Towards a Just Transition to Address Climate Inequities and Financial Challenges Post-COP28

Md Sazzad Hossain, Bangladesh High Commission, Ottawa

Introduction

The concept of "Just Transition" has emerged as a critical framework in climate change and other global discourse for ensuring that no one is left behind in the shift towards a net-zero future. Originating in the 1980s, this idea has evolved to encompass a broad range of economic, social, and environmental policies aimed at addressing the inequities and challenges posed by climate change. The last COP28 summit in the UAE marked significant progress in operationalizing this concept, particularly through the establishment of a dedicated "Loss and Damage" fund. However, despite these advancements, vulnerable countries continue to face substantial financial shortfalls and structural barriers in their pursuit of a just transition.

Concept of Just Transition

The term "Just Transition" originated in 1980s during a movement organized by US trade unions to safeguard workers affected by new environmental regulations. The idea of "Just Transition" encompasses all communities, workers, and social groups working towards a shared vision of a net-zero future (UNDP 2022). According to the International Labour Organization (ILO), "Just Transition" involves greening the economy fairly and inclusively, leaving no one behind while creating decent work opportunities (ILO 2023). It addresses socioeconomic inequities and aims to prevent the emergence of new disparities (Abdenur, n.d.). In its guidelines for “Just Transition,” the ILO delineated nine key policy areas to address environmental, economic, and social sustainability simultaneously: macroeconomic and growth policies, industrial and sectoral policies, enterprise policies, skills development, occupational safety and health, social protection, active labor market policies, rights, and social dialogue and tripartism (ILO 2015).

The necessity of a just transition was firmly established in the 2015 Paris Agreement during COP21 and further reinforced at COP27 through the Cover Decision in the Sharm el Sheikh Implementation Plan, which introduced a significant new work program focused on just transition (COP27 Decision -/CP.27, 2022). The International Labour Organization (ILO) emphasizes the need for a just transition that integrates policy coherence, social dialogue, and a holistic approach. Specifically, the ILO advocates for aligning the UNFCCC's just transition efforts with its own guidelines and resolutions, ensuring that policies are harmonized across the UN system. It also underscores the importance of involving social partners in all aspects of planning and implementation, emphasizing decent work and labor rights. Lastly, the ILO calls for a comprehensive strategy that considers all dimensions of sustainable development and includes all stakeholders, particularly workers, communities, and small and medium-sized enterprises, to ensure no one is left behind in the shift toward environmentally sustainable economies (ILO 2023).

Since its brief mention in the 2015 Paris Agreement, the concept of a just transition has gained significant momentum, culminating at COP28 with the establishment of a just transition work program as part of the core energy package (COP28 2023). This progress is underscored by all countries reaffirming the ILO's 2015 just transition guidelines, and over 30% of national climate plans for 2030 now including social dimensions such as just transition funds and strategies for worker protection, job creation, and skills development. The UAE Consensus emphasized the need for transitioning away from fossil fuels in a just, orderly, and equitable manner aimed at catalyzing action this decade to achieve net zero by 2050. It also recognized that the energy transition must protect indigenous peoples, local communities, and biodiversity, reflecting a broader acceptance that significant climate action by 2030 and 2050 requires a new social contract across countries (COP28 2023; UNFCCC 2023).

At COP27, a comprehensive work program on just transition pathways was launched, aiming to craft and scale methods to achieve the Paris Agreement's objectives equitably, ensuring that no one is left behind. In the first high-level ministerial roundtable on just transition, UN Climate Change Executive Secretary Simon Stiell emphasized the unique interpretations of just transition based on geographic and demographic factors but firmly stated the commitment to inclusivity, especially for marginalized groups such as women, indigenous peoples, and youth,

ensuring these groups have equal opportunities to benefit from these transitions ((COP27 Decision -/CP.27, 2022; UNFCCC, 2022).

At COP28, this concept was further elaborated upon and defined as a just and equitable transition that includes not only energy but also socioeconomic and workforce aspects. These pathways are to be aligned with national development priorities and supported by social protections to mitigate potential adverse impacts of the transition. Key decisions promoted inclusive and participatory methods for these transitions and acknowledged the importance of international cooperation as a facilitator (UNFCCC, 2023). The implementation of this comprehensive work programme was set to begin immediately, emphasizing the urgency of these initiatives (COP28, 2023).

Overall, the decisions and discussions at COP27 and COP28 have solidified a global commitment to advancing a just transition that is equitable, inclusive, and capable of meeting the ambitious climate goals of the Paris Agreement, ensuring that the transition leaves no one behind as the world strides towards a sustainable net-zero future.

Diverse Implications of Climate Change and “Just Transition”

Climate change's impact is profoundly varied worldwide, as is the definition of a "just transition." For the most vulnerable countries, the impact is more severe than in others. As we write this article, Bangladesh grapples with a heatwave that has tragically claimed lives. The International Labour Organization (ILO) forecasts that by 2030, Bangladesh could lose 4.84% of its total working hours due to heat stress induced by global warming (ILO 2019). Dhaka alone suffers a staggering $6 billion loss in labor productivity annually due to extreme temperatures (The Daily Star, 2022). Bangladesh faces significant risks, including the potential loss of 0.25 million jobs and $27 billion in apparel sector exports by 2030, attributed to climate-induced extreme heatwaves and flooding (Press Xpress, 2023). Meanwhile, the United Arab Emirates, including Dubai, recently witnessed its heaviest rainfall in at least 75 years, experiencing more than a year's worth of precipitation within 24 hours (CNN, 2024). Simultaneously, Oman mourns the loss of at least 19 lives due to flash floods (NY Times, 2024), while Pakistan and Afghanistan struggle with severe flooding, with the combined death toll rising to at least 135 (CBS News, 2024). The rise in

global temperatures from 1950 to 2018 has worsened conditions for dengue virus transmission, leading to an unprecedented surge in cases in Latin America, with over 3.5 million reported and more than 1000 deaths as of March 2024 (Brazilian Report, 2024). This trend is expected to make 2024 the region's worst year for dengue outbreaks, surpassing the record set in 2023 with 4.5 million cases. The impact on Brazil's economy is significant, with estimated productivity losses of BRL 4.4 billion (USD 889 million) in 2024 as reported by the Federation of Industries of Minas Gerais (Fiemg, 2024).

The concept of a "just transition" in tackling climate change, though well-intentioned, can have divergent impacts globally due to differences in economic conditions and interconnected trade and financial systems. For instance, the European Union's Carbon Border Adjustment Mechanism (CBAM) aims to reduce carbon emissions by imposing tariffs on high-emission imports. However, it is projected to decrease global income significantly, particularly harming developing countries, as these nations often rely on carbon-intensive exports (UNCTAD, 2021).

This disparity reflects the broader link between income and emissions, where developing countries, despite increasing emissions in their pursuit of sustainable development, have per capita emissions far below those of advanced economies. Moreover, the wealthiest 1% of the global population is responsible for a disproportionate share of emissions, while the poorest half, who emit the least, face the harshest climate impacts with minimal resources to adapt (UNCTAD, 2021; European Commission, 2023). Hence, a genuinely equitable transition requires acknowledging these disparities and integrating financial aid, technology transfer, and capacity-building to support vulnerable economies, ensuring that climate action does not exacerbate global inequalities.

Challenges

Not Well Defined and Inclusive Concept

The prevailing interpretation of "Just Transition" is often seen as narrowly focused, primarily addressing the conditions of developed or larger developing countries with significant industrial sectors prepared for transformation. This perspective is rooted in ensuring shifts towards carbon neutrality are managed in socially and ecologically sustainable ways, which inherently favors regions with the capacity to adapt and invest in new technologies. However, this concept often excludes the unique economic, social, and environmental circumstances of smaller or

economically constrained nations. As highlighted by Bishop et al. (2021), "Just Transition" implies different trade-offs for different societies, emphasizing that what is considered 'just' varies widely between contexts. The discourse largely addresses the needs of countries capable of extensive industrial overhaul, overlooking those that may face severe economic consequences from forced premature de-industrialization. This oversight demonstrates a significant gap in the inclusivity and applicability of "Just Transition," suggesting a need for a broader, more universally applicable definition that considers the diverse global landscape and ensures equitable outcomes for all nations.

What Does "Just Transition" Mean for Small Island Developing States?

"Just Transition" for Small Island Developing States (SIDS) refers to a comprehensive and equitable shift towards renewable energy and energy efficiency, with a focus on mitigating the disproportionate impacts of climate change on these vulnerable communities. Unlike larger nations with substantial carbon-intensive industries, SIDS often depend on tourism and lack significant extractive industries or fossil fuel-dependent labor (Bishop et al. 2021). Despite representing less than 1% of the world's population and greenhouse gas emissions, SIDS face heightened vulnerability due to their geographical location, economic fragility, and limited technical capacity (CCAC secretariat, 2023).

For SIDS, “Just Transition” involves promoting all renewable energy resources, including geothermal and ocean technology, as well as enhancing energy efficiency and promoting green hydrogen, battery storage, and sustainable transport. This transition is not only about reducing carbon emissions but also about linking renewable energy uptake to climate resilience and disaster recovery efforts. Furthermore, "Just Transition" for SIDS entails reinforcing connections between renewable energy and non-energy sectors such as agriculture, health, water, tourism, fisheries, education, and information and communication technology (ICT). By integrating renewables into these sectors, SIDS aim to achieve broader socio-economic development, including the promotion of small and medium-sized enterprises (SMEs), job creation, gender equality, and empowerment of youth and women.

To achieve a just transition, SIDS require international support in the form of tailored financing, technical assistance, capacity building, and technology transfer. This support is crucial due to the unique challenges faced by SIDS in accessing and mobilizing capital for renewable energy

expansion. The current climate finance architecture often falls short in meeting the specific needs of SIDS, with global creditors operating under inflexible structures that hinder their ability to compete with larger-scale projects. Therefore, a just transition for SIDS must prioritize means of implementation, including access to finance and capacity building, while addressing barriers and leveraging opportunities to develop tangible policy packages for a sustainable future.

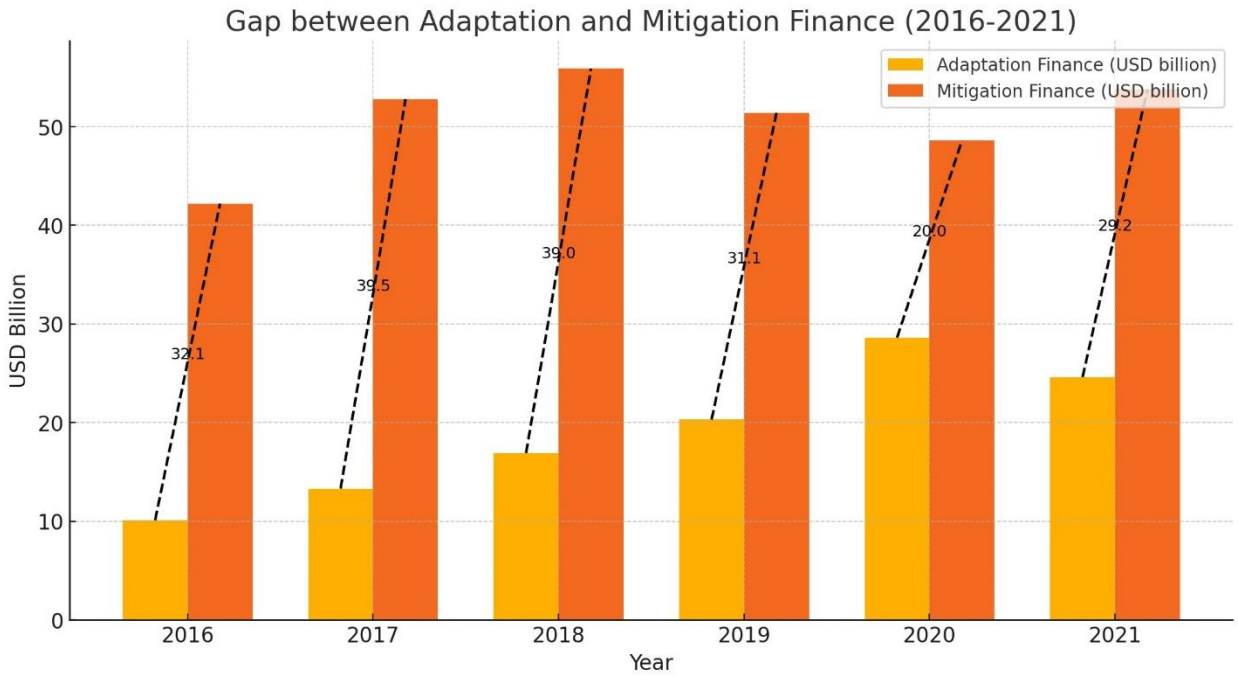
What Does “Just Transition” Mean for Middle and Low-Middle-Income Developing Countries?

For many low and middle-income countries (LMICs), where demography skews younger and poverty has deepened post-pandemic, the concept of a "Just Transition" must prioritize the creation of dignified, sustainable jobs, particularly in green sectors. With 82% of newly extreme poor of 120 million people caused due to the pandemic residing in Middle Income Countries (MICs), these nations, often burdened by high levels of informality in labor markets and significant dependency on single formal income sources within families, face unique challenges in ensuring that climate policy does not exacerbate unemployment or social inequality (World Bank, 2021). Moreover, in the context of LMICs, the drive to expand access to electricity - critical for 940 million people, or 13% of the global population without power, predominantly in developing regions - introduces tensions between poverty alleviation and climate objectives. Additionally, these countries are vulnerable to the economic shocks of rapidly transitioning from fossil fuels, which can lead to stranded assets and further economic instability, particularly as 60% of low-income countries and 30% of emerging economies face high capital costs and limited diversification in energy sectors. Therefore, a just transition for LMICs must not only focus on environmental sustainability but also on strengthening social protection frameworks, reducing poverty, and enhancing economic stability to support comprehensive development goals. This will align with the broader commitments made at international forums like COP26, which emphasize the need for global cooperation to address the structural imbalances that hinder both development and climate mitigation efforts in developing nations.

Developed World's Focus on Mitigation

The developed world's predominant focus on mitigation poses a significant challenge for achieving a just transition, particularly for vulnerable countries and communities facing the immediate

impacts of climate change. While mitigation efforts address global climate risks and are considered a public good requiring collective action, adaptation is often seen as a site-specific or local public good, placing the responsibility and cost on individuals, firms, or local communities benefiting from specific measures (Shalizi 2010). However, many vulnerable countries, including Small Island Developing States (SIDS), lack the financial and technological capacity to undertake adequate adaptation measures despite being least responsible for the climate consequences they face (Bishop et al. 2021). Despite pledges to provide financial support for both mitigation and adaptation, such as the commitments made in Cancun or in Paris Agreement, the majority of funds continue to be channeled into mitigation efforts, leaving a significant gap in adaptation finance (Birdsall and Michele 2012). In 2021, adaptation finance saw a decline of USD 4 billion (-14%), with mitigation still representing the majority (60%) of total climate finance (Figure-1). This highlights the urgent need for increased financial support for adaptation, as indicated by the adaptation finance gap estimated at US$194–366 billion per year (United Nations Environment Programme 2023). The recent adaptation of the framework for the Global Goal on Adaptation (GGA) in COP 28 signifies progress, but there remains a crucial need for a comprehensive framework supporting effective GGA implementation tailored to the specific needs of different countries, particularly those most vulnerable to climate change impacts (International Institute for Sustainable Development January 2024). The decision to operationalize the loss and damage fund was taken at COP 28 (UNFCCC Dec 2023). When financial commitments fall short of meeting the intense need and the majority of finance is provided in the form of loans, the focus tends to be primarily on mitigation efforts (UNCTAD 2022). In order to achieve a just transition, it is imperative for the developed world to shift focus towards supporting adaptation efforts and providing adequate financial assistance to vulnerable countries, ensuring equity and resilience in the face of climate change.



Source: OECD 2023

Figure 1: Gap between Adaptation and Mitigation Finance (2016-2021)

Often, mitigation and adaptation are interdependent, as the efficiency of mitigation measures can depend on effective adaptation strategies and vice versa (Shalizi 2010). According to the IPCC 2021 assessment report, even with immediate and drastic emission cuts, the world is projected to reach or exceed the 1.5°C target within the next two decades, leading to more frequent heatwaves, droughts, floods, and rising sea levels (Maizland 2023). This emphasizes the crucial need for both curbing emissions and implementing adaptation measures. Achieving a balance between mitigation and adaptation efforts presents a significant challenge, highlighting the necessity for comprehensive and coordinated action to address the impacts of climate change effectively.

Vulnerable Countries Seek Compensation for Damage Beyond Adaptation and Mitigation

Vulnerable developing countries argue that the financial contributions from developed nations are insufficient to meet the escalating costs of climate-induced "Loss and Damage," which refers to the impacts of climate change that cannot be mitigated or adapted to. At COP28, due to persistent

advocacy from these nations, a separate "Loss and Damage" fund was operationalized, marking a significant step forward in global solidarity and commitment to addressing climate inequities (UNFCCC 2023). However, the finance needed for this fund still falls significantly short, leaving vulnerable countries dissatisfied and emphasizing the urgent need for increased financial commitments in future negotiations for a just transition. This shortfall highlights the ongoing challenge of ensuring that financial mechanisms are robust and responsive to the needs of the most affected countries. “Loss and Damage” will continue to be at the center stage of “Just Transition” discourse.

Failing to Look Beyond the Energy Sector

Focusing solely on the energy sector when discussing just transition presents a significant challenge, as it overlooks the diverse array of industries and sectors crucial for a comprehensive transition to a sustainable economy. While energy plays a pivotal role with 65 million people employed worldwide and accounting for 2 percent of global employment, sectors such as agriculture, manufacturing, transportation, finance, and tourism also wield considerable influence on both emissions and adaptation efforts. For instance, Brazil, not heavily reliant on fossil fuels, faces pressing issues such as illegal deforestation. Similarly, Small Island Developing States (SIDS), heavily dependent on tourism, face challenges where certain carbon-intensive sectors like tourism are often overlooked in the implementation of "Just Transition" initiatives despite their substantial carbon footprint (Bishop et al. 2021). By transcending sectoral boundaries and considering the broader spectrum of industries, just transition initiatives can address the complex challenges of climate change while fostering inclusive economic growth and social equity. Therefore, a holistic approach that encompasses all sectors is essential to achieving a truly just transition those leaves no one behind.

Political and Economic Barriers

Political and economic barriers pose significant challenges to achieving a just transition, particularly in middle-income and poor countries where institutional capacity and effective policy planning may be lacking (Abdenur, n.d.). This results in a lack of coordination and effectiveness in decision-making processes compared to developed economies, hindering integration across public and private sectors and between different levels of government (Abdenur, n.d.). Additionally, resistance and contention at the political level may further impede the

implementation of just transition policies despite stakeholders reaching a consensus (Abdenur, n.d.)

Despite these challenges, successful climate policies have been implemented in various countries, demonstrating that progress is possible (World Bank 2023). Examples include Colombia's actions on green building, Peru's investments in low-carbon urban transit, Egypt's energy price reforms, and India's progress in solar power (World Bank 2023). In Bangladesh, the government has been promoting climate-resilient agriculture and implemented the Climate Change Strategy and Action Plan to enhance adaptive capacity and reduce vulnerability to climate impacts. However, social tensions and unpredictable factors can create setbacks for climate action, as seen in protests against carbon tax increases in France (World Bank 2023).

The recent COP28 conference marked some progress in addressing political and economic barriers to climate action. Declarations such as the COP28 UAE Declaration on Climate and Health aim to place health at the heart of climate action and accelerate the development of climate-resilient, sustainable, and equitable health systems (Geneva Centre 2023). The inclusion of human rights considerations, social protection, and recognition of labor rights in adaptation strategies represents a step forward (Geneva Centre 2023). Additionally, increased recognition of environmental rights in courts and efforts to protect civil society, including environmental human rights defenders, indicate growing awareness of the importance of climate justice (Geneva Centre 2023). Despite ongoing challenges, recent developments suggest improving prospects for overcoming political and economic barriers to achieving a just transition.

Lack of Technology Transfer

The lack of technology transfer presents a significant challenge for achieving a just transition, particularly for developing countries. Despite the urgent need for global intervention, countries hosting intellectual property (IP) are often unwilling to share green technologies, hindering the diffusion of climate technologies (UNCTAD 2023). This reluctance perpetuates economic disparities, as low-income countries struggle to access and deploy green technologies due to concentrated ownership of IP (Agnelli et al. 2022). Moreover, the high capital costs of renewables and limited diversification in the renewable energy sector expose developing countries to increased risk of stranded assets, further complicating their transition efforts (UNCTAD 2023). Additionally, the suitability of technologies in the local context and the identification of appropriate solutions

pose challenges, as technologies must be adapted to fit local conditions and changing climates (Agnelli et al. 2022). Overall, addressing the lack of technology transfer is crucial for enabling a just transition and reducing disparities in capacity and wealth among nations (Agnelli et al. 2022).

Within the UN Climate Change process, efforts to enhance technology development and transfer to developing countries have been recognized as crucial. Established in 2010, the Technology Mechanism aims to facilitate this transfer. In 2023, the Technology Mechanism launched the Initiative on Artificial Intelligence for Climate Action (#AI4ClimateAction), focusing on exploring AI's role in advancing transformative climate solutions for mitigation and adaptation in developing countries, particularly LDCs and SIDS (UNFCCC). COP28 discussions further underscored the potential of AI for climate action in developing nations while also addressing concerns about exacerbating the digital divide. The UN Climate Change Technology Executive Committee (TEC) and Enterprise Neurosystem have collaborated to launch the AI Innovation Grand Challenge, aiming to identify and support AI-powered solutions for climate action in developing countries. COP28 decisions emphasized the importance of securing adequate and predictable funding for implementing the mandates of the Technology Mechanism and its joint work program, recognizing finance, capacity-building, and technology transfer as critical enablers of climate action (UNFCCC 2023).

Debt Pattern and Climate Finance

Despite commitments under the Paris Agreement, the mobilization of finance falls short of what is needed for lower-income countries to adapt to and mitigate climate change and address debt distress during crises (Keswani 2023). External debt, accounting for over 70% of public climate finance provided, constrains these nations' ability to invest in climate mitigation and adaptation (OECD 2022). Moreover, the high share of debt as a percentage of climate finance is exacerbated by the growing cost of climate action and the increasing availability of concessional debt financing. According to the Climate Finance Shadow Report 2023 by Oxfam, a substantial portion of climate finance is provided as loans rather than grants, increasing the debt burden of the recipient countries and limiting their capacity to invest in sustainable development (Oxfam, 2023). Additionally, the World Bank highlights that the growing reliance on debt financing for climate action underscores the need for more grants and concessional finance to support low and middle-income countries effectively (World Bank, 2023).

The challenge of mobilizing finance for just transitions emerged as a critical gap left unaddressed by COP28. A new assessment from the Independent High-Level Expert Group on Climate Finance published during COP underscores the pressing need for emerging markets and developing countries to mobilize $2.4 trillion annually by 2030 for climate and nature spending. This includes $85 billion per year dedicated to just transition activities for workers and communities. However, achieving this ambitious goal requires a substantial increase in external finance from public and private sources, totaling $1 trillion annually by 2030. This entails a significant escalation in concessional public investment, including contributions from multilateral development banks. Despite these urgent financial needs, COP28 deferred serious discussion of financing until 2024, highlighting the need for accelerated action to address the financing gap (Independent High-Level Expert Group on Climate Finance).

However, COP28 brought some progress with increased pledges to funds like the Green Climate Fund and commitments to setting a new collective quantified goal on climate finance in 2024. Despite these efforts, financial pledges remain far short of the trillions needed to support developing countries with clean energy transitions and adaptation efforts (UNFCCC 2023). The UAE Leaders' Declaration on a Global Climate Finance Framework highlights the urgent need for investing $5-7 trillion annually in greening the global economy by 2030, emphasizing the importance of inclusive and shared prosperity in achieving climate goals (UAE Leaders' Declaration on a Global Climate Finance Framework). Thus, while COP28 signals progress, addressing the intertwined challenges of climate finance and debt patterns remains crucial for a just transition.

Recommendations

To address the challenges of climate finance and debt patterns while ensuring a just transition, several key actions are imperative:

1. **Mobilizing Finance:** Given the substantial financing gaps, multilateral financial institutions must play a crucial role in meeting these needs. Institutions such as the World Bank and IMF should increase the provision of concessional loans to support climate resilience and mitigation efforts in vulnerable countries. Additionally, diversifying climate finance instruments, including the utilization of green bonds and carbon trading, can

enhance funding streams for climate-related projects (Henry & North 2023; UNDP 2023; European Commission 2021).

2. **Debt Restructuring:** Addressing the climate debt crisis requires tailored debt restructuring solutions, potentially facilitated by organizations like the Paris Club. Reforms in climate finance, overseas development assistance, and debt relief mechanisms are essential to alleviate the debt burden on climate-vulnerable nations. Establishing platforms such as the Debt Resolution by Coordination Initiative within the G20 can foster collaborative efforts to address economic inequalities exacerbated by climate change (Keswani 2023).

3. **Technology Transfer:** Encouraging global green technology transfer involves revising trade agreements to remove barriers, ensuring technology choices align with national contexts, and emphasizing capacity building for effective technology adoption. Strategic deployment of concessional finance and long-term institutional capacity building are crucial for affordability and successful technology transfer initiatives (Agnelli et al. 2022).

4. **Expansionary Fiscal and Monetary Policies:** Coordinated fiscal and monetary policies across countries are essential for achieving an expansionary economic recovery that supports climate mitigation and adaptation efforts. Investing in green technologies globally can drive economic growth, increase productivity, and reduce inequality, contributing to a just transition (UNCTAD 2022).

5. **Unlocking Private Finance:** Leveraging private sector finance through dedicated instruments and effective risk management mechanisms is paramount for scaling up clean infrastructure and technology deployment. Technical assistance plays a critical role in addressing barriers to private investment and creating conducive environments for climate-aligned financing (UNCTAD 2022).

6. **Delivering High-Integrity Carbon Markets:** Enhancing transparency and integrity in carbon markets is crucial for supporting the implementation of the Paris Agreement. Ensuring consistency across different markets and adherence to environmental integrity principles can promote effective action and financial flows, especially to developing countries (UNCTAD 2022).

7. **Accelerating Mitigation Efforts by Advanced Economies:** Leading economies should take proactive steps to accelerate mitigation efforts and transition toward inclusive green labor markets. This includes transferring low-carbon technologies to developing economies, scaling up financial support, coordinating economic and financial policies globally, and providing adequate training and support for workers.
8. **Incorporating Just Transition Objectives by Developing Countries:** Developing nations must incorporate just transition objectives into national development planning, deploying national climate funds to guide climate action and sectoral transitions. Complementary fiscal and monetary policies should be used to advance expansionary strategies, expand and future-proof energy access, mobilize domestic resources, strengthen social infrastructure, and promote South-South cooperation for capacity building and multilateral support.

In conclusion, to achieve a just transition towards net-zero future, it is imperative that developed nations step up their financial commitments and support mechanisms, ensuring that the most affected regions have the resources and capabilities to adapt and thrive in a changing climate. The concept of a just transition must evolve to encompass a holistic approach, integrating diverse sectors and acknowledging the varied impacts of climate change across different regions. By embracing this inclusive vision, the global community can work towards a future where economic growth, environmental sustainability, and social equity are not mutually exclusive but rather complementary goals.

About the Author:

Md Sazzad Hossain is a career Foreign Service Officer from Bangladesh, currently serving at the Bangladesh High Commission in Ottawa. Previously, he worked at the Ministry of Foreign Affairs in Dhaka, where he handled various aspects of multilateral diplomacy, including representing Bangladesh in the COP process. Since joining in 2019, Mr. Hossain has brought a multidisciplinary background in applied sciences and business to his diplomatic endeavors. He can be reached via email at sazzad.hossain@mofa.gov.bd or on X (formerly Twitter) @sazzadhl71.

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