

UNITED NATIONS



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OFFICE OF THE PRESIDENT OF THE GENERAL ASSEMBLY

23 April 2013

Excellency,

I refer to the letter from the President of the General Assembly, dated 01 March 2013, on a series of four one-day workshops on the “Development, transfer and dissemination of clean and environmentally sound technologies in developing countries”, which will take place on 30 April and 01 May 2013, and 30 and 31 May 2013 respectively.

In this connection, please find attached the expanded Concept Note which elaborates further the rationale, mandate and topics of the workshops.

Please accept, Excellency, the assurances of my highest consideration.

A handwritten signature in black ink, appearing to read 'Zdravko Ponos', with a long horizontal flourish extending to the right.

Zdravko Ponos

All Permanent Representatives and  
Permanent Observers to the United Nations  
New York

General Assembly Consultative Workshops on:  
**“Development, transfer and dissemination of clean  
and environmentally sound technologies in developing countries”**  
EXPANDED CONCEPT NOTE  
with Preliminary Agendas and Questions for Discussion  
for Workshops 1 and 2

## **Background**

Technology plays a key role in addressing development challenges across a wide scope of cross-cutting sustainability dimensions, as in food and agriculture, water, energy, sustainable industrial development and chemicals and waste management. Technologies and product and process innovations can be major enablers in efforts to address scarcities generated by existing economic and social trends, if also backed by appropriate regulatory and institutional structures. They can make tangible contributions also in the social dimensions of sustainable development such as in the fields of health, education and poverty eradication as a whole. In this regard, generic technologies, which can be used across economic sectors, such as ICTs or biotechnology, have already shown their potential to contribute to sustainable development.

Currently, developing countries display an increasingly complex array of challenges, opportunities and actual outcomes in terms of creation and adoption of technology. The least developed countries as well as a number of small island developing states continue to be severely challenged with respect to science, technology and innovation, and small economies in general tend to be constrained on broader innovation capability building when this requires mastering a wide range of scientific disciplines and engineering skills. On the other hand, a number of middle-income countries today harbour quite well-developed economic structures and rising industrial and technological competencies. Some large and/or advanced developing countries are successfully competing in international trade of environmentally sound technologies, in fields such as the promotion of new and renewable sources of energy and/or food security, which are intended to address global sustainability challenges. South-South cooperation and know-how exchange are acquiring increasing importance.

Any policy advice on development, transfer and dissemination of clean and environmentally sound technologies needs to take into account the continually evolving worldwide picture of which types of economies face what sorts of difficulties or opportunities regarding access to technologies for sustainable development.

Technology is recognised as a one of the key “means of implementation” in the outcome document of the United Nations Conference on Sustainable Development (“Rio+20”, Resolution 66/288, paragraphs 269-76), along with finance, capacity building and trade. In response to paragraph 273 of the outcome document, the Secretary General has made recommendations to the General Assembly regarding a technology facilitation mechanism that promotes the development, transfer and dissemination of clean and environmentally sound technologies, based on options identified by all relevant UN entities. His report (A/67/348) provided an overview of proposals, outlining recommendations on the possible functions, format and working methods of a technology facilitation mechanism, as well as on a potential global way forward, and has been noted in the resolution on the “Implementation of Agenda 21”, adopted by the 67<sup>th</sup> session of the General Assembly.

Some delegations have expressed the need for more in-depth discussion on options to move forward on this issue. As a result, the General Assembly has decided “to hold a series of four one-day workshops on the development, transfer and dissemination of clean and environmentally sound technologies and the connection between clean and environmentally sound technologies and sustainable development” (A/RES/67/203, paragraph 8).

## Objectives

The objectives of the workshops, as spelt out in the above resolution, are to identify the technology needs of developing countries, options to address those needs, capacity-building and options for a technology facilitation mechanism, taking into account existing mechanisms. In addition, the Secretary-General has been requested to present a report for consideration by the General Assembly at its 68th session (Sept. 2013 – Sept. 2014) based on the discussions and recommendations from the workshops, including on the way forward, as well as additional inputs from Member States, the United Nations system and major groups.

As stipulated in the resolution A/RES/67/203, the workshops will be organised by the President of the General Assembly, and supported by the Secretariat and the United Nations system with the involvement of other relevant stakeholders, including policy makers, representatives of public research organisations, academics, private sector and non-governmental and civil society organisations.

## Proposed structure of the four workshops as a coherent cycle

It is proposed to structure the four workshops as an ensemble which, taken as a whole, seeks to meet the four objectives stated above. Individual workshops will address a range of issues of relevance to different countries or groups of countries with similar interests and facing analogous challenges with respect to clean and environmentally sound technology development, transfer and adoption. They will focus on particular aspects of the broader problem so as to enable a more focused discussion.

The first two workshops will focus on identifying technology needs of developing countries in the areas of research, development, demonstration and diffusion. In the first workshop, there will be an emphasis on earlier stages of research and technology development through prototype development and demonstration; in the second workshop the focus will be on moving from demonstration to commercial-scale deployment and broad diffusion. To the extent relevant and appropriate, there will be an effort to highlight the specific difficulties, challenges and opportunities faced by different groups of developing countries in relation to their level of economic development as well as their economic size. Technological capabilities required at different stages of the technology cycle and the capacity development needs of groups of developing countries will also be considered.

The third and fourth workshops will focus on issues at the international level, including opportunities for capacity building, with the third workshop taking stock of existing international structures, institutions and initiatives to facilitate technology development, transfer and diffusion, and the final workshop identifying options for strengthening technology facilitation, building wherever possible upon the existing framework.

## Dates and the themes of the individual workshops

30 April 2013	Workshop 1: Technology needs of developing countries and options to address them: <i>Focus on science and R&amp;D capabilities</i>
1 May 2013	Workshop 2: Technology needs of developing countries and options to address them: <i>Moving from R&amp;D to widespread adoption of environmentally sound technologies</i>
30 May 2013	Workshop 3: Capacity building to enhance the development, adoption and use of environmentally sound technologies in developing countries
31 May 2013	Workshop 4: The way forward: Strengthening the international architecture for environmentally sound technology development, transfer and dissemination

**Workshop 1**  
**Technology needs of developing countries and options to address them:**  
**Focus on science and R&D capabilities**  
 Conference Room #3, NLB, UN HQ, New York City, 30 April 2013, 10.00 – 18.00  
**PRELIMINARY AGENDA**

*This Workshop will focus on the needs, opportunities and constraints/gaps faced by developing countries in participating in research and early stage technology development and in moving from R&D to demonstration of environmentally sound technologies.*

10.00 – 10.15	<p><b>Opening</b></p> <p><b>H.E. Mr. Vuk Jeremic</b>, President of the 67th Session of the United Nations General Assembly</p> <p><b>Mr. Wu Hongbo (*)</b>, Under-Secretary-General for Economic and Social Affairs, United Nations</p>
10.15 – 13.00	<p><b>Session 1.1: Science and technology needs and options for poverty eradication and socio-economic development: focus on agriculture</b></p> <p><b>Mr. Daniele Giovannucci (*)</b>, President of the Committee on Sustainability Assessment (COSA)</p> <p><b>Mr. Hans R. Herren (*)</b>, President, Millennium Institute, TWAS Associate Fellow</p> <p><b>Mr. Ephraim Maduhu Nkonya (*)</b>, Senior Research Fellow, Environment and Production Technology Division, International Food Policy Research Institute (IFPRI)</p> <p><b>GENERAL DISCUSSION</b> (Q/A with panellists; Interventions from Member States, Major Groups, UN System)</p>
13.00 – 15.00	Lunch break
15.00 – 17.50	<p><b>Session 1.2: Science and technology needs and options in addressing sustainable development objectives and global sustainability challenges</b></p> <p><b>Mr. Jorge Rogat (*)</b>, DTU Management Engineering, Technical University of Denmark and Project Manager Technology Needs Assessment (TNA) Project, UNEP RISOE Centre</p> <p><b>Prof. Ambuj D. Sagar (*)</b>, Dean, Alumni Affairs &amp; International Programs and Vipula and Mahesh Chaturvedi Professor of Policy Studies, Department of Humanities and Social Sciences, Indian Institute of Technology</p> <p><b>Dr. Roberto Schaeffer (*)</b> Energy Planning Program, COPPE, Federal University of Rio de Janeiro (UFRJ), Brazil</p> <p><b>GENERAL DISCUSSION</b> (Q/A with panellists; Interventions from Member States, Major Groups, UN System)</p>
17.50 – 18.00	<b>Concluding remarks</b>

(\*) Confirmed participant.

**Workshop 2**  
**Technology needs of developing countries and options to address them:**  
**Moving from R&D to widespread adoption of environmentally sound innovation**  
 Conference Room #3, NLB, UN HQ, New York City, 1 May 2013, 10.00 – 18.00  
**DRAFT AGENDA**

*This Workshop will focus on the needs, opportunities and constraints faced by developing countries in moving from demonstration to widespread diffusion of environmentally sound technologies. It will take a closer look at technology transfer, acquisition and adaptation issues, and at success factors for technology diffusion, adaptation and application.*

10.00 – 13.00	<p><b>Session 2.1: Successful models for clean and environmentally sound innovation and technology diffusion in developing countries</b></p> <p><b>Prof. Ambuj D Sagar (*)</b>, Indian Institute of Technology  <i>(Key messages from Session 1.2)</i></p> <p><b>Dr. Imran H. Ahmad</b>, Senior Programme Officer (Regions), International Renewable Energy Association (IRENA)</p> <p><b>Dr. Claudio Huepe Minoletti (*)</b>, Economist, Renewables &amp; Environment, Centro de Energía y Desarrollo Sustentable, Universidad Diego Portales, Santiago de Chile</p> <p><b>Mr. Gang Zhang</b>, Global Relations Coordinator, Directorate for Science, Technology and Industry, OECD</p> <p><b>GENERAL DISCUSSION</b> (Q/A with panellists; Interventions from Member States, Major Groups, UN System)</p>
13.00 – 15.00	Lunch break
15.00 – 17.50	<p><b>Session 2.2: What forms of international cooperation can foster environmentally sound innovation and technology diffusion, including in smaller and or less developed economies?</b></p> <p><b>Mr. Ephraim Maduhu Nkonya (*)</b>, International Food Policy Research Institute (IFPRI) <i>(Key messages from Session 1.1)</i></p> <p><b>Mr. George Dragnich (*)</b>, Consultant, UN Office of the High Representative for the Least Developed Countries, Landlocked Developing Countries and Small Island Developing States</p> <p><b>Ms. Elenita (Neth) Daño (*)</b>, Action Group on Erosion, Technology and Concentration (ETC Group)</p> <p><b>Ms. Licia de Oliveira</b>, Deputy Director, Regional Office in Africa, Fundação Oswaldo Cruz (Fiocruz), Ministry of Health, Brazil</p> <p><b>GENERAL DISCUSSION</b> (Q/A with panellists; Interventions from Member States, Major Groups, UN System)</p>
17.50 – 18.00	<p><b>Concluding Remarks</b>, including on the next steps and the objectives of the third and fourth Workshops to be held on 30 and 31 May 2013.</p>

(\*) Confirmed participant.

Note: A more developed programme for Workshops 3 and 4 will be circulated several weeks prior to the events, together with questions proposed for discussion.

### **Workshop 3**

#### **Capacity building to enhance the development, adoption and use of environmentally sound technologies in developing countries**

UN HQ, New York City, 30 May 2013, 10.00 – 18.00

#### **DRAFT AGENDA**

*This Workshop will seek to identify what are the most promising opportunities offered by existing international institutions and programs to facilitate research and development cooperation, as well as more rapid and widespread global transfer and diffusion of environmentally sound technologies. It will offer perspectives on how information, capacity or other gaps can be addressed and how existing international arrangements can be further enhanced to foster technology cooperation and transfer.*

*In this Workshop there will be a particular focus on addressing intellectual property protection issues in relation to clean and environmentally sound technology development and transfer, and enhancing developing countries' capacities in this regard.*

*This Workshop will provide an opportunity to experts from relevant international organisations to present their activities in the area of capacity building.*

### **Workshop 4**

#### **The way forward: Strengthening the international architecture for environmentally sound technology development, transfer and dissemination**

UN HQ, New York City, 31 May 2013, 10.00 – 18.00

#### **DRAFT AGENDA**

*Themes to be addressed in the final Workshop include:*

- *Enhancing coherence among existing international structures, institutions, mechanisms to support environmentally sound technology development, transfer and dissemination, identifying gaps and options for addressing them;*
- *Options for a technology facilitation mechanism;*
- *Strengthening developing countries' participation in international research networks;*
- *Meeting the specific technology development needs of developing countries; addressing barriers and constraints to technology transfer and diffusion of clean and environmentally sound technologies;*
- *Enhancing South-South and triangular cooperation.*

ISSUES AND QUESTIONS PROPOSED FOR DISCUSSION  
in Workshops 1 and 2

**Technology needs of developing countries**

In accordance with the request expressed by world leaders in “The future we want”<sup>1</sup>, the UN agencies have identified options for a facilitation mechanism that promotes the development, transfer and dissemination of clean and environmentally sound technologies.<sup>2</sup> Bearing in mind the contributions that have already been submitted, and summarised in the Secretary-General’s report A/67/348, participants are invited address the following issues:

- *What are the most common difficulties still faced by a significant number of developing countries in terms of access to fundamental science and R&D underpinning clean and environmentally sound technologies?*
- *What are the most common difficulties still faced by a significant number of developing countries in fostering the diffusion and widespread adoption of clean technologies?*
- *In particular, what messages arise from Technology Needs Assessments carried out for developing countries in the area of clean and environmentally sound technologies?*
- *What are the complementarities and conflicts between developing countries’ technology constraints in addressing global commons (or boundaries) issues and their needs in addressing poverty eradication and socio-economic development?*

**Focus on the technology cycle:**

**How should international technology transfer mechanisms take account of it?**

The Secretary-General’s report on “Options for a facilitation mechanism...”<sup>3</sup> highlighted the importance of addressing constraints at different stages of the life cycle in the development, demonstration and diffusion of technologies in the market place. It also stressed the difficulties that companies, organisations and countries have in bridging gaps between these technology stages and observed that, typically, the role of government is progressively reduced in moving from research to diffusion.

- *Should international efforts to enhance developing country access to clean technology seek to equalise all developing countries’ capabilities along the entire technology life cycle within a policy-relevant time horizon?*
- *Or, is there evidence suggesting that difficulties faced by developing countries in specific segments of the technology life cycle should be prioritised?*

**Options for addressing the technology needs of developing countries**

- *What success stories can be cited of national or international efforts to address developing countries’ technology needs?*
- *What other major on-going national or international efforts deserve greater awareness and further support?*
- *What other new and additional international initiatives can help address the technology needs of developing countries?<sup>4</sup>*
- *What lessons can be cited from international efforts to support technology development and transfer in developing countries that have fallen short of their declared objectives?*
- *Are there significant examples of “technology leapfrogging” achieved by developing countries that are replicable in other national contexts? Subject to what policy pre-conditions or reforms?*
- *Are there significant examples of “technology leapfrogging” achieved in relatively lower income or smaller economies?*

### **What has evolved since the first Rio Summit in 1992?**

The participation of developing countries in science, technology and innovation activity has evolved considerably since the 1992 Rio summit on sustainable development. While some poorer and/or smaller economies continue to be severely challenged in this respect, some developing countries have become active participants in new technology development. The share of GDP devoted to R&D in developing countries has gone up from about a quarter of the share in developed countries in 1996 to nearly half of it in 2007.<sup>5</sup>

In addition to gaps in the availability and quality of data (see below), it is possible this overall picture hides an important dispersion of developing country experiences, with the larger and more advanced developing economies accounting for the bulk of the overall growth of R&D in developing countries.

- *In participants' view, what new opportunities and challenges do the evolving scientific and technological capabilities in a number of developing countries present for enhanced international technology cooperation?*<sup>6</sup>
- *What lessons arise from experience to date on "South-South" and "triangular" cooperation for the development, transfer and dissemination of clean and environmentally sound technologies?*

### **What issues remain on the table?**

Historically, developing countries have had limited capability in indigenous technology development. While developing countries present a diverse picture in terms of their industrial development performance in the last two decades, the modalities of technology transfer from developed countries have been an enduring development cooperation controversy.

- *What barriers, constraints and conditions affect the international transfer of clean and environmentally sound technologies? How have these evolved in recent decades?*
- *What innovative solutions have worked in terms of overcoming barriers associated with international technology transfer? What further initiatives can be proposed?*
- *Given the continuing challenges faced by many lower income or smaller economies in accessing and utilising clean and environmentally sound technologies, what options and priorities exist regarding further international efforts to strengthen technology transfer?*

### **Knowledge gaps**

Data on countries' innovation efforts and outcomes has improved in recent decades.<sup>7</sup> But significant gaps continue to exist in terms of availability or international comparability of data, especially on developing countries.

- *What options exist to help bring a large number of developing countries closer to international best practice regarding data and information on science, technology and innovation efforts and outcomes?*

A large share of analytical research on clean and environmentally sound technologies derives its empirical evidence from developments in the renewable energy sector, which has been a priority for publicly supported research in many countries at least since the Kyoto Protocol.

- *Bearing in mind the interconnection of sustainability challenges across sectors such as food, water, energy etc., what should be done to improve empirical understanding on technology needs and options in sectors other than energy?*



## NOTES

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- <sup>1</sup> A/RES/66/288, paragraph 273, first sentence.
- <sup>2</sup> These are listed in <http://sustainabledevelopment.un.org/index.php?menu=1455>.
- <sup>3</sup> “Options for a facilitation mechanism that promotes the development, transfer and dissemination of clean and environmentally sound technologies”, A/67/348, September 2012.
- <sup>4</sup> See A/67/348 Section IV. Recommendations for background.
- <sup>5</sup> World Bank, World Development Indicators online data:  
<http://databank.worldbank.org/ddp/home.do>.
- <sup>6</sup> See A/67/348 paragraphs 30 to 42, for a summary of “technology commitments” in UN resolutions since 1992.
- <sup>7</sup> See for example UNESCO Institute for Statistics online data:  
<http://stats.uis.unesco.org/>.