Global Policies to Phase Out Fossil Fuels

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May 4, 2025

Abstract

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1 Introduction

1.1 A critical assessment of the current regime

The international climate policy regime is laid down in the United Nations Framework Convention on Climate Change (UNFCCC), and its offshoot, the Paris Agreement. The consensus of the international community in favor this regime and its common temperature target is an immense success: the UNFCCC has been universally adopted, and the Paris Agreement has been ratified by all countries but three (Iran, Libya, and Yemen), before the U.S. withdrawal. As the UNFCCC takes its decisions by consensus, this also results in major limitations: agreements rest on the lowst common denominator and fall short of achieving any substantial progress on international climate action. In this section, we review the current regime and its most likely developments.

Developed nations taking the lead The UNFCCC introduces the distinction between developed and developing nations: the former shall provide financial resources to the latter to promote their sustainable development and climate action. While aimed at sharing fairly the costs of climate action, this classification dates from 1992 and is now outdated. For example, while Singapore, South Korea, Saudi Arabia and Slovenia are all richer than Greece, only the latter is considered by the UNFCCC to be a developed country with financial obligations. This outdated classification is stalling progress in critical negotiations, as newly high-income countries resist being considered developed, and historically developed countries are reluctant to increase their contributions unless all high-income countries do so.

While high-income countries should indeed provide resources for foster climate action in lower-income countries, the determination of required transfers should not rest on an outdated, binary classification; it should be defined using up-to-date, continuous indicators such as the GNI per capita. A simple yet fair rule would be that a country's

contributions are to be made in proportion to GNI and entitlements in proportion to population.

CBDR In its Article 1, the UNFCCC states what is now known as the *CBDR* principle: "Parties should protect the climate system (...) on the basis of equity and in accordance with their common but differentiated responsibilities and respective capabilities." This Article is commendable in its objective to guide the allocation of the burden of climate action between countries and reconcile different burden-sharing principles: common action, equity, historical responsibility, ability to pay, etc. Unfortunately, the CBDR principle only offers vague and inconsistent guidance. For example, does equity refer to equal per capita emissions rights or to something else (equal cost of emissions reductions, equal access to development)? How should we balance rules that result in different allocations of emissions rights, such as common action, equal per capita, historical responsibilities and ability to pay? As the key question of the burden-sharing rule was left unresolved by the CBDR principle and its multiple possible interpretations, countries are not able to agree on binding targets of emissions reductions and financial transfers by country.

NDCs This absence of consensus on burden-sharing led to the system of Nationally Determined Contributions (NDCs), where each country sets its own targets. Countries are not sanctioned if they fail their targets. Countries do not even have to define their target using a common indicator (such as their future cumulative emissions). As NDCs rarely specify a cumulative emissions target, researchers need to formulate hypotheses to assess whether NDCs are jointly consistent with the universally agreed temperature target.[1] Even in the most optimistic hypotheses, NDCs are insufficient to meet the temperature target. If all countries respect their NDCs, global GHG emissions should be 51 $GtCO_2eq$ in 2030, while 41 Gt would be needed to meet the 2 °C target with a 66% chance.[1] According to the Climate Action Tracker, current policies and actions correspond to a global warming of +2.7 °C by 2100, a warming may continue to rise beyond that date.

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[1]Note that the temperature is itself vague. Article 2 of the Paris Agreement aims at "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 above pre-industrial levels." Yet, given the uncertainty around the climate system, this (double) target is not precisely defined: does it mean a 83% chance to limit global warming to 2 °C? A 67% chance? A 50% chance? Each probability is associated with a different carbon budget – respectively 900, 1,150, and 1,350 $GtCO_2$ starting in 2020, according to the IPCC (AR6, WGI, p. 39).

1.2 Objectives for a truly sustainable regime

2 Discussion

Bibliography

[1] M. G. J. den Elzen, I. Dafnomilis, N. Forsell, P. Fragkos, K. Fragkiadakis, N. Höhne, T. Kuramochi, L. Nascimento, M. Roelfsema, H. van Soest, & F. Sperling. Updated nationally determined contributions collectively raise ambition levels but need strengthening further to keep Paris goals within reach. *Mitigation and Adaptation Strategies for Global Change*, 2022. Link. 3

Acknowledgments

JEL codes

Keywords

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A Appendix

A.1 Additional tables