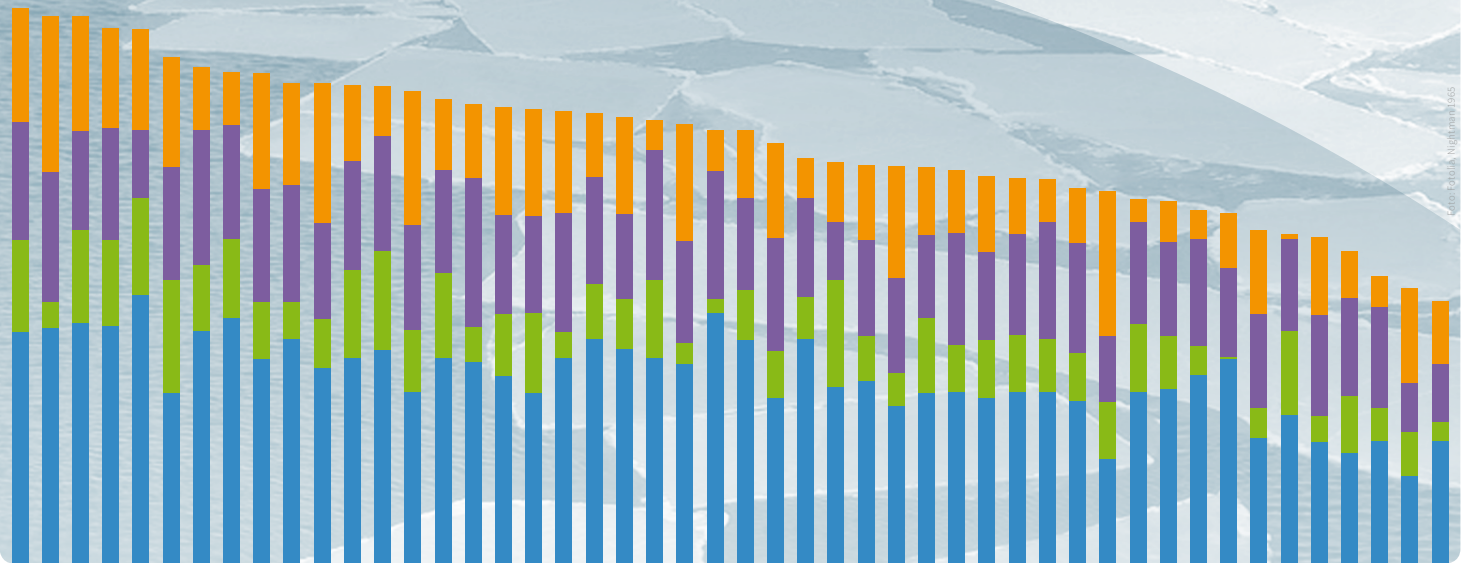




Climate Change  
Performance  
Index

# Results 2018

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# Imprint

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# Foreword

Dear Reader,

Recognizing the urgency to take immediate action in protecting the global climate, the 21<sup>st</sup> Conference of the Parties, held in December 2015 in Paris, made a groundbreaking achievement in adopting the goal to limit global warming to “well below” 2°C and to pursue efforts to limit warming to 1.5°C. Under the Paris Agreement, for the first time climate action was anchored in the context of international law. This requires countries to make their own unique contribution to the prevention of dangerous climate change. The next crucial step to follow this agreement is the rapid implementation by the signing parties of concrete measures to make their individual contributions to the global goal. For the past 13 years, the Climate Change Performance Index (CCPI) has been keeping track of countries’ efforts in combating climate change. The varying initial positions, interests and strategies of the numerous countries make it difficult to distinguish their strengths and weaknesses and the CCPI has been an important tool in contributing to a clearer understanding of national and international climate policy.

To demonstrate existing measures more accurately and to encourage steps toward effective climate policy, we evaluated the design of the CCPI this year with several achievements: For the first time, it is monitoring the development of all green-

house gas emissions of the 56 countries and the EU that are assessed in the CCPI. In addition to that, the index now is suited even better to measure how well countries are on track to the global goals of the Paris Agreement. It does so by not only comparing countries by their development and recent trends in the three categories “GHG Emissions”, “Renewable Energy” and “Energy Use”, but also the 2°C-compatibility of their current status and future targets in each of these categories. The index also continues to evaluate countries’ ambition and progress in the field of climate policy.

The following publication is issued by Germanwatch, the NewClimate Institute and the Climate Action Network. However, only with the help of around 300 energy and climate experts from all over the world we are able to include a review of each country’s national and international policies. The review charts the efforts that have been made to avoid dangerous climate change, and also evaluates the various countries’ current efforts regarding the implementation of the Paris Agreement. We greatly appreciate these experts for their time, efforts and knowledge in contributing to this publication. The experts are mainly representatives of NGOs who work within their respective countries, fighting for the implementation of the climate policy that we all so desperately need.

Best regards,



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# 1. Key Country Results

After a historic success in agreeing on a new international climate treaty in 2015 in Paris, the success of the Paris Agreement must now be measured by the implementation of mitigation targets on a national level. As in all past editions of the CCPI, the places 1 to 3 remain unoccupied because even after the Paris Agreement came into force, no country has yet done enough to prevent the dangerous impacts of climate change. The following overview highlights the performance of 27 selected countries and the EU. The results of all 56 countries and the EU can be found in chapter 4.

## Sweden

4

Driven in particular by a comparably high performance in the index' emissions category, Sweden ranks fourth in this year's CCPI. Per capita emissions have showed a relatively positive development from 2010 - 2015 with and without LULUCF\*. However, GHG emissions without LULUCF are decreasing at a much slower pace. Main drivers for the drop within Sweden's LULUCF emissions are net forest growth but also natural fluctuations in emissions from the agricultural sector. Another cause of concern is that whilst having a *very high* scoring in terms of the current share of renewable energies, the country's renewable energy target for 2030 is still not sufficient for the well-below-2°C limit. National experts criticize the restricting extent of the renewable energy target that only focuses on the electricity sector. They further argue for a near-term phase out of nuclear energy and fossil fuels, especially emphasizing natural gas, and demand action on Sweden's transport sector and consumption-based emissions that are twice the size of territorial emissions, and not decreasing.

## Lithuania

5

Lithuania secured fifth rank in the CCPI 2018. It is to be noted that the country, while receiving a *very high* rating for being on track regarding a well-below-2°C trajectory in terms of emissions, the emissions trend over the past five years has increased and therefore is rated *low*. The same can be observed in the energy use section, where a *weak* trend is offset by a *very high* rated target as well as very good compliance with a well-below-2°C pathway. For renewables the reverse is true: the country's 2030 target is rather unambitious and therefore rated *low*, while the recent trend points into a positive direction.

## Morocco

6

Driven by a *high* rating in the policy and energy use categories, Morocco is rated in the group of *high* performers within the overall tableau of this year's CCPI. The country profits from a low emissions level and an ambitious GHG emissions reduction target by 2030. Morocco was able to install many new renewable energy capacities within the last five years, which most likely will lead to a better rating regarding renewables next year. The country shows a *high* performance in the energy use category, targeting an ambitious level for 2030. Furthermore, Morocco's

current level of per capita energy use and its corresponding well-below-2°C compatibility, result in a *high* rating in this category.

## Norway

7

Slightly behind Morocco, Norway occupies seventh rank. While Norway ranks *high* in every indicator of the emissions category, experts criticize that, as a result of high government subsidies, the country exports a lot of fossil fuels leading to higher emissions in other countries. This is reflected in the assessment of national policy, yet due to its role in international negotiations the country still ranks *high* in the policy section. Rating also *high* in the renewables category of the index, Norway's overall performance is dampened by a *low* rating in energy use.

## United Kingdom

8

The UK ranks number eight in this year's CCPI. A strongly decreasing emissions trend over the last years, mainly driven by a shift from a production-based to a service-oriented economy, has resulted in a *high* performance in the index' emissions category. After weakened climate policy in the past years and cut-backs especially on the promotion of renewables, the newly passed clean growth strategy includes a commitment to offshore wind, and to coal phase-out. If consistently implemented, national experts see the country's power sector on the way to getting back on track. The plan also includes policy on clean vehicles which could be effective in further driving decarbonisation, experts claim. Within the UK the level of ambition varies: While Scotland, for example, has gone for a 2032 petrol and diesel car ban, the UK aims for 2040. Yet, the country's long-term 2030 targets for emissions and renewable energy are not ambitious enough for a well-below-2°C pathway.

## Finland

9

As the third Nordic country to make it into the top 10, Finland reached ninth rank. This is especially due to it being the second best performing country in the emissions category, profiting from a *very high* rated trend as well as from complying with its well-below-2°C trajectory. Yet, concerning energy use, the country ranks *very low* due to *very high* energy use levels as well as an insufficient target for 2030. Experts acknowledge the introduction of plans to phase out coal but criticize their government for at the same time still subsidizing other fossil fuels such as peat, which is why the country ranks only *medium* in the policy section.

## India

14

With a *high* rating in the emissions and energy use categories, India secured 14<sup>th</sup> place in the ranking. With its still low per capita emissions, the country's emissions level is showing compatibility with a well-below-2°C pathway. Yet emissions over the last years have increased relatively strong. India ranks *medium* in the

\* Land Use, Land-Use Change and Forestry

climate policy category with its plans for further promoting renewables. Despite India's significant deployment of renewables, the country should further improve the targets for this category.

## France

15

Driven by a *high* performance in the policy category, France secured 15<sup>th</sup> position in this year's CCPI ranking. National experts especially lauded the country's conduct in international climate diplomacy. Yet it is noteworthy that this leading role has not meant sufficient implementation at national level so far. Experts criticize their country, because it will very likely miss its 2020 target for renewable energy. Its performance in the GHG emissions category is only *medium*, as France is not currently on track for well-below-2°C, nor has it set sufficient targets for 2030. In the energy use section, France is rated *low*.

## Italy

16

Not having set an ambitious enough mitigation target to be aligned with a well-below-2°C pathway yet, Italy—ranking 16<sup>th</sup> in this year's CCPI—is rated *medium* in the emissions category of the index. Despite playing a constructive role in the context of the G7 process, Italian experts criticize their country for not being proactive enough. They also maintain that Italy lacks clear measures for implementing its long-term strategies domestically. The same goes for instruments to reduce energy use. In terms of renewable energy, the country has made progress and achieved *high* ratings in three of the four indicators defining this category.

## Denmark

17

While Denmark ranks 17<sup>th</sup> in the CCPI 2018, experts criticize that the current government cancelled plans for a coal phase-out as well as the existing reduction targets after taking office, which results in a relatively *low* performance in terms of climate policy. The country still ranks *high* in terms of renewables as well as regarding energy use due to positive trends in both categories. Nonetheless, the *low* rating for Denmark's 2030 emissions target and the country's compliance with a well-below-2°C pathway, it receives a *medium* rating in that category.

## Brazil

19

Ranking 19<sup>th</sup>, Brazil is leading the group of *medium*-performing countries. Domestic experts criticize climate policy under the current government, saying it lacks substance, especially with regard to the implementation of already existing measures. Due to its large share of hydropower and therefore its high current level of renewables in the energy mix, Brazil is rated relatively *high* in the renewables category of the index. In the GHG emissions category, the country managed to barely reach the upper third under the influence of its weak tendencies over the past years. Promising signals of a reduction in emissions from forestry were relativized recently when the government cut back on important policies targeting that sector. The same holds for energy use, where, compared to the other countries, Brazil rates *very low* in its developments within the last five years but still

*medium* when comparing its 2030 reduction target to a well-below-2°C pathway.

## Ukraine

20

The Ukraine is ranked 20<sup>th</sup> in this year's edition of the CCPI. It is the highest ranking country in the energy use category, where it performs comparably *high* to *very high* in all four indicators. Despite having a good emissions reduction trend, the country is only rated *medium* in the emissions section as its 2030 target lacks ambition. The same counts for the category renewable energy, where a comparably *very high* rated trend is not able to counterbalance the *very low* current level and the weak target.

## EU

21

Being evaluated in the CCPI for the first time, the European Union—the only supranational entity in the index—lands at place 21 in the ranking. As the union consists of 28 nations, there are wide differences in the performance of individual member states. The EU as a whole accounts for about 8% of global GHG emissions. The EU Emissions Trading Scheme is the largest carbon market in operation but carbon prices are significantly insufficient. In the CCPI, the EU rates *medium* in emissions, renewables and energy use. EU experts emphasize the union's constructive role in international climate diplomacy but criticize the slow progress in putting in place new and more ambitious policies and targets. Disagreements about the future of the European project would lead to weak agreements based on lowest common denominators, with the failure to substantially reform the Emissions Trading System being the most symptomatic example. They see current discussions on new clean energy policies and how to ensure the EU budget supports such policies as ideal opportunities to increase the ambition of climate action.

## Germany

22

Germany ranks number 22 in this year's CCPI edition. As the world's biggest user of lignite, Germany still has relatively high GHG emissions with nearly no improvements regarding GHG trends within the last years and is rated *low* in this category. Its dependence on coal remains a major decelerator to achieving alignment with the well-below-2°C emissions pathway. The energy use per capita (*low*) is higher than the EU average but has shown little improvement over the last years. Germany's renewable growth rates are rated as *high* but regarding the 2030 renewable energy target, national experts see room for improvement. Germany has taken on an increasingly vocal role within the international climate negotiations and during the G20 summit, for which the country receives a *high* rating. Domestically, experts criticize their last (and still acting) government for insufficient action on implementing the promises it made in Paris into national law (*low* rating).

*The CCPI 2018 takes a closer look on Germany's performance in this year's country special in chapter 5.*

## Mexico

27

Coming in at place 27, Mexico is performing relatively well in the policy category. This is due to national experts appreciating recent actions taken by the government, like a significant reduction in fossil fuel subsidies for example which, combined with a strong appearance on the international stage, leads to a *high* rating. A *very low*-rated 2030 target for renewable energy and a lack of compliance with a well-below-2°C compatible pathway make Mexico one of the worst performing countries in the renewables section, while ranking slightly above average concerning energy use as well as GHG emissions.

## Indonesia

37

Indonesia is classified as a *low*-performing country in this year's ranking. Although the rating of its GHG emissions reduction target for 2030 is relatively *high*, Indonesia's past trends and current status of GHG emissions per capita are rated comparably *very low* and *low*. Its relatively high emissions due to deforestation and forest degradation in particular have a large impact on Indonesia's ranking. With its large amounts of hydropower, Indonesia rates *high* in share of renewables compared to other countries, yet lacks ambition in aligning its 2030 targets for renewable energy and energy use to a well-below-2°C compatible pathway. The lack of bold action to phase out fossil fuels and a new policy, which according to national experts prevents investments in renewables, might be reasons for not moving forward, the experts claim.

## Poland

40

Poland ranks 40<sup>th</sup> in this year's edition of the Climate Change Performance Index. National experts specifically point out that the country hasn't played a constructive role in international negotiations especially within the EU, where it continues to fight sufficient climate legislation targeting higher carbon prices in the EU Emissions Trading Scheme for example. Domestically, the country is heavily reliant on coal, and climate protection policies are mainly driven by the implementation of EU legislation, experts criticize. Poland rates *low* in every indicator of the emissions category besides the trend, where it was able to achieve a *medium* rating. The country also rates *medium* in the renewable energy section of the index, since it shows a positive development over the past years, while at the same time is still lacking a sufficient 2030 target.

## China

41

China is the world's largest emitter of GHG emissions. In the emissions category of the index, the country is to be found in the group of *very low* performers, even though per capita GHG emissions have hardly increased since 2013. The 2030 reduction target and past emissions trends are rated *very low* compared to the other countries and not in line with a well-below-2°C compatible pathway. However, the country is ambitious concerning assuming a leading role in international climate diplomacy. Domestically, China has developed a series of policies to promote renewables and phase out coal capacity, experts claim.

China develops renewable energy at a very high speed, but its share of renewables within the energy mix in 2015 was still relatively *low*. And with a still insufficiently ambitious 2030 renewable energy target, the country has a *medium* rating for this category.

## Argentina

46

Argentina holds position 46 in this year's CCPI ranking. The country is performing *very low* on emissions and is currently far removed from meeting a well-below-2°C compatible trajectory. Argentina further ranks *low* in both the energy use and renewable energy categories. While there is progress in the use of renewables, which is already reflected in the trend indicator, national experts criticize Argentina for its vast investments in unconventional fossil fuels, such as shale gas and shale oil. While acknowledging their country would have shown its intention of going ahead with mitigation plans and recognizing the challenges of also moving forward with their implementation, experts also demand for more ambition.

## Turkey

47

Turkey ranks 47<sup>th</sup> in the CCPI 2018. This partly results from Turkey being rated *very low* concerning climate policy with experts criticizing unambitious targets, weak implementation and counterproductive policy measures domestically as well as a weak performance in international climate diplomacy. Turkey also ranks *low* in emissions and energy use due to negative developments in both categories. One upside is the renewables section, where positive developments over the course of the last years resulted in a *high* rating.

## South Africa

48

South Africa ranks 48<sup>th</sup> in the CCPI this year. The country faces a *very low* rating concerning GHG emissions, due to an insufficient 2030 target and its current level of emissions, both being incompatible with a well-below-2°C trajectory. Experts emphasize that, even though the country is performing well in international negotiations, it lacks ambition and stringent implementation of policies at home, which results in a *medium* rating in the CCPI's policy section. An only *medium*-rated development of renewables and a *very low*-rated 2030 target for renewables are reasons for a *low* performance with regard to this category.

## Ireland

49

Being the worst performing European country in the CCPI, Ireland ranks 49<sup>th</sup>. According to national experts, Ireland is one of the few EU countries to miss its 2020 emission reduction targets under the EU effort-sharing decision, which is one reason why the country rates *very low* in climate policy. Its performance in the field of GHG emissions is also *very low* as the country is nowhere close to being on track concerning its well-below-2°C compatible pathway with both its current level as well as its 2030 target. We observe a very positive trend in the development of renewable energy, but as the current share of renewable energy in energy supply—as well as the 2030 target—are insufficient, Ireland rates only *medium* in the renewables category.

## Japan

50

Japan ranks 50<sup>th</sup> in this year's CCPI and shows a *very low* to *low* performance in all categories except energy use, where the country scored *medium*. National experts see the continued increase in the number of coal-fired power plants as becoming a major threat to achieving Japan's already weak 2030 mitigation target. One bright spot can be seen in developments in renewable energy throughout the last five years, where the country received a *high* rating.

## Canada

51

As one of the largest producers of absolute greenhouse gases as well as per capita emissions, Canada is ranked 51<sup>st</sup> in this year's CCPI edition. Additionally, having a *very low*-rated 2030 GHG reduction target, the country will need higher ambitions to be on track with a well-below-2°C compatible pathway. Regarding the category energy use, Canada's performance is *very low* in terms of the current level as well as the 2030 target. Having large hydropower capacities and a very positive trend from other renewable capacities as wind or solar, Canada receives a *medium* rating in the renewables category. Canada gets comparably *very high* grades for its performance in international climate diplomacy. Domestically, experts praise the leadership of several provinces having ambitious 2030 targets for their per capita emissions and energy supply from renewable sources. Nonetheless, experts also criticize the lack of a joined climate responsibility on the national level and demand more specific strategies in order to progress on decarbonizing the country's economy.

## Russia

53

The Russian Federation ranks 53<sup>rd</sup> in the CCPI 2018. With its high level of GHG emissions and a mitigation target that drastically overshoots the benchmark for a well-below-2°C compatible pathway, the country is rated *very low* in emissions and *low* in energy use in comparison to the other countries. Not accounting for large hydropower in its own official assessment of renewable energy, the country is rated *very low* in all of the four indicators defining this category. National experts report about useful policies for the support of renewables being in place but too small in scale. Generally, experts criticize Russia's low ambition in domestic climate policy and a lack of implementing concrete measures.

## USA

56

Already in the first months of the Trump Administration, the USA started to take several steps backwards on climate action, especially by declaring its withdrawal from the Paris Agreement and dismantling the Clean Power Plan. As such, policy evaluations dropped dramatically, especially regarding international climate diplomacy, where national experts rated its country's performance *very low*. National policy grades are still slightly more positive, as (1) the new government has not yet erased all the efforts of the previous administration and (2) there are positive signs that more ambitious action on climate protection

will be taken by cities and states on the subnational level as well as by the economic sector to counterbalance the disastrous developments in federal policy. And ambitious action would be crucially needed with the USA being the second largest emitter in the world and emission levels therefore being considerably too high to be in line with a well-below-2°C pathway. A *high*-rated growth rate of renewables over the course of the past years led to a slightly more positive rating in the renewables category compared to the other index categories. There are positive signs showing this development could be secured even against current policy developments.

## Australia

57

Australia ranks among the *very low*-performing countries in three of the CCPI's categories—GHG emissions, energy use and climate policy—and among the *low* performers regarding renewable energy, which results in position 57 in the overall tableau. Experts emphasize the need to strengthen the country's 2030 targets especially in terms of emissions reduction and renewable energy and demand that their government sufficiently implement credible policies for meeting these targets.

## Republic of Korea

58

South Korea ranks in the bottom 3 of this year's CCPI with a comparably *very low* and severely misaligned performance with regard to a well-below-2°C pathway in the GHG emissions and energy use categories. Coming from a *very low* level of renewables in the energy supply, the country's *very high* rating in the development of renewable energy adds a bright spot to its overall performance. Nonetheless, national experts worry about the increasing installation of coal capacity and coal consumption and criticize their government for its unambitious 2030 emissions reduction target.

## Saudi Arabia

60

Saudi Arabia as this year's worst performing country ranks 60<sup>th</sup>. The kingdom is rated *very low* in every single category and in all indicators for emissions, energy use and renewable energy. Policy is lacking as well with experts criticizing the country's very poor appearance in international negotiations.

## 2. Key Developments

Two years after agreeing to limit global warming to well below 2°C, and to pursue efforts to even aim for a 1.5°C limit, we still see a huge ambition gap<sup>1</sup> in the countries' greenhouse gas reduction targets and their progress regarding a sufficient implementation of the Paris agreement in national legislation.

Nonetheless, there are encouraging signs that a global energy transition is underway. Numbers show that, in 2014, 2015 and 2016, global energy-related carbon dioxide emissions did not grow further - the first time since industrial revolution in years without a big economic crisis. Also, according to the recent UNEP "Emission Gap Report" all global greenhouse gas emissions declined in 2016 for the first time since the early 1980s.<sup>2</sup> However, preliminary data published by the Global Carbon Project indicates that the emission in 2017 increased again by 2%.<sup>3</sup>

The decarbonisation of energy systems plays a key role in limiting emissions and in reducing them in the future. In addition, it is an encouraging sign for ongoing decarbonisation that global energy-related emissions have not grown, while primary energy demand has grown by an annual average of around 1.8% since 2011.<sup>4</sup>

**Investments in renewable energies continue to dominate the new investments in the energy system worldwide.** At the same time coal use is declining. Last year the world consumption of coal was 1.7% less than in 2015. Even though coal prices have fallen, coal production already peaked in 2013 globally<sup>5</sup> and among the world's largest emitters, China, the USA, as well as in the EU. In 2015, almost all countries included in the index maintained double-digit growth rates in renewable energy and we see solar and wind technologies being more competitive from year to year. While growth rates of renewables have been particularly strong in industrialised countries in the past, emerging economies are playing an increasingly crucial role in the global energy transition. China is leading the upsurge in renewable energy, but Middle Eastern, North African and Central and South American countries are also expected to increase their installed capacity drastically by 2018. 51% of global capacity in wind energy and 53% in solar<sup>6</sup> energy is already installed in emerging economies, indicating the potential of leapfrogging a fossil-fuel-based industrialisation.

Shrinking costs for renewable energies (wind and solar) is also an opportunity to more rapidly phasing out fossil fuels in the order of magnitude that is necessary to meet the well-below-2°C

threshold of global warming. Prices for oil, gas and coal are dropping, which sets an incentive to use them also in the longer term. To maintain the positive developments in renewables, the need to set more ambitious renewable energy targets and appropriate carbon regulation including prices is increasing every day.

**The global reaction to Donald Trump's withdrawal of the USA from the Paris Agreement has so far made the other countries present a united front in holding on to the goals of the Agreement.** It still remains to be shown whether this will hold true when it comes to the real implementation of necessary policies. Positive signs have also come from US towns, states and companies, as well as actors in the financial market. Many of them implement their own strategies and at the same time demand more ambitious climate action internationally and nationally. They ask for a reliable and stringent policy framework and investment-relevant CO<sub>2</sub> price signals.

**One of the key tasks of ongoing climate negotiations is to establish an "ambition mechanism", thus continuously raising ambition in order to close the remaining gap between the countries' emissions reduction targets and the global limit for temperature rise.** This is not only a request to raise the mitigation target, but also the level of climate financing and innovative ways of cooperation, regarding technologies as well as beyond technology. To find new ways of cooperation, it is equally important for countries to deliver on their promises and adopt sufficient legislation domestically. As Paris has requested and G19 has promised, countries should put forward their plans for moving towards greenhouse gas neutrality until 2050.

**The design of the Climate Change Performance Index (CCPI)** has now been changed, taking into account the new reality after adopting the Paris Agreement. It is now suited to measure the progress of countries towards contributing to the temperature limit the global community agreed to in Paris.

It is also important to note that data show none of the 56 countries or the EU on a well-below-2°C pathway in their overall performance, while there are some initial indications that this might change for a few countries during the next years. **Countries have to prove consistency in implementing necessary policies to reach national mitigation targets and raise ambition in adapting their targets to what would be well-below-2°C or 1.5°C compatible.**

## 3. About 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 56 countries and the EU, which are together responsible for more than 90 percent of global greenhouse gas (GHG) emissions.

<sup>1</sup> UNEP (2017)

<sup>2</sup> UNEP (2017)

<sup>3</sup> <http://www.globalcarbonproject.org/>

<sup>4</sup> REN21 (2017)

<sup>5</sup> BP (2017)

<sup>6</sup> Financial Times (2017)



In 2017 the design of the CCPI was revised, due to recent global climate policy developments in the last years. One of the major events that marked a milestone in the international climate negotiations was the entry into force of the Paris Agreement. For the first time, it is possible to measure the performance of states based on the promises they themselves formulated in their Nationally Determined Contributions (NDCs). So far 169<sup>7</sup> 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.

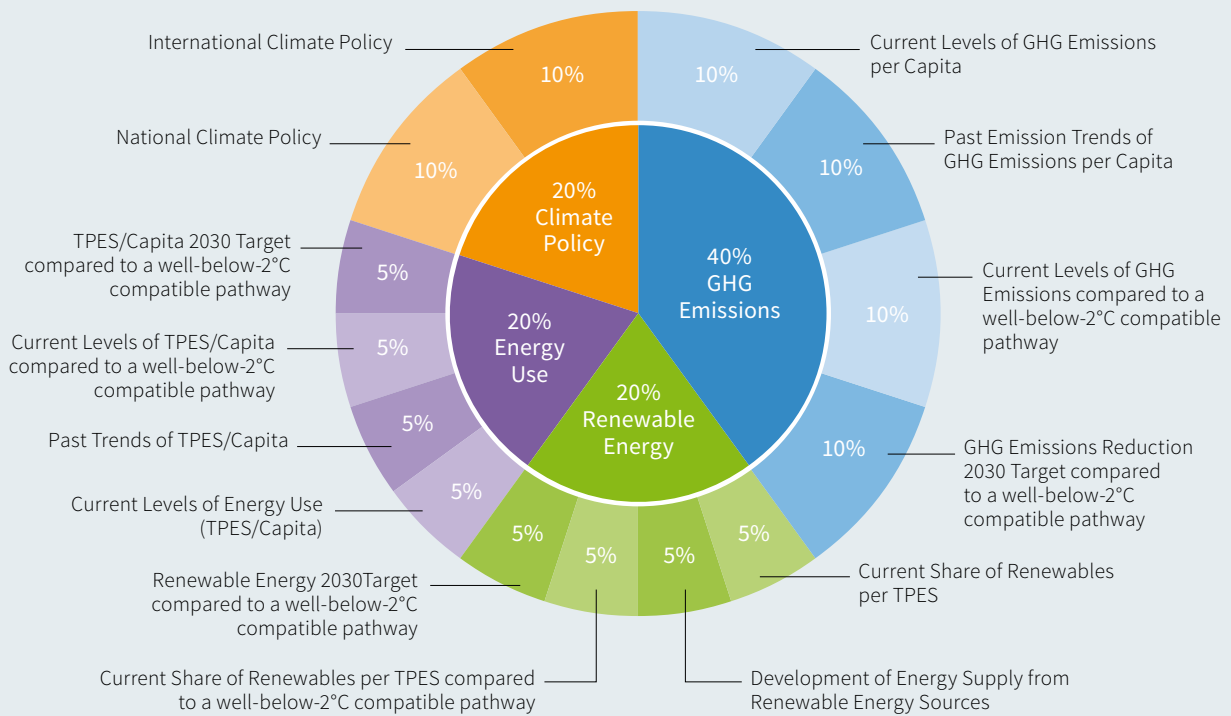
The CCPI aims to capture the fulfillment of those promises and evaluates the countries' 2030 targets within the important categories greenhouse gas emissions, renewable energy and energy use to determine, how well they are on track to a well-below-2°C pathway. The CCPI now also reflects countries' current performances towards this pathway in absolute terms, in addition to the remaining relative indicators measuring the current level and past trends in all three categories. 40% of the evaluation is based on indicators of emissions, 20% on renewable energies and 20% on energy use. The remaining 20% of the CCPI evaluation is based on climate policy assessments by experts from the respective countries. Besides 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 design. The three cat-

egories 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 have to be reached until 2050: nearly zero GHG emissions (taking into account country-specific pathways, which give developing countries a bit more time to reach this goal), a share of 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 these ambitious and necessary 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.

### Components of the CCPI

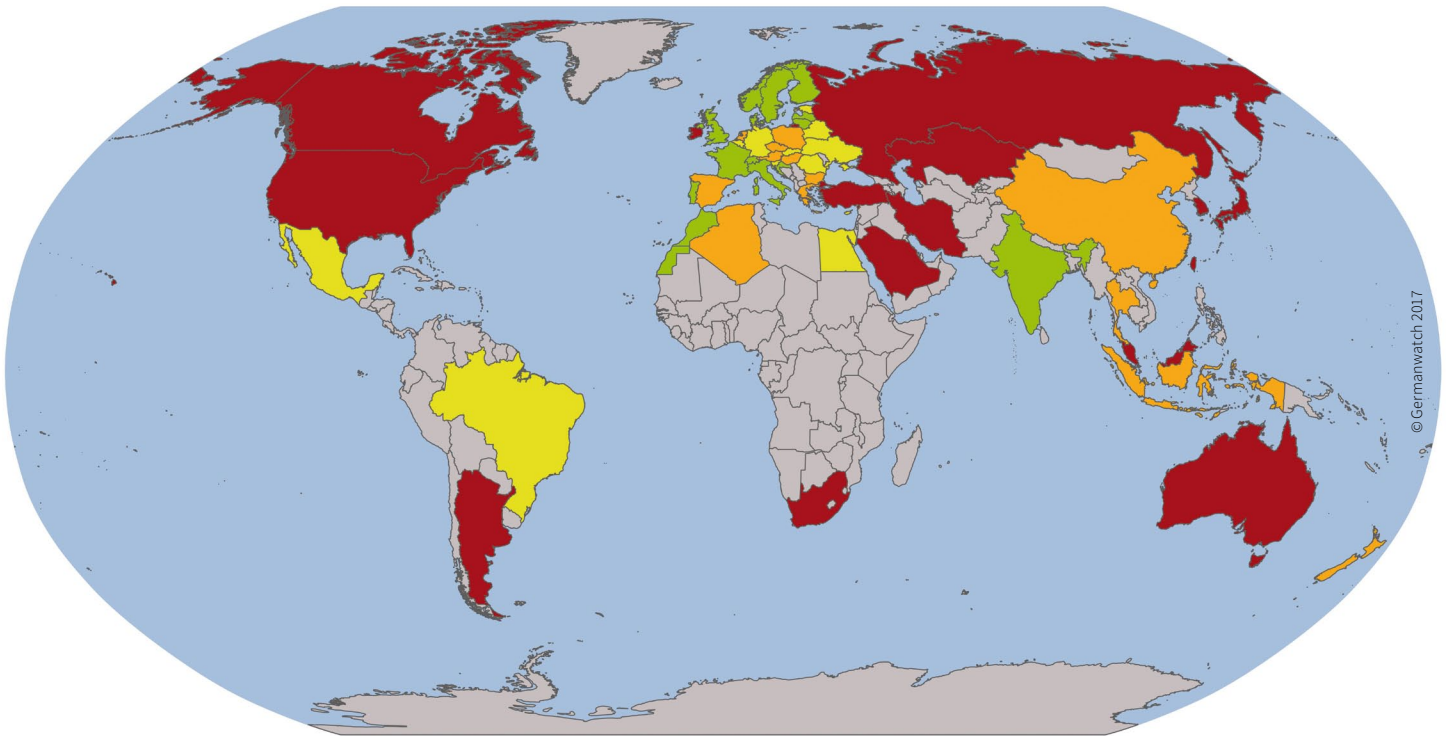


GHG = Greenhouse Gases | TPES = Total Primary Energy Supply

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<sup>7</sup> 11.11.2017

# 4. Overall Results CCPI 2018



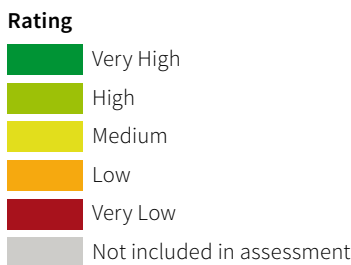
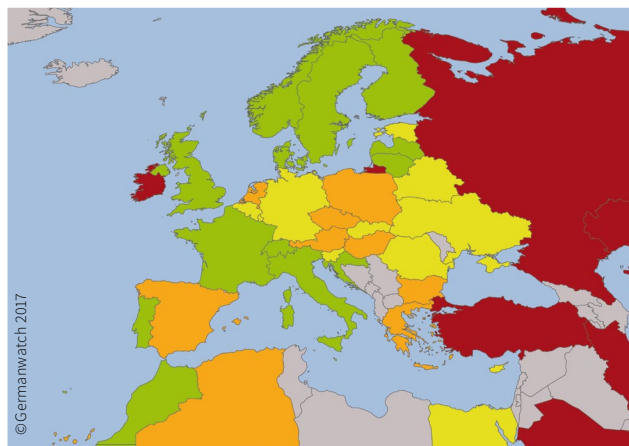
This section shows the overall results of this year's Climate Change Performance Index 2018. The ranking results of this category are defined by a country's aggregated performance regarding 14 indicators within the four categories GHG Emissions, Renewable Energy, Energy Use and Climate Policy.

The CCPI 2018 results illustrate the main regional differences in climate protection and performance within the 56 evaluated countries and the EU. Despite decreasing growth rates in CO<sub>2</sub> emissions, still no country performed well enough to reach the rating "very good" in this year's index.

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.

In this year's index, Sweden is leading the list, followed by Lithuania and Morocco. The group of medium-performing countries consists of countries like Brazil, Germany, Mexico and Ukraine while New Zealand, the Netherlands and Austria are classified as low performers in the overall rating.

Saudi Arabia, Islamic Republic of Iran, Republic of Korea, Australia and the United States form the bottom five of this classification, scoring low or very low across almost all categories.





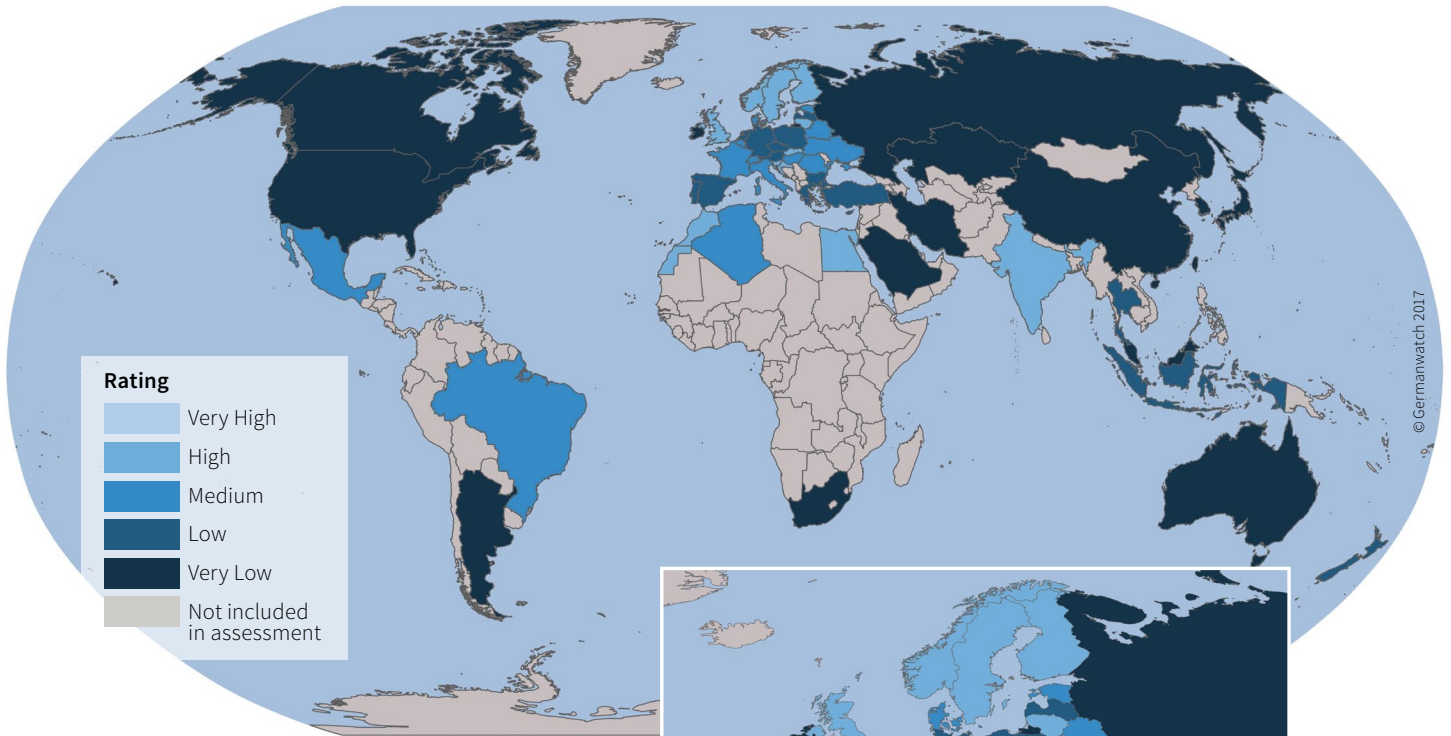
Rank	Country	Score**	
1.*	–	–	
2.	–	–	
3.	–	–	
4.	Sweden	74.32	
5.	Lithuania	69.20	
6.	Morocco	68.22	
7.	Norway	67.99	
8.	United Kingdom	66.79	
9.	Finland	66.55	
10.	Latvia	63.02	
11.	Malta	61.87	
12.	Switzerland	61.20	
13.	Croatia	61.19	
14.	India	60.02	
15.	France	59.80	
16.	Italy	59.65	
17.	Denmark	59.49	
18.	Portugal	59.16	
19.	Brazil	57.86	
20.	Ukraine	57.49	
21.	European Union (28)	56.89	
22.	Germany	56.58	
23.	Belarus	56.38	
24.	Slovak Republic	56.04	
25.	Luxembourg	55.54	
26.	Romania	55.32	
27.	Mexico	54.77	
28.	Egypt	54.02	
29.	Cyprus	52.29	
30.	Estonia	52.02	
31.	Slovenia	50.54	
32.	Belgium	49.60	
33.	New Zealand	49.57	
34.	Netherlands	49.49	
35.	Austria	49.49	
36.	Thailand	49.07	
37.	Indonesia	48.94	
38.	Spain	48.19	
39.	Greece	47.86	
40.	Poland	46.53	
41.	China	45.84	
42.	Bulgaria	45.35	
43.	Czech Republic	45.13	
44.	Hungary	44.00	
45.	Algeria	43.61	
46.	Argentina	41.21	
47.	Turkey	41.02	
48.	South Africa	40.61	
49.	Ireland	38.74	
50.	Japan	35.76	
51.	Canada	33.98	
52.	Malaysia	32.61	
53.	Russian Federation	29.85	
54.	Chinese Taipei	29.43	
55.	Kazakhstan	28.17	
56.	United States	25.86	
57.	Australia	25.03	
58.	Republic of Korea	25.01	
59.	Islamic Republic of Iran	23.05	
60.	Saudi Arabia	11.20	

**Index Categories**

- GHG Emissions (40% weighting)
- Renewable Energy (20% weighting)
- Energy Use (20% weighting)
- Climate Policy (20% weighting)

\* None of the countries achieved positions one to three. No country is doing enough to prevent dangerous climate change. \*\* rounded

# 4.1 Partial Results – GHG\* Emissions

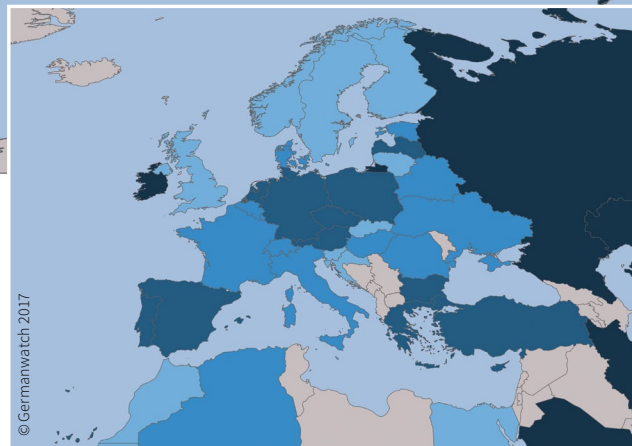


The sub-ranking results of the index category “GHG Emissions” are defined by a country’s aggregated performance regarding four indicators, each reflecting a different dimension and aspect of how well the country is doing in terms of GHG emissions.

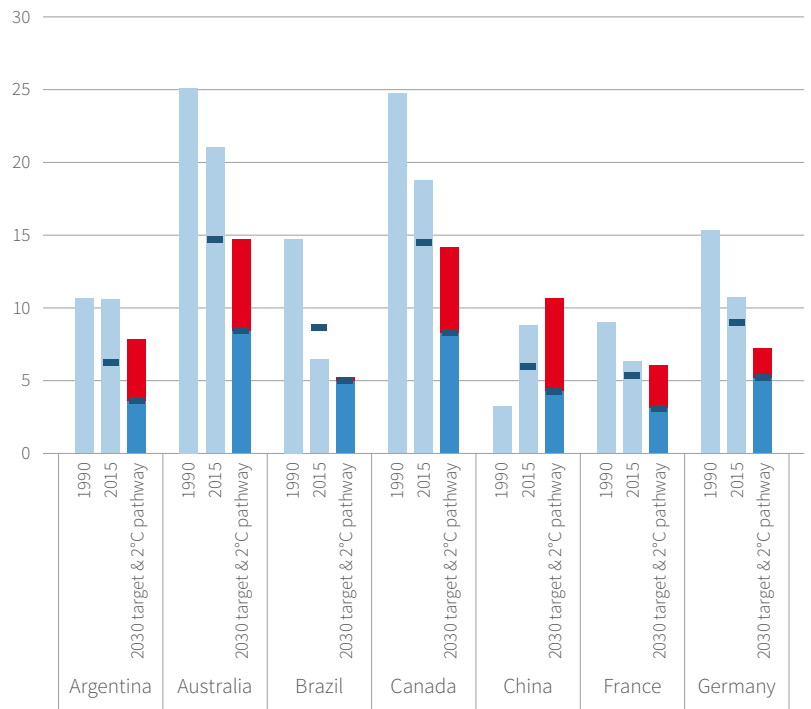
The evaluation looks at (1) the current levels of per capita GHG emissions; (2) the developments in GHG emissions in the last five years in absolute terms, (3) the current level of per capita GHG emissions compared to a country specific well-below-2°C pathway and (4) the country’s own 2030 emissions reduction target compared to its well-below-2°C pathway.

The world map shows the aggregated results and overall performance of countries in the category “GHG Emissions”. The table provides more detailed information on the top CO<sub>2</sub>-emitting countries’ performance with regard to the different indicators defining the category. The graph on the bottom indicates how emissions developed from 1990 until 2015 and visualises the 2°C compatibility of both a country’s recent trend and its 2030 target.

Considering emissions from LULUCF\*\* in the new index design, Sweden is the best performing country regarding GHG emissions, followed by Finland, Egypt and Croatia, while the Islamic Republic of the Islamic Republic of Iran, Republic of Korea and Saudi Arabia perform very low in every indicator of this category and build the bottom three. Generally, mitigation targets for 2030 are too low and not on track for a pathway towards well below 2°C or even 1.5°C warming.



**Emissions per capita (tCO<sub>2</sub>-eq/capita, incl. LULUCF\*\*), historic values and 2°C compatibility of current level and 2030 target**



\* Greenhouse Gas Emissions  
 \*\* Land Use, Land-Use Change and Forestry

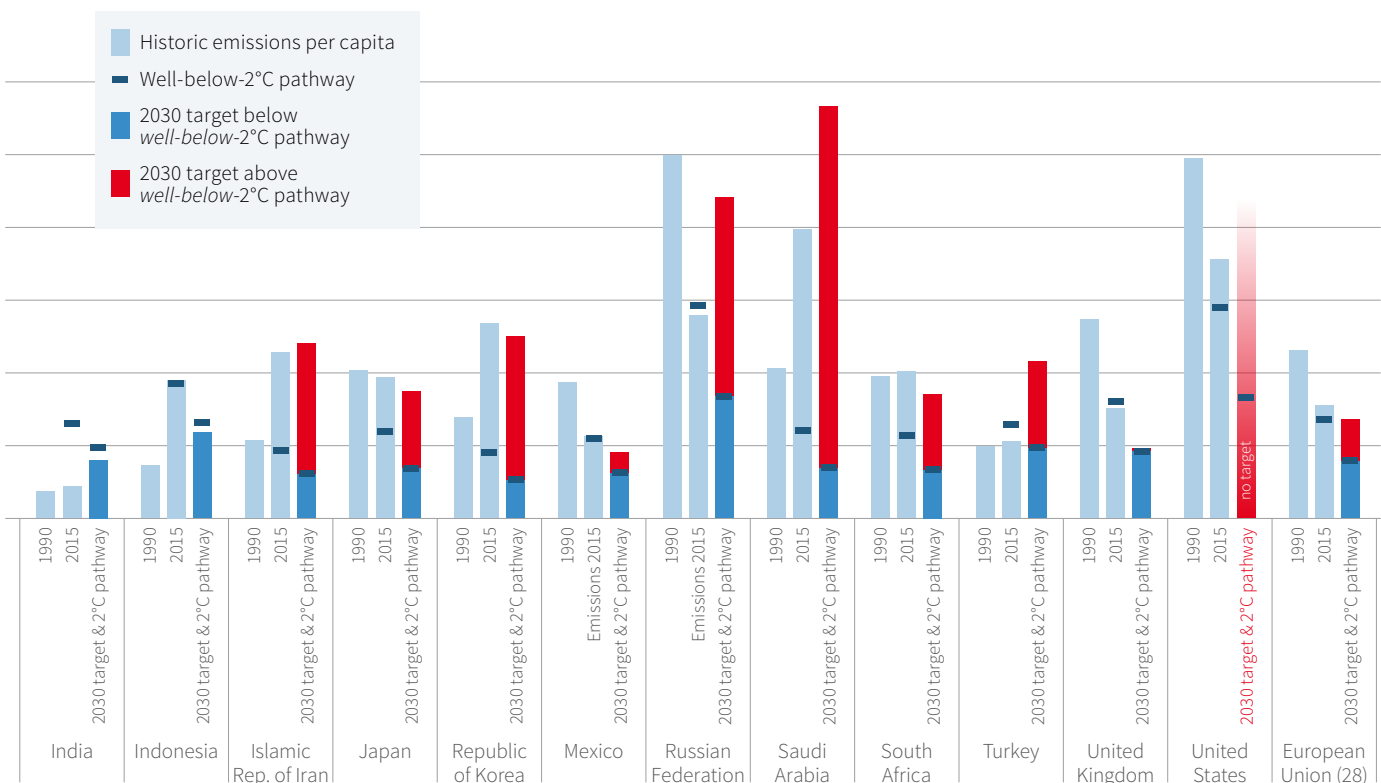


### Greenhouse Gas Emissions – Rating Table for the 20 Largest CO<sub>2</sub> Emitters\*

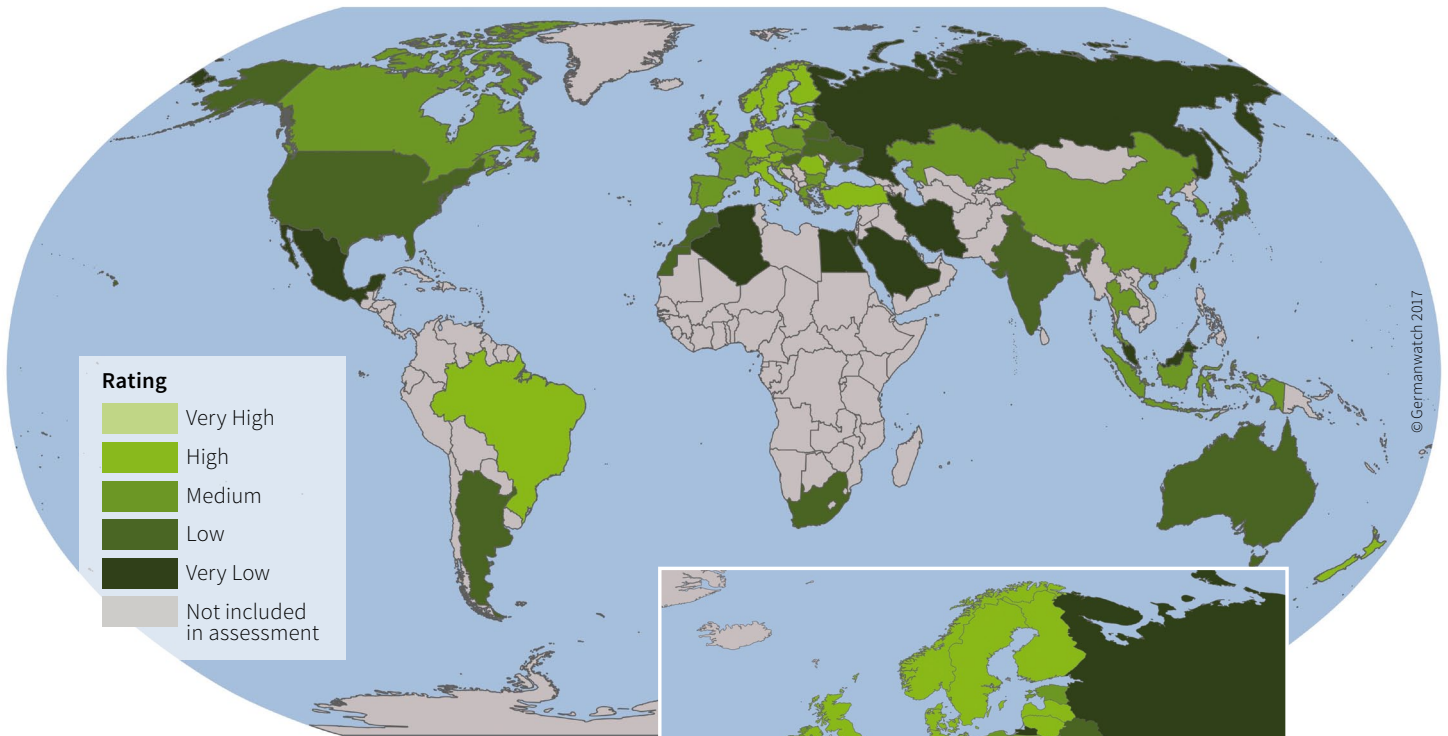
Rank	Country	Total Rating	Current Status of GHG Emissions per Capita	Recent Emission Trends of GHG Emissions per Capita	Current Levels of GHG Emissions compared to a well-below-2°C compatible pathway	GHG Emissions Reduction Target compared to a well-below-2°C compatible pathway
9.	United Kingdom	High				
14.	India	High				
21.	Brazil	Medium				
26.	Mexico	Medium				
27.	France	Medium				
29.	European Union (28)	Medium				
39.	Indonesia	Low				
40.	Germany	Low				
45.	Turkey	Low				
46.	Argentina	Very low				
48.	Japan	Very low				
49.	South Africa	Very low				
50.	Russian Federation	Very low				
52.	China	Very low				
53.	United States	Very low				
55.	Canada	Very low				
57.	Australia	Very low				
58.	Islamic Republic of Iran	Very low				
59.	Republic of Korea	Very low				
60.	Saudi Arabia	Very low				

\* The ratings for all 56 countries and the EU can be found here: [www.climate-change-performance-index.org](http://www.climate-change-performance-index.org)

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## 4.2 Partial Results – Renewable Energy

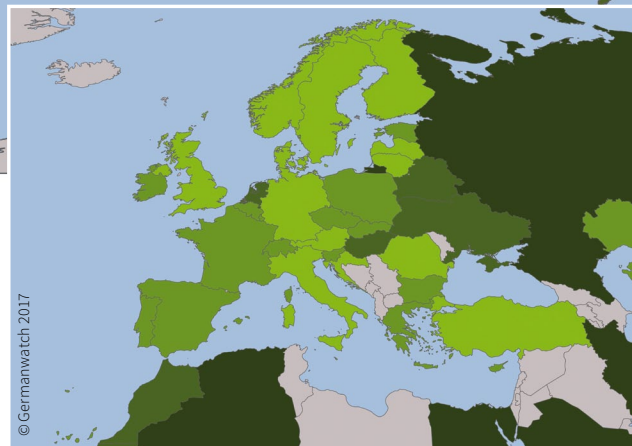


The sub-ranking results of the index category “Renewable Energy” are defined by a country’s aggregated performance regarding four indicators, each reflecting a different dimension and aspect of how well the country is doing in terms of renewable energy.

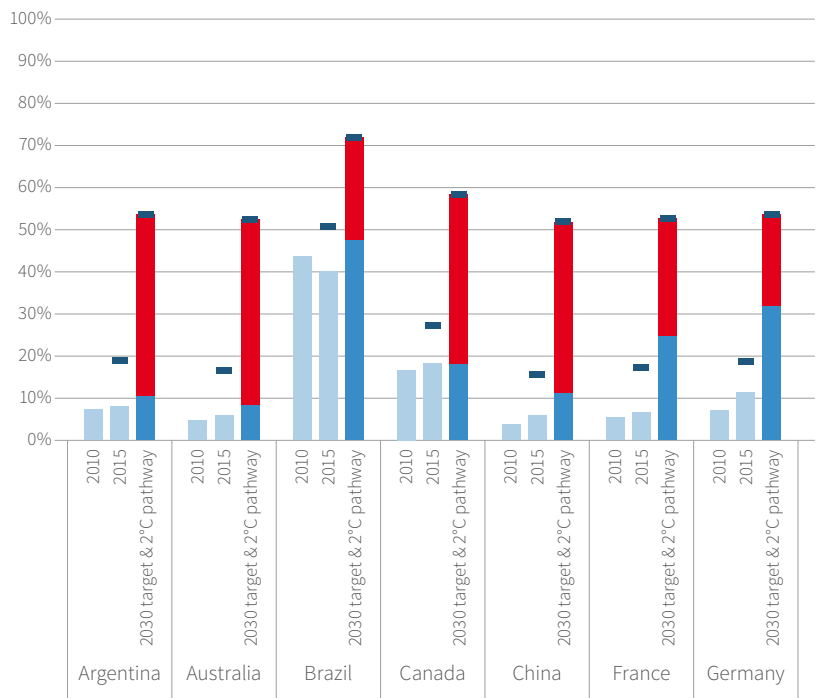
The evaluation looks at (1) current levels of the share of renewable energy in total primary energy supply; (2) developments of renewable energy in the last five years in absolute terms; (3) current levels of the share of renewable energy in total primary energy supply compared to a country-specific pathway that is in line with the well-below-2°C temperature limit; (4) the countries’ own 2030 renewable energy targets compared its well-below-2°C pathway.

The world map shows the aggregated results and overall performance of countries in the category “Renewable Energy”. The table provides more detailed information on the top CO<sub>2</sub>-emitting countries’ performance with regard to the different indicators defining the category. The graph on the bottom indicates how renewable energy developed from 2010 until 2015 and visualises the 2°C compatibility of both a country’s current level and 2030 target.

Since the energy sector contributes greatly to the CO<sub>2</sub> emissions of a country, renewable energies are a key driver for mitigating emissions. Traditionally, relatively well performing countries in this category are the ones with a high share of renewables, such as Denmark, Norway, Sweden, Austria, New Zealand, Latvia, and Germany, for instance. This year, Latvia is top of the list, followed by New Zealand. The group of very poorly performing countries includes Mexico, Malaysia, Egypt, the Russian Federation, Saudi Arabia, Algeria, and the Islamic Republic of Iran.



**Renewable Energy target (% of TPES\*), historic values and 2°C compatibility benchmarks**

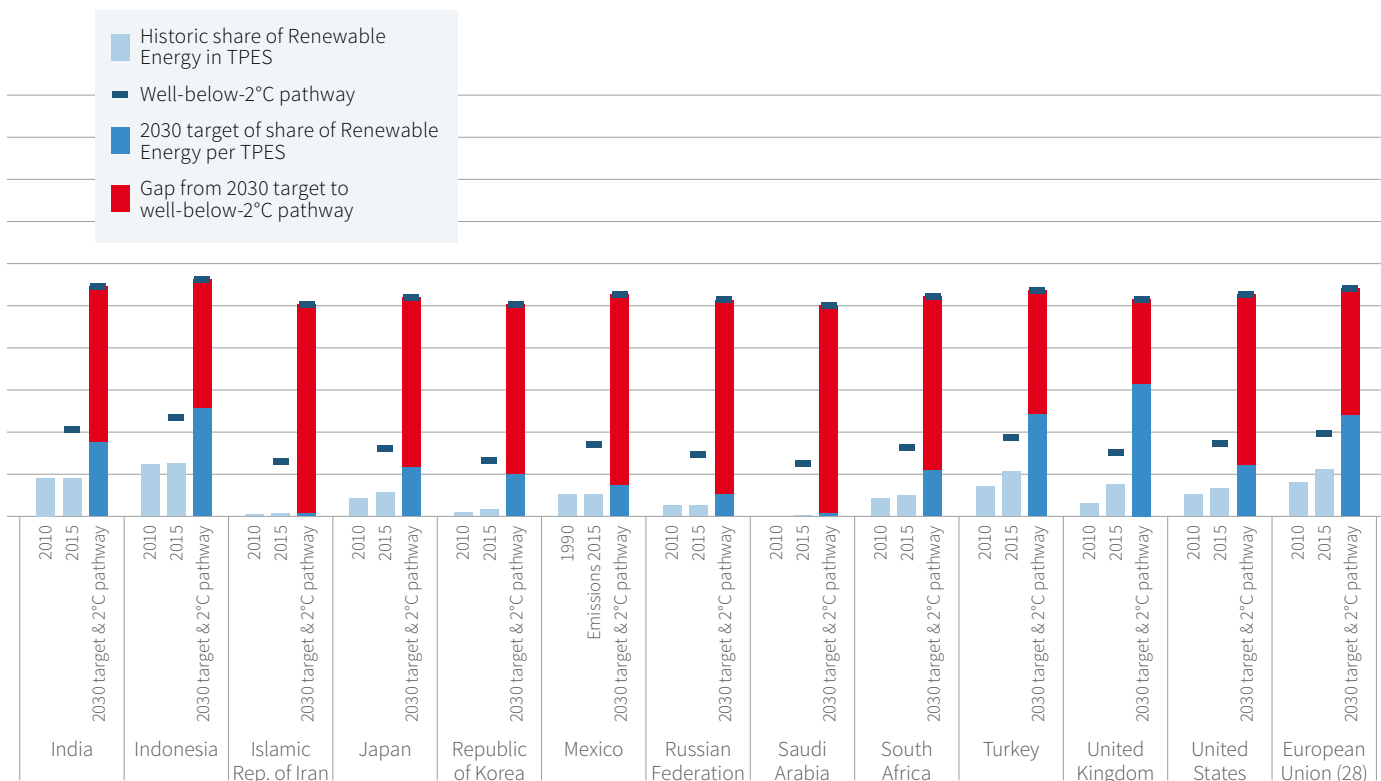




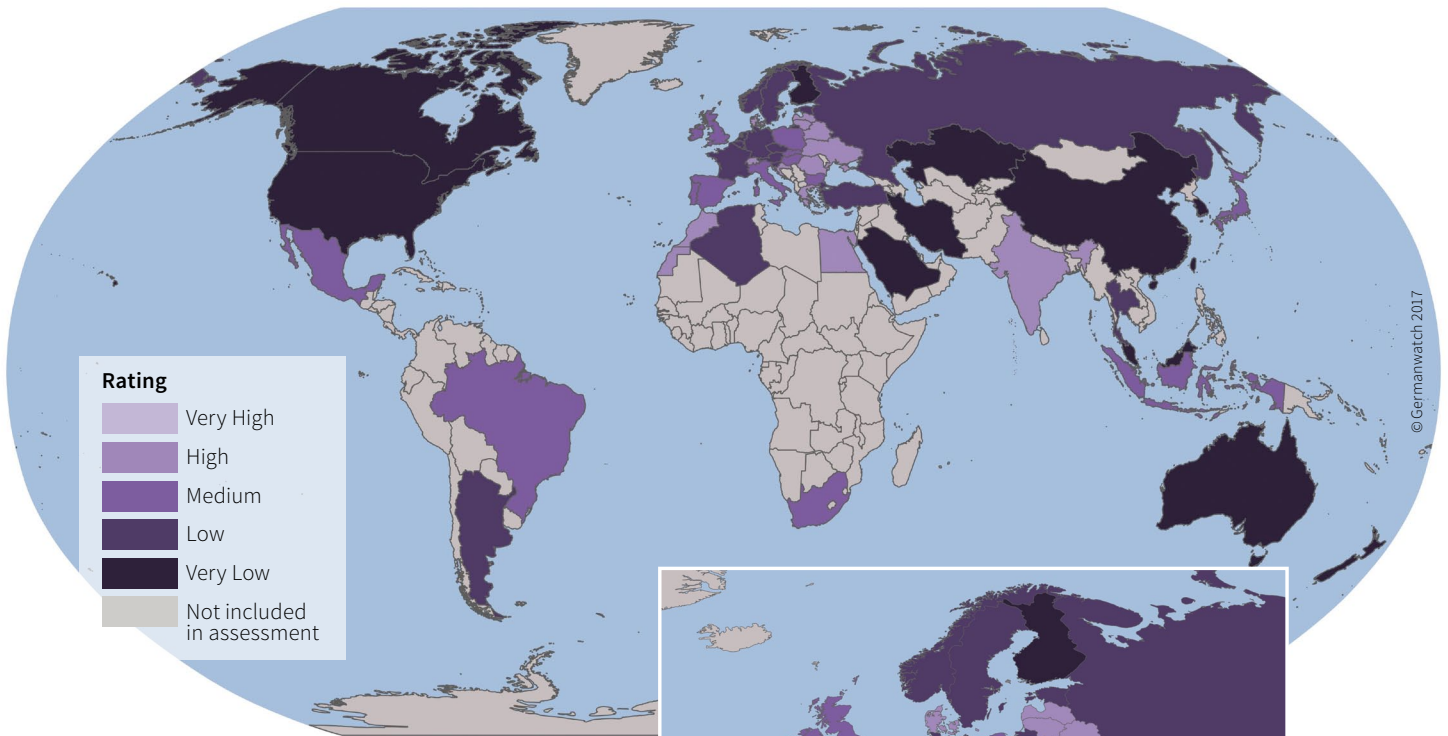
Renewable Energy – Rating Table for the 20 Largest CO <sub>2</sub> Emitters*						
Rank	Country	Total Rating	Current Share of Renewables per TPES	Development of Energy Supply from Renewable Energy Sources	Current Share of Renewables per TPES compared to a well-below-2°C compatible pathway	Renewable Energy 2030 Target compared to a well-below-2°C compatible pathway
12.	United Kingdom	High				
13.	Brazil	High				
14.	Turkey	High				
15.	Germany	High				
22.	European Union (28)	Medium				
24.	China	Medium				
30.	Republic of Korea	Medium				
34.	France	Medium				
36.	Indonesia	Medium				
39.	Canada	Medium				
42.	India	Low				
44.	United States	Low				
45.	Japan	Low				
47.	Argentina	Low				
49.	Australia	Low				
51.	South Africa	Low				
54.	Mexico	Very Low				
57.	Russian Federation	Very Low				
58.	Saudi Arabia	Very Low				
60.	Islamic Republic of Iran	Very Low				

\* The ratings for all 56 countries and the EU can be found here: [www.climate-change-performance-index.org](http://www.climate-change-performance-index.org)

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# 4.3 Partial Results – Energy Use

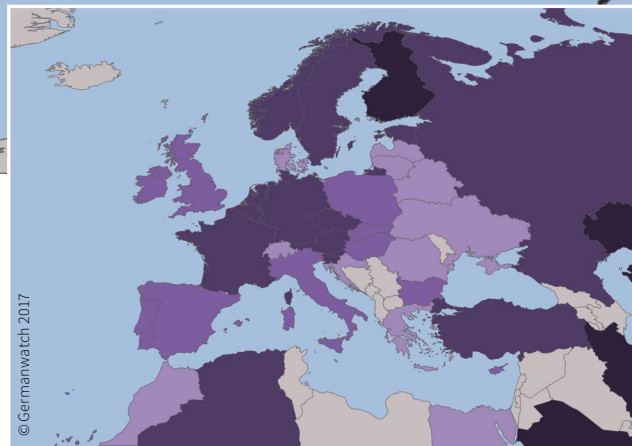


The sub-ranking results of the index category “Energy Use” are defined by a country’s aggregated performance regarding four indicators, each reflecting a different dimension and aspect of how well the country is doing in terms of energy use.

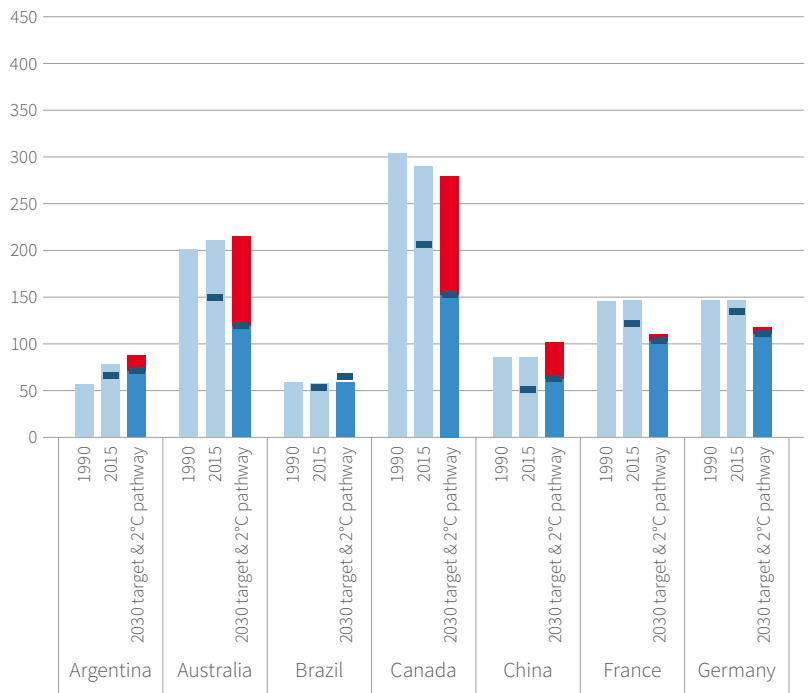
The evaluation looks at (1) current levels of per capita energy use; (2) developments of per-capita energy use in the last five years in absolute terms; (3) current levels of per capita energy use compared to a country-specific pathway that is in line with the well-below-2°C temperature limit; (4) the countries’ own 2030 energy use targets compared its well-below-2°C pathway.

The world map shows the aggregated results and overall performance of countries in the category “Energy Use”. The table provides more detailed information on the top CO<sub>2</sub>-emitting countries’ performance with regard to the different indicators defining the category. The graph on the bottom indicates how energy use per capita developed from 1990 until 2015 and visualises the 2°C compatibility of both a country’s current level and 2030 target.

Ukraine, Malta, Morocco as well as Romania are the front-runners in the Energy Use section, mostly due to low current levels of energy use and relatively good ratings regarding a 2°C compatible pathway in this category. New Zealand, Islamic Republic of Iran, Canada, Republic of Korea and Saudi Arabia are this year’s worst-performing countries, scoring low or very low across nearly all indicators. While emerging economies tend to perform decently in this category, Algeria, Turkey, India and China have been rapidly increasing their energy use in the last few years.



**Total Primary Energy Supply per capita (GJ/capita), historic values, targets and 2°C compatible benchmarks**







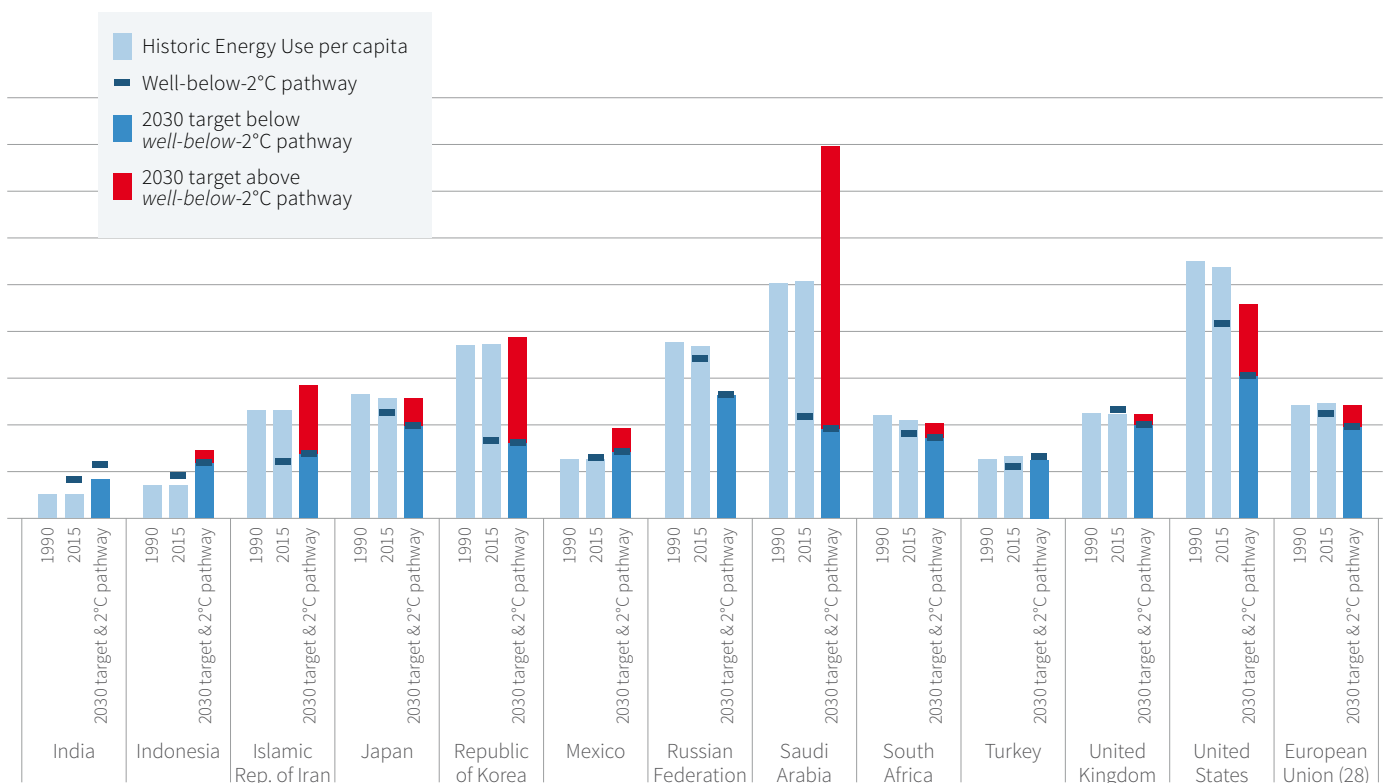
### Energy Use – Rating Table for the 20 Largest CO<sub>2</sub> Emitters\*

Rank	Country	Total Rating	Current Status of Energy Use (TPES**/Capita)	Recent Trends of TPES/Capita	Current Levels of TPES/Capita compared to a well-below-2°C compatible pathway	TPES/Capita 2030 Target compared to a well-below-2°C compatible pathway
11.	India	High				
18.	United Kingdom	Medium				
19.	Indonesia	Medium				
25.	Brazil	Medium				
27.	Mexico	Medium				
29.	South Africa	Medium				
30.	Japan	Medium				
31.	European Union (28)	Medium				
35.	Germany	Low				
36.	France	Low				
39.	Argentina	Low				
42.	Turkey	Low				
46.	Russian Federation	Low				
51.	Australia	Very Low				
52.	China	Very Low				
54.	United States	Very Low				
57.	Islamic Republic of Iran	Very Low				
58.	Canada	Very Low				
59.	Republic of Korea	Very Low				
60.	Saudi Arabia	Very Low				

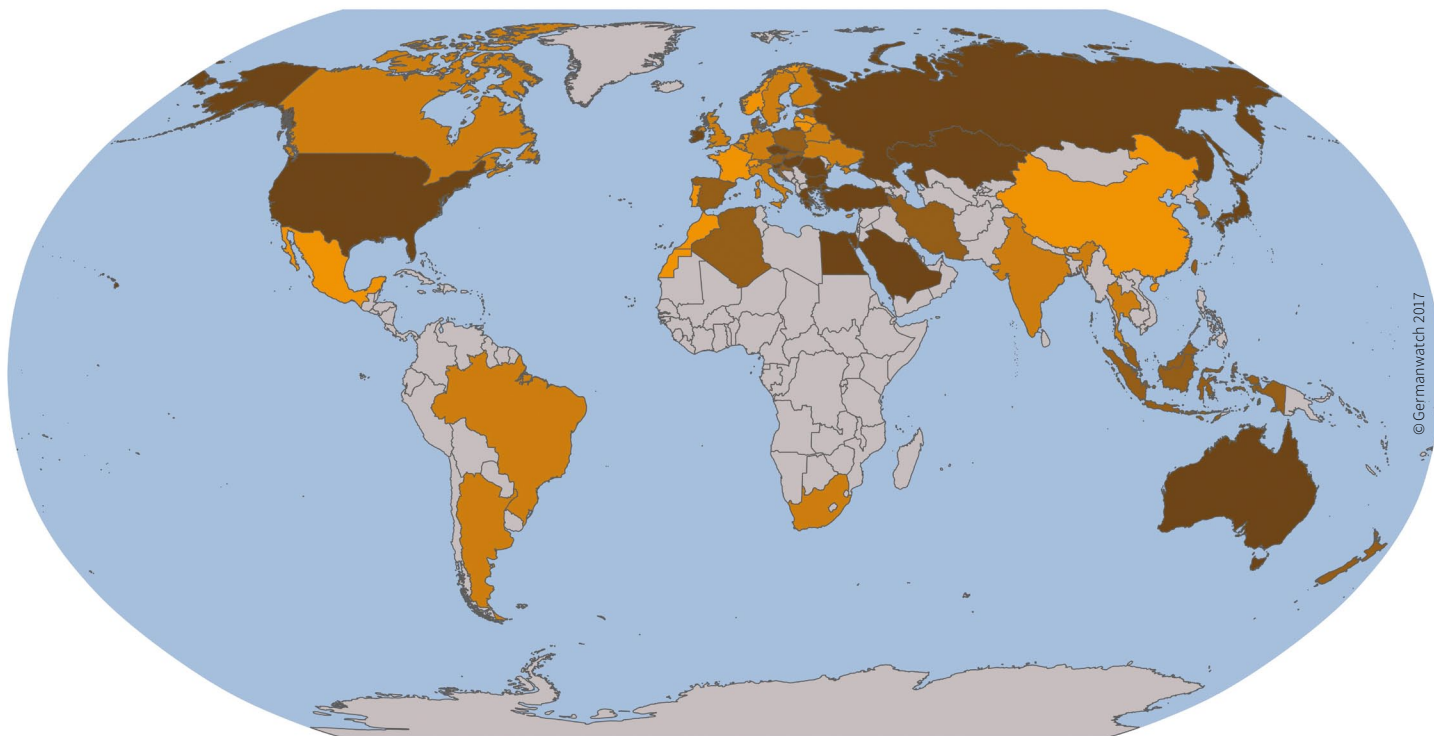
\* The ratings for all 56 countries and the EU can be found here: [www.climate-change-performance-index.org](http://www.climate-change-performance-index.org)

\*\* Total Primary Energy Supply

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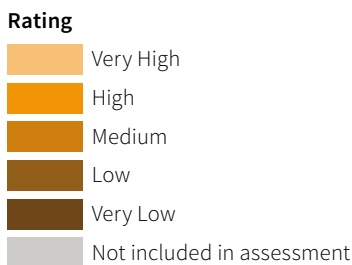
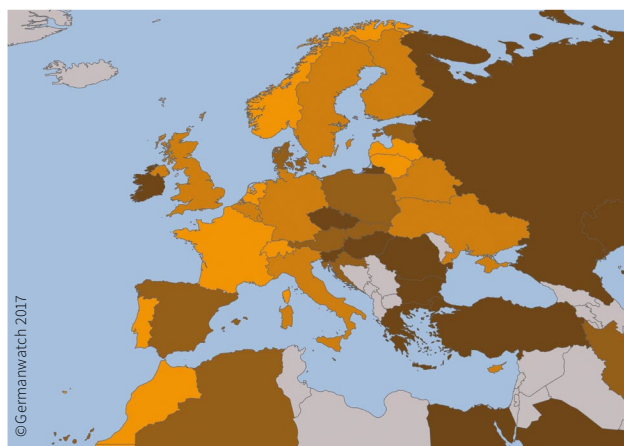
## 4.4 Partial Results – Climate Policy



With the index category “Climate Policy”, 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 energy use indicators. On top of this, the most current GHG emissions data 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 300 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.

The policy category of the CCPI is led by Morocco, China, France and Portugal who all score high regarding national and international climate policy, while Hungary, Bulgaria, the United States and Turkey form the group of the worst-performing countries not only lacking climate-friendly legislation at home, but also often hindering progress in international negotiations. It is noteworthy that many countries, including Canada, Germany, Argentina and South Africa, for example, are performing relatively well on the international stage, yet seem to be failing to deliver on sufficiently implementing policy measures at the national level.





Climate Policy – Rating Table for all Countries				
Rank	Country	Total Rating	National Climate Policy Performance	International Climate Policy Performance
4.	Morocco	high		
5.	China	high		
6.	France	high		
7.	Portugal	high		
8.	Mexico	high		
9.	Switzerland	high		
10.	Norway	high		
11.	Lithuania	high		
12.	Netherlands	high		
13.	Latvia	high		
14.	European Union (28)	high		
15.	Germany	medium		
16.	India	medium		
17.	Belarus	medium		
18.	United Kingdom	medium		
19.	Finland	medium		
20.	Luxembourg	medium		
21.	Cyprus	medium		
22.	Canada	medium		
23.	Sweden	medium		
24.	Argentina	medium		
25.	South Africa	medium		
26.	Italy	medium		
27.	Thailand	medium		
28.	Belgium	medium		
29.	Ukraine	medium		
30.	Brazil	medium		
31.	Republic of Korea	low		
32.	Austria	low		
33.	Estonia	low		
34.	Islamic Republic of Iran	low		
35.	Indonesia	low		
36.	Malta	low		
37.	Slovak Republic	low		
38.	Malaysia	low		
39.	New Zealand	low		
40.	Chinese Taipei	low		
41.	Spain	low		
42.	Poland	low		
43.	Algeria	low		
44.	Croatia	low		
45.	Denmark	low		
46.	Ireland	very low		
47.	Saudi Arabia	very low		
48.	Greece	very low		
49.	Czech Republic	very low		
50.	Egypt	very low		
51.	Slovenia	very low		
52.	Russian Federation	very low		
53.	Australia	very low		
54.	Japan	very low		
55.	Romania	very low		
56.	Kazakhstan	very low		
57.	Hungary	very low		
58.	Bulgaria	very low		
59.	United States	very low		
60.	Turkey	very low		

## 5. Country Example: Germany

To demonstrate the CCPI's methodology, every year, we describe the score of one of the 56 countries plus the EU in which interesting developments are taking place. This year Germany merits a closer look, especially because of the discrepancy between its performance in several of the indicators. Below, we describe the country's performance category by category.

Germany, the co-host country for Fiji's COP Presidency, is one of the world's top ten emitting countries in terms of absolute greenhouse gas emissions, with no reduction in its 11t/capita GHG emissions from 2009-2016. Germany has a goal of -30% by 2020 in the context of the EU and set itself relatively strict targets of -40% GHG reduction by 2020 and -55% by 2030 (base year 1990). The goal of reaching the two latter is currently in danger, as Germany only managed to reduce its emissions by about 28% by 2016. The measures that have been adopted so far will only lead to a 30-32% reduction by 2020. Germany is also still the world's biggest user of lignite coal and the traffic sector has not managed to reduce its emissions since 1990. The country has to drastically increase its efforts, if it wants to meet the 2020 and 2030 targets. This issue is one of the big questions currently being discussed in the coalition negotiations in Germany that are taking place parallel to COP 23. It remains to be seen whether Chancellor Merkel will stand by the promise she made during the election campaign to agree to the steps necessary for meeting the German climate targets.

Germany's rating in the CCPI in the last five years was always *medium*. Even with the new methodology of the CCPI, which takes into account the 2030 targets of countries, Germany did not manage to get a higher rating this year. The current CCPI evaluation shows that even the targets of the country's climate protection plan for 2050, which includes relatively strong mid- and long-term goals, are not on track to a well-below-2°C pathway.

In international climate diplomacy—in the UNFCCC as well as in the context of other bi- and multilateral processes—Germany received high grades in the policy evaluation of the CCPI. National experts give their country credit for its efforts during the past years: Germany's efforts (1) to put decarbonisation successfully on the agenda at the G7 summit in Elmau in 2015, (2) to set an example by committing to climate protection during COP 21 in Paris and COP 22 in Marrakech, for example, by presenting its long-term strategy for 2050 and (3) to create a consensus document with the US, that 19 countries will go on with a rapid

implementation of Paris during its G20 presidency this year. The same experts however give low grades when it comes to the implementation of the government's domestic policies within the last year. The high grades for international and lower grades for national performance reflect that the implementation gap was acknowledged by the government, which led to a commitment to new climate goals, but has not yet led the implementation of necessary instruments. The outcome of the coalition treaty will determine whether Germany can improve its rating next year.

In the field of renewable energy, Germany—a pioneer country for alternative energy technologies and one of the first to aim for an energy transition—still shows relatively high growth rates. National experts criticise the current government for having failed to deliver clear frameworks and specific measures to continuously promote renewables with the necessary speed, and for having failed to agree on a time schedule for phasing out coal.

Regarding energy use, Germany's aggregated performance regarding the four indicators defining this category is low. Neither the current performance, nor the country's targets for increasing efficiency and therefore reducing energy use are on track for a well-below-2°C pathway. After initiating transformation in the energy sector, efficiency has to be endorsed and transformations in the heat and the transport sectors have to be targeted.

In the currently ongoing negotiations for a new government coalition, experts see a window of opportunity for achieving progress in terms of a coal phase-out as well as for initiating important steps towards transforming the transport and other sectors. Not only civil society, but also a broad coalition of more than 50 companies from various business sectors, is demanding more ambitious mitigation targets and a stringent implementation of Germany's climate protection plan 2050, including certain sector-specific measures. It is highly relevant for the debate that an increasing number of important companies acknowledge the potential for modernisation in Germany by moving forward on climate action.

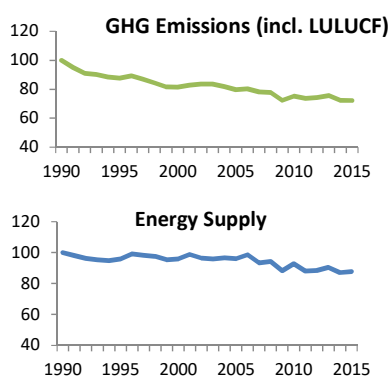
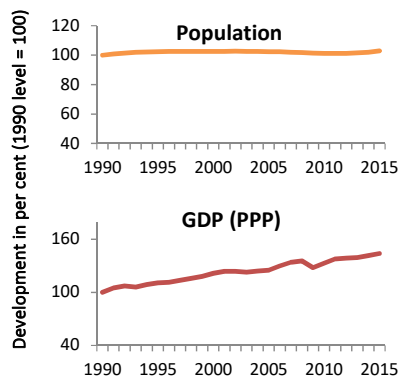
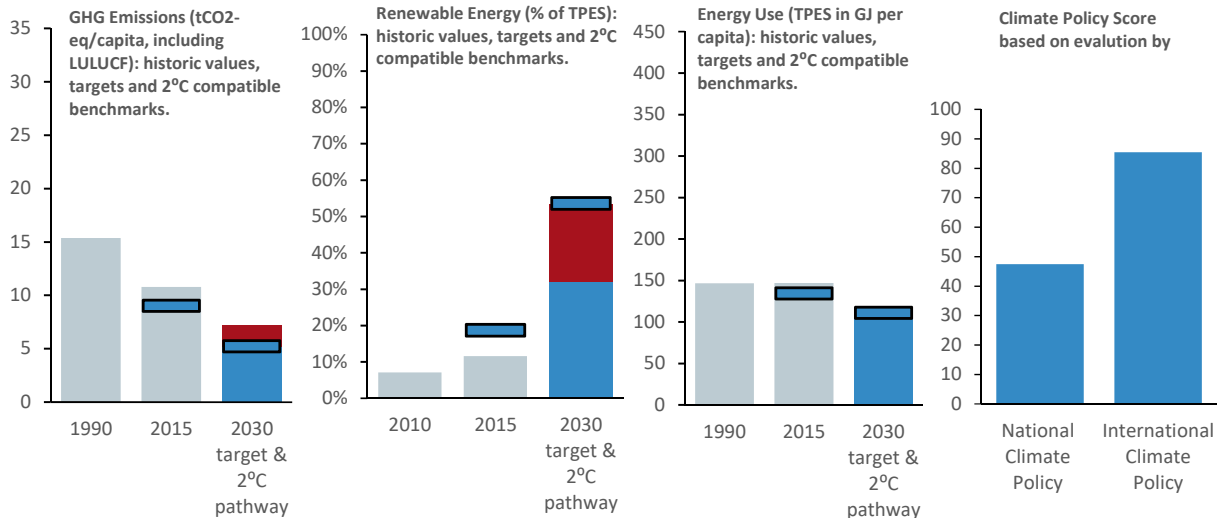
# Country Scorecard Germany

## CCPI 2018

Country Scorecard

Germany

Rank **22**



Key Indicators	2015
Population [million]	81.70
GDP per capita (PPP) [US\$]	42515.30
CO <sub>2</sub> per capita (excl. LULUCF) [t]	8.93
CO <sub>2</sub> per GDP (PPP) [t/1000US\$]*	0.20
TPES per GDP (PPP) [MJ/US\$]	3.71
CO <sub>2</sub> per TPES [t/TJ]*	56.63
Share of Renewable Energy of TPES	12.46%

GHG = Greenhouse Gases  
 TPES= total primary energy supply  
 PPP= purchasing power parity in prices of 2005  
 LULUCF = Land Use, Land Use Change and Forestry  
 Source: IEA (2017)

Indicators	Weighting	Score	Rank
GHG per Capita - current level (including LULUCF)	10%	49.32	45
GHG per Capita - current trend (excluding LULUCF)	10%	47.72	29
GHG per Capita - compared to a well-below-two-degrees benchmark	10%	52.54	40
GHG 2030 Target - compared to a well-below-two-degrees benchmark	10%	61.70	25
Share of Renewable Energy in Energy Use (TPES) - current level (including hydro)	5%	26.93	20
Renewable Energy - current trend (excl. hydro)	5%	42.36	20
Share of Renewable Energy in Energy Use (TPES) (excl. hydro) - compared to a well-below-two-degrees benchrr	5%	46.66	11
Renewable Energy 2030 Target (including hydro) - compared to a well-below-two-degrees benchmark	5%	82.99	8
Energy Use (TPES) per Capita - current level	5%	53.66	42
Energy Use (TPES) per Capita - current trend	5%	53.93	25
Energy Use (TPES) per Capita - compared to a well-below-two-degrees benchmark	5%	67.89	31
Energy Use 2030 Target - compared to a well below two-degrees-benchmark	5%	68.99	29
National Climate Policy	10%	47.39	23
International Climate Policy	10%	85.38	10

## 6. Sources and Further Reading Recommendations

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## Disclaimer on comparability to previous CCPI editions

The CCPI 2018 (for 56 selected countries and the EU) and the CCPI G20 Edition of July 2017<sup>8</sup> are the first publications based on a new methodological design. Due to the progressive change in its structure after twelve years of publication in a row, this year's edition makes it possible to get an even more detailed and relevant reflection about the countries' efforts towards climate protection after the Paris Agreement of 2015. Covering all GHG emissions<sup>9</sup> as well as now having included the 2030 targets and the 2°C compatibility of both the countries' current levels and targets in the categories GHG Emissions, Renewable Energies and Energy Use, the Climate Change Performance Index was redesigned to both be more encompassing and to meet the requirements of the new political situation after Paris. Owing to these changes, there is only limited comparability between this year's results and previous versions of the index. However, we will strive to limit future design changes to the necessary minimum to enable comparability with future editions of the index.

<sup>8</sup> G20 Edition: Climate Change Performance Index 2017: [www.germanwatch.org/en/14016](http://www.germanwatch.org/en/14016)

<sup>9</sup> All Kyoto Gases (CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, HFKW, PFKW and SF<sub>6</sub>) plus the emissions coming from Land Use, Land Use Change and Forestry (LULUCF)

## 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.

You can also help achieve the goals of Germanwatch by becoming a member or by donating to:

Bank für Sozialwirtschaft AG  
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[www.germanwatch.org](http://www.germanwatch.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.

[www.newclimate.org](http://www.newclimate.org)

## 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](http://www.climatenetwork.org)

