



T20 **Brasil 2024**
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T20 Policy Brief

Task Force 02

SUSTAINABLE CLIMATE ACTION AND INCLUSIVE JUST ENERGY TRANSITIONS

A North-South Agenda for the Renewables Challenge: Ensuring Sustainable Supply Chains, Equitable Green Development and Transparency Standards

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Abstract

Achieving the COP28 pledge of tripling renewable energy capacity by 2030 is crucial to tackle the climate crisis. Such a substantial and rapid shift poses challenges that need to be addressed to ensure the equity of the energy transition.

Three key challenges emerge. Firstly, minerals used in the renewable value chain are unevenly distributed geographically. This not only presents supply risks but also concentrates environmental and social impacts associated with mining in specific areas, while the majority of extraction benefits accrue elsewhere. Secondly, insufficient financing in the Global South can delay renewable energy deployment, and barriers to entering high-value segments in green value chains may result in an energy transition that disproportionately benefits advanced economies. Lastly, weak governance mechanisms amid large flows of financing, rapid investment scale-up and expectations of high returns in renewable energy projects can pose corruption risks and can result in violations of community rights, which may undermine societal support of the sector's growth.

Thus, to ensure a just tripling of renewable energy capacity, it is crucial to promote sustainable supply chains, provide equitable access to finance and technology, create opportunities for industrial capacity-building, and strengthen transparency, accountability, and anti-corruption policies.

Diagnosis of the Issue

The deployment of renewable energies emerges as one of the most powerful tools to tackle the climate crisis. Building upon this foundation, at the COP28 conference, more than 130 countries pledged to triple renewable energy capacity by 2030. However, a shift of this scale and pace poses challenges that could compromise both the progress and the equity of the energy transition.

The issues typically addressed in achieving this target are potential bottlenecks tied to technical, operational, and geopolitical aspects. Nevertheless, often overlooked are distributive and justice aspects crucial to ensuring a fair and beneficial deployment of renewables for all countries. **The energy transition can be a unique opportunity to build a more inclusive and fairer energy system, economy and society, encouraging engagement from all nations and regions.**

The populations of developing countries need a *just* transition that not only contributes to global environmental goals but also enhances their quality of life. This calls for a holistic governance framework that considers each of the challenges inherent to the development of the renewable value chain, from critical minerals (CM) extraction to renewables' deployment.

The first challenge is ensuring sustainable supply chains. The transition will exponentially increase demand for CM, creating both opportunities and risks for countries and stakeholders situated in different segments of the renewables global value chain. While developed countries in the North strive to secure stable supply of CM amidst geopolitical tensions (Andreoni and Roberts 2022; Narula et al 2023), CM resources are concentrated in a handful of countries, many of which are situated in the Global South. This creates a *sustainability paradox*: in these countries the transition toward a cleaner

energy matrix is associated with increasing environmental, social and governance risks (Marin and Goya 2021, Obaya et al 2024a).

There is a growing recognition that securing a reliable supply of CM cannot come at the expense of labor rights, the environment or local communities. This led to initiatives such as the Mineral Security Partnership or the European Critical Raw Materials Act, that set standards for CM suppliers' projects. Still, the views and objectives of actors in CM-producing and in green-technology-producing countries only partially align, potentially resulting in critical issues being overlooked in the international agenda (Obaya et al., 2024b). In many CM producing countries, there is a demand for the minerals sector to deliver lasting economic benefits, including playing a bigger role in the mid- and downstream of the mineral value chain. As part of this, stakeholders expect productive and technological capacity building to be part of multilateral agreements.

The second challenge thus involves ensuring fair access to the opportunities emerging from the expansion of renewables. The investment flows and the technological revolution propelled by the deployment of renewables presents an opportunity for countries to foster economic growth, enhance resilience, and guarantee energy access for all. Nevertheless, insufficient financing in developing countries can delay renewable energy deployment, and barriers to accessing high-value segments in green value chains can lead to an energy transition that disproportionately favors advanced economies. Global financing for renewable energy already reflects substantial inequities. Investments in renewables have nearly tripled since 2015, but most of the money has gone to developed countries (UNCTAD, 2023), while the regions home to most developing and emerging markets receive comparatively low investments.

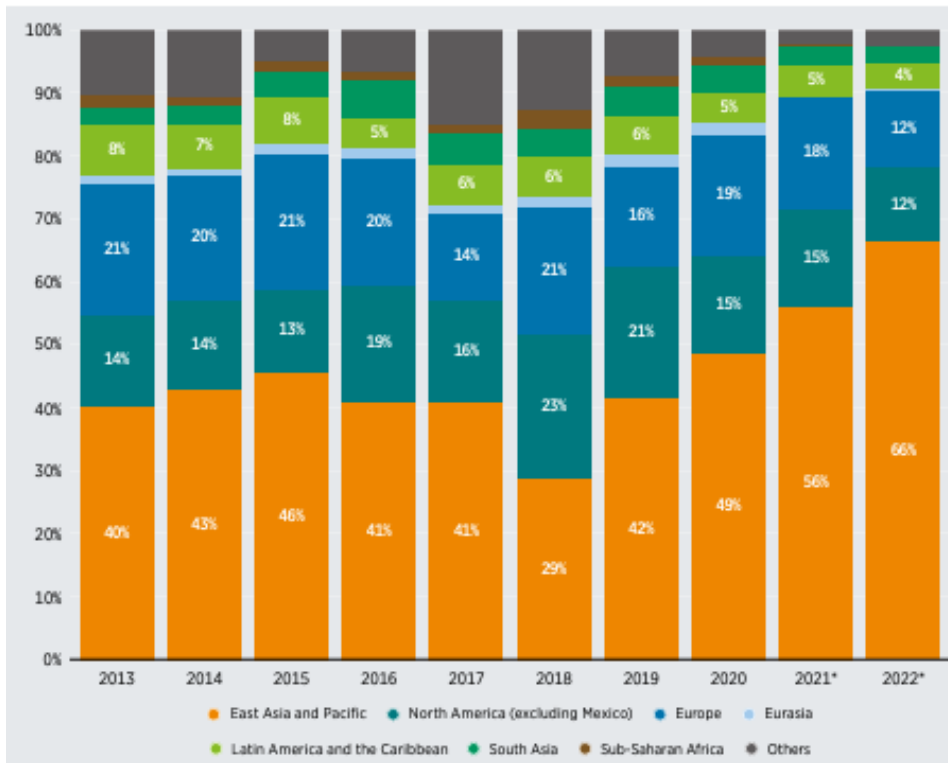


FIGURE 1. Investment in renewable energy by region of destination, 2013-2022

Source: IRENA and CPI

Furthermore, this already limited funding directed towards developing countries predominantly consists in deploying turnkey renewable energy projects, often with minimal involvement of local stakeholders. This has resulted in developed countries capitalizing on most of the opportunities presented by the green technological revolution: their exports of green technology surged by 160% from 2018 to 2021, while developing countries experienced a modest 32% increase in green exports and saw their global export share decline from 48% to 33% (UNCTAD, 2023). This growing technology gap underscores the imperative for global mechanisms of solidarity, which should enable developing countries to access the benefits of the green revolution, thereby fostering collective economic growth alongside climate change mitigation.

The third challenge stems from weak governance mechanisms that, amidst large flows of financing, rapid scale-up in investment, and expectations of high returns, can drive

corruption and violations of community rights. Corruption creates operational, reputational, and legal challenges that not only harm the investment climate and escalate business costs, but also create barriers to the sector's growth by eroding public trust. Weak governance risks creating unfair outcomes for local stakeholders, especially remote or indigenous communities. Areas of concern include auction and permitting processes, subsidy schemes, negotiations over grid connection, contestation of land rights, arguments over benefit sharing, and disputes over community consent. A just energy transition is a shared responsibility between governments, companies and civil society organizations. Therefore it is essential for all stakeholders to be involved in ensuring a transparent process that addresses governance and corruption risks.

Recommendations

The following recommendations are presented not as an exhaustive compilation of best practices, but to address key gaps and critical issues along the renewable value chain.

- **Promoting inclusive criteria for stakeholder engagement and decision-making along the renewables global value chain.**

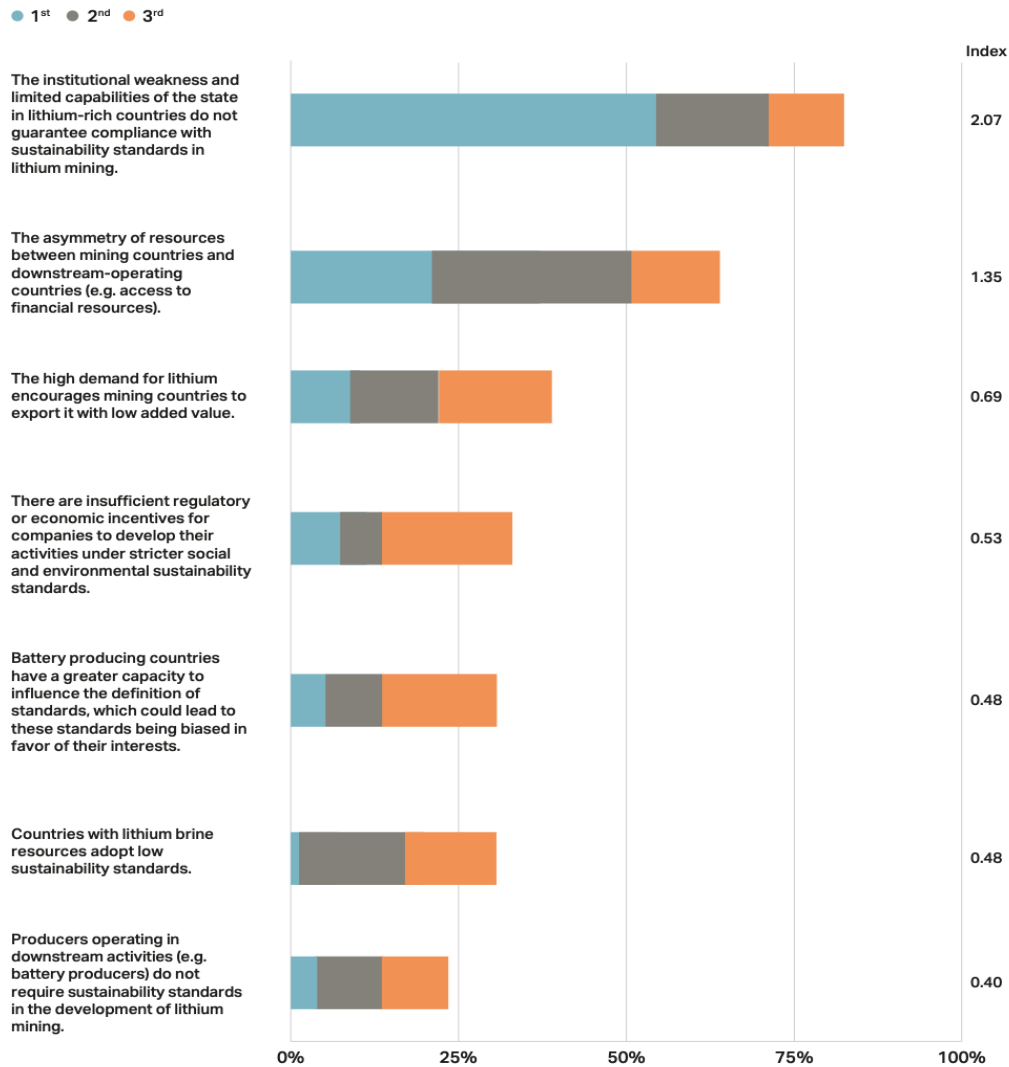
Inclusive criteria for extensive stakeholder engagement may provide a guiding principle for establishing sustainable supply chains as a key component of a just transition. A holistic governance framework is needed to address the existing challenges across the entire value chain, particularly in mineral production, which faces the most significant environmental, social, and governance risks.

In mineral producing countries, addressing the impacts of CM production at the local level requires being innovative in terms of integrating stakeholder engagement and participation in decision-making. Multi-stakeholder initiatives like the Extractive Industries Transparency Initiative (EITI), could address social, environmental, and governance challenges through inclusive participatory mechanisms, including promoting transparency on application of the principle of Free, Prior, and Informed Consent (FPIC). This is particularly important when the domestic institutional and legal environment in which companies operate does not contemplate provisions for addressing them (Narula et al., 2023). A critical dimension of meaningful participation in these initiatives is the access to reliable information as a necessary step for building public trust in institutions and organizations. At a project level, this means the development of monitoring and follow-up systems on mining project indicators, integrating perspectives of local actors,

communities and indigenous people, to ensure high-quality information and address the multiple asymmetries that characterize the interaction between actors.

Multi-stakeholder initiatives need to be complemented by strengthening domestic institutional arrangements and building legal and technical capacities by national and subnational states in less developed countries. A recent study on the sustainability of lithium-ion battery supply chains — essential for storage technologies that enable increased penetration of renewable energies into electrical grids — highlights this as a primary necessity (Figure 2).

Taking this information into account, which of these obstacles do you think are the most relevant for the construction of a lithium battery value chain that is just for the countries where mining takes place? Indicate the three most relevant, ranking them from 1 to 3 (1 being the most relevant).



(*) Methodological note: The length of the bar indicates what percentage of the panel mentioned that challenge. The color code reports the order in which it was mentioned (first, second, etc.). The index reported in the right column summarizes the information obtained and ranks the challenges: it was calculated assigning each response a value of 3 when the option was chosen first, 2 if it was chosen second, 1 if it was chosen third, and 0 if it was not selected. A simple average of these values was then obtained.

FIGURE 2. Obstacles hindering the development of a just lithium battery chain. Source: Delphi study, Obaya et al (2024a)

Although multi-stakeholder mechanisms are particularly vital at the resource extraction stage of the value chain, they need to be developed throughout the entire

process, as the deployment of renewable energy projects can also create tensions with local communities.

For participatory mechanisms to be effective, they must be accompanied by a process of institutional and capacity building that includes both public actors and civil society. **G20 countries could offer technical and financial support to build such capacities by incorporating these topics into Memorandums of Understanding or cooperation programs with multilateral organizations** (Obaya et al., 2024b).

- **Establish shared principles for transparency and good governance for the development of renewables projects.**

The renewable energy sector needs a shared approach for preventing governance and corruption risks. Drawing lessons from extractive industries, the G20 could define common principles for transparency and accountability for government and industry. Building on a call to action launched at COP28 by the EITI, REN21 and other stakeholders, these principles could set a benchmark for good practice in areas such as the disclosure of information on taxes and subsidies, licensing and contracting, beneficial ownership and supply chain due diligence. They could also include measures that help to mitigate risks for communities, including transparency on consultation and consent processes, environmental and social impact assessments and community benefits.

Experience in implementing standards like the EITI in the extractive industries shows how transparency and multi-stakeholder dialogue can build trust between actors who may have conflicting agendas. Through this mechanism both government agencies and companies commit to disclosing information to the public and adopt a series of expectations aimed at strengthening transparency and compliance mechanisms (EITI, 2022). On their part, civil society organizations take the responsibility of advancing and

scrutinizing the disclosure of information, including tax payments, contracts and licenses, and environmental and social impacts. This approach could serve as a model for the renewable energy sector to address tensions deriving from the development of large projects. Understanding communities' information needs is crucial for empowering them to be a part of decision-making processes.

- **Fulfilling of the Paris Financing Commitments and Supporting Renewable Investments**

To meet the emission targets of the Paris Agreement, investments in renewable energy in developing countries need to more than triple, rising from USD 770 billion in 2022 to USD 2.8 trillion by the early 2030s (IEA and IFC, 2023). To help developing countries meet these investment objectives, developed nations committed to allocate funds to bolster their mitigation efforts. Nevertheless, timely financial disbursements faced delays and fell short, posing a hurdle to their effectiveness. Ensuring the reliable delivery of these funds is imperative to effectively address worldwide climate objectives.

Additionally, in the developing world, the cost of capital serves as a barrier to renewable energy investments, considering them riskier endeavors. Addressing this issue requires two key actions. Firstly, strengthening state capacities to enhance regulatory frameworks and improve access to finance could help to overcome current obstacles to clean energy investments (IEA and IFC, 2023) and to translate energy transition targets into actionable investment plans. Secondly, reducing the cost of capital through mechanisms that include grants and partnerships between the public sector, international investors and multilateral financial institutions could significantly reduce the spread of debt finance (UNCTAD, 2023).

- **Creation of an Initiative for Cooperation in Innovation and Green Technology among the G20 nations with a North-South approach**

Given the higher opportunity and complexity of green value chains, integration in them is crucial for developing countries. However, the opening of green windows does not happen naturally. **Countries furthest from the green technological frontier cannot seize opportunities without the international community's support. To address this challenge, G20 countries could promote an Initiative for Cooperation in Innovation and Green Technology based on three pillars: (i) technology transfer; (ii) global cooperation mechanisms in R&D; and (iii) new trade mechanisms to support the enhancement of technological capacity in developing countries.**

Firstly, there is a need to expedite the transfer of capital goods and equipment to developing countries, combined with a strong focus on empowering individuals to acquire the necessary skills for operating and maintaining such equipment (know-how) and understanding its operational principles (know-why) (UNCDAT, 2023).

Secondly, inequality in technological development stems from uneven R&D investments among countries. As developing nations grapple with economic and social challenges, coupled with the escalating impacts of climate change, their investments in R&D lag behind those of developed countries (Table 1). This bias can be reduced by transitioning research efforts from national to global scales, establishing multinational research platforms, and fostering open innovation, thereby making findings accessible to international experts and knowledge communities.

Country	Last year available data
South Korea	4.93 (2021)
United States	3.45 (2021)
Japan	3.29 (2021)
Germany	3.14 (2021)
China	2.43 (2021)
European Union	2.27 (2021)
France	2.21 (2020)
United Kingdom	1.91 (2021)
Australia	1.82 (2019)
Canada	1.69 (2021)
Italy	1.45 (2021)
Turkey	1.40 (2021)
Brazil	1.14 (2020)
Russia	1.10 (2020)
India	0.65 (2020)
South Africa	0.60 (2020)
Argentina	0.52 (2021)
Saudi Arabia	0.45 (2021)
Mexico	0.30 (2020)
Indonesia	0.28 (2020)

FIGURE 3. R&D expenditure as a percentage of GDP in G20 countries. Source: World Bank

Thirdly, international support for green innovation should put more emphasis on enhancing innovative capacities in developing countries to independently adapt and adopt green technologies, devise local solutions, and generate employment. As part of this process, **the G20 countries should encourage new trade mechanisms to support the development of innovation and technological capacity in developing countries.** On the supply side, development assistance could be used to help developing countries emulate the production of more industrialized countries. On the demand side, developed

nations could open their markets to production from latecomer economies (UNCDAT, 2023). Complementing these policies, developing countries should elaborate initiatives aimed at enhancing local capacities and creating employment based on regulations that require local components in new renewable energy projects, training and retraining programs for workers shifting from the fossil fuel industry, and requirements of local ownership in energy projects (REN21, 2023).

Scenario of Outcomes

The implementation of these recommendations aims to strengthen the connection between climate mitigation and a more equitable world.

Firstly, **the implementation of transparency, good governance and multi-stakeholder dialogue mechanisms play a crucial role in ensuring a fair process of renewables' deployment.** Implementing such measures can effectively avoid the back-and-forth of socio-environmental or legal conflicts that may arise at each stage associated with the renewable energy value chain. This would contribute to a scenario of reduced uncertainty and increased diligence in achieving the goal of tripling renewable energy capacity.

Secondly, **moving beyond a narrow focus that solely tracks the aggregated deployment of renewables at a global level and instead advocating for a more comprehensive approach that acknowledges the barriers faced by developing countries—both in accessing financing for renewable projects and in successfully integrating into green technology segments—is an effective means of ensuring equitable and sustained progress of the decarbonization process.** This involves avoiding resource concentration, promoting fair financial distribution across regions, and collaborating to ensure renewables benefit capacity building and job creation in developing nations. Faltering in this endeavor risks widening gaps between developed and developing countries, which could hinder the transition as nations may choose to capitalize on their competitiveness in less sustainable but more familiar industries, seeing limited prospects in green sectors.

However, it's important to acknowledge that these scenarios are not without challenges. Setting up the structures of accountability mechanisms and information platforms can be costly in terms of both time and money, considerations that should be

included into project planning. Additionally, as the competitive advantage a nation holds in a particular technology is closely tied to its cost efficiency in production, venturing into less competitive countries could potentially elevate product prices, impacting deployment costs and overall energy expenses. Furthermore, the time-intensive nature of capacity acquisition may introduce delays that could delay the timely transition to renewable energy.

While the tensions and trade-offs described are significant, they should not be seen as obstacles to the energy transition. Instead, they should be seen as essential factors for ensuring a fair and equitable process. **Strengthening governance and including economic and social development in the COP28 renewable pledge is a compelling driver that will motivate nations to proactively engage in sustainable renewable energy transition, and position renewable energy as a catalyst for broader societal and economic development.**

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