

RIFS-Blogpost

Datum:

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Projekt:



What to do with the 1.5°C-target in a post-1.5°C world?]



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2024 is on track to become the warmest year on record and the first full year to breach the 1.5°C limit, according to the Copernicus Climate Change Services This news has caused alarm globally.

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Zitation: [Unger, Charlotte] (2025): [What to do with the 1.5°C-target in a post-1.5°C world?] – RIFS-Blogpost, 02.05.2025.

URL:





Media and press have started to talk of the failure and the implausibility of achieving this monumental target. At the same time the UNFCCC' COPs (Conferences of the Parties of the United Nations Framework Convention for Climate Change) have cleaved to the slogan of 'Keep 1.5°C alive!'. Countries are asked to update their targets and make their Nationally Determined Contributions (NDCs) '1.5°C- compatible'. Unsurprisingly, the looming failure of states to limit global warming to 1.5°C was rarely mentioned at this year's COP 29 in Baku, where physical reality met climate politics.

With this failure, we risk losing credibility. Breaching the 1.5°C-target sends the message that we are not on track to curb global warming, we are not doing nearly enough, and we are not genuinely committed to achieving the targets that we set. Should we still keep 1.5°C alive? And if so, how can we adjust our communication around the 1.5°C goal? In this article, we argue that we still need 1.5°C as leitmotif. However, we have to change the way we talk about this goal – in science and politics – to take into account socio-psychological aspects, while being transparent about the facts and assumptions behind the science.

1.2 Climate Science meets Climate Politics: What does and doesn't 1.5°C actually mean?

First, the 1.5°C target refers to average temperature change over decades. In the Paris Agreement countries agreed to "holding the increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C". This refers to a temperature change averaged over 20-30 years (the IPCC uses a 20-years-and the World Meteorological Organization a 30-years average). In other words, reaching 1.5°C in 2024 does not mean that we have failed the Paris Agreement's goals – yet. Andrew Jarvis and Piers Forster



discussed this in depth in [The Conversation in November 2024](#).

Second, “holding the increase” means that we have to deliver on the goal of 1.5°C permanently. This goal does not expire, a commitment that we must renew year in, year out. Lastly, the Paris Agreement establishes 1.5°C as our collective goal, but it does not define what countries’ fair contributions to achieving it are and lets them decide for themselves what and how they want to contribute. There is no internationally agreed methodology that defines whether national actions like NDCs are 1.5°C compatible or not. All of these features make the Paris Agreement’s 1.5°C target politically complex.

1.5°C is a scientifically-based, but even more so a politically-made goal. Initially, the third IPCC assessment report established the 2.0°C goal after 2001, and over many years this was the broadly accepted target. Conversely the 1.5°C emerged more abruptly, through a political push. In 2009, the Alliance of Small Island States (AOSIS) campaigned hard at the COP to shift the wording of the Copenhagen Accord to acknowledge the possibility of ‘below 2.0°C’ and establish 1.5°C as the ‘safe limit’ for many countries. Although the science at that time was not as robust on 1.5°C as on 2.0°C, a coalition of actors from politics, science, and society rallied behind the target. In spite of difficult negotiations it was possible to include it as an aspirational goal in the Paris Agreement. The Paris COP 21 politically mandated the IPCC’s “Special Report on Global Warming of 1.5 °C”, which was published in 2018. The report pushed the 1.5°C target into public consciousness and it has since been taken up by social movements and activist groups such as Fridays for Future, corporate initiatives (e.g., the [Science Based Targets Initiative](#)), and as a benchmark for climate policy (e.g., the [Climate Action Tracker](#)). 1.5°C has become the ‘golden number’ to guide all climate change mitigation activities.

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1.3 What does breaching 1.5°C mean for human cognition and emotions?

News of breaching the 1.5°C target can trigger a variety of cognitive and emotional responses. First, there are surprise-related emotions like confusion, shock or disappointment at the apparent discordance between the scientific data and the political slogans – is this really so, and what does this mean for the world, for myself? These reactions are likely widespread among the general public, where people are often interested in climate news but do not follow the specifics of climate science. Second, this news can increase the level of threat-related emotions like fear, overwhelm and hopelessness – what will my future and the future of my loved ones look like when temperatures exceed the threshold? This response is especially common among people who are already concerned about the climate emergency.

Third, people who attribute responsibility for climate change largely to political and economic structures and other stakeholders are likely to feel anger or frustration – how can decision-makers from politics and businesses allow this? If we can't achieve this goal, what hope do we have? Breaching the 1.5°C limit can cause people to doubt their self-efficacy – do we really have the means to achieve a climate-fair world? It can undermine trust in political institutions, fuel political conflicts and feed into the narratives of populist movements and far-right climate denialists.

Finally, people who feel a strong responsibility for the climate or support efforts to achieve a just and fair 1.5°C world might also feel emotions related to guilt and shame – why didn't I or my organization do enough?



These emotional responses can demoralize people and jeopardize climate cooperation. It is important that we take them into account in new communications around the 1.5°C target.

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1.4 The 1.5°C target: a guiding star to galvanize climate action

Taking a step back, we ask ourselves why it is important to have targets. From a psychological point of view, setting a clear policy target alone supports orientation and motivation. It may help to bridge the gap between knowledge and intention to take action. Individuals or organizations tend to be more committed when they know what they want to achieve because this reduces uncertainty and sets priorities for action [Bandura, 1997](#). Goals give direction to behavior and promote perceived self-efficacy, i. e. the feeling of being able to achieve something through one's own actions. In other words, they simplify the step from intention to action. The 1.5°C target serves as a guiding star that makes complex scientific contexts easier for people to understand. And, as a symbol of hope and success, it offers the promise that we can tackle the climate crisis through cooperation.

In order to increase the likelihood of success, goals should be formulated in a specific, measurable, attractive, realistic, and time-bound ([SMART](#)) way. The goal of “limiting the [global] temperature increase to 1.5°C above pre-industrial levels [if possible]” is specific, measurable and time-bound, lending it a clear advantage over the abstract and diffuse demand that states should “protect the climate, save the world”. 1.5°C is specific enough to align efforts in climate mitigation towards a common goal. Emissions budgets and national responsibilities (NDCs) can be derived from this target. It has been translated into policy plans and measures for cities, companies, and even individuals (e.g. carbon footprint policies or ‘[1.5° Lifestyles](#)’



The more concrete such policy plans are, the easier we can check their success and failure; and whether they ultimately really are compatible with a 1.5°C world.

The 1.5°C target also mobilizes social norms, as it strengthens social consensus on what actions are considered necessary and ethical. The fact that Paris Climate Conference succeeded in rallying almost 200 countries around a common goal is in itself a major achievement and a first step towards a sense of collective responsibility for planet and people. 1.5°C sets a fairly ambitious standard that works as an anchoring heuristic – an individual's or group's reference point for judgments and decisions – (originally conceptualized by Tversky & Kahnemann, 1974) around which the political and social debate revolves. Similar to a salary or political negotiation, in which it is worth entering with the highest possible demands, an ambitious figure helps to guide the discussion in the right direction. Even if these expectations are not met, the result is likely to be closer (on the target continuum) to the initial hope than without such an ambitious threshold.

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1.5 How should we proceed? Can and should we keep 1.5°C 'alive'?

How can we keep pushing for 1.5°C knowing that we are already breaching it? Sticking to theoretical pathways, the possibility of overshoot, and the argument that the 'real' breaching will only happen in the early 2030s (according to the IPCC, [link](#)) will not help. Much of the public – in Germany and globally – might still be unaware of the sad certainty that 1.5°C will not be achieved. This also gives us the opportunity to respond to uncertainties and communicate the breach in a way that we still support ongoing and future climate action and policymaking.



Taking 1.5°C seriously: 1.5°C signifies the hope for collective efforts and has provided a leitmotif that guides efforts in sustainability transformations. We explained why it is psychologically important to have climate targets at all. Goals provide a benchmark to which we can hold governments and industry accountable. In a post-1.5°C world, citizens can continue to use the goal to demand that governments do more. The motivation behind the 1.5°C goal still stands: We must strive to avoid the unbearable damage that is more likely to occur the more we surpass 1.5°C. Breaching 1.5°C does not put the consensus that underpins the Paris Agreement up for negotiation.

From a ‘Doomsday’ narrative to differentiated and honest risk communication: “Every tenth of a degree counts”: 1.5°C has always been a challenging goal. Although many scientists applauded when the Paris Agreement was adopted in 2015, many also commented on the slim chance of achieving the 1.5°C target (Cointe & Guillemot, 2023). The way in which 1.5°C has been politically elevated and framed as a ‘safe limit’ has perhaps supported a misconception. 1.5°C is not a hard threshold from a safe to an unsafe climate. ‘Doomsday’ narratives of this kind risk undermining the credibility of climate science and policy by evoking the imminent collapse of the climate once the threshold is passed. The largely (and sometimes arbitrary) symbolic character of 1.5°C could be demystified: Breaching 1.5°C does not mean that all climate efforts have been in vain. Every tenth, every hundredth degree counts and every bit that we achieve is better than the status quo.

At the same time efforts aimed at ‘keeping 1.5°C alive’ should be accompanied by honest communication about the risks associated with continuing temperature rise. Citizens need to know that



the feasibility and safety of many overshoot scenarios is questionable and that many of the consequences of climate change, including species extinction and the loss of low-latitude coral reefs, are irreversible – even if we manage to bring temperatures back to 1.5°C.

From perfectionism to tangible humanity: for many, the 1.5°C target remains rather abstract. What does this figure mean for people’s day-to day lives? For us and for future generations? What does it mean in different world regions? For our health, our housing, for migration, for war? Narratives that focus on the message of “every degree, half degree or tenth of a degree counts” could be enriched by descriptions and storytelling that connect present policy and actions with emerging and future outcomes: Keeping global warming at 1.5°C is about securing a dignified life for as many people on this planet as possible – today and for the future. Hundreds of millions of people are already suffering from the consequences of climate change every day: they suffer from food shortages due to failed harvests, are unable to attend school or work due to extreme weather events, experience health problems or are deprived of their indigenous territories and cultural identity due to extractive economic practices.

With every ton of greenhouse gases saved, we can slow the pace of climate change, soften its impacts, and limit their consequences. We should work together on the levers where we can make the strongest impact, like high-emission sectors. At the same time, we should also encourage small steps and improvements at all levels – because, in view of the urgency of climate change, every contribution is valuable. In other words, even though we still need to strive for achieving 1.5°C, breaching it should not let us abandon our hope and efforts.



This article already appeared in a similar version on April 28, 2025 in International Politics under the title “Ein Ziel mit Zukunft” .

