2022

CCPI
Climate Change
Performance Index

RESULTS

Jan Burck
Thea Uhlich
Christoph Bals
Niklas Höhne
Leonardo Nascimento

Monitoring Climate Mitigation Efforts
of 60 Countries plus the EU – covering 92%
of the Global Greenhouse Gas Emissions

CAN
CLIMATE ACTION NETWORK

GERMANWATCH

NEW CLIMATE
INSTITUTE

Imprint

Germanwatch – Bonn Office
Kaiserstr. 201
D-53113 Bonn, Germany
Ph.: +49 (0) 228 60492-0
Fax: +49 (0) 228 60492-19

Germanwatch – Berlin Office
Stresemannstr. 72
D-10963 Berlin, Germany
Ph.: +49 (0) 30 28 88 356-0
Fax: +49 (0) 30 28 88 356-1

E-mail: info@germanwatch.org
www.germanwatch.org

NewClimate Institute – Cologne Office
Waidmarkt 11a
D-50676 Cologne, Germany
Ph.: +49 (0) 221 99983300

NewClimate Institute – Berlin Office
Schönhauser Allee 10-11
D-10119 Berlin, Germany
Ph.: +49 (0) 030 208492742

CAN
Climate Action Network International
Kaiserstr. 201
D-53113 Bonn, Germany

Authors:
Jan Burck, Thea Uhlich, Christoph Bals, Niklas Höhne, Leonardo Nascimento, Ana Tamblyn, Jonas Reuther

With support of:
Pieter van Breevoort, Björk Lucas, Ritika Tewari, Joseph Dutton

Editing:
Adam Goulston, Tobias Rinn

Maps:
Made by 23°

Design:
Dietmar Putscher

Coverphoto: Shutterstock / greenaperture

November 2021

You can find this publication as well as interactive maps and tables at **www.ccpi.org**

With the support of South Pole

With financial support from the Barthel Foundation

Contents

Foreword

Informing the process of raising climate ambition

Published annually since 2005, the Climate Change Performance Index (CCPI) is an independent monitoring tool for tracking the climate protection performance of 60 countries and the EU. Every year, the CCPI sets off important public and political debates within the countries assessed. The CCPI aims to enhance transparency in international climate politics and enables comparison of climate protection efforts and progress made by individual countries. The climate protection performance of those countries, which together account for 92% of global greenhouse gas (GHG) emissions, is assessed in four categories: GHG Emissions, Renewable Energy, Energy Use and Climate Policy.

The countries' commitments under the Paris Agreement are still insufficient: to limit global warming to a maximum of 1.5°C a more ambitious climate action is urgently needed. In this context, the CCPI has gained further relevance as a long-standing and reliable tool to identify leaders and laggards in climate protection.

The impact of the CCPI as a climate protection monitoring and communication tool also depends on whether and how the index is used by different actors. We are glad to see that the CCPI is increasingly used by financial actors to rate sovereign bonds. Given the key role of the financial market in determining whether investments are made in high-emission or low-emission infrastructures and technology developments for shifting the trillions. Therefore, the CCPI is an important tool to promote the reallocation of investments by providing crucial information on climate change for Environmental, Social and Governance (ESG) ratings for finance actors.

Jan Burck
(Germanwatch)

Thea Uhlich
(Germanwatch)

Christoph Bals
(Germanwatch)

Niklas Höhne
(NewClimate Institute)

Leonardo Nascimento
(NewClimate Institute)

Tasneem Essop
(Climate Action Network International)

Authors and acknowledgements

The Index is published by Germanwatch, NewClimate Institute and the Climate Action Network. The CCPI's unique climate policy section, evaluating countries' national and international climate policy performance, is only possible through the continued support and contributions of around 450 climate and energy experts. We express our gratitude to these experts and greatly appreciate their time, efforts and knowledge in contributing to this publication.*

* A full list of contributors to the climate policy evaluation can be found in the Annex of this publication.

1. Hope for Change

How civil society, litigation, and new business models can accelerate the transformation

The year 2021 has been a busy one for climate diplomacy. Several high-level international events have taken place, enhanced Nationally Determined Contributions (NDCs) submitted, agreements made, new scientific reports released.

With newly elected US president Joe Biden, the US stepped back onto the climate stage and re-joined the Paris Agreement. In April, Biden hosted the virtual Leaders Summit on Climate, inviting 40 world leaders to discuss increasing climate ambition and finance. In this context, the US-government submitted a new NDC and announced a 50–52% emissions reduction by 2030 (compared with 2005) and an increase in US-climate finance to $5.7 billion per year by 2024 (at the UN Assembly in September, Biden doubled this to $11.4 billion). The finance gap to reach the promised $100 billion of international climate finance per year from the industrialised states thereby decreased, but it is still not closed.

Further important climate events include the Petersberg Climate Dialogue in May (where Germany introduced its new reduction target, forced by a court ruling), virtual UN negotiations in June, the first V20 Climate Vulnerables Finance Summit, the G20 Ministerial Meeting on Environment, Climate and Energy in July (where all G20 members agreed to keep 1.5°C in reach), and the UN Assembly in September (where Turkey finally ratified the Paris Agreement and China announced its exit from coal financing abroad).

As part of the Paris Agreement, states are urged to submit new updated targets to close the gap between NDCs agreed to in Paris and the 1.5°C, or at least well-below-2°C, limit, focusing on the 2030 targets. At the end of October 2021, 114 countries and the EU had submitted their new NDCs, covering nearly 61% of global emissions.[1] The Climate Action Tracker (CAT) analysed the new targets of 36 countries and concluded that 18 countries and the EU submitted stronger targets (including Argentina, Canada, Japan, Morocco, Norway, and the United Kingdom), while nine countries had not increased their ambition (including Australia, Brazil, Mexico, Russia, and Switzerland). Furthermore, China, South Korea, and Nigeria announced stronger NDC targets, while India's government is expected to announce a new NDC at COP26 in Glasgow. The NDC Synthesis Report published by UN Climate Change at the end of September concluded that the updated NDCs are an important step for combating climate change, but there is still a wide ambition gap in the way of sufficient reduction of GHG emissions.[2] The most recent addition of the NDC Synthesis Report confirms the ambition gap and the need, especially for the G20 countries, to raise their targets.[3]

Worldwide, states are committing to reach net zero by mid-century. If these targets are well-designed, backed by short-term targets and transparent measurements, they can serve as a powerful mechanism to keep 1.5°C in reach. Without implementation strategies, however, the targets are nothing more than greenwashing (also see the net zero article in this brochure). Consequently, this movement must be monitored critically, because even if implementation occurs, there are several loopholes. Particularly, the 'net' aspect has a scope of interpretation. Some countries actively refer to technologies such as Carbon Capture and Storage (CCS) or other carbon sequestration strategies that will play a certain role in fields where zero emissions are impossible, and this must be treated with caution. Even the emphasis on natural sinks such as forests should not be overstressed. As important as forest strategies are, there are spatial limitations, human rights concerns and increasing uncertainty on which part of forests can serve as carbon sinks in a global warming world. The priority to reach net zero should, wherever politically better, be the actual reduction of emissions.

The political developments are alongside the increasingly dramatic climate change impacts visible globally this year. China, India, Russia, parts of the US, and Canada faced remarkable heatwaves and drought, with forest fires in California and Greece as well as a dramatic famine in Madagascar. In Germany, heavy rain and floods led to one of the largest-scale natural disasters in decades. This year saw the warmest July since weather record-keeping began in 1880.[4] Before this backdrop, the Intergovernmental Panel on Climate Change (IPCC) published the first part of its Sixth Assessment Report in August. The report states that global emissions must be halved by 2030 (compared with 2010) to keep global warming within the 1.5°C reach.[5] Based on a new scenario introduced in May, the International Energy Agency (IEA) released its World Energy Outlook in October, underscoring the importance of renewable energy sources for global energy supply, the need for dramatically faster expansion of renewables and energy efficiency worldwide, and no new investments in fossil fuels, especially exploration of new sources.[6]

Positive developments can trigger an upward spiral for a sustainable and just transition

By now, it is evident that the Paris Agreement can increasingly coordinate the expectations of different stakeholders relevant for increasing dynamics. We therefore, globally in

different fields, see positive activities that might jointly be able to trigger an upward spiral towards a sustainable and just world. Regarding climate action, governments worldwide are confronted with a series of pressure points, executed by different actors.

First, we see the **financial market** increasingly uses the Paris Agreement and 1.5°C as key criteria for investments. Increasing numbers of regulators and financial market actors see the need to overcome the 'tragedy of the horizon'[7] and prevent huge amounts of (fossil) stranded investments. In different parts of the world, future-oriented disclosure and sustainability taxonomies are being introduced as an important step to shift the finance streams to support the Paris Agreement's goals. Combined with the right framework for a real economy, the financial market is a key leverage factor in the race to zero. There is no lack of money, but it must be used in the right way.

We also see the voices and influences of **civil society** rising. The promises, as well as the 1.5°C limit of the Paris Agreement, are the foundations of most of these demands. The worldwide movement of Fridays for Future is just one example. Globally, voices from civil society, especially from frontline communities and Indigenous people, are rising and fighting for climate justice. They are protesting loudly and effectively against governments that are not doing enough to prevent dangerous climate change, which threatens the living environment. A recent example is the Fossil Fuel Non-Proliferation Treaty Initiative, which more than 800 organisations, 16 cities and sub-national governments, and nearly 130,000 individuals support.[8] The initiative demands non-proliferation of gas, oil, and coal by ending all new exploration and phasing out all production.

The Paris Agreement is also a strong starting point for a global wave of **litigation cases** against governments and companies, advanced, for example, by towns, affected people, civil society, and youth organisations. Notable judgements are based on the Paris Agreement. The Federal Constitutional Court obligated the German government, challenged by youth and civil society, to adopt a new definition of freedom, taking the freedom of future generations into account. A first consequence was the robust improvement of the Federal Climate Protection Act from 2019. The German government announced new targets of a 65% reduction in GHG emissions by 2030 (compared with 1990), 88% by 2040, and climate neutrality as early as 2045. Another important example is this past summer's Shell Court Rule in the Netherlands, in which 17,000 Dutch citizens filed proceedings against the oil company. Consequently, Shell must – based on the Paris 1.5°C limit – cut its CO_2 emissions to 45% by 2030 (compared with 2019). The Climate Change Litigation Database (https://www.climatecasechart.com) lists 1,433 cases in the US and 481 in other countries. Apart from the US and from European countries such as Turkey, Portugal, and Ukraine, there are court cases from Chile, Brazil, Colombia, and many other places.

Emerging climate litigation processes are a good example of how individual actions can lead to global transformation, change narratives, and create reference points for other developments.

New business models apply, and they are pushing economic action

Increasing numbers of businesses are developing their business cases in line with GHG neutrality achieved no later than 2050. Increasingly, finance market actors are also asking them to consider, in addition to a stress test, how they can reach GHG neutrality by 2035. A deep transformation requires the engagement of businesses, companies, and industries to reach carbon neutrality by mid-century. Initiatives such as the Race to Zero Campaign launched by the UNFCCC has, among other things, the support of more than 3,000 businesses and 120 countries committed to net zero targets.[9] For high-emitting producers, such as the chemical and cement industries, it is more difficult to switch to climate-compatible alternatives. Such industries need to develop new technologies and business models to balance their activities with climate mitigation. Stable and affordable price development of renewables in the past years, and growing energy efficiency, are what support this transformation. Inventions and innovations by frontrunners can be affordable and provide important motivation for other players in this sector. Net zero-oriented business models and technologies can potentially create economic value and reduce costs as well as risks.

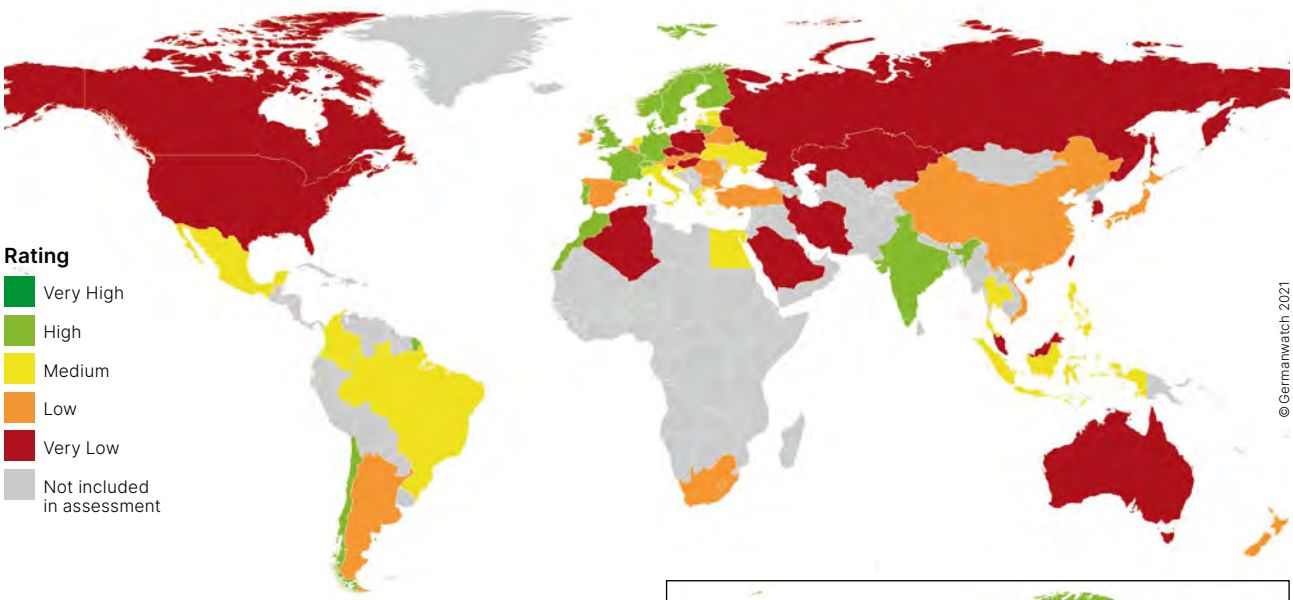
All this can only lead to a 1.5°C world if it is the starting phase of exponential development

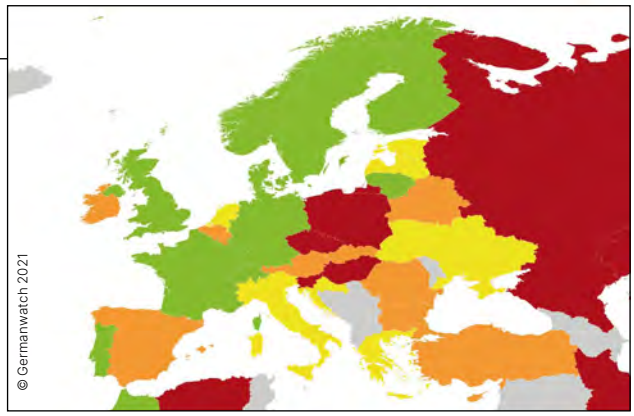
Although there are several positive developments that vitalise themselves and create more political space, far from all signs are pointing towards change. The world energy supply still heavily depends on coal, oil, and gas. There are powerful actors in different countries blocking sustainable and just transformation, and the current financial commitments are insufficient for supporting countries of the Global South.

This is the decade of implementation. Only if the emissions are halved by 2030 there is a chance to keep 1.5°C within reach. Every 0.1°C increases the probability of irretrievable climate tipping points with runaway tendencies and far more dangerous climate change.

We are now at a crossroads with little time left for decision-making, and of extreme relevance for the future of humankind and nature.

2. Overall Results CCPI 2022





Still no countries are ranked in the top three overall positions

Key results:

The world map shows the aggregated results and overall performance for the evaluated countries. The table shows the overall ranking and indicates how the countries perform in the four index categories.

- No country performs well enough in all index categories to achieve an overall *very high* rating in the CCPI. Therefore, once again, the top three places in the overall ranking remain empty.
- Denmark is the highest ranked country in CCPI 2022, but it does not perform well enough to achieve an overall *very high* rating.

G20 performance:

- With the United Kingdom (7th), India (10th), Germany (13th), and France (17th), four G20 countries are among the *high*-performing countries in CCPI 2022. Eleven countries receive a *low* or *very low* overall rating; the G20 are responsible for about 75% of the world's greenhouse gas emissions.
- Saudi Arabia is the worst-performing country among the G20, ranked 63rd.

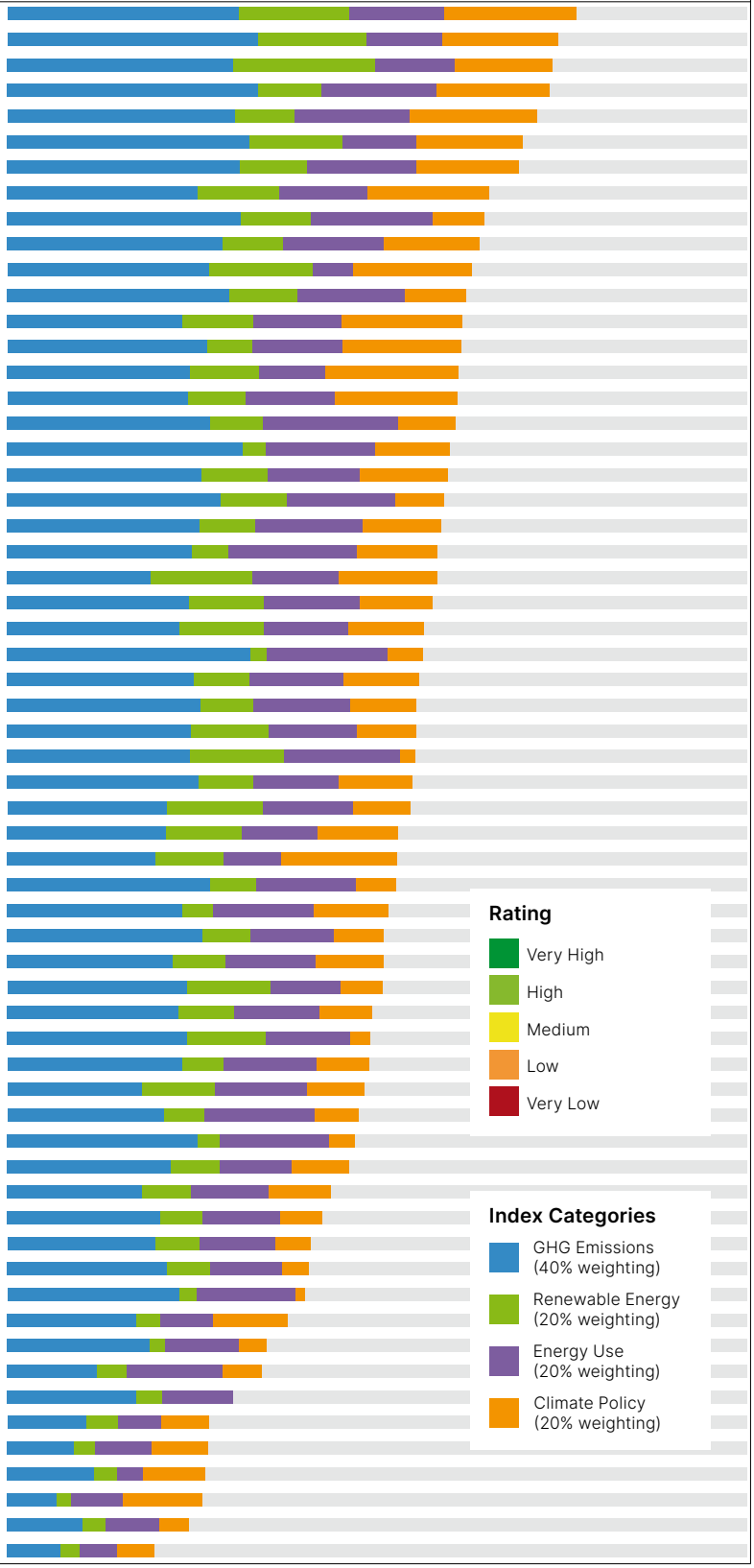
EU performance:

- Overall, the EU drops six places from last year, to now rank 22nd, and no longer is among the *high* performers. Notably, because of the CCPI indicators, the EU and its 27 member states are responsible for the EU's outcome.
- Denmark and Sweden are the best-performing EU-countries, at a respective 4th and 5th. A further five countries are *high* performers.
- Up 10 ranks, the Netherlands is one of the most improved countries since last year's CCPI, though still performing at a *medium* level.
- Slovenia, Czech Republic, Poland, and Hungary are among the worst-performing countries, each receiving a *very low* rating.

The following sections look into the results for the index categories: GHG Emissions (2.1), Renewable Energy (2.2), Energy Use (2.3), and Climate Policy (2.4).

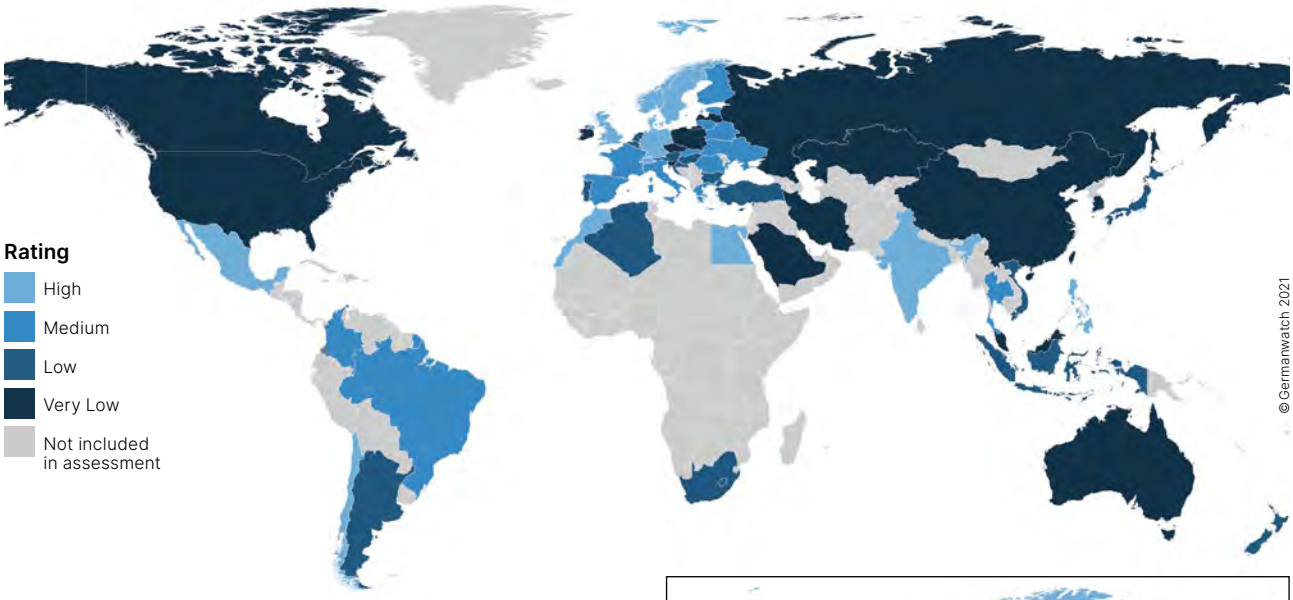
Climate Change Performance Index 2022 – Rating table

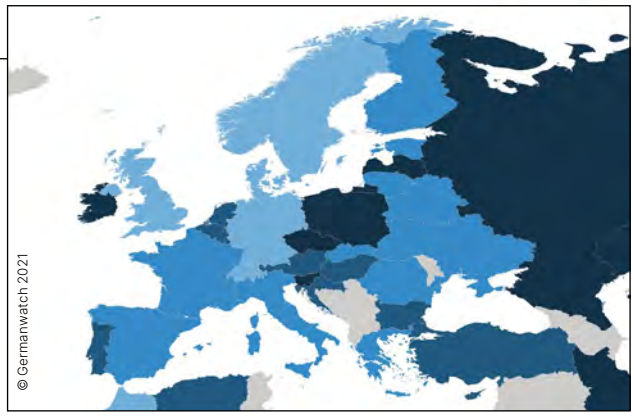
Rank	Rank change	Country	Score**
1.*	–	–	–
2.	–	–	–
3.	–	–	–
4.	2 ▲	Denmark	76.92
5.	-1 ▼	Sweden	74.46
6.	2 ▲	Norway	73.62
7.	-2 ▼	United Kingdom	73.29
8.	-1 ▼	Morocco	71.64
9.	0 –	Chile	69.66
10.	0 –	India	69.22
11.	4 ▲	Lithuania	65.06
12.	0 –	Malta	64.39
13.	6 ▲	Germany	63.82
14.	-3 ▼	Finland	62.74
15.	-1 ▼	Switzerland	61.98
16.	1 ▲	Portugal	61.45
17.	6 ▲	France	61.33
18.	3 ▲	Luxembourg	61.03
19.	10 ▲	Netherlands	60.81
20.	0 –	Ukraine	60.52
21.	1 ▲	Egypt	59.83
22.	-6 ▼	European Union (27)	59.53
23.	new	Philippines	58.98
24.	10 ▲	Greece	58.55
25.	new	Colombia	58.11
26.	-13 ▼	Latvia	58.06
27.	-3 ▼	Indonesia	57.39
28.	-10 ▼	Croatia	56.26
29.	3 ▲	Mexico	56.19
30.	-3 ▼	Italy	55.70
31.	-5 ▼	Thailand	55.28
32.	6 ▲	Estonia	55.25
33.	-8 ▼	Brazil	55.17
34.	7 ▲	Spain	54.71
35.	-7 ▼	New Zealand	54.49
36.	-1 ▼	Austria	52.80
37.	-4 ▼	China	52.66
38.	-8 ▼	Romania	52.59
39.	-2 ▼	South Africa	51.56
40.	-9 ▼	Slovak Republic	50.90
41.	8 ▲	Cyprus	50.89
42.	0 –	Turkey	50.75
43.	new	Viet Nam	49.35
44.	0 –	Bulgaria	49.02
45.	0 –	Japan	48.94
46.	-7 ▼	Ireland	48.29
47.	-1 ▼	Argentina	47.50
48.	-12 ▼	Belarus	46.91
49.	-9 ▼	Belgium	46.27
50.	1 ▲	Slovenia	43.73
51.	-4 ▼	Czech Republic	42.53
52.	-4 ▼	Poland	41.01
53.	-3 ▼	Hungary	40.71
54.	-11 ▼	Algeria	40.24
55.	6 ▲	United States	37.90
56.	-4 ▼	Russian Federation	35.00
57.	-1 ▼	Malaysia	34.37
58.	-4 ▼	Australia	30.41
59.	-6 ▼	Korea	27.28
60.	-3 ▼	Chinese Taipei	27.11
61.	-3 ▼	Canada	26.73
62.	-3 ▼	Islamic Republic of Iran	26.35
63.	-3 ▼	Saudi Arabia	24.45
64.	-9 ▼	Kazakhstan	19.81



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

2.1 Category Results – GHG* Emissions





A strong COVID-19 rebound effect is seen for GHG emissions

Key developments:

The COVID-19 pandemic triggered a sharp, globally unrepresented 5.4% drop in CO_2 emissions. A strong rebound effect of greenhouse gas (GHG) emissions has, however, been expected for 2021. The International Energy Agency estimated, for the period of January–July 2021, CO_2 emissions would rise 4.8%. CO_2 emissions in 2021 will in fact near the record high from 2019 (UNEP and IEA).[10,11] For a 1.5°C world, it would have been necessary for emissions to fall at their 2020 rate.

Nevertheless, the CCPI 2022 results for GHG Emissions still do not reflect the pandemic's influence; as mentioned, comparable data are only available up to 2019.

Key results:

The table on the right provides details on the performance of all countries listed in the CCPI in the four indicators comprising the GHG Emissions category.

- Among the newly included countries in this year's CCPI, only the Philippines performs *high* in this category; Colombia rates *medium*, and due to a *very low* rating in the current trend indicator, Viet Nam receives a *low*.

G20 performance:

- Still, no country rates *very high* in the GHG Emissions category, but with the United Kingdom, Mexico, India, and Germany, two more G20 countries than in last year's edition receive an overall *high* rating.
- Seven G20 countries receive a *very low* rating for their performance, including the Russian Federation, Australia, the United States, and Canada. All other G20 countries generally are equally divided into *medium* and *low* ratings.
- Like last year, Saudi Arabia remains the worst-performing G20 country in this category.

EU performance:

- As it did last year, the EU rates *medium* for its overall performance and in all indicators in the GHG Emissions category.
- The best performing EU country is Sweden at 5th, though Malta, Denmark, and Germany are rated *high* in this category.
- Among the EU countries that received a *very low* for their performance are Czech Republic, Poland, Ireland, and Slovenia.

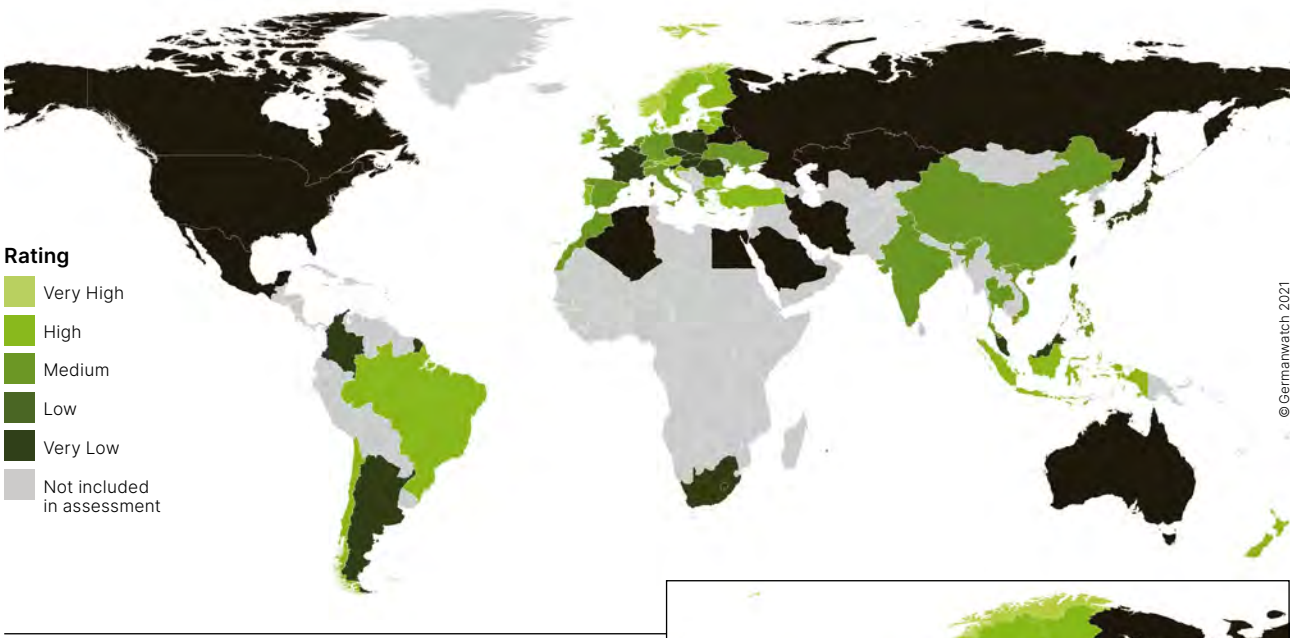
* Greenhouse Gas Emissions

Greenhouse Gas Emissions – Rating table

Rank	Country	Score*	Overall Rating	GHG per Capita – current level (including LULUCF)**	GHG per Capita – current trend (excluding LULUCF)**	GHG per Capita – compared to a well-below-2°C benchmark	GHG 2030 Target – compared to a well-below-2°C benchmark
4.	United Kingdom	33.93	High	Medium	High	High	Very high
5.	Sweden	33.84	High	Very high	High	High	Medium
6.	Mexico	32.85	High	High	Medium	High	High
7.	Chile	32.69	High	High	Very Low	Very high	Very high
8.	Egypt	31.79	High	High	Low	High	Very high
9.	Malta	31.56	High	High	Very high	Medium	Low
10.	India	31.42	High	Very high	Very Low	Very high	Very high
11.	Denmark	31.22	High	Low	High	Medium	Very high
12.	Morocco	30.71	High	High	Very Low	Very high	Very high
13.	Norway	30.50	High	Medium	High	Medium	High
14.	Switzerland	30.03	High	High	High	Medium	Medium
15.	Germany	29.12	High	Low	High	Medium	High
16.	Philippines	28.80	High	Very high	Very Low	Very high	Very high
17.	Ukraine	27.38	Medium	Medium	Medium	High	Medium
18.	Romania	27.37	Medium	High	Low	High	Medium
19.	Finland	27.21	Medium	Medium	High	Medium	Low
20.	France	26.97	Medium	Medium	Medium	Medium	Medium
21.	Slovak Republic	26.40	Medium	Medium	Low	High	Medium
22.	European Union (27)	26.21	Medium	Medium	Medium	Medium	Medium
23.	Thailand	26.15	Medium	Medium	Medium	Medium	Low
24.	Greece	25.96	Medium	Medium	High	Low	Low
25.	Spain	25.88	Medium	Medium	Medium	Low	Low
26.	Belarus	25.75	Medium	Medium	Low	Medium	Medium
27.	Lithuania	25.70	Medium	High	Very Low	High	Medium
28.	Italy	25.20	Medium	Medium	Medium	Medium	Low
29.	Colombia	24.92	Medium	High	Low	Medium	Low
30.	Estonia	24.79	Medium	Very Low	High	Medium	Low
31.	Brazil	24.69	Medium	Medium	High	Low	Very Low
32.	Luxembourg	24.66	Low	Very Low	High	High	Medium
33.	Indonesia	24.56	Low	Medium	Very Low	Medium	Medium
34.	Netherlands	24.37	Low	Low	Medium	Low	Medium
35.	Bulgaria	24.27	Low	Medium	Medium	Medium	Low
36.	Turkey	24.23	Low	High	Low	High	Very Low
37.	Portugal	23.66	Low	High	Low	Low	Low
38.	South Africa	23.62	Low	Low	High	Very Low	Low
39.	Japan	23.58	Low	Low	High	Very Low	Low
40.	Croatia	23.28	Low	High	Low	Medium	Low
41.	Algeria	23.18	Low	Medium	Low	Low	Low
42.	Viet Nam	23.15	Low	High	Very Low	High	Low
43.	Cyprus	22.31	Low	Medium	Low	Low	Low
44.	Belgium	22.08	Low	Low	Medium	Low	Low
45.	Hungary	21.55	Low	Medium	Very Low	Medium	Low
46.	New Zealand	21.51	Low	Very Low	High	Very Low	Low
47.	Austria	21.44	Low	Low	Medium	Low	Low
48.	Argentina	21.10	Low	Low	Medium	Very Low	Low
49.	Czech Republic	20.66	Very Low	Very Low	Medium	Low	Low
50.	China	20.03	Very Low	Low	Low	Low	Very Low
51.	Poland	19.94	Very Low	Low	Low	Low	Low
52.	Latvia	19.33	Very Low	High	Very Low	Low	Very Low
53.	Russian Federation	19.26	Very Low	Very Low	Low	Medium	Very Low
54.	Slovenia	18.16	Very Low	Low	Low	Very Low	Very Low
55.	Ireland	18.15	Very Low	Very Low	Medium	Very Low	Very Low
56.	Australia	17.45	Very Low	Very Low	Medium	Medium	Low
57.	United States	17.41	Very Low	Very Low	Medium	Very Low	Low
58.	Malaysia	12.08	Very Low	Very Low	Low	Very Low	Very Low
59.	Canada	11.71	Very Low	Very Low	Medium	Very Low	Very Low
60.	Korea	10.63	Very Low	Very Low	Low	Very Low	Very Low
61.	Saudi Arabia	10.19	Very Low	Very Low	High	Very Low	Very Low
62.	Chinese Taipei	9.01	Very Low	Very Low	Low	Very Low	Very Low
63.	Kazakhstan	7.18	Very Low	Very Low	Low	Very Low	Very Low
64.	Islamic Republic of Iran	6.70	Very Low	Very Low	Very Low	Very Low	Very Low

* weighted and rounded ** Land Use, Land-Use Change and Forestry

2.2 Category Results – Renewable Energy



Renewable energy is expanding, despite worldwide economic decline

Key developments:

Renewable energy capacity continues to growth at a record pace, despite the effects of the COVID-19 pandemic. In 2020, 260 GW of renewable energy capacity was installed globally, which accounted for 81% of the total electricity capacity added.[12] In most of the world, wind and solar power were also the cheapest sources of new electricity generation in.[13] Even the cheapest climate-damaging coal-fired power plants are increasingly more expensive than solar and wind power.

Key results:

The table gives details on the performance of all countries listed in the CCPI in the four indicators comprising the Renewable Energy category.

As the energy sector greatly contributes to a country's greenhouse gas emissions, the results of the Renewable Energy rating indicate substantial room for improvement in mitigating emissions by accelerating deployment of renewable energy.

- Norway is the first country, receiving a *very high* rating in this category.

G20-performance:

- The majority of G20 countries rank *low* or *very low*, with Mexico and the Russian Federation as the worst performers among them.
- India joins Brazil, Indonesia, and Turkey as the only G20 countries rating *high* in the Renewable Energy category. The United Kingdom's performance however falls from *high* to *medium*.

EU performance:

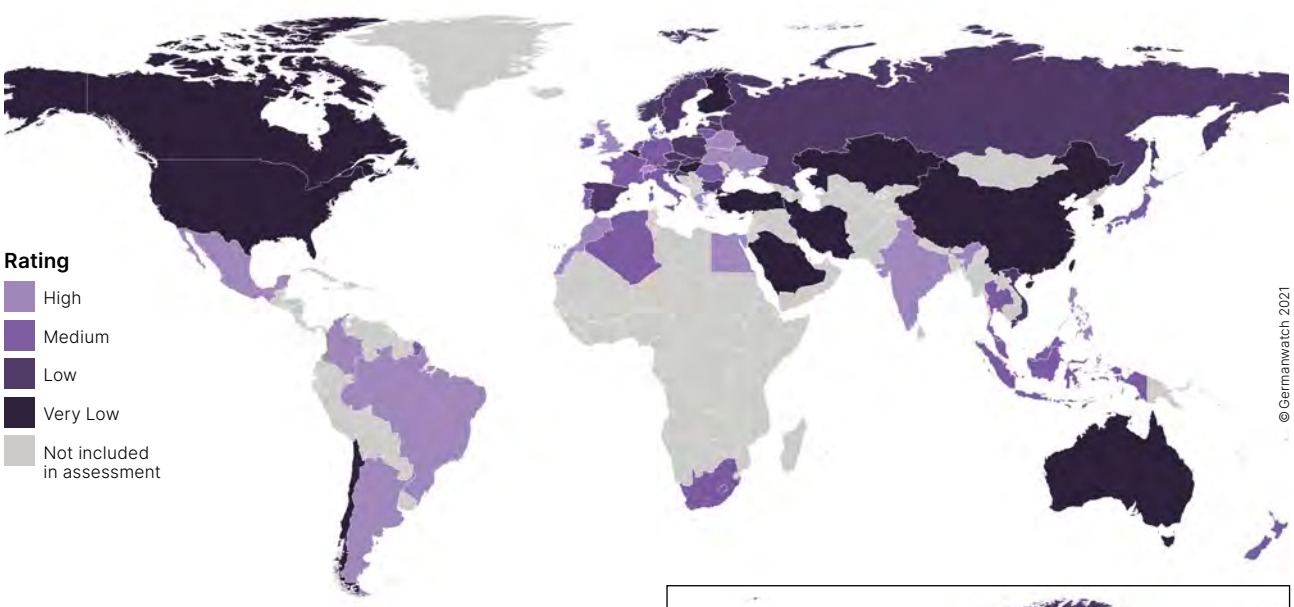
- The EU's performance in the Renewable Energy category shows no improvements from last year's CCPI, as it rates *medium*.
- With Denmark, Sweden, Finland, Latvia, Croatia, and Turkey, six countries are under the top 10 performers in the Renewable Energy category – another four EU countries rate *high*.
- Like last year, no EU country performs *very low*. Czech Republic, Poland and France remain the worst-performing EU countries in this category.

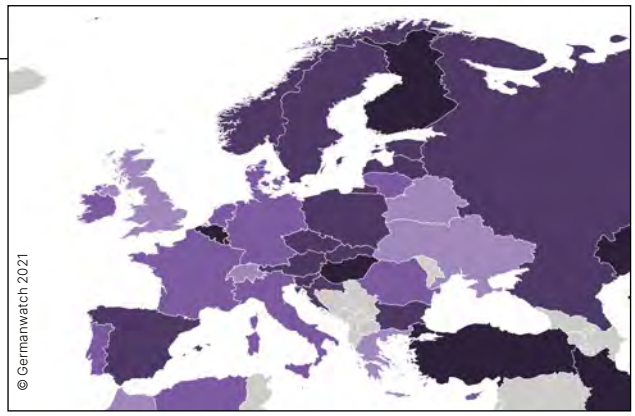
Renewable Energy (RE) – Rating table

Rank	Country	Score*	Overall Rating	Share of RE in Energy Use (TPES)** – current level (incl. hydro)	RE current trend (excl. hydro)	Share of RE in Energy Use (TPES) (incl. hydro) – compared to a well-below-2°C benchmark	RE 2030 Target (incl. hydro) – compared to a well-below-2°C benchmark
3.	Norway	19.21	Very High	Very high	Very high	Very High	High
4.	Denmark	14.93	High	High	High	High	Medium
5.	Sweden	14.72	High	Very high	Medium	High	High
6.	Finland	14.04	High	High	Medium	High	Medium
7.	Latvia	13.79	High	High	High	High	Medium
8.	New Zealand	13.05	High	Very high	Low	High	Medium
9.	Brazil	12.70	High	Very high	Low	Medium	Medium
10.	Chile	12.62	High	High	High	High	Medium
11.	Croatia	11.32	High	Medium	Very high	Low	Medium
12.	Turkey	11.30	High	Medium	Very high	Medium	Low
13.	Lithuania	10.95	High	Medium	High	Medium	Medium
14.	Bulgaria	10.63	High	Low	Very high	Low	Medium
15.	Estonia	10.53	High	Medium	High	Medium	Medium
16.	Austria	10.17	High	High	Very Low	Medium	Medium
17.	Indonesia	10.08	High	Medium	High	Medium	Low
18.	Ireland	9.85	High	Medium	High	Medium	Medium
19.	Portugal	9.54	High	High	Low	Low	Medium
20.	Malta	9.38	Medium	Low	Very high	Very Low	Low
21.	Luxembourg	9.34	Medium	Low	High	Low	Low
22.	Switzerland	9.20	Medium	High	High	Medium	Low
23.	China	9.17	Medium	Low	Very high	Very Low	Low
24.	India	9.10	Medium	Medium	High	Low	Medium
25.	Philippines	9.00	Medium	High	Low	Very Low	Medium
26.	European Union (27)	8.98	Medium	Medium	Medium	Low	Medium
27.	United Kingdom	8.48	Medium	Medium	High	Medium	Very Low
28.	Germany	8.13	Medium	Medium	Medium	Medium	Low
29.	Morocco	8.05	Medium	Very Low	Very high	Very Low	Low
30.	Netherlands	7.79	Medium	Low	High	Very Low	Low
31.	Greece	7.52	Medium	Medium	Medium	Low	Medium
32.	Viet Nam	7.48	Medium	Medium	High	Low	Low
33.	Italy	7.43	Medium	Medium	Low	Medium	Low
34.	Spain	7.30	Medium	Medium	Low	Low	Medium
35.	Cyprus	7.20	Medium	Low	High	Very Low	Low
36.	Ukraine	7.13	Medium	Very Low	High	Very Low	Low
37.	Thailand	7.05	Medium	High	Low	Low	Very Low
38.	Slovenia	6.68	Low	Medium	Medium	Very Low	Low
39.	Belgium	6.60	Low	Low	Medium	Very Low	Low
40.	Slovak Republic	6.48	Low	Low	Low	Very Low	Medium
41.	Romania	6.30	Low	Low	Low	Very Low	Medium
42.	France	6.18	Low	Low	High	Very Low	Low
43.	Poland	5.98	Low	Low	Low	Very Low	Low
44.	Hungary	5.84	Low	Low	Medium	Very Low	Low
45.	Japan	5.69	Low	Low	High	Very Low	Very Low
46.	Czech Republic	5.66	Low	Low	Low	Very Low	Low
47.	Argentina	5.49	Low	Low	High	Very Low	Very Low
48.	Colombia	4.92	Low	Medium	Very Low	Very Low	Low
49.	Korea	4.31	Low	Very Low	High	Very Low	Very Low
50.	South Africa	4.19	Low	Very Low	Medium	Very Low	Very Low
51.	Malaysia	4.04	Low	Very Low	High	Very Low	Very Low
52.	Australia	3.49	Very Low	Low	High	Very Low	Very Low
53.	United States	3.20	Very Low	Low	Medium	Very Low	Very Low
54.	Canada	3.12	Very Low	Medium	Very Low	Very Low	Very Low
55.	Saudi Arabia	3.09	Very Low	Very Low	Medium	Very Low	Very Low
56.	Egypt	3.07	Very Low	Low	Low	Very Low	Very Low
57.	Belarus	2.92	Very Low	Low	Medium	Very Low	Very Low
58.	Chinese Taipei	2.79	Very Low	Very Low	Medium	Very Low	Very Low
59.	Kazakhstan	2.54	Very Low	Very Low	Medium	Very Low	Very Low
60.	Algeria	2.43	Very Low	Very Low	Medium	Very Low	Very Low
61.	Mexico	2.21	Very Low	Low	Medium	Very Low	Very Low
62.	Russian Federation	1.95	Very Low	Very Low	Low	Very Low	Very Low
63.	Islamic Republic of Iran	1.90	Very Low	Very Low	Medium	Very Low	Very Low

* weighted and rounded ** Total Primary Energy Supply

2.3 Category Results – Energy Use*





Energy consumption continues to rise

Key developments:

Last year's Energy Efficiency Report from the IEA showed that primary energy consumption was on the rise in 2019, and many countries were falling short of their own targets.[14] Despite the COVID-19 pandemic and a subsequent 1.9% drop in final energy consumption, the EU overshot its energy consumption target for 2020 and is thus still not on track to meet its 2030 pledge.[15]

Key results:

The table provides details on the performance of all countries listed in the CCPI in the four indicators comprising the Energy Use category.

G20-performance:

- Of the G20 members, seven perform *very low* in the Energy Use category, with Canada last among them; Nearly all G20 countries show worse performance than in last year's CCPI.
- Mexico, Brazil, United Kingdom, Argentina, and India receive a *high* rating.

EU performance:

- As in previous years, the EU rates *medium* for its performance in the Energy Use category.
- Malta and Greece are the only two EU countries that rank *high*; while Belgium, Luxembourg, and Finland perform *very low* in this category.

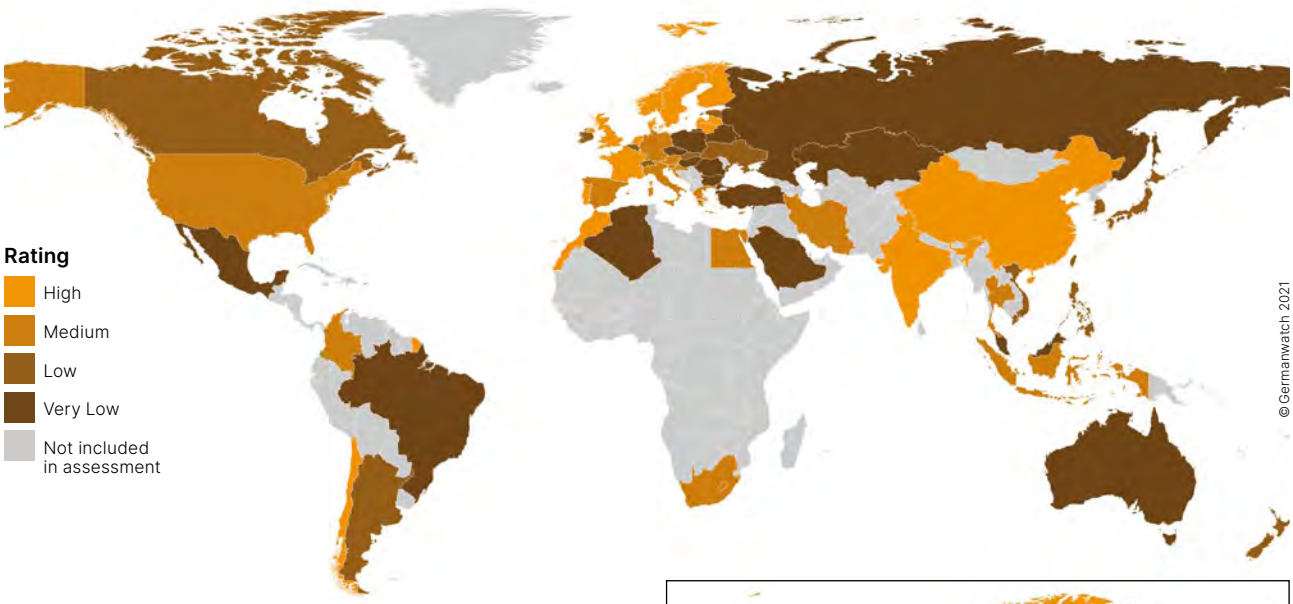
* Increases in energy efficiency, strictly speaking, are complex to measure and would require a sector-by-sector approach. As there are no comparable data sources across all countries available, the CCPI evaluates the per capita energy use of a country to measure improvements in this category.

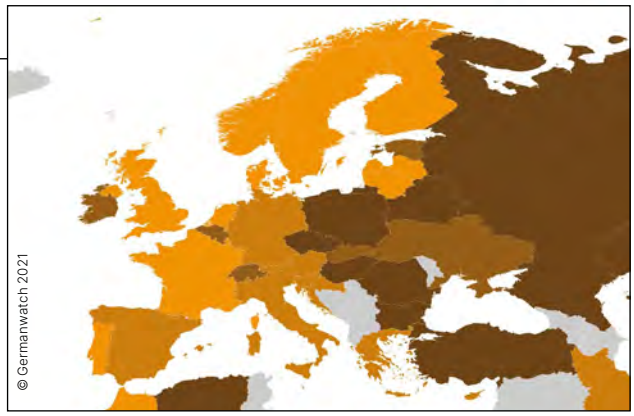
Energy Use – Rating table

Rank	Country	Score*	Overall Rating	Energy Use (TPES)** per Capita – current level	Energy Use (TPES) per Capita – current trend	Energy Use (TPES) per Capita – compared to a well-below-2°C benchmark	Energy Use 2030 Target – compared to a well-below-2°C benchmark
4.	Ukraine	18.33	High	High	High	Very high	Very high
5.	Colombia	17.38	High	Very high	Medium	Very high	High
6.	Malta	16.55	High	Very high	Very high	High	Low
7.	Mexico	16.28	High	Very high	High	High	High
8.	Brazil	15.67	High	Very high	High	High	Medium
9.	Morocco	15.67	High	Very high	Low	Very high	Very high
10.	United Kingdom	15.59	High	Medium	High	High	High
11.	Argentina	14.94	High	High	High	Medium	Low
12.	Egypt	14.90	High	Very high	Low	High	Very high
13.	Belarus	14.82	High	Medium	Low	High	Very high
14.	India	14.69	High	Very high	Very Low	Very high	High
15.	Philippines	14.56	High	Very high	Very Low	Very high	Very high
16.	Greece	14.55	High	High	Medium	High	Medium
17.	Switzerland	14.46	High	Medium	High	Medium	High
18.	Germany	13.63	Medium	Low	High	Medium	Medium
19.	South Africa	13.54	Medium	Medium	Medium	Medium	Low
20.	Romania	13.43	Medium	High	Very Low	High	High
21.	Algeria	13.33	Medium	Very high	Low	Medium	High
22.	Thailand	13.19	Medium	High	Medium	Low	Low
23.	Indonesia	13.02	Medium	Very high	Very Low	High	Low
24.	Malaysia	12.95	Medium	Medium	High	Very Low	Low
25.	Denmark	12.89	Medium	Medium	Medium	Medium	Low
26.	Italy	12.78	Medium	Medium	Low	Medium	Medium
27.	Ireland	12.53	Medium	Medium	Low	Low	Medium
28.	Japan	12.47	Medium	Low	Medium	Low	Low
29.	European Union (27)	12.34	Medium	Low	Low	Low	Medium
30.	Cyprus	12.19	Medium	High	Low	Medium	Medium
31.	Netherlands	12.12	Medium	Low	Medium	Low	Medium
32.	France	12.12	Medium	Low	Medium	Low	Low
33.	New Zealand	12.10	Medium	Low	High	Very Low	Low
34.	Portugal	11.99	Medium	High	Low	Low	Medium
35.	Lithuania	11.94	Medium	Medium	Very Low	High	High
36.	Estonia	11.85	Low	Very Low	Medium	High	Very Low
37.	Spain	11.66	Low	Medium	Low	Low	Medium
38.	Latvia	11.58	Low	Medium	Very Low	High	Medium
39.	Viet Nam	11.52	Low	Very high	Very Low	High	Low
40.	Croatia	11.45	Low	High	Very Low	Medium	Medium
41.	Bulgaria	11.39	Low	Medium	Low	Medium	Low
42.	Slovak Republic	11.16	Low	Low	Low	Medium	Low
43.	Norway	10.74	Low	Very Low	High	Very Low	Low
44.	Czech Republic	10.58	Low	Low	Low	Low	Very Low
45.	Slovenia	10.45	Low	Low	Low	Very Low	Low
46.	Austria	10.34	Low	Low	Medium	Very Low	Low
47.	Poland	10.28	Low	Medium	Very Low	Low	Low
48.	Sweden	10.18	Low	Very Low	Medium	Low	Low
49.	Russian Federation	10.07	Low	Very Low	Low	Low	Very high
50.	Chile	9.97	Very Low	High	Low	Very Low	Low
51.	Hungary	9.71	Very Low	Medium	Very Low	Low	Very Low
52.	Belgium	9.68	Very Low	Very Low	Low	Low	Low
53.	Turkey	9.54	Very Low	High	Very Low	Low	Low
54.	Australia	9.47	Very Low	Very Low	High	Very Low	Very Low
55.	Luxembourg	8.93	Very Low	Very Low	High	Low	Very Low
56.	China	7.78	Very Low	Medium	Very Low	Very Low	Very Low
57.	Chinese Taipei	7.74	Very Low	Very Low	Medium	Very Low	Low
58.	Saudi Arabia	7.24	Very Low	Very Low	High	Very Low	Very Low
59.	United States	7.17	Very Low	Very Low	Medium	Very Low	Very Low
60.	Islamic Republic of Iran	6.89	Very Low	Low	Low	Very Low	Very Low
61.	Korea	5.87	Very Low	Very Low	Low	Very Low	Very Low
62.	Finland	5.51	Very Low	Very Low	Medium	Very Low	Very Low
63.	Kazakhstan	5.06	Very Low	Very Low	Very Low	Low	Very Low
64.	Canada	3.48	Very Low	Very Low	Low	Very Low	Very Low

* weighted and rounded ** Total Primary Energy Supply

2.4 Category Results – Climate Policy





Climate policies increasing but still have insufficient ambition

Key developments:

The Emissions Gap Report 2021 states that the current national targets for reducing greenhouse gas emissions are not ambitious enough for a 1.5°C world, despite higher reduction pledges in the latest updated Nationally Determined Contributions (NDC).[16] The current (conditional) targets will lead to 50 $GtCO_2e$ emissions in 2030. To be 1.5°C-compatible, emissions should be halved. The 25 $gtCO_2e$ gap needs to be closed as soon as possible.

In the Climate Policy indicators in CCPI 2022, not only are the national emissions targets assessed, but also sectoral targets and their specific implementation.

Key results:

The table on the right gives details on the performance of all 60 countries and the EU in the two indicators comprising the Climate Policy category.

G20-performance:

- France, China, the United Kingdom, and India are under the 18 countries earning a *high* rating in the Climate Policy category.
- Ten of the G20 countries rate *low* or *very low* in this category, up one from last year's CCPI.

EU performance:

- With Luxembourg and Denmark, two EU countries lead the Climate Policy ranking, owing to their national and international climate performance. Another seven EU countries are also *high* performers.
- Mostly Eastern European are under the EU countries rated *very low*.

Climate Policy – Rating table

Rank	Country	Score*	Overall Rating	National Climate Policy Performance	International Climate Policy Performance
4.	Luxembourg	18.11	High	High	High
5.	Denmark	17.87	High	Medium	High
6.	Morocco	17.23	High	High	Medium
7.	Netherlands	16.53	High	Medium	High
8.	Lithuania	16.48	High	High	High
9.	Portugal	16.27	High	Medium	High
10.	France	16.06	High	Medium	High
11.	Finland	15.98	High	Medium	High
12.	Sweden	15.72	High	Medium	High
13.	China	15.68	High	Medium	Medium
14.	United Kingdom	15.30	High	Medium	High
15.	Chile	14.38	High	Medium	Medium
16.	India	14.00	High	Medium	Medium
17.	Latvia	13.36	High	Medium	High
18.	Norway	13.17	High	Medium	High
19.	Germany	12.95	Medium	Low	High
20.	European Union (27)	12.00	Medium	Medium	Medium
21.	Colombia	10.89	Medium	Medium	Medium
22.	Islamic Republic of Iran	10.86	Medium	Medium	Medium
23.	Austria	10.85	Medium	Medium	Medium
24.	Greece	10.52	Medium	Medium	Medium
25.	Italy	10.29	Medium	Low	Medium
26.	Croatia	10.21	Medium	Medium	Low
27.	South Africa	10.20	Medium	Low	Medium
28.	United States	10.13	Medium	Low	Medium
29.	Egypt	10.07	Medium	Medium	Medium
30.	Spain	9.86	Medium	Low	Medium
31.	Indonesia	9.74	Medium	Low	Medium
32.	Cyprus	9.19	Medium	Low	Medium
33.	Thailand	8.89	Medium	Medium	Medium
34.	Slovenia	8.44	Medium	Medium	Low
35.	Canada	8.42	Low	Low	Medium
36.	Switzerland	8.29	Low	Low	Medium
37.	Estonia	8.08	Low	Medium	Low
38.	Belgium	7.90	Low	Low	Medium
39.	New Zealand	7.84	Low	Low	Medium
40.	Ireland	7.76	Low	Low	Medium
41.	Ukraine	7.68	Low	Low	Low
42.	Chinese Taipei	7.58	Low	Low	Medium
43.	Japan	7.21	Low	Low	Low
44.	Viet Nam	7.20	Low	Low	Medium
45.	Malta	6.90	Low	Low	Low
46.	Slovak Republic	6.87	Low	Low	Low
47.	Philippines	6.62	Low	Low	Low
48.	Korea	6.48	Low	Low	Low
49.	Argentina	5.98	Low	Low	Low
50.	Turkey	5.68	Very Low	Low	Low
51.	Czech Republic	5.63	Very Low	Low	Low
52.	Romania	5.49	Very Low	Low	Low
53.	Malaysia	5.29	Very Low	Low	Low
54.	Kazakhstan	5.03	Very Low	Low	Low
55.	Mexico	4.85	Very Low	Low	Low
56.	Poland	4.81	Very Low	Low	Low
57.	Saudi Arabia	3.94	Very Low	Low	Very Low
58.	Russian Federation	3.72	Very Low	Very Low	Low
59.	Hungary	3.61	Very Low	Low	Low
60.	Belarus	3.42	Very Low	Low	Low
61.	Bulgaria	2.73	Very Low	Low	Very Low
62.	Brazil	2.11	Very Low	Low	Very Low
63.	Algeria	1.30	Very Low	Very Low	Low
64.	Australia	0.00	Very Low	Very Low	Very Low

* weighted and rounded

3. Key Country Results

The following overview provides a brief summary on the performance of 19 selected countries and the EU. The coloured boxes indicate a country's rank in this year's CCPI, while the grey boxes refer to its rank last year. When directly comparing the ranks between the CCPI 2021 and 2022 editions, please note that ranks from last year are unadjusted throughout the publication.

Denmark

4 6 ▲

Denmark ranks 4th and becomes the frontrunner in this year's CCPI. The country marks an overall *high* performance.

As in the last year's CCPI, Denmark has *high* ratings in the GHG Emissions, Renewable Energy, and Climate Policy categories; it ranks in the top 10 for each. In GHG Emissions and Renewable Energy, Denmark is up two spots, and in Climate Policy it is up three from last year. It marks a *medium* rating in the Energy Use category. Notably, its performance in the indicator for a Renewable Energy 2030 Target compared to a well-below-2°C benchmark is *low*.

In 2020, Denmark committed to a 2030 target of a 70% emissions reduction compared with 1990 levels and it aims at climate neutrality by 2050. The CCPI experts note that Denmark's climate target is in line with the Paris Agreement. The independent Danish Council on Climate Change (DCCC), under the Danish Climate Act, charged with assessing whether government policies sufficiently match the target. After the first year with the 70% target, the DCCC assessment concluded that the initiatives and measures were inadequate and needed improvement. Potential areas for improvement are notes in the agriculture and transport sectors. The CCPI experts see shortcomings in policies addressing electric vehicles and policies to move Denmark away from biomass. Denmark relies heavily on biomass as an energy source and the Danish experts see a need for a wood biomass phase-out.

In partnership with Costa Rica, Denmark launched the Beyond Oil & Gas Alliance this year, aimed at moving more countries away from extracting fossil fuel. Denmark is among the progressive players in climate policy. Domestically, the experts consider Denmark's climate neutrality goal should be brought forward from the current 2050 to reach neutrality by 2040.

Schweden

5 4 ▼

For the first time in 5 years, Sweden is no longer the top-performing country in the CCPI rankings. After dropping one spot, the country is now 5th, but still earns an overall *high* performance.

As in previous years, Sweden performs *highly* in the GHG Emissions, Renewable Energy, and Climate Policy categories. The country does, however, remain unable to improve on its *low* performance in Energy Use.

CCPI experts give Sweden a *medium* rating for climate policy efforts at the national level and a *high* rating internationally. The latter reflects highlights including the country's progressive role at the international level, notably for its contributions to the Green Climate Fund, in which it is a leading funder.

At the national level, experts recognise Sweden's climate ambitions, reflected in its commitment to achieving net-zero emissions by 2045, and its policies, anchored in the country's Climate Act of 2018. The experts, however, also see substantial room and need for further improvement, such as towards burgeoning emissions from waste incineration, an unaffordable public transport system, and low requirements for building efficiency.

Another big point of criticism, noted by the experts, is massive deforestation in the country. This is occurring because the government wants to reach its climate neutrality goals not only with reduced use of fossil fuels, but also with increased use of biomass. Overall, experts see capacity for Sweden to reach a net zero target by 2030.

United Kingdom

7 5 ▼

The United Kingdom remains in the top 10, though it drops two places, to 7th, from last year's CCPI.

The UK receives *high* ratings in three CCPI categories – GHG Emissions, Energy Use, and Climate Policy – though its rating for Renewable Energy falls from *high* last year to *medium* this year.

The CCPI experts still regard the UK as a leading country for climate policy, despite its slight downgrade in the rankings. The country has substantial political and financial support to deliver its net zero 2050 target and the new interim target for a net zero power system by 2035, and to ensure that progress is made at this year's rescheduled COP26. The government has also created policies to support development of hydrogen, Carbon Capture Usage and Storage (CCUS), carbon removal, and greater take-up of electric vehicles. The UK is rated *high* for the trend in renewable energy share, primarily owing to its offshore wind sector and phasing out of coal-fired power generation, with its power sector decarbonisation accounting for most of the emissions reductions in the economy.

Despite the above, policy efforts are still needed to ensure total energy use and the share of renewable energy become aligned with a well-below-2°C trajectory, and

to be sure that overall GHG emissions per capita are reduced. Although the government has announced support schemes for take-up of low-carbon heating and a future phasing out of fossil fuel heating, policies on energy efficiency are lacking and the heating sector remains a considerable source of carbon emissions. The UK, following its exit from the European Union, has created its own ETS, based on the EU ETS but with a lower cap for total emissions. Whether the UK ETS will be linked to the EU ETS has yet to be confirmed. Using carbon credits to achieve the net zero target is also problematic, along with insufficient consideration of offshored emissions in supply chains, and continued subsidies for fossil production. The experts highlight a farm subsidy reform, which has yet to be published in a policy but has the potential to restore nature and sequester carbon with land.

Morocco

8 7 ▼

Morocco falls one spot to 8th but remains in the top 10 of this year's CCPI and among the *high*-performing countries.

As in previous years, Morocco has a *high* ranking in most categories: GHG Emissions, Energy Use, and Climate Policy. The country's Renewable Energy trend is rated *high*, but the *very low* rating in the Share of Renewable Energy in Energy Use and *low*-rated 2030 targets are responsible for an overall *medium* rating in this category.

Morocco updated its Nationally Determined Contribution in 2021. Its goal is now slightly improved, from 42% to a 45.5% reduction of GHG emissions by 2030, and rates as *very high*. Morocco's energy sector is carbon-intensive. Fossil fuels maintain a high share of the total primary energy supply. The country, however, has a fossil fuel subsidy phase-out plan and is already actively cutting these subsidies. The CCPI experts see excellent potential for renewable energy production in Morocco, as many large-scale renewable energy projects are currently being realised under the Moroccan Solar Plan. The Plan aims to increase the installed solar power capacity from photovoltaic and from concentrated solar power to a total of 20% of installed capacity by 2030. The Moroccan Integrated Wind Program aims to increase installed wind power capacity to 20% of all installed capacity by 2030.

Aside from the utility-scale projects, the experts indicate there is also an opportunity for a decentralised energy transition. There are some initial experiences with this: Moroccan officials inaugurated the first fully solar-powered, grid-autonomous village in Africa in October 2019. The country has set the goal of producing 52% of its electricity needs with renewable energy by 2030. Combined with this is Morocco's goal of reducing energy consumption by 15% by 2030, through enhancing energy efficiency. The experts see progress with investments in the public transport sector and energy efficiency regulations. Weak points are expressed in the agricultural and building sectors, and the experts demand better long-term strategies and more finance for the planned climate actions. In international climate policy, Morocco is recognised as an ambitious leader in negotiations and shows a commendable commitment to the Paris Agreement.

India

10 10 –

India maintains its strong performance from last year's CCPI, holding 10th place.

India's performance was rated *high* in the GHG Emissions, Energy Use, and Climate Policy categories, and *medium* in Renewable Energy. The subcontinent is already on track to meet its 2030 emissions target (which is compatible with a well-below-2°C scenario), close to achieving its Nationally Determined Contribution (NDC) target of a 40% share for non-fossil fuel installed power capacity by 2030, and on course for a targeted 33–35% reduction in energy intensity by the same year.

Contributing to India's strong performance this year, the CCPI country experts highlight the considerable improvement of renewables targets and the focus on implementation and achievement of NDC targets. The experts also stress India's ambitious renewable energy policies, such as its targets of renewable electricity capacity of 450 GW and a 30% electric vehicle share by 2030. The experts do, however, believe some policies are disjointed and missing detail on implementation and long-term targets. Meanwhile, considerably more can be done to promote growth of solar (notably, as mentioned, Renewable Energy was the only category not rated *high*). No Indian states have announced a clear coal phase-out. In fact, the pipeline of proposed coal power plant development is the world's second largest and one of the few that have increased since 2015. There have been initiatives to promote more electric vehicles in the transport sector, and the experts demand expansion and better infrastructure of such vehicles.

Although India receives an overall *high* performance, the experts argue that the country should set an explicit net zero target for 2050 and leverage its domestic success on renewables and emissions intensity into international initiatives. Additionally, more could be done to strengthen policies on climate vulnerability, adaptation, and resilience building. Equity and social development should also feature more strongly in the energy transition.

Germany

13 19 ▲

Germany rises six spots to rank 13th and sits among the high-performing countries in this year's CCPI.

In contrast with last year, Germany receives a *high* rating in the highest weighted category, GHG Emissions. There it shows relatively *high* performance in the GHG per Capita current trend indicator, as emissions decreased in 2019.

It receives a *medium* in the remaining Renewable Energy, Energy Use, and Climate Policy categories.

In 2021, Germany decided on more ambitious climate targets because of a ruling by Germany's Federal Constitutional Court. After this, the government set the goal of reducing emissions 65% by 2030 compared with the 1990 level, and it set its net zero target for 2045. The CCPI experts welcome the new climate ambition but call for more ambitious measures to achieve the target. Studies from the government itself clearly shows that Germany will miss the targets with its existing policies, and it will even miss the older 55% reduction target. The new government should act quickly to fix past failures.

The experts ask for a quicker coal phase out and to phase-out harmful fossil fuel subsidies as soon as possible. Many bureaucratic and legislative obstacles, especially for onshore wind, will need to be removed to greatly increase renewable energies. Particularly, decarbonisation of the transport sector must be accelerated. Massive investment in fossil-free infrastructure for rail and bikes is demanded. The experts also see the need to reduce buildings emissions and to invest in building modernisation to enhance energy efficiency.

Germany is a progressive player in climate negotiations; it receives a *high* rating the in International Climate Policy indicator. Despite this, the experts wish the country would take an ambitious frontrunner role in climate policy in the future. In 2021's federal election campaign, almost all parties committed to climate action and the Paris Agreement. The experts expect the parties to maintain these promises in the new government.

EU

22 16 ▼

The European Union (EU) drops six places to 22nd in this year's CCPI.

The EU receives *medium* ratings for all four CCPI categories: GHG Emissions, Renewable Energy, Energy Use, and Climate Policy.

The CCPI experts regard the EU as having a strong package of policy and legislative approaches to climate and energy, across a range of emitting sectors, such as transport, buildings, and energy. Discussions are also underway on strengthening land use, forestry, and agriculture policies, and on improving the Emissions Trading System. Promotion of renewable energy has led to a rising share of renewables in total primary energy supply, along with policies to reduce overall energy demand. The absence of phase-out dates for the use of fossil fuels (especially coal and gas), however, are problematic. Neither the current renewables share nor the 2030 renewable energy target are in line with a Paris Agreement-compatible trajectory (with respective ratings of *low* and *medium* for these indicators in this year's CCPI).

The EU increased its Nationally Determined Contribution to a domestic net emissions reduction target of at least 55%, up from at least 40%. Though this is not yet compatible with a Paris Agreement-compatible trajectory pathway, it does reflect the EU's substantial effort to deal with its emissions gap. Proposed reforms under the 'Fit for 55' policy package, to ensure a 55% emissions reduction by 2030, will be important for addressing this misalignment and for achieving the 2050 climate neutrality target. They will also be important towards increasing renewables and reducing energy use. The experts view the EU's climate diplomacy as insufficient, although the EU is seen as one of the key actors for effective international climate policy (rated *medium* in this indicator). Re-engaging on the international stage should be a priority for the EU, especially in the COP process and the former High Ambition Coalition, with EU international diplomacy of particular importance to the roles of China and the US. The lack of ownership and implementation in the member states can explain the six-place drop for the EU.

Philippines

23 – new

The Philippines, as one of three new entrants in this year's CCPI, ranks 23rd, with a *medium* rating.

In the four main CCPI categories, the Philippines rates *low* in Climate Policy, *medium* in Renewable Energy, and *high* in GHG Emissions and Energy Use.

The Philippines receives a *low* rating in the National Climate Policy indicator. In 2021, the Department of Energy has, however, defined some new regulations for reducing GHG emissions. It seeks a renewable energy target of a 35% share by 2030, a higher renewable portfolio standard, and a moratorium on coal power plant development. Nevertheless, the moratorium will not affect coal projects over 7 MW that are committed to be built by 2030. Additionally, no policy on coal phase-out is in place.

Regarding energy use, the National Economic Development Authority approved the Philippine Urban Mobility Program in 2020, which prioritises multi-modal low-carbon public transport in urban cities. In April 2021, the Philippines finally submitted its first Nationally Determined Contribution, with a 75% GHG emissions reduction sought by 2030 compared with 2010 levels. CCPI experts note this target is ambitious, as is the government's plan to reduce absolute GHG emissions from there forward. Criticism does, however, remain regarding this target. First, there is no clear plan for how to achieve the goal. The current climate policies are in fact not ambitious enough to reach the NDC target. Furthermore, the experts criticise that only 2.71% of the NDC target remains unconditional. The rest will be pursued in the case of international finance support.

Overall, the main problems concerning climate policy performance in the Philippines are, according to the experts, not just ambition, but apparently the delayed or non-im-

plemented provisions. Additional to the presence of more ambitious climate policies, they demand strong and swift implementation.

Colombia

25 – new

Colombia is among three new countries added in this year's CCPI. It debuts at 25th, with an overall *medium* rating.

Colombia shows mixed ratings among the four main CCPI categories. In Energy Use, it earns a *high* rating, while it receives a *medium* for GHG Emissions and Climate Policy. In the Renewable Energy category, it ranks as *low*.

Colombia's current Nationally Determined Contribution aims to reduce GHG emissions by 51% in 2030 compared to 2014 levels. The Colombian experts welcome this ambitious goal, though they criticize the lack of a financing plan and implementation.

Colombia's national climate policy has made progress in electric mobility policies and initiatives for energy efficiency in the industry and building sectors. Energy transition towards renewable energy is underway and there is great potential for wind and solar energy. The country is a big coal producer, and the climate experts demanded a concrete coal phase-out plan. The experts also expressed the need for an energy efficiency standard for vehicles, and for regulation of GHG emissions in the industry sector.

Indonesia

27 24

Indonesia falls three ranks from last year, to 27th in this year's CCPI.

Indonesia shows *high* performance in the Renewable Energy category. In the Energy Use and Climate Policy categories, the country ranks as *medium*, while it earns a *low* for GHG Emissions. This gives Indonesia an overall *medium* performance.

In 2021, Indonesia updated its Nationally Determined Contribution, and aims to reach its net zero target by 2060. The CCPI national experts see these targets as insufficient and not Paris Agreement-compatible. Indonesia's energy supply still highly relies on coal, while there are also fossil fuel subsidies in place. There is no concrete plan for a coal phase-out, though the country has set the goal of a 23% share of renewable energy by 2025. The experts demanded greater support for development of solar and wind power. The existing palm oil moratorium expired in September 2021, and the experts demanded the government extend this regulation. At the international level, there is ambition for greater involvement in international negotiations and dialogue. The experts also see need for a more ambitious NDC goal.

Brazil

33 25

Brazil ranks 33rd in this year's CCPI, dropping eight places from last year's CCPI, when it was just within the top 25.

The country shows a mixed performance across the CCPI categories, with ratings of *high* for Renewable Energy and Energy Use, *medium* for GHG Emissions, and *very low* for Climate Policy.

Brazil announced a long-term goal of hitting net zero emissions by 2050, but there are no concrete policies towards implementing what it takes to reach this. In fact, no long-term strategy has even been designed.

Institutions that play a major role in environmental policy suffered attacks by and funding cuts from the federal government (National Climate Policy rates *low* as a result). Key issues such as reducing emissions from fossil fuel use, land use change, and creating a carbon price have no clear backing policies, with Brazil's GHG per capita (rated *low*) and 2030 target (*very low*) consequently not aligned with a well-below-2°C trajectory. Renewables are growing in Brazil, thanks to increased wind and solar (on top of substantial existing hydro), but their potential remains underutilised. Less than 6% of Brazil's electricity production comes from renewable sources. The high levels of hydro lead to a *very high* rating for renewables in the country's primary energy share, but this dependence makes the country vulnerable to droughts, which in turn brings increased use of fossil electricity.

Though agriculture and land-use/forestry are Brazil's two biggest sources of GHG emissions, the CCPI country experts note an absence of policies for reducing emissions at the national level. What policies do exist are underfunded and poorly monitored. Experts recognise widespread deforestation as one of the biggest problems in the country. This is also a factor in Brazil's poor International Climate Policy (rated *very low*), in which there have been almost no progressive actions. The updated Nationally Determined Contribution, submitted last year, leads to increased emissions; this, according to our experts, goes against the principles of the Paris Agreement and sends the wrong signal to the international community.

China

37 33

China falls four places to 37th in this year's CCPI.

The country receives a *low* rating overall, but with mixed ratings across categories: *very low* for GHG Emissions and Energy Use, *medium* for Renewable Energy, and *high* for Climate Policy.

China is the world's largest territorial emitter, but the CCPI country experts regard its climate policy as ambitious, with clear policies and timelines (with breakdowns into local and sectoral plans in some areas). It advanced its long-term strategy in 2020 with a target of peaking carbon emissions

by 2030 and achieving carbon neutrality by 2060 (although its current GHG per capita and 2030 target are not aligned with a well-below-2°C trajectory).

Its 14th Five-Year Plan, published in March 2021, included energy and carbon intensity reduction targets, and it has since declared that fossil fuels will be less than 20% of the energy mix by 2060. China continues to develop renewable energy (its current renewables trend was rated *very high*), with support for biomass, 2030 targets for renewable generation and electric vehicles, and policies on green electricity purchase and trading. The experts, however, regard its coal phase-out as too slow, with plans to continue building coal-fired power stations because of energy supply concerns. China will only be able to climb in the CCPI rankings if the well-regarded policies work and emissions decline.

China's international climate policy was rated *medium*, as its growing domestic ambition is beginning to shape its international policies – such as the decision to stop funding overseas coal-fired power stations. Continuing to build domestic coal power stations, however, undermines the key aim of 'ending coal' at COP26. Engagement between China and the US remains crucial for COP, but the countries' complex trade and geopolitical relationship suggest a positive climate policy outcome is uncertain. The new climate pledge released the week before COP26 fell short of expectations, as it is not in line with 1.5°C.

South Africa

39 37

South Africa slips two places in this year's CCPI, to 39th.

The country receives *medium* ratings in the Energy Use and Climate Policy categories, but *low* in Renewable Energy and GHG Emissions.

South Africa submitted an updated Nationally Determined Contribution ahead of COP26, but its 2030 target for emissions reductions falls short of a 1.5°C target. The upper limit of the reduction target is also inadequate for even a 2°C target. Despite the more ambitious target, the CCPI country experts note continued misalignment across sector government policies, with a lack of both guidance and political will for implementation of national climate policies (rated *low* in this year's CCPI).

The country's energy policy framework also limits penetration of renewables because policy creation still strongly focuses on coal (with renewables' share in primary energy rated *very low*). As a result, GHG per capita is not aligned with a well-below-2°C benchmark (thus rated *very low*). The experts highlight how the Department of Mineral Resources and Energy is structured towards continuing reliance on coal in the energy mix, with no real focus on sustainability. Poor policy making leads to an imbalance in favour of coal and centralised power generation, rather than decentralised (sub-national) and renewable energy initiatives.

South Africa has called for more international green finance, which would help the domestic transition of its energy sector, and public utility Eskom, from fossil fuels to renewables.

Japan

45 45

Japan retains its rank of 45th in this year's CCPI.

The country receives *low* ratings in the GHG Emissions, Renewable Energy, and Climate Policy categories, but *medium* for Energy Use.

The CCPI experts welcomed Japan's goal of reducing emissions by 46% by 2030 (compared to 2013) and the long-term target of carbon neutrality by 2050. The absence of a clear plan for delivering these goals, however, is an issue, with few concrete policies in place for meeting either target. Neither Japan's GHG per capita nor its 2030 GHG target are aligned with a well-below-2°C benchmark, and the expected power generation mix in 2030 would still contain coal. The country plans to increase consumption of natural gas and create new hydrogen demand sectors, while meeting the targets may require continued use of nuclear power generation. Despite government support for renewable electricity, the share of renewables in Japan's total primary energy supply is *very low* (and received a *low* rating for renewables). For Japan to meet its medium- and long-term climate goals, the experts recommended the country must introduce measures such as carbon pricing, increased investments in renewable electricity and grids, halting plans to build more coal power stations, and setting a coal phase-out date.

Japan's international climate policy (rated *low*) is shaped by its continued domestic policies, particularly on coal and natural gas. Japan is a major economic actor, but on climate policy it is typically influenced by other nations' engagement, especially the US and UK. Although Japan committed to net zero by 2050 before the United States' Biden administration re-joined the Paris Agreement, Japan has pushed back on international efforts to phase out coal development and financing.

USA

55 61

The United States edges higher, to 55th, in this year's CCPI, but it remains lower than most developed economies.

The US receives ratings of *very low* for the GHG Emissions, Renewable Energy, and Energy Use categories, with a *medium* for Climate Policy. US climate policies and performance have been in flux because of the changing administration in early 2021, with incoming President Biden vowing to position countering climate change as a pillar of his administration, and a pledge to by 2030 reduce US greenhouse gas emissions by at least 50% below 2005 levels.

Despite this, the CCPI experts believe the political divisions in Congress remain a substantial barrier to implementing

any ambitious national policies in the US. Moreover, the current patchwork of policies is insufficient for delivering necessary emissions reductions. Neither the US GHG per capita nor the measures to achieve the 2030 GHG target are aligned with a well-below-2°C benchmark, and consequently receive ratings of *very low* and *low*, respectively. The growth of renewable energy (currently rated *very low*) is held back by insufficient policies on low-carbon infrastructure and electricity networks, though there has been some growth in offshore wind. Despite government plans to cut fossil fuel subsidies, the absence of a phase-out date for coal is a major barrier to achieving a zero-emissions power grid by 2035, net zero economy by 2050, and cutting GHG emissions per capita (rated *very low*).

Biden's decision to re-join the Paris Agreement was vital for the US's international climate policy (rated *medium* – the highest rating of any category for the country this year), and his efforts constitute clear acknowledgment of the danger of climate change as a substantive change from the previous administration. Nevertheless, most decisions and plans have not yet been finalised, and they still require Congress' approval, which carries the risk that any progressive climate protection policies could still be weakened. The US submitted a new and stronger target to the COP, and it pledged to implement a range of policies to deliver it, but domestic politics remain a barrier. Re-joining the Paris Agreement and improved climate diplomacy will also be important for how China and the EU approach the COP process.

Australia

58 54

Australia slips four places to 58th in this year's CCPI, trailing many developed economies.

The country receives ratings of *very low* for its performance in every CCPI category: GHG Emissions, Renewable Energy, Energy Use, and Climate Policy.

Australia's federal climate policies are based on its Technology Investment Roadmap (TIR), aimed at supporting technologies intended to help reduce emissions by 2040, yet with continuation of fossil fuel-based energy consumption. In October 2021, the government confirmed its long-term emissions reduction plan aiming for net zero by 2050. No new policies and plans were announced to go along with this announcement. The CCPI national experts regard the TIR as insufficient for decarbonising the economy, reducing the use of fossil fuels, promoting renewable energy, and setting out how national GHG emissions will be reduced (with a rating of *very low* for Climate Policy). The government does not have any policies on phasing out coal or gas, but CCUS and hydrogen are being promoted as low emissions technologies. Even though the renewables electricity is growing, the experts believe that Australia has failed to take advantage of its potential, and other countries have outpaced it. This failure to promote renewables (leading to a *low* rating for the Share of Renewable Energy in Energy Use indicator), is exacerbated by inadequate infrastructure investment, despite subsidies for fossil fuel production and promotion of a 'gas-led' economic recovery following COVID-19. Despite public support for a net zero target, there is currently no national plan for transitioning to renewable energy (a backdrop for the *very low* rating for the National Climate Policy indicator), with the policy uncertainty undermining investment and causing energy supply concerns.

The country's lack of domestic ambition and action has made its way to the international stage. The experts describe that the country's international standing has been damaged by climate denialism by politicians, refusal to increase ambition, and refusal to recommit to international green finance mechanisms (accompanying a *very low* rating for the International Climate Policy indicator). Australia has fallen behind its allies and its inaction even attracted public criticism in the run-up to COP26.

Korea

59 53

In this year's CCPI, the Republic of Korea (ROK; South Korea) drops six spots to 59th and is thus still a very low performer.

Like in last year's CCPI, Korea receives *very low* ratings in the GHG Emissions and Energy Use categories and a *low* in Renewable Energy. In Climate Policy, the country plummets 27 ranks and is now rated *low*. Both the National and International Climate Policy indicators receive a *low* rating.

In April 2021, President Moon Jae-in announced an immediate end to state-backed financing of new overseas coal plants. Environmental NGOs worldwide celebrated the decision because Korea is the third-largest provider of public finance for overseas coal. With the Framework Act on Carbon Neutrality and Green Growth of August 2021, South Korea set itself the target of at least a 35% GHG emissions reduction by 2030 (compared to 2018 levels). Experts note this is incompatible with the global 1.5°C target. As a market-based mitigation tool, the Korea Emissions Trading Scheme was launched in January 2015, and it is currently in its third phase (2021–2025), wherein the annual allocation is reduced by about 10%. Experts criticise this tool for being ineffective at reducing domestic GHG emissions in line with Korea's domestic 2030 target.

The country still has not announced a date for coal phase-out and still has new coal power plants under construction. Considering this, and the national 2050 net zero target, experts ask that coal-fired power generation be halted no later than 2030, followed by a net zero power sector in 2035. Complicated permit schemes and grid access challenges currently hinder necessary expansion of renewable energy. Despite the government's efforts, the majority state-owned utility company KEPCO and its subsidiaries' protection of legacy assets underlies many of these problems, preventing faster decarbonisation of Korea's power sector and enhancement of climate targets.

Canada

61 58

Canada drops three places in this year's CCPI, ranking 61st.

Its performance rates *very low* overall, with *very low* in the GHG Emissions, Renewable Energy, and Energy Use categories, and *low* for Climate Policy.

The CCPI country experts regard the entering into law of Canada's 2050 net zero target in 2021 as fundamental for the country's long-term climate ambition. It also signals a significant shift in climate ambition. While policy still lacks coherence for delivery and for achieving the target, detailed plans are on the way. Carbon pricing, the need for which there is general consensus, should be complemented by enhanced ambition across all other policy areas for emissions to decline. Canada has committed to reducing fossil fuel subsidies and emissions from oil extraction, but these remain an issue (with neither GHG per capita nor the GHG 2030 target aligned with a well-below-2°C benchmark).

The experts emphasise the oil and gas industry as the major block to more ambitious climate policy. The crosscutting nature of energy policy in federal and provincial politics serves as a barrier to better policy making. Although Canada is working to phase out coal (and will not approve new thermal coal mines), it plans to support and encourage deployment of fossil fuel-based carbon capture and storage and hydrogen. The experts believe more should be done to promote renewables, deep energy retrofits for buildings, and electrification of transport, with a shorter-term commitment to decarbonising the electricity grid in the 2030s (the Share of Renewable Energy in Energy Use indicator was rated *medium*, and rated *very low* compared to a well-below-2°C benchmark).

Canada continues to play an important role in international climate policy (rated *medium* this year for that indicator). Its membership in the Powering Past Coal Alliance is important for wider climate diplomacy, and the experts highlight its constructive contributions in the G7 and G20 on higher climate ambition, targets for limiting global warming to 1.5°C, and increasing climate finance contributions. Canada also used the 2021 G7 in the UK to announce a doubling of its climate finance contribution.

Saudi Arabia

63 60

Saudi Arabia drops three places, to 63rd, in the CCPI this year, from 60th in last year's CCPI, now making it the second lowest ranked performer.

The country's fall in rank owes to ratings of *very low* for all four CCPI categories: GHG Emissions, Renewable Energy, Energy Use, and Climate Policy.

Saudi Arabia announced a new target of net zero by 2060 in the run-up to COP26, building on its previous Vision 2030 and Saudi Green Initiative (SGI), which looked at reducing the country's dependence on oil production and at increasing renewables. The CCPI experts welcomed these new ambitions and if these initiatives show success, the country may increase its CCPI standing in future editions.

Under the new SGI, the emissions reductions target for 2030 will also more than double the previous one, but the delivery of net zero relies on the 'circular carbon economy', with carbon removals, tree planting, hydrogen, and carbon capture and storage. Under this new plan, emissions would continue rising during the 2020s and state-owned Saudi Aramco would increase its oil and gas production, despite its also having a net zero 2050 target. Saudi Arabia's share of renewable energy in the total energy supply was rated *very low*, with the country's first wind farm not opening until 2021. Almost half the country's emissions derive from power generation.

Although Saudi Arabia's new Nationally Determined Contribution has a more ambitious emissions reduction target than the previous one, neither its 2030 GHG target nor its GHG per capita are aligned with a well-below-2°C pathway (as it has the highest per capita GHG emissions of the G20 nations). The country's climate targets and policies are also not consistent with the Paris Agreement's 1.5°C temperature limit.

Kazakhstan

64 55

Kazakhstan is the bottom-ranked country in this year's CCPI. The country drops nine ranks to the lowest spot, 64th.

Kazakhstan marks a *very low* rating among all CCPI categories. The country sees a large decline in the Energy Use, Climate Policy and Renewable Energy categories, falling 19–25 spots in these categories compared to last year's CCPI.

Last year, Kazakhstan announced a carbon neutrality commitment for 2060. Also, this May (2021), the government set the target of having a 15% renewable energies share by 2030. Planned renewable energy production seems to be for foreign investors and there is a lack of support for individual renewable energy stations for the domestic population. The CCPI experts see far greater potential for renewable energies, owing to the weather conditions and expansive territory in the country.

Many shortcomings were expressed about Kazakhstan's climate policy. Energy efficiency measures are lacking, energy prices and coal are heavily subsidised, and there are high emissions in the transport sector due to old vehicles being imported into the country. Overall, the Kazakh climate experts demanded a more ambitious Nationally Determined Contribution, a carbon tax, and that the government attracts international assistance and funding for climate action. The experts also urge Kazakhstan to develop a functioning emissions trading system.

➔ More country texts can be found at: **www.ccpi.org/countries**

4. Net zero targets gain substantial global support

In a nutshell

- Net zero targets encompass most greenhouse gas emissions. If implemented, they would put the Paris Agreement goals within striking distance.
- Net zero targets gained support in the past year. Over 80% of the countries analysed perceive net zero targets as helpful tools for realising emissions reductions.
- There are, however, some concerns surrounding adoption of these targets. These concerns are often centred on lack of clarity about short-term implementation, feasibility, and over-reliance on carbon dioxide removal and/or offsets.
- Despite these concerns, in the countries analysed, support outweighs opposition regarding net zero targets. In several cases, the conversation has shifted from whether it is relevant to adopt such targets to how they can be implemented.
- To seize the opportunity presented by the wave of net zero targets, policy makers must carefully consider the pitfalls and engage with relevant stakeholders to ensure that real emissions reductions are the outcome.

Introduction

Over the past year, a global wave of national net zero targets was set into motion. Recent targets establish the year when countries expect to balance out their anthropogenic greenhouse gas emissions and removals. If fully implemented, the targets could put the Paris Agreement goals within reach and lower the best estimates of global temperature to between 2.0°C and 2.4°C warming by 2100.[17]

Well-designed and ambitious net zero targets may be a step in the right direction, but they need to be continually backed by short-term commitments and policies to demonstrate real improvement. Meaningful targets detail their scope, architecture, and transparency, such as by elaborating on the implementation plans' specifics for achieving net zero emissions.[18,19]

Net zero targets can, however, be counterproductive regarding meaningful climate action; they can be used to delay short- and medium-term actions, shifting action further into an uncertain future. Other ambitious targets, such as short-term, enhanced Nationally Determined Contributions (NDCs) or other long-term deep emissions reductions targets, may be more appropriate in specific contexts. An unnecessary focus on net zero may shift attention away from other important strategies, especially because of these targets' implicit reliance on carbon dioxide removal or offset.[20]

As of October 2021, a total of 59 countries had adopted[21] net zero targets.[22] These countries account for about 63% of global emissions.[23,24]

We asked CCPI policy expert network contributors about their perspectives on net zero targets. We sought to understand whether these targets are considered helpful and if there is support for their adoption. The 205 responses we received concern 60 of the 61 countries and regions covered in the CCPI. Each respondent – a team, organisation, or individual supporting climate policy analysis and adoption – provided insights about their own country.

Main findings

Net zero targets have gained considerable support in the countries analysed (Figure 1). We compared country responses containing information about perceived support and opposition concerning net zero targets (see Methodology). Respondents in 60% of the countries perceived greater support than opposition in their context.

The dynamics explaining cross-country variations are complex. Stakeholder groups have distinct views on adopting and subsequently implementing the net zero targets. A transition that requires deep emissions reductions will face strong domestic opposition from affected fossil exploration groups in countries such as Russia. Other countries with high emissions per capita, such as the United States and Canada, also show considerable opposition. In these countries, however, overall support for the targets is also higher.

Support for the targets can be explained by their role in driving higher ambitions. Despite the targets' long-term nature, they have informed more ambitious NDC updates for several large-scale emitters, including the European Union (EU), United States, and United Kingdom. In Germany, the long-term prospect of reducing emissions to net zero contributed to a court order ruling to increase the nation's 2030 target.[25] In most of the countries analysed (85%), net zero targets are considered helpful tools for realising emissions reductions (Figure 2).

Governments in several countries have already inserted net zero targets in legislation. The EU, for example, legislated its net zero target in 2021 as part of its Climate Law. The target sets a goal of reaching climate neutrality by 2050. As part of the European Green Deal, the EU has prepared a comprehensive policy package that is expected to lead it towards its objectives. Some EU member states have also legislated individual net zero targets. Denmark's parliament, for example, almost unanimously adopted a target in 2020.

South Korea, Canada, Japan, and New Zealand have all already formalised their net zero commitments.

Over the past year, general support for net zero targets has increased in the countries analysed. Respondents in 73% of the countries surveyed agreed or strongly agreed that support for the targets has grown. Though not all countries covered in the CCPI have adopted a net zero target, support for the targets' adoption is present in most countries surveyed. In many countries, the discussion has shifted from whether it is relevant to adopt a net zero target to how such a target can be implemented.

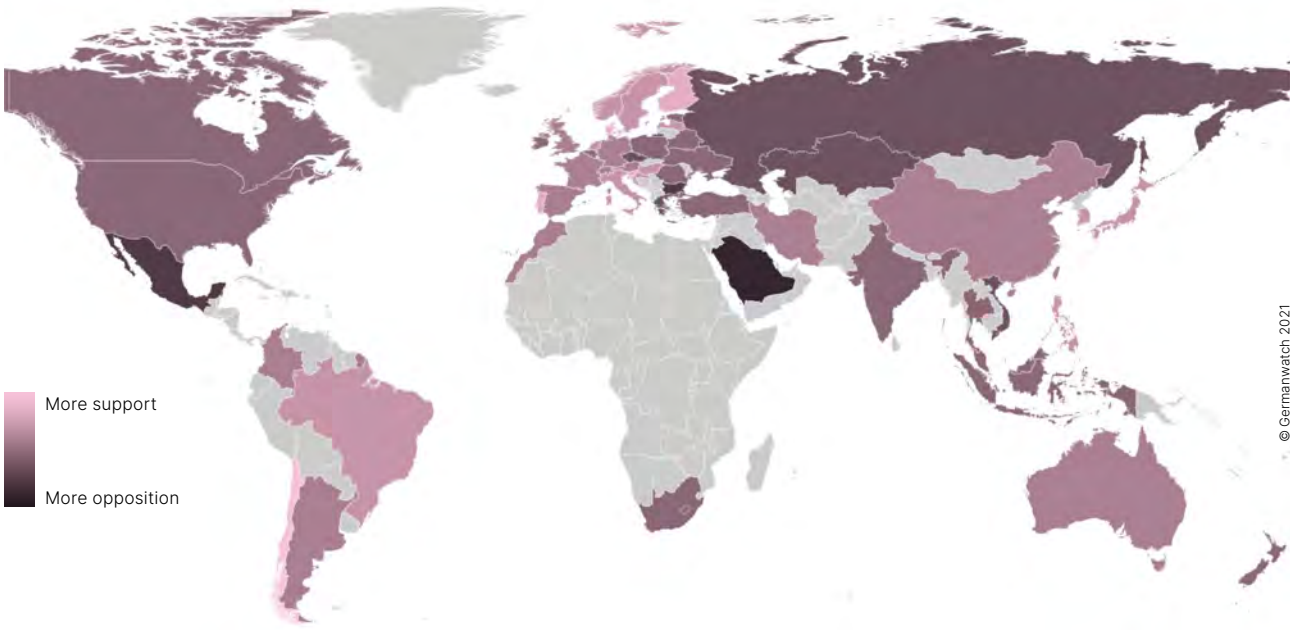
The opposition to net zero targets is not only driven by actors that oppose a low-carbon transition. In India, for example, general concerns about net zero targets are exacerbated by the contrast with current mitigation efforts in the country. India's climate mitigation efforts have been primarily supported by a narrative centred on co-benefits and development, rather than long-term, climate-driven planning.[26] CCPI contributors reported that opposition to net zero exists in nearly half of the countries surveyed (47%).

Respondents also emphasised that the focus on net zero may shift the focus to long-term target setting instead of short-term policy adoption. They indicated that the targets are sometimes built on overly optimistic assumptions and are not grounded in realistic options for decarbonising all economic sectors, especially in countries highly dependent on hard-to-abate sectors, such as the agriculture sector in Argentina. Overreliance on emissions sinks and offsets was mentioned as an additional point of strong concern. In Norway, the fossil fuel exploration sector casts doubt on the country's net zero targets, as new oil and gas fields are expected to remain active beyond 2050.

The international momentum towards net zero represents an important aspect of the global effort to achieve the Paris Agreement's goals. To seize this opportunity, policy makers should carefully consider the pitfalls in setting net zero targets, and they should engage with relevant stakeholders to ensure the targets lead to real emissions reductions over time.

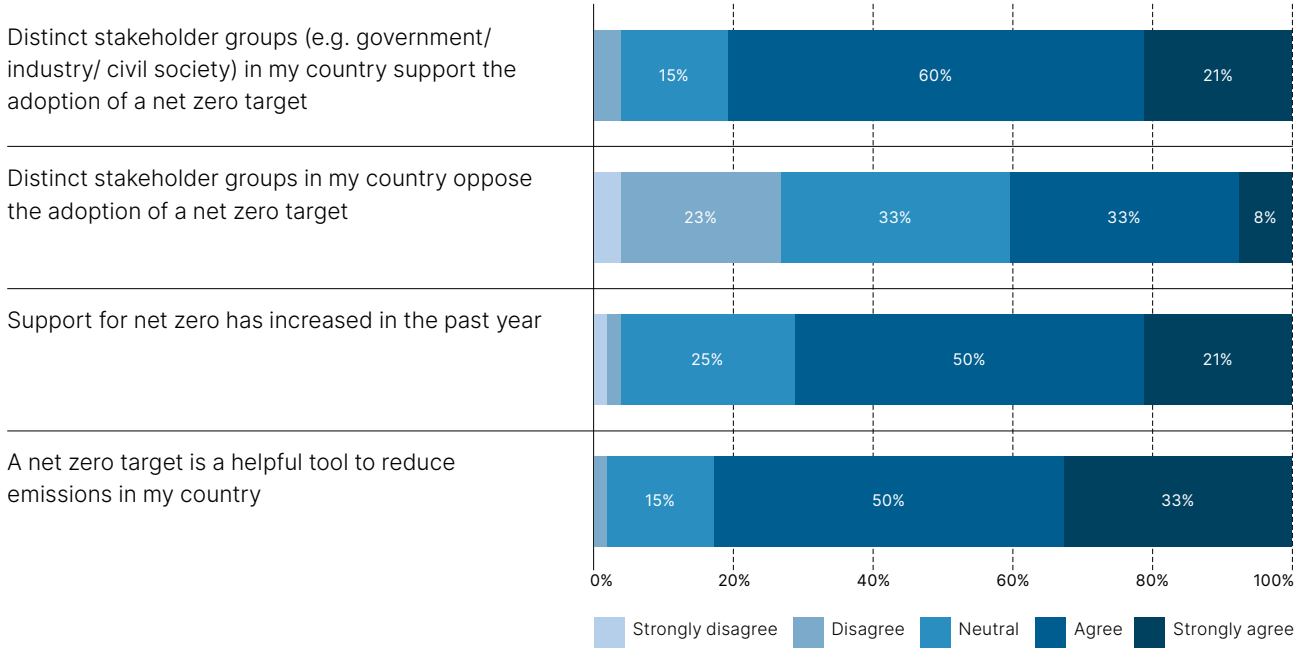
Support for net zero target

Figure 1: Comparison of support and opposition of distinct stakeholders for net zero targets



Net zero support

Figure 2: Experts' level of agreement with the respective statements



Methodology

Our method was based on a survey of national experts, most of whom are part of the Climate Action Network or scholars working in climate-related fields. The survey took place in September–October 2021.

Experts may have diverging perspectives on the level of adoption of a target and on perceived support or opposition regarding net zero targets. We accounted for the degree of agreement between experts by averaging the answers for each country and question. Contradicting answers from two experts for the same answer and country offset one another. The country results tend to the answer of the majority. The results are based on averaged results per country, not on averaged responses across all respondents.

The definitions of support and opposition are broad and not restricted to specific stakeholder groups. Distinct groups may have varying perspectives on net zero targets. Respondents were asked to indicate their levels of agreement with the following statements:

- Distinct stakeholder groups in my country oppose the adoption of a net zero target
- Distinct stakeholder groups in my country support the adoption of a net zero target

The level indicates the overall perception of the balance between these opposing ideas within the country.

5. About the CCPI

Country coverage: covering more than 90% of global GHG emissions

On the basis of standardised criteria, the CCPI currently evaluates and compares the climate protection performance of 60 countries and of the European Union (EU), which are together responsible for more than 90% of global greenhouse gas (GHG) emissions. For the CCPI 2022 the Philippines, Viet Nam and Colombia were added.

Methodological approach and data sources

The CCPI assesses countries' performance in four categories:

- **"GHG Emissions"** (40% of overall score),
- **"Renewable Energy"** (20% of overall score),
- **"Energy Use"** (20% of overall score) and
- **"Climate Policy"** (20% of overall score).

Aiming to provide a comprehensive and balanced evaluation of the diverse countries evaluated, a total of 14 indicators are taken into account (see figure below). Around 80% of the assessment of countries' performance is based on quantitative data taken from the International Energy Agency (IEA), PRIMAP, the Food and Agriculture Organization (FAO) and the national GHG inventories (submitted to the UNFCCC).[27] The categories "GHG Emissions", "Renewable Energy" and "Energy Use" are each defined by four indicators: (1) Current Level; (2) Past Trend;[28] (3) well-below 2°C Compatibility of the Current Level; and (4) well-below 2°C Compatibility of the Countries' 2030 Target. The remaining 20% of the assessment is based on the globally unique climate policy section of the CCPI. The index category "Climate Policy" considers the fact that climate protection measures taken by governments often take several years to have an effect on the emissions, renewable energy and energy use indicators. This category thereby covers the most recent developments in national climate policy frameworks, which are otherwise not projected in the quantitative data. This category's indicators are (1) National Climate Policy and (2) International Climate Policy, and the qualitative data for these is assessed annually in a comprehensive research study. Its basis is the performance rating provided by climate and energy policy experts from non-governmental organisations (NGOs), universities and think tanks within the countries that are evaluated.[29]

Compatibility of countries' performance with well-below-2°C pathway and NDC analysis

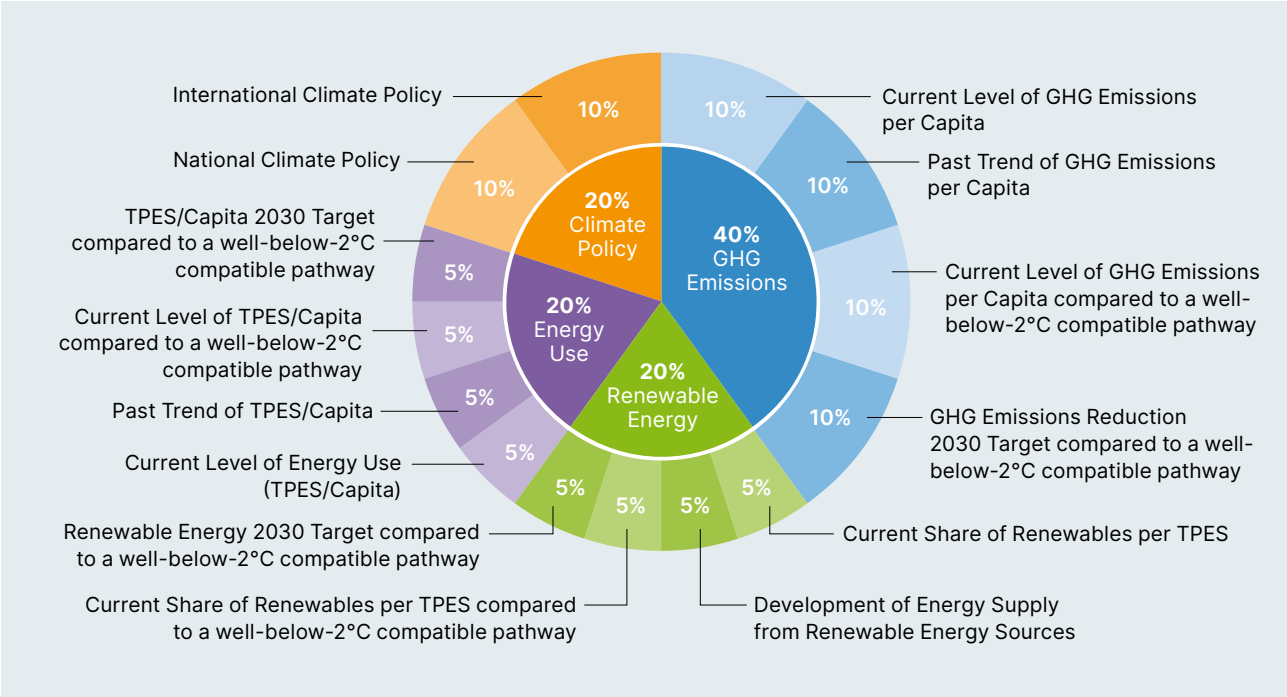
In 2017, the methodology of the CCPI was revised to fully incorporate the 2015 Paris Agreement, a milestone in international climate negotiations with the goal to limit global warming to well below 2°C or even to 1.5°C. Since then, the CCPI includes an assessment of the well-below 2°C compatibility of countries' current performances and their own targets (as formulated in their Nationally Determined Contributions, or NDCs). Within the quantitative index categories – "GHG Emissions", "Renewable Energy" and "Energy Use" – current performance and the respective 2030 target are evaluated in relation to their country-specific well-below-2°C pathway. For the well-below-2°C pathways, ambitious benchmarks are set for each category, guided by the long-term goals of the Paris Agreement. The three benchmarks are: nearly zero GHG emissions (taking into account country-specific pathways, which give developing countries more time to reach this goal); *100% energy from renewable sources*; and keeping to *today's average global energy use per capita levels and not increasing beyond*. The CCPI compares where countries actually are today with where they should be to meet the ambitious benchmarks. Following a similar logic, the CCPI evaluates the countries' own 2030 targets by comparing these to the same benchmarks.

Interpretation of results

In interpreting the results, it is important to note that the CCPI is calculated using production-based emissions only. Thereby the CCPI follows the currently prevailing method of accounting for national emissions and the logic that the nation producing the emissions is also the one held accountable for them. Further, it is important to note that 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 committed as the current frontrunners, efforts would still not be sufficient to prevent dangerous climate change.

➔ More detailed information on the CCPI methodology and its calculation can be found in the "Background and Methodology" brochure, available for download at: **www.ccpi.org/methodology**

Components of the CCPI



GHG = Greenhouse Gases | TPES = Total Primary Energy Supply

Disclaimer on comparability to previous CCPI editions

The CCPI 2022 (for 60 selected countries and the EU) is based on the methodological design introduced in 2017 covering all greenhouse gas (GHG) emissions* and evaluates the 2030 targets and the well-below-2°C compatibility of countries' current levels and targets in the categories "GHG Emissions", "Renewable Energies" and "Energy Use". Therefore, there is only limited comparability between this year's results and versions of the index prior to the CCPI 2018. However, this year's results are comparable to the CCPI G20 Edition as well as to the CCPI 2018 to CCPI 2021. Please note that there have been slight methodological changes compared to last year's edition. In the categories "GHG emissions" and "Energy Use" the 2030 target indicators are now calculated using an absolute difference to the 2°C-pathway rather than a relative difference.

Disclaimer on maps

The depictions of territorial boundaries on maps displayed in the CCPI do not imply a political opinion or judgement on the legal status of any state territory.
The state boundaries shown are aligned with the official stance of the United Nations (UN) on said matter.

We apologize if any names used/borders depicted are in conflict with your national identity or your general beliefs. We would like to point out that the CCPI, focusing solely on the global goal of climate protection, in no way intends to spark geopolitical controversy.

Disclaimer – Data from before COVID-19

The CCPI 2022 uses data from 2019 and thus does not take into account the most recent developments and effects caused by the COVID-19 pandemic.

* All Kyoto gases (CO_2, CH_4, N_2O, HFKW, PFKW and SF_6) including the emissions coming from Land Use, Land Use Change and Forestry (LULUCF).

6. Endnotes

1 **Climate Action Tracker (2021)** CAT Climate Target Update Tracker.
Available at: https://climateactiontracker.org/climate-target-update-tracker/.

2 **UNFCCC (2021)** Full NDC Synthesis Report: Some Progress, but Still a Big Concern.
Available at: https://unfccc.int/news/full-ndc-synthesis-report-some-progress-but-still-a-big-concern.

3 **UNFCCC (2021)** Nationally determined contributions under the Paris Agreement. Revises synthesis report by the secretariat.
Available at: https://unfccc.int/sites/default/files/resource/cma2021_08rev01_adv.pdf.

4 **NOAA (2021)** It's official: July was Earth's hottest month on record.
Available at: https://www.noaa.gov/news/its-official-july-2021-was-earths-hottest-month-on-record.

5 **IPCC (2021)** AR 6 Climate Change 2021: The Physical Science Basis. Available at: https://www.ipcc.ch/report/ar6/wg1/.

6 **IEA (2021)** World Energy Outlook 2021. Available at: https://www.iea.org/reports/world-energy-outlook-2021.

7 **Carney, M. (2015)** Breaking the tragedy of the horizon – climate change and financial stability.
Available at: https://www.bis.org/review/r151009a.pdf.

8 **Fossil Fuel Treaty (2021)** Endorsements. Available at: https://fossilfueltreaty.org/endorsements.

9 **UNFCCC (2021)** Race To Zero Campaign. Available at: https://unfccc.int/climate-action/race-to-zero-campaign.

10 **UNEP (2021)** 'Emissions Gap Report 2021: The Heat Is On – A World of Climate Promises Not Yet Delivered'.
Available at: https://www.unep.org/resources/emissions-gap-report-2021.

11 **IEA (2021)** 'Global Energy Review 2021'. Available at: https://www.iea.org/reports/global-energy-review-2021.

12 **IRENA (2021)** 'Renewable Capacity Statistics 2021'.
Available at: https://www.irena.org/publications/2021/March/Renewable-Capacity-Statistics-2021.

13 **IRENA (2021)** 'Renewable Power Generation Costs in 2020'.
Available at: https://www.irena.org/publications/2021/Jun/Renewable-Power-Costs-in-2020.

14 **IEA (2020)** 'Energy Efficiency Report 2020'. Available at: https://www.iea.org/reports/energy-efficiency-2020.

15 **EC (2021)** 'State of the Energy Union 2021: Renewables overtake fossil fuels as the EU's main power source'.
Available at: https://ec.europa.eu/commission/presscorner/detail/en/ip_21_5554.

16 See note 10 above.

17 **Höhne, N. et al. (2021)** 'Wave of net zero emission targets opens window to meeting the Paris Agreement', Nature Climate Change, 11(10), pp. 820–822. doi: 10.1038/s41558-021-01142-2.

18 **Climate Action Tracker (2020)** Paris Agreement turning point: Wave of net zero targets reduces warming estimate to 2.1°C in 2100 - All eyes on 2030 targets. Climate Action Tracker (CAT). Available at: https://climateactiontracker.org/documents/829/CAT_2020-12-01_Briefing_Global-Update_Paris5Years_Dec2020.pdf?fbclid=IwAR2e_SHEJes6bml9Y1I8I_dM1KEqrLTtSyfXxWB3QbPi5e3TCZ7XH0ph2Co.

19 **Rogelj, J. et al. (2021)** 'Net-zero emissions targets are vague: three ways to fix', Nature 2021 591:7850, 591(7850), pp. 365–368. doi: 10.1038/d41586-021-00662-3.

20 **Smith, S. M. (2021)** 'A case for transparent net-zero carbon targets', Communications Earth & Environment, 2(1). doi: 10.1038/s43247-021-00095-w.

21 In a policy document or law.

22 **Hale, T. et al. (2021)** Net Zero Tracker. Available at: https://www.zerotracker.net/.

23 **Olivier, J. G. J. and Peters, J. A. H. W. (2020)** Trends in global CO_2 and total greenhouse gas emissions: 2019 report. The Hague, Netherlands: PBL Netherlands Environmental Assessment Agency. Available at: https://www.pbl.nl/sites/default/files/downloads/pbl-2020-trends-in-global-co2-and-total-greenhouse-gas-emissions-2019-report_4068.pdf.

24 **FAOSTAT (2021)** Land use emissions. Food and Agriculture Organization of the United Nations.
Available at: http://www.fao.org/faostat/en/#data/GL (Accessed: 10 May 2021).

25 **Black, R., Smith, S. and Hale, T. (2021)** 'Net zero: despite the greenwash, it's vital for tackling climate change', The Conversation, 10 May.
Available at: https://theconversation.com/net-zero-despite-the-greenwash-its-vital-for-tackling-climate-change-160329.

26 **Dubash, N. K. (2021)** 'Should India consider a "net-zero" climate pledge?', Environmentality, Centre for Policy Research, 17 February.
Available at: https://environmentality.cprindia.org/blog/should-india-consider-a-net-zero-climate-pledge.

27 The latest available data, which allows for comparison of all 60 countries plus the EU included in the CCPI 2022, dates back to 2019 for the quantitative index categories.

28 The CCPI takes into account a five-year linear trend (for CCPI 2022, the period 2014–2019).

29 The survey for the CCPI 2022 was carried out between September and October 2021. The results therefore cover recent policy developments until mid of October.

Annex

List of contributors to the climate policy evaluation

About 450 climate and energy experts contributed to this year's edition of the Climate Change Performance Index with their evaluation of national climate policies and international climate policy performance. The following national experts agreed to be mentioned as contributors to the policy evaluation of this year's CCPI:

Country	Name	Organisation
Algeria	Benadjila	
Argentina	Miguel Angel Rementeria & Roque Pedace	Foro del Buen Ayre CIMA
	Carlos Tanides	Fundación Vida Silvestre Argentina
Australia	Andrew Petersen	Sustainable Business Australia
	Richie Merzian & Alia Armistead	The Australian Institute
	Suzanne Harter & Gavan McFadzean	Australian Conservation Foundation
	Graeme McLeay & Dr. John Iser	Doctors for the Environment Australia
Austria	Klara Schenk, Jasmin Duregger, Christian Steiner	Greenpeace Österreich
		Forum Wissenschaft und Umwelt
	Karl Schellmann	WWF Austria
Belarus	Maria Falaleeva	Ecoproject
Belgium		Greenpeace, Bond Beter Leefmilieu, Inter Environnement Wallonie, WWF, Coalition Climat
Brazil	Andre Ferretti	Fundacao O Boticario/Observatorio do Clima
	Carlos Nobre	Institute of Advanced Studies
Bulgaria	Radostina Slavkova	Za Zemiata
		Greenpeace CEE – Bulgaria
Canada	Alain Brunel	AQLPA
	Eddy Perez	Climate Action Network
	Mitchell Beer	The Energy Mix
Chile	Nuria Hartmann	Hinicio Chile
	Sam Leiva	Fundación Heinrich Böll Stiftung Cono Sur.
	Teresita Alcántara	Municipios ante el Cambio Climatico
China	Lin Jiaqiao	Rock Environment and Energy Institute (REEI)
	Patrick Schröder	Chatham House
Chinese Taipei	Gloria K.-J. HSU	Mom Loves Taiwan Association
	Robin Winkler	Wild at Heart Legal Defense Association
	Dr. Ying-Shih Hsieh	Environmental Quality Protection Foundation
Columbia	Maria Laura Rojas & Giovanni Pabón	TRANSFORMA GLOBAL
Croatia		Society For Sustainable Development Design
Czech Republic	Jiri Jerabek	Greenpeace Czech Republic
	Karel Polanecký	Hnutí DUHA
Egypt	Mostafa Medhat	
	Riham Helmy	Envarious for development
EU	Sam Van den Plas	Carbon Market Watch
	Dora Petroula & Klaus Rohrig	Climate Action Network (CAN) Europe
Finland		Third Rock Finland Oy
France	Nicolas Berhmans	IDDRI
Germany	Björn Ecklundt & Malte Hentschke	Klima-Allianz
	Sebastian Scholz	NABU
	Eva Schmid & Manfred Treber	Germanwatch

Country	Name	Organisation
Greece	Dimitris Ibrahim	WWF Greece
	Nikos Mantzaris	The Green Tank
Hungary	Adam Harmat	WWF
	Dr. Béla Munkácsy	ELTE University
	András Lukács	Clean Air Action Group
	Judit Szegő	
India	Ranjan Panda	Combat Climate Change Network
	Sanjay Vashist	CAN South Asia
	Shruti Neelakantan	Dublin City University
	Srinivas Krishnaswamy	Vasudha Foundation
Indonesia	Dicky Edwin Hindarto	Green Partner Foundation
	Satrio Swandiko Prillianto	Greenpeace Indonesia
	Fabby Tumiwa & Erina Mursanti	IESR
Italy	Mauro Albrizio	Legambiente
	Gianni Silvestrini	Kyoto Club
Japan	Kimiko Hirata	Kiko Network
	Tetsu Iida	ISEP
	Yuri Okubo	Renewable Energy Institute
Kazakhstan	Rustam Nassirkhan	Zhasyl Damu
	Tsoy Sergey	EICON
Korea	Jieon Lee	Korea Federation for Environmental Movements
	Gahee Han	SFOC
Latvia	Laura Treimane	WWF Latvia
	Janis Brizga	Green Liberty (Zaļā brīvība)
Malaysia	Anthony Tan Kee Huat	Malaysian CSO SDG Alliance
Malta	Edward Mallia	Friends of the Earth
Mexico	José María Valenzuela	Institute for Science, Innovation and Society
	Pablo Ramírez	Greenpeace México
	Mariana Gutiérrez Grados & Analuz Presbítero García	Iniciativa Climática de México
Morocco	Hajar Khamlichi	Moroccan Alliance for Climate and Sustainable Development & CAN International
	Dr. Mohammed-Saïd Karrouk	Université Hassan II de Casablanca
	Dr. Saddik Mohammed	Association Homme & Environnement
	Yossef Ben Meir	High Atlas Foundation
		Association Ecologia pour l'éducation à l'environnement
Netherlands	Dr. Robert Koelemeijer	Netherlands Environmental Assessment Agency
	Sible Schöne	HIER
New Zealand	Amanda Larsson & Genevieve Toop	Greenpeace NZ
		WWF-NZ
	David Tong	Oil Change International
		Lawyers for Climate Action New Zealand Inc
Norway	Aled Dilwyn Fisher	Friends of the Earth Norway (Naturvernforbundet)
	Christoffer Klyve, Johan Reinertsen, Ida Thomasson	FIOH

Country	Name	Organisation
Philippines	Antonio Gabriel La Viña	Energy Collaboratory Director, Manila Observatory
	Riedo Panaligan	Center for Renewable Energy and Sustainable Technology
	Angela Ibay	WWF Philippines
	Aya de Leon	Parabukas
	John Leo Algo	Living Laudato Si' Philippines
	Rodne Galicha	Aksyon Klima Pilipinas Network
	Bert Dalusung, Golda Hilario, Mila Jude & Pete Maniego	Institute for Climate and Sustainable Cities (ICSC)
Poland	Andrzej Ancygier	Climate Analytics
	Andrzej Kassenberg	Institute for Sustainable Development
	Wojciech Szymalski	Institute for Sustainable Development
Portugal	Catarina Grilo	ANP|WWF
	Laura Carvalho	Quercus ANCN
	Francisco Ferreira & Pedro Nunes	ZERO - Associação Sistema Terrestre Sustentável
Romania	Laura Nazare	Bankwatch Romania
	Radu Dudau	Energy Policy Group
Russian Federation	Bliznetskaya Ekaterina	CarbonLab
	Vasily Yablokov	Greenpeace Russia
	Vladimir Chuprov	Greenpeace
Saudi Arabia	Eisa Qahtan & Khaldoon Aziz	
	Sarah Alharthey	Alstom Transport
Slovenia	Barbara Kvac	Focus Association for Sustainable Development
		Umanotera, The Slovenian Foundation for Sustainable Development
South Africa	Tina Schubert	Project 90 by 2030
	James Reeler & Prabhat Upadhyaya	WWF South Africa
Spain	Begoña María-Tomé Gil	ISTAS
	Josep Puig i Boix	Group of Scientists and Engineers for a Non Nuclear Future
Switzerland	Georg Klingler Heiligtag	Greenpeace Switzerland
Thailand	Boonrod Yaowapruek	The Creagy
	Tara Buakamsri	Greenpeace Southeast Asia
		Climate Groups
Turkey	Önder Algedik	Climate, Energy and Environment Research Association
	Özlem Katısöz	Climate Action Network (CAN) Europe
	Nuray Çaltı	Climate Change Policy and Research Association (CCPRA)
	Özgür Gürbüz	Eksofer
Ukraine		Ecoclub NGO
	Oksana Aliieva	Heinrich Boell Foundation
		Ukrainian Climate Network
United Kingdom	Caterina Brandmayr	Green Alliance
	Christoph v. Friedeburg	Christoph v. Friedeburg, CF Energy Research & Consulting UG
United States	Christoph v. Friedeburg	Christoph v. Friedeburg, CF Energy Research & Consulting UG
	Christina DeConcini	World Resources Institute
Viet Nam	Lars Blume	Climate and Energy Consultant for SEA

Germanwatch

Following the motto of *Observing. Analysing. Acting.* Germanwatch has been actively promoting global equity and livelihood preservation since 1991. We focus on the politics and economics of the Global North and their worldwide consequences. The situation of marginalised people in the Global South is the starting point for our work. Together with our members and supporters, and with other actors in civil society, we strive to serve as a strong lobbying force for sustainable development. We aim at our goals by advocating for prevention of dangerous climate change and its negative impacts, for guaranteeing food security, and for corporate compliance with human rights standards.

Germanwatch is funded by membership fees, donations, programme funding from Stiftung Zukunftsfaehigkeit (Foundation for Sustainability), and grants from public and private donors.

You can also help us to achieve our goals by becoming a member or by making a donation via the following account:

Bank fuer Sozialwirtschaft AG
BIC/Swift: BFSWDE33BER
IBAN: DE33 1002 0500 0003 2123 00

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

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.

www.climatenetwork.org

CAN CLIMATE ACTION NETWORK

GERMANWATCH

NEW CLIMATE INSTITUTE