

PRESENTATION AND RECOMMENDATIONS

“Often there is a communication gap amongst scientists, policy makers, and the public at large, whose interests are articulated by both governmental and non-governmental organizations. Better communication is required among scientists, decision makers, and the general public.”

-- Agenda 21 : Chapter 35, Science for Sustainable Development

FOR THE

PANEL DISCUSSION

ON

SCIENCE AND SUSTAINABLE DEVELOPMENT

Commission for Sustainable Development 6th Session (CSD6)

United Nations, New York

Wednesday 22 April 1998, 18:15-20:00

Conference Room 8

STATEMENT FROM THE PANEL

Harnessing science and technology as forces for sustainable development depends on processes that will ensure the involvement of all appropriate scientific input and expertise in problem identification and response. Scientific excellence and integrity needs to be combined with a close dialogue and co-operation with policy makers and implementers, including full participation by stakeholders, the host communities and experts with local knowledge.

Recommendation

- **Every possible effort should be made to improve the processes of generating, sharing and utilising science for sustainable development.**

This will include a commitment to overcome the communication gaps within the scientific community and between scientists, policy makers and the general public.

Future CSD sectorial issues, such as Oceans and Seas (CSD7), should explicitly address and implement more effective science communication processes.

Elements of quality assurance, science communication and public policy processes will include: new institutions and public procedures for the social evaluation of science advances; technology transfer seen in the framework of reciprocal learning and capacity building; and a reassessment of the forms and locations of the “centres of excellence” capable of contributing knowledge and judgment needed for sustainability.

**Panel Discussion on “Science and Sustainable Development”
held at the Commission for Sustainable Development 6th Session (CSD6)
United Nations, New York, Wednesday 22 April 1998**

Considerations for an Improved Science Communication Process

Key points from the Panel Discussion on “Science and Sustainable Development”

held at the Commission for Sustainable Development 6th Session (CSD6)

United Nations, New York, Wednesday 22 April 1998

The principle of sustainable development has been conceived in response to perceived inadequacies of earlier models of economic development. Promotion of sustainable development involves a learning process about societal, economic and environmental goals. Scientific activity for sustainable development will therefore be issue-driven as well as curiosity-generated and mission-oriented. Policies to encourage research, knowledge exchange and science applications for sustainable development must address urgent social needs and also complex and difficult issues where our knowledge is incomplete, values are in dispute and stakes are high.

New processes and institutions are needed for quality assurance in science and technology applications and to maintain public trust and support for the contributions of science to both urgent and long-term problems. The old conception of a largely one-way traffic of information from the experts to the public, and from developed countries to the developing ones, is being replaced by a more reciprocal partnership among those involved in the process.

Such partnership necessarily is constructed through a close dialogue and co-operation of scientists and technical experts with policy makers, implementers and stakeholders, including full participation by experts with local knowledge in developing countries.

- Science communication is a self-renewing process involving mutual learning between different sectors of society, not a one-way traffic from expert to public.
- Priorities in science communication should include commitments of resources in support of:
 - “mundane science” (local problem-solving, utilising all appropriate scientific and societal resources);
 - vernacularisation of science (science activity and communication of original scientific research in local languages);
 - fora and media that disseminate science information accessible to wide audiences;
 - communication networks, based on locality and on common concerns using all appropriate media (voice, paper, ICT);
 - education for improved awareness of “mundane science” among students, researchers and policy makers in established science;
 - demonstrations of the positive potential of science – on large and small scales – as a force for sustainable development.

- Research and capacity building for sustainable development is an investment responding to social needs with a long term perspective. The effective use of science for sustainable development will require bringing together different strands of knowledge and experience in problem solving, for example:
 - combining expertise of public, private and community sectors;
 - establishing interfaces between formal knowledge and informal understanding and knowing-how;
 - recognising complementarities between local and external expertise;
 - reconciling different stakeholder interests covering urgent social needs, commercial interests, policy makers' requirements and long run sustainability concerns.

- Quality in science for sustainability refers not only to internal standards of rigour and coherence, but also accountability to external societal considerations such as:
 - reconciling science and technology interests with wider social concerns;
 - transparency in the ways that policy makers and the science community are responsible in addressing high-stakes risks;
 - the ability of the scientific community to demonstrate their contributions to resolving important problems of their societies;
 - the participation of scientists, in their professional capacities, in the processes of policy debate, the communication of risks and the evaluation of decision stakes.

- Important decisions for development and environment will often involve difficult judgements about risks and collective hopes in situations of very incomplete knowledge.
 - These judgements depend on explicit assessment of scientific uncertainty, and on acceptance of legitimate scientific and social dispute on complex issues;
 - Involvement from the onset of stakeholders in the knowledge assessment process, in identifying constraints and defining resource use options and their costs and benefits, is important for robust, socially legitimate and credible policy choices;
 - A full scientific understanding of ecosystems and environmental processes will integrate the knowledge contained in local history, traditions and innovative practices.

- Opportunities should be sought within the scientific community and international organisations to design, promote and implement these new conventions for scientific communication and quality assurance.

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SUPPORTING DOCUMENTS:

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- **Anil Gupta : "Science, Sustainability and Social Purpose: Barriers to effective articulation, dialogue and utilization of formal and informal science in public policy"**

THEME 2 :

- **Silvio Funtowicz, Martin O'Connor, Jerome Ravetz, "Scientific Communication, International Cooperation and Capacity Building for Sustainable development", Background Note No.2**
- **Sheila Jasanoff (et al.): "Conversations with the Community: AAAS at the Millenium" (Science Vol.278, 19 December 1997, pp.2066-2067)**
- **"Scientific Advisory Processes on Sustainable Development (from UNESCO Addendum on Chapter 35 of Agenda 21)**

THEME 3 :

- **Sekou Toure: "Extent of Utilisation of scientific understanding in the CSD deliberation on freshwater"**
- **Chandrakant Thatte : "Science in Freshwater Issues for Sustainable Development and Resource Management"**

DISCUSSION CO-CHAIRS

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AGENDA

SCIENCE AND SUSTAINABLE DEVELOPMENT

Professor Eric ODADA and Professor Michael SCOULLOS (Co-Chairs)

INTRODUCTION : The Panel will discuss the design and implementation of processes for effective knowledge exchange and use of scientific information and advice in decision making for sustainable development. The widespread conception of a one-way traffic of information from the experts to the public, and from developed countries to the developing ones, has to be replaced by a more reciprocal partnership among those involved in the process. Such partnership necessarily is constructed through a close dialogue and cooperation of scientists and technical experts with policy makers, implementers and stakeholders, including full participation by experts with local knowledge in developing countries.

THEME 1 : Barriers to the effective utilisation for sustainable development

Introduced by : **Professor Anil GUPTA**

Issues include: better lines of communication between scientists, policy makers and the public; building up endogenous capacity in countries currently having less developed science resources; cooperation between local and external experts for successful science-technology implementations; development of processes for assessing scientific uncertainty, for accommodating scientific dispute and for integrating stakeholder interests.

THEME 2 : Elements of a better science communication process

Introduced by : **Professor Sheila JASANOFF**

What are the deficiencies of existing science communication processes? What elements do we need to incorporate into a process that includes and empowers the full range of scientific understanding and opinion, the political viewpoints of policy makers, and the meaningful involvement of sectoral stakeholders and the public at large, including countries without a strong basis in all key scientific fields?

THEME 3 : Science and sustainable development in water issues

Introduced by : **Dr. Sekou TOURE, Dr. Chandrakant THATTE**

Review of how well scientific understanding, information and advice has been used in the CSD6 deliberations on freshwater and, most importantly, where there is room for improvements.

THEME 4 : Objectives for an improved science communication process

General discussion

Rapporteurs : **Silvio FUNTOWICZ** (ISIS, EC-JRC, Ispra, Italy)

Martin O'CONNOR (C3ED, Université de Versailles, France)

Jerome RAVETZ (Consultant, London, UK)