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# **Promoting and facilitating trade in environmental goods and services**

*Evidence on trade and environmental impact of EGS  
efforts to date*

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- Studies are relatively scant, esp. on trade flows of environmentally friendly products
- Results depend on trading countries, goods that are traded etc.
- Results cannot be compared across studies





## Evidence on positive trade effects

Increase in trade in environmental goods...

- in *APEC countries* (He et al., 2015)

## What about FTAs?

- *EU-South Korea FTA* (Norrel, 2020)
- in developing countries that concluded *FTAs with environmental provisions* (Brandi et al., 2020)

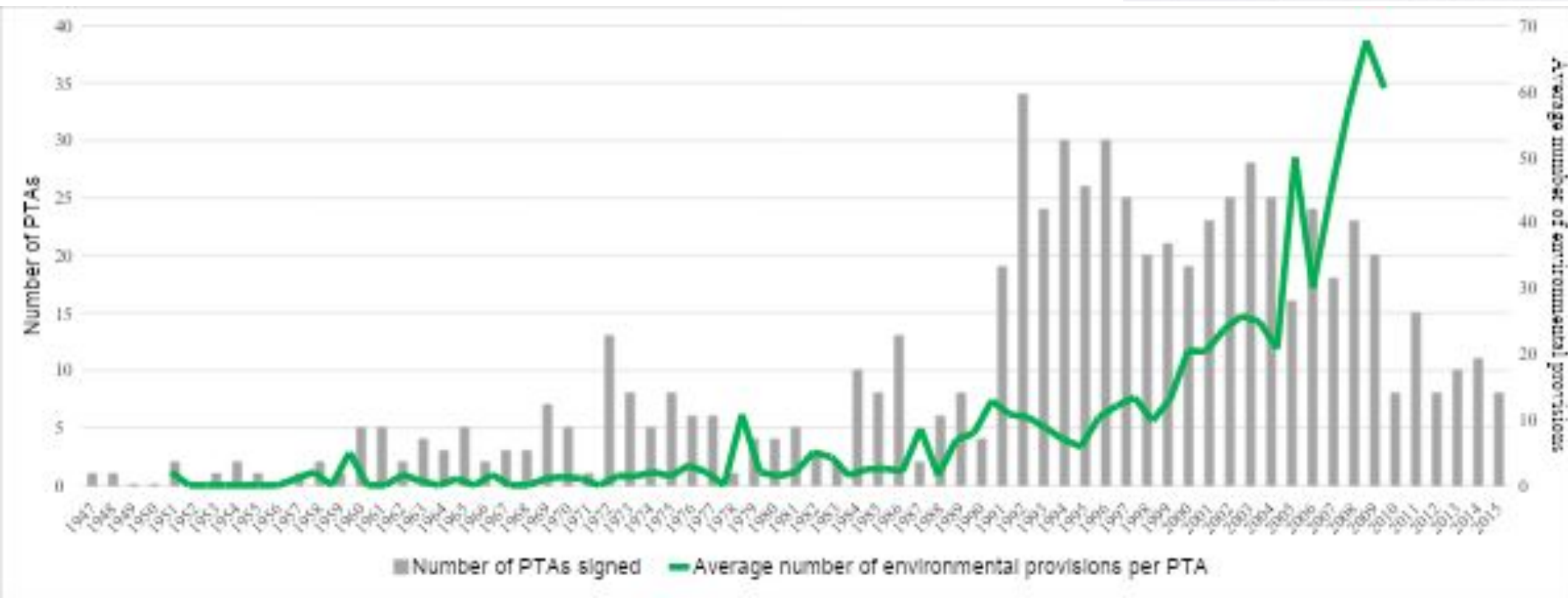
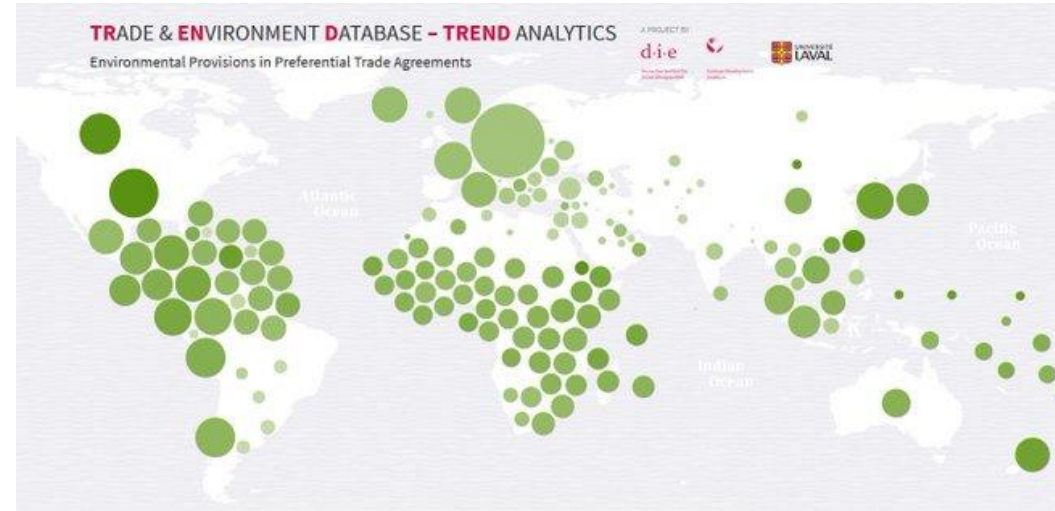


# Environmental Provisions in PTAs

## Trade and Environment Database (TREND)

- > 700 PTAs
- 300 types of environmental provisions

[www.TRENDanalytics.info](http://www.TRENDanalytics.info)





## Empirical evidence:

Panel data on >150 countries > 30 years (1984-2016)

- Trade restricting environmental provisions: reduce exports of polluting goods
- Trade liberalizing environmental provisions: increase exports of environmental goods





## Evidence on positive environmental effects

- Reduced SO<sub>2</sub> emissions (De Alwis, 2015)
- Better overall environmental performance in APEC members (Tran, 2018)
- decreased environmental degradation in OCED countries (Can et al., 2021)





## Efficiency versus Effectiveness

Trade in Environmental Goods and Air Pollution: A Mediation Analysis to Estimate Total, Direct and Indirect Effects (Zugravu-Soilita, 2019)

- 114 countries between 1996 and 2011
- *efficiency* gains from trade in EGs (in terms of CO<sub>2</sub> and SO<sub>2</sub> emissions per 1 US\$ of GDP)
- results failed to highlight environmental *effectiveness* (in terms of total CO<sub>2</sub> and SO<sub>2</sub> emissions)

## End use matters

Do imported environmental goods reduce pollution intensity? The end use matters (Liu et al. 2022)

- Data on 269 cities in China from 2003 to 2013
- Type A EGs: some non-environmental end uses
- Type B EGs that only have environmental end uses
- Imports of type B EGs can reduce pollution intensity, especially PM<sub>2.5</sub>
- Imported EGs can promote the development of green industries in long run.



# Using Models to Project Potential Effects

## Environmental Goods Trade Liberalization: A Quantitative Modelling Study of Trade and Emission Effects (Bacchetta et al., 2022)

- Projections of a potential trade liberalization agreement in energy related environmental goods (EREGS) and environmentally preferable products (EPPs)
  - (i) increase in exports of EREGs and EPPs both at the global level and in most regions;
  - (ii) modest increase in GDP in all regions because of falling tariffs, NTMs, increased energy efficiency;
  - (iii) reduction in global emissions of about 0.3%





## **Almost complete absence of activities related to trade in environmental goods**

- World Bank's US\$8 billion trade facilitation programme, covering 893 projects over 12 years:
  - 3% mentioned the environment in project documents (World Bank, 2019)
- ITC's US\$7 million trade facilitation programme, covering 206 activities over 4 years:
  - environmental concern was “barely touched” in the programme's activities (ITC, 2019)

## **Reports suggest that trade facilitation for increasing trade in environmental goods will be effective, esp. when used in combination with other activities**

- IISD & UNEP, 2014; Fliess and Kim, 2007
- E.g. positive effect of trade facilitation in promoting Vietnam's trade in environmental goods (Tang, 2021)

# Take aways



- Evidence on positive trade and environmental effects
- But devil is in the detail
- Effects dependent on goods and services; measures taken etc.
- More research needed on services, non-tariff measures etc.
- Potential of trade facilitation
- Complementary measures, e.g. environmental policies





## **Trade liberalization and trade performance of environmental goods: evidence from Asia-Pacific economic cooperation members (He et al. 2015)**

- bilateral trade data from 20 APEC members (1996-2011)
- tariff reductions in EGs have a positive trade effect (larger positive effect in exporting than in importing country)
- lower non-tariff barriers increase imports of EGs

## **The impact of the EU-South Korea FTA on trade with environmental goods (Norrel, 2020)**

- data for 2007-2018
- statistically robust increase of trade in environmental goods
- higher growth rate of trade with environmental goods compared to non-environmental goods

## **International Environmental Agreement and Trade in Environmental Goods: The Case of Kyoto Protocol (Tran, 2020)**

- exports of EGs increased by 32% compared to the “no-Kyoto” scenario

## **Barriers to trade in environmental goods: How important they are and what should developing countries expect from their removal (Melo and Solleder, 2020)**

- EG tariffs reduce the intensity of bilateral trade
- regulatory harmonization, as captured by an increase in regulatory overlap is also estimated to be conducive to more intense bilateral trade



**Is environmental goods trade beneficial for the environmental performance of the concerned countries?** (Tran, 2018)

- APEC members, 2007-2014
- *positive impacts* of EGs exports and imports on *environmental performance*

**Environmental Consequence of Trade Openness for Environmental Goods** (De Alwis, 2015).

- elimination of tariff on EGS trade result in falling SO<sub>2</sub> emissions (in comparison to increasing SO<sub>2</sub> pollution as a result eliminating tariff on non-EGS trade)

**The role of trading environment-friendly goods in environmental sustainability: Does green openness matter for OECD countries?** (Can et al. 2021)

- New Green Openness Index: measure for trade in green products
- Green Openness Index (GOP) decreases environmental degradation in OECD countries



- **The impacts of the trade liberalization of environmental goods on power system and CO2 emissions (He et al.)**
- trade liberalization of EG does not necessarily benefit the environment without other policies
- merging an EGA into a global carbon tax system would enhance the effects of carbon tax on CO2 reduction by 33%, and simultaneously lower the GDP loss due to the carbon tax by 75%
- economic benefits from the EGA could offset the costs of other environmental policies, e.g. a global carbon tax

**The impact of trade in environmental goods on pollution: What are we learning from the transition economies' experience?**

(Zugravu-Soilita, 2018)