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Presentation

The Debate on Climate Change and Access to Technology: LDCs Perspectives

Breakout Session - Is There a Role for the LDCs in Reshaping Global Economic Governance?

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INTERNATIONAL CENTRE FOR
TRADE AND SUSTAINABLE
DEVELOPMENT

The Debate on Climate Change and Access to Technology : LDCs Perspectives

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Enhanced transfer of climate friendly technologies : A key element of the global climate change debate

- UNFCCC calls on developed countries to take steps to promote technology transfer (TT) to developing countries (Article 4.5).
- The Bali Action Plan called for “enhanced action on technology development and transfer to support action on mitigation and adaptation, including, consideration of:
 - (i) Effective mechanisms and enhanced means for the removal of obstacles to,.....promote access to affordable environmentally sound technologies (EST);
- A variety of proposals have been made on ‘enhanced’ action technology transfer with some progress achieved.
- Intellectual property has featured in discussions with diverging views between developed and developing countries on its role in technology transfer.

The Copenhagen Accord and Transfer of Technology

- The Copenhagen Accord establishes a ‘**technology mechanism**’ to accelerate technology development and transfer in support of action on adaptation and mitigation.
- **Enhanced action on adaptation** is “urgently required to support the implementation of adaptation actions aimed at reducing vulnerability and building resilience in developing countries, especially in those that are particularly vulnerable, especially least developed countries, small island developing States and Africa.”
- Developed countries “shall provide adequate, predictable and sustainable financial resources, **technology and capacity-building to support the implementation of adaptation** action in developing countries.”



Elements of the 'enhanced' framework on TT in the climate change negotiations

- Establishment of a new Technology Mechanism under the UNFCCC Convention
- Increased R&D cooperation
- International and National Technology Action Plans
- Creation of a network of regional technology innovation centers
- Strengthening of national innovation system
- Capacity building

LDCs and Climate Change Technology

- LDCs are highly vulnerable to the physical impact of climate change, including droughts, floods, and hurricanes.
- Key economic sectors such as agriculture, fisheries, public health, and tourism are among the most susceptible to the impact of climate change.
- LDCs are mainly interested in adaptation technologies.
- Most LDCs have weak technological bases and capabilities and rely significantly on development partners for financing, capacity building and partnerships.
- LDCs can benefit from pro-poor technologies adapted to their needs and circumstances.

Climate Change Technologies of Interest to LDCs

- Technologies needed for observation and monitoring of climate change
- Adaptation Technologies
 - Water saving, water-capture and water-reuse technologies
 - Agricultural biotechnology
 - Disease and pest-control technology
 - Flood, drought, sea-level rise, agricultural disasters and desertification-control technologies
- Mitigation Technologies
 - Energy-efficient and renewable energy technologies
 - Energy efficiency transportation technology
 - Energy- and material-saving building and construction technologies,
 - Low-greenhouse gas (GHG) emission technologies for agriculture

Challenges facing LDCs in Accessing Technology

- Formal market-based technology transfer mechanisms such as trade in goods, foreign direct investment or joint ventures and licensing play a limited role in meeting the needs and demands of LDCs.
- The role of intellectual property (IP) in promoting the transfer of technology, though generally controversial, is particularly complex in relation to LDCs.
- The basic conditions for IP to operate as an incentive for the transfer of technology are limited in countries at the initial stages of technological development.
- Absorption of existing technologies and their adaptation to local conditions primarily occurs through informal mechanisms.

Evidence from patenting and licensing data



→ **UNEP-EPO-ICTSD Project on Patents and Clean Energy announced in April 2009 on the occasion of world IP day**

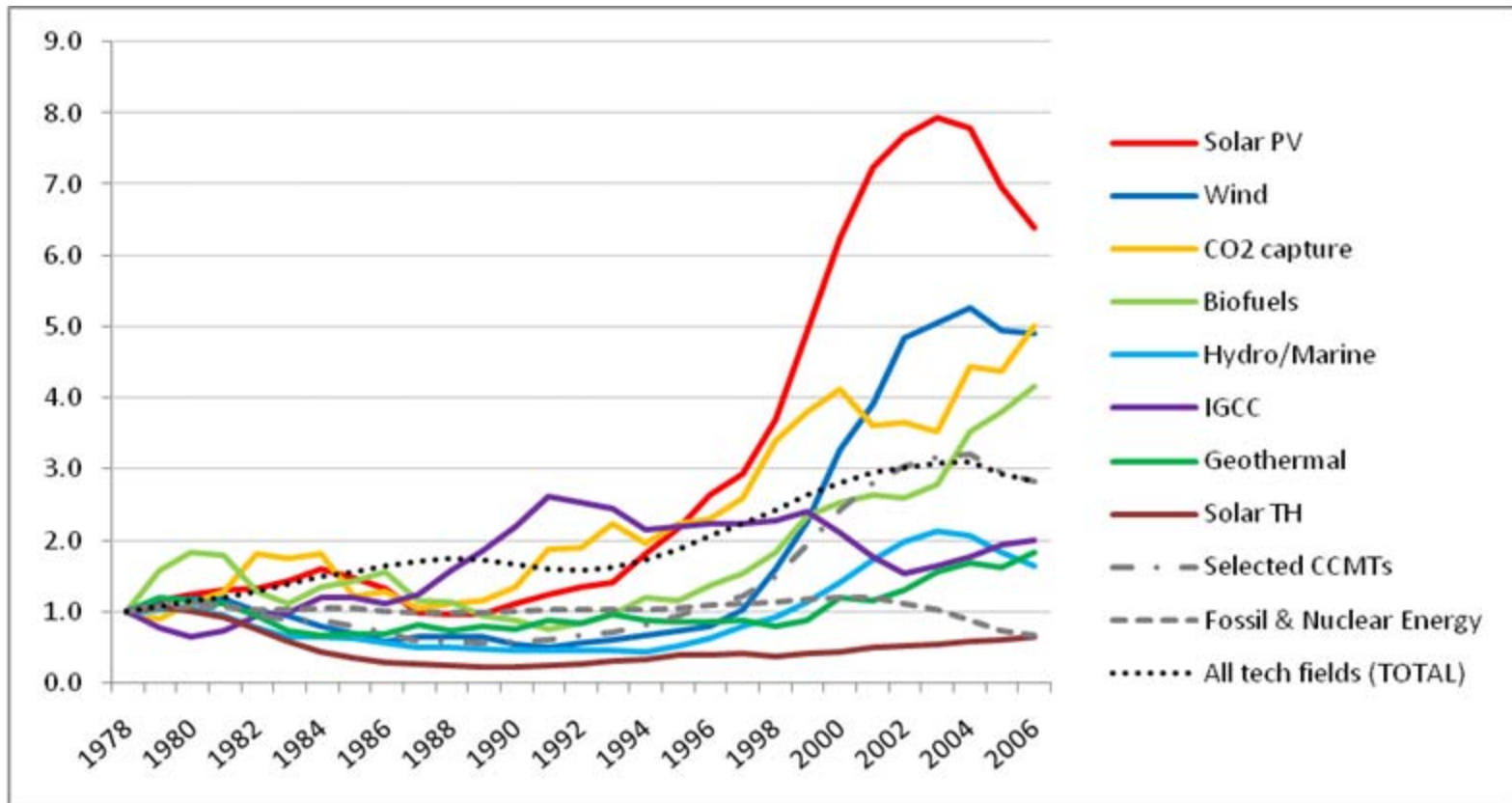
The project components:

- **Technology Mapping**
- **Patent Landscape of energy generation technologies**
- **Survey of Licensing practices in clean energies**

Trends identified in Patent Landscaping of clean energy technologies

- Significant increase in patenting of clean technologies in recent years (since late 1990s). In particular, wind-power, solar photovoltaic and CO2 capture have been exhibiting a rapid growth in recent years
- The patenting activity across all clean energy technology appears to be dominated by Japan, US, Germany, Korea, Great Britain and France.
- Some increase in patenting in emerging economies (particularly China)
- Few patents registered in low income countries

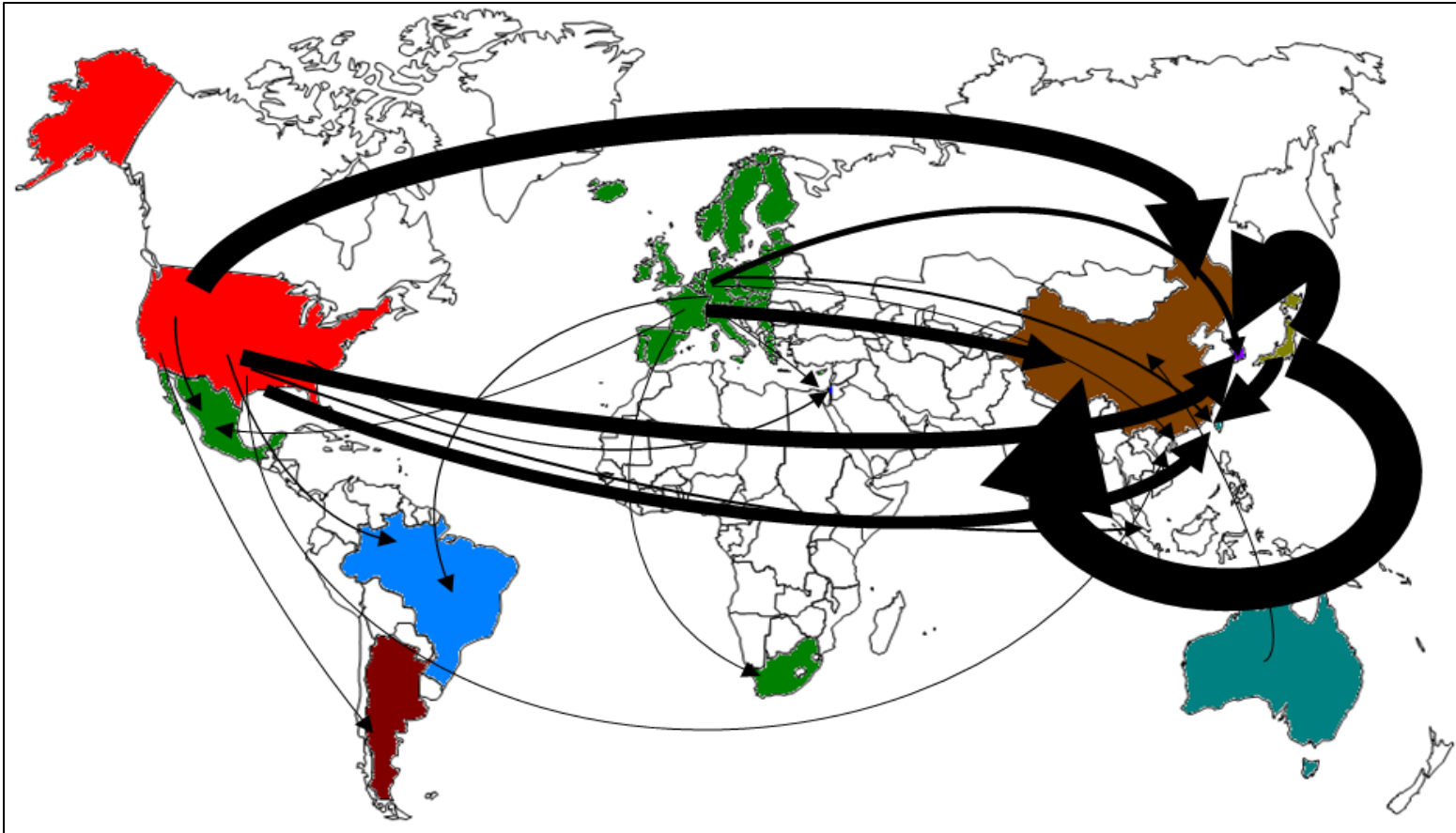
Growth rate of clean energy patenting (1978-2006)



United Nations Environment Programme



International patenting: Solar PV



Trends identified in Licensing Survey of clean energy technologies

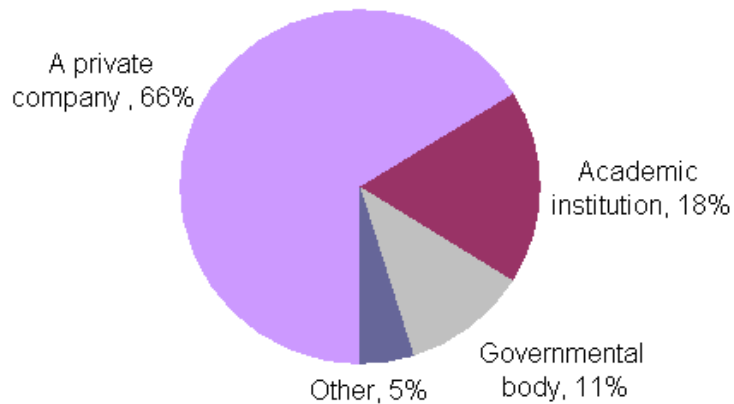
- A majority of respondents (58%) indicated that they never entered licensing agreements that involve licensees (which are not majority-controlled subsidiaries) based in developing countries in the last three years.
- The main recipients of licensing or other commercialization activities of IPRs were the BRICS countries, with China topping the list.
- 70% of respondents indicated that they are willing to provide more flexible licensing for entities that are based in developing countries.

Survey sample structure

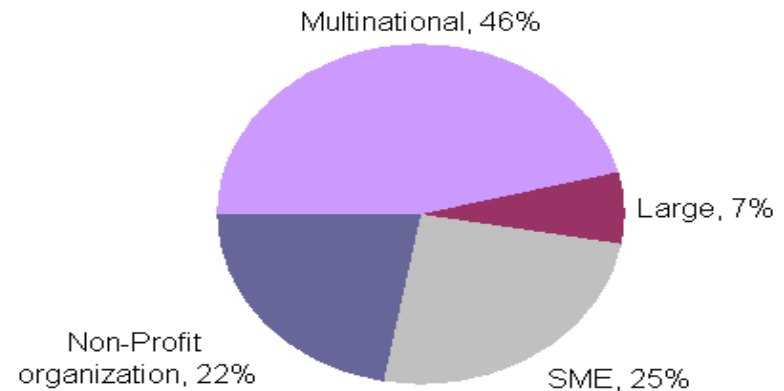
Some 150 questionnaires received (50% via on-line survey)

Wide range of responding organizations (multinationals, universities, government agencies)

Character



Size



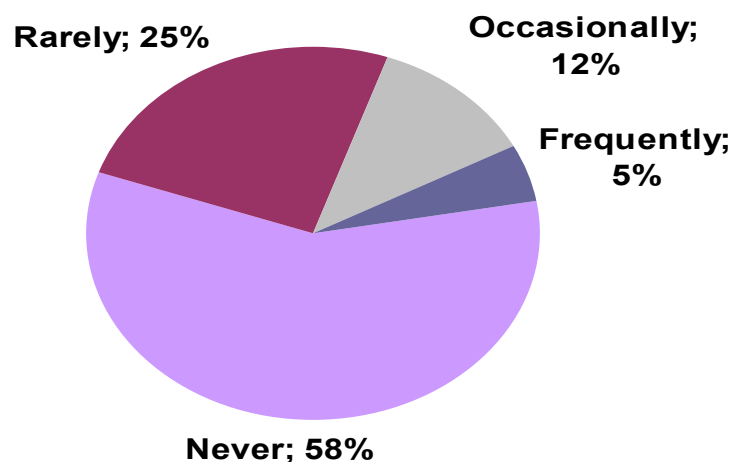
United Nations Environment Programme



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Relationship with developing countries

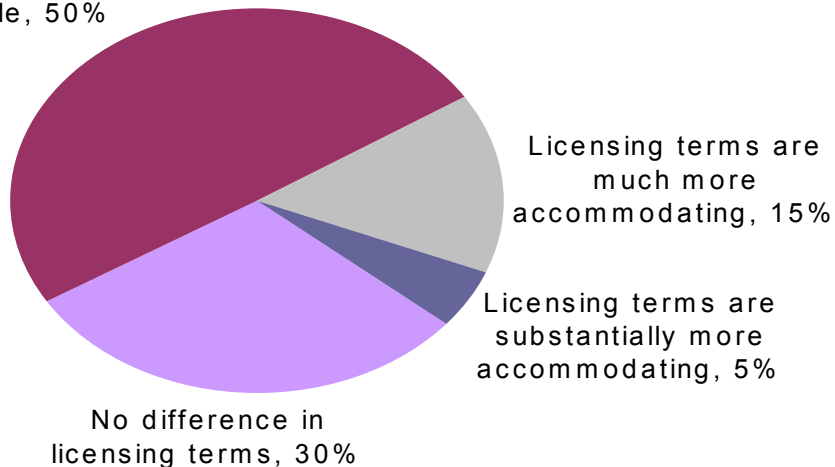
'To what extent has your organization entered licensing agreements that involve licensees (which are not majority-controlled subsidiaries) based in developing countries in the last three years?'



Willingness to show greater flexibility towards DCs

'When entering into an out-license agreement with parties that are based in developing countries, to what extent do the monetary terms of your license reflect your willingness to introduce greater lenience due to differences in the purchasing power of the parties?'

Licensing terms are more flexible, 50%



Challenges faced by LDCs with respect to IPRs and access to technology

- Technology Transfer (TT) is a complex and multidimensional process. Its success is contingent on many factors (finance, local absorptive capacity, enabling environment).
- Despite of small number of IPRs on climate change technologies in LDCs and variations in role of IPRs according to technology sector, **still some concerns** regarding, for instance, patenting of drought resistant crops (agriculture).
- In agricultural technologies, patent claims tend to be broad, implying that the patent owner will have strong market power vis-à-vis local competitors.
- **Need of more evidenced based research.**
- LDCs also need to **develop innovation capabilities in niche areas** relevant to climate change technologies.
- **Menu of options in the negotiations to pursue policy objectives in these areas.**

Menu of options for the nexus Transfer of Technology/IPRs

- **Business as usual approach:** difficult to sustain in view of demand for rapid and wide scale diffusion of EST to developing countries
- Promoting the transfer of EST in the **public domain**
- Greater Access to **publicly funded R&D/technology**
- Arrangements for greater use of **alternative innovation models** (prizes, patent pools, open innovation etc.) and **collaborative R&D**
- Building capacities on **EST research and innovation in developing countries and LDCs**
- **Declaration on IPRs and Access to Climate Change Technologies**
- **Use of TRIPS flexibilities** (Exempting LDCs from patent protection of climate-related technologies for adaptation and mitigation, compulsory licensing etc)

IPRs language in the climate change negotiating text is all bracketed.

Leveraging FTAs/EPAs to access climate change technology?

- Inclusion of a specific section on “Innovation” within the chapter on “Innovation and Intellectual Property of the CARIFORUM EPA.
- Article 138: Cooperation on eco-innovation and renewable energy
2.Parties agree to cooperate, including by facilitating support, in the following areas:
 - (a) projects related to environmentally-friendly products, technologies, production processes, services, management and business methods, including those related to appropriate water-saving and Clean Development Mechanism applications;
 - (b) projects related to energy efficiency and renewable energy;
- Article 142: Transfer of technology
The EC Party shall facilitate and promote the use of incentives (instead of just shall provide incentives as per TRIPS Article 66.2).

Elaborating an enhanced 'enhanced' framework on TT which fully integrates LDCs interests

- The UNFCCC has recognized that LDCs and SIDs have 'specific needs and situations' in regard to transfer of technology.
- **Adaptation:** 'Copenhagen Programme on Adaptation.'
- **Funding** for adaptation needs to be prioritized (developed countries commit to a goal of mobilizing jointly USD 100 billion dollars a year by 2020 to address the needs of developing countries?).
- A pro-competitive and pro-development approach to a **governance regime for technology transfer** requires flexibility, adaptability and sustainability in the interests of those most threatened by climate change.
- Reach a framework on **IPRs** which provides a variety of options to address challenges in different situations and cases. No single solution.

ICTSD Initiative on Climate Change Technology and Trade

- Initiative launched in 2008 as an informal mechanism to formulate a research agenda, identify gaps and priorities to be addressed with a view to identifying obstacles and potential points of intervention to promote the transfer of climate-related technology.

Recent policy oriented research:

- ***Innovation and Technology transfer to address climate change: Lessons from the global debate on IP and Public Health*** by Frederick Abbott, Issue Paper, No.24, June 2009.
- ***Access to climate Change Technology by Developing Countries*** by Cynthia Cannady, Issue Paper No. 25, September 2009.
- ***Technologies for Climate Change and IP: Issues for Small Developing Countries***, Information Note 12, October 2009.
- ***Fostering the Development and Diffusion of Technologies for Climate Change: Lessons from the CGIAR Model*** by Carlos Correa, Policy Brief No.6, December 2009.



Thank you

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