Sustainable Energy Innovation and Diffusion: What is the Role of Trade?

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GLOBAL PLATFORM
ON CLIMATE CHANGE, TRADE & SUSTAINABLE ENERGY

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- Patents and licensing
- Fast tracking patent licensing schemes
- Innovation and tech transfer
- Technology mechanism
- Way forward?

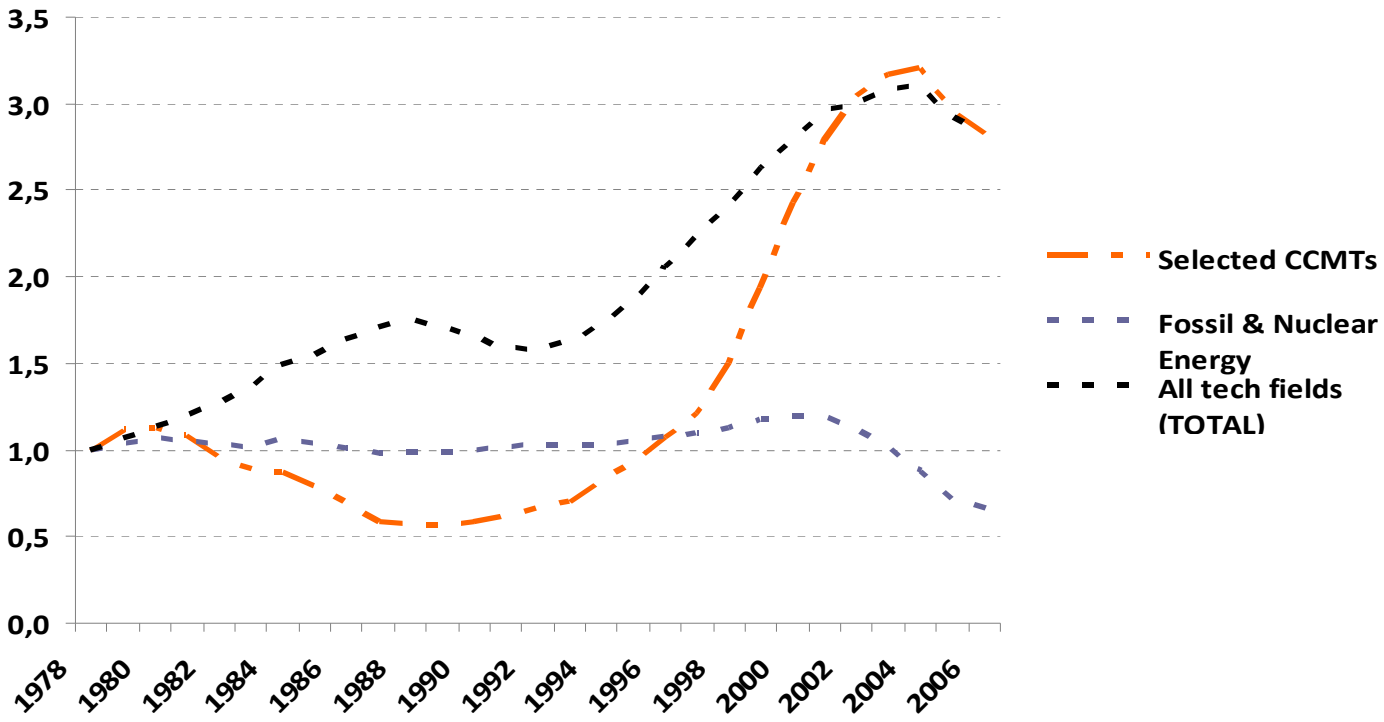
Discussions on IPRs and climate change are controversial

- Disagreements on whether IPRs are a barrier to the transfer of clean technologies or an essential pre-requisite to promote innovation, technology development and transfer.
- Much of the discussions have been confined to generalisations and lacked an informed policy perspective and a solid empirical basis.

→ **Evidence based research and empirical data are needed.**

Growth rate of clean energy patenting (1)

(1978-2006)



Counts are measured in terms of claimed priorities, normalised to 1978=1.0.

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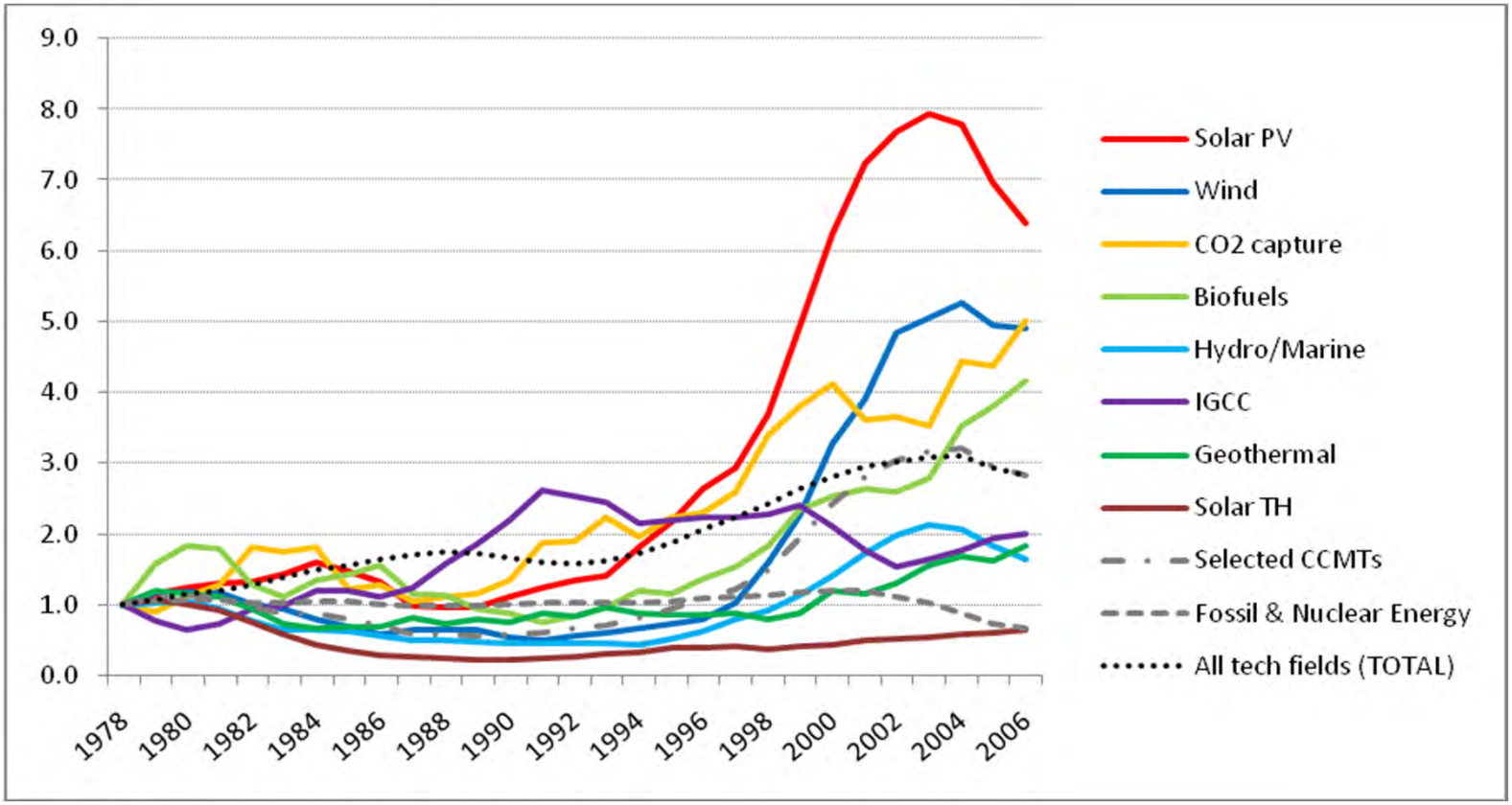
Growth rate of clean energy patenting (2)

(1978-2006)



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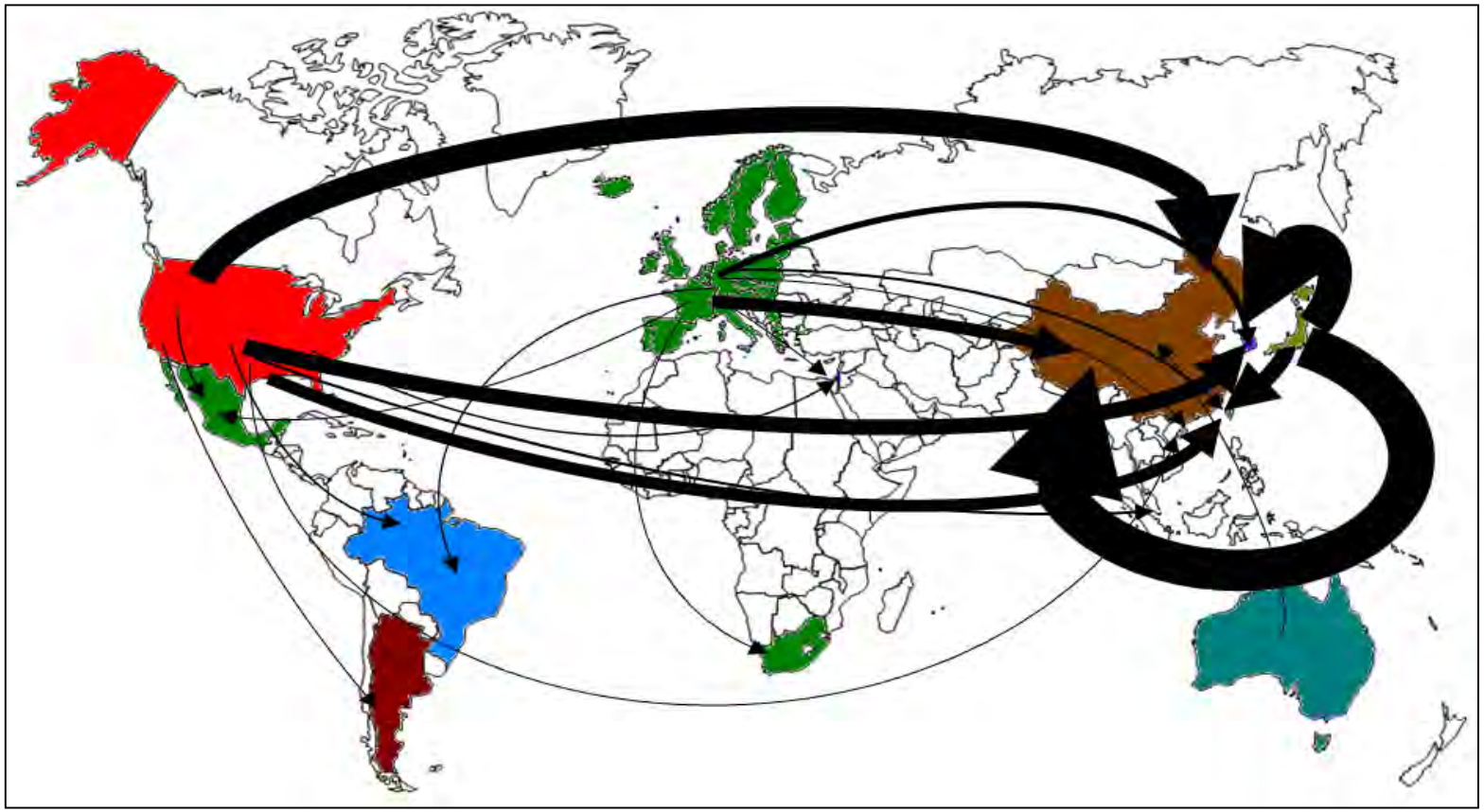
International patenting: Solar PV



Transfer is measured as the relationship between source country of inventions
("inventor country") and countries in which protection of the intellectual property has been sought.

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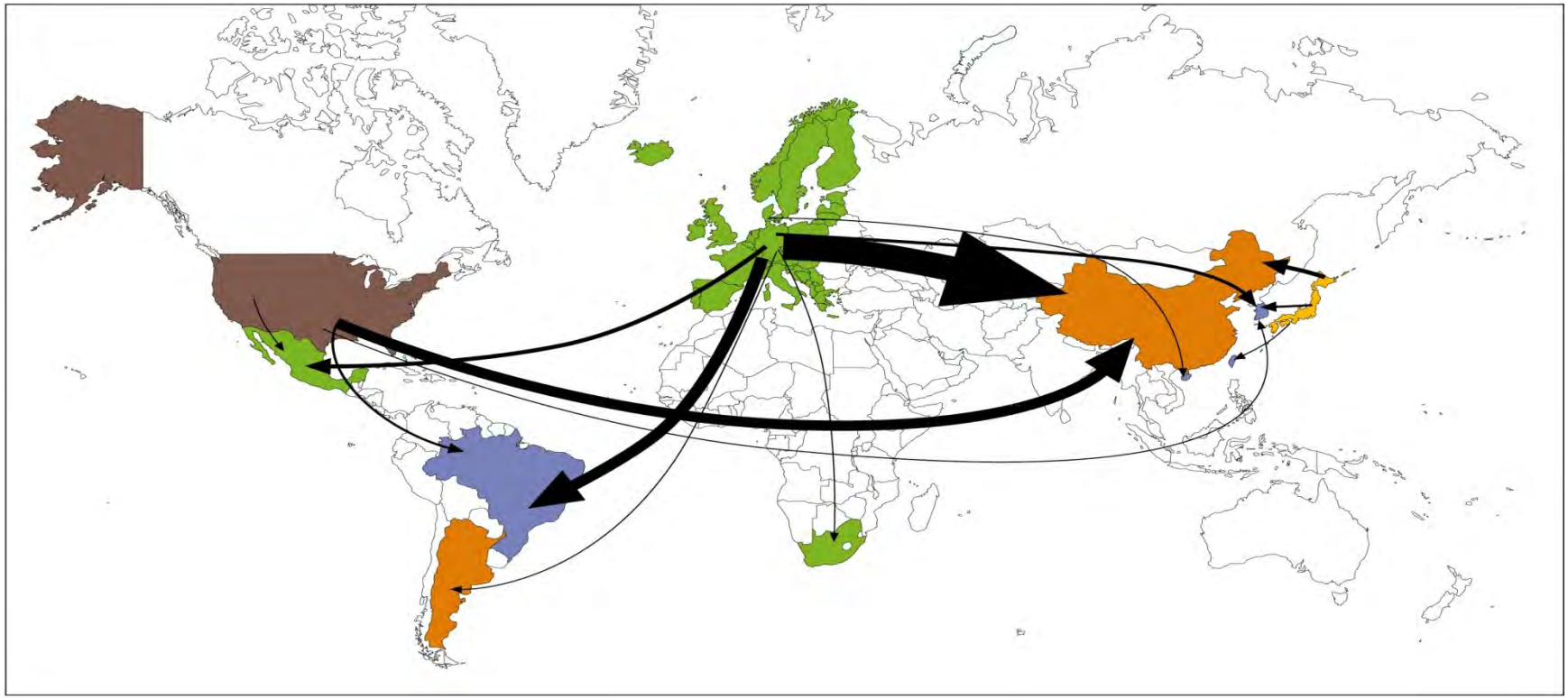
Patenting trends between countries: wind energy



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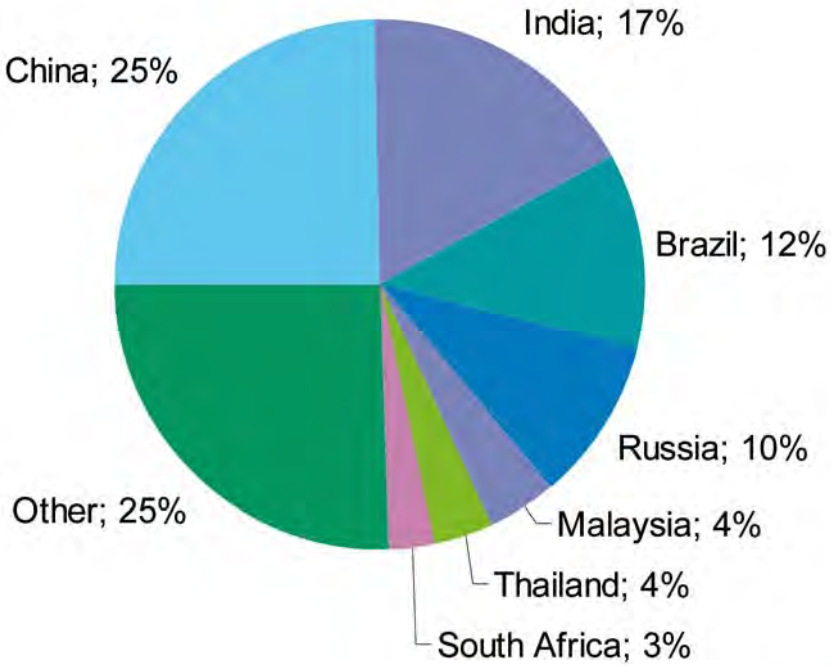
BRIC countries important for licensing

With which countries has your organisation been most involved in licensing or other commercialization activities of intellectual property in the field of CETs



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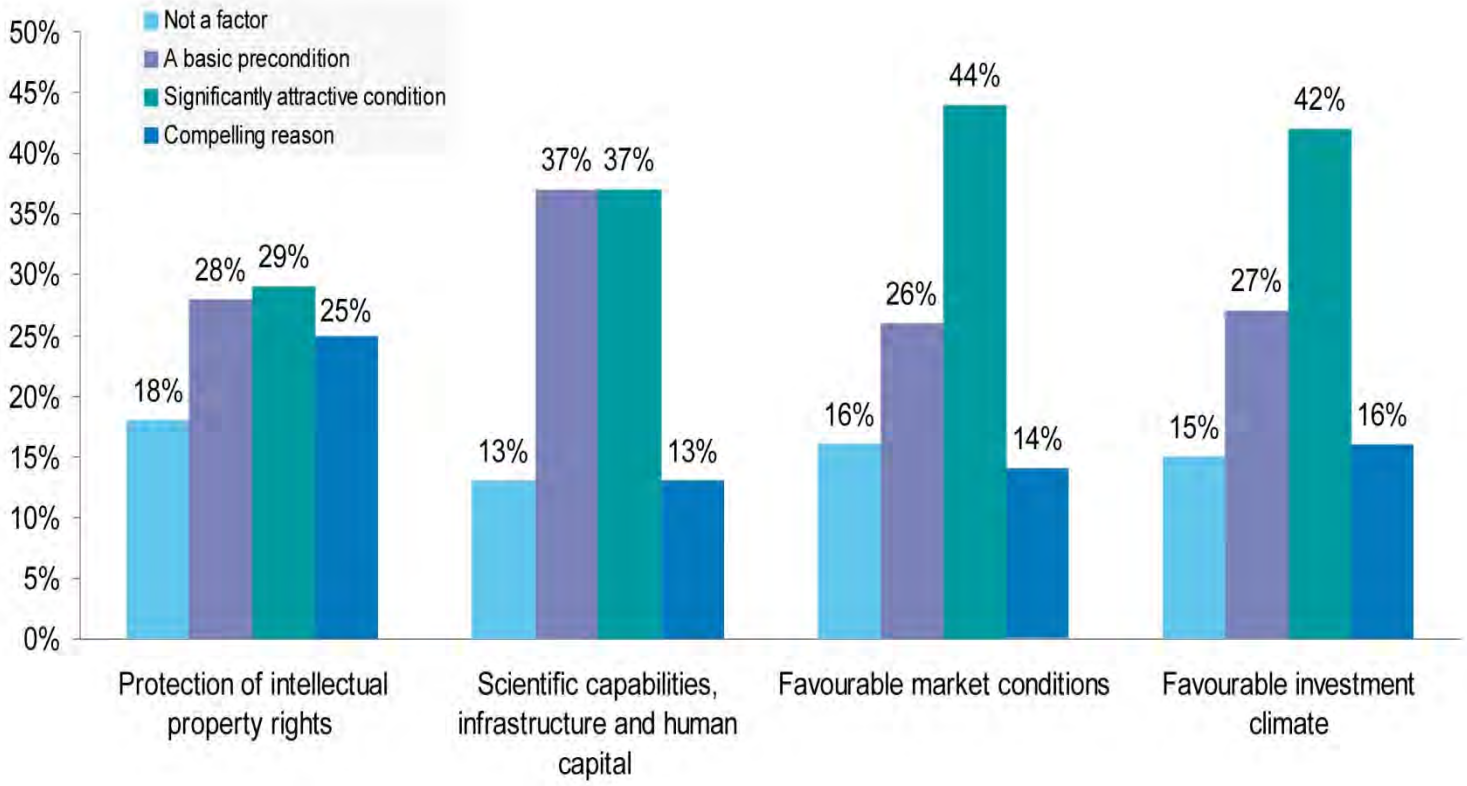
Factors affecting Licensing with developing countries

When your organisation is making a decision whether or not to enter into a licensing or co-operative development agreement with a party in a developing country, to what extent would the following factors positively affect your assessment?



Fast tracking ‘green’ patent applications

1. 9 IP offices have programme to fast track ‘green’ patent applications (Australia, Brazil, Canada, China, Israel, Japan, Korea, the UK and the US)
2. First empirical analysis: 5000 patents, small share of total green patent applications
3. Fast-tracked patents up to75% faster, of higher quality, filed in more countries, and patent more likely granted
4. Knowledge diffusion: fast tracked patents received more than twice as many citations
5. Overall positive, benefits need to be communicated

- **‘Solutions’ have not worked to facilitate access to climate technology**
- **Proposal for ‘two pronged approach’:**

1. Climate Technology Innovation Strategy
2. Mutually beneficial technology transfer contracts

Precedent: China and Cuba

China:
Instigated policies to promote the development of a state innovation system in areas including nanotechnology, materials science and storage batteries. At the same time, China encouraged the use of IP rights to build up technology ownership. This resulted in a significant increase of patent filings

Cuba:
Innovation strategy targets biotechnology and provides state-of-the-art medical care. Institutional IP policies allow negotiation for commercial licenses, which earn significant revenues for Cuba.

Climate Change Regime:

- *Article 4.5 of the UNFCCC*

- *Technology Mechanism*

Innovation and UNFCCC Technology Mechanism

Priority Areas:
Strengthening of national systems of innovation and technology innovation centers

Technology Mechanism

Aim: to accelerate the innovation and diffusion of ESTs and stimulate cooperative research and development

Technology Executive Committee

Special consideration to LDCs

Climate Technology Centre and Network

Facilitate networks and international partnerships to accelerate the innovation and diffusion of ESTs

Next steps and challenges for the TM

- Overlaps between TEC and CTCN
- Governance structure CTCN
- IPRs in or out?
- Role of private sector?
- Financing – link with Green Climate Fund

The relevance of trade

- Trade and trade policy will play important role to enable access to low-carbon dvpt
- Few countries have capacity or know-how to produce all technologies
- Liberalization can lower clean energy equipment costs for consumers
- Trade in SEGS closely related to domestic regulatory policies (FiTs, LCR, standards, procurement)
- Services!

Sustainable Energy Trade Initiatives

- Cover all modes of TT: investment, licensing, services
- -> NTBs (govt procurement, standards)
- Energy efficiency technologies
- Balance between role of markets and governments
- Flexible, adaptive framework b/c dynamic
- Conclusion: need for new international institutional architecture

Conclusions

Continuity

- Affordable access to Environmental Technologies remains a pressing global challenge
- Debate about the role of intellectual property rights continues to be divisive

and Change

- Paradigm shift to ‘green’ innovation
- A changing global landscape of technology and innovation
- Greater availability of empirical evidence
- Harnessing regional and bilateral cooperation

Thank you!

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