

The Heat Is On

UN 
environment
programme

5 
1972-2022

A world of climate promises
not yet delivered

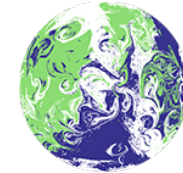


Emissions Gap
Report **2021**

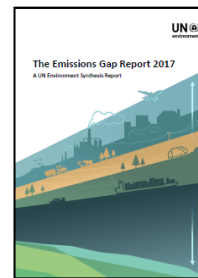
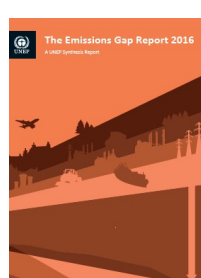
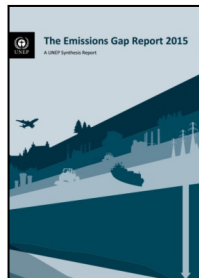
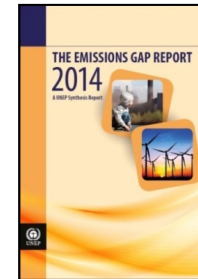
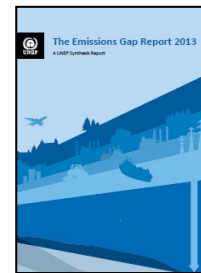
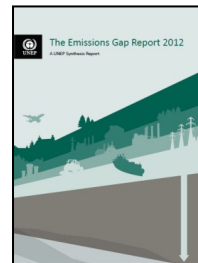
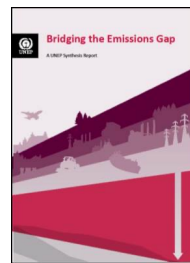
Structured Expert Dialogue ♦ 1 November 2021 ♦ COP26 Glasgow

Emissions Gap Reports

Annual science-based assessment reports since 2010



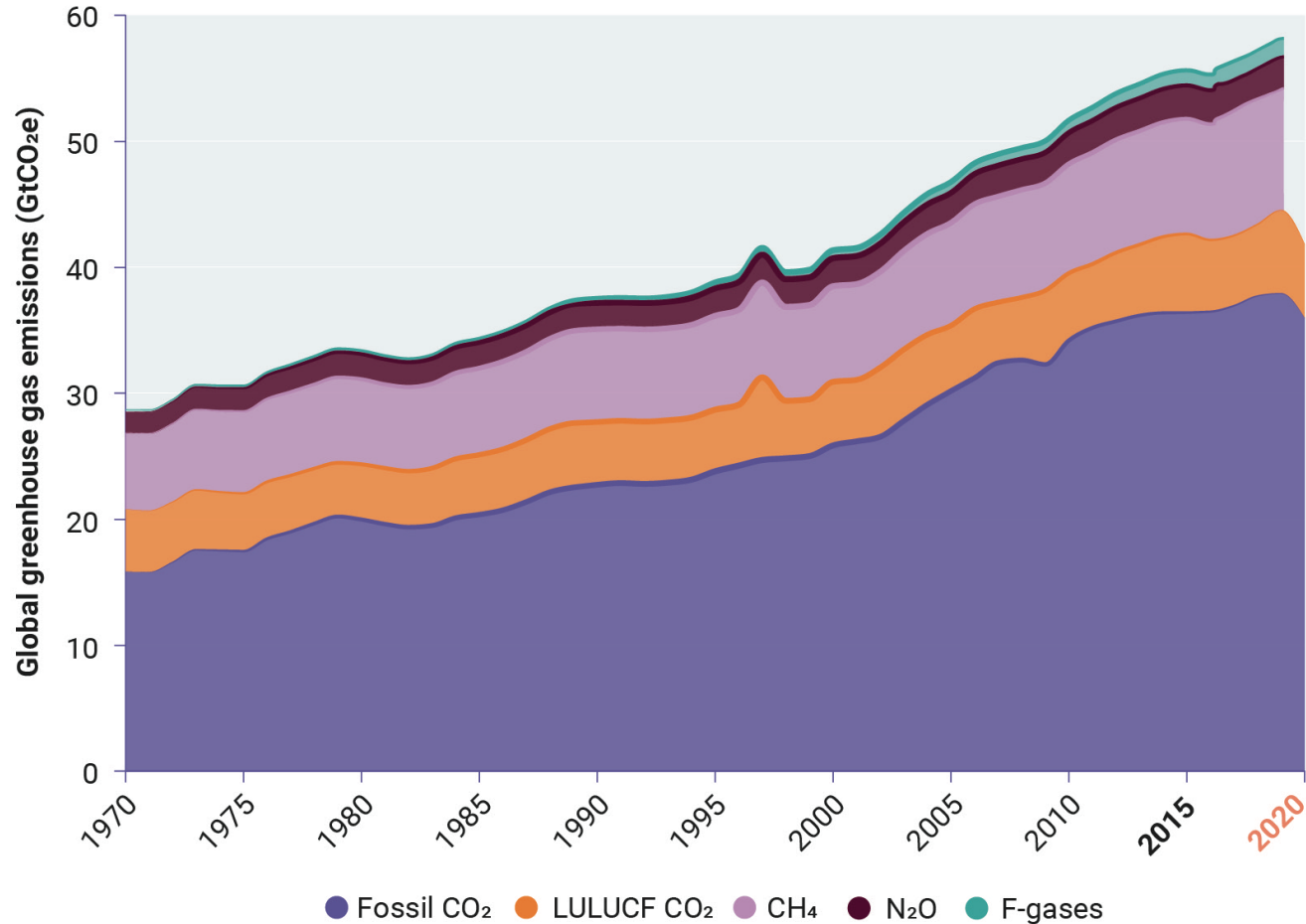
UN CLIMATE CHANGE CONFERENCE UK 2021
IN PARTNERSHIP WITH ITALY



Emissions Gap Report 2021: key questions

- What are the latest trends in global greenhouse gases?
- What is the impact of submitted and announced mitigation pledges on 2030 emissions and on the emissions gap?
- What are the implications for global warming at the end of the century?
- What is the status of net-zero emission pledges and are near-term actions and targets for 2030 aligned with these pledges?
- Can the gap be bridged, and how:
 - COVID-19 fiscal recovery measures
 - Anthropogenic methane emissions
 - Market mechanisms

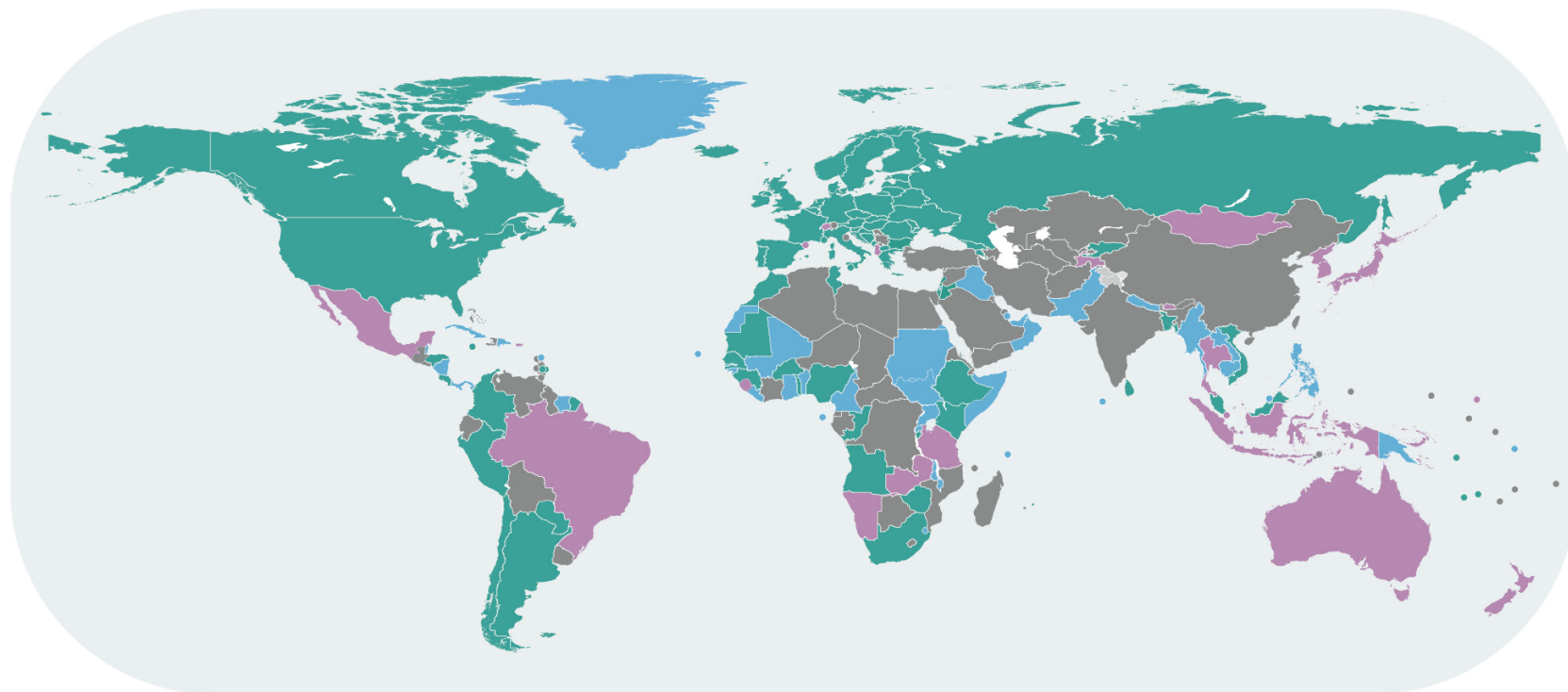
Global greenhouse gas emissions dropped in 2020 due to COVID-19, but are bouncing back



2020 data only available for fossil and LULUCF CO₂

- CO₂ emissions dropped by an unprecedented 5.4% in 2020
- Data not yet available for all GHGs but the drop in total emissions in 2020 anticipated to be smaller
- Strong rebound expected in 2021

New and updated NDCs show some progress



● New or updated NDC with lower 2030 emissions than prior NDC

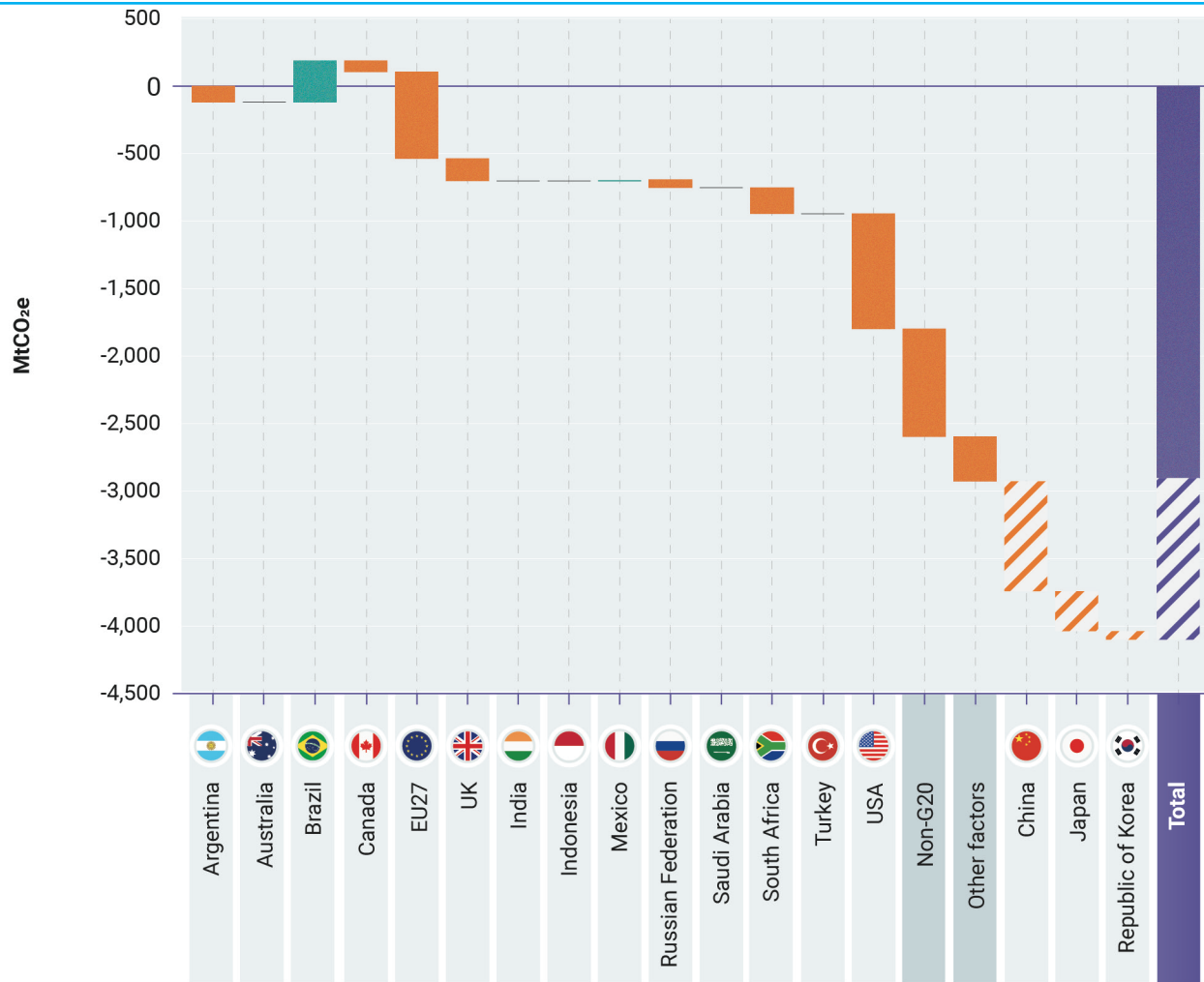
● New or updated NDC with equal or higher 2030 emissions than prior NDC

● No new or updated NDC submitted

● New or updated NDC not comparable to prior NDC

- By 30 September 2021, 121 parties, covering 52 percent of global emissions, had communicated new or updated NDCs
- About half of these lower 2030 emissions
- Just under 20 percent imply equal or higher 2030 emissions
- The effect of the remaining NDCs is unclear as they are not comparable to the prior NDCs
- The NDCs are generally more transparent and more include GHG targets than prior NDCs

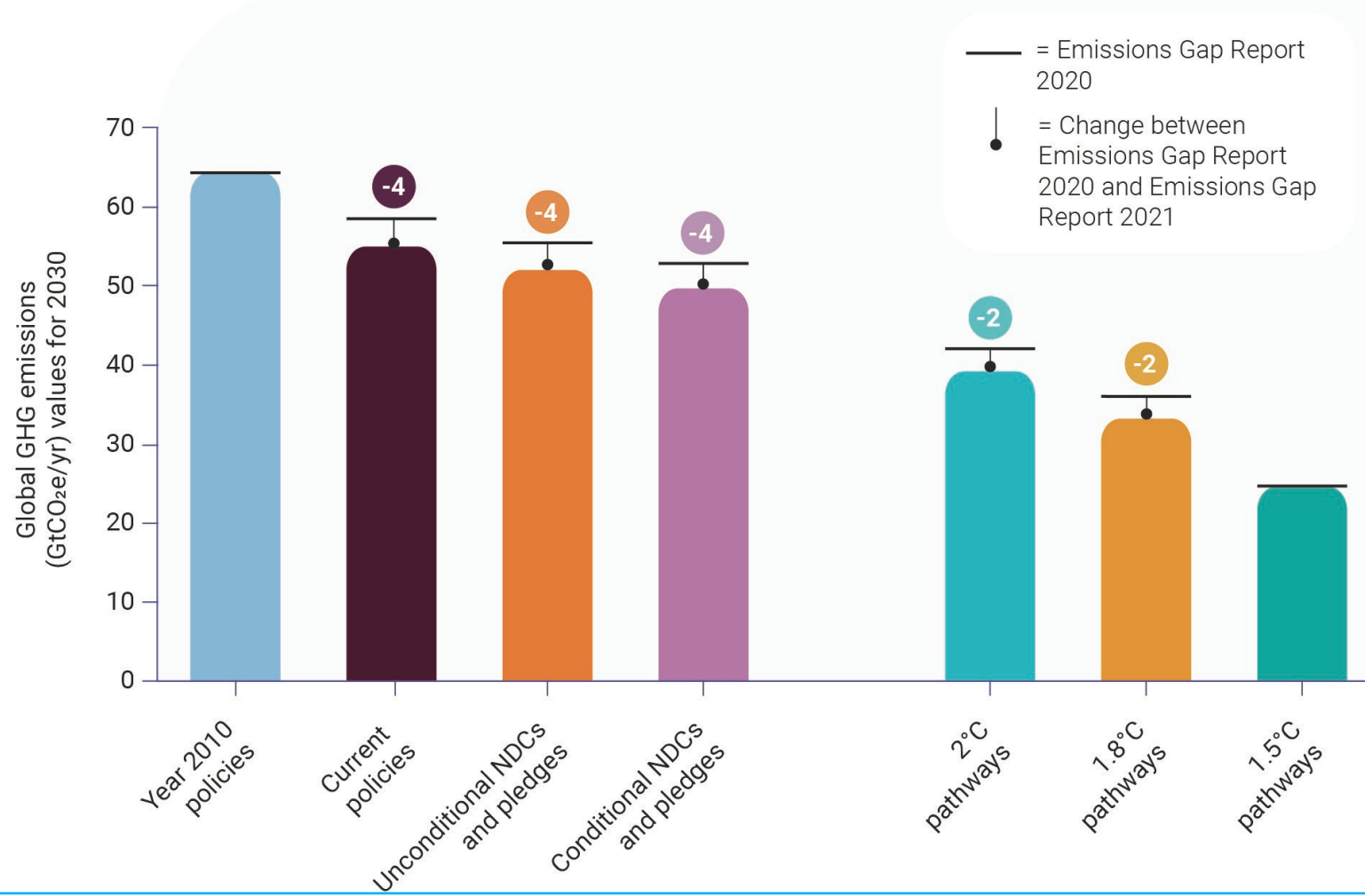
However, the aggregate impact of mitigation pledges on projected global greenhouse gas emissions in 2030 is limited



- New or updated unconditional NDCs lead to a total annual reduction of about 2.9 GtCO₂e in 2030 compared with the previous NDCs
- If the announced pledges (as of 30 September) of China, Japan and the Republic of Korea are also included, the aggregate reduction increases to just over 4 GtCO₂e

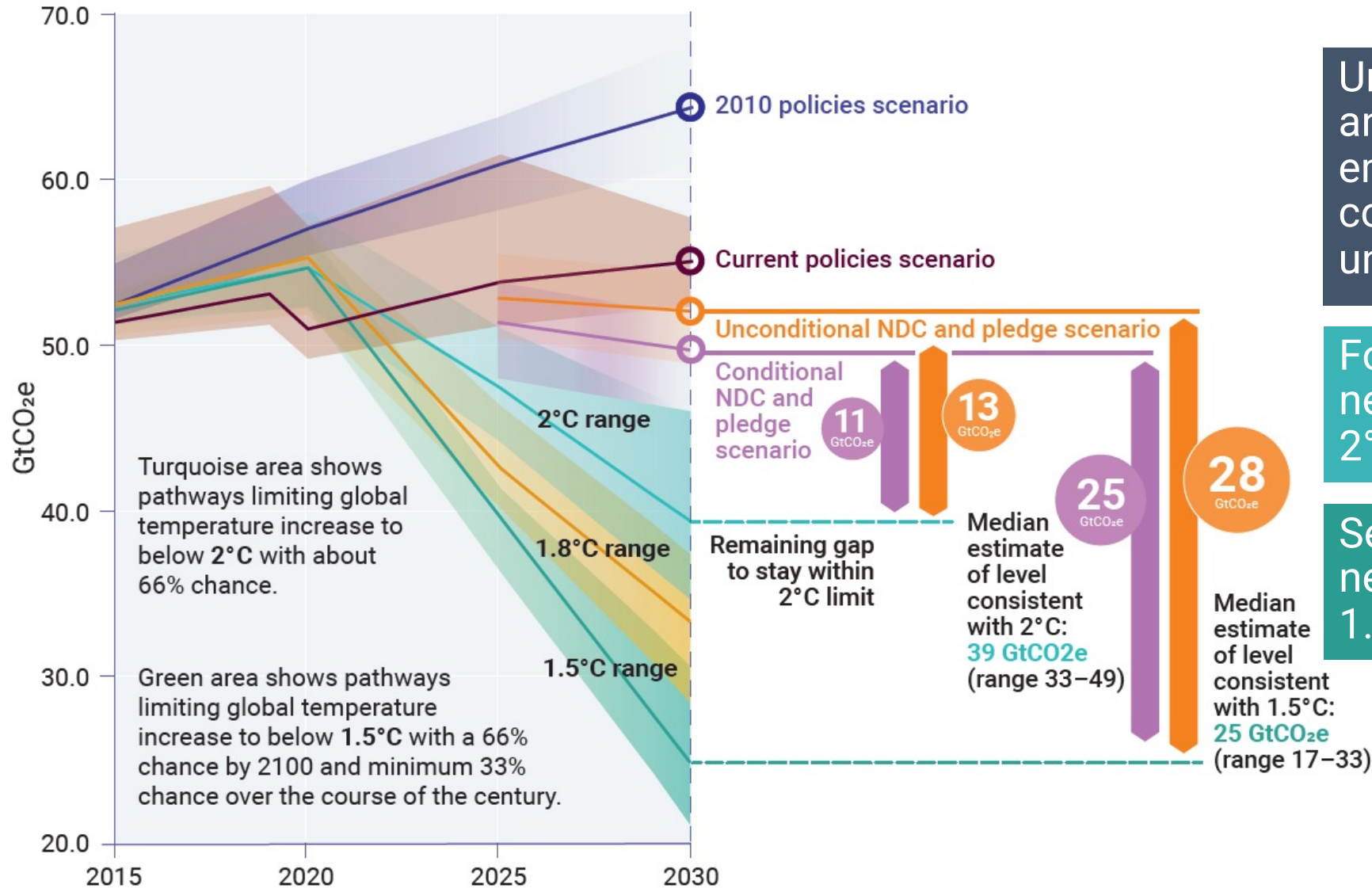
● Increased emissions ● Reduced emissions
▨ Impact of announced pledges ▨ Total impact

Changes in the emissions gap scenarios compared with 2020



- The implementation gap between current policies and NDC scenarios remains at 4 GtCO₂e
- Current policies are 4 GtCO₂e lower due to the impact of COVID-19 and of recent policies
- The impact of the announced and submitted 2030 pledges is also 4 GtCO₂e
- Scenario updates lead to 2 GtCO₂e lower emission levels for 2°C and 1.8°C

The emissions gap in 2030 remains large



Unconditional NDCs and announced pledges lower emissions in 2030 by 7.5% compared to prior unconditional NDCs

Four times higher ambition needed to get on track to 2°C

Seven times higher ambition needed to get on track to 1.5°C

A promising development is the net-zero emissions pledges made by 50 parties, covering more than half of global greenhouse gas emissions

Global snapshot

- Net-zero pledges by 50 parties, covering 57% of global domestic GHG emissions, 60% of gross domestic product and 34% of the global population
- Eleven targets are in law, 24 in policy documents and 15 are government announcements

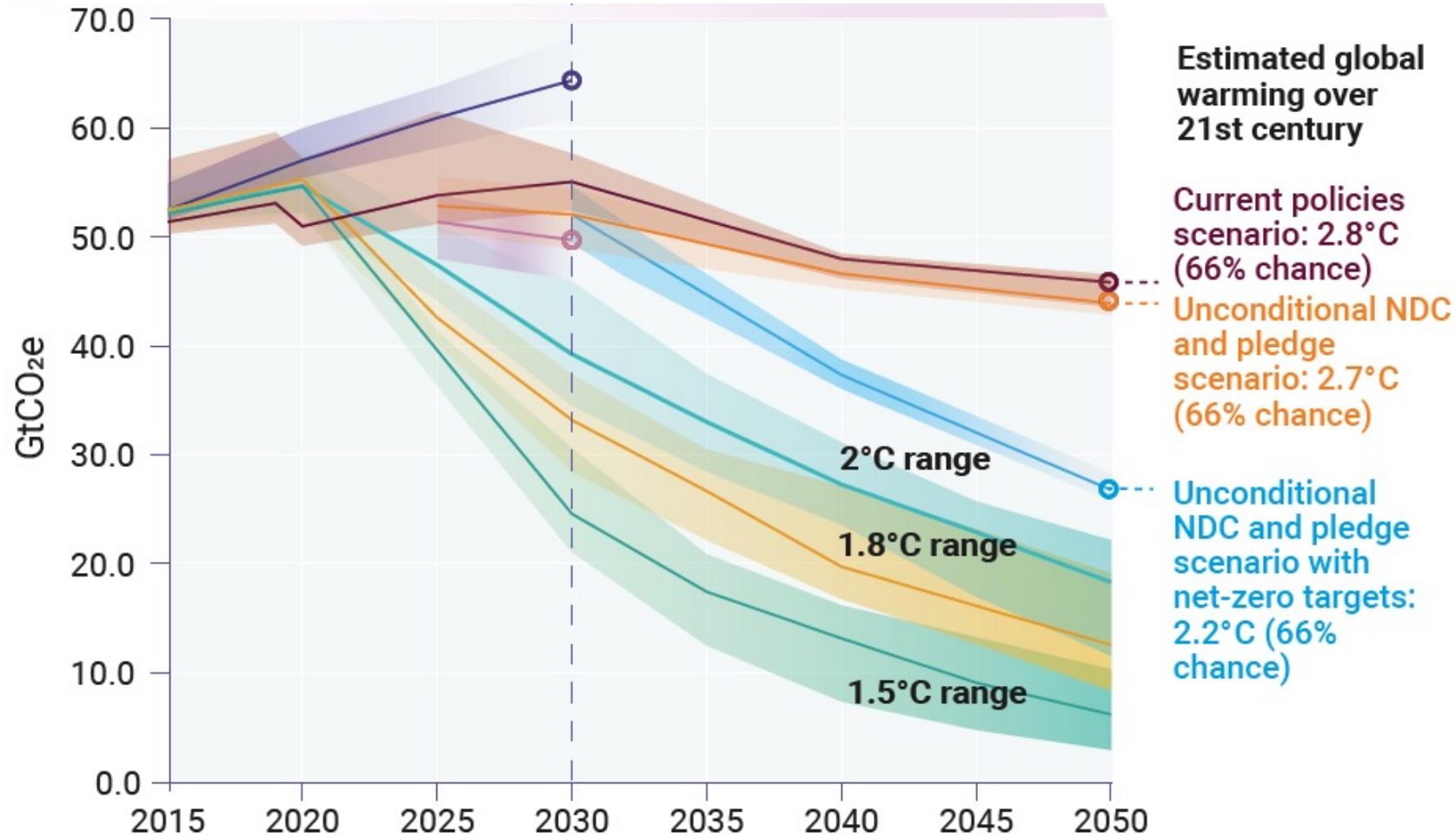
G20 snapshot

- Net-zero pledges by 12 G20 members, covering 54% of global domestic GHG emissions
- Six are in law, two are in policy documents and four are government announcements
- All are for the year 2050, with the exception of China's 2060 target and Germany's target for 2045

Common ambiguities

Sectors and gases covered; inclusion of offsets and of international aviation and shipping emissions; lack of transparency regarding the plans for achievement and on reporting and reviewing progress

Global warming implications at the end of the century under 2030 pledges and net-zero targets



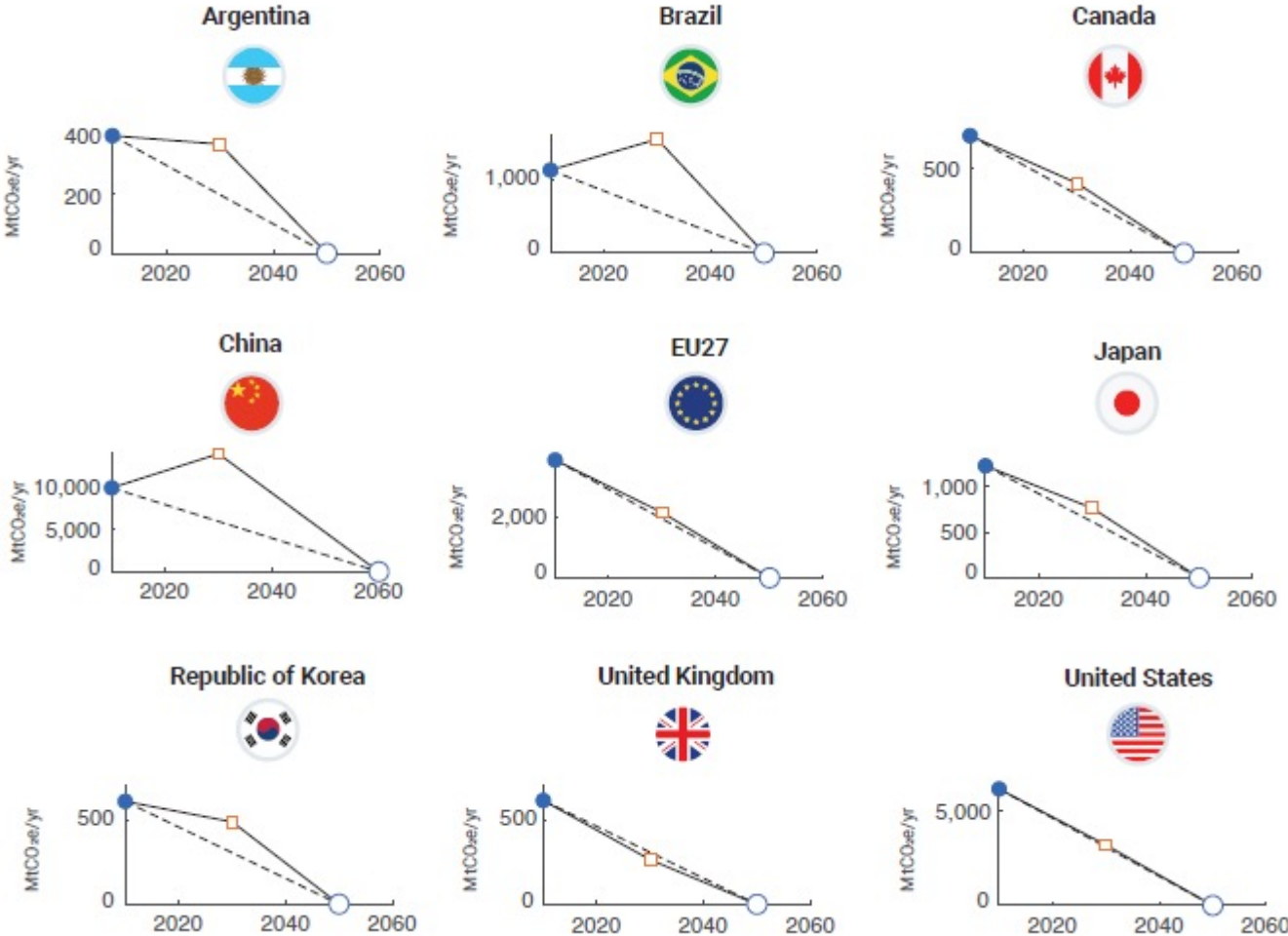
Full implementation of the net-zero targets in addition to 2030 pledges, would bring global warming levels closer to the Paris Agreement temperature goal

But we need to get there: Collectively, G20 members are not on track to achieve either their original or new 2030 pledges

		Projected progress towards the previous NDC target [x studies meet the target/out of y studies]		
		Achieve previous target (indicated by +, if overachieved by more than 15 per cent)	Miss previous target	Uncertain
Status of NDC or announced target	Submitted stronger target	Argentina [3/3], EU27 [in Emissions Gap Report 2020 for EU27+UK; 1/3, one within reach], ^{1,2} Russian Federation+ [4/5], ¹ South Africa [3/3], UK (formerly part of the EU)	USA [0/5], Canada [1/3]	
	Announced stronger target	China [4/6], Japan [3/3]	Republic of Korea [0/3] ³	
	No new target submitted	India+ [4/6], Saudi Arabia [2/2], Turkey+ [3/3]		
	Submitted equivalent or weaker target		Australia [1/4], Brazil [1/4, one within reach], Mexico [0/3]	Indonesia [0/3, two within reach]

- Ten G20 members are on track to achieve their previous NDCs, while seven are still off track
- Assessed against current policy scenarios, the G20 as a group is projected to fall short of achieving their original unconditional NDCs by 1.1 GtCO₂e annually
- Six new or updated NDCs and three announcements by G20 members with enhanced mitigation pledges (as of 30 Sept 2021)

Few of the G20 members' 2030 pledges put emissions on a clear path towards net zero

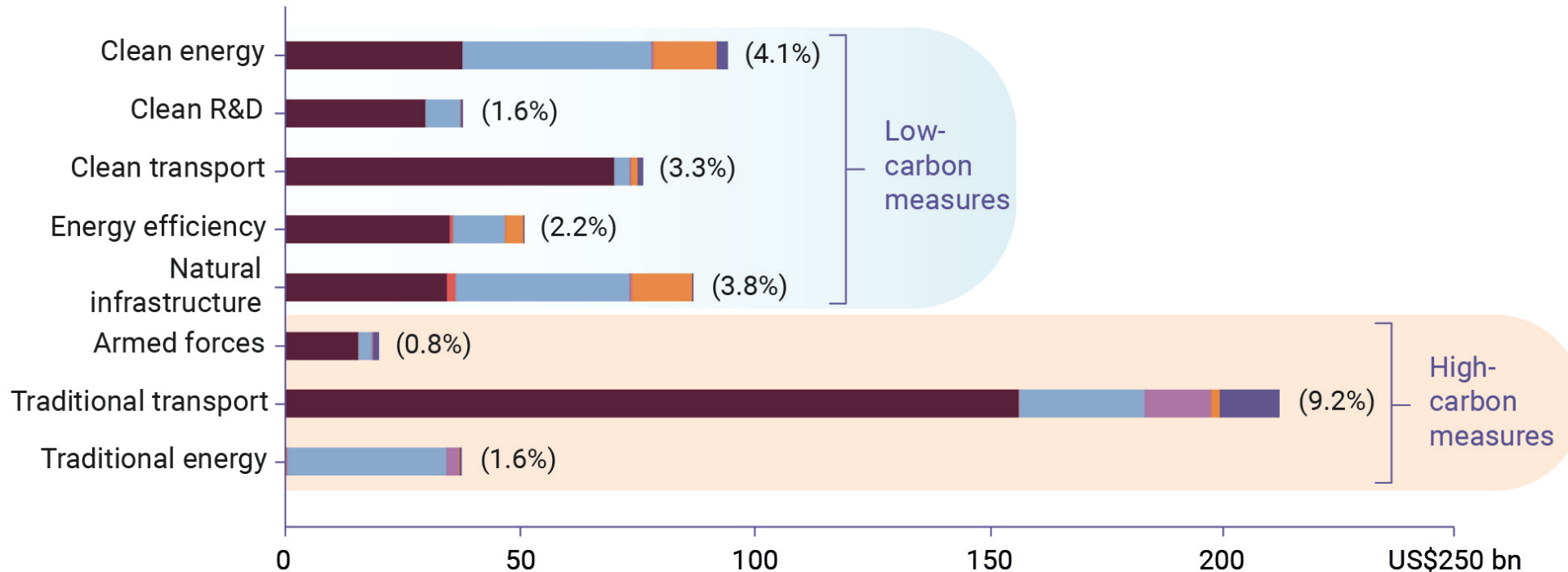


There is an urgent need to enhance ambition and accelerate action to bridge the emissions gap and set global emissions on a credible path towards net zero to keep the temperature goal of the Paris Agreement achievable

Opportunities to bridge the gap and get on track to net zero: COVID-19 fiscal measures

Global recovery spending as at May 2021 across sectors by region (US\$ billion).
Low-carbon initiatives (top) and high-carbon initiatives (bottom)

● Africa ● Asia ● Europe ● Latin America & the Caribbean ● Northern America ● Oceania



- Approximately US\$16.7 trillion was spent on COVID-19-related rescue and recovery packages to May 2021
- Of this, US\$2.25 trillion is considered recovery spending.
- Only around 17–19 per cent (US\$390–440 billion) of the recovery spending is likely to reduce GHG emissions

Opportunities to bridge the gap and get on track to net zero: methane

Reduce methane emissions to:

- Slow down the rate of warming in the short term
- Reduce peak warming during this century
- Help bridge the emissions gap

Untapped potential:

- Current NDCs cover only about one third of the methane reduction required to be consistent with a 2°C temperature goal, and only about 23 per cent of what is needed for the 1.5°C goal.



Fossil Fuels

Using existing technologies to reuse methane leaking from oil, gas and coal facilities can reduce the sector's emissions by **40-50%** by 2030 - much of it at net-zero cost.



Agriculture

Measures such as changing rice growing patterns, breeds of cattle and their diets can reduce the sector's emissions by **20%** by 2030.



Waste

Actions such as diverting organic material from landfills or capturing landfill gas can reduce the sector's emissions by **35-40%** by 2030.

Opportunities to bridge the gap and get on track to net zero: market mechanisms

- Carbon markets can deliver real emissions abatement and drive ambition, but only when rules are clearly defined, designed to ensure that transactions reflect actual reductions in emissions, and supported by arrangements to track progress and provide transparency
- Markets can provide an opportunity for countries, companies and other actors to achieve their emission reduction goals at lower costs and thereby create room to enhance their ambition in both the near- and long term
- The number of countries that in their new or updated NDCs have indicated the planned or possible use of voluntary cooperative approaches has almost doubled compared to the previous NDCs, indicating significantly increased interest



Thank you

On behalf of the 78 authors,
13 steering committee members
and the production team of the report

Anne Olhoff
UNEP DTU Partnership
UNEP Science Division



www.unep.org
United Nations Avenue, Gigiri
PO Box 30552 – 00100 GPO Nairobi, Kenya



Emissions Gap Report 2021