

Commentary

# Addressing Knowledge Gaps for Global Climate Justice

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**Abstract:** The Conference of Parties (COP) 26 highlighted the need for global-level deep decarbonization and provided financial instruments to aid climate mitigation in the global south, as well as compensation avenues for loss and damage. This narrative reiterated the urgency of addressing climate change, as well as aiding advances in green products and green solutions whilst shifting a portion of responsibility upon the global south. While this is much needed, we argue that the science rhetoric driving this initiative continues to be advantageous to the global north due to their capacity to control consumption gaps and to access human knowledge and resource extraction. If not addressed, this will reinforce a continuing unjust north/south narrative, highlighting neo-climate colonialism precepts.

**Keywords:** climate justice; global north; global south; climate change; COP26; science; climate knowledge; mining



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## 1. Introduction

Discussions at the Conference of Parties (COP) 26, supported by the latest findings from the IPCC, pointed to the urgent need for global deep decarbonization [1,2]. This is supported by the fact that if all countries committed to their nationally determined contributions (NDC), temperatures could still increase by as much as 2.7 °C, exceeding the Paris Agreement target of 2 °C, preferably 1.5 °C [3]. The Intergovernmental Panel on Climate Change (IPCC) further points to the need for deep rooted policies on climate mitigation and suggests possible pathways, painting a bleak picture if urgent actions are not pursued [1]. This will demand a new focus and an increasing need for new products that can respond to climate needs. With a growing consensus upon the subject from private sector agencies, it can be expected that a race for 'green products' and 'green solutions' will be witnessed to supply the demand for sustainability transitions and mechanisms. The design, purchase and implementation of those products and solutions, however, can be expensive. It will place further demand on access to expertise and raw materials that are inequitably distributed around the world, adding to the challenge of addressing the global north/south disparity. This is a key subject in attaining climate justice and just transitions. It must therefore be at the forefront of global discussions but must not be seen as a linear objective. So, while the subject of climate financing instruments and provisions for loss and damage as addressed in the Glasgow Climate Pact [2] have been well received, there is an equal need to look at the capacity of the global south in developing solutions for an upcoming 'green' race, there being a need for 'green' technology to satisfy increasing market demands.

Building capacity for the global south to provide its own solutions for its local problems is a valid means of empowerment. But this capacity building, which has sound economic merits, assumes cheaper product provision, nurturing knowledge quarters and niches, all of which can be 'exported' and 'traded' at a regional level to service the global north. We expect that post-COP26, this approach will emerge from global south territories to harvest opportunities brought about by the global north's reinforced need for deep decarbonization and sustainability transitions. This calls for the acceleration of innovation within both academia and industries and furthermore for urgent fiscal measures to reduce the price of 'green premiums' on sustainable products. Green premiums in this case refers to the increased margin for product development. As innovation is largely driven within techno-academic centers and industrial corporates, there will be a need to ensure that access to 'science' within all realms is made possible so that development of solutions can be accessible to all.

While this sounds logical, academics often stumble on 'pay-walls', where access to data and knowledge is expensive, and post-pandemic academia and knowledge in particular has been financially emasculated. While global north universities can afford subscription fees to students and researchers with access, this is still an issue in the global south [4]. Similarly, the global north controls the hardcopy and electronic knowledge publication institutions and vehicles, negating easy access by the global south. Additionally, providing access to data is only perceived as being free when authors bear the cost of 'Open Access' fees. However, those are often inaccessible to global south researchers, hence further limiting the dissemination of solutions and knowledge emerging from those geographies. The 'green race' will continue to provide economic opportunities for techno-academics and industrial corporates and will encourage private sector investment in innovation. One challenge in this area is that some 'green' solutions can have global applications and could therefore place global south technology providers in direct competition with those in the global north (albeit with more resources). Within this competition, will be potential disputes of Copyright and Intellectual Property for emerging products and ideas, that will cascade into patent races to capture economic opportunities. It is foreseen that some patents, submitted by parties in the global north, will limit the development of localized products in the global south. This issue will have to be addressed and could potentially be resolved via bilateral agreements between countries, acknowledging the global demand for green products, to ensure technology transfer with the prospect of servicing a larger customer base.

Cementing equitable agreements, where both the global south and north can be equal partners, will be a challenge when factoring in the investment and resource mining capacities of both. With the demand for rare earth minerals such as lithium, copper, cobalt, and others, underpinning the rise of power batteries, electronics, and global semi-conductor shortages will be determined by financial capacity as to who obtains the most economic and knowledge profits. Thus, while bilateral agreements may be seen as a 'quick-win', one must also look at reinforcing local capacities to ensure that local companies can better be better positioned to supply the growing global green market.

Local policies such as 'Green New Deals' can offer potent solutions in stimulating actions across different sectors [5,6]. These can be contextualized to equally support the production of 'green solutions', but the appropriate fiscal landscape must be present. Bill Gates, in his latest book [7], speaks about the issue of 'Green Premiums' and the need to provide solutions that are at par with the pricing of traditional solutions. Indeed, this will be a key challenge to address, and this can potentially be delivered through well-planned fiscal incentives, which can accelerate the speed of innovation while lowering the cost of production. Climate justice is gaining increasing interest of varied stakeholders, including academics, policy makers, and the broader public, but the larger implications for international cooperation and varied decision-making have only begun to receive empirical attention. Thus, our argument posits this subject as being a fairly new, but important, field [8].

In this respect, there is need to ponder on the ethical and moral global trade structures in line with the transition needs of global and emerging economies. Doing so, and ensuring that an equitable development agenda across geographies is achieved, while pursuing sustainability goals) will be paramount for our shared future. Therefore, there is a need to address climate justice as a multi-dimensional process. This is a theme, within climate discourses, that receives extensive noise and rhetoric to the needs for addressing ‘emissions gap’ [9], which is crucial in limiting emissions to reduce the impacts of global warming. However, there is also an equal need to recognize ‘knowledge gaps’ by the global south to contribute to this need. Without this, the ethical dimensions of climate change will be eluded, contributing to unjust foundational precepts, and leading to the continued precept of climate-colonialism by cementing the global south as perpetual customers of the global north for mitigation products (designed for a problem largely caused by the global north).

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