



Division of Technology, Industry,
and Economics
Economics and Trade Branch



Trade and Climate Change

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Development**

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Climate Change Impacts on Trade

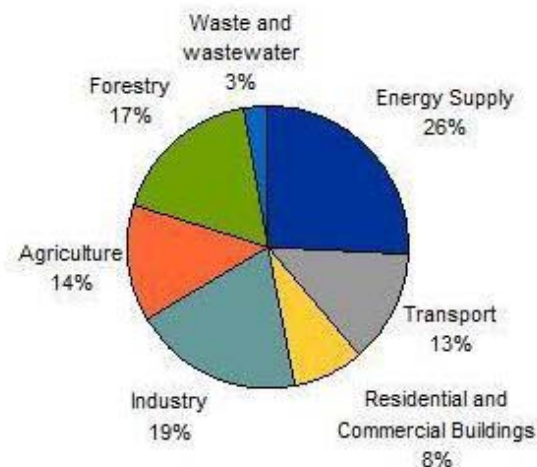
- **Δ countries' CA**
 - Δ in agriculture & access to water
 - Severe impacts on ecosystems & biodiversity, Δ tourism, fisheries, forestry
- **Damaged trade infrastructures (port, buildings, roads, railways, airports, bridges) by rising sea level & extreme weather**
- **Access to new routes (e.g. if Mongolia has a coast)**



Trade Impacts on Climate Change

- **Trade opening & GHG**
 - Will trade opening lead to more GHG?
 - How much does trade Δ GHG?
- **Analytical Framework**
 - Scale effect
 - Composition effect
 - Technique effect

Global Anthropogenic GHG emissions by Sector (2004)



Source: IPCC Assessment Report 4 (2007), Summary of Policymakers: Figure SPM 3
*Forestry includes deforestation

The Scale Effect

- Expansion of economic activity from trade opening, & its effect on GHG
- An ↑ level of economic activity requires ↑ energy use & ↑ GHG



The Composition Effect

- Trade opening Δ structure of a country's production & consequently emission levels
- Δ production structure depends on the country's (CA)
- If CA in less emission-intensive sectors trade opening will lead to lower GHG, vice versa



The Technique Effect

- Improvements in production methods
- The principal way trade opening can help mitigate CC
- ↑ open trade can ↑ availability & ↓ cost of climate-friendly goods & services
- As income ↑ due to trade opening, people may demand lower GHG



Sum of the Effects

- \uparrow open trade likely to \uparrow CO₂
- *Scale effect* tends to outweigh *technique & composition effects*
- May be differences between rich & poor countries
 - Environmental improvement in the rich but deterioration in the poor



- **Creating a level playing field for development & diffusion of green goods, technologies & services**
- **Phasing out fossil fuel subsidies**
- **Clarifying the legal relationship between existing WTO rules and specific trade obligations set out in MEAs**





Thank You!

**United Nations Environment Programme
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