille 2019

Transport

- ▶ To stay within a 1.5°C limit, passenger and freight transport need to be decarbonised.
- ▶ 45% of passenger transport is by private car, and 85% of freight transport is on the road in South Africa. Both sectors are still dominated by fossil fuels.
- ▶ Green Transport Strategy (2018) aims to shift 30% of freight transport from road to rail, and 20% of passenger transport from private cars to public transport and active alternatives within seven years of implementation. There are support schemes for promoting public transport. Detailed programmes for implementing the strategy are lacking.
- ▶ Opportunity for EV public transport from renewables energy.

POLICY ASSESSMENT

Phase out fossil fuel **cars**



Phase out fossil fuel **heavy-duty vehicles**



Modal shift in (ground) transport



Opportunities

JUST TRANSITION

KEY OPPORTUNITIES FOR ENHANCING CLIMATE AMBITION



Ramping up procurement processes for renewables as outlined in electricity expansion plans in the IRP and **exploiting the decreasing cost of renewables would increase the proportion of renewables in the power sector.**



South Africa could adopt a just energy transition plan to **phase coal out of the economy while still supporting communities** impacted by retirement of aging coal plants.



South Africa should submit a **revised NDC in 2020** with much more ambitious targets.

► Greener COVID- 19 Response Measures



Current recovery responses are taking us in the wrong direction, but G20 countries still have the opportunity to realign with Paris Agreement and Sustainable Development Goals.

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Tasneem Essop
 Executive Director of
 Climate Action Network-International

“ THE G20 REPRESENTS SOME OF THE HIGHEST EMITTING COUNTRIES IN THE WORLD. THEY THEREFORE HAVE A RESPONSIBILITY TO LEAD WITH AMBITIOUS CLIMATE ACTION. THE CLIMATE TRANSPARENCY REPORT NOT ONLY HELPS THESE COUNTRIES UNDERSTAND HOW MUCH MORE THEY NEED TO DO, BUT ALSO HELPS CITIZENS IN HOLDING THESE GOVERNMENTS ACCOUNTABLE FOR IMPLEMENTING THE PARIS AGREEMENT. ”

THE CLIMATE TRANSPARENCY REPORT 2020
 COMES OUT ON
 18 NOVEMBER 2020

#CTreport2020

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This years Spokesperson for Climate Transparency South Africa was Tasneem Essop - the Executive Director of Climate Action Network International.

Thank you

Questions