

**AD HOC WORKING GROUP ON LONG-TERM COOPERATIVE ACTION
UNDER THE CONVENTION**

Fourth session

Poznan, 1–10 December 2008

Agenda item 3 (d)

Enabling the full, effective and sustained implementation of the Convention through long-term cooperative action now, up to and beyond 2012, by addressing, inter alia:

Enhanced action on technology development and transfer to support action on mitigation and adaptation

**Report on the workshop on cooperation on research and development of
current, new and innovative technology, including win-win solutions**

Summary by the chair of the workshop

I. Introduction

1. The Ad Hoc Working Group on Long-term Cooperative Action under the Convention (AWG-LCA) agreed on its work programme for 2008 at its first session. The AWG-LCA also agreed that its work should be facilitated by workshops and other activities to clarify and deepen understanding of the elements contained in decision 1/CP.13 (the Bali Action Plan). At the same session, it requested the secretariat, under the guidance of the Chair of the AWG-LCA and in consultation with Parties, to organize a workshop at its fourth session on “Cooperation on research and development of current, new and innovative technology, including win-win solutions”.¹
2. The workshop was held in Poznan, Poland, on 6 December 2008, during the fourth session of the AWG-LCA, and was chaired by Mr. Kunihiko Shimada (Japan) on behalf of the Chair of the AWG-LCA, Mr. Luiz Alberto Figueiredo Machado (Brazil).
3. This note by the chair of the workshop summarizes the presentations, exchange of views and discussions by Parties at the workshop.
4. Presentations were given by the following 10 Parties: Australia, Bangladesh, China, France on behalf of the European Community (EC) and its member States, India, Japan, Norway, the Republic of Korea, the Philippines on behalf of the Group of 77 and China, and the United States of America. Following the presentations, two interventions were made by Canada and a representative of the Intergovernmental Panel on Climate Change (IPCC). The presentations were also followed by a general exchange of views during which Parties had the opportunity to clarify the ideas presented.

II. Summary of discussions

5. The Chair of the Expert Group on Technology Transfer (EGTT) set the scene for the discussions by presenting experiences and lessons learned from the group’s work relating to cooperation on research

¹ FCCC/AWGLCA/2008/3, paragraph 26.

and development (R&D) of technology. He highlighted the role of public finance in the R&D stage and the role of private investment in the deployment and diffusion stages of the technology development cycle. Possible options for cooperation being explored by the EGTT include global pooling of R&D funds, coordinating existing R&D programmes, and increasing public investment and incentives for greater private investment in R&D. A representative of the IPCC mentioned that the IPCC is preparing a special report on renewable energy sources and climate change mitigation, to be completed by the end of 2010.

6. In their presentations, Parties stressed the key role of technology in addressing climate change and the need to scale up R&D of current, new and innovative technologies for both mitigation and adaptation; technology provides the means to close the gap between the need for economic growth and the reduction of emissions. Many Parties emphasized the importance of cooperation on technology R&D between developed and developing countries, involving both the public and the private sector. The accelerated development of key technologies could reduce the cost of stabilizing the concentration of greenhouse gas (GHG) emissions in the atmosphere by hundreds of billions of dollars globally.

7. Elaborating on the rationale and importance of cooperation on R&D between developed and developing countries, Parties were of the opinion that cooperation is needed in all stages of the technology development cycle. It was noted that current best available technologies are not fully diffused; this should be addressed through the targeted diffusion of these technologies and the invention of new technologies. Parties also mentioned the acceleration of innovation and development of technologies, cost reduction and the avoidance of duplication of R&D efforts as being among the benefits of international cooperation.

8. Some Parties highlighted their experiences and lessons learned from international technology R&D cooperation programmes and initiatives, at the national, bilateral and multilateral levels, such as the Global Carbon Capture and Storage Institute of Australia, the Asia-Pacific Partnership on Clean Development and Climate, the Carbon Sequestration Leadership Forum, the International Partnership for the Hydrogen Economy and the Methane to Markets Partnership. Many of these programmes and initiatives have a clear focus on specific sectors and/or technologies. It was suggested that any new initiatives should build on and complement these existing cooperative efforts. To realize the potential of technology development, deployment and cooperation, it is necessary to identify and focus on key technologies. Areas for further cooperation include: early warning systems and other observation tools, technologies for irrigation and flood and drought control (adaptation); and carbon capture and storage, solar power, biofuels, system integration of renewables, and energy efficiency in buildings, transportation and industry (mitigation).

9. It was noted that cooperation on technology at different levels will complement the work being carried out under the Convention. Priority areas for technology cooperation could include areas with major sources of GHG emissions and great potential for technological progress. Possible ways and means to achieve this cooperation include joint programmes, technology centres, demonstration projects and research infrastructure investments.

10. Parties noted that public and private R&D spending have been decreasing over recent decades. Several Parties stressed that the public sector has a crucial role to play in reversing this trend by using public R&D funding to leverage private investments in R&D and by providing incentives to the private sector to scale up its investment in R&D of environmentally sound technologies.

11. Parties highlighted the importance of supporting the development and enhancement of the endogenous capacities and technologies of developing countries, and the importance of building human and institutional capacity in developing countries through, inter alia, knowledge-sharing, training, strengthening the capacity of national centres of excellence and building up and linking national climate technology centres.

12. Many presentations focused on R&D for mitigation. Parties recognized the need for more opportunities for cooperation on R&D for adaptation and questioned how adaptation R&D could be addressed for the small island developing States in the absence of win-win solutions and market intervention. Parties also confirmed the urgent need to move towards low-carbon societies.

13. Parties emphasized the importance of creating enabling environments to remove barriers to scaling up cooperation on technology R&D, and the importance of well-developed national and international systems of innovation. Parties also raised questions on how to deal with the intellectual property rights (IPR) issues in the context of the discussions under the AWG-LCA. Some Parties stated that IPR issues could be a barrier to the development, deployment, diffusion and transfer of technology. Other Parties stated that costs related to IPR are not the main contributor to the overall costs of technologies.

14. Specific proposals presented in the workshop included:

- (a) To enhance R&D cooperation through:
 - (i) Ensuring R&D capacity-building via information-sharing platforms and increased networking, training and exchange, climate and technology policy support, and market assessment, linking and building-up national climate technology centres (EC);
 - (ii) Creating R&D-related technology-oriented agreements (TOAs), building on existing cooperation. These TOAs could formalize cooperation through international R&D programmes, focus on specific (groups of) technologies and help to develop and implement technology road maps and planning (EC);
 - (iii) Strengthening of national centres of excellence in the most vulnerable countries; establishment of regional and international centres; capacity-building for adoption of technology to cater for the needs of developing countries; effective collaboration among international, regional and national institutions and centres; generation and sharing of data and information; waiver of IPR in the transfer of environmentally sound technologies (Bangladesh);
- (b) To enhance policies for public R&D by (Republic of Korea):
 - (i) Integrating global environmental goals such as climate change and technology transfer into public R&D programmes;
 - (ii) Exploring the possibility of pooling, sharing and exchanging publicly funded environmentally sound technologies for mutual and global benefit;
 - (iii) Enhancing accessibility of public R&D programmes and promoting joint R&D activities with developing countries;
 - (iv) Building long-term partnerships for mutual and global benefit through publicly funded R&D with new public R&D policies;
- (c) To measure, report and verify the progress and success of R&D activities (EC).
- (d) To establish the following institutional arrangements for R&D:
 - (i) A network of climate technology development and diffusion centres aimed at addressing the diverse range of technology, business and regulatory barriers to the development and diffusion of a specific technology, involving technology developers, companies, regulators and policymakers. The activities of this network would include product development, development of appropriate

business models and policy and market research/analysis to support regulatory and policy development. This network would report to the Conference of the Parties (India);

- (ii) An advisory group for sectoral technology cooperation with representatives from the public and private sectors. This group could identify and focus on key technologies by the drawing of technology roadmaps containing a shared vision by industry, academia and government and would report to the Convention (Japan);
 - (iii) A special panel in charge of R&D cooperation within a proposed subsidiary body for development and transfer of environmentally sound technologies (China);
- (e) To establish an international technology mechanism under the Convention for the development and transfer of environmentally sound technologies structured around the following three pillars (Group of 77 and China):
- (i) A technology action plan to enhance action at all stages of the technology development cycle, including R&D, deployment, diffusion and transfer of technologies;
 - (ii) An institutional arrangement comprising an executive body, a strategic planning committee, expert panels and a verification group;
 - (iii) A multilateral climate technology fund established as part of the enhanced financial architecture of the Convention.

15. There was an active exchange of views among Parties on various proposals, including how an R&D specialized panel and a network of technology centres could work together or be integrated, how technology road maps could be linked with IPR matters to facilitate the development, deployment, diffusion and transfer of technologies, how to ensure that the result of technology R&D could be transferred to developing countries, and on elements of the technology action plan as proposed by the Group of 77 and China and how these would link to national action.

III. Possible areas of focus

16. Several areas of interest and convergence emerged during the discussions, which could be further considered by Parties, including:

- (a) **Cooperative action on R&D:** possible form and content of the proposed technology action plan, technology agreements, or technology road maps to scale up cooperation on R&D of key technologies and to reduce the global cost of mitigation and adaptation;
- (b) **Financing R&D:** ways and means to scale up financial support and international collaborative effort on technology R&D;
- (c) **Institutional arrangements:** roles or specific responsibilities, and status of the proposed institutional arrangements for coordinating R&D activities.
