

BROWN TO GREEN:

THE G20 TRANSITION TO A LOW-CARBON ECONOMY | 2018

INDONESIA

GREENHOUSE GAS (GHG) EMISSIONS (INCL. FORESTRY) PER CAPITA







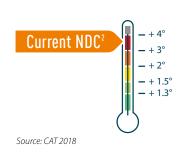
Data from 2015 | Source: PRIMAP 2018

The gap:

Is Indonesia on track to stay below the Paris Agreement temperature limit? Based on implemented policies, Indonesia's **GHG emissions** are expected to increase to between 1,573 and 1,751 MtCO₂e by 2030 (excl. forestry). This emission pathway is not compatible with the Paris Agreement.¹

Indonesia's **NDC** is not consistent with the Paris Agreement's temperature limit but would lead to a warming of between 3°C and 4°C.2

Indonesia's sectoral **policies** still fall short of being consistent with the Paris Agreement, especially on coal power, energy efficiency in industry and deforestation.3



Recent developments:

What has happened since the Paris conference?



Indonesia's state-owned power utility expects coal use to double between 2017 and 2025.



The government announced in 2017 that no new coal power plants would be built on Java, the largest island, in a pledge to reach the country's renewables target of 23% in energy mix by 2025.

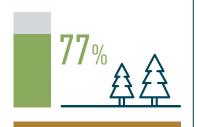


Deforestation rates dropped by 60% between 2016 and 2017, likely due to a 2016 peat drainage moratorium.

Brown and green performance:

Where does Indonesia lead or lag compared to G20 countries?

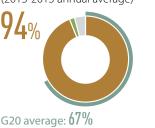
FOREST AREA COMPARED TO 1990 LEVEL



Data from 2015 | Source: PRIMAP 2018

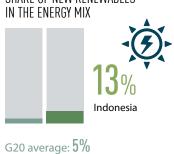
SHARE OF BROWN PUBLIC POWER FINANCE

(2013-2015 annual average)



Source: Oil Change International 2017

SHARE OF NEW RENEWABLES



Data from 2017 | Source: Enerdata 2018

This country profile is part of the Brown to Green 2018 report. The full report and other G20 country profiles can be downloaded at: http://www.climate-transparency.org/g20-climate-performance/g20report2018



INDONESIA'S EXPOSURE TO CLIMATE IMPACTS⁶

This indicator shows the extent to which human society and its supporting sectors are affected by the future changing climate conditions based on an approximately 2°C scenario. This sectoral exposure will be even higher given that the efforts depicted in current NDCs will lead to an approximately 3°C scenario.





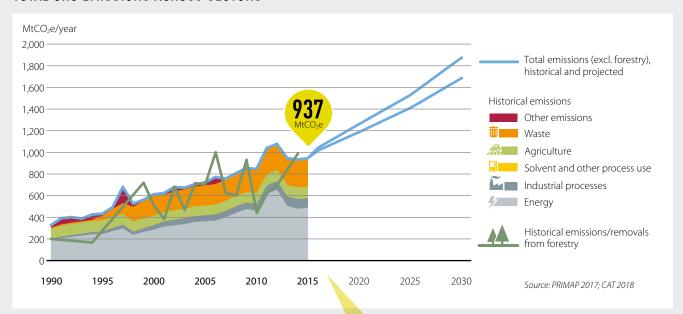
Own composition based on ND-GAIN 2017 (based on data for 2016)



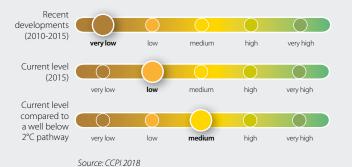
GREENHOUSE GAS (GHG) EMISSIONS

INDONESIA

TOTAL GHG EMISSIONS ACROSS SECTORS7

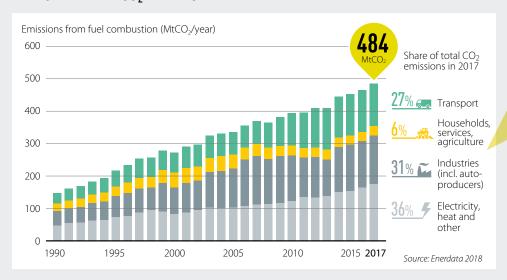


CCPI PERFORMANCE RATING OF GHG EMISSIONS PER CAPITA⁸



Indonesia's emissions almost tripled between 1990 and 2015 (+196%), and the trend is expected to pick up speed towards 2030. Forestry and energy sectors currently contribute most to overall emissions.

ENERGY-RELATED CO₂ EMISSIONS⁹



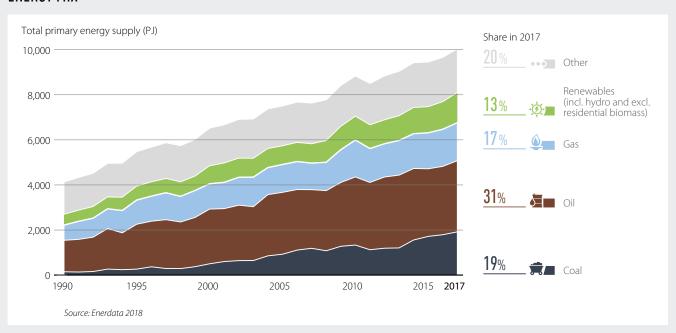
The largest contributor for overall GHG emissions are CO₂ emissions from energy, which have increased by 18% (2012–2017), largely driven by increasing emissions from power generation, industries and transport.



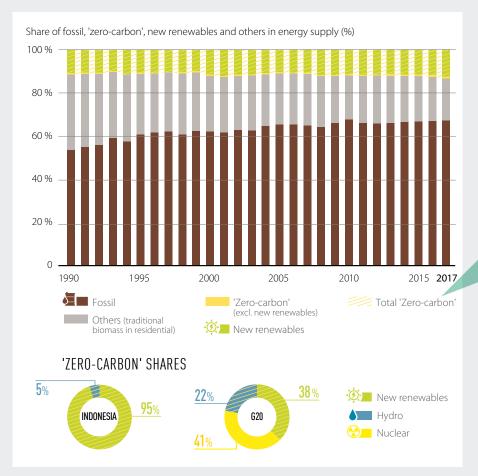
DECARBONISATION

INDONESIA

ENERGY MIX 10



SHARE OF FOSSIL FUELS AND 'ZERO-CARBON' FUELS IN ENERGY SUPPLY 11



PERFORMANCE RATING OF SHARE OF FOSSIL FUELS¹²



Zero-carbon fuels include nuclear, hydropower, new renewables. Indonesia's share of zero-carbon fuels (mainly new renewables) in the energy mix increased by 11% (2012–2017) to 13%, near the G20 average.

PERFORMANCE RATING OF SHARE OF ZERO-CARBON TECHNOLOGY¹²



Source: own evaluation

Source: Enerdata 2018



DECARBONISATION

INDONESIA

NEW RENEWABLES¹³



Source: Enerdata 2018

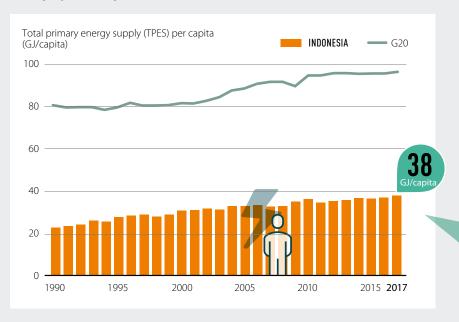
"New renewables" excludes unsustainable renewable sources such as large hydropower. Indonesia sources 13% of its energy supply from new renewable sources, which is above the G20 average (5%). The energy supply from new renewables increased by 25% (2012–2017), mainly through an increase in geothermal energy.

PERFORMANCE RATING OF NEW RENEWABLES¹²

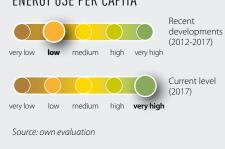


Source: own evaluation

ENERGY USE PER CAPITA 14

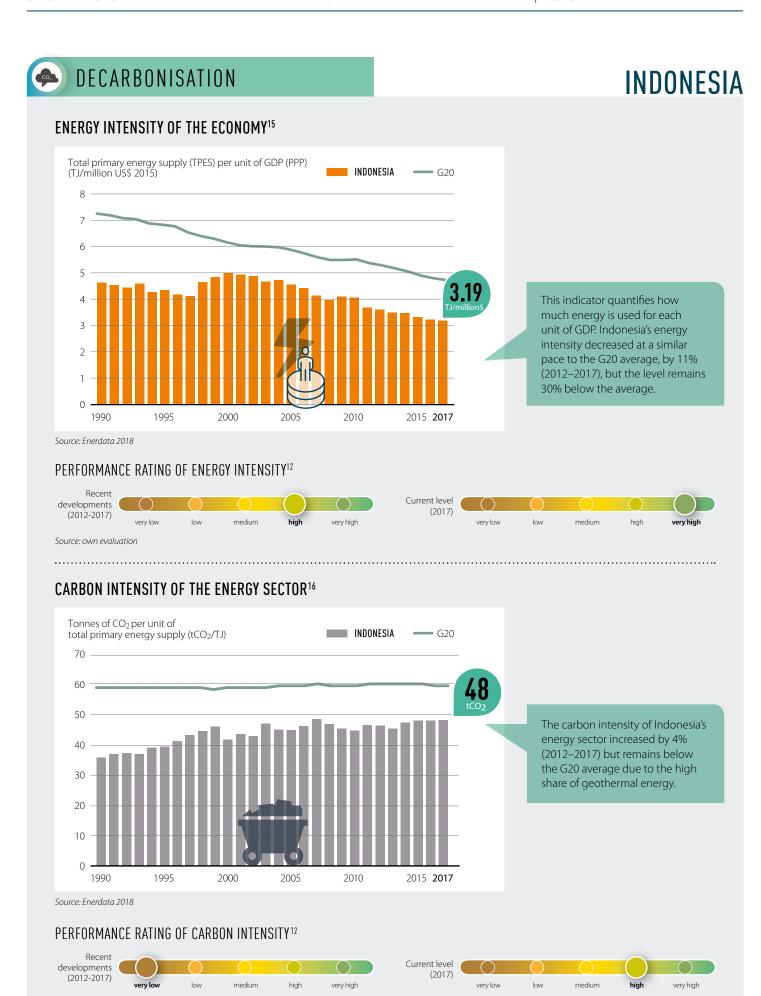


PERFORMANCE RATING OF ENERGY USE PER CAPITA¹²



Indonesia's energy use per capita rose by 7% (2012–2017), faster than the G20 average (+1%), but the level is less than half the G20 average.

Source: Enerdata 2018



Source: own evaluation



DECARBONISATION

INDONESIA

SECTOR-SPECIFIC INDICATORS

Legend for trend:





The trend number shows developments over the past five years, where data is available

POWER SECTOR

ELECTRICITY DEMAND PER CAPITA

(kWh/capita)



G20 Indonesia Trend: + 27%

Data from 2017 Source: Enerdata 2018 **EMISSIONS INTENSITY** OF THE POWER SECTOR (gCO₂/kWh)



G20 average Trend:

Data from 2016 Source: Enerdata 2018 SHARE OF RENEWABLES IN POWER GENERATION

(incl. large hydro)



G20 average: 24%

Trend:

Data from 2017 Source: Enerdata 2018 SHARE OF POPULATION WITH ACCESS TO ELECTRICITY



Trend: +3%

Data from 2016 Source: World Bank 2018 SHARE OF POPULATION WITH BIOMASS DEPENDENCY



Data from 2014 Source: IEA 2016

TRANSPORT SECTOR

TRANSPORT EMISSIONS PER CAPITA

(tCO₂/capita)



Trend: +1%

Data from 2017 Source: Enerdata 2018 MOTORISATION RATE (Vehicles per

1000 inhabitants)

Data from 2014 | Source: Agora Verkehrswende, 2018

PASSENGER TRANSPORT

(modal split in % of passenger-km)

car & bus rail

Source: Agora Verkehrswende 2018

FREIGHT TRANSPORT (modal split in % of tonne-km)

road air rail pipeline inland waterways

Source: Agora Verkehrswende 2018

MARKET SHARE OF ELECTRIC VEHICLES IN NEW CAR SALES (%)



Data from 2017

INDUSTRY SECTOR®

INDUSTRY EMISSIONS INTENSITY

(tCO₂e/thousand US\$2015



Data from 2015 Source: PRIMAP 2018

Trend:

BUILDING SECTOR

BUILDING EMISSIONS PER CAPITA



+5%

Data from 2016 Source: Enerdata 2018

Trend:

AGRICULTURE SECTOR

AGRICULTURE EMISSIONS INTENSITY

(tCO₂e/thousand US\$2015



G20 average: **0.95** Trend: -17%

Data from 2015 Source: PRIMAP 2018

FOREST SECTOR

FOREST AREA COMPARED TO 1990 LEVEL (%)



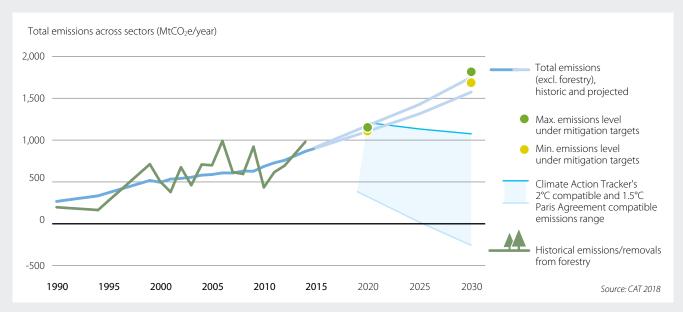
Data from 2015 Source: PRIMAP 2018





INDONESIA

COMPATIBILITY OF CLIMATE TARGETS WITH THE PARIS AGREEMENT²



The CAT rates Indonesia's NDC "highly insufficient" as it is not ambitious enough to limit warming to below 2°C, let alone to 1.5°C. To be consistent with the Paris Agreement, Indonesia's emissions (excl. forestry) should be stabilising, if not beginning to decline, by 2030. According to CAT's analysis, Indonesia will achieve its NDC targets without any additional efforts while still doubling current levels of emissions (excl. forestry).

CLIMATE ACTION TRACKER (CAT) EVALUATION OF NDC²



NATIONALLY DETERMINED CONTRIBUTION (NDC)

MITIGATIO)N	ADAPTATION		
Targets	Overall targets	Targets	Not mentioned	
	To reduce unconditionally 26% of its GHG emissions against the 'business as usual' scenario by the year 2020 and 29% by the year of 2030 Coverage • Sectors covered: energy (including fugitive), waste, industrial processes and product use; agriculture; forestry • GHG covered: Carbon dioxide (CO ₂); methane (CH4); nitrous oxide (N ₂ O) • Percentage of national emissions covered: Not specified	Actions	Actions specified (sectors: agriculture, water, forestry, health, infrastructure, biodiversity/ecosystems)	
		FINANCE		
		Conditio- nality	NDC partly conditional on international financial support (Indonesia could increase its contribution up to a 41% reduction of emissions by 2030, subject to availability of international support for finance, technology transfer, and development and capacity-building)	
	Sectoral targets Energy: Primary energy supply mix with shares as follows:	Investment needs	Not specified	
	a) new and renewable energy at least 23% in 2025 and at least 31% in 2050; b) oil should be less than 25% in 2025 and less than 20% in 2050; c) coal should be minimum 30% in 2025 and minimum 25% in 2050; and d) gas should be minimum 22% in 2025 and minimum 24% in 2050.	Actions	National actions to align financial flows specified (public spending)	
		International market mechanisms	Not mentioned	
		Source: own compila	ation based on UNFCCC 2018	
Actions	Actions specified (sectors: land use and forestry, agriculture, energy, waste)			



CLIMATE POLICY

INDONESIA

POLICY EVALUATION¹⁷

The ratings evaluate a selection of policies that are essential pre-conditions for the longer-term transformation required to meet the 1.5°C limit. They do not represent a complete picture of what is necessary.

GHG emissions target for 2050 or beyond

Long-term low emissions development strategy

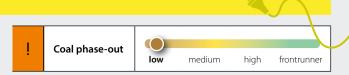
The Indonesian government is currently forming a long-term low emission development strategy, which it expects to enact in 2018. The Medium-Term Planning 2015–2019 clearly aspires to long-

term low emission development. Indonesia has a 2030 target but has not set a 2050 target.

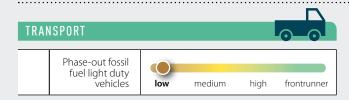
POWER



Indonesia plans to increase the share of new and renewable energy in the primary energy mix to 31% by 2050. The government offers feed-in tariffs for various renewable technologies but the rate is based on the average generation cost of electricity (including subsidised coal power), which renders unsubsidised renewable energy projects uneconomical in some regions.



The government expects that 56 GW of new capacity will be needed in the next decade, and plans to cover 26,8 GW of this by coal. No coal phase-out is under consideration.



Since 2018, petrol vehicles need to adhere to EURO 4 standards while for diesel the former EURO 2 standard still applies until 2021. There are no targets to phase out fossil-fuelled LDVs.



Green building codes and standards are in place, yet there is no national strategy to promote zero-energy buildings.

Low-carbon new industry installations low medium high frontrunner

Energy Management System standards for industry are in place such as textile and garment, pulp and paper, chemical, food and beverages, fertiliser, and ceramic glass industries. Several companies are ISO 50001 certified. National expert energy managers and energy auditors are certified

FORESTS



There is no national target to reach zero deforestation. Despite a 2011 moratorium on logging in undisturbed areas, valid until May 2019, Indonesia is still facing alarmingly high rates of deforestation, mainly driven by the pulp and palm oil industry. However, the government offers support schemes for reforestation, is currently establishing an agency tasked to manage financing for REDD+ activities, and has frozen the licensing of new palm oil plantations until 2021.

Source: own evaluation

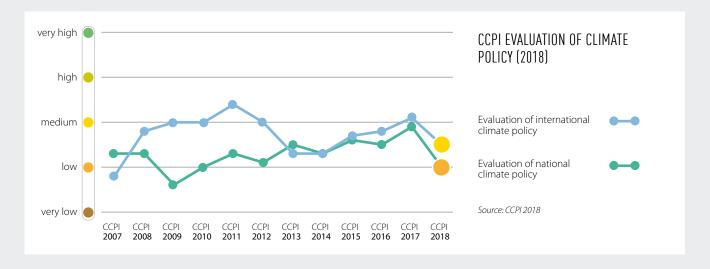


CLIMATE POLICY

INDONESIA

CCPI EXPERTS' POLICY EVALUATION18

Experts criticise Indonesia's lack of ambition to align its energy use and renewable energies to the targets of the Paris Agreement. Furthermore, they claim the country is not moving forward, as its existing policy for renewable energies prevents investment and the country does not take action to phase out fossil fuels. International performance is ranked medium and therefore slightly better than the national performance (low).



JUST TRANSITION¹⁹

Indonesia is the fourth largest coal and tenth largest gas producer in the world, but increasingly relies on oil imports. The 2014 National Energy Policy calls for reducing the share of oil in the energy mix to under 25%, and growing the share of renewables to 23%, by 2025; however it also sets "minimum" shares for coal and gas of 30% and 22% respectively. Earlier in 2018, the Energy Ministry capped prices of domestic coal for power stations for two years, to avoid rises in electricity prices, and increased the quota of coal production by 100 Mt, so it could exceed 500 Mt for the year.

Indonesia's oil consumption last peaked in 2014. In 2015, a new fuel pricing mechanism was introduced to reduce gasoline subsidies and reallocate this spending to socially linked programmes (including indirectly universal health coverage) to boost growth and reduce poverty. The government also increased funding for electrification, aiming to reach 97% by the end of 2018.





FINANCING THE TRANSITION

INDONESIA

FINANCIAL POLICIES AND REGULATIONS

Through policy and regulation governments can overcome challenges to mobilising green finance, including: real and perceived risks, insufficient returns on investment, capacity and information gaps.

APPROACHES TO IMPLEMENTING THE RECOMMENDATIONS OF THE TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES (TCFD)²⁰

This indicator establishes the degree of government engagement with the recommendations of the G20 Financial Stability Board's Task Force on Climate-Related Financial Disclosure.

No formal engagement with TCFD	Political and regulatory engagement	Formal engagement with private sector	Publication of guidance and action plans	Encoding into law

Source: CISL 2018

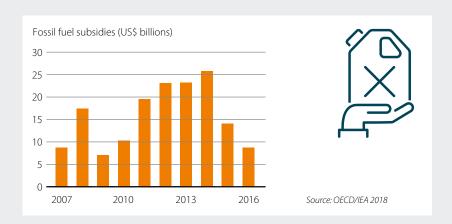
No evidence of formal engagement with TCFD-compliant initiatives was found in Indonesia. More broadly, Indonesia's Financial Service Authority has recently issued regulation on Sustainable Finance for banking, capital markets and non-bank financial institutions.

FISCAL POLICY LEVERS

Fiscal policy levers raise public revenues and direct public resources. Critically, they can shift investment decisions and consumer behaviour towards low-carbon, climate-resilient activities by reflecting externalities in prices.

FOSSIL FUEL SUBSIDIES

In 2016, Indonesia provided US\$8.8bn in fossil fuel subsidies (fluctuating US\$7.0-25.8bn since 2007). From 2007 to 2016, subsidies were greater (US\$0.006) than the G20 average (US\$0.003) per unit of GDP. Subsidies primarily target consumption (96%), through direct budget support and tax exemptions. The largest subsidy is annual compensation to state-owned Perusahaan Listrik Negara for selling (fossil fuel-dominated) electricity at below market prices (US\$4.2bn in 2016).



CARBON REVENUES

Indonesia does not have a national carbon tax or emissions trading scheme, nor are any such schemes planned. Despite this, 16% of domestic emissions from energy usage are subject to other taxes.

NO EXPLICIT CARBON PRICING SCHEME FROM 2007 TO 2017



Source: I4CE 2018; OECD 2018



FINANCING THE TRANSITION

INDONESIA



Governments steer investments through their public finance institutions including via development banks, both at home and overseas, and green investment banks. Developed G20 countries also have an obligation to provide finance to developing countries and public sources are a key aspect of these obligations under the UNFCCC.

NATIONAL AND INTERNATIONAL PUBLIC FINANCE IN THE POWER SECTOR²¹

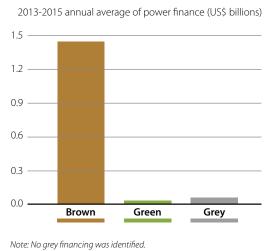
From 2013 to 2015, Indonesia's public finance institutions spent an annual average of US\$1.4bn brown, US\$0.03bn green and US\$0.06bn grey financing in the power sector domestically. The largest transaction was Indonesia Infrastructure Guarantee Fund loan guarantee (US\$4bn) to the Sumsel Mounmouth coal power plant. This data is likely to be non-comprehensive due to the lack of financial institutions' transparency.

> coal, oil and gas projects (and associated infrastructure)

large-scale hydropower, biofuels, biomass, nucléar, incineration, transmission, distribution, storage, energy efficiency, other general electricity support

renewable energy projects (excluding grey financing)

green



Source: Oil Change International 2017; FARN 2018



Proportion of total public finance

4%

to power

PROVISION OF INTERNATIONAL PUBLIC SUPPORT

Indonesia is not listed in Annex II of the UNFCCC and is therefore not formally obliged to provide climate finance. While Indonesia may channel international public finance towards climate change via multilateral and other development banks, this has not been included in this report.

OBLIGATION TO PROVIDE CLIMATE FINANCE UNDER UNFCCC





CONTRIBUTIONS THROUGH THE MAJOR MULTILATERAL CLIMATE FUNDS²²

Note: See Technical Note for multilateral climate funds included and method to attribute amounts to countries

Source: Climate Funds Update 2017

Annual average contribution (mn US\$, 2015-2016)

0.02

Theme of support			
Adaptation	Mitigation	Cross- cutting	
0%	100%	0%	

BILATERAL CLIMATE FINANCE CONTRIBUTIONS²³

Annual average contribution (mn US\$, 2015-2016)

n.a.

Theme of support			
Mitigation	Adaptation	Cross- cutting	Other
n.a.	n.a.	n.a.	n.a.

Source: Country reporting to UNFCCC

ANNEX



For more detail on sources and methodologies, please refer to the Technical Note at: https://www.climate-transparency.org/wp-content/uploads/2018/11/Technical-Note_data-sources-and-methodology.pdf

- The 2030 projections of the future development of greenhouse gas (GHG) emissions under current policies are based on the Climate Action Tracker (CAT) estimates.
- 2) The CAT is an independent scientific analysis that tracks progress towards the globally agreed aim of holding warming to well below 2°C, and pursuing efforts to limit warming to 1.5°C. The CAT "Effort Sharing" assessment methodology applies state-of-the-art scientific literature on how to compare the fairness of government efforts and (Intended) Nationally Determined Contribution ((I) NDC) proposals against the level and timing of emission reductions consistent with the Paris Agreement. The assessment of the temperature implications of a country's NDC is based on the assumption that all other governments would follow a similar level of ambition.
- 3) This assessment is based on the policy evaluation on page 9 of this Country Profile.
- 4) Gross Domestic Product (GDP) per capita is calculated by dividing GDP with mid-year population figures. GDP is the value of all final goods and services produced within a country in a given year. Here GDP figures at purchasing power parity (PPP) are used. Data for 2017.
- 5) The Human Development Index (HDI) is a composite index published by the United Nations Development Programme (UNDP). It is a summary measure of average achievement in key dimensions of human development. A country scores higher when the lifespan is higher, the education level is higher, and GDP per capita is higher.
- 6) The ND-GAIN index summarises a country's vulnerability to climate change and other global challenges in combination with its readiness to improve resilience. This report looks only at the exposure indicators as part of the vulnerability component of the ND-GAIN index for six sectors. It displays the exposure scores provided by the ND-GAIN on a scale from low (score: 0) to high (score: 1).
- 7) The indicator covers all Kyoto gases showing historic emissions in each of the IPCC source categories (energy, industrial processes, agriculture, etc.). Emissions projections (excl. forestry) under a current policy scenario until 2030 are taken from the Climate Action Tracker and scaled to the historical emissions from PRIMAP (see Brown to Green Report 2018 Technical Note).

- 8) The ratings on GHG emissions are taken from the Climate Change Performance Index (CCPI) 2018. The rating of "current level compared to a well below 2°C pathway" is based on a global scenario of GHG neutrality in the second half of the century and a common but differentiated convergence approach.
- 9) CO₂ emissions cover only the emissions from fossil fuels combustion (coal, oil and gas) by sector. They are calculated according to the UNFCCC methodology (in line with the 2006 IPCC Guidelines for National Greenhouse Gas Inventories).
- 10) Total primary energy supply data displayed in this Country Profile does not include non-energy use values. Solid fuel biomass in residential use has negative environmental and social impacts and is shown in the category "other".
- 11) Zero-carbon fuels include nuclear, hydropower and new renewables (non-residential biomass, geothermal, wind, solar).
- 12) Climate Transparency ratings assess the relative performance across the G20. A high scoring reflects a good effort from a climate protection perspective but is not necessarily 1.5°C compatible.
- 13) New renewables include non-residential biomass, geothermal, wind and solar energy. Hydropower and solid fuel biomass in residential use are excluded due to their negative environmental and social impacts.
- 14) Total primary energy supply (TPES) per capita displays the historical, current and projected energy supply in relation to a country's population. Alongside the intensity indicators (TPES/GDP and CO₂/TPES), TPES per capita gives an indication on the energy efficiency of a country's economy. In line with a well-below 2°C limit, TPES per capita should not grow above current global average levels. This means that developing countries are still allowed to expand their energy use to the current global average, while developed countries have to simultaneously reduce it to that same number.
- 15) TPES per GDP describes the energy intensity of a country's economy. This indicator illustrates the efficiency of energy usage by calculating the energy needed to produce one unit of GDP. Here GDP figures at PPP are used. A decrease in this indicator can mean an increase in efficiency but also reflects structural economic changes.
- 16) The carbon intensity of a country's energy sector describes the CO₂ emissions per unit of total primary energy supply and gives an indication of the share of fossil fuels in the energy supply.



ANNEX (continued)

- G20
- 17) The selection of policies rated and the assessment of 1.5°C compatibility are informed by the Paris Agreement and the Climate Action Tracker (2016): "The ten most important short-term steps to limit warming to 1.5°C". The table below displays the criteria used to assess a country's policy performance. See the Brown to Green Report 2018 Technical Note for the sources used for this assessment.
- 18) The CCPI evaluates a country's performance in national climate policy, as well as international climate diplomacy through feedback from national experts from non-governmental organisations to a standardised questionnaire.
- 19) See the Brown to Green 2018 Technical Note for the sources used for this assessment.
- 20) The University of Cambridge Institute for Sustainability Leadership (CISL) in early 2018 reviewed the progress made by the national regulatory agencies of G20 members in making the Task Force on Climate-related Financial Disclosures (TCFD) recommendations relevant to their national contexts. See the Brown to Green Report 2018 Technical Note for more information on the assessment.
- 21) This data includes bilateral public finance institutions such as national development banks and other development finance institutions, overseas aid agencies, export credit agencies, as well as key multilateral development banks. The analysis omits most finance delivered through financial intermediaries and significant volumes of multilateral development bank (MDB) development policy finance (due to a lack of clarity on power finance volumes). Given a lack of transparency, other important multilateral institutions in which G20 governments participate are not covered. See the Brown to Green Report 2018 Technical Note for further details.
- 22) Finance delivered through multilateral climate funds comes from Climate Funds Update, a joint ODI/Heinrich Boell Foundation database that tracks spending through major multilateral climate funds. See the Brown to Green Report 2018 Technical Note for multilateral climate funds included and method to attribute approved amounts to countries.
- 23) Bilateral finance commitments are sourced from Biennial Party reporting to the UNFCCC. Financial instrument reporting is sourced from the OECD-DAC; refer to the Brown to Green Report 2018 Technical Note for more detail. Figures represent commitments of Official Development Assistance (ODA) funds to projects or programmes, as opposed to actual disbursements.

On endnote 17)	Criteria description				
	Low	Medium	High	Frontrunner	
GHG emissions target for 2050 or beyond	No emissions reduction target for 2050 or beyond	Existing emissions reduction target for 2050 or beyond	Existing emissions reduction target for 2050 or beyond and clear interim steps	Emissions reduction target to bring GHG emissions to at least net zero by 2050	
Long-term low emissions development strategy	No long-term low emissions strategy	Existing long-term low emissions strategy	Long-term low emissions strategy includes interim steps and/or sectoral targets	Long-term low emissions strategy towards full decarbonisation in the second half of the century; includes interim steps and/or sectoral targets, plus institutions and measures in place to implement and/or regularly review the strategy	
Renewable energy in power sector	Allianz Monitor 2018 Category 1.2 (targets) and 2 (policies), average 0-25	Allianz Monitor 2018 Category 1.2 (targets) and 2 (policies), average 26-60	Allianz Monitor 2018 Category 1.2 (targets) and 2 (policies), average 61-100	Allianz Monitor 2018 Category 1.2 (targets) and 2 (policies), 61-100 plus 100% renewables in the power sector by 2050 in place	
Coal phase-out	No consideration or policy in place for phasing out coal	Significant action to reduce coal use implemented or coal phase-out under consideration	Coal phase-out decided and under implementation	Coal phase-out date compatible with 1.5°C	
Phase-out of fossil fuel light duty vehicles (LDVs)	No policy or emissions performance standards for LDVs in place	Energy/emissions performance standards or support for efficient LDVs	National target to phase out fossil fuel LDVs in place	Ban on new fossil-based LDVs by 2025/30	
Near zero-energy new buildings	No policy or low emissions building codes and standards in place	Building codes, standards or fiscal/financial incentives for low emissions options in place	National strategy for near zero-energy buildings (at least for all new buildings)	National strategy for near zero-energy buildings by 2020/25 (at least for all new buildings)	
Low-carbon new industry installations	No policy or support for energy efficiency in industrial production in place	Support for energy efficiency in industrial production (covering at least two of the country's sub-sectors (e.g. cement and steel production))	Target for new installations in emissions-intensive sectors to be low-carbon	Target for new installations in emissions-intensive sectors to be low-carbon after 2020, maximising efficiency	
Net zero deforestation	No policy or incentive to reduce deforestation in place	Incentives to reduce deforestation or support schemes for afforestation / reforestation in place	National target for reaching zero deforestation	National target for reaching zero deforestation by 2020s or for increasing forest coverage	

CLIMATE TRANSPARENCY

Partners:





























Funders:





Supported by:





based on a decision of the German Bundestag

Data Partners:









http://www.climate-transparency.org/g20-climate-performance/g20report2018

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