Trade in material resources - biomass, fossil fuels, metals and minerals - has grown strongly over the past half century. The volume of trade has increased at a faster pace than the volume of extracted resources, signifying a growing dependency of the global economy on material resource trade.

Assessing upstream resource requirements of trade - that is, the additional materials, energy, water and land used in the country of origin to extract and produce traded goods but left behind as wastes and emissions - can serve as proxies for the ecological impacts of trade.

One-third of the total volume of materials resources extracted in the world economy are linked to the production of traded goods.

The indirect or embodied materials in trade far exceed - by a factor of three - the direct volume of material resources traded across nations.

In recent decades, numerous countries shifted towards becoming net importers of resources (including emerging economies like China and India), whereas very few switched to becoming net exporters. This signals a growing vulnerability of the global trading system, as rising demand is being met by ever fewer exporters.

### Regional Overview

**Asia & Pacific**

- China: 5,398 (+127%)
- Japan: 5,223 (+139%)
- India: 2,858 (+153%)

**Europe**

- France: 1,228 (+136%)
- Italy: 1,153 (+139%)
- Spain: 1,087 (+141%)

**Latin America & Caribbean**

- EECCA: 3,398 (+42%)
- South America: 3,705 (+77%)

**North America**

- USA: 2,649 (+141%)
- Canada: 1,228 (+437%)

**West Asia**

- Middle East: 1,190 (+387%)

**Africa**

- North Africa: 1,967 (+375%)
- Sub-Saharan Africa: 5,298 (+36%)

### Top 10 Countries

- **Million tonnes, 2017 (% change from 2000)**

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### Global Physical Trade

- **Million tonnes**

  - 2015: 7.9 billion tonnes
  - 2017: 9.2 billion tonnes

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### Infrastructure of the Global Economy on Material Resource Trade

- **Material resource trade**
  - Biomass
  - Fossil fuels
  - Metals
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