



MEASURING CLIMATE CHANGE THE ECONOMIC AND FINANCIAL DIMENSIONS

Trade, Investment, and Financial Aspects of Climate Change

November 17, 2021

Anu Peltola, UNCTAD, Acting Head,
Development Statistics and Information

with Diana Barrowclough, Rachid Bouhia,
Onno Hoffmeister & Daniel Hopp

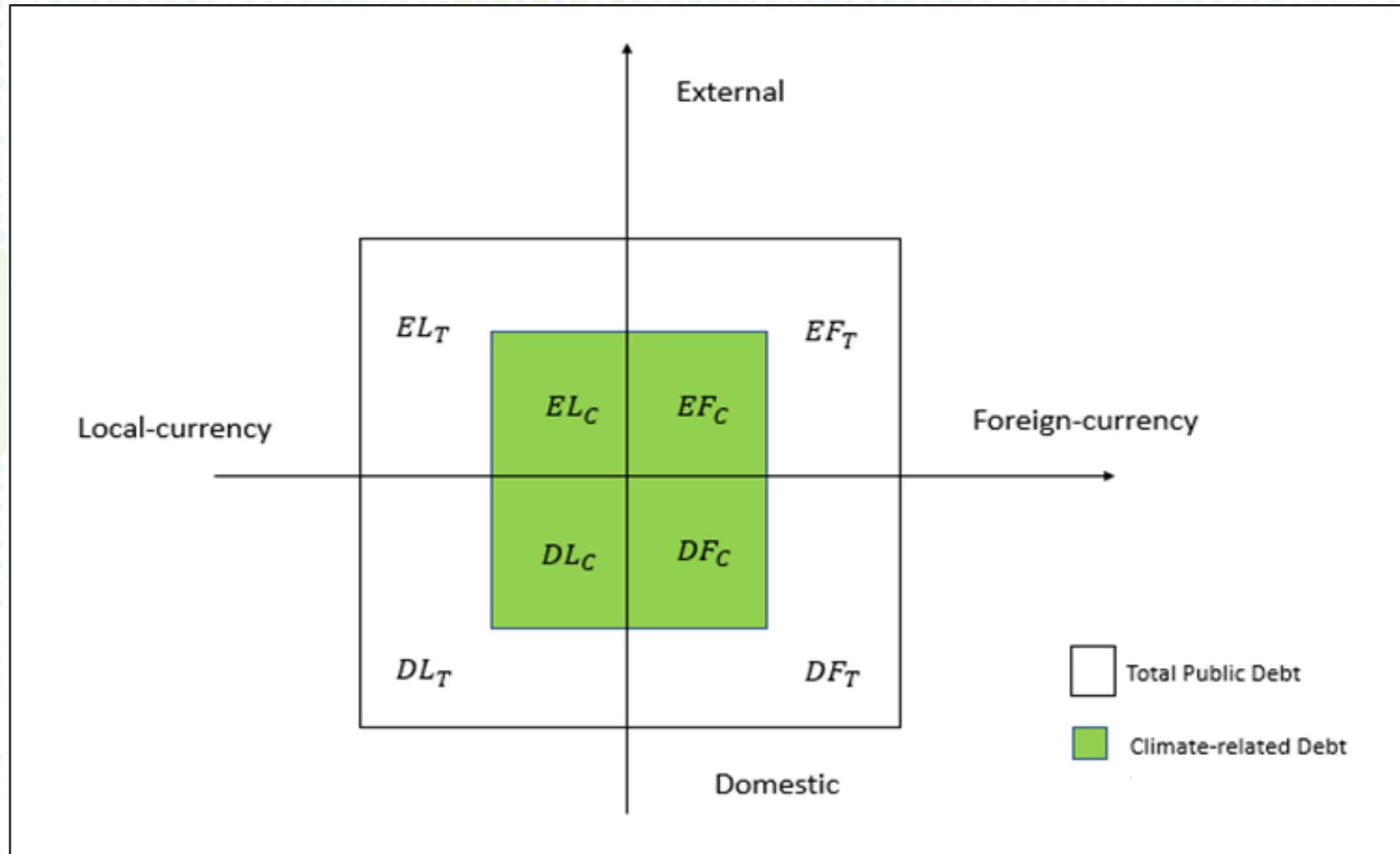
Background

- 2008: official statistics and climate conferences in Oslo and Seoul by UNSD
- 2009: a programme review on climate change and official statistics by the Australian Bureau of Statistics for the UN Statistical Commission
- 2011: UNECE Task Force on Climate Change-related Statistics
- 2014: Recommendations on Climate Change-related Statistics by UNECE
- 2021: latest set of 44 indicators covering climate change drivers, emissions, impacts, mitigation and adaptation by UNECE
- 2021: Global Set of climate 134 indicators and statistics
- 2021: IMF Climate Change Indicators Dashboard

The paper...

- Contributes to the efforts of the global statistical community to develop statistics to inform climate policies by
 - ▶ Highlighting the need to improve availability of debt statistics and proposing a conceptual framework with an emphasis on developing countries
 - ▶ Reviewing progress on climate and sustainability investment and potential indicators thereof
 - ▶ Digging deeper into one high-carbon sector – on plastics lifecycle trade, UNCTAD new Database on Trade in Plastics
 - ▶ Discussing the potential of a new UNCTAD Global Transport Costs Database for International Trade to estimate emissions from transport related to trade

Conceptual framework for climate-relevant debt indicators



Proposed climate-relevant debt indicators

- Five debt indicators broken down by ownership and currency composition would reveal much about vulnerability and sustainability:

Indicator	Available data/source	IPCC category	IMF category
Share of climate-related debt in external and foreign-currency denominated debt	Not available	Vulnerability	Financial
Share of climate-related debt in domestic and foreign-currency denominated debt	Not available	Vulnerability	Financial
Share of climate-related debt in external and local-currency denominated debt	Not available	Vulnerability	Financial
Share of climate-related debt in domestic and local-currency denominated debt	Not available	Vulnerability	Financial
Share of climate-related debt in total debt	Not available	Vulnerability	Financial

Opportunities

- Indications on the intensity of the global fight against climate change
- New insights on the sustainability debt of developing countries and to what extent climate change weighs on their public finances
- Official creditors who are interested in fostering climate adaptation and mitigation would be able to assess progress in this area better in light of vulnerabilities
- Better guidance for private creditors in making relevant investments and incentives to participate in debt restructuring programmes

Challenges

- Currently official debt statistics do not permit the computation of such indicators:
 - climate-related debt data is not reported
 - data assume a perfect concordance between ownership and currency composition of public debt

Proposed climate-related investment indicators

- The most popular investment areas to be considered: climate change mitigation, carbon-efficient assets, renewables, green real estate and infrastructure, and green, social or mixed-sustainability bonds.
- Adaptation measures including grants and other non-loan instruments need to be included

Indicator	Available data/source	IPCC category	IMF category
The value of certified green lending and grants for climate action (by country/sector/issuer)	Not available	Mitigation/ Adaptation	Financial
The value of certified climate-related investment (by type/country/sector/donor)	Not available	Mitigation/ Adaptation	Cross-border

Opportunities

- UNCTAD estimates that in total, “sustainability-dedicated” investments amounted to US\$3.2 trillion in 2020
- Rapid expansion of sustainable investment market
 - Potential to help fill gaps in financing for the 2030 Agenda?
- More data becomes available as these instruments become more popular

Challenges

- Information about different climate investment and financial instruments remains scattered and makes it difficult to see the big picture
- More transparency is needed to judge the true depth of “green” in these instruments
- Difficulty to separate climate-specific instruments from more generic environmental or SDG-targeted investment
- “Blue” climate and finance data still a relatively unexplored area

UNCTADstat Plastics Trade Database and indicators

- Example of a high-carbon, highly traded, useful but problematic product – plastic
- The new database provides indicators to calculate plastics trade over the entire lifecycle, by function in the productive cycle; by countries’ role in global plastics trade; and by importance for national economies and development paths
- Derived from the UN Comtrade and a selected list of plastics-related inputs and products, e.g., not only HS Chapter 39 ‘Plastics and articles thereof’ but beyond it

Indicator	Available data/source	IPCC category	IMF category
Trade in plastics by value/volume and product type	UNCTADstat	Drivers	Cross-border
Plastics trade lifecycle (primary, intermediate, final, waste)	UNCTADstat	Drivers	Cross-border
Trade in plastics by trading partner and product type and share of total exports/imports	UNCTADstat	Drivers	Cross-border



Opportunities

- These data were not available before. It is important to help countries meet low-carbon and pollution goals and respond to carbon-related trade regulations.
- UNCTAD will be publishing the database online as an open resource and welcome input on categorizations
- We now have a more robust framework for understanding plastic trade flows
- Possibility to calculate derived indicators, such as comparative advantage in plastics trade or dependence on it or produce country rankings

Challenges

- A great deal of trade in plastics remains ‘hidden’ and unidentifiable in the HS classification, like some highly traded products (packaging, cars, electronics).
- This hinders efforts to properly assess the carbon intensity of the sector; as well as country exposure to climate change regulations and costs
- The multi-faceted and complex nature of plastics trade indicate that countries will have differing challenges in the search for sustainable solutions

Limitations from a plastic pollution perspective

- Shortcomings in existing HS classifications include:
 - ▶ limited detail on the types of plastic polymers in products traded across the life cycle of plastics (e.g., primary plastics, empty plastic packaging, waste)
 - ▶ not aligned with updated terminology in Basel Agreement plastic waste amendments
 - ▶ limited detail on the feedstocks for different products (e.g., bio-based, recyclates or virgin fossil fuels)
 - ▶ absence of information on environmentally problematic chemical components in plastics across the life cycle (e.g., in pellets, packaging and waste)
 - ▶ gaps in the scope of products that are classified described or defined plastics
 - ▶ varying detail on the share of plastics embedded in products
 - ▶ missing information on flows in plastic packaging associated with products

UNCTADstat Global Transport Costs Dataset on International Trade and indicators

- Database developed by UNCTAD and the World Bank in collaboration with the International Maritime Organization
- Derived from the UN Comtrade with data on volume and value of bilateral goods trade, mode of transport and distance, detailed by 5000 commodity groups
- Emission factors to be collected from other sources (transport literature, registers, AIS, ...)

Indicator	Available data/source	IPCC category	IMF category
CO ₂ emissions from transport for international trade in goods	UNCTADstat	Emissions	Cross-border
Carbon intensity of importation and exportation of goods	UNCTADstat	Emissions	Cross-border

Opportunities

- Assess the contribution of transport related to international trade in goods to CO₂ emissions and global warming
- Identify the most and the least emission-intensive trade segments
- Simulate the effects of mitigation measures (e.g., carbon tax, CO₂ offsetting schemes), technical innovations and bio-fuels on the trade bill and on domestic prices
- Inform analysis of trade asymmetries with better data on transport costs by mode
- Analyse in detail the actual routes on which goods travel & costs and emissions related to different routes

Challenges

- UNCTAD is currently building time series to be released on UNCTADstat
- As source data coverage grows, the models used for data editing and filling of data gaps will be further enhanced

Conclusion

- Better data on climate-related debt, financial flows and investment needed!
- IMF's 'Climate Change Indicators Dashboard' is a welcome initiative for better evidence covering financial and macroeconomic aspects of climate change
- The UNECE and UNSD climate indicator sets could benefit from the IMF initiative and the outcomes of this Forum to identify new data and indicators
- New databases in the UNCTADstat Data Center will enable the calculation of new climate change indicators from the cross-border perspective
 - UNCTADstat Trade in Plastics Database
 - UNCTADstat Global Transport Costs Dataset on International Trade
 - UNCTADstat BioTrade Database (upcoming)
 - UNCTADstat Oceans Economy Database (upcoming)
- All of the above databases are based on official trade data reported by countries and maximize their analytical potential and value for policy