Role of trade and trade policy in fostering green technologies in developing countries

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Trade is a force multiplier for countries’ adaptation and mitigation efforts. It can speed up the low-carbon transition and the creation of green jobs, by fostering access to as well as diffusion and development of low-carbon technologies.

A. Introduction
B. The role of trade in adapting to climate change
C. The trade implications of a low-carbon economy
D. Carbon pricing and international trade
E. The decarbonization of international trade
F. Trade in environmental goods and services
G. Conclusion
Trade in Environmental Goods and Services (EGS) can help fight climate change

- Higher EG trade growth rate than merchandise trade supports uptake of environmental technologies
- Climate change mitigation and adaptation supported by a broad range of EGS
- Creation of global marketplace for EGS thanks in part to international trade
- Potential net CO2 reduction by opening up trade in energy-related EG and environmentally preferable products

**Graph:**
- **Imports of solar PV panels (cells and modules)**
- **Average solar PV module price**

**Axes:**
- **Y-axis:** Solar PV module price in real USD (2015) per watt
- **X-axis:** Trade in solar PV panels in real USD million (2015)

**Data Points:**
- Trade in solar PV panels in real USD million (2015)
- Average solar PV module price

**Years:**
Opportunities in renewable energy value chains

- Combination of components that are produced in few places at large scales & those that are produced in many places at lower scales
- Opportunities for local production in certain components and services (operations and management, construction, design)

### Key components

<table>
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<tr>
<th>Key companies</th>
<th>Global production</th>
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#### Utility-scale solar PV

<table>
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<tr>
<th>Solar Modules [8541]</th>
<th>JinkoSolar, JA Solar, SunPower, Canadian Solar, Panasonic</th>
<th>Over 75% in China, followed by rest of Asia, North America, India, and Europe</th>
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<tbody>
<tr>
<td>Inverter [8504]</td>
<td>Huawei, Sungrow, SMA, Power Electronics, Firmer, ABB</td>
<td>Top 10 largest inverter vendors manufacturers accounted for 75% of global trade</td>
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<td>Structures [e.g., 7005]</td>
<td>Countries will have several suppliers for structures. Typical market entrants are steel companies.</td>
<td>Racks and mounting market is highly fragmented, with production capacity available in many countries</td>
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Source: IISD, 2021

Source: WTO-IRENA (2021)
More trade in EGS requires more international cooperation, including at WTO
Subsidies: Increasing number of environment-related measures

Subsidy notifications and measures: Agreement on Subsidies and Countervailing Measures

Source: WTO Environmental Database

* Under the Agreement on Subsidies and Countervailing Measures, WTO Members notify once every two years, which explains the year-on-year variation in environment-related ASCM notifications and measures. See G/SCM/M/30, para. 6 and G/SCM/M/46, para. 43.
Subsidies: Alternative/renewable energy and sustainable agriculture top objectives

WTO Environmental Database: Environment-related objectives 2009 – 2021 (top 10)

- Alternative and renewable energy: 1582
- Biodiversity and ecosystem: 725
- Climate change mitigation and adaptation: 658
- Energy conservation and efficiency: 834
- Natural resources conservation: 714
- Soil management and conservation: 893
- Sustainable agriculture management: 1322
- Sustainable and environmentally friendly production: 483
- Sustainable fisheries management: 642
- Water management and conservation: 1116
Role of trade, and aid for trade, in building capacities for and attract investment into green technologies

• Need to develop greater synergies and compatibilities between trade, development and climate agendas.

Aid for Trade disbursements related to climate change (current USD billion)

Source: World Trade Report 2022
Policy dialogue to share experiences, foster cooperation, identify best practices and solutions at the intersection of trade and environment

• Developing country needs and interests integral to discussions, including regarding technological capacities and needs

Committee on Trade and Environment

Identify and discuss linkages between trade and environment measures to promote sustainable development

Trade and Environment Week 2023

Ongoing discussions on how to further improve functioning of the CTE (e.g. through thematic sessions)

Trade and Environmental Sustainability Structured Discussions (TESSD)

• Four Working Groups: (i) trade-related climate measures, (ii) environmental goods and services, (iii) circular economy-circularity, (iv) subsidies

Dialogue on Plastics Pollution and Environmentally Sustainable Plastics Trade (DPP)

• Topics: improve transparency of supply chains; strengthen regulatory cooperation; identify env. sustainable trade policies and mechanisms; strengthen trade-related technical assistance for vulnerable economies

Fossil Fuel Subsidy Reform (FFSR)

• Seeks to rationalize and phase out inefficient fossil fuel subsidies that encourage wasteful consumption by sharing information and experiences, while taking into account the specific needs and conditions of developing countries
Thank you

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