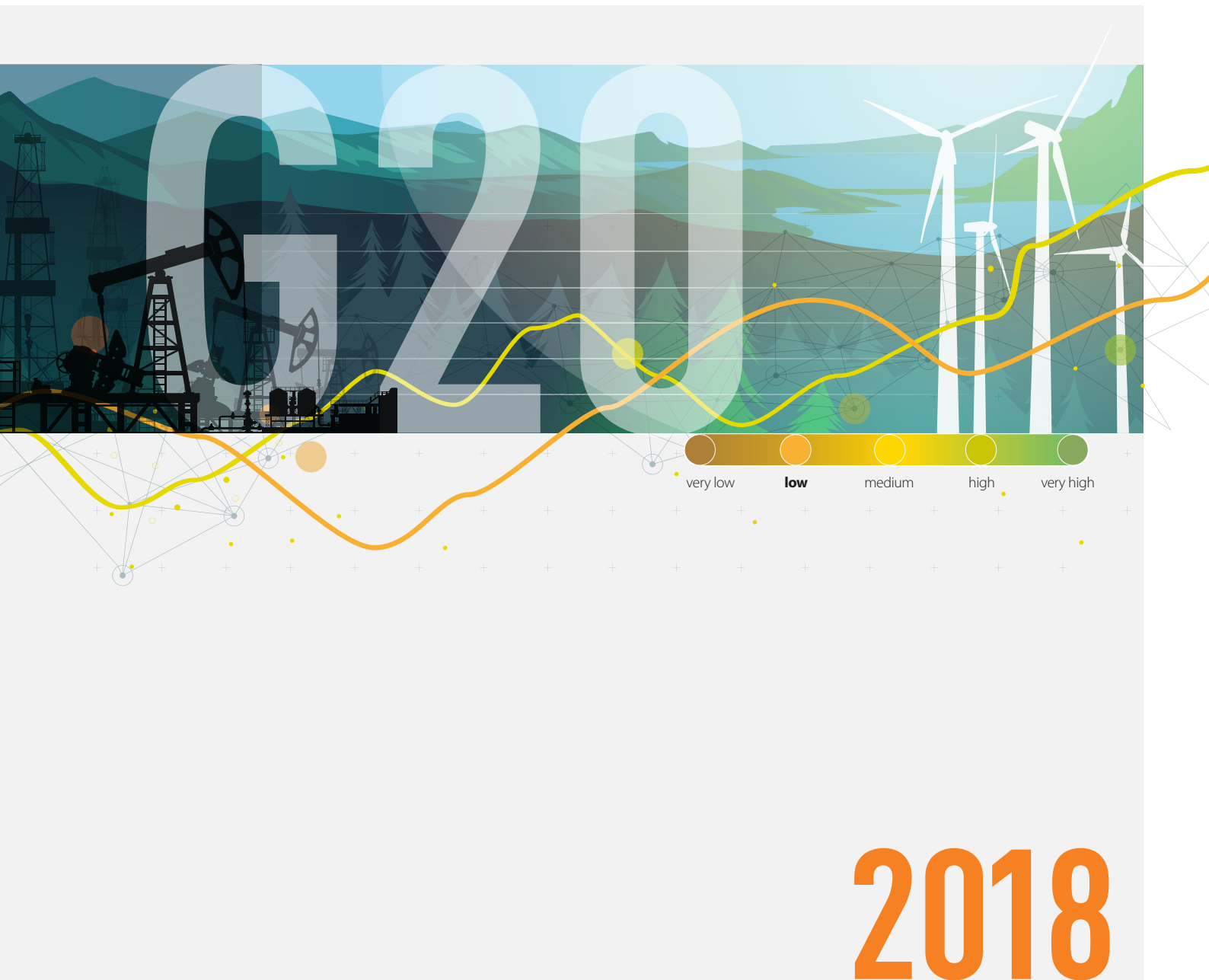


BROWN TO GREEN

EXECUTIVE SUMMARY AND INDONESIA COUNTRY PROFILE | 2018



ABOUT CLIMATE TRANSPARENCY AND THIS REPORT



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CENTRO CLIMA
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BROWN TO GREEN

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The *Brown to Green Report 2018* consists of this summary report and in-depth country profiles for each G20 country. The country profiles and a technical note on data sources and methodology can be downloaded at www.climate-transparency.org/g20-climate-performance/g20report2018



FOREWORD: A G20 Stocktake on Climate Action

Alvaro Umaña and Peter Eigen

The Global Stocktake established in Article 14 of the Paris Agreement aims to “assess the collective progress” towards the agreed goals: 1) holding the increase in global average temperature to well below 2°C and pursuing efforts to limit the increase to 1.5°C; 2) increasing the ability to adapt to the adverse impacts of climate change and foster climate resilience; and 3) making all finance flows consistent with a pathway towards low greenhouse gas (GHG) emissions and climate-resilient development.

At the moment, we are far away from taking the action needed to achieve these three goals. Current nationally determined contributions (NDCs) would lead to a global temperature increase of around 3.2°C. The Global Stocktake together with the NDCs are the key elements of the Paris Agreement aimed at ratcheting up the ambition of national climate actions. Countries need to submit their revised NDCs by 2020. Those that have not yet submitted an NDC with a 2025/30 target must provide a new NDC. All other countries are invited to strengthen their NDCs. Informed by the Intergovernmental Panel on Climate Change (IPCC) 1.5°C Special Report and the Talanoa Dialogue in 2018, it is clear that these next NDCs must increase the level of ambition through much stronger 2030 targets. The cycle of assessing collective progress and increasing the ambition of national climate actions will then continue with the first five-yearly Global Stocktake in 2023, to inform the submission of new and strengthened NDCs by 2025.

Our *Brown to Green Report* supports the process of raising climate ambition. It is a simple stocktake on climate action (with a focus on mitigation and finance) of the G20 countries produced collectively by 14 organisations from different G20 countries.

Setting an example: The *Brown to Green Report* compares climate action of countries with their G20 peers as well as collectively and for some specific policies against 1.5°C benchmarks. It provides indicators on emissions, decarbonisation, climate policies and finance. Our report shows that substantial information is already available on what countries are doing or not doing. This analysis can inform the preparation of the next round of NDCs to be submitted by 2020 and can drive more ambitious climate action.

Ensuring accountability: To hold governments accountable, transparency and a critical level of public attention are required. Our country profiles for all G20 countries are each 15 pages long, providing concise and illustrative information with country-tailored messages. These help our global partnership to inform national climate policy agendas. We promote the findings of the *Brown to Green Report* in the media, in stakeholder workshops and in government briefings in the G20 countries through local partners.

Facilitating learning: Raising ambition is achieved by communicating the emission gap and by facilitating learning and diffusion of good practices to close the gap. This year's *Brown to Green Report* highlights the positive developments that have happened since the Paris conference in 2015 and the best practices in G20 countries that are compatible with the 1.5°C limit. We believe that this solution-oriented approach is as important to motivate Parties to implement fully their NDCs as underlining the urgency of action.

This is the fourth edition of our annual publication. We are proud to share what is new this year:

- We have included new and improved assessments on finance, exposure to climate change, just transition and the NDCs.
- Based on collaboration with ENERDATA, we will for the first time show emission and decarbonisation trends until 2017 (last year's report showed trends up to 2014).
- We have revised our country profiles so that the front page provides a concise summary of where the country stands in its transition from brown to green.

We believe that our transparent and comparable information can be a powerful tool to stimulate a race to the top in climate action.



„Global emissions need to peak in 2020. The Brown to Green report provides us with an independent stocktake, where we stand now. This is valuable information for countries when they declare their climate contributions in 2020.“

Christina Figueres, Former Executive Secretary, UNFCCC (2010-2015) and Convenor, Mission 2020



Alvaro Umaña

Co-chair of Climate Transparency, Former Minister of Environment and Energy of Costa Rica and former Ambassador of Costa Rica to the United Nations Copenhagen Climate Change Conference



Peter Eigen

Co-chair of Climate Transparency, Founder and Chair of the Advisory Council of Transparency International and Co-Founder of the HUMBOLDT-VIADRINA Governance Platform

EXECUTIVE SUMMARY



COLLECTIVELY, THE G20 NEEDS ROUGHLY TO HALVE EMISSIONS IN 2030 TO MEET THE PARIS GOALS, BUT ADEQUATE LONG-TERM STRATEGIES TO DO SO ARE STILL LACKING.

The emission gap:

- Currently, nationally determined contributions (NDCs) would lead to a global temperature increase of around 3.2°C. None of the G20 NDC targets for 2030 is in line with the Paris Agreement.
- India's NDC is the most ambitious, closest to the 1.5°C limit. The NDCs of Russia, Saudi Arabia and Turkey would lead to a warming that exceeds

4°C, if all governments were to have similar levels of ambition for their targets.

- Given current policies, Argentina, Brazil, Canada, Mexico, South Korea, Turkey and the United States are likely to miss their NDC targets (LULUCF is not considered). China, the European Union, Indonesia, Japan, Russia and Saudi Arabia are likely to achieve or even overachieve their current targets, partly because their NDCs have a low level of ambition.



IN 15 OF THE G20 COUNTRIES, ENERGY-RELATED CO₂ EMISSIONS INCREASED AGAIN IN 2017, AND 82% OF THE G20 ENERGY SUPPLY STILL COMES FROM FOSSIL FUELS.

Developments after the Paris conference:

- Energy-related CO₂ emissions – the highest share of GHG emissions – of the G20 countries grew by 56% between 1990 and 2014. Between 2014 and 2016 these G20 emissions stalled, but in 2017 they started to increase again.
- The G20 carbon intensity of the energy sector decreased slightly in 2016 and stalled in 2017 due to a slightly higher share of renewables and/or other zero-carbon technologies in the energy mix.
- On average, 82% of the energy supply in the G20 countries is still sourced from fossil fuels – the share even increased in Canada, India and Indonesia between 2012 and 2017. The United Kingdom managed to significantly reduce its share of fossil fuels in the energy mix, followed by China and France.

- Several G20 countries have made major climate policy announcements since Paris, e.g. Argentina's launch of a US\$5.7 billion investment programme to push renewable energies or India's release of the draft Cooling Action Plan, to cut cooling demand by 20% to 25% by 2037. Nevertheless, there are also "brown" actions pointing in the opposite direction, e.g. the United Kingdom's cancelling of climate policies (Zero Carbon Homes, Feed-in-Tariffs, energy efficiency measures in buildings) and Brazil's new subsidy to diesel consumption provided in 2018.



THE G20 COUNTRIES THAT NEED TO DO MOST IN THE POWER AND TRANSPORT SECTORS LACK CONCRETE ACTIONS.

G20 leaders and laggards in sectoral performances:

- **Power:** South Africa (961 gCO₂/kWh), Australia (768 gCO₂/kWh) and Indonesia (755 gCO₂/kWh) have the highest emission intensity in the power sector and lack concrete actions to phase out coal.
- **Transport:** France, Japan and the United Kingdom lead the G20 policy rating with 'phase-out' plans for fossil fuel cars. The United States (5.4 tCO₂/capita), Canada (4.8 tCO₂/capita) and Australia (4.0 tCO₂/capita) have high mobility rates and the highest transport emissions per capita. The United States and Canada lack adequate fuel efficiency standards, while Australia has none.
- **Industry:** Only the European Union receives a high policy rating because of its target for new installations in emission-intensive sectors to be low-carbon. South Africa, China

and Russia lag behind. They have the highest emission intensity, up to 0.6 tCO₂e/US\$1,000 (2015) sectoral GDP (PPP), and insufficient policies.

- **Buildings:** Canada (2.1 tCO₂/capita), Germany (1.7 tCO₂/capita) and the United States (1.6 tCO₂/capita) show the highest direct building emissions per capita (not counting the emissions from commercial heat and electricity) in the G20. The 1.5°C-compatible EU policy of near zero-energy buildings by 2020/25 for new buildings could be a model for other G20 countries.
- **Forestry:** Indonesia (23%), Argentina (22%) and Brazil (10%) have had the highest forest loss since 1990. They do not show sufficient action to reverse this trend. A strategy for net zero deforestation by 2020 would be 1.5°C-compatible.



G20 COUNTRIES PROVIDED US\$147 BILLION SUBSIDIES TO COAL, OIL AND GAS IN 2016. ONLY CANADA AND FRANCE GENERATE MORE PUBLIC REVENUES THROUGH EXPLICIT CARBON PRICING THAN THEY SPEND ON FOSSIL FUEL SUBSIDIES.

G20 leaders and laggards in financing the transition:

- Several G20 countries – developed and emerging economies – have introduced green finance policies. France, the European Union and Japan are leading in implementing climate-related financial disclosure policies.
- Nearly all G20 countries spend more on fossil fuel subsidies than they receive in public revenues from explicit carbon pricing. Only Canada and France generate more public revenues through explicit carbon pricing than they spend on fossil fuel subsidies (Canada: US\$3.7 billion vs US\$2.1 billion; France: US\$6.2 billion vs US\$5.8 billion). The G20 countries providing the highest amounts of fossil fuel subsidies per unit of GDP are Saudi Arabia (total

amount of subsidies US\$30 billion), Italy (US\$14 billion), Australia (US\$7 billion) and Brazil (US\$16 billion). Of these countries, subsidies have been increasing with fluctuations in Australia, Brazil and Italy since 2007.

- From 2013 to 2015, G20 countries provided on average US\$91.4 billion a year for fossil fuel power projects (coal, oil and gas projects and associated infrastructure). South Korea, Japan and Russia provided the largest amounts compared to their GDP.
- G20 international climate finance provision has slightly increased recently.



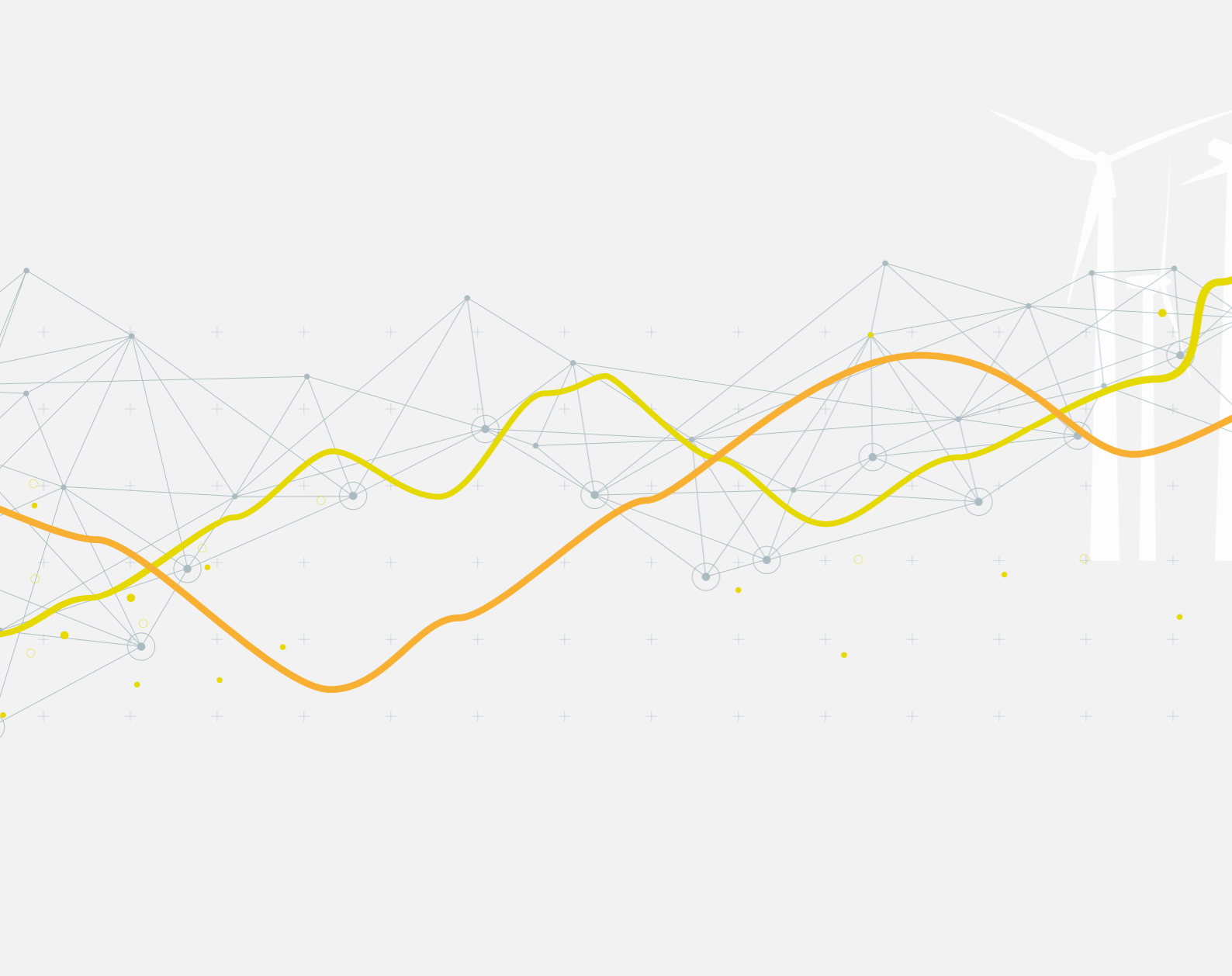
JUST TRANSITION: SEVERAL G20 COUNTRIES HAVE STARTED TO ADDRESS THE QUESTION OF HOW TO CONDUCT A TRANSITION THAT IS FAIR TO THOSE ADVERSELY AFFECTED BY IT.

Just transition good practice examples in the G20:

- There are national or regional governmental initiatives to learn from in Australia, Canada, China, the European Union, France, Germany, Indonesia, South Africa and the United States.
- For example: A federal taskforce develops a just transition plan for coal workers and communities in Canada. The Chinese government will allocate 30 billion yuan (US\$4.56 billion) over the next three years to support the closure of small, inefficient

coal mines and redeploy around 1 million workers. France's draft finance bill for 2019 includes a ten-year compensation fund to make up for the loss of revenue for local authorities caused by the closure of coal power stations.

- India, Japan, Mexico, Russia, South Korea and the United Kingdom are socially affected by the transition, but seem to have no dialogue or action yet.



INDONESIA COUNTRY PROFILE | 2018

BROWN TO GREEN: THE G20 TRANSITION TO A LOW-CARBON ECONOMY | 2018

INDONESIA

GREENHOUSE GAS (GHG) EMISSIONS
(INCL. FORESTRY) PER CAPITA
(tCO₂e/capita)



Data from 2015 | Source: PRIMAP 2018



The gap:

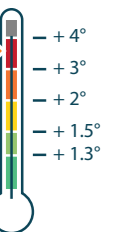
Is Indonesia on track to stay below the Paris Agreement temperature limit?

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

Current NDC²



Source: CAT 2018

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.

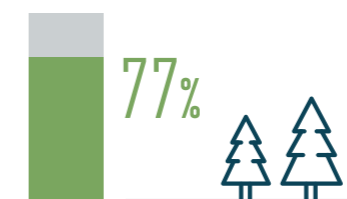


Deforestation rates dropped by 60% between 2016 and 2017, likely due to a 2016 peat drainage moratorium.

Brown and green performance:

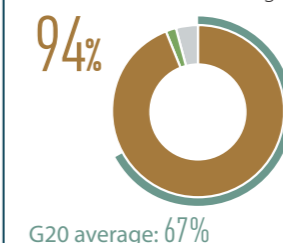
Where does Indonesia lead or lag compared to G20 countries?

FOREST AREA
COMPARED TO 1990 LEVEL
(%)



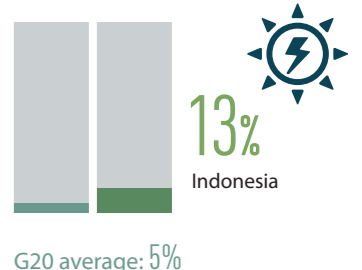
Data from 2015 | Source: PRIMAP 2018

SHARE OF BROWN PUBLIC
POWER FINANCE
(2013-2015 annual average)



Source: Oil Change International 2017

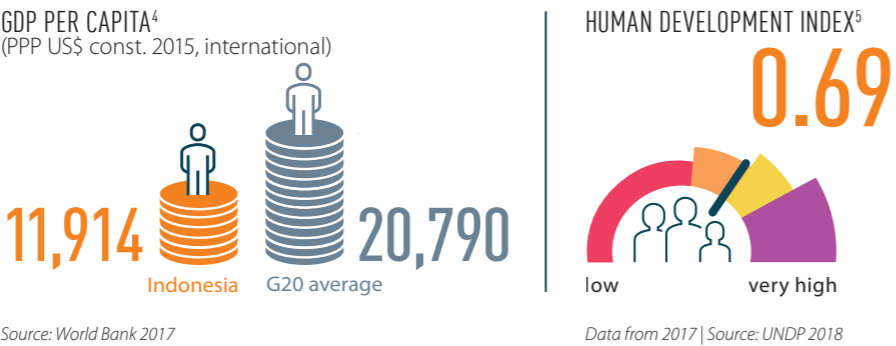
SHARE OF NEW RENEWABLES
IN THE ENERGY MIX



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>

BACKGROUND INDICATORS:
INDONESIA



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.

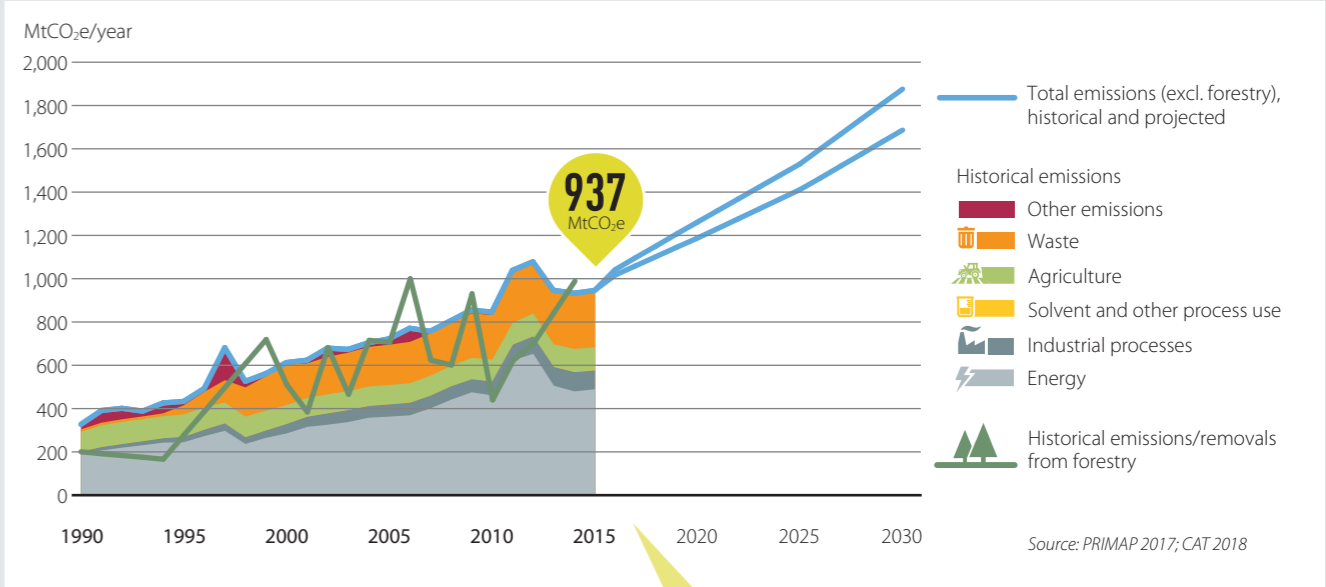


Own composition based on ND-GAIN 2017 (based on data for 2016)

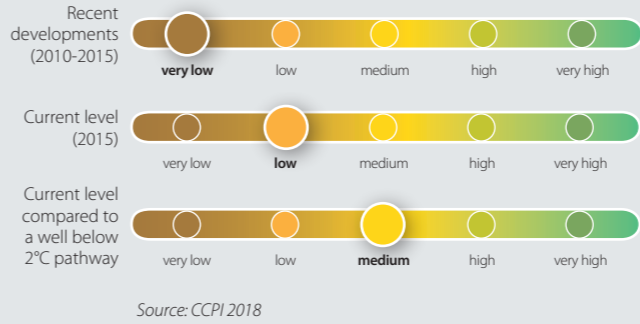
GREENHOUSE GAS (GHG) EMISSIONS

INDONESIA

TOTAL GHG EMISSIONS ACROSS SECTORS⁷

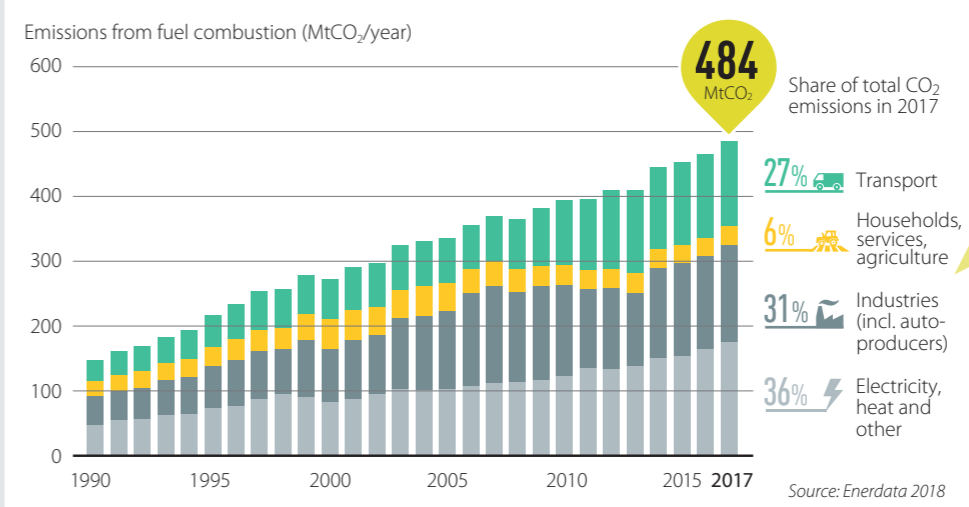


CCPI PERFORMANCE RATING OF GHG EMISSIONS PER CAPITA⁸



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

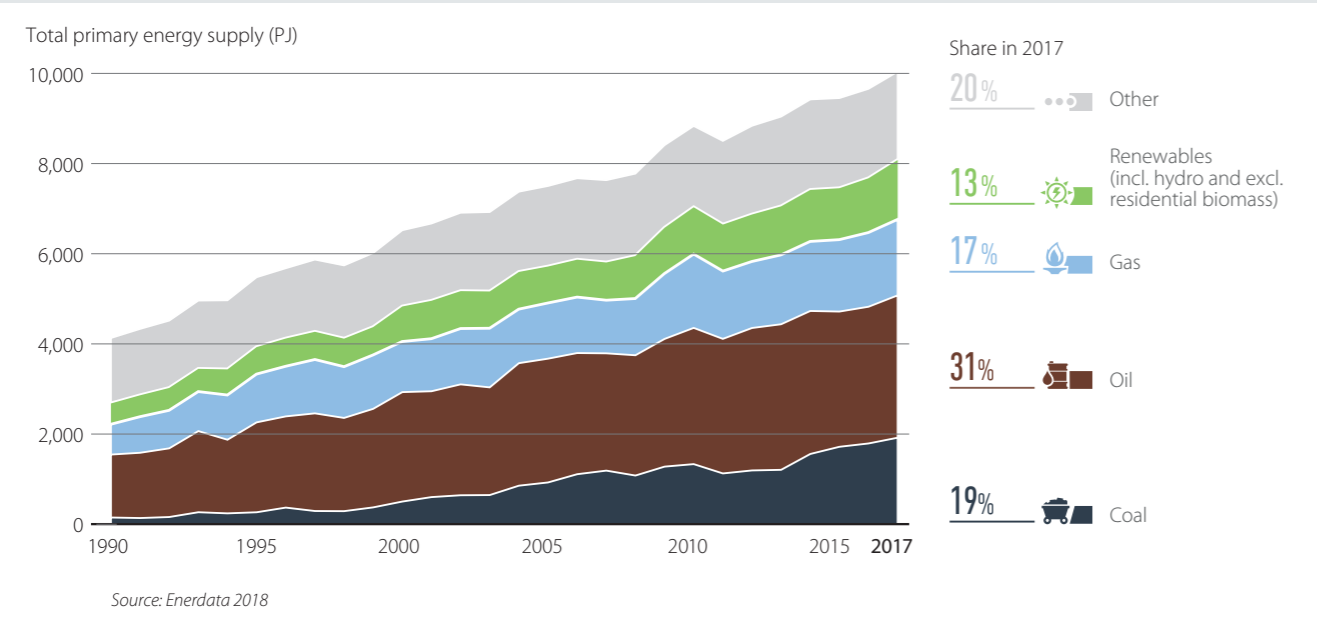


The largest contributor for overall GHG emissions are CO₂ emissions from energy, which have increased by 18% (2012–2017), largely driven by increasing emissions from power generation, industries and transport.

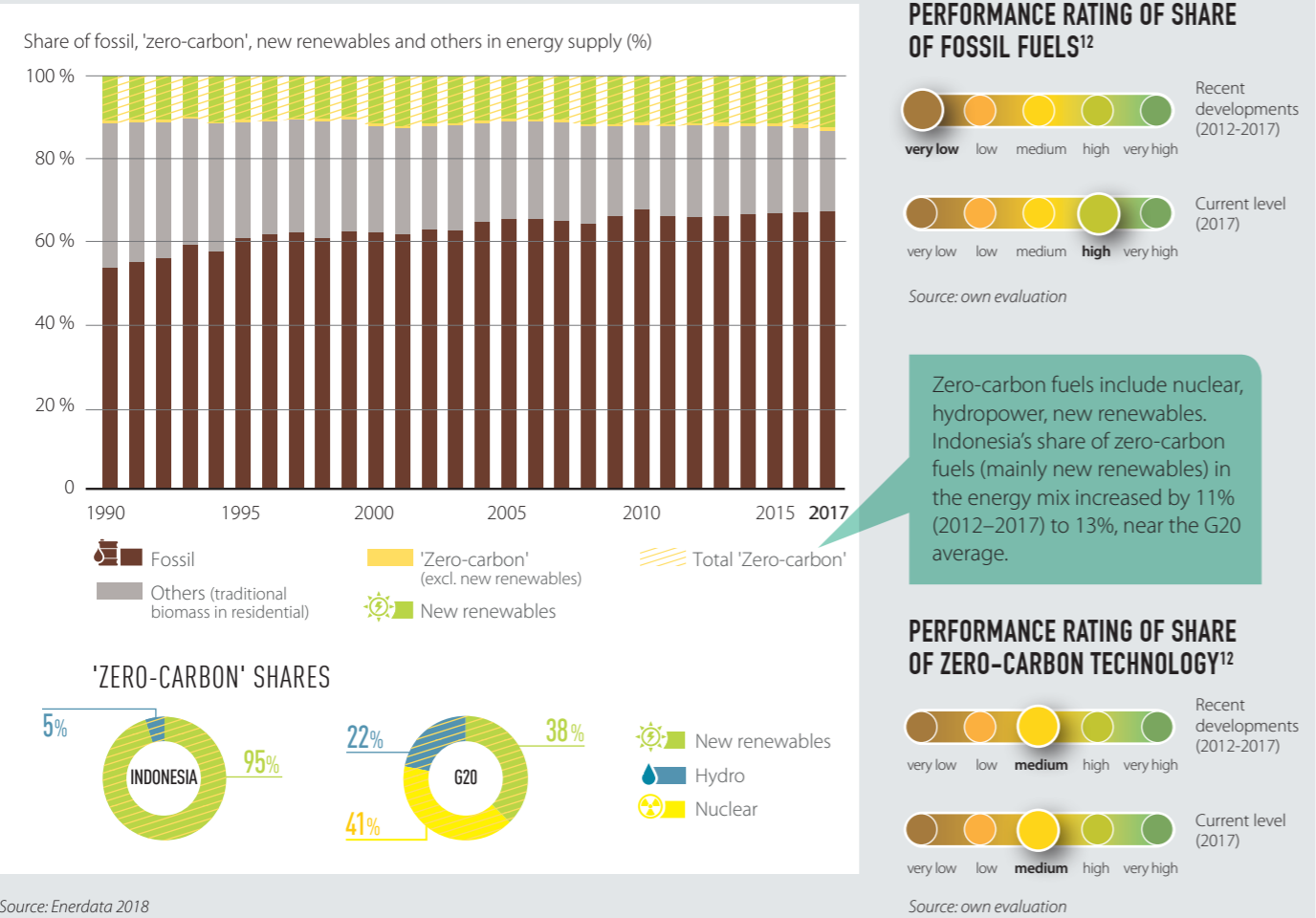
DECARBONISATION

INDONESIA

ENERGY MIX¹⁰



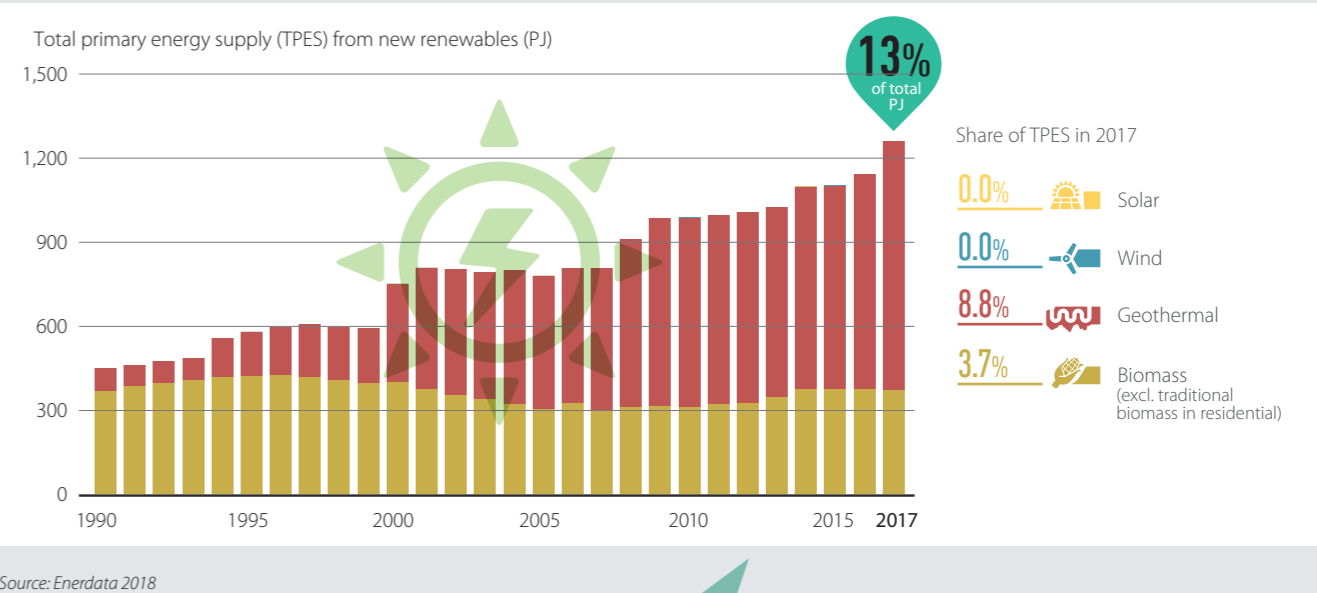
SHARE OF FOSSIL FUELS AND 'ZERO-CARBON' FUELS IN ENERGY SUPPLY¹¹



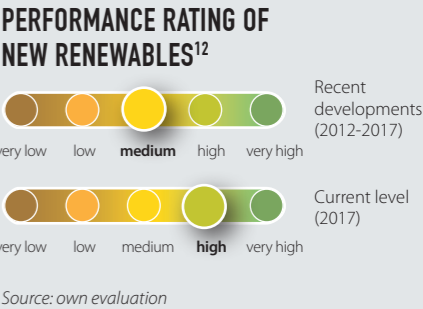
DECARBONISATION

INDONESIA

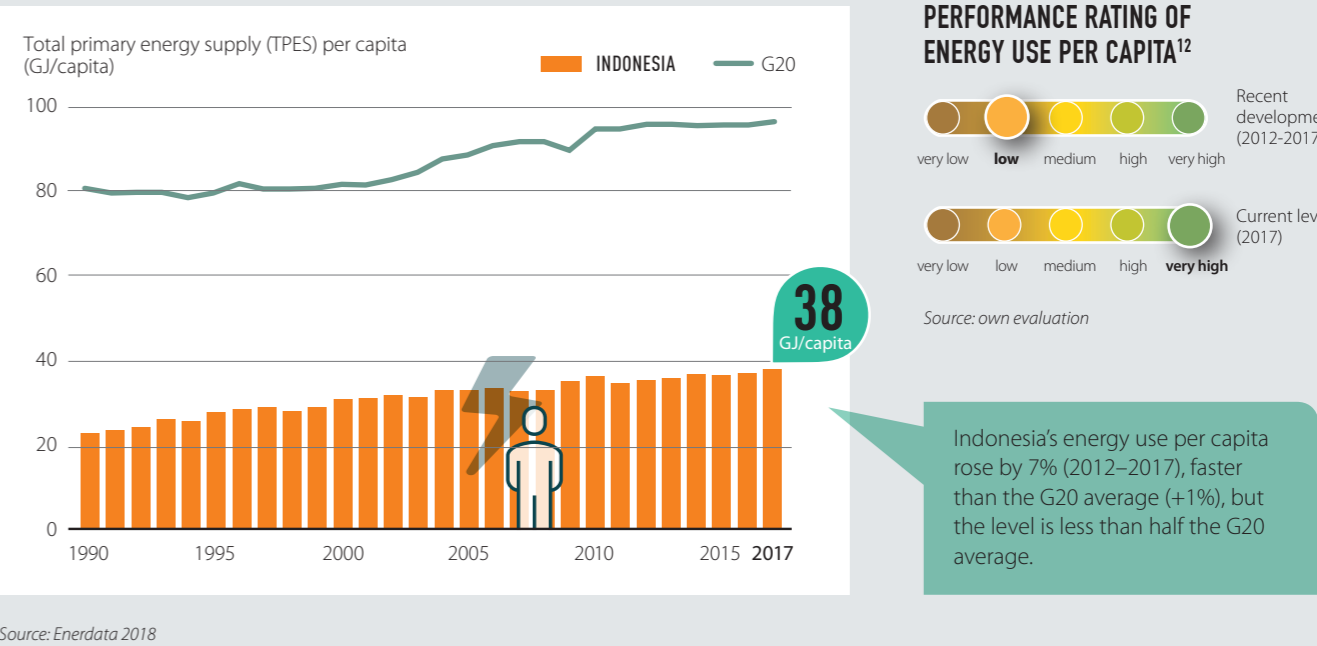
NEW RENEWABLES¹³



"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.



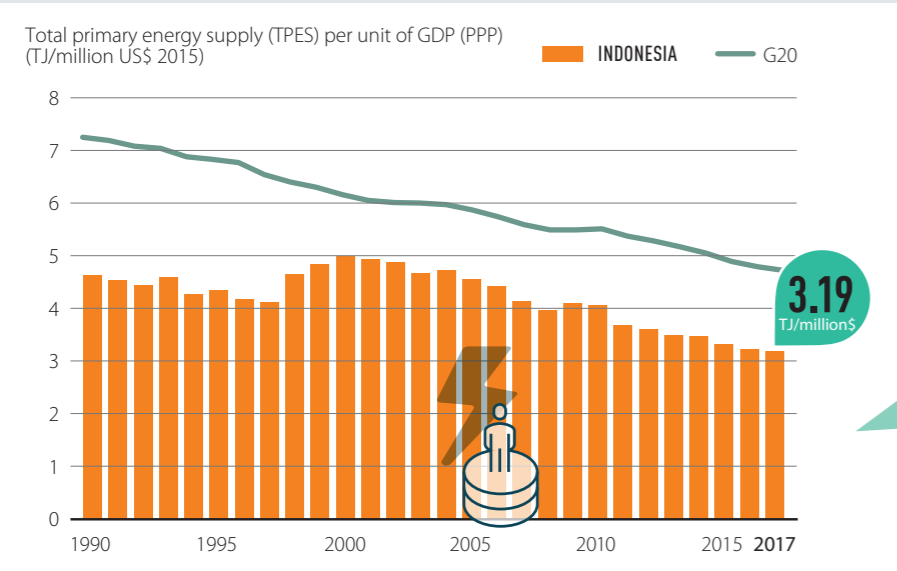
ENERGY USE PER CAPITA¹⁴



DECARBONISATION

INDONESIA

ENERGY INTENSITY OF THE ECONOMY¹⁵



This indicator quantifies how much energy is used for each unit of GDP. Indonesia's energy intensity decreased at a similar pace to the G20 average, by 11% (2012–2017), but the level remains 30% below the average.

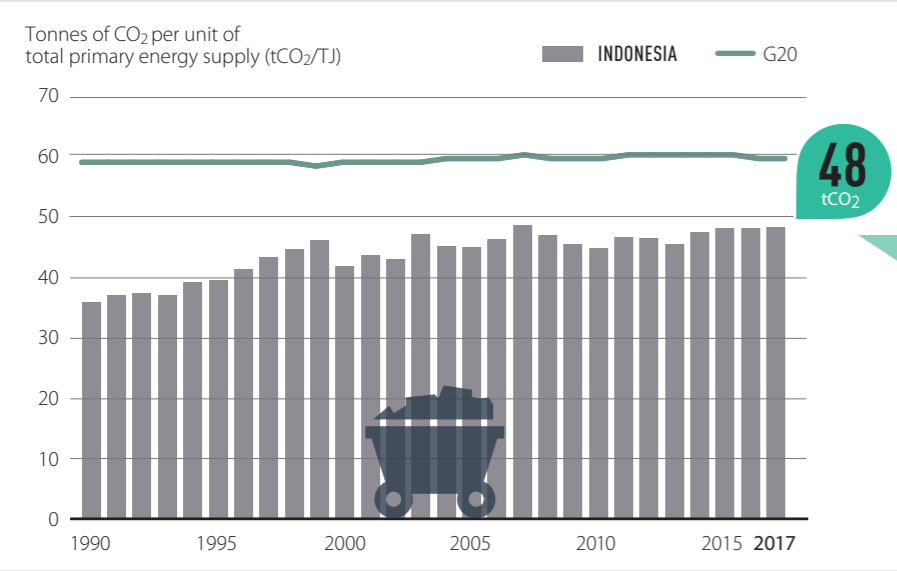
Source: Enerdata 2018

PERFORMANCE RATING OF ENERGY INTENSITY¹²



Source: own evaluation

CARBON INTENSITY OF THE ENERGY SECTOR¹⁶



The carbon intensity of Indonesia's energy sector increased by 4% (2012–2017) but remains below the G20 average due to the high share of geothermal energy.

Source: Enerdata 2018

PERFORMANCE RATING OF CARBON INTENSITY¹²



Source: own evaluation

DECARBONISATION

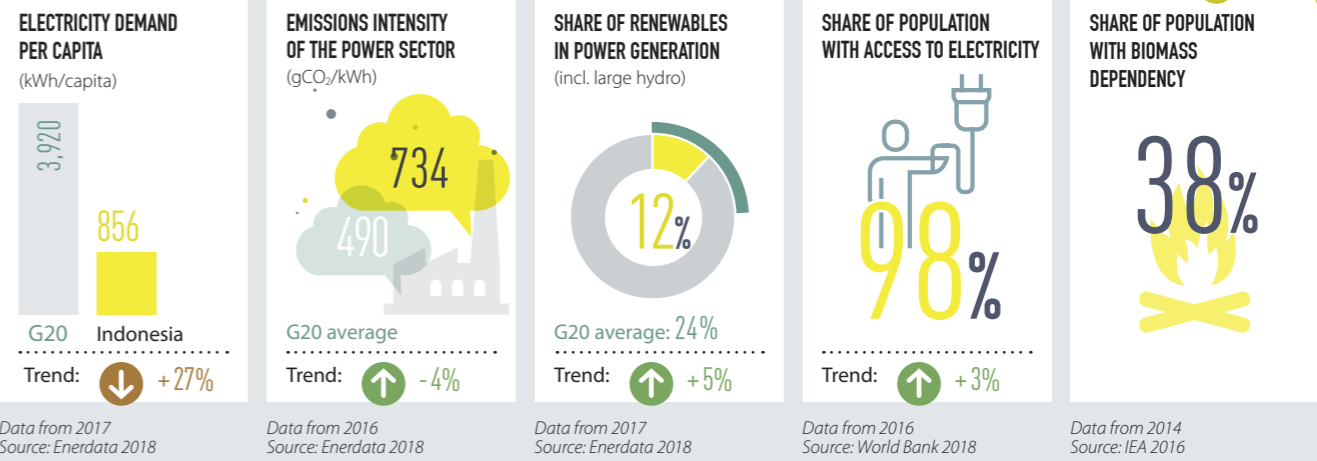
INDONESIA

SECTOR-SPECIFIC INDICATORS

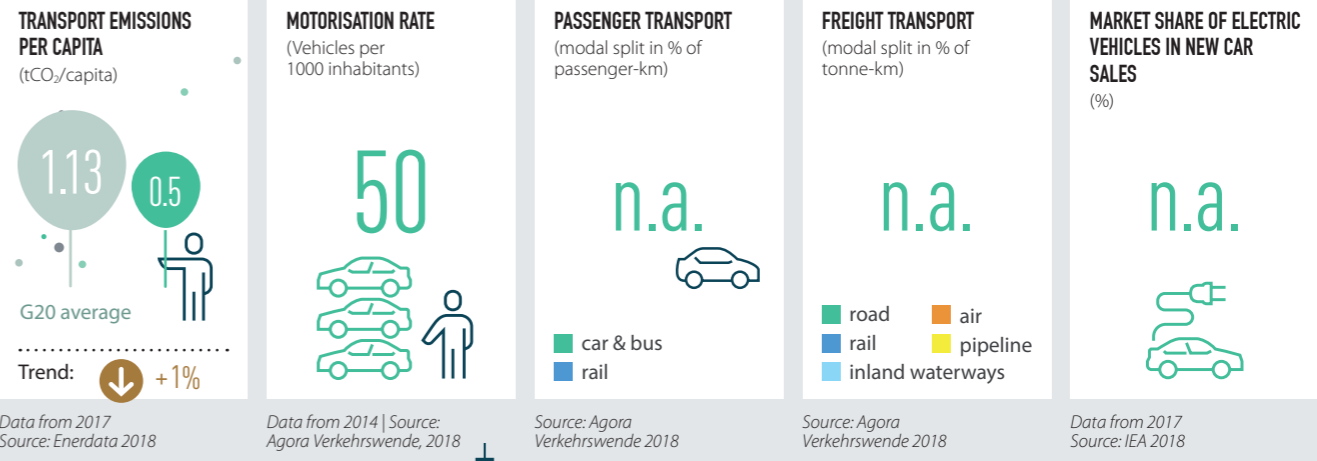
Legend for trend: negative positive

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

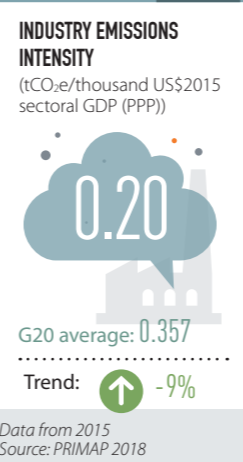
POWER SECTOR



TRANSPORT SECTOR



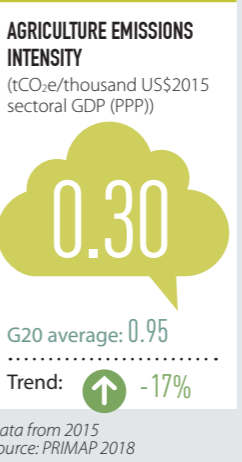
INDUSTRY SECTOR



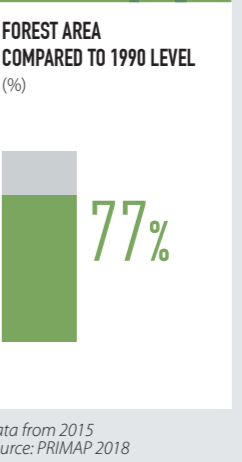
BUILDING SECTOR



AGRICULTURE SECTOR



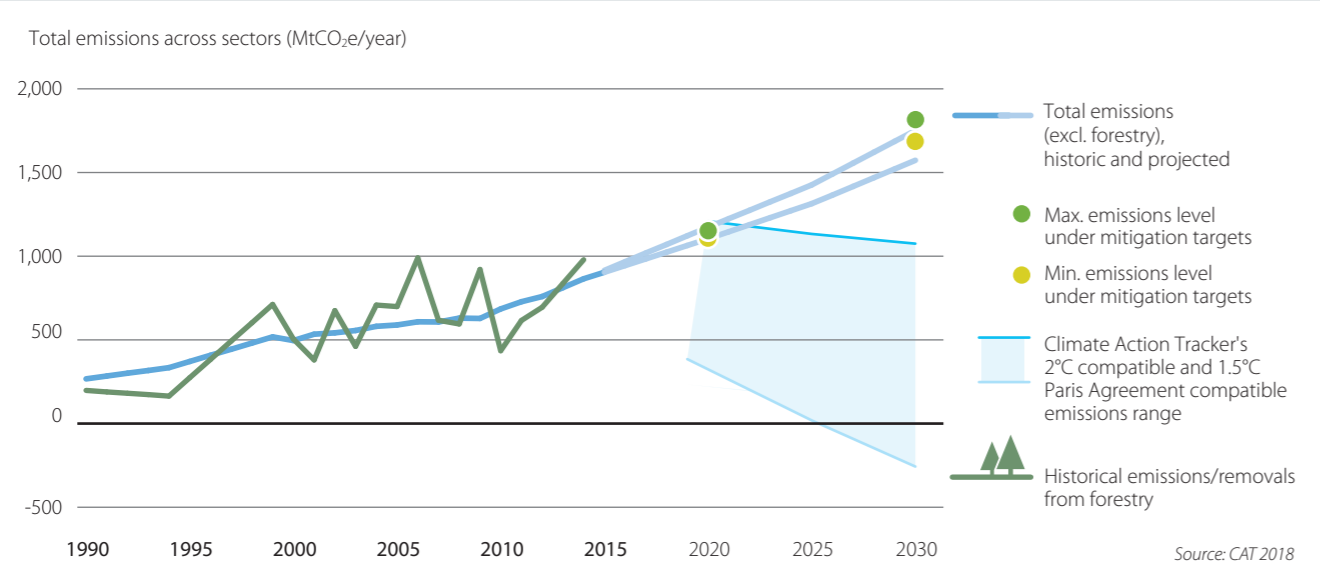
FOREST SECTOR



CLIMATE POLICY

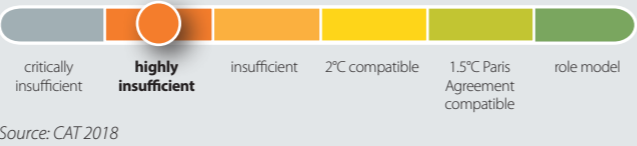
INDONESIA

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)

| MITIGATION | |
|------------|---|
| Targets | Overall targets 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 (CH ₄); nitrous oxide (N ₂ O) • Percentage of national emissions covered: Not specified |
| Actions | Sectoral targets Energy: Primary energy supply mix with shares as follows: 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 Actions specified (sectors: land use and forestry, agriculture, energy, waste) |

| ADAPTATION | |
|---------------------------------|--|
| Targets | Not mentioned |
| Actions | Actions specified (sectors: agriculture, water, forestry, health, infrastructure, biodiversity/ecosystems) |
| FINANCE | |
| Conditionality | 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) |
| Investment needs | Not specified |
| Actions | National actions to align financial flows specified (public spending) |
| International market mechanisms | Not mentioned |

Source: own compilation based on UNFCCC 2018



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.

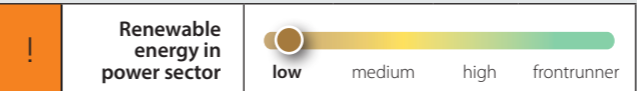
Legend:
low No action
medium Some action
high Significant action and a long-term vision
frontrunner Significant action, and a long-term vision that is compatible with 1.5°C
! most important measures based on share of emissions and political relevance

| | low | medium | high | frontrunner |
|--|-------------|--------|------|-------------|
| GHG emissions target for 2050 or beyond | <div></div> | | | |
| Long-term low emissions development strategy | <div></div> | | | |

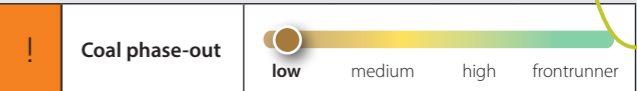
The Indonesian government is currently forming a long-term low emission development strategy, which it expects to enact in 2018. The Medium-Term Planning 2015–2019 clearly aspires to long-

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

POWER

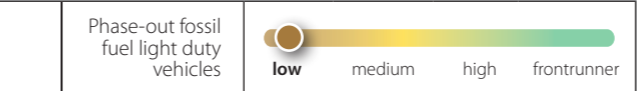


Indonesia plans to increase the share of new and renewable energy in the primary energy mix to 31% by 2050. The government offers feed-in tariffs for various renewable technologies but the rate is based on the average generation cost of electricity (including subsidised coal power), which renders unsubsidised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



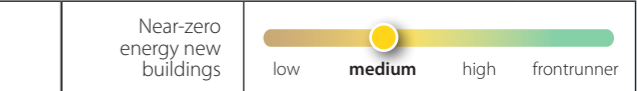
The government expects that 56 GW of new capacity will be needed in the next decade, and plans to cover 26,8 GW of this by coal. No coal phase-out is under consideration.

TRANSPORT



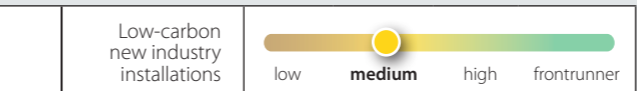
Since 2018, petrol vehicles need to adhere to EURO 4 standards while for diesel the former EURO 2 standard still applies until 2021. There are no targets to phase out fossil-fuelled LDVs.

BUILDINGS



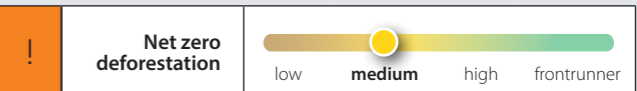
Green building codes and standards are in place, yet there is no national strategy to promote zero-energy buildings.

INDUSTRY



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.

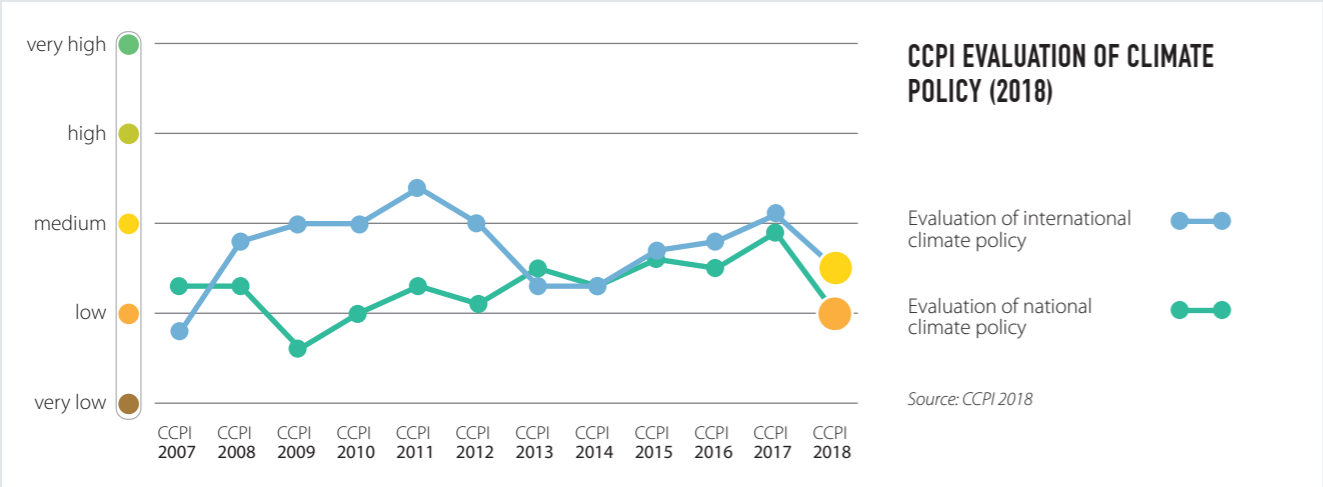
Source: own evaluation

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

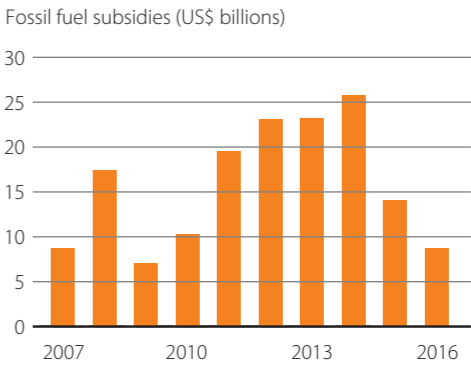
No evidence of formal engagement with TCFD-compliant initiatives was found in Indonesia. More broadly, Indonesia's Financial Service Authority has recently issued regulation on Sustainable Finance for banking, capital markets and non-bank financial institutions.

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).



Source: OECD/IEA 2018



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: IACE 2018; OECD 2018

FINANCING THE TRANSITION

INDONESIA

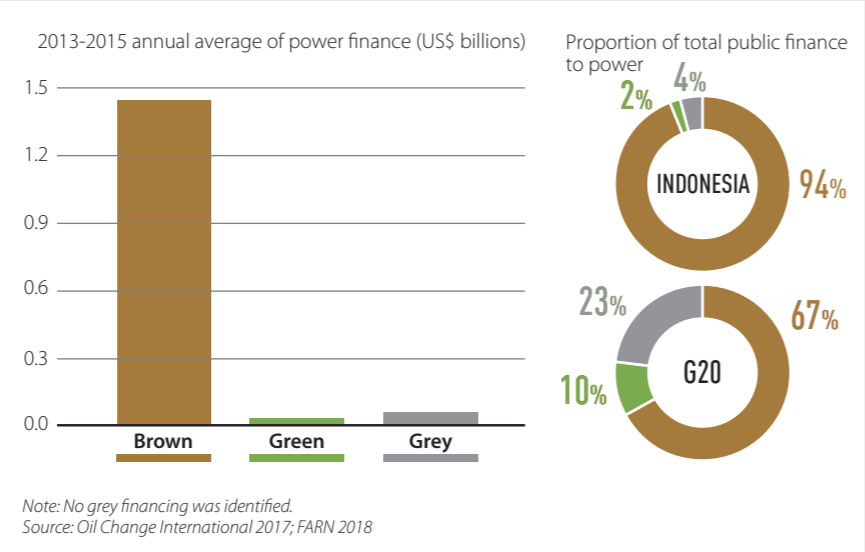
PUBLIC FINANCE

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.

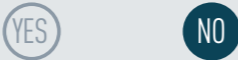
- coal, oil and gas projects (and associated infrastructure) **brown**
- large-scale hydropower, biofuels, biomass, nuclear, incineration, transmission, distribution, storage, energy efficiency, other general electricity support **grey**
- renewable energy projects (excluding grey financing) **green**



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

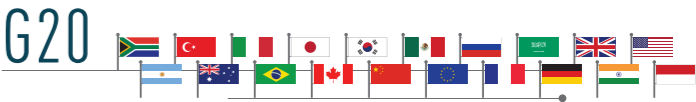
| Annual average contribution (mn US\$, 2015-2016) | Theme of support | | |
|---|------------------|------------|---------------|
| | Adaptation | Mitigation | Cross-cutting |
| 0.02 | 0% | 100% | 0% |

BILATERAL CLIMATE FINANCE CONTRIBUTIONS²³

Source: Country reporting to UNFCCC

| Annual average contribution (mn US\$, 2015-2016) | Theme of support | | | |
|---|------------------|------------|---------------|-------|
| | Mitigation | Adaptation | Cross-cutting | Other |
| n.a. | n.a. | n.a. | n.a. | n.a. |

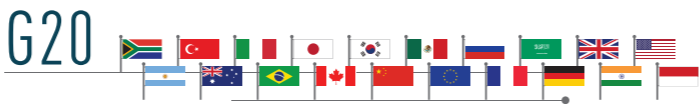
ANNEX



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

- 1) 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)



- 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 |

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