CONCEPT NOTE

Global Commodities Forum
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Adaptation to the Energy Transition in Fossil Fuel-Dependent Developing Countries

Just over 80 per cent of the world's energy demand is currently met by fossil fuels[1]. However, the ongoing climate change emergency has made it imperative that a fundamental shift in the sources of energy that power the day-to-day activities of businesses and households across the globe take place. This energy transition away from fossil fuels towards renewable sources is already underway — for every dollar invested in fossil fuels today, $1.80 is invested in clean energy technologies and infrastructure[2] — and it is expected to accelerate its pace in the coming years.

The deceleration in fossil fuels consumption and progressive substitution with renewable sources of energy is expected to have a permanent impact on those commodity-dependent developing countries (CDDC's)[3] who are reliant on the production and export of these fuels for foreign exchange, foreign direct investment (FDI), public revenue and economic growth, among others.

Out of the 95 countries that are classified as CDDC's, 28 of them depend on fossil fuel exports for the largest share of their commodity exports. Moreover, for 17 of these countries, one single fossil fuel product makes up over half of their total merchandise exports[4]. Additionally, the revenues from the extraction and sale of fossil fuels are a crucial source of funding for the respective governments' public spending programs. In fact, it is not uncommon to observe fossil-fuel-exporting CDDC's that rely on the commodity sector for well over half of all their fiscal revenues. In some cases, the figure rises to over 80 per cent[5].

The expected peak and progressive decline in the demand for fossil fuels will also affect the volume and, especially, the value of trade of energy-dependent CDDC's - in a context where international trade in energy products currently represents almost 40 per cent of all world commodity exports, at approximately $2.1 trillion[6]. In turn, these changing patterns in international trade will result in significant macro- and micro-economic impacts across those developing countries that rely on the export of fossil fuels for a significant proportion of their export revenues. Among the many and diverse consequences of the process of global decarbonization, three, in particular, are pertinent for fossil fuel exporting CDDCs.

[1] See Energy Institute (2024). *Statistical Review of World Energy 2024.* 73rd Annual Edition.
[2] See International Energy Agency (2023). *World Energy Outlook 2023.*
[3] UNCTAD defines commodity dependence as those countries for whom more than 60 per cent of their merchandise export value comes from commodities.
[4] See UNCTAD (2023). The State of Commodity Dependence 2023. UNCTAD. Geneva.
[5] See UNU-WIDER database. Available at: https://www.wider.unu.edu/project/grd-government-revenue-dataset
[6] See UNCTAD (2023). The State of Commodity Dependence 2023. UNCTAD. Geneva.

First is the expected decline in public revenue from exports of fossil fuels. Regardless of whether these public revenue streams originate from direct public operations in the fossil fuel sector (i.e. through fully or partially state-owned energy companies) or from the taxes levied on private companies that produce and export these fuels (including corporate income tax, royalties, export taxes), as well as indirect taxes on economic activity like VAT or sales tax, the downturn in fossil fuel export revenues is expected to result in a drop in the associated fiscal receipts. The extent of the impact will depend crucially on different conditioning factors, including the degree of diversification of fiscal revenue sources, the existence of fiscal buffers (such as sovereign wealth funds), the type of fossil fuel exported, the magnitude and time profile of the expected price and volume drops in fossil fuel exports, and policy preparedness for these upcoming changes[7].

Additionally, the energy transition can impact energy-exporting countries through both the current and financial accounts of the Balance of Payments. First, because demand for fossil fuels declines, export revenue from fossil fuel exports in these countries is expected to decrease. Second, the reduced interest in investing in the fossil fuel sector, driven by expectations of decreasing global demand for these fuels[8], can have important effects on FDI, which is an important source of Financial Account inflows in resource-rich developing countries[9]. It can also affect other financial inflows for countries more closely integrated into international capital markets, via the acquisition of domestic financial assets by foreign nationals. These developments can influence various economic factors, depending on domestic conditions such as the exchange rate regime, existing debt and reserves, and macro-prudential rules. Potential impacts include fluctuations in exchange rates, changes in monetary aggregates, shifts in interest rates, and effects on the financial sector, such as changes to the volume, price, and conditions of domestic credit.

Finally, the energy transition will change the incentives for using existing stocks of fossil fuels in various sectors, and also lead to changes at the microeconomic level. This includes value-addition activities that could result in a significant portion of current fossil fuel reserves becoming stranded assets. The extent of these stranded assets will depend on the pace of the energy transition. In fact, recent estimates indicate that nearly 60 per cent of oil and natural gas and 90 per cent of coal must remain unused to limit global heating to 1.5°C [10]. While the precise value of the resulting global stranded assets from the energy transition is difficult to estimate, as it depends on different future scenarios, current projections under plausible changes in expectations regarding the effects of climate policy put the figure at over 1 trillion dollars[11]. The prospect of such stranded assets will undoubtedly have an additional impact on investment flows into the fossil fuel sector, as well as on sectorial employment and private incomes, in addition to the aforementioned macroeconomic effects. Crucially, producers most at risk are those with greater extraction costs and

[7] See: Peszko et al (2020). Diversification and Cooperation in a Decarbonizing World - Climate Strategies for Fossil Fuel Dependent Countries. World Bank Open Knowledge Repository; IMF (2023). Fiscal Monitor—Climate Crossroads: Fiscal Policies in a Warming World. Washington, DC, October.
[8] Recent estimates suggest that the demand for all fossil fuel categories will peak by 2030 (See IEA (2023), *World Energy Outlook* 2023).
[9] See Rangasamy and Mihaljek (2011). Capital flows, commodity price movements and foreign exchange intervention. BIS Papers chapters, 56:63-80. Bank for International Settlements.
[10] See Welsby et al (2021). Unextractable fossil fuels in a 1.5 °C world. *Nature,* 597:230–234.
[11] See Semieniuk et al (2022). Stranded fossil-fuel assets translate to major losses for investors in advanced economies. *Nature Climate Change*, 12:532–538.

those with higher emission intensity in their extractive processes. These factors will play a crucial role in determining the distribution of global market shares for fossil fuels in a context of diminishing prices and overall demand, and of demand preferences shifting increasingly towards greener fossil fuel products[12].

Through the various channels outlined above, countries heavily dependent on the extraction and export of fossil fuels are exposed to significant changes in terms of their prospects for economic growth, employment, incomes, as well as other key socio-economic variables in the coming years. Of particular importance, and unlike previous instances of temporary (but persistent) shocks that have led to heightened volatility in commodity prices, including multi-year price cycles, is the fact that the energy transition is a permanent shock whose effects will not recede over time. Nevertheless, the time path of this permanent shock is still subject to significant uncertainty, as it is conditional on a variety of factors and scenarios that are still to play out, adding further complexity to the challenges faced by fossil fuel exporting CDDC's. Among these factors is the policy path — in terms of penalties and restrictions on emissions-intensive processes and polluting technologies — adopted by governments across the globe, as well as the pace of technological advances concerning the efficiency, affordability and accessibility of renewable energies.

In this session, we will discuss these issues in turn and address the following questions:

- What are the challenges facing energy export-dependent developing countries?
- How are vulnerable countries preparing to address the macroeconomic challenges of the energy transition?
- Are there environmentally sustainable opportunities through value addition to contribute to economic growth in these countries?

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[12] See International Energy Agency (2023). Emissions from Oil and Gas Operations in Net Zero Transitions: A World Energy Outlook Special Report on the Oil and Gas Industry and COP28. Paris.