

**OECD-South Africa Workshop**  
**on**  
**International Science and Technology Co-operation for Sustainable Development**  
**21-22 November 2005**

*Resolutions*

**Preamble**

Global leaders, experts, policy makers and academics from the OECD countries as well as developing countries met at Kwa Maritane, Nor West Province, South Africa, to further the work of the OECD and its partners in the area of international co-operation in science and technology for sustainable development.

As a follow-up to the World Summit on Sustainable Development held in Johannesburg in 2002, the OECD Committee for Science and Technology Policy adopted the *Declaration on International Science and Technology Co-operation for Sustainable Development* at its Ministerial session in January 2004.

There is a growing international consensus that science and technology (S&T) is a key vehicle to achieve the global sustainable development agenda. It is also an essential tool in the realization of the Millennium Development Goals within reasonable timeframes. This emerging consensus has revealed that very few countries, if any, have the capacity, knowledge platforms and resources to do this alone. We need smarter and more effective partnerships. We need co-operation between regions, between countries, between institutions and between people. This co-operation should be both north-south and south-south in nature, and by design, governments, academia and business in both OECD member countries and developing countries have important roles to play.

In this spirit, the South African government, through its Department of Science and Technology, has partnered with the OECD to advance co-operation in the areas of policy and good practices in key sustainable development domains. The themes of water and energy were chosen as the focal points of this discussion to coincide with and add value to, the work in these areas underway under the auspices of the UNCSO.

**Key challenges**

- To identify good practices in international science and technology co-operation, especially between OECD and developing countries, aiming at fostering capacity-building in science and technology, at facilitating effective diffusion of scientific knowledge and technology transfer, and at developing knowledge infrastructure and networks, in order to meet sustainable development objectives at national and global levels. Such good practices include highlighting concrete and efficient solutions that have been implemented in the areas of water and energy.

- To consider possible indicators of good practices in international science and technology co-operation for sustainable development and methodologies to evaluate international science and technology co-operation initiatives.

## Deliberations

Using plenary sessions, breakout sessions and panel discussions, the workshop addressed issues such as:

- Effective science and technology capacity building in developing countries.
- Facilitating knowledge and technology transfer and partnerships to achieve this.
- Developing knowledge infrastructure and networks of science and innovation for sustainable development.
- Technologies that best meet the needs of the developing countries in the areas of water and efficient use of energy while meeting sustainable development objectives.
- Indicators and criteria for good practices in science and technology and S&T co-operation for sustainable development.

The principal finding was the importance of scientific and technological co-operation for sustainable development.

## Resolutions

- 1) Participants invite OECD committees and working groups involved in the production indicators related to sustainable development, development assistance, and science and technology broadly defined to take note of the importance of science and technology co-operation for sustainable development and to consider the production of indicators to support policy development in this area.
- 2) The practical actions for the sustainable use of energy resources: promote the creation of innovative intellectual communities and partnerships within developing countries addressing the key technology, policy and programme issues for the efficient use of conventional and new forms of energy in pursuit of the goals of sustainable development.
- 3) Practical actions for sustainable use of water resources: strengthen, through demand-driven and efficient co-operation (*e.g.* partnerships, centres of excellence) in science and technology, the knowledge base of all levels of stakeholders, in order to synergistically improve access to (efficient and clean) water supply and sanitation from an integrated water resources management approach.
- 4) Further meetings to develop the “science and technology for sustainable development” agenda in the OECD can be envisaged to incorporate insights in other domains (biodiversity and agriculture for example) and to develop envisaged indicators.
- 5) Develop a paper on the cross-cutting nature of international co-operation to achieve sustainable development and the core supporting actions to mainstream the contributions of science and technology to achieve these objectives for submission to UNCSD.

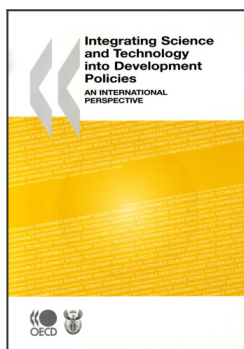
## *Table of Contents*

	Foreword	3
	Executive Summary	9
	Workshop Resolutions	15
	<i>Résumé</i>	17
	<i>Résolutions de l'atelier</i>	23
<hr/>		
<b>Part 1.</b>	<b>Introduction</b>	<b>25</b>
	Opening Statements	27
	Rapporteur's Summary	35
<hr/>		
<b>Part 2.</b>	<b>Plenary Presentations</b>	<b>41</b>
Chapter 1.	International Science and Technology Co-operation for Sustainable Development: Background and Issues <i>Yukiko Fukasaku, OECD Directorate for Science, Technology and Industry</i> <i>Mmampei Mabusela, Department of Science and Technology, South Africa</i>	43
Chapter 2.	Technological Learning and Sustainability Transition: The Role of Institutions of Higher Learning in Africa <i>Calestous Juma, Harvard University</i>	57
Chapter 3.	Regionalism and Technology Development in Africa <i>John Mugabe, New Partnership for Africa's Development and University of Pretoria</i>	69
Chapter 4.	Elements of Effective Technology Transfer and Stimulating Entrepreneurship <i>Wendy Poulton, Eskom</i>	79
Chapter 5.	Effective Technology Transfer and Stimulating Entrepreneurship: Strategy and Examples <i>Uwe Brekau, Bayer AG, Germany</i>	85

Chapter 6.	The Persistent Bandwidth Divide in Africa: Findings of the African Tertiary Institution Connectivity Study and Lessons for Developing Knowledge Infrastructure and Networks in Africa <i>Robert Hawkins, World Bank</i>	91
Chapter 7.	Developing Knowledge Infrastructure and Networks for Sustainable Development <i>S. Arungu-Olende, Queconsult Limited, Kenya</i>	101
Chapter 8.	Assessing International S&T Co-operation for Sustainable Development: Towards Evidence-based Policy <i>Fred Gault, Statistics Canada</i>	107
Chapter 9.	Assessing International Science and Technology Co-operation for Sustainable Development: “Art of the State” <i>Michael Kahn, Centre for Science, Technology and Innovation Indicators, Human Sciences Research Council, South Africa</i>	115
<hr/>		
<b>Part 3.</b>	<b>Session on Water</b>	<b>123</b>
Chapter 10.	Summary of the Water Breakout Session <i>Bruno Bordage, Ministry of Foreign Affairs, France</i>	125
Chapter 11.	Integrated Water Resources Management and Knowledge Transfer <i>Harsha Ratnaweera, Norwegian Institute for Water Research (NIVA)</i>	131
Chapter 12.	Experiences from an Interdisciplinary Vietnamese-German Project on Decentralised Water Management Systems <i>Joachim Clemens, University of Bonn, Germany Le Quang Minh, University Can Tho, Vietnam</i>	139
Chapter 13.	Nile Basin Capacity-Building Network for River Engineering <i>Sherif M. El-Sayed and Samir A. S. Ibrahim Hydraulics Research Institute, Cairo, Egypt</i>	143
Chapter 14.	International Scientific and Technological Co-Operation of the International Commission on Irrigation and Drainage in the Field of Irrigation for Sustainable Development <i>F. B. Reinders, International Commission on Irrigation and Drainage (ICID), South Africa</i>	155
Chapter 15.	Coupling Surface and Ground Water Research: A New Step Forward Towards Water Management. International Centres for Innovation, Research, Development and Capacity Building in Water Management <i>José Galizia Tundisi, IAP Water Programme, Brazilian Academy of Sciences, International Institute of Ecology</i>	163

Chapter 16.	Implementing The New Partnership for Africa’s Development (NEPAD) Initiative on the Creation of Centres of Excellence on Water Science and Technology <i>Salif Diop, United Nations Environment Programme (UNEP), Nairobi</i>	171
Chapter 17.	Waterpool: The Austrian Competence Network for Water Resources Management <i>Wolfgang Fischer, Graz University, Austria</i>	177
Chapter 18.	Sharing Information and Knowledge about Water: Groundwater Examples <i>Slavek Vasak and Jac Van Der Gun, International Groundwater Resources Assessment Centre, The Netherlands</i>	183
Chapter 19.	Water Scarcity Impacts and Policy and Management Responses: Examples from Australia <i>Colin J. Chartres, National Water Commission, Australia</i>	193
Chapter 20.	Water Resources Management in Megacities <i>Shinichiro Ohgaki, Department of Urban Engineering, University of Tokyo</i>	205
<hr/>		
<b>Part 4.</b>	<b>Session on Energy</b>	<b>209</b>
Chapter 21.	Summary of the Energy Session <i>Alicia Mignone, Italian National Agency for New Technologies, Energy and the Environment</i>	211
Chapter 22.	Energy Efficiency Metrics <i>Ian Househam, International Institute for Energy Conservation, South Africa</i>	217
Chapter 23.	Taking Advantage of the Untapped Water and Energy Efficiency Opportunities in Municipal Water Systems <i>Mike Rabe, Watery Programme, Alliance to Save Energy, South Africa</i>	225
Chapter 24.	Public Benefit Charge to Support Energy Efficiency and Research and Development: Lessons from Brazil <i>Gilberto M. Jannuzzi, University of Campinas, Brazil International Energy Initiative</i>	235
Chapter 25.	Mediterranean Renewable Energy Programme <i>Chedli Chakroun, Ministry of Industry and Energy, Tunisia</i>	241
Chapter 26.	Energy and Environment Partnership with Central America <i>Markku Nurmi, Ministry of Environment, Finland</i>	249
Chapter 27.	Research for Sustainable Development: Experiences in Austria <i>Brigitte Weiss, Federal Ministry for Transport, Innovation and Technology, Austria</i>	251

Chapter 28.	International Networks to Promote Environmentally Sustainable Industrial Production	259
	<i>Peng Sizhen, Administrative Centre for China's Agenda 21, Ministry of Science and Technology, People's Republic of China</i>	
Chapter 29.	Energy and Sustainable Development in Africa: The Case of Mali	265
	<i>Aliou Maiga, Mali Folkecenter and University of Bamako, Mali</i>	
<hr/>		
Annex.	Developing Countries' Perspective on Energy and Water Issues	271
	<i>Stephanie Dippenaar, Thokozani Simelane, Wilson Mathekenya, Mongameli Mehlwana and Thobeka Nkosi</i>	
	<i>Council for Scientific and Industrial Research, South Africa</i>	



**From:**  
**Integrating Science & Technology into  
Development Policies**  
An International Perspective

**Access the complete publication at:**  
<https://doi.org/10.1787/9789264032101-en>

**Please cite this chapter as:**

OECD/Department of Science and Technology (2007), "Workshop Resolutions", in *Integrating Science & Technology into Development Policies: An International Perspective*, OECD Publishing, Paris.

DOI: <https://doi.org/10.1787/9789264032101-3-en>

This work is published under the responsibility of the Secretary-General of the OECD. The opinions expressed and arguments employed herein do not necessarily reflect the official views of OECD member countries.

This document and any map included herein are without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries and to the name of any territory, city or area.

You can copy, download or print OECD content for your own use, and you can include excerpts from OECD publications, databases and multimedia products in your own documents, presentations, blogs, websites and teaching materials, provided that suitable acknowledgment of OECD as source and copyright owner is given. All requests for public or commercial use and translation rights should be submitted to [rights@oecd.org](mailto:rights@oecd.org). Requests for permission to photocopy portions of this material for public or commercial use shall be addressed directly to the Copyright Clearance Center (CCC) at [info@copyright.com](mailto:info@copyright.com) or the Centre français d'exploitation du droit de copie (CFC) at [contact@cfcopies.com](mailto:contact@cfcopies.com).