

India and Technology Transfer: Positions, Barriers and Options

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Tech Transfer and Climate Change: Background

- The UNFCCC
 - Art. 4(1)(c) – Promotion and Cooperation in development, application, diffusion *including* transfer of technologies
 - Art. 4(3) – Annex II Developed Country commitment to provide transfer of technology needed by developing countries to meet commitments in Art 4(1) *and* Art 11
 - Art. 4(5) – Annex II Developed Country commitment:
 - **To promote, facilitate and finance transfer of technology and know-how**
 - **Support development of endogenous capacities and technology**

Tech Transfer and Climate Change: Background

- The UNFCCC
 - Art. 4(7) – Extent of developing country commitments depends on developed country commitment to financial resources and tech transfer
 - Art. 4(8) – Parties to give full consideration to actions related to tech transfer to meet needs of developing countries arising from adverse effects of climate change and/or *impact of implementation of response measures*

Tech Transfer and Climate Change: Background

- The Kyoto Protocol
 - Art. 10(c)
 - Promoting modalities for development, application and diffusion of environmentally sound tech
 - Taking *practicable steps* to promote/facilitate/finance transfer of *or access to* tech, *know-how*, etc.
 - Particularly applies to developing countries
 - Includes specifically:
 - policies and programs for *transfer of public domain tech*
 - Creating an *enabling environment for private sector*

Evolution of Tech Transfer: The COP Decisions

- Decision 13/CP.1
 - 1(a) Itemised Progress Report
 - 1(b) Inventory and Assessment of Tech and Know-how
- Decision 7/CP.2
 - 2(a) Enhancement of Progress Report
 - 2(c) Technology Database (TT:CLEAR)
 - 2(e) Round Table on Tech Transfer
- Decision 4/CP.4
 - 3 - Requests Annex I and Annex II parties to assist developing countries

Evolution of Tech Transfer: The COP Decisions

- Decision 4/CP.4 (contd)
 - 7(b) Urges Annex II parties to provide list of publicly owned tech and know how
 - 7(c) Urges Non-Annex I countries to submit technology needs
 - 9 - Consultative Process
- Decision 1/CP.6
 - Annex, Box A – Intergovernmental consultative group of experts on tech transfer under SBSTA
- (2) EGTT

Evolution of Tech Transfer: The COP Decisions

- Decision 4/CP.7
 - (1) Framework to enhance implementation of Art. 4(5) of UNFCCC
 - (2) EGTT
- Decision 15/CP.10
 - (2) EGTT to recommend steps to implement framework to enhance Arts. 4 and 5 of UNFCCC
- Decision 6 /CP.11
 - Requests review of EGTT
- Decision 5/CP.12
 - Extension of EGTT by 1 year

Evolution of Tech Transfer: The COP Decisions

- Decision 3/CP.13
 - (Annex 1) Action points for framework for implementation of Art 4 and 5 adopted
 - EGTT reconstituted for 5 years
 - Annex parties and organisations urged to provide non-Annex I parties and economies in transition help to conduct, identify, implement prioritised technology needs
- Decision 4/CP.13
 - Adopted points for funding
 - Requests GEF to create a program to scale up investment for technology transfer

Evolution of Tech Transfer: The COP Decisions

- Decision 4/CP.13
 - Requests EGTT to create indicators to evaluate implementation of the framework
 - Urges parties to provide assistance to developing country parties to implement action points
 - Invites parties to designate national entity for technology transfer

India's position on Technology Transfer Issues

- Need for strengthening regional systems and data
- Exchange of data and information
- **SBSTA 26:** Need for an improvement in local systems: emphasis on improving capabilities and integration of local information with operational management
 - Dissemination of information to the local level
 - Effective science-policy interface
- **CMP 3:** Status quo on substantive components of UNFCCC like Art. 4 in reference to the Russian Proposal.
- **SBSTA 26:** Proposes the use of compensations for reducing emissions through other mechanisms (forest cover maintenance) as funding for technology transfer.

India's position on Technology Transfer Issues

- **COP 6 Part II:**

Favours centralised decision making by the COP, as against delegation to the SBSTA over Technology Transfer

favours the review of implementation of article 4.5

the barriers to TT should not be limited to IPCC reports rather it should be applied beyond the ones identified by IPCC

Indian Initiatives

- Capacity Building
- Research: involvement of academia, industry,
Information dissemination:
- Institutional cooperation: DST, TIFAC, NIF,
CDM initiatives
- Social Engineering Initiatives: CNG
implementation, renewable energy,
- Monitoring and Evaluation: Bharat Norms,
various reports by the stakeholders

Indian Initiatives

- Adaptation Initiatives:
 - Crop Improvement
 - drought proofing
 - Crop Insurance
 - Disaster Management
 - Livelihood Preservation
- Energy Efficiency:
 - Renewable Energy initiatives
 - enhancement of efficiency of conventional energy
 - Energy Audits
 - social initiatives (labeling program and Energy Conservation Building)

Barriers to Technology Transfer: India Issues

- Lack of co-ordination
 - between institutional setups
 - Between State and Centre
 - Between Government academia, industry and civil society
- Lack of information, mapping systems and databases
- Lack of incentives for private acquisition of clean tech
- Potential for diversion of International Funds to alternative fund mechanisms

Barriers to Technology Transfer: India Issues

- Intellectual Property Barriers
 - The WTO and the TRIPS regime
 - Extensive private ownership of intellectual property in clean technology
 - Lack of capacity to pay for licensing the most efficient technologies
 - Lack of efficient funding mechanisms

Recommendations

- Alternative Financing Mechanisms
 - Need for innovative financing systems, venture capital
 - Carbon Credit-Based Financing Mechanism
 - Exchange CERs such as Compensated Conservation or CDM measures for PSUs for Technology Licenses
- Creating Enabling Environment for SMEs to obtain benefits of CDM mechanism

Recommendations

- Incentivisation
 - Technology-specific incentives, scope of venture capital
 - Incentives (subsidies) extended towards adoption and manufacture of clean technologies
 - Incentivisation may be linked to UNFCCC funds
 - Corresponding disincentivisation (prohibitive taxation for using sub-optimal technologies)
 - Incentives for consistent adoption of new technology