

LATIN AMERICA AND THE CARIBBEAN: ENVIRONMENTAL IMPACTS OF TRADE



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OUTLINE

1. Definitions

- Sustainable Development (SD)
- Environmentally Sensitive Industries (ESI)

2. Environmental impact of exports

3. Export profiles in LAC

- Importance of Environmentally Sensitive Industries
- Exports with higher technological content

4. Policy challenges

Trade and Sustainable Development

- Organizing principle for global policy coherence, useful framework for analysing trade impacts through a variety of lenses, captured in interactions of:
 - ❖ economic growth (income, wealth..)
 - ❖ social concerns (equity, justice..)
 - ❖ environmental protection
- these should be adequately measured to indicate whether countries are on the right track to Sustainable Development

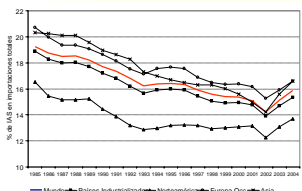
Environmental impact of Exports: Environmentally Sensitive Industries (ESI)

2 criteria for definition of ESI:

- Industries that incur in the highest expenditures in pollution control and reduction per unit of output (to comply with norms and regulations in the US and other OECD countries)
- Industries with the highest emission intensities to air, water and soil per unit of output (IPPS, WB)
- Both criteria lead to the same group of industries:

**Iron and steel,
non-ferrous metals,
industrial chemicals,
pulp and paper,
non metallic minerals**

- ESI are not only pollution intensive, they also tend to be capital and energy (carbon) intensive,
- ESI less labor intensive



➤ ESI are not dynamic in world trade: declining share of ESI in total imports in 5 markets

- A large share of production related to ESI can be associated with Dutch disease (exchange rate)
- Difficulty in building linkages (particularly mining)
- Fewer incentives for innovation
 - less demand for product differentiation
 - few technologies available for process innovation

How can export patterns contribute to Sustainable Development?

- ❖ Should reduce activities and products with highest negative environmental impacts (**less ESI !!**)
- ❖ Should **increase activities and products with higher technological content:**
 - the most dynamic in world markets
 - tend to be cleaner
 - greater positive spillovers and linkages to the economy
 - allow for product differentiation
 - higher labor productivity and income
- ❖ Should contribute to delivering welfare gains and ensuring better livelihoods for the population (wages, productivity..)
- ❖ Should develop linkages with the domestic economy, particularly with SMEs, and add knowledge to natural res.

LAC export pattern: on the road to Sustainable Development?

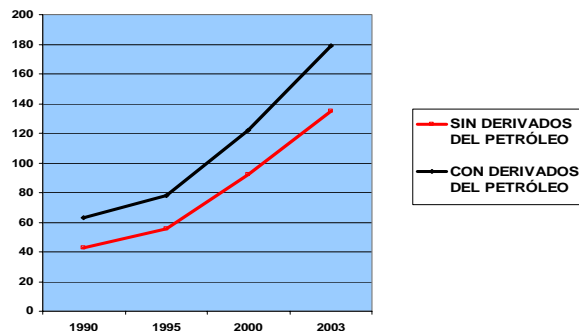
two relevant product groups:

- **Environmentally Sensitive Industries (ESI):**
 - Export Volume (scale effect)
 - Main Export markets
 - Index of Revealed Comparative Advantage (RCA)
- **High and medium tech exports**
 - Index of Technological Specialization (ITS)

LAC: TOTAL VOLUME OF ESI EXPORTS x 3

Scale effect

(Millions of tons)

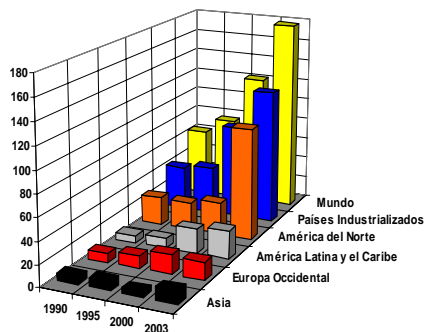


Increasing share of ESI in total exports?

	1990	2003/04
Jamaica	59.0	63.0
Trinidad & Tobago	52.0	55.4
Chile	53.5	45.4
Barbados	42.1	38.0
Venezuela	41.2	36.1
El Salvador	13.8	25.2
Brasil	28.1	24.2
Colombia	12.0	19.0
Argentina	21.6	18.0
Guatemala	5.5	13.6
Uruguay	5.3	10.5
Bolivia	16.3	10.2
México	15.3	7.9

LAC EXPORT MARKETS FOR ESI

millions of tons



Fuente: BADECEL

Importance of Foreign Direct Investment in ESI for some countries:

FDI strategy in LAC:

Search for market access, services (Mercosur, Arg, Br)

Search for natural resources (Arg, Col, Ven, Chile)

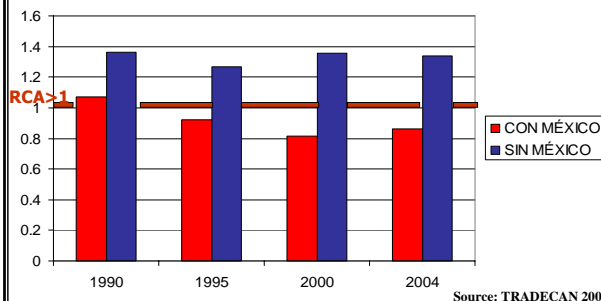
Search for efficiency (México, Caribe)

	% ESI in total exports (2003/2004)	% of FDI to ESI
Trinidad & T	55.4	70.3 (1999)
Chile	45.4	63.5 (2002)
Venezuela	36.1	63.9 (2001)
Brazil	24.2	13.5 (2002)
Colombia	19.0	31.3 (1999)
Bolivia	10.2	49.7 (2002)
Mexico	7.9	2.0 (2001)

Source: UNCTAD (FDI) and ECLAC

LAC competitiveness in ESI exports

LAC exports of ESI are competitive in
developed country markets ($RCA \geq 1$)



Source: TRADECAN 2006

¿Why are countries competitive in ESI?

Mixed reasons:

- inefficient allocation of resources due to market failures or policy failures
- main destination of FDI
- absence or lack of enforcement of environmental regulations
- natural resource abundance
- absence of a Sustainable Development Strategy
- trade rules are not adequately negotiated or opportunities generated are not seized

LAC competitiveness in exports of high and medium tech industries

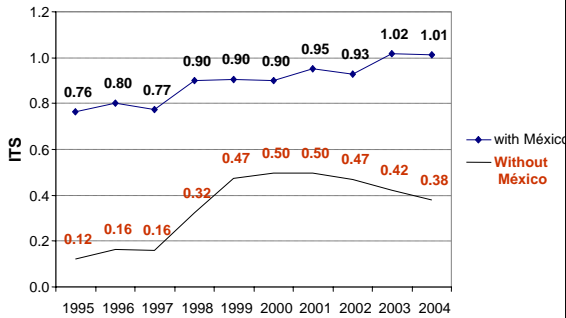
Importance for LAC: Mid- and high-tech products usually have a more dynamic impact on the rate of growth, are more in line with SD objectives (cleaner, better jobs..), are most dynamic in world trade.

Index of Technological Specialization(ITS)

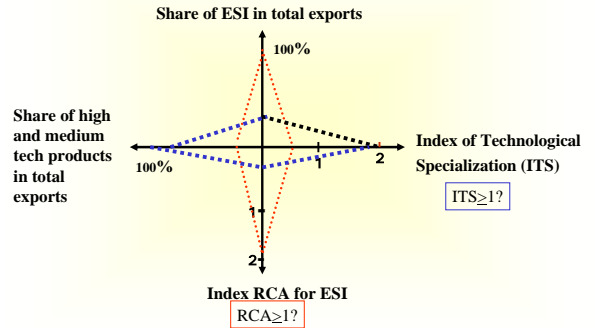
If the ITS ≥ 1

the share of the county's exports in high and medium tech markets is higher then its share in low tech markets

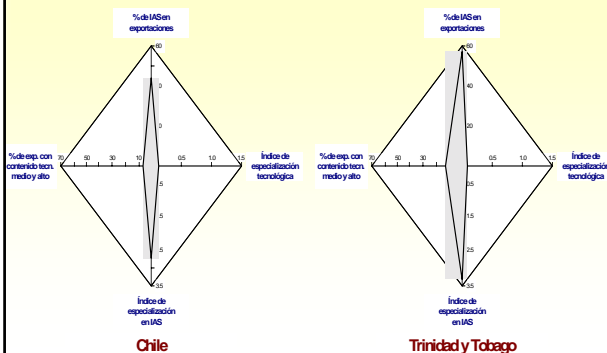
LAC is not competitive in high and medium tech: ITS < 1 and decreasing



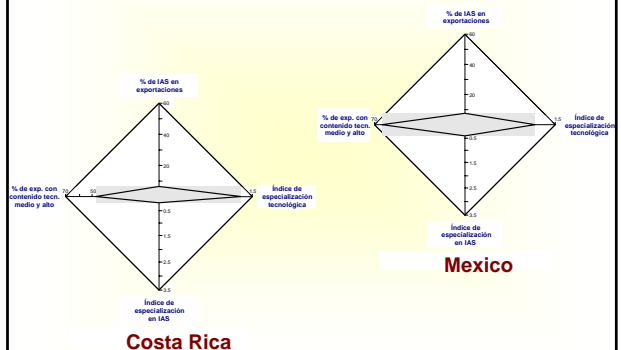
Export profiles in LAC: combination of four variables



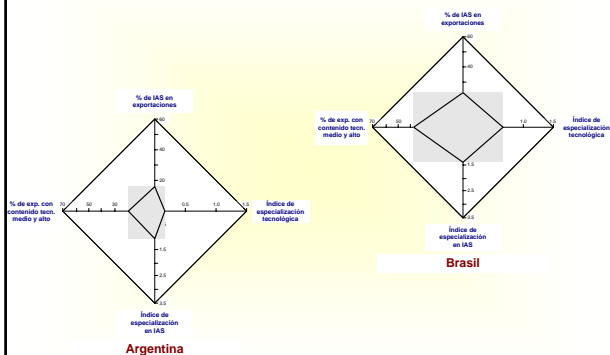
Country profiles oriented towards Environmentally Sensitive Industries



Country profiles oriented toward exports with higher technological content



More "balanced" country profiles



...we get a very heterogenous picture in LAC, countries with very different export profiles

- **Chile and Trinidad & Tobago** (and to lesser extent **Peru and Venezuela**) show very ESI oriented profiles
- **Costa Rica and Mexico** export profiles oriented towards greater technological content
- The other countries have mixed results, some have more balanced profiles, with certain importance of ESI as well as medium and high tech products (this is the case for **Argentina or Brasil**), while other countries show less symmetric figures.
- Careful with general conclusions for the LAC region

THANKS FOR YOUR ATTENTION

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