

BROWN TO GREEN:

THE G20 TRANSITION TO A LOW-CARBON ECONOMY | 2018

ARGENTINA

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







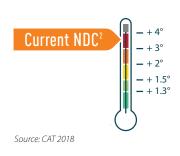
Data from 2014 | Source: Argentina BUR 2017

The gap:

Is Argentina on track to stay below the Paris Agreement temperature limit? Based on implemented policies, Argentina's **GHG emissions** are expected to increase to around 470 MtCO $_2$ e by 2030 (excl. forestry). This emission pathway is not compatible with the Paris Agreement. 1

Argentina is one of the few countries that has increased its **NDC** targets, improving content and reflection of national policies but the 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

Argentina's sectoral **policies** still fall short of being consistent with the temperature limit, especially with respect to fossil fuels, agriculture and transport, but Argentina is showing some progress on renewable energy.³



Recent developments:

What has happened since the Paris conference?



The government decided in 2017 to guarantee subsidies for gas exploitation until 2021.



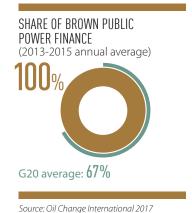
In 2016 the government launched a US\$5.7bn investment programme to push renewable energies, and received funding from the Green Climate Fund to guarantee the investment through the World Bank.

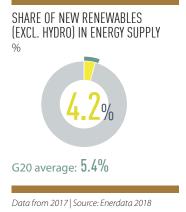


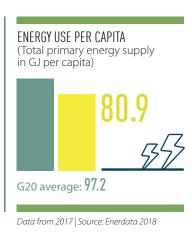
Argentina implemented a carbon tax in 2017 (although it does not include emissions from natural gas) and has adopted important climate policies such as the Renewable Energy Act, and the Renewable Energy Distributed Generation Law.

Brown and green performance:

Where does Argentina lead or lag compared to G20 countries?







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: ARGENTINA

HUMAN DEVELOPMENT INDEX⁵
0.83

low very high

Data from 2017 | Source: UNDP 2018

ARGENTINA'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.





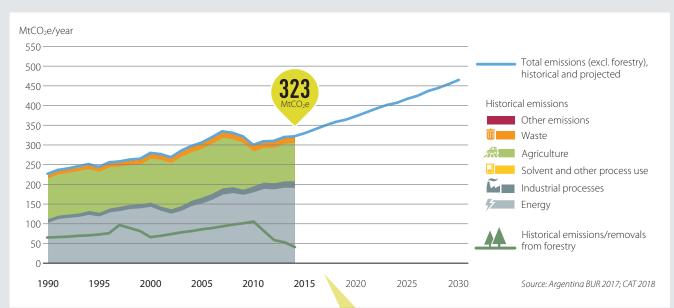
Own composition based on ND-GAIN 2017 (based on data for 2016). Note: Different areas within the country have different projections for the annual run off that may cause severe impacts. See Third National Communication of Argentina.



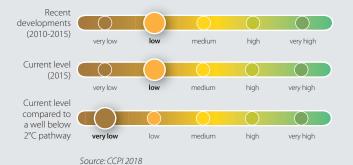
GREENHOUSE GAS (GHG) EMISSIONS

ARGENTINA

TOTAL GHG EMISSIONS ACROSS SECTORS⁷

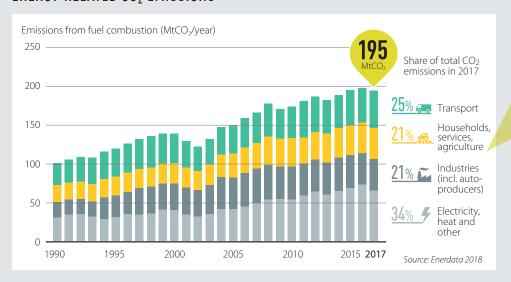


CCPI PERFORMANCE RATING OF GHG EMISSIONS PER CAPITA⁸



Argentina's emissions (excl. forestry) increased by 43% between 1990 and 2014. The trend is expected to pick up speed towards 2030. The energy (including transport) and agriculture sectors contribute most to overall emissions.

ENERGY-RELATED CO2 EMISSIONS9



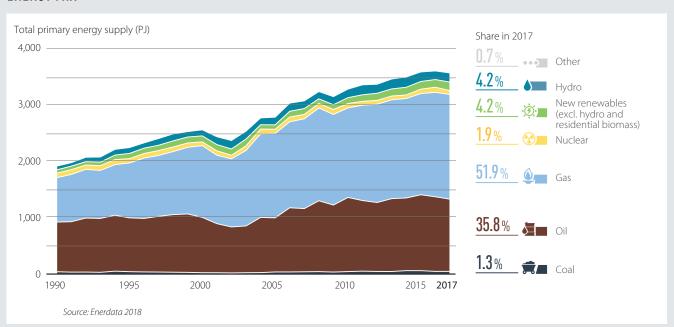
After emissions from agriculture, the next largest driver for overall GHG emissions is CO₂ emissions from energy, which increased in Argentina by 4% (2012–2017). This trend was mainly driven by emissions from power generation and transport.

3

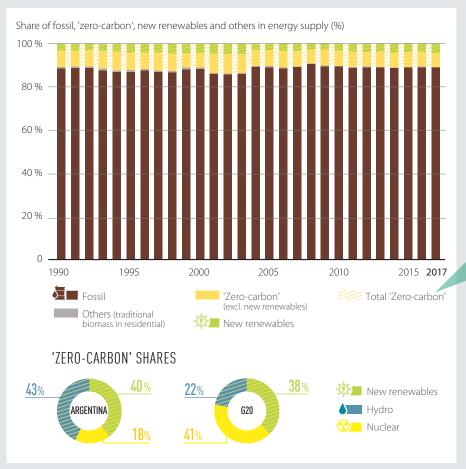
DECARBONISATION

ARGENTINA





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. In Argentina, the share of zerocarbon fuels in the energy mix remained almost constant at 11% between 2012 and 2017.

PERFORMANCE RATING OF SHARE OF ZERO-CARBON TECHNOLOGY¹²



Source: own evaluation

Source: Enerdata 2018



DECARBONISATION

ARGENTINA

NEW RENEWABLES¹³



Source: Enerdata 2018

"New renewables" excludes unsustainable renewable sources such as large hydropower. New renewables account for only 4.23% of the energy mix, slightly below the G20 average of 5%. Biomass is the main source and was the driver for the 20% increase in generation between 2012 and 2017.

PERFORMANCE RATING OF NEW RENEWABLES¹²

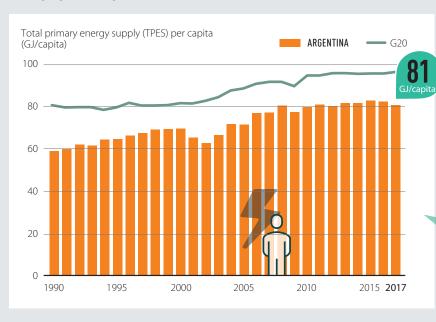


developments (2012-2017)

Current level (2017)very high medium high

Source: own evaluation

ENERGY USE PER CAPITA¹⁴



PERFORMANCE RATING OF ENERGY USE PER CAPITA¹²



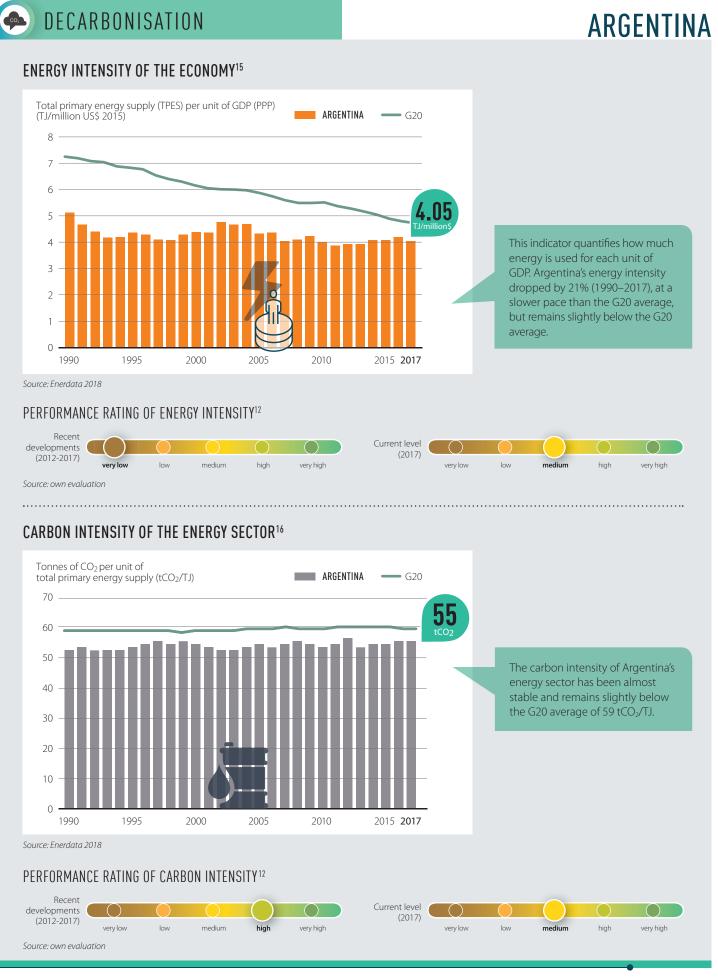
Recent developments (2012-2017)



Source: own evaluation

Energy use per capita in Argentina has increased at a similar pace as the G20 average but remains below the G20 average.

Source: Enerdata 2018





DECARBONISATION

ARGENTINA

SECTOR-SPECIFIC INDICATORS

Legend for trend:



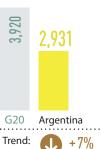


The trend number shows developments over the past five years, where data is available

POWER SECTOR

ELECTRICITY DEMAND PER CAPITA

(kWh/capita)



Data from 2017

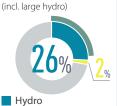
EMISSIONS INTENSITY OF THE POWER SECTOR (gCO₂/kWh)



G20 average

Trend: no change

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



New renewables G20 average: 24%

Trend (hydro &

Data from 2017 Source: Enerdata 2018

new renewables)

SHARE OF POPULATION WITH ACCESS TO ELECTRICITY



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

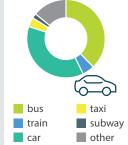


Data from 2017 Source: Enerdata 2018 MOTORISATION RATE (Vehicles per 1000 inhabitants)



Data from 2017 Source: AFAC 2018

PASSENGER TRANSPORT (modal split in % of passenger-km)



Data from 2012 | Source: Government of Argentina 2017

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



road rail inland waterways

Data from 2014 | Source: Ministry of Environment 2017

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



Data from 2017

INDUSTRY SECTOR®

INDUSTRY EMISSIONS INTENSITY

(tCO₂e/thousand US\$2015 sectoral GDP (PPP))



Data from 2015 Source: Argentina BUR 2017

Trend:

BUILDING SECTOR

BUILDING EMISSIONS PER CAPITA



+1%

Data from 2016 Source: Enerdata 2018

Trend:

AGRICULTURE SECTOR

AGRICULTURE EMISSIONS INTENSITY



G20 average: **0.95** Trend: -39%

Data from 2014 Source: Argentina BUR 2017

FOREST SECTOR

FOREST AREA COMPARED TO 1990 LEVEL

Data from 2015 Source: PRIMAP 2018

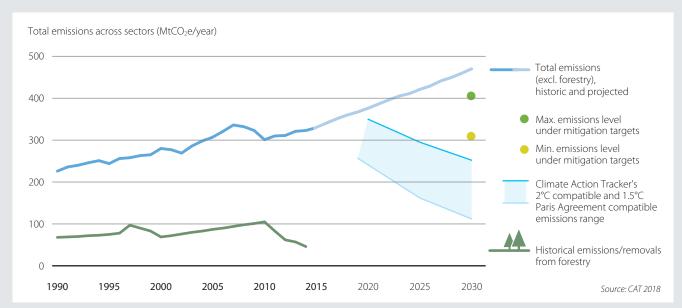




CLIMATE POLICY

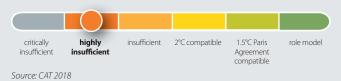
ARGENTINA

COMPATIBILITY OF CLIMATE TARGETS WITH THE PARIS AGREEMENT²



The CAT rates Argentina's NDC "highly insufficient", as it is not consistent with holding warming to below 2°C, let alone to 1.5°C. Under current policies, Argentina will not reach its target. But a new set of energy scenarios released by the government show significantly lower emissions – if additional measures are implemented – leading to achievement of its NDC. However, recent growth in shale gas reserves and investments in the sector threaten the implementation of these new energy scenarios.

CLIMATE ACTION TRACKER (CAT) EVALUATION OF NDC²



NATIONALLY DETERMINED CONTRIBUTION (NDC)

Argentina revised its first NDC in November 2016.

MITIGATION				
Targets	Not exceed a net emission of 483 million tons of carbon dioxide equivalent (tCO₂eq) by the year 203			
	Coverage 100% of emissions covered (all sectors and gases)			
Actions	Actions mentioned (sectors: energy, agriculture, forestry, transport, industry, waste)			

ADAPTATION	
Targets	Not mentioned
Actions	Actions specified (sectors: health, agriculture, water, ecosystems)

FINANCE	
Conditio- nality	Additional conditional target of 369 million tCO ₂ eq by 2030 based on a) international funding, b) transference, innovation and development of technologies and c) capacity creation)
Investment needs	Investment needs not specified
Actions	Not mentioned
International market mechanisms	Any transfer of units of emissions reductions reached in the Argentine territory must have the authorization of the national government

Source: own compilation based on UNFCCC 2018





CLIMATE POLICY

ARGENTINA

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 $^{\circ}\text{C}$

most important measures

based on share of emissions and political relevance



Argentina is currently developing a long-term low emissions development strategy towards 2030 and beyond, but the government has not yet adopted an emissions target for 2050.

This strategy is being developed in the national climate change cabinet established in 2016.

POWER



The government aims to increase the share of renewables in the electricity mix from 2% to 20% by 2025. It has awarded projects of approximately 5,000 MW, half the power required to reach the 2025 target, although finance for initial investment poses a challenge. In 2017, the government published a 2030 Energy and Climate Change action plan.

Coal phase-out not applicable

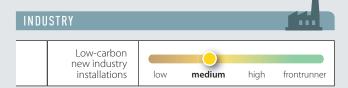
The share of coal in Argentina's energy mix is negligible.



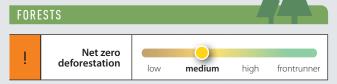
In its 2017 Transport Plan, the government envisages reducing transport emissions by 7.2% by 2030 compared to business-as-usual. The plan covers measures to target both freight and passenger transport, including the promotion of low-/zero-emission vehicles, but no phase-out date for fossil-based LDVs has been set. In 2017, Argentina adopted its first efficiency labelling scheme for LDVs. Vehicles need to comply with EURO 5a standards.

Near-zero energy new buildings low medium high frontrunner

The government adopted an energy savings programme for public buildings, and educational programmes. No national building code exists but different cities are developing and implementing energy building codes, e.g. requiring replacement of inefficient heating systems or the use of solar water heaters in new public buildings.



The government presented in 2018 an Industrial Mitigation Action Plan that includes measures such as substituting old electric motors for new, efficient ones. The Renewable Energy Law mandates mid-size and large companies to consume 20% of their energy from renewable energy resources by 2025 and provides support to this end.



In 2017, Argentina adopted a National Action Plan on Forests and Climate Change, aiming to reduce GHG emissions from the forest sector by at least 27 MtCO₂e by 2030. There is no target for reaching net zero deforestation.

Source: own evaluation



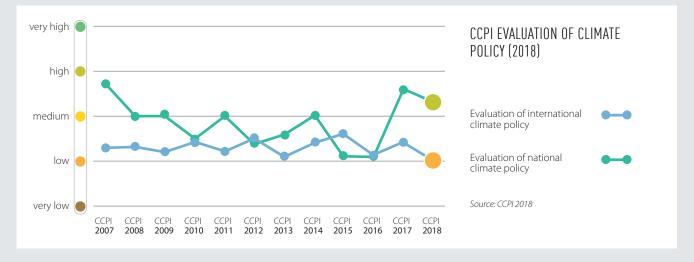
CLIMATE POLICY

ARGENTINA

CCPI EXPERTS' POLICY EVALUATION18

Experts contributing to the Climate Change Performance Index rate Argentina's national performance as low. They recognise the government has worked hard to increase its NDC, but note a lack of innovative, forceful implementation of policies and call for more ambition. Experts note that new support schemes for renewable energy are a success but that the country is also investing heavily in unconventional fossil fuels. In contrast, experts rate the international policy as high, with the government, as this year's

G20 Presidency, playing a more proactive role, and with Argentina in a new group of countries under the UNFCCC alongside Uruguay and Brazil (ABU), taking more constructive climate positions.



JUST TRANSITION¹⁹

The TUCA (Trade Union Confederation of the Americas), through the PLADA (Development Platform of the Americas), defines "just transition" as a set of policies to ensure that the path towards production with low emission of GHGs also offers opportunities to workers and the communities involved.

Effective implementation of just transition policies in Argentina is impeded by a lack of assessment of social and job vulnerabilities, as well as proper inclusion of unions in climate change policy development, making it difficult to include just transition in government agendas.

Therefore, despite the participation of civil society (including labour organisations) on panel discussions promoted by government agencies within the framework of adaptation and mitigation policies (e.g. the expanded Climate Cabinet), the concept of just transition loses strength or is distorted, with a merely nominal space. Neither specific decisions nor methodologies have been discussed.







FINANCING THE TRANSITION

ARGENTINA

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

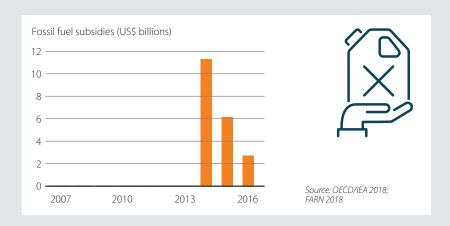
No evidence of formal engagement with TCFD-compliant initiatives was found in Argentina. It has, however, begun a process to examine how its financial system supports sustainable financing. As the G20 presidency holder this year, Argentina builds on past G20 presidencies to support sustainable financing.

■ 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, Argentina's fossil fuel subsidies reached US\$2.7bn, from US\$11.3bn (2014). From 2014 to 2016, subsidies were above (US\$0.008) the G20 average (US\$0.004) per unit of GDP. This includes an estimate of consumption subsidies alone, adopting the price-gap approach. Analysing both production and consumption subsidies, FARN finds subsidies were more than US\$1bn in 2016. Subsidies to fossil fuel production are increasing under the VacaMuerta and Los Molles megaproject.



CARBON REVENUES

In December 2017, Argentina launched a national carbon tax. The scheme will provide exemptions to natural gas products, expected to become a major power source in the coming years. No other carbon taxation or emissions trading schemes are currently planned, either national or subnational.

NO EXPLICIT CARBON PRICING SCHEME FROM 2007 TO 2016.



Source: I4CE 2018; FARN 2017



FINANCING THE TRANSITION

ARGENTINA

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

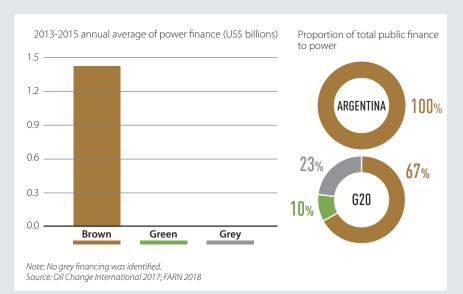
From 2013 to 2015, Argentina's public finance institutions spent an annual average of US\$1.4bn on brown and US\$4m on green financing in the power sector domestically. The largest transaction (US\$2bn) was for fossil fuel exploration by state-owned enterprises. No grey public financing was identified, likely due to a lack of transparency. In 2018, FARN estimates brown financing at closer to 93%.

> 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



PROVISION OF INTERNATIONAL PUBLIC SUPPORT

Argentina is not listed in Annex II of the UNFCCC and is therefore not formally obliged to provide climate finance. While Argentina 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)
n.a.

Adaptation	Mitigation	Cross- cutting
n.a.	n.a.	n.a.

Theme of support

BILATERAL CLIMATE FINANCE CONTRIBUTIONS²³



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

n	H	a	

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

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.
- 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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