



With Around 40% of Resource Extraction and Use Linked to World Trade, New Policies Required to Address Environmental Impacts

IRP Report Finds Trade Shifting Burden of Environmental Impacts to Developing Economies

Davos, Switzerland, 14 October 2015 – As countries become increasingly dependent on world trade, with 40 per cent of resources extracted and used worldwide linked directly or indirectly to trade, new policies are needed to address adverse environmental impacts, according to a new report.

International Trade in Resources: A biophysical assessment, produced by the United Nations Environment Programme-hosted International Resource Panel (IRP), reveals that the value of international trade has increased over six-fold and its volume more than doubled between 1980 and 2010.

This increase in trade has been accompanied by a shift in resource-intense processes, and associated environmental burdens, to developing nations.

UNEP Executive Director Achim Steiner said, “The benefits of international trade can include better access to resources and even more efficient production techniques from economies of scale. Yet the associated increase in global consumption and production results in overall environmental impact, from pollution to resource depletion.

“That these impacts are being transferred to poorer nations is further cause for concern. In taking advantage of the benefits of international trade, we will need policies that protect the environment from trade’s detrimental effects.”

The report examines the upstream resource requirements of trade, which refers to the materials, energy, land and water used in the country of origin for producing traded goods, but left behind as wastes and emissions.

While trade has risen for most materials, dependency on world markets is highest for fossil fuels and metals. Around half of the volume of extracted fossil fuels and metals is reallocated through trade.

Estimating upstream requirements of traded commodities is challenging, with estimates ranging from 40 to up to 400 per cent of traded materials. With this in mind, the report draws the following conclusions:

- The amount of global resource extraction and use—65 billion tonnes in 2010—has increased at a slower rate than trade, which signifies the rising overall dependency of countries on trade.

- Of the resources extracted and used worldwide, 15 per cent are directly traded. This proportion rises to around 40 per cent when including resources indirectly associated with trade—that is, used in the production process, but not physically included in the traded good.
- High-income countries have up to twice as large positive trade balances when measured in raw materials rather than direct trade, while for low-income countries the opposite is true. This signifies a shift in resource-intensive processes from high-income countries to developing and emerging economies, with a corresponding shift in associated environmental burdens.
- The distribution of trade dependency has changed. Although high-income countries continue to be main recipients of resources via trade, emerging economies such as China have switched to becoming major importers. The world trading system has come to rely on ever fewer net exporters, which makes it increasingly vulnerable to disruptions in supplies.
- Trade could be resource efficient in that it allows commodities to be obtained from countries/locations where their production requires fewer resources and generates fewer environmental impacts than in others. However, numerous processes—including higher trade levels, declining ore grades and decreasing energy returns upon energy investment (EROEI), higher food demand and diminishing land productivity—further increase the upstream resource requirements of trade. These factors are likely to negate any benefits of a potentially more resource efficient allocation of extraction and production activities via world trade.

Appropriate trade and environmental policies and agreements are therefore required in order to limit over-exploitation of resources, waste and environmental destruction linked to expanded levels of trade.

Dr. Ashok Khosla and Dr. Janez Potocnik, co-chairs of the IRP, said in a statement, "This extraordinarily readable report manages to present the essential insights decision-makers need to design and implement policies that will ensure international trade is a positive instrument for building more prosperous economies, a fairer world and a healthier global environment."

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About the International Resource Panel

The International Resource Panel was established in 2007 to provide independent, coherent and authoritative scientific assessment on the sustainable use of natural resources and the environmental impacts of resource use over the full life cycle. By providing up-to-date information and best science available, the International Resource Panel contributes to a better understanding of how to decouple human development and economic growth from environmental degradation. The information contained in the International Resource Panel's reports is intended to be policy relevant and support policy framing, policy and programme planning, and enable evaluation and monitoring of policy effectiveness.

To download a summary of the report, please visit: www.unep.org/resourcepanel