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Orchestrating *Change*

LEONARD GOOD says that transferring new technologies to developing countries is essential in combating climate change, and describes how it is being done

Last year's entry into force of the Kyoto Protocol, and its introduction of the European regional emissions trading system, brought to the forefront longstanding commitments to implement the United Nations Framework Convention on Climate Change (UNFCCC). But discussions have also gone beyond the Convention context: climate change was one of the main topics at the Gleneagles G8 summit, as well as in some other regional fora. The global effort to promote renewable energy in the wake of the 2004 Bonn conference has led to the establishment of a Renewables Policy Network and a follow-up forum in China in November. September's United Nations Summit highlighted the importance of energy for sustainable development and for achieving the Millennium Development Goals. Preparations are starting to gain momentum for next spring's 13th Session of the Commission on Sustainable Development, focusing on energy, and many similar initiatives will continue over the next year.

All these processes share a recurrent theme: that attaining the UNFCCC 's ultimate goal is only possible if new technologies form an integral part of sustainable development in developing countries. Respecting this, the Global Environment Facility (GEF) has always taken a two-pronged approach as the Convention's financial mechanism. Its support to Non-Annex I Parties starts with enabling the process of strategy formation and capacity building at the policy level, through funding National Communications – including Technology Needs Assessments, National Capacity Self Assessments, and National Adaptation Programmes of Action. These official documents form the basis of countries' climate change strategies for both adaptation and mitigation. Using the resources of the GEF investment programmes, countries can receive incremental funding to help implement their technology priorities, build further operational capacity, and remove the barriers to disseminating technology. The Clean Development Mechanism (CDM) is now also operational - and, with some decisions on Joint Implementation in Montreal, at the joint Conference of the Parties of the Convention and Meeting of the Parties of the Kyoto Protocol, all the Convention's financial mechanisms will be in place, triggering real change in our joint efforts to implement it.

This multitude of instruments and mechanisms can play together in an impressive orchestra. The GEF's long-term, programmatic support builds capacity, helps countries put in place enabling environments for technological change and development, and assists them in improving their overall access to clean technologies. Flexible mechanisms provide short-term, project-oriented revenue enhancement that can encourage investors, nongovernmental organizations, and communities to use those clean technologies as much as possible. When the two go hand-in-hand they can have wide-reaching impact, successfully transferring technology – which is what we strive for at the GEF.

An example is GEF's support for mini-hydro power plants in two northern Indian States. While the ultimate objective of this project was to facilitate investments into grid-connected small hydropower plants, the project spent much time and effort to get the right information about technologies, to map the hydrological resources in the area, and to change the policy frameworks for investment and for the power sector in such a way that independent power producers would be able to sell the power generated to the grid. Now, two years after the project has ended, several replicator projects are in the pipeline for the CDM.

Technical capacity

Developing countries need modern, energy efficient, or zero-emission technologies to make economic development sustainable. This technology transfer requires a constant and long-term thrust nourished by a reliable partner, such as the GEF, that leads towards growing technical capacity to go along with the investment ▶

capital required. The relevant bodies under the Subsidiary Body for Scientific and Technological Advice – the Intergovernmental Panel on Climate Change, and the Expert Group on Technology Transfer – have identified how important the foundational capacity is for effective technology transfer. They call for enabling environments and the build-up of local technical capacity. GEF projects have been helping countries provide enabling environments and build up capacity and will continue to do so.

GEF support has often been instrumental in constituting North-South and South-South partnerships that are elementary for technology transfer and local development of technologies. This is particularly important in those GEF programmes that focus on very new and progressive technologies. For example, four GEF projects with the World Bank will invest in different solar power plants, such as those which have been operational in California for over a decade. In June, a partnership between Southern utilities and Northern technology suppliers of solar technologies that will continue to build on these experiences has been launched by UNEP and GEF. Another example is GEF's Fuel Cells Financing Initiative, in which the International Finance Corporation works together with private sector technology companies that use fuel cells in a large number of applications. While initially investing generous amounts of money to demonstrate the applications, GEF and the World Bank's International Finance Corporation are paying heed to making the replication of these applications as easy as possible and removing barriers to technology dissemination along the way.

Private partnerships

Another technology programme is focusing on the efficiency of industrial boilers. GEF-supported efforts to reduce coal use and greenhouse gas emissions in these boilers in China have demonstrated win-win opportunities. Roughly speaking, coal is responsible for 80 per cent of China's greenhouse gas emissions. About 40 per cent of Chinese coal consumption is burned in industrial boilers and municipal systems, and 95 per cent of these systems use coal. GEF support has made it possible for eight Chinese boiler manufacturers to enter into technology transfer agreements with international partners. Because of these arrangements, the manufacturers, can now bring more energy efficient boilers to market.

These are a few examples of how GEF projects promote pilot business and delivery models, public private partnerships, joint ventures, and other advanced risk sharing arrangements that help involve the private sector and bring modern technologies to our recipient countries. In many cases, the risks perceived by the private sector discourage investments, but the presence of a multilateral partner provides confidence and hands-on help in securing financing and legal agreements that are necessary for private sector engagement. Once an initial investment model is successful, it can then serve as a role model for other investments.

Sustainable energy technologies do not have to be expensive. There is significant scope for establishing energy efficient technologies in normal consumption patterns with no additional costs. We are constantly looking for these win-win situations. In many instances, consumers can save money by reducing their energy consumption and greenhouse gas emissions. Where this is possible, GEF market transformation programmes typically provide resources for technology information and awareness campaigns, and help implement technical standards and labels, which help consumers identify the energy-efficient products. Technical standards require sufficient local technical know-how and facilities to enforce the standards domestically, and therefore, the GEF programmes in these areas also build up technical capacity and expertise. The GEF is committed to the Convention process and to the UNFCCC objective. Technology is a crucial part of this, particularly for developing countries. Technology transfer can only have large-scale impact if foundational capacity building is combined with a large-scale investment push and a broad dissemination of the technology. The GEF is well placed to facilitate both processes and help developing countries achieve access to modern technologies. I look forward to a continued cooperation with all countries – both donors and recipients – on these critical issues ■

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