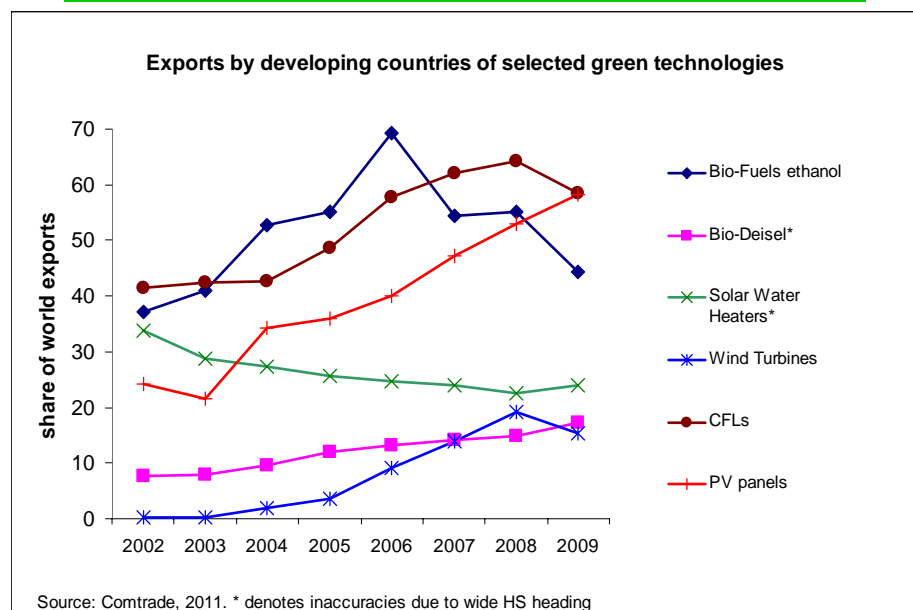


Using **Green Product Space** to identify green export opportunities for Arab countries

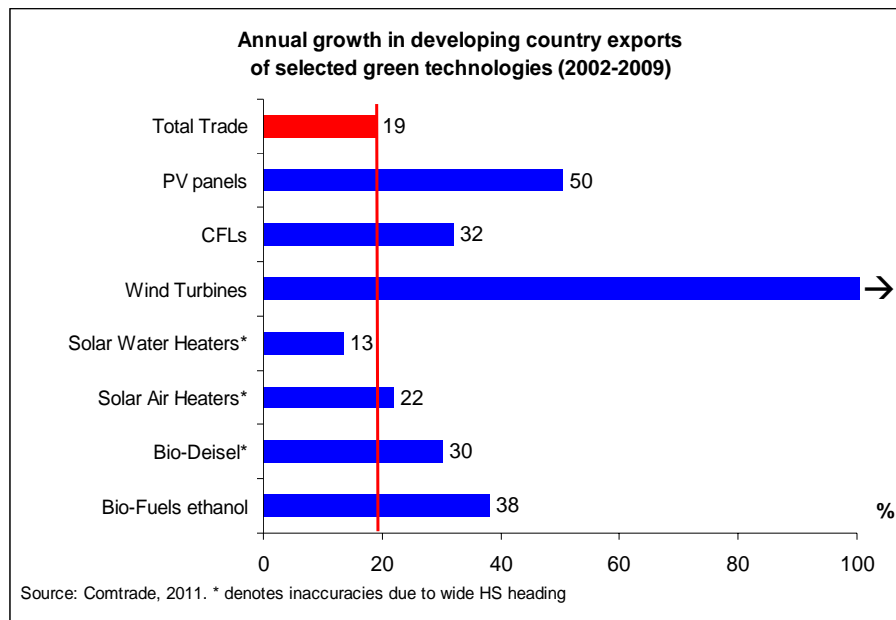


Robert Hamwey
UNCTAD

Environmental technologies – an emerging market



Environmental technologies – an emerging market










And importantly, **Green economy** includes much more than environmental technologies...

- **Rural electrification**
- **Waste management and Recycling**
- **Water purification**
- **Green construction**
- **Biofuels**
- **Organic agriculture**
- **Ecotourism**
- **Biotrade products**
- **etc.**

Opportunities for developing countries

- Can countries identify their potential strengths in producing and exporting green technologies?
 - It would be nice to know which green technologies a country is best positioned to produce and export competitively?
 - *The product space methodology can help*

Product Space Maps*

- A map of all 'products' that a country exports (circular nodes –    ).
- Products the country produces/exports competitively are readily identified (square nodes –   ).
- Products in close proximity are related – *if one is competitively produced the other can be also.*

* Hidalgo and Hausmann, 2009.

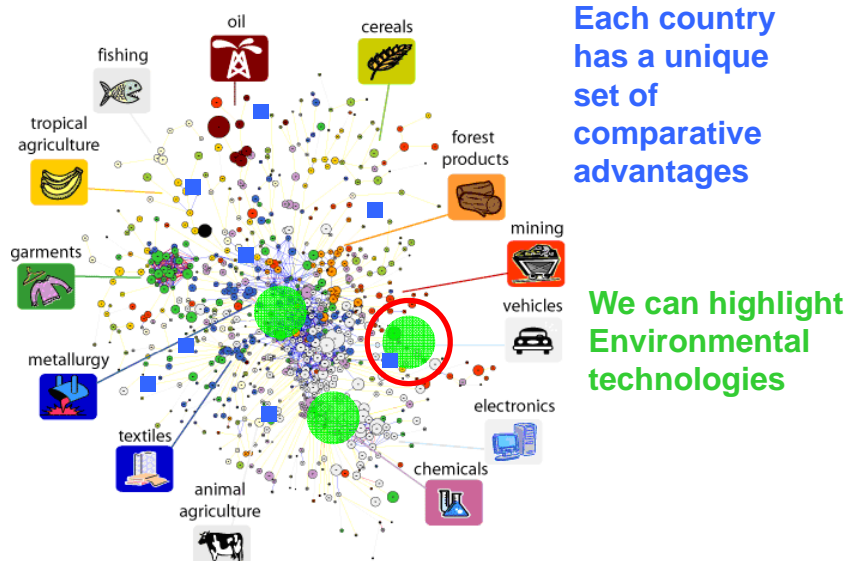
Product Space Maps*

Uses concept of
Revealed Comparative Advantage...

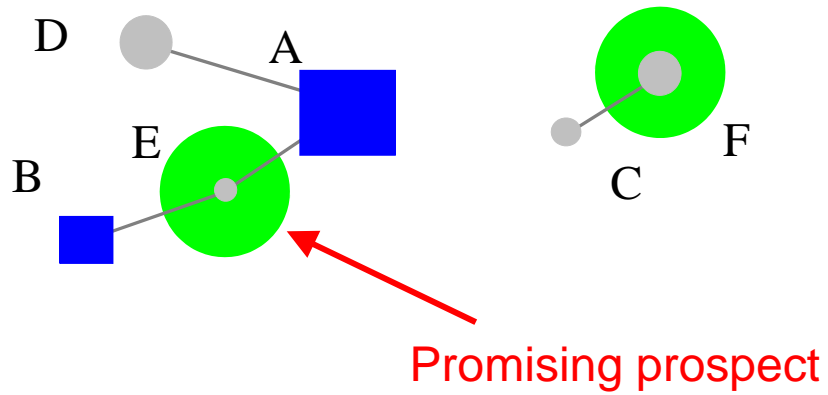
$$RCA = \frac{\frac{X_{Ai}}{\sum_j X_{Aj}}}{\frac{X_{Wi}}{\sum_j X_{Wj}}} \geq 1$$

* Hidalgo and Hausmann, 2009.

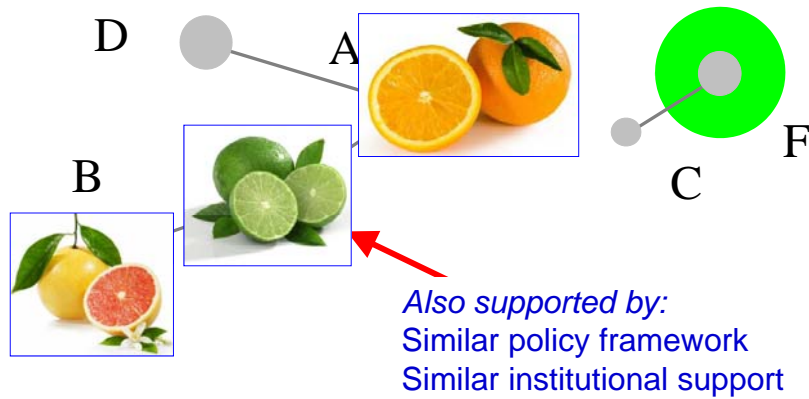
Product Space Map (of a country)

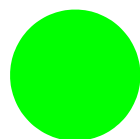


Product Space Map: Details



Same inputs
Same producer services
Same skills/workers
Same distribution network
Same markets





Green Goods Which green goods ???

We can choose any green goods we want

We consider the **SAMPLE CORE LIST OF ENVIRONMENTAL GOODS** proposed in Annex II of the CTESS Chairperson's Report (WTO doc. TN/TE/20 of 21 April 2011)

Selected Green Goods

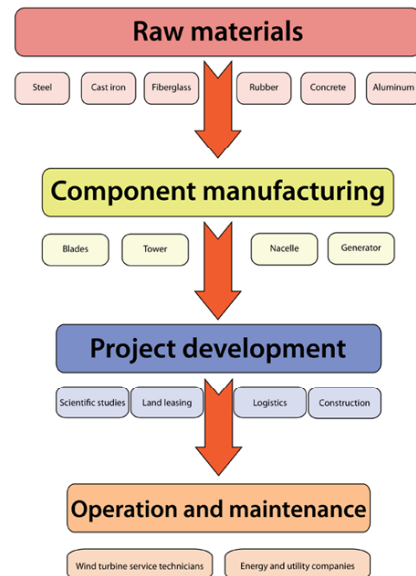
SITC4	HS2002	SITC4	Category
6975	7324	Sanitary ware, and parts thereof, ... of iron, steel, copper or aluminum	Waste management
7148	8410/11	Turbines	Energy efficiency
7414	8418	Refrigerating equipment (electric or other), other than household-type...	Renewable energy
7162	8502	Electric generating sets	Renewable energy
7763	8541	Diodes... and semiconductor devices (including photovoltaic cells...	Renewable energy
8841	9001	Optical fibres... prisms, mirrors and other optical elements...	Renewable energy
8744	9027	Instruments and apparatus for physical or chemical analysis ...	Environmental analysis
7782	8539	Electric filament lamps and discharge lamps	Energy efficiency

Selected green product groups from TN/TE/20

Supply Chains (*not analysed*)

Eg: Wind power

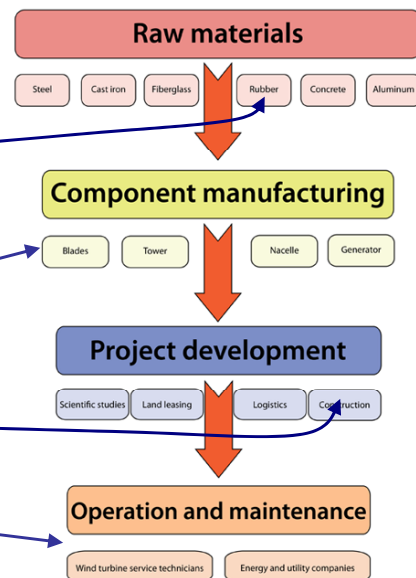
- Env. tech. supply chains are elaborate.
- Offer wide range of entry points for suppliers from developing countries.



Supply Chains (*not analysed*)

Eg: Wind power

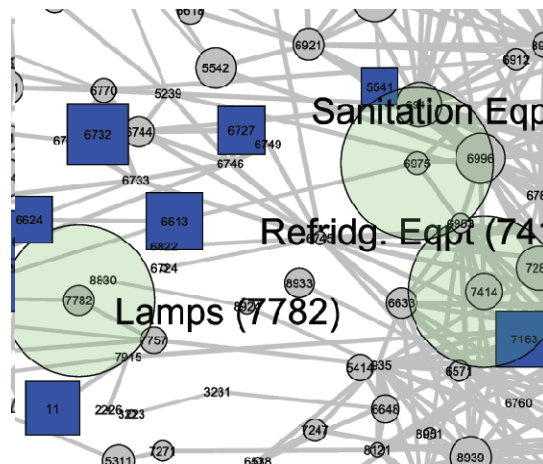
Various countries



Product Space Map



Product Space Map



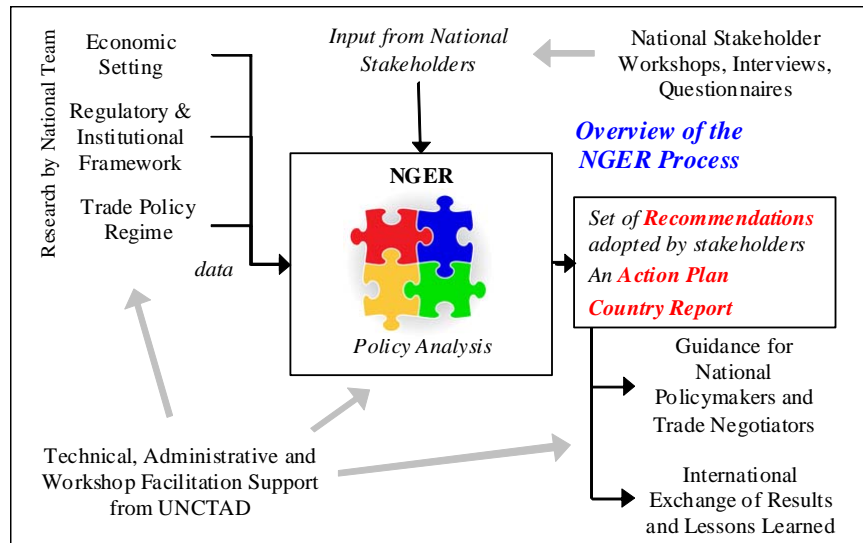
Main point

Green Product Space Maps can serve as a powerful **scoping tool** to assess national potential to **diversify production and export** into environmental technologies and other green products.

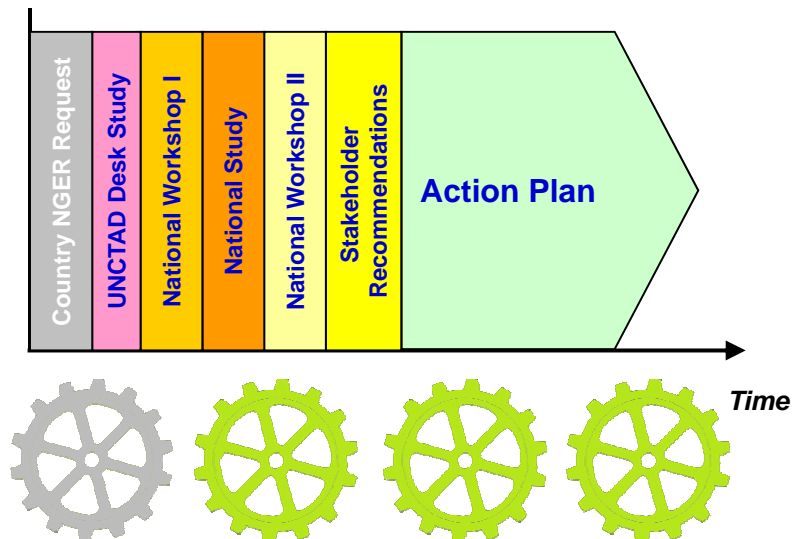
UNCTAD's National Green Economy Reviews (NGERs)

The green product space methodology is a key element of UNCTAD's capacity building projects.

National Green Economy Reviews (NGERs)



National Green Economy Reviews (NGERs)



Thank you for your attention



Trade, Environment, Climate
Change and Sustainable
Development Branch