

SUSTAINABLE TRADE IN RESOURCES GLOBAL MATERIAL FLOWS, CIRCULARITY AND TRADE

Acknowledgements

This discussion paper is the product of a joint and collaborative effort by UNEP's Environment and Trade Hub and the International Resource Panel.

The paper was prepared under the supervision of Anja-Katharina von Moltke, Head of the UNEP's Environment and Trade Hub, and Merlyn Van Voore, Head of the Secretariat of the International Resource Panel at UNEP. The writing team included Stacey Leigh Mills and Colette van der Ven from the Environment and Trade Hub, who authored sections 3, 4 and 5, and Christina Bodouroglou from the Secretariat of the International Resource Panel, who authored sections 1 and 2.

We are grateful for the valuable comments received from expert members of the International Resource Panel, Edgard Hertwich, Keisuke Nansai and Marina Fischer-Kowalski, as well as from experts at the European Commission, Luca Marmo and Helena Cavaco Viegas.

Special thanks go to Ligia Noronha, Director of UNEP's Economy Division, Mark Radka, Deputy Director ad interim of UNEP's Economy Division, Steven Stone, Chief of UNEP's Resources and Markets Branch, Janez Potočnik and Izabella Teixeira, Co-Chairs of the International Resource Panel, and Astrid Schomaker, Director for Global Sustainable Development at European Commission, for their contributions and guidance.

We acknowledge financial contributions from Norway and the UK Research and Innovations Global Challenges Research Fund (UKRI GCRF) through the Trade, Development and the Environment Hub project.

Recommended citation: UNEP and IRP (2020). Sustainable Trade in Resources: Global Material Flows, Circularity and Trade. United Nations Environment Programme. Nairobi, Kenya.

Editing: Lisa Mastny

Infographics: Yi-Ann Chen, UNEP
Design/layout: Marie Moncet, UNESCO

Printed by: UNESCO

Cover photos: SvartKat; corlaffra / Shutterstock & Christina Bodouroglou

Copyright © United Nations Environment Programme, 2020

This publication may be reproduced in whole or in part and in any form for educational or non-profit purposes without special permission from the copyright holder, provided acknowledgement of the source is made. The United Nations Environment Programme would appreciate receiving a copy of any publication that uses this publication as a source.

No use of this publication may be made for resale or for any other commercial purpose whatsoever without prior permission in writing from the United Nations Environment Programme.

Disclaimer

The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of the United Nations Environment Programme concerning the legal status of any country, territory, city or area or of its authorities, or concerning delimitation of its frontiers or boundaries. Moreover, the views expressed do not necessarily represent the decision or the stated policy of the United Nations Environment Programme, nor does citing of trade names or commercial processes constitute endorsement.













Sustainable Trade in Resources

Global Material Flows, Circularity and Trade

Discussion paper by UNEP's Environment and Trade Hub and the International Resource Panel

Preface

The COVID-19 pandemic has caused dramatic shocks in global supply and demand, leading to an unprecedented contraction in international trade that is affecting all regions. Overall, international trade could shrink by an estimated one-fifth in 2020.¹

The COVID-19 crisis is exacting a particularly heavy economic toll on commodity-dependent countries, primarily in sub-Saharan Africa and Latin America. Developing countries (excluding China) could lose nearly \$800 billion in export revenues in 2020 due to reduced trade volumes and depressed energy and commodity prices.² The sharp decline in commodity prices since the outbreak of the pandemic has weakened external balances, triggering large capital outflows, exchange rate depreciations and higher external borrowing costs. These factors constrain countries' abilities to service their debt, potentially leading to debt crises.³

The pandemic has highlighted the interconnectedness of countries and the importance of global value chains and a resilient trading system. Impaired global value chains are contributing to increased trade costs, and trade has fallen more steeply in product sectors that have complex value chains. Debate over the impacts of COVID-19 on the structure of global production and global supply chains is ongoing, with consideration being given to the length of existing supply chains, sourcing decisions and the classification of strategic goods.

Governments around the world can focus on building the resilience of supply chains and better understanding their strengths and vulnerabilities. Close monitoring of material flows through tools like the International Resource Panel's Global Material Flows Database will be critical for informed decision-making regarding sustainable value chains. Consideration should be given to creating trade and investment policies that can best support economic and climate resilience.

- 1. UNCTAD 2020a
- 2. UNCTAD 2020b
- 3. UN-DESA 2020

As history demonstrates, trade plays an important role in post-crisis recovery. Countries are thus urged to implement informed policies to ensure that trade helps drive the recovery towards a more resilient, green and circular economy.

While the reduction in the movement of some goods, services and people due to COVID-19 has reduced greenhouse gas emissions, it can also impede trade flows of green goods and services such as certified products and low-carbon and energy-efficient technologies. This is owing to the shut-down of factories, drops in demand and closure of many borders leading to a fragmentation of supply chains including in climate technology. Moreover, it has slowed momentum on addressing important environment and climate issues.

It is crucial that policy-makers act to both facilitate trade in environmental goods and services, and address the adverse effects of trade on climate change, pollution and biodiversity through appropriate recovery measures. Economic stimulus packages introduced in response to the pandemic should promote green goods and services such as renewable energy technologies. Rapid recovery of green trade and investment will help stimulate economic recovery and achieve the green transition.



Janez Potočnik Co-Chair, International Resource Panel



Izabella TeixeiraCo-Chair,
International Resource Panel



Ligia NoronhaDirector, Economy Division,
United Nations Environment
Programme

Purpose of this paper

Research by the International Resource Panel (IRP) has drawn attention to the observed shift in environmental burdens from high-income importing countries to low-income exporting countries, and has called for effective trade policies to address the impacts of trade from an environmental and resource-efficiency standpoint (UNEP 2015).

In response, UNEP's Environment and Trade Hub has joined forces with the IRP Secretariat to update the IRP's findings on trade footprints, and to draw policy conclusions on how trade can help achieve a transition towards a fairer, more sustainable and circular economy.

The purpose of this discussion paper is to enhance understanding among trade and environment policymakers regarding trade flows of material resources – including their environmental impacts – and regarding trade's potential to contribute to the transition to a greener, more circular economy. The paper summarises the IRP's analysis on so-called upstream requirements of trade flows, drawing on the IRP reports *International Trade in Resources* (2015), *Global Material Flows and Resource Productivity* (2016), *Sustainable Natural Resource Use* (2017) and *Global Resources Outlook* (2019). It uses updated data to 2017 on trade flows and on the raw material equivalents of trade flows derived from the IRP Global Material Flows Database.

The paper builds on the work of UNEP's Environment and Trade Hub to offer policy implications focusing on the role of trade in moving production and consumption away from linear to more circular models.

Table of contents

Preface	2
Purpose of this paper	4
Executive Summary	9
1. Introduction	17
2. International Trade in Resources	20
2.1 Trends in international trade in resources	21
2.2. Upstream resource requirements of international trade	28
2.3 Implications of trade for environmental and resource efficiency	38
3. Resource Trade, Circularity and Implications for Developing Countries	40
3.1 Reducing demand for material resources by transitioning to a circular economy	41
3.2 Trade, circularity and developing countries	46
3.3 Trade agreements and the circular economy	54
3.3.1 The WTO and the circular economy	55
3.3.2 Regional trade agreements as circular enablers	58
3.3.3 Aligning trade agreements and the Basel Convention 3.3.4 Using trade agreements to reduce energy resource extraction	60 62

4. Recommendations for Policymakers	64
4.1. Enhance alignment between international trade and environmental legal frameworks	65
4.2. Align domestic policy in developing countries with trade agreements	65
4.3. Ensure that trade agreements move towards a circular economy that is inclusive of developing countries	66
4.4. Proactively use regional trade agreements to advance circularity and reduce demand for primary raw materials	e 66
4.5. Advance the development of international standards for circularity	67
5. Conclusion	68
References	70





