



Climate Action Tracker

Global update

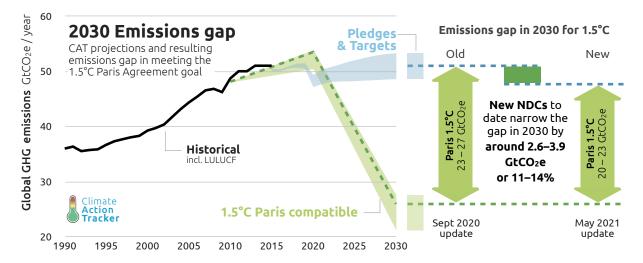
September 2021



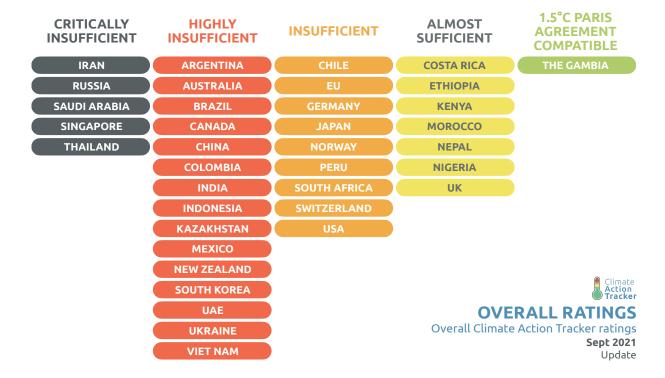


Summary

- Code red: The new IPCC report on climate science has reinforced the absolute urgency of closing the 2030 emissions gap if there is to be any chance of limiting warming to 1.5°C. While people are suffering from ever more severe and frequent impacts of climate change around the globe, and the IPCC has yet again clearly demonstrated the feasibility and urgency of climate change mitigation, action to reduce greenhouse gas emissions continues to lag behind what is needed in practically all countries and sectors. International climate finance to support action in developing countries is falling short. Even countries with strong targets are mostly not on track to meet them, while more have failed to bring forward stronger commitments for 2030.
- Gap narrowed only slowly: NDC updates submitted so far in 2020–2021 have narrowed the gap to what is needed for 1.5°C only by up to around 4 GtCO₂e, or up to 15%. Of particular concern are governments Australia, Brazil, Indonesia Mexico, New Zealand, Russia, Singapore, Switzerland and Viet Nam that have failed to lift ambition at all they have submitted the same or even less ambitious 2030 targets than they had put forward in 2015. These countries need to rethink their choice. There are still over 70 countries that have yet to submit an updated target.



- The new comprehensive CAT rating system reveals a few lone frontrunners, but most government targets and actions remain highly or critically insufficient. For domestic action, only one developed country has a domestic target that is rated under the CAT's new rating system as "1.5°C compatible" (UK), and some are close (EU, Germany, Norway). Domestic targets are, however, only one dimension of the actions needed for Paris compatibility. None of these governments have put forward sufficient international climate finance which is absolutely essential for ambitious action in those developing countries needing support to reduce emissions nor do they have sufficient policies in place. As a consequence, the EU, Germany and Norway are rated as "Insufficient" in the new overall CAT rating, whilst the UK is slightly better rated as "Almost sufficient". Only one country a developing country The Gambia scored an overall 1.5 degree compatibility in the new CAT rating system launched with this update.
- More targets and actions are needed: almost all developed countries need to further strengthen their targets to reduce emissions as fast as possible, to implement national policies to meet them, and to support more developing countries to make the transition. Developing countries also need to update their targets and policies, but also show a pathway for how they could also reduce their emissions as fast as possible if they were supported financially and to clearly indicate the support they need.



- Positive developments need to urgently be scaled up: some countries have significantly updated their targets and implemented new policies (USA, EU, Germany). Such positive movements need to urgently be followed by all other countries. Governments need to take advantage of the drop in renewable energy and storage costs and ramp up their installation. They must cancel their coal construction plans, and drop plans and funding for gas pipelines and new terminals.
- The most important target date is 2030, by which time global emissions must be cut by 50%, and governments are nowhere near this. We estimate that with current actions global emissions will be at roughly today's level in 2030, we would be emitting twice as much as required for the 1.5°C limit.
- The wave of national mid-century net zero targets give reasons for hope, but will fail without sufficient 2030 reductions. There needs to be alignment between 2030 targets and net zero goals for the latter to be believable. Our assessment shows that most net zero targets are formulated vaguely and do not yet conform with good practice. Robust short-term targets and pathways towards achieving them are required to fully realise their ambition. If fully implemented, the net zero targets on the table, in combination with the 2030 goals on the table so far, could reduce global temperature increase to around 2.0°C in the CAT optimistic case, based on our briefing from May 2021.

Table of Contents

Su	ımmary	i	i
1	Introd	uction1	J
2	Recen	t developments in climate action1	l
	2.1	NDC updates	I
	2.2		
		Policy developments	
3	New C	limate Action Tracker rating system7	7
	3.1	Overall "Critically insufficient"	3
	3.2	Overall "Highly insufficient"	3
	3.3	Overall "Insufficient"	3
		Overall "Almost sufficient"	
	3.5	Overall "1.5°C Paris Agreement compatible")
Αı	nnex 1	Detailed overview of net zero target assessments12	<u>></u>
Αı	nnex 2	Rating details: what does the change in the CAT rating update mean for countries?.14	Ļ
Αı	nnex 3	Detailed overview of climate finance assessments20)

Introduction

The first tranche of the IPCC Sixth Assessment Report clearly states that this decade is our last chance to keep 1.5°C alive. The IPCC is clear that getting onto a 1.5°C pathway means reducing emissions by 50% by 2030. It also noted that not only is this possible, but will produce real time benefits, reduce warming and air pollution. The impacts, some of which we are already experiencing at 1.2°C today, illustrate the urgency of sticking to this limit.

The IPCC also shows how closely the observed temperature increase links to human activity, with more clarity than in any previous report. The means to control climate change are already within reach. Limiting global temperature increase to 1.5°C is no longer a matter of feasibility, but rather one of political will.

The global consensus around the need for climate action has grown, even among previously sceptical political forces. This has already resulted in several new climate change mitigation targets and policies.

The CAT scrutinises the impact of updated targets and policies on greenhouse gas emissions. In this briefing, we introduce our new rating methodology, which now rates more elements than before – mitigation targets in Nationally Determined Contributions (NDCs), policies and action, and climate finance. We've also added a methodology for assessing net zero targets.

This briefing provides an overview of the development in climate action over the last year and illustrates the new CAT assessment of the countries we analyse, based on our updated method.

Recent developments in climate action

2.1 NDC updates

The Paris Agreement required national governments to update or provide new "nationally determined contributions" (NDCs) by the end of 2020, but the pandemic and the postponement of COP26 effectively extended the deadline by a year. So far, the update process provides a mixed picture of some countries increasing their targets, some not, and some not even yet having submitted (Figure 1) leaving a gigantic gap (Figure 3).

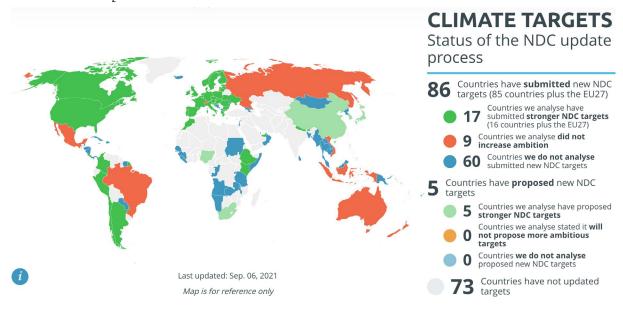
So far close to 90 countries plus the EU27 have submitted new or updated NDCs, which cover roughly half of global greenhouse gas emissions. A handful of countries have proposed new and more ambitious targets, but have not submitted them officially, among them China, which accounts for 25% of global emissions. This leaves over 70 countries that have not yet submitted anything, covering around one quarter of global greenhouse gas emissions. From the G20, India, Saudi Arabia and Turkey have not made a new submission. Turkey has also still not ratified the Paris Agreement.

Governments that have increased the ambition of their targets with an official submission include the **USA and the EU**. Others, such as **China and Japan**, have proposed new targets, but have not yet officially submitted them to the Paris Agreement. Together, these targets would reduce the level of emissions that we expect in 2030 by up to around 4 GtCO₂e (Figure 2). Governments with more ambitious proposed or updated NDCs since our last update in May 2021 include Bhutan, Morocco, South Korea, Nigeria.

Several countries still fail to align with neither the spirit nor the science of the Paris Agreement to progressively increase ambition. Many have simply resubmitted former targets, have proposed targets leading to the same - or even a lower - level of ambition than the first NDC target, or have submitted new targets they can easily achieve with existing policies. These include:

- **Brazil and Mexico**: submitted the same numerical targets. However, changes to their baseline assumptions result in weaker mitigation efforts overall.
- **Russia and Viet Nam**: updates appear stronger on paper but o not constitute a meaningful change, as they can easily be met with policies in place.
- Australia and Indonesia: simply recommunicated their original, insufficient, NDCs.
- **Singapore**: improved the architecture of its targets (moving to an absolute emissions level), but did not increase its target.
- **Switzerland**: increased the domestic component of its NDC, but not the overall target.
- New Zealand: submitted its original NDC target but has committed to submitting a stronger one this year, but has deployed a discredited emissions accounting architecture.

As a result of all new NDCs, the emissions gap between a 1.5°C Paris-compatible pathway and the emissions level based on all NDCs in 2030 has only been decreased by around 4 $GtCO_2e$, leaving a gap of 20 to 23 $GtCO_2e$ (Figure 3).



55.2% GLOBAL EMISSIONS COVERED BY NEW NDC SUBMISSIONS

42.7% GLOBAL POPULATION COVERED BY NEW NDC SUBMISSIONS

COUNTRIES WE ANALYSE

SUBMITTED A STRONGER TARGET		STRONGER NDC RGET		INCREASE TION*	WILL NOT PROPOSE A MORE AMBITIOUS TARGET
ARGENTINA MORO BHUTAN NEPA CANADA NORM CHILE PER COLOMBIA UAI COSTA RICA UKRA ETHIOPIA UNIT EU KINGD KENYA USA	AL JAPAN VAY NIGERIA U E IINE ED DOM	SOUTH AFRICA SOUTH KOREA	AUSTRALIA BRAZIL INDONESIA MEXICO NEW ZEALAND	RUSSIAN FEDERATION SINGAPORE SWITZERLAND VIET NAM	

Figure 1 Overview of updates and new NDCs in the 2020/21 update round as of 6 September 2021. <u>See Climate Target Update Tracker</u> for more information.

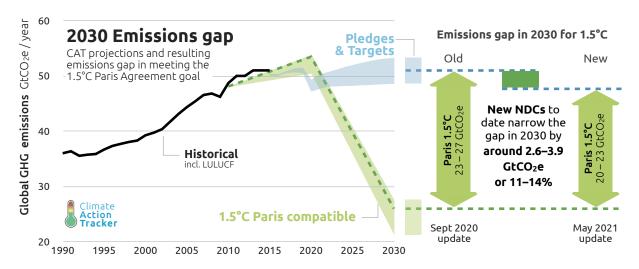


Figure 2 Impact of recent NDC announcements and submissions since September 2020 on the reduction in the 2030 emissions gap (status May 2021, but no significant changes visible of this scale since).

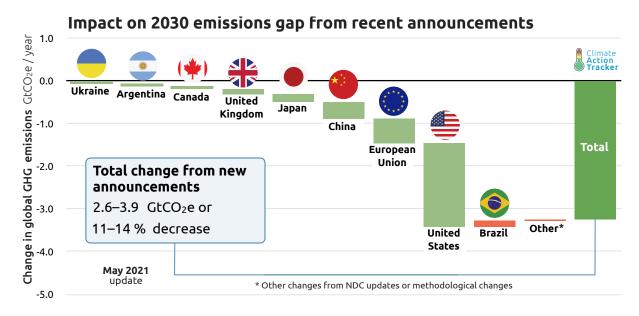


Figure 3 Comparison of emissions gap in 2030 for 1.5°C compatible scenario based on CAT analysis in September 2020 and May 2021. There have been no significant changes since May 2021 that would be visible on this scale above.

2.2

In-depth evaluation of national net zero targets

<u>Analysis by the Climate Action Tracker (CAT) in May 2021</u> showed that, if fully implemented, government net zero targets can make a substantial dent in future warming levels, but also warned that steep near-term mitigation efforts are needed to make that feasible.

Our assessment found that global warming by 2100 could be limited to 2.0°C if all 131 net zero targets announced or under consideration (but not yet submitted to the UNFCCC) were to be achieved. While this is still far from 1.5°C, it stands in stark contrast to the expected global warming levels under submitted Paris Agreement targets and pledges (2.4°C) and currently implemented policies (2.9°C).

There are many uncertainties in estimating the impact of net zero targets, not least because underlying assumptions may not be clear, the targets may not be comprehensive, or their legal status and likelihood of being fully implemented are uncertain.

As part of this update, the CAT has published net zero target evaluations for all G20 members and selected other countries applying its <u>recently published</u> evaluation methodology (Table 1). A complete overview for the in-depth assessment of all elements for each net zero target can be found in the Annex (Table 2).

Table 1 Overview of Climate Action Tracker's net zero target evaluations for G20 member countries (excluding France and Italy as both not separately analysed by the CAT) and selected other countries (Chile, Colombia, Costa Rica, Iran, New Zealand, Nigeria, Thailand) as of September 2021.

CAT net zero evaluation	Country
Acceptable	Chile, Costa Rica, EU27
Average	Canada, Germany, United Kingdom
Poor	Japan, New Zealand, South Korea
Information incomplete	Argentina, Brazil, China, Colombia, Nigeria, South Africa, USA
No target	Australia, India, Indonesia, Iran, Mexico, Russian Federation, Saudi Arabia, Thailand, Turkey

These evaluations aim to provide nuanced assessment of incoming national net zero targets to understand their scope, architecture, and transparency. Without such scrutiny, there is a risk that poorly backed up net zero claims could render these targets meaningless.

The net zero target assessments reveal heterogeneity in terms of scope, architecture, and transparency of net zero targets adopted and announced as of September 2021. 16 out of 25 countries assessed to date either have no net zero target at all, or only provide incomplete information, including 12 of the G20 member countries analysed.

Chile, Costa Rica, and the European Union are the only governments with a net zero target that we consider currently "acceptable" in terms of scope, architecture, and transparency, taking into account all available information to date¹. These targets are accompanied by transparent assumptions on the role of carbon dioxide removals and comprehensive plans for how they will be achieved. These three governments explicitly state that they will achieve net zero emissions within their own borders. Most other net zero targets announced or under consideration lack details on these issues.

¹ Please note that our evaluation currently does not analyse governments' net zero target years and whether these are compatible with the Paris Agreement's temperature limit. Such evaluation requires a robust estimation of feasible emissions and removals trajectories for individual countries domestically. Our <u>recently published evaluation methodology</u> of June 2021 provides more detailed explanation on these evaluation limitations.

The **European Union** and the **United Kingdom** (evaluated as "average") are the only two governments to include emissions from international aviation and shipping in their net zero target.

We evaluate the net zero targets of **Japan, New Zealand** and **South Korea** as "poor" as these lack transparency on several elements, which the CAT considers good practice (see Figure 4). Specifically, New Zealand's and South Korea's target cover less than 95% of all emissions, and New Zealand relies heavily on its highly uncertain forestry sink to reach its target.

The <u>CAT country analyses</u> provide more country-specific detail for all assessment presented Table 1 (and Table 2 in the Annex). We will continuously update the evaluations of all net zero targets for the 40 countries, totalling around 80% of today's global emissions, that we regularly cover in our country assessments, by COP26.



Figure 4 Identified good practice for all ten key elements in the Climate Action Tracker's evaluation methodology for countries' net zero targets.

2.3 Policy developments

We're seeing a mixed picture in terms of government climate policies. As we head toward COP26, the key date governments need to keep in focus is 2030, by which time the world needs to have halved emissions in order to get onto the 1.5°C pathway all governments signed up to in the Paris Agreement.

The **EU** has moved forward to design policies to meet its new 55% goal. The "fit for 55" programme includes a series of measures that, if fully implemented as proposed, could overachieve the 55% target. Member states, however, need to implement this action. The UK's new targets are positive, but it is far off having the policies to meet them.

In the **US**, President Biden's comprehensive proposals, if agreed, would see the most comprehensive climate effort the world's second largest emitter has ever undertaken. However, it remains to be seen what comes out of the convoluted negotiations in Congress on the two major pieces of legislation before it.

Coal remains a major issue of concern, particularly in the Asia region, where we see governments determined to maintain coal, despite the lower installation (and fuel) costs of renewable energy. While **China** has signalled it will move away from coal, in 2020 it built 75% of the world's new coal-fired power plants. **India** is continuing to build new coal plants, with the second largest coal plant pipeline in the world, with no concrete plans yet to phase it out.

Southeast Asian coal is also of concern, in particular **Indonesia**, and **Viet Nam**, followed closely by **Japan** and **South Korea**. For the world to get onto a 1.5°C compatible pathway, coal power needs to be phased out globally by 2040. The risk of these coal plants becoming stranded assets grows stronger by the day.

Following closely behind is **gas**, which is still - and falsely - being termed as a "bridging fuel" - but gas is still a fossil fuel, and still needs to be phased out as soon as possible. **Australia**, the world's largest gas exporter, is of particular concern, with the government investing money into new gas exploration. **Thailand** is working hard to get off coal, but plans to ramp up new gas. The EU is still planning to commit public funding to new gas infrastructure, and various member states are lobbying hard for the continued use of this fossil fuel.

Interest in green **hydrogen** (hydrogen produced from renewable energy) has grown exponentially in the last year as financial markets and governments focus on the challenges of decarbonisation and reaching net zero. The total pipeline of all hydrogen projects by 2030 has been estimated at about USD 500bn, but not all of these are "green" with some producing hydrogen from natural gas with carbon capture and storage technologies (so- called blue hydrogen). It is clear however hydrogen produced from fossil fuels still produces substantial CO_2 emissions and is inconsistent with reaching net zero.

In terms of **transport**, many car producers and almost all governments (with some key exceptions like Australia) are realising that the future is electric, and moving toward adopting policies to promote electric vehicles, with a range of phase-out dates for combustion engine passenger vehicles. Key to decarbonising the transport sector is decarbonising the electricity sector: the two are inextricably linked.

New Climate Action Tracker rating system

In this update, the CAT publishes our new rating methodology to assess together all necessary elements of a country's climate action. The new CAT rating system compares the absolute level of emissions assuming the NDC targets are reached - and the emissions resulting from national policies currently being implemented - to what our methodology says is cost-efficient and fair, and considers government contributions to climate finance (mitigation focus).

Both **policies and action**, and **targets**, are important – governments must do well on both to get a good rating. Both are given equal weight. Both the fair-share, which for developed countries include how much climate finance they are putting forward – as well as full decarbonisation perspectives – are important. Governments should do well in both spaces to provide their fair contribution and get on track toward full decarbonisation.

We also consider both unconditional targets and targets that are conditional on support by others.

More detail on the new rating methodology is available in the briefing on the new method and on our website. Subgratings and explanations of changes compare to previous ratings are provided in Annex 2.

The CAT now rates a total of 37 countries, of which four – Nigeria, Iran, Thailand, Colombia - are assessed for the first time.²

- Of the 37, only one The Gambia is rated as having overall climate action that is 1.5°C Paris Agreement compatible.
- In another seven, overall climate action is nearly sufficient, meaning they are not yet consistent with the Paris Agreement's 1.5°C temperature limit but could be with moderate improvements.
- This leaves three quarters of the countries that we assess, with significant gaps in climate action. This stands in contrast to the findings of the latest IPCC WG1 report, and the ever-increasing number and severity of extreme weather events around the globe and the lives of millions of people already threatened by the impacts of climate change today.

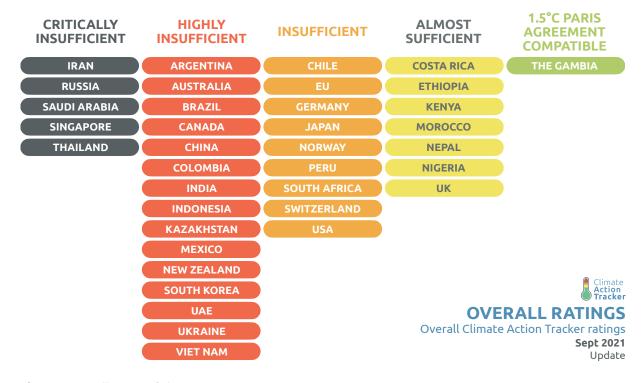


Figure 5 Overall rating of climate action

We will release the ratings under our new methodology for Bhutan, the Philippines and Turkey later this year.

The new rating system provides an overall rating, but also allows for a differentiated view of different essential elements of government climate action, such as the domestic mitigation targets, policies and action, and support for action internationally including climate finance. Our results show that in most cases countries perform consistently poorly across all categories:

Overall "Critically insufficient"

Iran, Russia, Saudi Arabia, Singapore, and Thailand perform so badly on climate action, that if all governments were to adopt this approach, global warming would reach beyond 4°C. A number of those countries even receive our "Critically insufficient" rating for every element we rate: Iran, Saudi Arabia, and Thailand. Some other countries rate "Critically insufficient" overall but show minimally better results and rate "Highly insufficient" for some elements: Russia and Singapore.

Most of these countries meet their self-set targets, but this is a sign of lax targets well above any realistic emissions pathway, rather than any policies and action. The countries in this group need to make a steep turn in climate action. With their signature on the Paris Agreement, Russia, Saudi Arabia, Singapore, and Thailand have committed to supporting climate action, and their current behaviour is a clear breach of the Agreement.

Iran is one of the few countries that has signed, but not yet ratified the Paris Agreement—the CAT rates Iran's Intended Nationally Determined Contribution (INDC) as its mitigation target, which it submitted before the Paris Agreement was adopted.

Overall "Highly insufficient"

A large group of 15 governments' climate action is rated overall as "Highly insufficient". **Argentina, Australia, Brazil, Canada, China, Colombia, India, Indonesia, Kazakhstan, South Korea, Mexico, New Zealand, Ukraine, United Arab Emirates and Viet Nam.** For most countries, all individual elements receive this rating, but in a few countries some individual components are rated critically insufficient or insufficient.

The only elements rated "Almost sufficient" in this group are the domestic targets of Canada and Kazakhstan and the policies of India. For Canada, the domestic targets are close to what modelled domestic pathways imply is a global cost-efficient solution, but their fair share contribution would require them to go much further, including by providing international support. Kazakhstan has a conditional target that transparently shows it aims to go well beyond its unconditional target with international support, and lands in the "Almost sufficient" category. India's policies are almost in line with their fair share, but India has not submitted a new NDC target and its current targets would lead to higher emissions than under current policies.

The countries in this group show some sign of effort for climate action but need to significantly ramp up this effort and expand it to all sectors and activities.

Overall "Insufficient"

Nine countries are rated "Insufficient", meaning their climate action is still not good enough to meet a 1.5 Paris compatible pathway. The developed countries in this group – **EU, Germany, Japan, Norway, Switzerland and USA** - implement policies that move their emissions in the direction of what is needed on their national territory, while not yet Paris compatible. EU and Germany are "Almost sufficient" in this category. This group's domestic emission targets are often even more ambitious (all these countries are "Almost sufficient" in this category) but fall far short of their fair share to global mitigation efforts (all these countries are "Insufficient" in this category). These countries need to further strengthen and mainstream their climate action nationally, and drastically ramp up support for developing countries.

Chile, Peru and South Africa have initiated actions and propose targets that are going in the right direction but are still not good enough to meet a 1.5 Paris compatible pathway and are rated "Insufficient". Peru and South Africa implement "Almost sufficient" policies but their targets are not aligned. Another push for climate action, with international support where needed, can turn actions of these countries into a comprehensive effort.

Overall "Almost sufficient"

We rate **Costa Rica, Ethiopia, Kenya, Morocco, Nepal, Nigeria and United Kingdom** "Almost sufficient". The climate action of the developing countries under this category is, in many cases, in line with their fair share of global mitigation efforts. These developing countries have contributed little to climate change, offer to make steps to reduce emissions, but often need financial support to implement comprehensive and impactful climate action.

To exploit further mitigation potential to become fully Paris compatible, and to benefit from the related social, environmental and economic effects, they need access to international financial support. These governments should set ambitious conditional targets and specify the support they need to meet them.

We note that Morocco and Nigeria's conditional targets are very close to the 1.5°C Paris Agreement compatible range. A small improvement of these conditional target would improve their overall rating to "1.5°C Paris Agreement compatible".

The UK is the only developed country currently rated better than "Insufficient", with a 1.5°C Paris Agreement compatible domestic target, in line with modelled domestic pathways, but currently implemented policies do not reach that level. If the UK implemented more ambitious policies to reach its domestic target and ramped up its climate finance contribution significantly, it could become "1.5°C Paris Agreement compatible".

Overall "1.5°C Paris Agreement compatible"

The Gambia is rated "1.5°C Paris Agreement compatible" overall. In addition to the actions of the developing countries in the "Almost sufficient" group, The Gambia has set ambitious conditional targets, that it suggests it will implement if financial support is made available. The Gambia needs to further specify the exact support it needs and receive sufficient climate finance to turn its targets into action.

A detailed look at individual elements

We rate **targets** both against the fair share and the modelled domestic pathways, to reflect different levels of international support needs or responsibilities and the required emissions reductions on the national territory of a country.

Are the NDCs a fair contribution to the global problem, considering the country's responsibility and capability? We find that only countries that contributed little or have low economic capability have proposed targets in line with their fair share (Figure 6). All developed countries often have used their fair emissions space in the past and therefore not only need to reduce their own emissions faster but also help others to do so (see also Figure 9).

Are NDCs in line with what physically needs to happen in the country irrespective of who pays? We measure this by rating targets against modelled domestic pathways: conditional targets for those countries that provide conditions and only the domestic part of the NDC for those countries that plan to achieve part of it outside of their territory (Figure 7). Of the developed countries only UK proposes reducing their own emissions to 1.5-degree compatible levels; all others fail to set ambitious enough targets for their own emissions. Of the developing countries, only The Gambia provides a proposal on how its emissions could be reduced to 1.5°C compatible degree levels if it received support to do so.

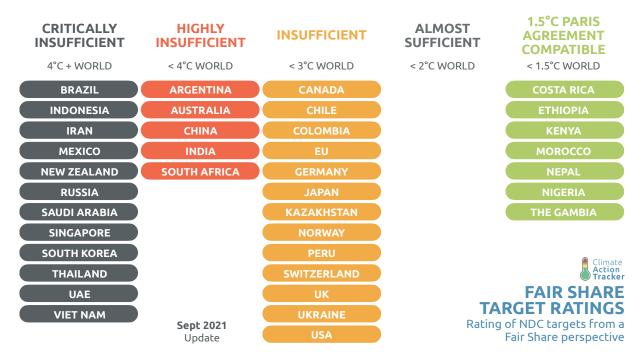


Figure 6 NDCs from a fair share perspective: Rating of the NDC against fair share (unconditional NDC for those countries that provide conditions, international NDC for those countries that plan to achieve part of it outside of their territory). Note that this should be read in combination with the climate finance rating.

For our **policies and action** rating, we use the rating framework that is more beneficial to the country, and compare it to absolute emissions levels in 2030 after policies and action. Only seven countries achieve a 1.5°C Paris compatible rating for their policies and action, and another six an "Almost sufficient" rating (Figure 8). This means that action on the ground is too little in the large majority of the countries we analyse.

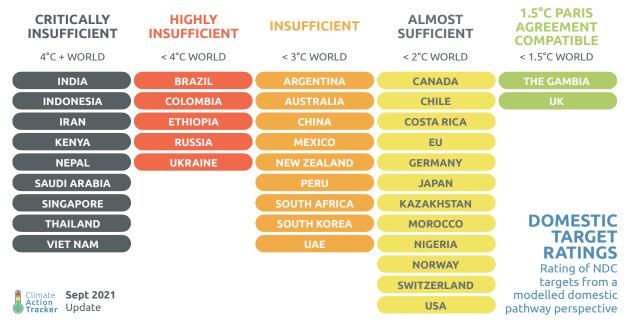


Figure 7 NDCs from the perspective of what needs to happen in the country with support if appropriate: Rating of the NDC against modelled domestic pathways (conditional NDC for those countries that provide conditions, only the domestic part of the NDC for those countries that plan to achieve part of it outside of their territory)

Note that in earlier briefings we evaluated the progress of policy making in recent years.

CRITICALLY INSUFFICIENT	HIGHLY INSUFFICIENT	INSUFFICIENT	ALMOST SUFFICIENT	1.5°C PARIS AGREEMENT COMPATIBLE			
4°C + WORLD	< 4°C WORLD	D < 3°C WORLD < 2°C WO		< 1.5°C WORLD			
IRAN	ARGENTINA	AUSTRALIA	EU	COSTA RICA			
SAUDI ARABIA	CANADA	BRAZIL	GERMANY	ETHIOPIA			
THAILAND	KAZAKHSTAN	CHILE	INDIA	KENYA			
(MEXICO	CHINA	PERU	MOROCCO			
(NEW ZEALAND	COLOMBIA	SOUTH AFRICA	NEPAL			
(RUSSIA	INDONESIA	UK	NIGERIA			
(SINGAPORE	JAPAN		THE GAMBIA			
(SOUTH KOREA	NORWAY					
(UKRAINE	SWITZERLAND					
		UAE	POLIC	CIES & ACTION			
Climate Sept 2021		USA	Rating has	RATINGS sed on current policies			
Climate Sept 2021 Action Update		VIET NAM	Racing bas	and real world action			

Figure 8 Policies and actions rating (against fair share or modelled domestic pathways, whichever is better)

We separately assess **climate finance** for Annex I countries with sufficient information. A positive climate finance rating can improve countries' "fair share rating". We've assessed climate finance for 11 of the countries we analyse, and of those, none is even close to 1.5°C compatibility. Governments need to urgently ramp up their climate finance and phase out any support for fossil fuels, to enable transformative climate action around the globe.

In the absence of a system for governments to commit to specific levels of climate finance in the future, in the same way they commit to reducing their emissions by 2030, the present rating system has to rely on recent historical contributions. We also check the trend in past contributions, plans for the future and counterproductive international finance that increases emissions.

The development of a more serious approach to commitments to international climate finance to make the Paris Agreement 1.5°C limit appears to be an essential necessary development in the near future.

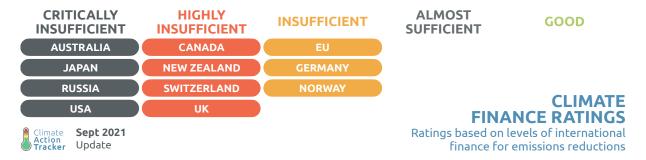


Figure 9 Climate finance rating (only applied to Annex I countries with sufficient information)



Annex 1 – Detailed overview of net zero target assessments

Table 2 Overview of Climate Action Tracker's net zero target evaluations for G20 member countries (excluding France and Italy as both not separately analysed by the CAT) and selected other countries (Chile, Colombia, Costa Rica, Iran, New Zealand, Nigeria, Thailand) per key elements as of September 2021.

Rating the comprehensiveness of national net zero target design			N	let zer	o t <u>arg</u>	et <u>des</u>	ign el	em <u>ent</u>	ts							
		1	2	3	4	5	6	7	8	9	10					
Country	Rating	Target year	Emissions coverage	International aviation and shipping	Reductions or removals outside of own border	Legal status	Separate reduction & removal targets	Review process	Carbon dioxide removal	Comprehensive planning	Clarity on fairness of target					
EU	ACCEPTABLE	2050	②	Θ	\odot	\odot	(X)	\bigcirc	②	\bigcirc	(X)					
Chile	ACCEPTABLE	2050	②	(X)	\bigcirc	Θ	②	Θ	②	\bigcirc	(8)					
Costa Rica	ACCEPTABLE	2050	\odot	(8)	\odot	Θ	\bigcirc	Θ	\bigcirc	\odot	8					
Germany	AVERAGE	2045	\odot	lacksquare	(X)	\bigcirc	\odot	\bigcirc	lacksquare	Θ	Θ					
UK	AVERAGE	2050	\odot	\bigcirc	(X)	\bigcirc	(X)	②	(8)	Θ	Θ					
Canada	AVERAGE	2050	\odot	lacksquare	\odot	\bigcirc	lacksquare	\bigcirc	\odot	Θ	(8)					
Japan	POOR	2050	\odot	(8)	(X)	\bigcirc	(X)	②	(8)	Θ	(8)					
New Zealand	POOR	2050	(8)	(X)	(X)	\bigcirc	(X)	②	(X)	Θ	(8)					
South Korea	POOR	2050	\odot	(8)	(X)	\bigcirc	(X)	Θ	(8)	Θ	(X)					
USA	INFORMATION INCOMPLETE	2050	\odot	?	?		?	?	?	Θ	?					
China	INFORMATION INCOMPLETE	before 2060	\odot	?	?	Θ	?	?	?	?	?					
South Africa	INFORMATION INCOMPLETE	2050	\odot	?	?	Θ	?	?	?	?	?					
Nigeria	INFORMATION INCOMPLETE	ASAP After 2050	?	?	?	Θ	?	?	?	?	?					
Argentina	INFORMATION INCOMPLETE	2050	(X)	?	?	Θ	?	?	?	?	?					
Brazil	INFORMATION INCOMPLETE	2050	?	?	?	Θ	?	?	?	?	?					
Colombia	INFORMATION INCOMPLETE	2050	?	?	?	?	?	?	?	?	?					

Rating the comprehensiv	eness of	Net zero target design elements 1 2 3 4 5 6 7 8 9 10											
national net zero target design						(<u>*</u>)		(iii)	(4)	(%)			
Country	Rating	Target year (Emissions (coverage	International aviation and shipping	Reductions or removals outside of own border	Legal status (Separate reduction & removal targets	Review process (Carbon dioxide (removal	Comprehensive (planning)	Clarity on fairness (
Australia	NO TARGET					1. 1	1	,	. , .				
Australia	-	Not applicable as no target existing											
India	-	Not applicable as no target existing											
Indonesia	NO TARGET	-	Not applicable as no target existing										
Iran	NO TARGET	-	Not applicable as no target existing										
Mexico	NO TARGET	-			Not	ıpplicab	le as no l	target ex	xisting				
Russia	-	Not applicable as no target existing											
Saudi Arabia NO TARGET		-	Not applicable as no target existing										
Thailand	NO TARGET	-			Not	ıpplicab	le as no l	target ex	xisting				

Not applicable as no target existing

NO TARGET

Turkey



Annex 2 – Rating details: what does the change in the CAT rating update mean for countries?

Table 3 shows the current overall rating for each country³, as well as the rating before the we updated our methods. Note that this rating takes data from our previous update, where not only our method has changed since then, but also in some cases NDCs and policies. Also note that the rating categories have slightly changed: we dropped the category "Role model" and changed "2°C compatible" to "Almost sufficient".

Table 3 Overview of the change in ratings from the previous rating in Novemebr 2020 (under the old rating system) and the new overall rating (under the newly update system), current to September 2021.

Country	Previous rating Nov 2020	New overall rating Sept 2021 - under new system
The Gambia	1.5°C PARIS AGREEMENT COMPATIBLE	1.5°C PARIS AGREEMENT COMPATIBLE
1 огоссо	1.5°C PARIS AGREEMENT COMPATIBLE	ALMOST SUFFICIENT
osta Rica	ALMOST SUFFICIENT	ALMOST SUFFICIENT
thiopia ————	ALMOST SUFFICIENT	ALMOST SUFFICIENT
enya	ALMOST SUFFICIENT	ALMOST SUFFICIENT
κ	INSUFFICIENT	ALMOST SUFFICIENT
igeria ————	New CAT country	ALMOST SUFFICIENT
epal —	NOT RATED	ALMOST SUFFICIENT
hile ———	INSUFFICIENT	INSUFFICIENT
U ————	INSUFFICIENT	INSUFFICIENT
orway	INSUFFICIENT	INSUFFICIENT
eru ———	INSUFFICIENT	INSUFFICIENT
witzerland —	INSUFFICIENT	INSUFFICIENT
ermany	HIGHLY INSUFFICIENT	INSUFFICIENT
apan —————	HIGHLY INSUFFICIENT	INSUFFICIENT
outh Africa ———	HIGHLY INSUFFICIENT	INSUFFICIENT
SA	CRITICALLY INSUFFICIENT	INSUFFICIENT
dia ———	ALMOST SUFFICIENT	HIGHLY INSUFFICIENT
ustralia	INSUFFICIENT	HIGHLY INSUFFICIENT
razil ————	INSUFFICIENT	HIGHLY INSUFFICIENT
anada —————	INSUFFICIENT	HIGHLY INSUFFICIENT
azakhstan —	INSUFFICIENT	HIGHLY INSUFFICIENT
exico —	INSUFFICIENT	HIGHLY INSUFFICIENT
ew Zealand	INSUFFICIENT	HIGHLY INSUFFICIENT
hina ————	HIGHLY INSUFFICIENT	HIGHLY INSUFFICIENT
donesia	HIGHLY INSUFFICIENT	HIGHLY INSUFFICIENT
outh Korea	HIGHLY INSUFFICIENT	HIGHLY INSUFFICIENT
AE	HIGHLY INSUFFICIENT	HIGHLY INSUFFICIENT
rgentina —	CRITICALLY INSUFFICIENT	HIGHLY INSUFFICIENT
kraine ————	CRITICALLY INSUFFICIENT	HIGHLY INSUFFICIENT
iet Nam	CRITICALLY INSUFFICIENT	HIGHLY INSUFFICIENT
olombia ————	New CAT country	HIGHLY INSUFFICIENT
пдароге ————	HIGHLY INSUFFICIENT	CRITICALLY INSUFFICIENT
ussia —	CRITICALLY INSUFFICIENT	CRITICALLY INSUFFICIENT
audi Arabia ———	CRITICALLY INSUFFICIENT	CRITICALLY INSUFFICIENT
an ————	New CAT country	CRITICALLY INSUFFICIENT
hailand ————	New CAT country	CRITICALLY INSUFFICIENT

Table 4 shows the details of the overall CAT rating and individual elements for each country. For the countries where there are changes in the rating, or where there are no changes in spite of a substantial update of the NDC, we provide further explanations below.

Table 4 Overview of Climate Action Tracker's overall rating and rating components

Country	Climate Action Tracker Overall rating	Rating components			Addit		
	Sept 2021 Update Combined rating based on a new system	Policies & action	Domestic or supported target	Fair Share target	Climate finance	Land use & forestry	Net zero target
The Gambia	1.5°C PARIS AGREEMENT COMPATIBLE						
Costa Rica	ALMOST SUFFICIENT	—					
Могоссо	ALMOST SUFFICIENT	—					
Nigeria ———	ALMOST SUFFICIENT	_					
Ethiopia —	ALMOST SUFFICIENT						
UK	ALMOST SUFFICIENT						
Kenya	ALMOST SUFFICIENT						
Nepal ———	ALMOST SUFFICIENT						
EU	INSUFFICIENT						
Germany —	INSUFFICIENT						
Chile —	INSUFFICIENT						
Japan ———	INSUFFICIENT						
Norway	INSUFFICIENT						
Реги	INSUFFICIENT						
Switzerland —	INSUFFICIENT						
USA —	INSUFFICIENT						
South Africa —	INSUFFICIENT						
Canada ———	HIGHLY INSUFFICIENT						
Kazakhstan —	HIGHLY INSUFFICIENT						
Australia ——	HIGHLY INSUFFICIENT						
China ———	HIGHLY INSUFFICIENT						
Colombia —	HIGHLY INSUFFICIENT						
Argentina —	HIGHLY INSUFFICIENT						
India ———	HIGHLY INSUFFICIENT						
UAE	HIGHLY INSUFFICIENT						
Ukraine	HIGHLY INSUFFICIENT						
Brazil ————	HIGHLY INSUFFICIENT						
Mexico —	HIGHLY INSUFFICIENT						
New Zealand —	HIGHLY INSUFFICIENT						
South Korea	HIGHLY INSUFFICIENT						
Indonesia —	HIGHLY INSUFFICIENT						
Viet Nam	HIGHLY INSUFFICIENT						
Russia	CRITICALLY INSUFFICIENT						
Singapore ——	CRITICALLY INSUFFICIENT						
Iran ————	CRITICALLY INSUFFICIENT						
Saudi Arabia —	CRITICALLY INSUFFICIENT						
Thailand ———	CRITICALLY INSUFFICIENT						

This section explains the main drivers for the change in ratings. Please refer to the website for a detailed explanation of each country's rating.

In 2021, the CAT updated its fair share rating methodology to reflect the latest scientific literature. This update affected all fair share ranges and some country ratings.

Major improvements in the fair share methodology include:

- The latest equity studies from the literature have been included in our fair share rating assessment. We have also removed outdated studies, for example where a more recent study from the same authors is available.
- Equity studies in the literature are quite diverse, and differ heavily in the underlying assumptions, and the CAT aims to include as many studies as possible. However, to ensure the quality of the results, we filtered out selected equity studies with an incompatible sectoral scope (e.g., energy sector emissions only) or gas coverage (e.g., CO₂ emissions only). This ensures that the CAT fair share ranges represent the literature on a comparable scope.
- Fair share allocations quantified directly by CAT were updated to the latest available baseline scenarios (SSP2 RCP85) and the latest sustainable 1.5°C-compatible global scenarios.
- The definition of the fair share range has changed to limit the possible influence of a small number of extreme studies. The new data set is weighted in a way that different types of equity approaches contribute similarly to the overall fair share range. The range is defined as the inner 90% (excluding 5% on each extreme) of studies in the weighted data set.
- Finally, we adapted the temperature categories for 2°C, 3°C and 4°C so that the projected global warming is likely (66% change) to be below those levels. This is now more consistent with other components of the CAT, such as our global temperature ratings. In the old rating methodology, all temperature levels were computed for a 50% chance to be below. The 1.5°C temperature level is remains defined as a 50% change to be below this level in 2100 since this is closely consistent with definitions in the IPCC Special Report of 1.5°C.

Countries where the rating improved and why

Argentina: the CAT considers Argentina's updated NDC, which strengthens its previous climate action targets for 2030. The new NDC target could have been rated "Insufficient" under the old rating framework. However, the update of our fair share calculations causes the required fair share contribution of Argentina to result in lower emissions levels than previously, because the new methods result in a more stringent upper bound. Previously, a few studies had a strong impact on the upper end of the effort-sharing range, which are less influential in the new methodology. The lower end of the effort range is quite low, due to equity studies based on Argentina's historical capabilities and responsibility. Argentina's fair share temperature ranges do not reflect current economic circumstances. As a result, Argentina's NDC rates "Highly insufficient" against its fair share contribution. Policies and action also rate "Highly insufficient" – against modelled domestic pathways.

Germany: the CAT takes into account Germany's updated national climate target for 2030, which strengthens its previous climate action targets for 2030. As a result, Germany rates "Insufficient" against its fair share contribution, rather than "Highly insufficient" as was previously the case.

Japan: the CAT considers Japan's updated national climate target for 2030, which strengthens its previous climate action targets for 2030, and places it clearly in the "Insufficient" rating category when compared to Japan's fair share contribution. When compared to required efforts on national territory (modelled domestic pathways), the updated target even rates "Almost sufficient". The update of our fair share calculations for Japan leads to slightly higher emissions levels for the 1.5°C compatible fair share contribution. In the previous assessment, the lower bound of Japan's fair share range was mainly influenced by studies in a single category (responsibility, capability need). The new method gives more equal weighting to the different categories of fair share approaches and leads to a comparably higher, but still negative, lower bound of the fair share range.

³ We will release the ratings under our new methodology for Bhutan, the Philippines and Turkey later this year.

South Africa: South Africa's 2030 NDC target has a large range, of which we rate the upper end, because reaching that would comply with the NDC. With policies and action, South Africa by far overachieves the upper end of its NDC target, getting close to the lower end of the range and landing in the "Almost sufficient" range when compared to modelled domestic pathways. Our previous method did not consider the policies and actions in the rating, and this change in the approach causes South Africa's rating to improve from "Highly insufficient" to overall "Insufficient".

Ukraine: the CAT considers Ukraine's updated NDC, which strengthens its previous climate action targets for 2030. This increases the overall rating from "Critically insufficient to "Highly insufficient".

United Kingdom: the UK's NDC target is in line with mitigation action required on its national territory, so we rate the domestic target as "1.5°C Paris Agreement compatible". We also rate the UK's policies and action as "Almost sufficient", compared to modelled domestic pathways. This moves up the overall rating in comparison to the previous analysis, which focused exclusively on the UK's fair share contribution. The domestic target alone, however, is not ambitious enough, as the UK would have to support developing countries as well to contribute its fair share: When rated against its fair share contribution, the target remains in the "Insufficient" category. The CAT takes into account the UK's first NDC, submitted to the UNFCCC after leaving the EU. The NDC results in lower emissions levels than the previous national target, but, as with the previous target, falls within the "Insufficient" rating when looking at the fair share contribution.

USA: since our last full update of the US rating, the government change has caused a U-turn on climate change. The previous "Critically insufficient" rating for the Trump administration, where the US had withdrawn from the Paris Agreement and not submitted any mitigation target, is no longer valid. We instead rate the Biden Administration's NDC, which is close to what modelled domestic pathways say is 1.5°C compatible ("Almost sufficient" rating), and is in the "Insufficient" category when compared to the US's fair share contribution. For the policies and actions, we also consider the efforts underway. The currently most likely scenario falls in the "Insufficient" category.

Viet Nam: Viet Nam profits from the inclusion of policies and action in the rating system, because its policies and action, while still rated "Insufficient" against its fair share contribution, are significantly stronger than its NDC targets, which are rated "Critically insufficient". Overall, Viet Nam now rates "Highly insufficient".

Countries where the rating got worse and why

Australia: Australia is rated worse even if it has not updated its NDC, because we now also rate policies and actions, which currently fail to meet its NDC. The update of our fair share calculations for Australia leads to lower required emissions levels for the fair share contribution, mainly due to the update of the fair share temperature bounds from a 50% to a 66% likelihood (see above).

Australia's fair share contribution is still relatively less stringent in comparison to other developed countries (e.g. Germany), because our method harmonises the data from studies to a recent historical data point (2017) and Australia also has relatively low cumulative emissions when compared with some other countries, particularly when emissions dating back to 1850 are considered. Since the publication of much of the literature we use, Australia's emissions have increased, meaning that the harmonisation shifts the equitable contributions from the studies upwards. However, in, for example, Germany and the EU overall, emissions have decreased since then, meaning that the harmonisation method shifts the fair share contribution downwards.

Brazil: for Brazil, the CAT takes into account its updated NDC, which effectively weakened its previous climate action targets for 2025 and 2030. The update of our fair share calculations causes the required fair share contribution of Brazil to result in higher emissions levels than previously, mainly because of updates in the studies included in the literature database.

The CAT evaluates fair share emissions for countries excluding LULUCF, but many equity studies include LULUCF. In updating our methods, we exclude some studies for countries where land use and forest emissions are high because the results aren't comparable to those excluding LULUCF. The previous rating for Brazil was strongly influenced by some data based on studies including LULUCF. Due to the update, the lower end of the fair share range shifted significantly from negative to positive levels, and the fair share range narrowed. The old NDC target for 2030 would have been rated "Almost

sufficient" against the updated fair share contribution, an improvement compared to the old rating of "Insufficient". Conversely, the new NDC target for 2030 was rated as "Highly insufficient", but in the updated system is now rated as "Critically insufficient".

Canada: the CAT takes into account Canada's updated NDC target, which strengthens its previous climate action targets for 2030. Canada still receives the same rating against its fair share contribution as before ("Insufficient"), but it scores worse in the other elements we rate – policies and action and climate finance.

Overall, we now rate Canada "Highly insufficient". Note that under the old rating system, the updated NDC would also still be rated "Insufficient". Its range would span also the category "Almost sufficient", but in such cases, CAT looks at the upper end of the range, given that is the minimum requirement for the achievement of the target.

India: India's current policies are in line with what would be an "Almost sufficient" contribution when compared to its fair share. India's unconditional NDC that it intends to meet without international support, however, leads to significantly higher emissions than expected under currently implemented national policies. This target is rated "Highly insufficient". The conditional part of India's NDC that is to be implemented if international support is available, also leads to emissions higher than expected under current policies. It is rated "Critically insufficient".

Taking all these targets and policies into account, India's overall climate action is rated "Highly insufficient". If India were to update its unconditional NDC to the level that it would achieve with currently implemented policies and propose an additional ambitious target that is conditional to international support, the overall rating could be "Almost sufficient".

In the previous system, we had only rated India's NDC target against its fair share. We have updated our fair share calculations, and for India these have become more stringent, leading to a fair share rating of "Highly Insufficient", compared to its previously "2°C compatible". This difference is mainly because the old rating included studies that had different gas and sectoral scope up to a level where the applied harmonisation was not able to ensure consistent quantification of emission allowances across studies. Thus, previously India's upper bound of the fair share range was driven by studies with various different and inconsistent underlying assumptions. The updated data set and the new methodology reduces this impact. In the case of India, this brings the top of the range down and significantly impacts India's fair share rating.

Kazakhstan: Our previous method did not consider the policies and actions in the rating, and this change in the approach causes Kazakhstan's overall rating to move from "Insufficient" to "Highly insufficient". Its policies and action lead to much higher emissions levels than its targets, and receive a worse rating. Note that if the policies and action projection improved only slightly, the rating of the policies and action would change to "Insufficient", as would the overall rating.

Morocco: as with many developing countries, Morocco rates much better against its fair share than it does against modelled domestic pathways. We rate policies and action and the conditional targets, i.e. those that the country wants to achieve assuming sufficient international finance is available, against the modelled domestic pathways. The inclusion of this element in the evaluation of the targets changes Morocco's rating for the worse from "1.5°C Paris compatible" to "Almost sufficient".

Mexico: the update of our fair share calculations for Mexico causes the required fair share contribution to result in lower emissions levels, mainly because the changes in the temperature categories of 2°C and higher to be likely (66% compared to 50% previously) below the temperature level. On the basis of the old rating method but with updated data, Mexico would now be rated "Critically Insufficient". However, Mexico's conditional NDC, rated against modelled domestic pathways, is lower, and receives an "Insufficient" rating. This results in an average target rating of "Highly insufficient", same as the rating for policies and action.

New Zealand: the update of our fair share calculations for New Zealand causes the required fair share contribution to result in lower emissions levels, mainly because the upper bound of the fair share is more stringent under the new methodology. In addition, the temperature levels are now evaluated with a 66% chance of staying below. The fair share contribution of New Zealand is still relatively less stringent in comparison to other developed countries (e.g. Germany), because New Zealand's historic responsibility, in terms of cumulative emissions, is not as high when compared to some other developed countries.

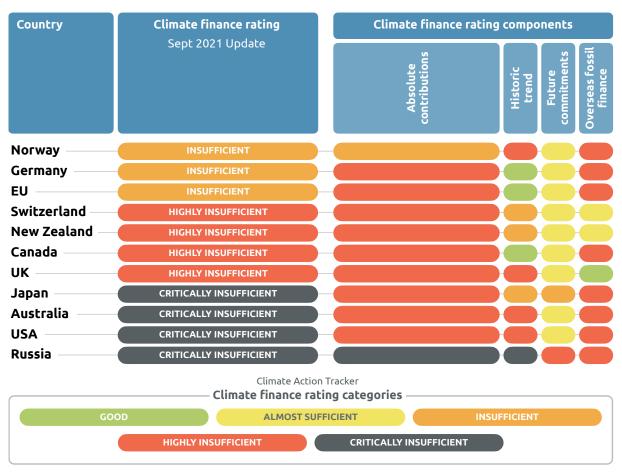
Singapore: The update of our fair share calculations for Singapore causes the required fair share contribution to result in lower emissions levels, mainly due to the new categorisation of the temperature levels. We rate Singapore's NDC as "Critically insufficient" against its previously "Highly insufficient" fair share contribution. Policies and action are slightly better - "Highly insufficient" - but cannot make up for the bad target, and overall, the rating remains at "Critically insufficient".



Annex 3 – Detailed overview of climate finance assessments

An overview of subratings for climate finance is provided in Table 5. For more information, see our detailed methodology document.

Table 5 Overview of Climate Action Tracker's climate finance evaluations for the countries rated as of September 2021, including details for the overall climate finance rating and the individual components that make it up. The assessment is only focused on mitigation finance for emissions reductions.







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The Climate Action Tracker (CAT) is an independent scientific analysis produced by two research organisations tracking climate action since 2009. We track progress towards the globally agreed aim of holding warming well below 2°C, and pursuing efforts to limit warming to 1.5°C.

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NewClimate Institute is a non-profit institute established in 2014. NewClimate Institute supports research and implementation of action against climate change around the globe, covering the topics international climate negotiations, tracking climate action, climate and development, climate finance and carbon market mechanisms. NewClimate Institute aims at connecting up-to-date research with the real world decision making processes.

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