G20 Edition



Climate Change Performance Index 2017

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1. Key Developments CCPI G20 Edition

Emitting about 75% of global greenhouse gas (GHG) emissions and 82% of global energy-related CO₂ emissions (2014), the G20 as the 20 biggest economies have a particularly high responsibility in leading the world towards success in limiting global warming to well below 2°C, if not 1.5°C, as agreed to in the Paris Agreement in 2015. With its new methodology, the Climate Change Performance Index (CCPI) is now suited to measure the progress of countries towards contributing to the climate goals agreed to in Paris. The global response to Donald Trump's plans to pull the USA out of the Paris Agreement was encouraging and strengthened hope that new competitive technologies as well as knowledge about the dangerous effects of the rise in global temperature are the basis for the global community to implement the Pairs treaty. Even domestically, the President's decision was countered by a strong coalition of states, towns and businesses who announced measures to fulfil the US pledge under the Paris Agreement. They expect the new policy of the US federal government to fail, being convinced that climate protection could be perfectly aligned with economic development and renewables would already be the better business model.

This assumption is underlined by the data, which shows massively growing investments in renewables, leading to double-digit growth rates for renewables already for some years already. In 2016, renewables exceeded fossil fuels not only in investments but for the first time also in newly installed capacity; renewable technology has already reached market parity. At the same time, the Trump administration seems isolated in its attempt to revive its coal industry. Other countries have turned their back on coal, some in an attempt to fight bad air quality in their cities, others driven by economic factors. The new Korean (Rep.) president announced the closure of coal-fired power plants, China has reversed plans for new coal plants to be built, India is re-evaluating plans for the expansion of coal and, some European countries acknowledged the need to phase out coal completely in the medium term.

While recognizing the significance of this development, it is important to also note that data as well show very few countries - especially in the G20 - on a pathway to well below 2°C, neither in their current performance nor in their targets for 2030. Countries have to prove they are willing to follow through with implementing the necessary policies to reach national mitigation targets and raise ambition in adapting their targets to what would be compatible with well below 2°C.



2. Key Country Results

Italy (1 st)	Italy scores first in this year's ranking. Over the last five years, its emissions per capita have shown posi- tive developments, reducing the still existing gap to a pathway that is compatible with well below 2°C. Additionally, there has been a high trend in the up- take of renewables, +53% between 2010 and 2014, with Italy showing the closest alignment to the share of renewables needed to be in line with a pathway	well below 2°C in the G20. It is also the highest scor- ing country in terms of its renewable energy target, although it is still not sufficient for the well-below-2°C limit. These positive trends could be dampened by the relatively low ambition in relation to national climate policies, lacking proactivity in achieving progress on its NDC.
Brazil (2 nd)	The scores of the countries ranking first and sec- ond are close together. Brazil ranks second. Due to its large hydro capacities, the country's renewable energy share in the energy mix was 38% in 2014 and is the highest in the G20. Yet there has been a slight decrease in the share of renewables over the last five years and, despite its current high level of renewables, the country's 2030 target is only rat- ed medium. National experts demand that Brazil's	national climate policies send out a clearer signal concerning the phase-out of fossil fuel subsidies and that they increase targets for reducing GHG emis- sions and for renewable energy to align those to a well-below-2°C pathway. The government recently agreed to heavy budget cuts for the environmental ministry, endangering the country's progress in de- creasing emissions from deforestation.
France (3 rd)	Shortly behind Brazil, France scores well due to its relatively good development and its level of GHG emissions per capita. France still needs to signifi- cantly improve its share of renewables - recent announcements by the government point in this direction - and must reduce the energy use per	capita. France's international climate policies show leadership, while national policies have remained moderate so far. To align France closer with its 2°C pathway, the new administration needs to keep its campaign promises and increase the level of ambi- tion nationally.
Germany (4 th)	Germany scores only very marginally behind France. Germany's renewable growth rates and its alignment to a well-below-2°C pathway within this category are rated as high. However, as the world's biggest user of lignite, Germany still has relatively high GHG emissions as well as an energy use per capita higher than the EU average, showing little improvement over the last years. Its 2030 targets	across the indicators are rated medium. Germany has taken on an increasingly vocal role within the international climate negotiations and its national climate plan (2015) shows sector-specific emissions reduction targets, yet some of these could be more ambitious. Its dependence on coal remains a major decelerator to achieving alignment with the well- below-2°C emissions pathway.
UK (5 th)	With a very high performance especially in the GHG emissions category, e.g. with the third highest rated emissions reduction target, the United Kingdom holds the 5th rank in the CCPI. From national experts, the UK receives only low ratings for current policies, both domestically and regarding its performance in international climate diplomacy. National Experts warn, like some other European countries, the UK ¹ s relatively high score would stems from a lag effect: with the exception of a bold promise to phase out coal power, for which the UK deserves credit, policy from 5-10 years ago is responsible for	low carbon investment and the UK ¹ s falling emis- sions. Experts agree that future carbon reductions are at real risk: the government has failed to deliv- er a policy framework for renewables from 2017 onwards, and as a consequence the UK ¹ s Treasury expects renewables investment to fall by 96% by 2020. The continuation of several other important policies, including the carbon floor price and zero carbon homes, also seems to be at risk. Without sig- nificant change in policy in the next years, experts would expect the UK to drop in the CCPI.



ergy mix was 9% in 2014. With one of the world's largest renewables programs and its recent shift in coal policies, India scores very high within the national policy evaluation. Its recent role in the international climate negotiations has also found wide acknowledgment. It still accounts for 7% of global emissions.	India (6 th)
Experts for European climate policy warn the diver- sity that exists in the level of ambition for climate protection between the different member states and the lack of compliance mechanisms might be leading to a loss in climate leadership for the EU as a whole. The Union's clear condemnation of Donald Trump's announcement of a US withdrawal from the Paris Agreement on the other hand, was widely appreciated among the experts.	EU (7 th)
expand renewable energy capacities to increase in the near future, since Mexico's new climate strategy focuses on renewables deployment and a reduction of emissions from fossil fuels. While experts value the strategy as a major step forward, at the same time they criticize that it would be lacking a suffi- cient alignment to the well-below-2°C limit.	Mexico (8 th)
well as energy use per capita, rank in the mid-field of the G20 tableau and show a gap between the situa- tion as it is and what would be necessary for a well- below-2°C pathway. To climb up the ranking, South Africa would need to expand renewable energy and to increase ambition in its 2030 targets and imple- mentation for all three index categories.	South Africa (9 th)
	ergy mix was 9% in 2014. With one of the world's largest renewables programs and its recent shift in coal policies, India scores very high within the na- tional policy evaluation. Its recent role in the inter- national climate negotiations has also found wide acknowledgment. It still accounts for 7% of global emissions. Experts for European climate policy warn the diver- sity that exists in the level of ambition for climate protection between the different member states and the lack of compliance mechanisms might be leading to a loss in climate leadership for the EU as a whole. The Union's clear condemnation of Donald Trump's announcement of a US withdrawal from the Paris Agreement on the other hand, was widely appreciated among the experts. expand renewable energy capacities to increase in the near future, since Mexico's new climate strategy focuses on renewables deployment and a reduction of emissions from fossil fuels. While experts value the strategy as a major step forward, at the same time they criticize that it would be lacking a suffi- cient alignment to the well-below-2°C limit. well as energy use per capita, rank in the mid-field of the G20 tableau and show a gap between the situa- tion as it is and what would be necessary for a well- below-2°C pathway. To climb up the ranking, South Africa would need to expand renewable energy and to increase ambition in its 2030 targets and imple- mentation for all three index categories.



Indonesia (10th)

Indonesia ranks lowest in the group of moderately performing countries. Compared to the other G20 states, Indonesia has a relatively high share of renewables with its large amounts of hydro power, and yet lacks ambition in aligning its 2030 targets for renewable energy and energy use to a well-below-2°C compatible pathway. Although the country performs second highest in the G20 regarding the GHG mitigation target it has put forward, a gap towards

Argentina (11th) Argentina, which will assume next year's G20 presidency, ranks among the medium performers in three of the indicators defining the GHG emissions category, namely recent developments, current level, and the well-below-2°C compatibility of its current emissions level. The well-below-2°C compatibility of both renewable energy and energy use leave room for improvement, as do the country's targets for 2030. Although Argentina is one of a few

China (12th) Being the world's largest emitter of GHG emissions, and with by now relatively high per capita emissions as well, China nonetheless scores best among the group of low performing countries. Ambitious national climate policies and robust implementation indicate major improvements for the country towards becoming a leader in renewable energy and reaching a peak in GHG emissions earlier than expected and recorded in its NDC. Its current share

as relatively low. According to national experts, the country's national climate policy lacks sector-specific targets, thus dampening expectations for further alignment with the well-below-2°C threshold. However, its role in international climate diplomacy has improved to a relatively good performance.

its well-below -2°C pathway still remains. Experts'

anticipation of increasing engagement on sides of

the Indonesian government, especially in the con-

text of international climate diplomacy, leads to

a medium performance in this regard. However, a

rise in the national and aggregated policy ranking

would require serious steps to limit deforestation,

which has proven difficult in the past, as national

countries that already revised its Nationally Deter-

mined Contribution (NDC), its targets are still rated

experts claim.

terms China has installed by far the highest amount of renewables in the G20 over the last years. Since China's reaction to the Trump administration pulling the USA out of the Paris Agreement, national experts have observed that China is taking on a leading role in international climate diplomacy.

low, yet the increase is remarkable and in absolute

Turkey (13th) Turkey's overall climate policy performance is ranked lowest in the G20. The government, which has applied to host the UN climate summit in 2019, has not yet ratified the Paris Agreement and, according to national experts, has approved several new coal power plant projects. Due to its still relatively low emissions level, Turkey performs relatively high in the well-below-2°C compatibility of current levels, however the lack of ambition in the country's

policy framework is reflected in its low performances regarding trends in GHG emissions and energy use per capita. A growth in renewable energy over the last years though, has led Turkey to a comparably very high performance in the respective category. Nevertheless, country experts demand that Turkey must raise it ambition in adapting mitigation and renewable energy targets to the well-below-2°C temperature limit.

Canada (14th) Canada's 2030 GHG emissions targets are low, which means significantly higher ambition is needed to reduce its per-capita emissions to a well-below-2°C compatible pathway. Its current share of renewables per primary energy is 17% with large hydro capacities and has shown a positive trend over the last years. Despite positive developments throughout the last five years, the country's current energy use

per capita is the highest in the G20. Under the current administration, Canada's role in international climate diplomacy has improved significantly and national policies are expected to be strengthened accordingly. However, sector-specific decarbonisation strategies in particular are still lacking, national experts criticize.



Australia has shown some positive developments in the categories GHG emissions and energy use per capita but both levels are still high, which results in a relatively low performance. Its share of renewables in the energy mix remains low, as does the coun-	try's performance in aligning its 2030 targets with a well-below-2°C pathway in all categories. Current national and international policy performances are too weak to drive ambitious action.	Australia (15 th)
Japan, ranking in the bottom five of the CCPI G20 edition, shows a very low performance overall. Its efforts in the category energy use per capita are rat- ed medium, despite a relatively high ranking regard- ing recent developments in that category. Japan's national and international climate policy scores are	among the lowest in the G20, due to a high focus on nuclear energy and coal instead of strengthening the renewables sector, and a not very proactive role in international climate policy. The share of renew- ables in total primary energy supply was 5.25% in 2014.	Japan (16 th)
Russia scores low in both recent developments and current levels of GHG emissions and energy use per capita. Its share of renewables (excl. large hydro) remains negligible with hardly any improve- ments over the last years There is a strong need to increase targets for emissions reduction and an ex- pansion of renewable energy. National experts criti-	cize that Russia's energy strategy mainly focuses on fossil fuels and leads to only minor developments in driving action on GHG emission reductions, energy efficiency and renewable energy. Nevertheless, re- cent government statements announced increasing ambition on climate protection and a starting pro- cess on the ratification of the Paris Agreement.	Russia (17 th)
With a very low performance in the category per capita energy use and a performance in the emis- sions category that is severely misaligned with a well-below-2°C pathway, South Korea is occupying a place among the very low performers in the over- all G20 ranking. Similarly low, yet less severe, are the developments in and the current level of GHG emissions. Coming from a very low level, South	Korea is showing very high growth rates in renew- able energy. The country's international climate policy performance is evaluated as medium, profit- ing from announcements of increasing ambition on GHG emissions reductions, plans for strengthening renewable energy and cutbacks on coal made by the new president.	Korea Rep. (18 th)
The recent withdrawal from the Paris Agreement and the wave of rollbacks on federal climate poli- cies has significantly impacted its scores. Expecta- tions for potential improvements in the near future rest mainly on states, towns and businesses. With these backward-targeted developments and still very high GHG emissions and energy use per capi-	ta, the USA scores second last in the CCPI G20 edi- tion. The country performs in the medium category regarding its share of renewables but relatively low regarding its alignments with a 2°C pathway. The crucially needed strengthening of the country's 2030 targets has become very unlikely under the new administration.	USA (19 th)
Landing in the bottom three regarding almost all in- dicators and therefore with only marginal scores in the different categories, Saudi Arabia ranks lowest in the CCPI G20 edition. A stringent implementation	of the 2030 strategy by the country and using the potential to build up a solar and hydrogen economy could improve the rating in the medium term.	Saudi Arabia (20 th)



3. Overall Results CCPI 2017 – G20 Edition



This section shows the overall results of this year's Climate Change Performance Index 2017 – G20 edition. The ranking results of this category are defined by a country's aggregated performance regarding 14 indicators within the four categories GHG emissions, renewable energy, energy use and climate policy.

The world map shows the aggregated results and overall performance of countries. The table on the right indicates how the countries perform in the different categories. The table below shows some relevant key data for all G20 countries.





Rank	Country	Score	
1.	Italy	73.48	
2.	Brazil	70.88	
3.	France	70.68	
4.	Germany	70.67	
5.	United Kingdom	69.83	
6.	India	68,95	
7.	European Union (28)	68.08	
8.	Mexico	60.76	
9.	South Africa	57.87	
10.	Indonesia	55.83	
11.	Argentina	55.76	
12	China	54.26	
13.	Turkey	52.22	
14.	Canada	45.95	
15.	Australia	43.22	
16.	Japan	40.61	
17.	Russian Federation	39.59	
18.	Korea	35.18	
19.	United States	31.62	
20.	Saudi Arabia	13.22	

Index categories



Emissions – 40% weighting Renewable Energy – 20% weighting

Energy Use – 20% weighting Policy – 20% weighting

Rank	Country Name	Share of global GDP*	Share of World Population*	Share of global GHG-Emissions**	Share of global Primary Energy Supply***
1.	Italy	1.94%	0.84%	0.77%	1.07%
2.	Brazil	3.02%	2.84%	2.71%	2.21%
3.	France	2.37%	1.12%	1.63%	2.23%
4.	Germany	3.39%	0.78%	0.98%	3.31%
5.	United Kingdom	2.41%	0.89%	0.98%	1.31%
6.	India	6.81%	17.87%	6.52%	6.02%
7.	European Union	17.03%	7.01%	7.52%	11.42%
8.	Mexico	1.91%	1.65%	1.42%	1.37%
9.	South Africa	0.65%	0.74%	1.06%	1.07%
10.	Indonesia	2.47%	3.51%	5.20%	1.65%
11.	Argentina	0.80%	0.59%	0.84%	0.63%
12.	China	16.98%	18.92%	24.61%	22.38%
13.	Turkey	1.37%	1.06%	0.81%	0.89%
14.	Canada	1.48%	0.49%	1.61%	2.04%
15.	Australia	1.03%	0.33%	0.93%	0.91%
16.	Japan	4.38%	1.75%	2.60%	3.22%
17.	Russian Federation	3.18%	1.98%	4.39%	5.19%
18.	Korea	1.67%	0.70%	1.31%	1.96%
19.	United States	15.94%	4.40%	12.36%	16.18%
20.	Saudi Arabia	1.48%	0.43%	1.36%	1.56%
	G20 Total	80.81%	64.28%	75.26%	78.71%

Sources: * World Bank, 2017 ** PRIMAP, 2017 *** IEA, 2016



3.1 Partial Results – GHG Emissions



This section shows the results in the index category "GHG Emissions". The sub-ranking results of this category are defined by a country's aggregated performance regarding four indicators, each reflecting a different dimension and aspect of how well the country is doing in terms of GHG emissions.

Therefore, the evaluation looks at (1) recent developments in GHG emissions in the last five years, (2) current levels of per capita GHG emissions, (3) current levels of per capita GHG emissions as well as (4) the countries' own 2030 emissions reduction targets. Both (3 and 4) were compared to a country-specific pathway that is in line with the well below 2°C temperature limit.

The world map shows the aggregated results and overall performance of countries in the category "GHG Emissions". The table provides more detailed information of a country's performance with regard to the different indicators defining the category. The graph on the bottom indicates how emissions developed from 1990 until 2014 and visualises the 2°C compatibility of both a country's current level and its 2030 target.



Emissions per capita (tCO2-eq/capita, including LULUCF), historic values,





			Greenhouse gas emissions (per capita)			
			Comparison to other G20 countries		Comparison to "well below 2°C" pathway	
Rank	Country	Total rating	Recent percentage change	Current level	Current level	2030 target
1.	Brazil	Very High				
2.	United Kingdom	Very High				
3.	France	Very High				
4.	Italy	Very High				
5.	European Union (28)	High				
6.	India	High				
7.	Germany	High				
8.	Mexico	High				
9.	Turkey	Medium				
10.	Argentina	Medium				
11.	South Africa	Medium				
12.	Australia	Medium				
13.	Indonesia	Medium				
14.	China	Low				
15.	Russian Federation	Low				
16.	Canada	Very Low				
17.	Japan	Very Low				
18.	Korea	Very Low				
19.	United States	Very Low				
20.	Saudi Arabia	Very Low				

and 2°C compatibility of current level and 2030 target





3.2 Partial Results – Renewable Energy



This section shows the results in the CCPI category "Renewable Energy". The sub-ranking results of this category are defined by a country's aggregated performance regarding four indicators, each reflecting a different dimension and aspect of how well the country is doing in terms of renewable energy.

Therefore, the evaluation looks at (1) recent absolute developments of renewable energy in the last five years, (2) current levels of the share of renewable energy in total primary energy supply, (3) current levels of this share as well as (4) the countries' own 2030 renewable energy targets. Both (3 and 4) were compared to a country-specific pathway that is in line with the well below 2°C temperature limit.

The world map shows the aggregated results and overall performance of countries in the category "Renewable Energy". The table provides more detailed information of a country's performance with regard to the different indicators defining the category. The graph on the bottom indicates how renewable energy developed from 2010 until 2014 and visualises the 2°C compatibility of both a country's current level and 2030 target.



RE target (% of TPES), historic values and 2°C compatibility of





			Renewable Energy			
			Comparison to other G20 countries		Comparison to "well below 2°C" pathway	
Rank	Country	Total rating	Recent percentage change	Current level per TPES*	Current level	2030 target
1.	Italy	Very High				
2.	Germany	Very High				
3.	United Kingdom	Very High				
4.	Turkey	Very High				
5.	Brazil	High				
6.	European Union (28)	High				
7.	Canada	High				
8.	Indonesia	High				
9.	China	Medium				
10.	Korea	Medium				
11.	France	Medium				
12.	Argentina	Medium				
13.	United States	Low				
14.	India	Low				
15.	Japan	Low				
16.	Australia	Low				
17.	South Africa	Very Low				
18.	Mexico	Very Low				
19.	Russian Federation	Very Low				
20.	Saudi Arabia	Very Low				

*Total Primary Energy Supply

current level and 2030 target





3.3 Partial Results – Energy Use



This section shows the results in the index category "Energy Use". The sub-ranking results of this category are defined by a country's aggregated performance regarding four indicators, each reflecting a different dimension and aspect of how well the country is doing in terms of energy use.

Therefore, the evaluation looks at (1) recent developments of per capita energy use in the last five years, (2) current levels of per capita energy use, (3) current levels of per capita energy use as well as (4) the countries' own 2030 energy use targets. Both (3 and 4) were compared to a country-specific pathway that is in line with the well below 2°C temperature limit.

The world map shows the aggregated results and overall performance of countries in the category "Energy Use". The table provides more detailed information of a country's performance with regard to the different indicators defining the category. The graph on the bottom indicates how energy use per capita developed from 2010 until 2014 and visualises the 2°C compatibility of both a country's current level and 2030 target.



TPES per capita (GJ/capita), historic values and 2°C compatibility of





			Energy Use (per capita)			
			Comparison to other G20 countries	Comparison to other G20 countries		
Rank	Country	Total rating	Recent percentage change	Current level	Current level	2030 target
1.	Italy	Very High				
2.	United Kingdom	Very High				
3.	India	Very High				
4.	Indonesia	Very High				
5.	European Union (28)	High				
6.	France	High				
7.	Japan	High				
8.	Mexico	High				
9.	Germany	Medium				
10.	Turkey	Medium				
11.	South Africa	Medium				
12.	Brazil	Medium				
13.	Argentina	Low				
14.	Russian Federation	Low				
15.	Australia	Low				
16.	United States	Low				
17.	China	Very Low				
18.	Canada	Very Low				
19.	Korea	Very Low				
20.	Saudi Arabia	Very Low				

current level and 2030 target





3.4 Partial Results - Climate Policy



With the climate policy category of the CCPI, we consider the fact that measures taken by governments to reduce GHG often take several years to show their effect on the emissions, renewable energy and efficiency indicators. On top of this, the most current GHG emissions data enumerated in sectors of origin provided by PRIMAP and the IEA is about two years old. However, the assessment of climate policy includes very recent developments. The effect that current governments benefit or suffer from the consequences of the preceding administration's climate actions is thereby reduced.

The qualitative data of the indicators in the field of 'climate policy' is assessed annually in a comprehensive research study. Its basis is the performance rating by about 280 climate change experts from civil society within the countries that are evaluated. By means of a questionnaire, they give a judgement and rating on the most important policies and concrete measures of their governments as well as its implementation status and effects on the country's decarbonisation progress.



Rank	Country	Total Rating	National Policy Performance	International Policy Performance
1.	China	High		
2.	India	High		
3.	South Africa	High		
4.	France	High		
5.	Germany	High		
6.	Mexico	High		
7.	Brazil	High		
8.	Argentina	Medium		
9.	European Union (28)	Medium		
10.	Canada	Medium		
11.	Korea	Medium		
12.	Indonesia	Low		
13.	Italy	Low		
14.	United Kingdom	Low		
15.	Russian Federation	Low		
16.	Saudi Arabia	Low		
17.	Australia	Low		
18.	Japan	Very Low		
19.	United States	Very Low		
20.	Turkey	Very Low		



4. Components of the CCPI

The Climate Change Performance Index (CCPI) is an instrument designed to enhance transparency in international climate politics. Its aim is to put political and social pressure on those countries which have, up until now, failed to take ambitious action on climate protection. It also aims to highlight those countries with best practice climate policies.

On the basis of standardised criteria, the index evaluates and compares the climate protection performance of the G20, which are together responsible for more than 75 percent of global greenhouse gas (GHG) emissions. In 2017 the methodology of the CCPI was revised, due to recent global climate policy developments in the last years. One of the mayor events that marked a milestone in the international climate negotiations was the development and ratification of the Paris Agreement. For the first time, it is possible to measure states based on the promises they themselves formulated in their Nationally Determined Contributions (NDCs). So far 149 Parties have ratified the Paris Agreement and promised to combat dangerous climate change in limiting global temperature rise to well below 2°C or even 1.5° C.



*Greenhouse Gas Emissions **Total Primary Energy Supply



The CCPI aims to capture those promises and evaluates the countries' 2030 targets within the important categories greenhouse gas emissions, renewable energy and energy use to determine, if they are on track to a well below 2°C pathway. The CCPI now also reflects countries' current performances towards this pathway in absolute terms, in addition to the remaining relative indicators. 40% of the evaluation is based on indicators of emissions, 20% on renewable energy and 20% on energy use. The remaining 20% of the CCPI evaluation is based on national and international climate policy assessments by experts from the respective countries. Despite changes in the weighting and smaller modifications within the calculation method, the addition of indicators, which measure the progress of countries on their way not to overshoot the well below 2°C limit, are the major changes in the new methodology. The three categories GHG Emissions, renewable energy and energy use are defined by four indicators each (recent developments, current levels and 2°C compatibility of the current performance) as well as an evaluation of the countries' 2030 targets in the respective categories. With these complements, the CCPI covers the evaluation of the countries promises as well as their current progress in terms of climate protection.

For the pathways, we set three ambitious targets that are essential to stay well below 2°C, which has to be reached until 2050: nearly zero GHG emissions (taking into account country-specific pathways, which gives developing countries bit more time to reach this goal), 100% energy from renewable sources, and remaining at today's global energy use per capita levels. The CCPI compares where countries actually are and where they need to be, to meet the ambitious benchmarks. Following a similar logic, the CCPI evaluates the countries' own 2030 targets in comparing them to the same benchmarks.

Still, more than half of the CCPI ranking indicators are qualified in relative terms (better–worse) rather than absolute. Therefore, even those countries with high rankings have no reason to sit back and relax. On the contrary, the results illustrate that even if all countries were as involved as the current front runners, efforts would not yet be sufficient to prevent dangerous climate change.



5. Sources and Further Reading Recommendations

- Burck; Hermwille; Bals (2016): The Climate Change Performance Index: Background and Methodology. www.germanwatch.org/en/ccpi_bame
- Climate Transparency (2015): G20: A turning point? Available at: http://www.climate-transparency.org/g20-climateperformance [accessed: 01.11.2016]
- Climate Transparency (2016): G20 Report, From Brown to Green. Available at: http://www.climate-transparency.org/g20-brown-to-green [accessed: 01.11.2016]
- FAO (2015): Global Forest Resource Assessment 2015. Rome. Available at: www.fao.org/forest-resources-assessment/en/ [accessed: 01.11.2016]
- Freudenberg (2003): Composite Indicators of Country Performance: A Critical Assessment. STI Working Paper 2003/16. Paris.
- Gütschow, Johannes; Jeffery, Louise; Gieseke, Robert; Gebel, Ronja (2017): The PRIMAP-hist national historical emissions time series (1850-2014). V. 1.1. GFZ Data Services. http://doi.org/10.5880/PIK.2017.001
- Howarth; Santoro; Ingraffea (2011): Methane and the Greenhouse-Gas Footprint of Natural Gas from Shale Formations. In: Climatic Change, 106/4, 679-690.
- IEA (2016a): CO2 Emissions from Fuel Combustion. Paris.
- IEA (2016b): Renewables Information. Paris.
- IEA (2016c): World CO2 Emissions from Fuel Combustion: Database Documentation. Paris. Available at: http://wds.iea.org/wds/pdf/Worldco2_Documentation.pdf [accessed: 01.11.2016]
- IEEFA (2015): Global Coal Consumption: Down an Additional 2-4% in 2015. Available at: http://ieefa.org/global-coal-consumption-down-an-additional-2-4-percent-in-2015/ [accessed: 01.11.2016]
- IPCC (1997): Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories. Available at: www.ipcc-nggip.iges.or.jp/public/gl/invs1.html [accessed: 30.11.2015]
- Meinshausen et al. (2009): Greenhouse-gas emission targets for limiting global warming to 2 °C. Nature 458/7242: 1158.
- REN21 (2017): Renewables 2017 Global Status Report. Paris: REN21 Secretariat.

G20 Edition

Germanwatch

Following the motto "Observing, Analysing, Acting", Germanwatch has been actively promoting global equity and the preservation of livelihoods since 1991. In doing so, we focus on the politics and economics of the North and their worldwide consequences. The situation of marginalised people in the South is the starting point of our work. Together with our members and supporters as well as with other actors in civil society, we intend to represent a strong lobby for sustainable development. We attempt to approach our goals by advocating for the prevention of dangerous climate change, for food security, and compliance of companies with human rights.

Germanwatch is funded by membership fees, donations, grants from "Stiftung Zukunftsfähigkeit" (Foundation for Sustainability) as well as grants from various other public and private donors.

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Climate Action Network

CAN members work to achieve this goal through information exchange and the coordinated development of NGO strategy on international, regional, and national climate issues. CAN has regional network hubs that coordinate these efforts around the world.

CAN members place a high priority on both a healthy environment and development that "meets the needs of the present without compromising the ability of future generations to meet their own needs" (Brundtland Commission). CAN's vision is to protect the atmosphere while allowing for sustainable and equitable development worldwide.

www.climatenetwork.org

NewClimate Institute

The NewClimate Institute for Climate Policy and Global Sustainability is a Germany-based research institute generating ideas on climate change and driving their implementation. They do research, policy design and knowledge sharing on raising ambition for action against climate change and supporting sustainable development. Their core expertise lies in the areas of climate policy analysis, climate action tracking, climate finance, carbon markets, and sustainable energy.

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