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An Introduction to This Issue: Climate Change and Technology Transfer

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Climate Change and Technology Transfer

*by Dalindyebo Shabalala**

The Earth continues to experience record-breaking temperatures caused by increased concentrations of carbon dioxide and other greenhouse gases in the atmosphere. The impacts of this unprecedented warming include increased floods and drought, rising sea levels, the spread of deadly diseases such as malaria and dengue fever, and increasing numbers of violent storms. These impacts threaten to be more severe and imminent than previously believed. An urgent, global response is essential. The UNFCCC and the Kyoto Protocol, however, have failed to live up to their promise, especially in respect to technology transfer. This failure has pushed countries to move towards a new post-Kyoto framework with a focus on ensuring the effective and broad-based transfer of environmentally sound climate-related technologies.

Transfer of technology is a key pillar of any international response to global climate change. The UNFCCC and the Kyoto protocol were built on a basic political bargain. On one side, under the first commitment period, industrialized countries would take primary responsibility for emissions reductions. They would demonstrate carbon-free development, while transferring technology that would enable developing countries to make progress in reaching increasing carbon efficiency. Thus, carbon leakage, i.e. the shifting of polluting carbon-inefficient industries from industrialized to developing countries, would be avoided. The success of the first phase would enable developing countries to take on their own emissions reduction obligations in the second phase.

Industrialized countries, however, have largely failed to provide measurable, reportable, verifiable, and effective transfer of environmentally sound climate-related technologies. This failure was a primary bone of contention during the Bali Conference in December 2007, and it laid behind the refusal of developing countries to agree to take on specific emissions reduction obligations in the post-Kyoto period. The Bali Action Plan identifies technology transfer as a key element leading up to 2012 and beyond. However, there are several other challenges underlying the failure to provide transfer of technology, in addition to the lack of political will from the industrialized countries. These challenges include:

- A lack of criteria and support for conducting needs assessments and identifying priority technologies for transfer;
- A need to properly address the role of Intellectual Property ("IP") with respect to mitigation and adaptation technologies and to proactively address ways that the IP system can be used or altered to serve the needs of addressing climate change;
- What lessons and best practices to learn from existing technology transfer mechanisms such as that of the Montreal Protocol and existing platforms and mechanisms existing mechanisms for technology transfer in other multilateral environmental agreements;
- A lack of institutional mechanisms at the national, bilateral and multilateral level responsible for implementing transfer of environmentally sound technologies;
- Insufficient programs to enhance absorptive capacity of technologies appropriate to the level of development of each country; and
- A lack of financial resources and financing mechanisms properly targeted at all stages of the technology transfer process, including capacity building.

The fundamental failure in achieving technology transfer has been a lack of responsible institutions and mechanisms.

The papers in this volume provide a broad overview of the range of issues that need to be considered if there is to be a real and sustainable solution to climate change that aims at transforming production and consumption patterns in both developed and developing countries. The role of outside research in producing information on what has gone on before, what is happening on the ground in countries such as China, and how approaches to technology, including the role of private investment, should be framed has become increasingly important to a workable outcome in Copenhagen.

A workable institutional mechanism for measuring, reporting, and verifying the effective delivery of technology transfer is crucial to reaching and successfully implementing any post-Kyoto agreement. Some of the elements covered in the articles in this volume point to the real need for work to be done to:

- Develop methods and criteria for technology identification and prioritization;
- Identify how modes of technology transfer might be implemented in a multilateral context;
- Outline the institutional mechanisms that will be needed at the national level and at the multilateral level to enable all the points in the technology transfer chain from economic actors in one country to economic actors in another country;
- Identify appropriate financing and funding mechanisms; and
- Ensure compliance and monitoring, reporting and verifying of technology transfer obligations

There is a lot of work to be done and not much time in which to do it. I look forward to further research that will contribute to achieving an effective and equitable multilateral agreement that will reduce greenhouse gas emissions, address the very real negative human rights impacts of climate change on vulnerable populations, and ensure a carbon efficient development path for all countries.

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