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## Cancun Technology Breakthrough Hides a Fatal Flaw Within

by

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### Abstract

*Access to technology for dealing with the consequences of climate change, and for taking a low emission path for development, is of core concern to the developing countries but has seen little concrete action over the last two decades. The claimed achievements under CDM in transferring technologies to the South are, at best, exaggerations. The Cancun Climate Conference has now agreed on the setting up of a technology executive committee (TEC), climate technology centre and network (CTCN) and a supporting financial mechanism. The TEC has been constituted on the pattern of the CDM Executive Board with a six monthly rotational leadership among its 20 expert members. Such a brief preset leadership, claimed as a matter of right among its nominated members, and expected to work through consensus, is likely to provide good managerial skills and produce tools of guidance for assessing technology transfer needs, useful rules of transactions and glossaries of technical terms but may not be able to achieve the intended technology transfers at any significant scale. A transformational leadership, and a sufficiently long period, is required to address such an intractable problem as technology transfer from North to South has proved to be. The main attributes of a TEC leader should be a fashioning a clear vision and the ability to create a path to that distant vision, fathoming depths of obstacles, and motivating a large number of countries, institutions and individuals to walk on that uncertain path. Consensus should be attempted but not made mandatory as it would restrict transfer benefits to only those technologies that cost the least. The critical task is to find a leader with proven credentials and give her the mandate, time and the tools.*

Key words: technology transfer, climate change mitigation, adaptation, transformational leadership

Citation: Kant, P. 2011. Cancun Technology Breakthrough Hides a Fatal Flaw Within. IGREC Working Paper IGREC-18: 2011, Institute of Green Economy, New Delhi

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After many years of slide back on the promises of action on climate change there was only a mild hope that Cancun would result in some real progress. Over the past several years it had become quite clear that there was no domestic political space in most large developed countries, particularly the USA, which would allow them to bear the costs of reducing greenhouse gas emissions if their fast emerging competitors among the developing economies were perceived to be having it too easy. At Cancun the central challenge was getting the emerging economies to come on board the mitigation platform, and the developed countries to honour their original commitments to transfer technology and provide funds to enable the developing countries to initiate meaningful steps for adaptation and mitigation. Discussions at the pre-summit climate meet at Tianjin had suggested the possibility of a concrete technology agreement including creation of regional technology centres, and on the contentious issue of financial assistance in these times of recession, there were hopes of at least a limited Fast Start Fund for immediate action. As days passed in the noise and din of the huge gathering at Cancun, hopes began dimming fast till some tactically brilliant compromises by the President of the Conference, Ms Patricia Espinosa, saw the tables turn.

At the first UNFCCC Conference at Rio in 1992 the world leaders had agreed that mitigation of climate change, and adaptation to it, would require not merely changing human behaviour but also the development and use of technologies that would lead to sharply reduced carbon footprints of human activities. And the developed world was expected to not only invest deeply in such technologies but also transfer the technologies needed to the developing world and meet the incremental costs involved to enable them to both benefit from, and contribute to, to an early attainment of the goals of the UNFCCC.

The UNFCCC also created a Subsidiary Body for Scientific and Technological Advice (SBSTA) and charged it with the responsibility to identify innovative, efficient and state-of-the-art technologies and know-how and promote the development and transfer of such technologies to the developing countries. And five years later the Kyoto Protocol re-emphasized the role of technological innovations for dealing with the fast emerging challenge of the climate change, requiring developed countries to promote research in appropriate technologies and increase the use of new and renewable forms of energy. The developed countries are also required under the Protocol to take all practicable steps to ensure access to these technologies, and their management, to the developing countries through *“policies and programmes for the effective transfer of environmentally sound technologies that are publicly owned or in the public domain and the creation of an enabling environment for the private sector, to promote and enhance the transfer of, and access to, environmentally sound technologies”*.

At the Marrakesh Conference an Expert Group on Technology Transfer was created within SBSTA and a framework was established for quick, effective and efficient transfer of environmentally sound technologies (EST). The key features of this framework were assessment of technology needs and priorities of developing countries, detailed on-time knowledge of the availability of ESTs, capacity building, creation of an enabling legal, policy and fiscal environment to give and receive these technologies and diffuse them through various means including private enterprise.

But in spite of all these steps very little has actually happened in technology transfer and diffusion till today. The CDM is often cited as the one instrument that has led to infusion of mitigation technologies in developing economies but this is at best an exaggerated claim. In a recent UNFCCC official study of about 5000 projects in the CDM pipeline in 81 developing countries at the end of June 2010, as many as 30% project developers claimed technology transfer in their Project Design Documents. As can be expected, transfers occurred more in specific project types, like the Nitrous oxide

emission reduction in which all projects reported technology transfer, in sharp contrast to hydroelectric power units where barely one in eight projects felt the need for technological infusion from outside. Besides these extremes, other notable sectors that merit mention are landfill gas projects and energy efficiency projects in which 80% and 40% projects, respectively, sought technological inputs from Annex 1 countries (UNFCCC, 2010a).

Also multilateral and large sized projects were more likely to involve transfer of technology than unilateral and small sized projects. The proportion of multilateral projects has actually dropped sharply over the past five years from 30% in 2004 to just about 5% in 2009. This rise in unilateralism, with projects owned entirely within the host developing countries, is probably linked to the increasing technological reach of some of the main CDM host countries like China, India, Brazil, Mexico and Korea (UNFCCC, 2010a).

The UNFCCC report suggests that the involvement of technology transfer may actually be higher as almost a quarter of the Project Design Documents did not mention technology transfer even when it was involved (UNFCCC, 2010a). This, however, might be taking too positive a view since, for want of an accepted definition of technology transfer, often a peripheral use of new technology or a minor infusion of managerial knowledge, not central to the primary objective of the project, is claimed as technology transfer just to make the project look attractive.

It, of course, does not mean that technology transfer through purchase of equipment or knowhow by developing country project proponent could not have taken place. But these transfers are more like business-as-usual technology acquisitions that would have occurred anyway.

Cases where the technology acquired may have by itself accorded additionality to the project are the ones which can truly be termed as CDM driven technology transfer. The UNFCCC study did not examine such cases specifically nor have any other scholars working in this field. But discussions that this author had with researchers suggest that CDM projects in which the barriers were effectively crossed through technology transfer were generally limited to HFCs and N<sub>2</sub>O emission reduction.

Cancun has decided to establish a Technology Mechanism that includes a Technology Executive Committee (TEC) and a Climate Technology Centre and Network (CTCN). The TEC is to provide an overview of technology needs and recommend actions to promote technology transfer and encourage development of technology actions plans and the CTCN is expected to engage stakeholders in making need assessment and help in diffusion of the technologies transferred. A financial mechanism is also being set up that will enable these new institutions to function (UNFCCC, 2010b).

The fact that the Expert Group on Technology Transfer (EGTT), set up as a specialized Group within SBSTA a decade back, did not have widely different mandate from the TEC raises the question as to whether TEC would also meet the same fate as the many efforts of the past. After all it is not as if no money has been spent on technology transfer earlier. The GEF alone has spent \$ 2.5 billion on this since 1993, and leveraged another \$ 15 billion from other sources, for supporting 30 climate friendly technologies across more than 50 developing countries (GEF, 2008). But the results are yet to show benefits at a scale of significance even after almost two decades since there is no evidence that these GEF supported pilot projects have led to widespread dispersal of the renewable energy technologies transferred. Because of its technical, rather than a visionary approach, the GEF was not able to turn the technical successes of its individual projects into a collective achievement of the ultimate objectives of

technology transfer which is its wide diffusion so that millions may use the mitigation opportunities now available. The reason for this failure lies not in any wrong doing or lapses on the part of the GEF but in expecting an entirely finance management oriented institution to develop a vision necessary to address as entrenched a problem as technology transfer has been.

And it is here that Cancun may also end up failing as badly as all efforts in the preceding two decades. The Technology Executive Committee (TEC) has been constituted in a manner designed to act as a mere technical management board with 20 nominated members, selected for their technical abilities by the developed and developing nation groupings, that will have a half-yearly rotating leadership among its members and will be required to take decisions by consensus.

This is the pattern of the CDM Executive board and the experience there itself should have warned that it has little to recommend itself. It is doomed to fail because it lacks what is needed the most, leadership with a vision and initiative, and an entirely uncommon capacity to walk around the path littered with minefields as it would discover very soon.

There are broadly two kinds of leadership. One is transactional leadership that seeks to find solutions for the current challenges and relies on a carrot and stick approach with economically, legally and culturally acceptable forms of inducement, reward and punishment to cajole followers towards preset goals. The leader draws a format and his team members are expected to fill in the details. The leader's productivity depends primarily on his capacity to lay down a clear path to the objectives, assign tasks suitably to members, monitor progress and provide help when needed (Politis, 2004, Rowold & Wolff, 2009).

Transformational leadership, on the other hand, works on a long term vision and is able to make it into a shared vision of all with entirely new expectations from themselves and from their environment. The leader arouses the followers and creates hitherto unknown capabilities making them act far beyond the framework, beyond the mere call of duty, beyond self-interest, and in the process she transforms not only herself, the followers but the task itself into something far more than originally envisaged (Politis, 2004, Rowold & Wolff, 2009).

The manner in which TEC has been set up, with 20 technical members and a half yearly rotating leadership among them, is designed to preclude the possibility of appointment, or emergence, of a transformational leadership in this body. With this body, and assuming its membership would consist of competent technological experts, one can look forward to a decade of good work ahead of producing a large number of tools of guidance for assessing technology transfer needs, rules of transactions and colourful glossaries of technical terms but little real technological transfer from North to South. It would, ofcourse, marshal enough evidence of such case-by-case 'transfers' to China, India, Brazil, South Africa, Korea among a few other technically non-Annex 1 countries. In the hands of people of such competence it would not be difficult to prove the 'business as usual' as 'additional' establishing its success as CDM Executive Board has done. But one can be sure there would be no mass technology transfers to those who really need support for mitigation and adaptation, the vast majority of the poor and less technologically capable countries of the South.

Problems that have defied solution for decades require leadership of a different nature altogether. For such a leader technological knowledge would be merely one of the desirable qualifications and her main attributes will have to be a clear vision, an ability to fashion a new path to

that distant vision, sell the vision and her way to it to the world, fathom the depth of obstacles on the path and motivate her team to achieve beyond themselves. And she would need sufficient time, many times longer than the presently prescribed six months, to show results. For the global community to really invest itself wholeheartedly in enabling the South to adapt effectively and quickly to the consequences of climate change, and adopt low carbon paths of development, the first and most important task is to find a leader for the Technology Executive Committee with proven credentials and give her the mandate, time and the tools. The experts in the TEC and CTCNs should form her team and she should have a central role in the formation of these bodies. She should work in consultation with the experts and in a transparent manner but should not be forced into seeking consensus because that would restrict transfer benefits to only those technologies that cost the least.

There are many political and business leaders across the world who have transformed their states, metropolises and businesses beyond recognition against impossible odds using their leadership skills, the technical and managerial skills of their teams and the trust of the people they served. Imagine a Bill Gates, an Indira Nooyi, or a Mohammed Yunus given the responsibility of leading technology transfer. Would not success then be just a given?

Acknowledgement: The author is thankful to Miss Swati Chaliha and Miss Zainab Hassan, Research Associates in the Institute of Green Economy, New Delhi, for their contributions in writing this working paper.

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