United Nations Development Programme

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Submission by the United Nations Development Programme to the COP 30 Presidency Invitation to Submit Contributions to Submit Contributions to: A) the COP 30 Presidency Roadmap on the Transition Away from Fossil Fuels in a Just, Orderly and Equitable Manner.

The following submission draws on the evidence and experience gathered from across UNDP's vast portfolio of support to developing countries on climate action, as the largest implementer of support in the UN system. It reflects on barriers and opportunities for countries to embark on the transition away from fossil fuels in a just orderly and equitable manner, taking into account context-specific factors. It also includes examples of many countries already taking steps towards this transition which, successfully demonstrating the alignment with national development priorities and pathways, which can be a model providing lessons and insights for replication.

(a) What are the most critical barriers — whether physical, economic, financial, institutional, technological or social— preventing a transition away from fossil fuels?

Many country contexts present barriers to a just transition that must be taken into account. While many countries have identified strategies for addressing these barriers, as reflected below, it is important to consider these barriers when designing strategies for transitioning away from fossil fuels.

Economic and financial barriers are substantial. Many countries remain structurally dependent on fossil fuel revenues, exports, or employment, creating strong political economy constraints and risks of social backlash. One of the most critical barriers to transitioning away from fossil fuels is limited fiscal space driven by high public debt, particularly in developing economies. Many countries face debt-to-GDP ratios above 60–80%, with some exceeding 100%, while debt servicing can absorb 20–30% of government revenues, constraining investment in renewable energy, infrastructure, and just transition measures.[1]

At the same time, fossil fuel dependent economies often rely on hydrocarbons for 30–50% of fiscal revenues or exports, creating structural risks where rapid phase-out can lead to fiscal instability and widening deficits without viable diversification pathways.[2] High borrowing costs further limit progress, with developing countries facing interest rates 2–4 times higher

[1] International Monetary Fund (2023). *Fiscal Monitor: Navigating Global Divergences*. Washington, DC.
[2] International Energy Agency (2023). *World Energy Investment 2023*. Paris.

than advanced economies, alongside investment risks and weak financial markets.[3] As a result, debt burdens crowd out critical investments in institutions, skills, technology, and economic diversification in general.

The global distribution of clean energy investment remains highly uneven. More than 90 percent of global clean energy investment is going to advanced economies and China. Meanwhile, many emerging and developing economies, home to the fastest-growing populations and the greatest development needs, continue to receive only a fraction of the capital required.

In many emerging markets, financing costs - *not hardware* - are now the main barrier to cheaper and more accessible renewables. In these countries, investors face a set of risks that include regulatory and policy uncertainty, currency volatility, off-taker and market risk, technology and capacity gaps, financing and capital market limitations and political and social risks.

- Each one of these risks raises the cost of financing and can, together, double it. The high capital intensity of renewable energy projects means that they are highly sensitive to the cost of financing, resulting in either higher costs of electricity for consumers, or the downright lack of investment. These risks span several layers:
- Regulatory and policy: unclear or inconsistent frameworks, weak enforcement, and complex licensing procedures create uncertainty.
- Currency and macro-economic: foreign exchange volatility and limited access to hard currency raise financing costs and constrain capital flows.
- Market-related: low creditworthiness of public off-takers, unpredictable demand, and affordability issues undermine revenue certainty.
- Technology: limited project developer capacity, shortages of qualified technicians, and restricted access to affordable, quality hardware signal broader capability gaps.
- Financing and capital markets: lack of long-term local currency financing and risk-sharing mechanisms suited for small- and medium-scale projects.
- Political and social: instability and insufficient community engagement add complexity to investment decisions.

Finally, social barriers, including concerns over job losses, energy affordability, and unequal impacts across regions and groups, can undermine public support and delay action if not proactively addressed.

<u>(b) What potential levers, whether economic, financial, institutional, social or technological, exist for accelerating the implementation of the transitioning away Commitment?</u>

Despite the challenging context in many countries and the considerations required, there are many good examples already of countries who have put in place the necessary conditions to successfully advance a transition. These lessons recognize that accelerating implementation

[3] World Bank (2023). *Scaling Up to Phase Down: Financing Energy Transitions in the Power Sector*. Washington, DC.

of the transition away from fossil fuels requires action across interconnected economic, financial, institutional, technological, and social levers.

First, countries need **stronger policy instruments and market mechanisms** that shift incentives across both the demand and supply sides of the energy system, including regulatory reform, carbon pricing and subsidy reform, public procurement, efficiency standards, and measures that steer investment away from fossil fuels and toward clean alternatives. Fossil fuel subsidies can be re-directed towards technologies. For example, in Uruguay, UNDP-GEF MOVES project supported the repurposing fossil fuel subsidies to reduce the upfront cost of electric buses and enable fleet renewal. Accelerating the energy transition requires systematically reducing investment risks so that low-cost private capital can flow at scale.

Second, from UNDP's country support experience, financing the transition away from fossil fuels requires a **combination of complementary levers across public, private, and innovative sources,** as demonstrated in multiple country contexts. Concessional finance and blended structures are central, as seen in **South Africa's Just Energy Transition Partnership (JETP)**, which mobilized **USD 8.5 billion** in concessional and grant finance to support coal phase-down and a just transition. Debt-linked instruments are also emerging, with **Uruguay issuing sustainability-linked sovereign bonds** tied to climate and environmental targets, and countries such as **Ecuador exploring debt-for-nature swaps** to create fiscal space. At the domestic level, reforms such as **Indonesia's gradual fossil fuel subsidy reform** and **carbon pricing mechanisms in countries like Chile and South Africa** help shift incentives and generate revenues. Mobilizing private capital is critical, supported by risk mitigation and clear policy frameworks, as seen in **Morocco's large-scale renewable energy investments (e.g. Noor solar complex)**. Dedicated just transition financing is also gaining traction, including support for worker reskilling and regional diversification under JETP models. In addition, innovative mechanisms such as **Article 6 carbon markets**, with early pilots in countries like **Ghana**, are creating new revenue streams. Together, these examples illustrate how countries are combining financial instruments to align climate ambition with economic and social realities.

Third, countries need **robust institutional and governance frameworks.** These established frameworks and systems help to coordinate across ministries, sectors, and levels of government, and to translate long-term goals into credible, sequenced implementation plans. This includes ensuring alignment with NDCs so that transition pathways are fully integrated into national climate commitments and supported through coherent policy, planning, and implementation frameworks. UNDP, through its Climate Promise initiative supporting NDCs, has helped 72 countries integrate just transition considerations into their NDCs, ensuring that transition issues are not addressed in isolation but are systematically embedded within existing institutional and governance frameworks and receive adequate support for implementation.

Finally, accelerating transition requires **a just transition approach** that is rights-based and recognizes differentiated national pathways and addresses physical and climate systemic risks, social impacts, affordability, employment, and regional inequality through inclusive dialogue, social protection, skills development, and targeted support for affected workers and communities. UNDP has supported multiple countries in establishing just transition stakeholder engagement mechanisms and institutionalized dialogue at the national level, for example in Jamaica, to incorporate a rights-based approach into the process. Together, these levers help make the transition not only faster, but more feasible, politically durable, and equitable.[4]

(c) What country, regional or sector roadmap experiences, best practices, and lessons learned can be shared?

UNDP has supported green transition efforts through various programmes, including DREI and the Climate Promise, with selected examples highlighted below.

Serbia: In Serbia, UNDP has supported the development of a **Just Transition Strategy focused on coal-dependent regions, particularly Kolubara and Kostolac**. The process combined stakeholder engagement, socio-economic analysis, and policy advisory to assess the impacts of coal phase-down on employment, local economies, and public revenues. This informed the design of targeted measures for workforce reskilling, social protection, and regional economic diversification, while aligning energy transition objectives with national development priorities. The experience highlights the importance of place-based planning and inclusive dialogue in shaping credible and implementable just transition pathways.

Vietnam: In Viet Nam, UNDP supported the government in advancing a people-centered and investable Just Energy Transition Partnership by combining analytical, technical, and institutional support across both design and implementation. This included the development and operationalization of the JETP Plan of Action, alongside resource mobilization, monitoring and evaluation, and financing frameworks to enable JETP-aligned investments at scale. UNDP generated robust evidence to inform decision-making through gender-responsive social and environmental impact assessments of coal phase-out in state-owned and foreign-invested power plants, as well as scenario analysis for private sector facilities, helping to identify socio-economic impacts and design targeted mitigation measures. Building on this, a practical blueprint was developed to support replication in other contexts. The approach also prioritized inclusive implementation through targeted capacity-building efforts, including engagement with ethnic minority groups and youth-led platforms to support NDC and JETP delivery. This experience underscores the importance of integrating strong analytics, investable frameworks, and inclusive processes to translate high-level transition commitments into actionable, country-owned pathways that are both socially equitable and financially viable.

[4] UNDP (2023). *How Just Transition Can Help Deliver the Paris Agreement*. United Nations Development Programme.

In **Montenegro**, UNDP supported the development of Just Transition Roadmap. The roadmap advances a just transition through a whole-of-government, participatory approach that integrates decarbonization with economic diversification, workforce reskilling, and strong social inclusion. It combines short-term actions and pilot projects with long-term structural reforms, supported by coordinated governance, targeted financing, and robust monitoring to ensure an equitable and place-based transition.

In **Uruguay**, UNDP supported the transition to low-carbon urban mobility by positioning electric buses as a competitive, reliable, and scalable alternative to conventional public transport. Rather than focusing only on vehicle deployment, the project addressed the full electric mobility ecosystem: financing, infrastructure, institutional capacity, and policy reform. Key interventions included: Repurposing fossil fuel subsidies to reduce the upfront cost of electric buses and enable fleet renewal; expanding charging and maintenance infrastructure for electric public and freight transport; building institutional and technical capacity among public officials and transport operators; strengthening policies and regulatory frameworks, including eco-labelling standards and battery management regulations.

Mauritius aims to increase the share of renewable energy in its electricity mix to 60% by 2030. This ambitious goal not only enhances energy security but also aligns with the country's commitment to reducing greenhouse gas (GHG) emissions by 40% by the same year, as per its revised National Determined Contribution (2021). To support this ambitious target, the UNDP through the transition to a low-carbon economy programme funded by the Green Climate Fund, is ensuring the deployment of 25 megawatts (MW) of rooftop solar photovoltaic panels for low- and middle-income households, NGOs, and public buildings. Furthermore, this initiative has leveraged technologies such as Battery Energy Storage Systems and Smart Grids to support the deployment of a 18 MW battery energy storage system and enhance the grid's capacity to integrate up to 185 MW of intermittent renewable energy.

Colombia provides a strong example of a government-led just transition, combining a clear roadmap for reducing coal dependence with a focus on territorial equity and economic diversification. Recognizing the high reliance of regions such as La Guajira and Cesar on coal, the strategy integrates participatory planning, socio-economic impact assessments, and targeted policies to support workers and communities through the transition. A key strength is its use of evidence-based analysis and inclusive stakeholder engagement to anticipate employment and regional impacts, helping to design responsive measures such as skills development, social protection, and alternative livelihoods. The approach also links coal phase-out with renewable energy expansion and broader development objectives. UNDP has supported this process through socio-economic analysis, policy integration, and stakeholder engagement, helping to strengthen the evidence base and ensure that transition pathways are inclusive and aligned with national climate goals.

Relevant UNDP initiatives

- **UNDP has an extensive active Climate Change Mitigation Vertical Fund portfolio valued at over USD400 million and spanning more than 60 countries.** It supports countries in mobilizing bilateral and multilateral financing to implement strategic interventions that accelerate the sustainable energy transition. These include the deployment of renewable energy, grid modernization, improvements in energy efficiency, closing the energy access gap, shifts towards sustainable transport, the development of resilient and sustainable cities. as well as advancing Net-zero and Nature Positive targets.

- **UNDP's Derisking Renewable Energy Investment (DREI) 2.0 framework** provides an essential platform to accelerate the energy transition. DREI helps governments and investors build a shared understanding of the investment risks that matter most, and identifies the policy, institutional, or financial measures with the greatest potential to unlock private capital at scale. UNDP worked with over 20 countries, helping them identify investment risks, develop tailored derisking strategies, and unlock private capital for renewable energy projects.

- Through its **Climate Promise,** the largest global offer of support on NDCs and climate action having supported 90% of developing countries over the past decade, UNDP has maintained a strong focus on supported just transition approaches. To date, UND has supported 72 countries in integrating the key principles and processes of just transition into climate policies and implementation, leveraging key entry points such as NDCs, NAPs, and LT-LEDS. This support has been delivered through transition impact assessments, inclusive stakeholder engagement, strengthened policy and institutional frameworks, targeted capacity building, and efforts to mobilize transition finance.

(d) How can a just, orderly and equitable transition best reflect the diverse realities of countries at different stages of development and with different degrees of dependence on fossil fuels?

There is no single, universal pathway for a just, orderly and equitable transition. The pace, sequencing, and process of transitioning away from fossil fuels will necessarily differ across countries, reflecting diverse socio-economic conditions, levels of development, institutional capacities, and degrees of fossil fuel dependence.

However, while pathways will differ, a set of common enabling elements can help ensure that transitions are both context-specific and aligned with equity and development objectives.

First, **nationally owned and inclusive transition planning** is essential. Each country should define and agree on its transition pathway through inclusive, participatory processes that engage governments, workers, communities, private sector actors, and other stakeholders.

This is critical to building a shared vision, strengthening social license, and ensuring that transition strategies are grounded in national realities and priorities.

Second, **evidence-based decision-making** is fundamental. Transition pathways are often characterized by high levels of uncertainty, not only in terms of overall costs and benefits, but also in how these are distributed across sectors, regions, and population groups. To address this, countries should invest in **transition impact assessments**, which provide data-driven analysis of the potential effects of different pathways on employment, GDP, incomes, skills, and fiscal dynamics. UNDP's experience shows that such assessments are critical to identifying trade-offs and synergies across policy options, and to supporting governments in selecting transition pathways that maximize development co-benefits while minimizing adverse impacts on vulnerable groups.

Third, **strategic investment in the transition** is essential to ensure that pathways are both feasible and equitable across diverse national contexts. This requires a comprehensive approach that goes beyond financing energy systems to include enabling policy and regulatory frameworks that provide long-term certainty and align energy, industrial, labour, and fiscal policies with national transition pathways. It also requires investment in people through strengthened social protection systems, active labour market policies, and skills development and reskilling programmes, particularly in fossil fuel-dependent regions where targeted, place-based interventions are needed to support economic diversification and job creation. At the same time, investments in institutional capacity are critical to enable effective planning, coordination, and implementation, including strengthening cross-ministerial governance, data and analytical systems, and subnational capacities. Finally, scaling finance remains central, including through concessional and blended finance, efforts to reduce the cost of capital, and stronger domestic financial systems, while ensuring that financial flows support not only energy infrastructure but also the social and economic dimensions of the transition, enabling countries to pursue pathways that reflect their development priorities and socio-economic realities.