

KEY FINDINGS OF “TECHNOLOGY TRANSFER IN CDM” STUDY¹

Background information:

- Key source: PDD of 2293 projects in the CDM pipeline (registered and proposed) as of September 2007
- Scope of study: - Tech Transfer types used in CDM PDD
 - TT by project type (24 project types)
 - TT by host country
 - Technology supplier vs buyer participants
 - Origin of technology
 - TT versus technology needs in TNA report

Note: Tech transfer is not defined in the CDM Glossary of Terms, however the PDD form Section A.4.3 requests project participant to “include a description of how environmentally safe and sound technology and know-how to be used is transferred to the host Party(ies).” While this requirement exists, it is important to note that the transfer of technologies is not a requirement being assessed in the context of registering a CDM project activity.

Key findings:

- Project participant general interpretation of TT in the PDDs: means to use of equipment and/or knowledge not previously available in the host country by the CDM project
- TT by project type (Ref: Table 1):
 - Wide range: 8 ktCO₂e per year for Energy efficiency service - 1,038 and 4,563 ktCO₂e per year for N₂O and HFC reduction projects
 - TT is more common for larger projects: 39% projects (representing 64% estimated emission reductions) claims TT
 - Unilateral and small-scale projects involve less technology transfer, possibly due to their smaller size: Unilateral project constitutes 54% of all projects (accounting for 29% of estimated emission reductions); only 33% claims TT
 - Small-scale projects accounts for 44% of all projects (accounting for only 8% of estimated emission reductions); only 33% claims TT
 - Technology transfer is more common for projects that have foreign participants: almost half of projects with foreign participants claims TT
- TT by host country characteristic:
 - TT is not systematically related to the host country population or per capita GDP: TT claims in terms of share of projects and share of annual reductions, are more common for CDM projects in countries with a population between 1 -100 million
 - Frequency of TT claims is high for “Least Developed Countries” although the number of projects (14) is relatively small
 - Brazil, China, India and South Korea – dominate the totals by sharing 72% of the projects (representing 80% of the annual emission reductions)

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- Host country can influence the extent of technology transfer involved in its CDM projects: The DNA approval criteria of these countries include provision for technology transfer or technology development
- Regression analysis with project type and host country:
 - Probability of technology transfer increases with project size and the GDP and declines for host countries with larger populations
 - Probability of TT increase if the project includes foreign participants.
 - Technology transfer is *more* likely for agriculture, HFC, N₂O projects and less likely for Biogas, Biomass energy, Cement, Coal bed/mine methane, Energy efficiency own generation, Energy distribution, Fossil fuel switch, Fugitive, Hydro, Landfill gas, and Reforestation.
- Technology supplier vs buyer participants
 - Buyers for projects with a significantly higher rate of technology transfer, this is not associated with technology supplied by those countries. Example : Finland, France
 - Switzerland is a technology supplier and credit buyer for over half of the projects it participates in
- Nature and origin of technology transfer:
 - 56% of the projects that involve technology transfer (accounting for 47% estimated emission reductions) claim both equipment and knowledge transfers
 - 32% of the projects (accounting for 39% of estimated emission reductions) claims transfer of equipment only
 - 11% claims transfer of knowledge only
 - 1% claims a new technology under a domestic and foreign partnership
- Origin of technology transfer (source: PDD and PP survey)
 - Japan, Germany, the USA, France, and Great Britain are the main origin of transfer of equipment and knowledge (70%)
 - Japan is the dominant supplier of technology for EE industry, EE own generation, HFC and Transport projects. Germany is the dominant supplier for EE households and N₂O projects
 - Brazil, China, India, South Korea and Chinese Taipei are the source of 94% of equipment transfers and 74% of knowledge transfers from Non-Annex 1 sources.
 - Import of equipments most commonly found in EE Households, EE Service, Fossil fuel switch, HFC and Wind, and to some extent in Cement, Hydro, Solar and Transport projects.
 - There appears to be no barriers to technology transfer for most of the project types with the largest number of projects and project developers appear to have a choice among a number of domestic and/or foreign suppliers.
- TT vs technology needs in TNA report
 - Only 13 out of 25 identified country in TNA report host CDM projects (14 more countries have submitted TNAs including 8 countries that host CDM projects)

- The results for six countries with more than 5 CDM projects, barriers identified by countries in their TNAs do not appear to be significantly related to the pattern of technology transfer for CDM projects
- The number of barriers identified does not appear to affect the percent of CDM projects involving technology transfer