

# Foreword

Climate change is creating adverse conditions for both ecosystems and societies that go beyond anything in the recorded history of humanity. If climate tipping points are crossed these trends could worsen exponentially, leading to profound changes in our planet and in the natural and socio-economic systems it sustains. This OECD report provides key insights for policy-makers on how to take account of the threat of tipping points in climate policy today. It also reviews the most recent scientific information, concluding that crossing tipping points is increasingly likely at even low levels of global warming, with the time remaining to avoid such disastrous outcomes rapidly running out.

There is indisputable evidence that the planet is approaching tipping points. Unexpectedly high melt rates of the Greenland and Antarctica ice sheets over the past three decades, the loss of Amazon rainforest resilience, the drastic slowdown of important ocean currents and the acceleration of Arctic permafrost melting are just some examples. If tipped over the edge, the changes in even one of these sub-systems can cascade, with deep and often irreversible global consequences for natural and human systems, for decades or centuries to come. We are rapidly approaching warming of 1.5°C, which modelling projections increasingly suggest will trigger some of these tipping points. This makes it imperative to take collective, ambitious and bold action to mitigate greenhouse gas emissions before the end of this decade.

In light of the mounting scientific evidence, this report argues that the earlier generally accepted advice – that the risk of crossing tipping points is low – can no longer be accepted. The dramatic impacts associated with tipping points mean that urgent action is needed to avoid crossing them, and to prepare for their effects if they are crossed. This means redoubling efforts to keep rising temperatures below 1.5°C. It also means that adaptation measures need to be transformational, necessitating stringent and even drastic action to minimise short-term losses and to build resilience in the medium-term. Moreover, Earth sub-systems susceptible to tipping points must be closely and urgently monitored.

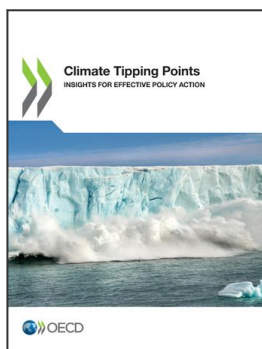
Tipping points can be seen as inflection ‘points of no return’ in the Earth system. Unlike other climate impacts, crossing tipping points cannot be counteracted by more action later. The time for acting to protect our planet and the future generations which depend on us is now.



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**From:**  
**Climate Tipping Points**  
Insights for Effective Policy Action

**Access the complete publication at:**  
<https://doi.org/10.1787/abc5a69e-en>

**Please cite this chapter as:**

OECD (2022), "Foreword", in *Climate Tipping Points: Insights for Effective Policy Action*, OECD Publishing, Paris.

DOI: <https://doi.org/10.1787/84899395-en>

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