Forum on climate change and science and technology & innovation
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Address by Yvo de Boer, Executive Secretary
United Nations Framework Convention on Climate Change

Excellencies, ladies and gentlemen,

It is an honour for me to address you at the Forum on Climate Change and Science & Technology Innovation.

China's economic development has been called the most momentous event in global economic history and will transform living standards of billions. To increase sustainability, the 11th five-year plan for economic and social development makes special reference to protecting the environment and building an environmentally-friendly society.

Environmentally safe and sound technologies are central to achieving sustainable development objectives.

- Climate change impacts have the potential to undo economic gains that have been made. In terms of reducing vulnerability, much can be achieved with appropriate adaptation technologies and by integrating adaptation into national development planning.
- In terms of mitigation, cleaner technologies and energy efficiency can provide win-win solutions, allowing growth and the fight against climate change to proceed hand in hand.

According to the reference scenario of the International Energy Agency (IEA), global energy demand will grow by 60% by 2030. In the period up to 2030, the energy supply infrastructure world-wide will require a total investment of $20 trillion, with about half of that in developing countries. China alone would need to invest about USD 3.7 trillion or 18.5% of the world total.

The way in which global energy needs are met will determine whether climate change will remain manageable and whether emissions will go down by the required 50% by 2050 instead of up by 50%.

Low-emissions economic development needs to take place without jeopardising poverty eradication

There exist a number of options for reducing emissions for managing energy demand and employing low carbon energy supplies that can make major contributions to low-emissions economic growth.

The Fourth Assessment Report of the Inter-governmental Panel on Climate Change (IPCC) concluded that stabilisation levels of greenhouse gas emissions can be achieved by

deployment of a portfolio of technologies that are either currently available or expected to be commercialised in coming decades, assuming appropriate incentives are in place.

For future technologies, additional investments in R&D both from the public and private sector will be needed. One way of doing this would be through inter-governmental financial and policy support.

There are a number of barriers to the uptake of environmentally sound technologies. These include human behaviour, IPR-related issues, the absence of appropriate policies or the need for investment in infrastructure necessary for new energy technologies.

Both governments and the private sector have a key role to play in enhancing technology transfer.

The role of business as a source of solutions for global climate change is universally recognized. The transition to a low-emissions economy can become a platform for new economic growth, new jobs, new manufacturing and service industries, new markets and new roles for sectors such as agriculture and forestry. Markets for low-carbon energy products are projected to be worth at least $ 500 billion per year by the middle of the century.

For clean technologies to be widely deployed, governments need to concretize and support a market-friendly, clear and predictable playing field for private investors:

- Governments can provide companies with incentives that are clear, predictable, long term and robust in order to reduce the perceived risk of the associated investment.

- Business needs to know and understand the direction and the ultimate goal of national and international climate policies in order to invest with confidence.

- And Governments need to provide business with frameworks and partnerships at the national and international level.

- International public sector investment through International Financial Institutions can also play a vital role, particularly in assisting the creation of public –private investment partnerships for clean technology projects.

International coordination of policies, for example on technology research and development, in an appropriate forum will often be most effective.

Overall, the speed or timeline with which technologies are eventually deployed at a large scale is likely to differ substantially depending on the type of mitigation measure agreed to. Ambitious, binding targets for industrialised countries are most likely to rapidly push technologies into the market.

As impacts increase, adaptation technologies will become more important for maintaining economic gains

Technologies for adaptation can comprise "hard" technologies, such as drought-resistant seeds, seawalls and irrigation technology, and "soft" technologies, such as crop rotation patterns, as well as information and knowledge.

The flows of experience, know-how and equipment between countries holds the key for transfer of technology for adaptation.

Institutional arrangements are needed for information, planning, implementation and monitoring for adaptation considering benefits, including economic/financial and costs, (ii) equity, and (iii) social/legal acceptability.

Technology features strongly in international climate policy

Technology development and transfer is included in both the United Nations Framework Convention on Climate Change and its Kyoto Protocol. All Parties are required to promote and cooperate in the development, application and diffusion, including transfer, of greenhouse gas mitigation technologies and technologies for adapting to the adverse effects of climate change.

The Kyoto Protocol's Clean Development Mechanism is one promising avenue for technology transfer. Although the Clean Development Mechanism (CDM) does not have an explicit technology transfer mandate, it contributes to technology transfer by financing emission reduction projects using technologies currently not available in the host countries.

A recent survey found that roughly 39% of all CDM projects accounting for 64% of the annual emission reductions claim to involve technology transfer, particularly with larger projects. An expanded CDM may further boost technology transfer.

However, while the CDM can address some of the market-related issues, other mechanisms are needed for government-to-government cooperation and sectoral approaches.

Technology needs a revolutionary push - and the Framework Convention on Climate Change needs to catalyse it

At the United Nation Climate Change Conference in Bali last year, the international response to climate change was firmly set. Agreed to conclude in Copenhagen in 2009, the process presents an important opportunity to significantly strengthen technology approaches.

One of the main challenges is to create additional value for the development and transfer of technologies by providing incentives for the transfer of technologies. This could be considered at three different levels:

- **Inside** the Convention (e.g. GEF Strategic Programme)
- **Through the Convention** (e.g. World Bank Clean Technology Fund, or the proceeds from auctioning emissions permits)
- **Outside** the Convention (e.g. Export Credit Agencies)

The key is to put in place an effective international mechanism for the transfer of technologies.

Such a mechanism needs to include the removal of barriers to, and provision of predictable financial resources and other incentives for, scaling up the level of investment on environmentally sound technologies to developing countries.

Such a mechanism may also foster institutional capacity building, lead country driven programmes based on Technology Needs Assessments and oversee the funding resources to hold the created value.

In terms of a Copenhagen agreement in 2009, it is critical that the role of the Framework Convention on Climate Change is maximised and its added value clarified.

At the Bangkok Climate Change Talks four weeks ago, Parties put forward ideas to scale up the development and transfer of technologies, including by highlighting the role of incremental costs and market mechanisms and the creation of a multilateral fund under the Convention with foreseeable and scalable contributions.

The GEF strategic programme aims to scale up the level of investment in the transfer of technologies. For example, could private sector initiatives that involve clean technology - let's say clean coal technology - be supplemented with public funding to install a technology that is even more advanced - let's say Carbon Capture and Storage? This would allow for accelerated technology transfer and commercialisation. Would this be one way in which the GEF Strategic Programme could work?

There is an urgent need to discover what effective language in a Copenhagen agreement needs to entail and cover in order to unleash the full potential of technology.

A fund for technology transfer may be one aspect of the agreement, but there needs to be a clear understanding of the problems that the fund will solve. Various proposals from developing country parties like the overall Technology Transfer Mechanism, the Mexican proposal for a Multinational Fund, a Venture Capital Fund and others could be further explored.

Enabling technology transfer is not just about financing transfers, but also about tackling the main barriers in receiving countries. Technologies need a fertile landing ground.

Cooperation between key stakeholders is seen by many Parties as a centrepiece for enhancing the development and transfer of technology.

The agreed outcome to be adopted at Copenhagen will include technology as one key pillar. Finance, which is linked to technology, is another pillar. The other main pillars are of course adaptation and mitigation, which are also linked to technology and finance. All these pillars need to be significantly built up, strengthened and enhanced to put the world on a sustainable development pathway.

So where is the added value of the Convention?

The Kyoto Protocol, for all the brilliance of its design, has not empowered developing countries in a number of areas. When crafting its second commitment period or other legal language, we must take stock of this.

When discussing capacity building, National Adaptation Programmes of Action (NAPAs) or National Communications, what do we need to put in place to ensure that seeds don't land on stony ground?

When discussing financial mechanisms, how can we create value to ensure that maximal resources are catalysed, blended and deployed towards national development goals?

When discussing the mobilisation of resources, how can we catalyse innovation and cooperation beyond what is in the Protocol or the Convention?

That finance and technology are critical is crystal clear to me. The challenge now is to craft those few, short and crisp paragraphs that will help us turn the corner we must turn.

Lao-tzu said that a journey of a thousand miles begins with a single step. My hope is that this conference will be more than a single step that will contribute to proposals to enhance technology in the future.

Thank you

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