



Draft Report for Comment of the

**Second Meeting of the UN Science and Technology Cluster in
Support of NEPAD**

UNESCO Headquarters Paris, Friday 9 June 2006



Summary

UNESCO, as a convener of the UN S&T Cluster in support of NEPAD, organized the Second Meeting of the Cluster in Paris on 9 June 2006. The AU Commissioner for Human Resources, Science & Technology, Professor Nagia Essayed and Dr. John Mugabe, Science and Technology Advisor to NEPAD attended the meeting. The main UN agencies, member of the Cluster (UNESCO, UNECA, UNIDO, UNCTAD, UNEP, WIPO, IAEA, and WBI) also attended the meeting as well as representatives from DIFD, IDRC, CERN and the Science and Development Network.

The meeting presented a unique opportunity to launch a platform/forum and a process to collectively harness African and international efforts in science and technology for Africa's development through the AU/NEPAD process in S&T. The enthusiastic response of the UN agencies and other partners at such short notice demonstrated the level of willingness to support AU/NEPAD in the lead-up to the AU Summit and in the longer term.

The AU/NEPAD delegates presented the Consolidated Plan of Action (CPA) and the planned programmes and events leading to the AU Summit in January 2007. The UN agencies, presented their current activities in Africa which relate to the development of S&T and expressed their readiness to cooperate with the AU/NEPAD in the implementation of the CPA.

The AU/NEPAD and the UN agencies agreed on the following:

1. The UN S&T Cluster is the best forum for the cooperation between NEPAD and the UN Agencies in the field of Science. In view of the small size and limited capacity of AU/NEPAD to engage with outside partners, the UN S&T Cluster is ideally placed to coordinate UN input and act as a hub in engaging and linking in with other S&T partners for Africa's development. UNESCO was requested to continue its lead role and act as a focal point for the contacts with AU/NEPAD.
2. There was enormous room for progress in the process of harmonizing international efforts in support of African efforts in S&T; the Cluster needs to coordinate more closely, working as a functioning team to strengthen its role as a significant partner in S&T to AU/NEPAD.
3. Three programmes were identified for immediate AU/NEPAD-UN cooperation:
 - a. *The Development of an African System for S&T Indicators.* Lead agency: UNESCO and other agencies such as UNIDO, WIPO to closely cooperate.

- b. *Development of Science & Technology Parks*: Lead Agency: UNIDO and other agencies such as UNECA, UNCTAD, UNESCO to closely cooperate.
 - c. *Energy, Water and Desertification*: Lead agency: UNEP and other agencies such as UNESCO, WHO, UNIDO to cooperate
4. The NEPAD Secretariat also requested the assistance of the Cluster in the development of some 10 studies within the framework of an initiative aiming at “procuring evidence-based science advice for the new partnership for African Development”. UNESCO is circulating the request among the members of the Cluster.

Introduction

It is now widely recognized that science, technology and innovation play a fundamental role in the development process. The 2005 World Summit Outcome document recognized that “sciences, technology, including information and communication technology are vital for the achievement of the development goals”.

The African Union (AU) and its development organ “New Partnership for African Development” (NEPAD) have jointly elaborated “Africa’s Science and Technology Consolidated Plan of Action” (CPA) which was adopted by the Second African Ministerial Conference on Science and Technology (AMCOST II) in Dakar, Senegal in September 2005 and endorsed by the Executive Council of the AU Summit in Khartoum in January 2006.

The AU Heads of State Summit in January 2007 will have as its theme ‘Science, Technology and Research for Africa’s Development’. The AU and NEPAD have scheduled a number of S&T lead-up activities to contribute to and inform the Heads of State Summit.

UN S&T Cluster in support of NEPAD

Since 1999, in response to regional development efforts, in particular in Africa, within the context of the UN Secretary-General’s reform agenda and as urged by the UN Economic and Social Council (ECOSOC), regional consultative meetings are held to improve the coherence of the activities of the various UN agencies working in the five regions of the world including in Africa. This reform agenda echoes the wishes of many Member States of the UN to revitalize the role of the specialized agencies, to maximize efforts and to avoid duplication.

For Africa, six thematic cluster areas involving different UN agencies concerning the priority areas for NEPAD were established to serve as an operational framework to support NEPAD.

The Science and Technology (S&T) Cluster was established at the Fifth Regional Consultation in May 2003 designating UNESCO as the Convener and the UN Commission for Africa (UNECA) as the Vice-Convener.

The inaugural meeting of the S&T Cluster took place in July 2004 during the Sixth Regional Consultation. The meeting adopted an initial programme of activities for active cooperation which included collaboration with AU/NEPAD within the framework of the AU summit on the theme of science and technology to be held in 2007. In addition to UNESCO and UNECA, agencies cited as important for membership of the Cluster included WIPO, UNIDO, UNCTAD, FAO, UNEP, World Bank, ILO and WHO. Since 2004, the Cluster has been working informally, notably supporting and monitoring the process of the development of AU/NEPAD's "Africa's S&T Consolidated Plan of Action"; the review, update and restructuring of S&T systems and policies in Africa and in supporting the Inter-agency Network on Biotechnology.

However, the Cluster needs to coordinate more closely, working as a functioning team to strengthen its role as a significant partner in S&T to AU/NEPAD. In order to coordinate UN S&T input into the AU Summit, to improve the functioning and to maximize efforts, a meeting of the UN S&T Cluster in support of NEPAD and to which other relevant partners were invited was convened by UNESCO in Paris on 9 June 2006.

The purpose of the meeting was to promote dialogue and gain a better understanding of the different partners' vision, strategies, and goals in relation to the contribution of S&T to Africa's development and how best the UN system can respond to the AU/NEPAD process in coordination with other relevant partners.

Participants' Contributions

African Union

The AU Commissioner for Human Resources, Science and Technology, Dr Nagia Essayed, highlighted the role of science and technology for Africa's sustainable development and the fact that Science, Technology and Research for Africa's Development' was the theme of the African Union Heads of State Summit in January 2007. She emphasized the role of the AU as an organization which formulated policy as opposed to NEPAD which is concerned with translating policies into plans. She outlined the preparatory meetings and events leading up to the Summit, including the Ministerial Bureau meeting on 15-16 June 2006 in Dakar in preparation for the African Ministerial Council Meeting on Science and Technology (AMCOST) in November 2006, the Conference of Scientists and Policy Makers in October 2006 and expressed the intention of organizing a high-level AU/NEPAD/UNESCO panel on centres of excellence in August 2006.

Priority S&T issues for the AU include:

- Empowering universities and their orientation to applied research;

- Popularizing science through the educational system in particular with respect to youth and women;
- Promoting industrial development through science;
- Harnessing the skills and knowledge of the African scientific diaspora.

The AU would like to be considered as a platform for all stakeholders, is open to propositions, is prepared to listen and do things differently and considers that the UN could assist in the achievement of its goals.

NEPAD

The NEPAD Science and Technology Advisor, Dr John Mugabe, gave an overview of the development and priorities of Africa's S&T Consolidated Plan of Action which is cast within the context of S&T contributing to sustainable development and the Millennium Development Goals. It has taken over 3 years to develop following Africa-wide consultation. It needed buy-in from political leaders, to be anchored in African realities but within the context of global knowledge economies. Existing skills needed be mobilized at the same time as the creation of new knowledge. Out of 12 flagship programmes, 5 were chosen. To implement the plan, new institutions needed to be established and existing university and industrial centres needed to be strengthened.

The budget for the first 5 years (2006-2010) of the CPA is between \$ US 158-200 million. To manage these funds, an African Science Innovation Facility (ASIF) is planned and to be debated at a stakeholders forum in Dakar. So far, there are 2 networks up and running:

1. The Biosciences Network, with hubs in Egypt, Senegal, South Africa and Kenya, underpinned by business plans with very specific themes. Students are studying for Masters' Degrees within the context of these hubs and there is a growing African input-\$100 000 was contributed by Cameroon to the Biosciences Network in East and Central Africa. Canada contributed \$30 million to the Biosciences Network.
2. The Water Sciences Network with 4 continental programmes essentially based on water quality, disaster reduction and climate change.

NEPAD is a regional plan and projects must involve several countries. The Plan should be implemented as a whole and not treated as a menu by outside partners. The contribution of nuclear science was not explicitly treated in the CPA, perhaps due to lack of knowledge of it's applications in S&T for development.

The UN could support NEPAD by:

- Contributing to the High-Level Panel on Biotechnology;

- Working on the establishment of S&T indicators with the aim of establishing the ‘African Indicators Outlook’ (AIO) by 2008 which could be done in collaboration with the UNESCO Institute of Statistics in Montreal;
- Supporting the ‘Water, Energy and Land Degradation’ component of the CPA;
- Assist with studies to be financed by the Bill Gates Foundation.

UNECA

Mr Alex Tindimubona of ECA thanked the convener for the opportunity to participate in the meeting. He said he had participated in the establishment of the NEPAD S&T Action Plan in October/November 2003, and in the launching of the UN S&T Cluster in support of NEPAD in July 2004. He called attention to the Inception Document of the Cluster, which showed the initial program of activities, themes of focus and their lead agencies. These included monitoring the NEPAD S&T Action Plan; technological entrepreneurship; engineering education; science and technology for agriculture and the environment (African Green Revolution and biotechnology); Centres of Excellence; the Brain Drain; and the upcoming African S&T Summit. He said the Cluster had a website which could be updated and linked to the NEPAD site.

Mr Tindimubona appreciated the emerging strategic links of the Cluster to NEPAD, which range from the technical level (e.g. generation of expert studies and background documents, co-organization of expert meetings) to the political/decision support level of ministerial conferences and Head of State Summits. He encouraged UN and NEPAD to develop and utilize these links in serving Africa more effectively.

UNESCO

Mr Joseph Massaquoi stated that UNESCO had been actively involved in the AU/NEPAD process in S&T from the start, in particular in the elaboration of the Outline Plan of Action. UNESCO had endeavoured to align its programmes in Africa to suit NEPAD plans. UNESCO could contribute in several ways to the preparation of the AU Summit, in particular to the Conference of Science and Policy Makers in Africa. With regard to the CPA, UNESCO could contribute to 4 of the 5 Programme Clusters and with regard to the CPA recommendations for science policy development in Africa; UNESCO could contribute to 3 of the 5 proposals.

Mr Mustafa El Tayeb said that a focal point in each UN agency could be designated. He also stated that UNESCO could help AU/NEPAD in the field of S&T indicators.

Mr Walter Erdelen outlined the areas of UNESCO’s work in science which were particularly relevant to NEPAD, in particular in the in the field of science policy formulation with the specific example of Nigeria, biodiversity conservation with the World Network of Biosphere Reserves, capacity building in the basic sciences and centres of excellence and in the water sciences.

Mr René Zapata added that issues relating to the ethics of science in areas such as medicine, health and agriculture needed to be taken into account. Giving society the means to having a critical view of science through its popularization was also important.

The social and human sciences needed to accompany science per se to measure impact on society. There also needed to be a link to Higher Education.

UNCTAD

Mr Mongi Hamdi explained that UNCTAD had 3 programmes in Africa which could contribute to the AU/NEPAD process in S&T:

- ICT projects in Lesotho with 200 computers serviced by 16 ICT engineers connecting schools in rural areas, and in Mali with 300 computers in provincial areas;
- Policy reviews and STI policy indicators in Angola and Sierra Leone;
- Programme for African centres of excellence sponsored by the government of Italy.

UNIDO

Mr Georges Assaf stated that UNIDO could assist the AU in the field of biotechnology and specifically with the meeting on the Biosciences in September 2006. UNIDO could also assist in the following areas: bio-prospecting, bio-fuels, including bio-diesel in West Africa, waste reduction during water usage, and indicators using industrial statistics. Coordination between the different UN agencies needed to take place. Mr Ricardo Seidl added that the CPA is of very high quality, noting that UNIDO's contribution in the area of industrial indicators would be a good basis for foresight exercises. He considered that UNIDO could also contribute to the establishment of technology parks.

WIPO

Ms Cynthia Cannady explained that in order to ensure the return on investment made by developing and least-developed countries for research activities both in universities and research and development (R&D) institutions, it was essential to adopt a strategy at the research, development, protection, and commercialization phases taking into account the challenges faced, and the means needed to address them. Governments and academic institutions needed to treat IP as a practical tool for enhancing national competitiveness, increasing opportunities for technology exchange, augmenting revenues, enhancing exports, avoiding brain drain, and motivating employees.

WIPO had recently changed its paradigm from a 'rights model' to an 'assets model' with more emphasis on technology management, ownership and innovation strategies. Presently, Africa has only about thirty patents and five people with the capacity to draft them. Intellectual Property Offices needed to communicate with researchers and only patented elements should be put into databases to protect Africa's intellectual property.

With a view to meeting the goals set by the African Union (AU) and the NEPAD Secretariat in Africa's Science and Technology Consolidated Plan of Action, and in the light of the mandate and activities of the other members of the S&T Cluster, WIPO could

offer training to researchers on IP asset management, including patent drafting, which would enable them to file patents with a view to protecting their research results, before publication. WIPO currently offered a course on Successful Technology Licensing and would also cooperate with the United Nations Industrial Development Organization (UNIDO) and the United Nations Conference on Trade and Development (UNCTAD) in offering training in the field of licensing and technology transfer agreements so that the two parties concerned could receive and exchange equivalent benefits and value. WIPO could also help NEPAD with early funding strategies drawing on lessons learnt in Asia.

Ms. Dalila Hamou outlined the assistance WIPO provided to its Member States as far as IP was concerned. In response to an observation made by Mr. J. Mugabe of NEPAD, she stated that WIPO had expressed its willingness to cooperate with NEPAD on various occasions. It had sent a memorandum of cooperation to the NEPAD Secretariat without result. She commended the CPA and invited the NEPAD Secretariat, through UNESCO as the lead UN agency for the S&T Cluster in its support, to let WIPO and other UN agencies know how best WIPO could cooperate in the implementation of the CPA.

IAEA

Mr Ali Boussaha explained that within the context of its mandate to promote nuclear science in the interests of world peace, health and prosperity, the IAEA works directly with each of its 36 African Member States and also within the framework of the inter-governmental *African Regional Co-operative Agreement for Research, Development and Training Related to Nuclear Science and Technology (AFRA)* which has 30 Member States. IAEA is also developing strategic partnerships with other UN agencies (UNDP/GEF, WHO, UNESCO etc.) and other partners (African Union), in particular in disease control (HIV/AIDS, malaria, and tuberculosis), water resource development and sustainable land management.

The IAEA provides support to African countries through its Technical Cooperation Fund (\$37 million to Africa for 2005-6 biennium) to build capacity through providing equipment and technical and managerial training, in particular through ICT-facilitated distance learning programmes including under the African Education Network in Nuclear Science and Technology (AFRA.NEST). Up to 2004, the IAEA has allocated \$5 million to training Africans in nuclear science for socio-economic development. Needs in nuclear science are defined by Member States. A significant number of cooperative activities support the MDGs.

The IAEA through AFRA has made concrete offers to support NEPAD's regional S&T programmes. The IAEA with its substantial operational field technical programme funded by Member States is well placed to be a partner to the implementation of Africa's S&T Consolidated Plan of Action, for example but not exclusively, in the fields of energy, water resource management and post-harvest crop loss.

UNEP

Mr Arab Hoballah stated that UNEP had several small actions and two larger projects contributing to S&T areas of concern to NEPAD. One of the larger projects involved mainstreaming environmental capability in universities in Africa and the second concerned the Marrakesh process on sustainable production and consumption. During the recent meeting in Addis Ababa, priorities were identified for national production centres. In Tanzania, there was sustainable production and consumption implementation within the context of SMI/SMEs involving the transfer of technology.

He said that NEPAD must decide where the UN could potentially assist its S&T process. NEPAD needs to produce a technical roadmap for implementation of the CPA. NEPAD knows what each UN agency can do and which cluster of agencies can deliver on specific topics. A political request was also needed. UNEP could assist the process in the field of sustainable production and consumption, demonstration projects and the use of public/private partnerships.

DFID

Mr Steve Hillier stated that DFID was very impressed with the CPA as it was elaborated by Africans and articulated African demands. NEPAD, as a regional project should complement and not preclude national S&T efforts and other actions by bilateral donors. The costs of implementation appear realistic at \$ US 159 million. Donors should not make specific choices but should contribute to a central fund and S&T investment choices should be made by AU/NEPAD. Political signals should come from a pan-African forum. We should avoid duplication and promote harmonization. DFID strongly supports the NEPAD process. The UN S&T Cluster should speak with a unified voice to NEPAD. The nature of the UN-Cluster relationship needs to be clarified.

UK Delegation

Mr Tim Craddock emphasized that the S&T development process must be driven by Africa, supported by the combined and harmonized efforts of the international community. The principle themes should focus on centres of excellence, science policy and the brain drain. We need to make real progress on the ground.

He suggested that UNESCO had a global role as a science policy body with the objective of informing governments about good S&T policy for development. UNESCO is best at bringing governments together to set standards. Collecting statistics and monitoring good policies in science should be a priority. UNESCO should be the lead agency for good science policy in the world.

The international community had endorsed the principle of harmonization among the UN agencies as a function of their individual comparative advantage. He asked if the arrangements for coordination between them, and leadership with respect to different areas, sufficient and what the collective contribution would be at the AU Summit. He also asked how the agencies would produce a plan. These issues need to be addressed.

He said that he was not in favour of UNESCO doing everything, but a strong supporter of multilaterally working together with other partners as international forum acting in the interests of Africa.

IDRC

Dr. Richard Isnor outlined the role and mandate of IDRC and gave an overview of IDRC's Programme Areas, including the new programme area under his direction, "Innovation, Policy and Science" with particular reference to Africa and NEPAD S&T, which IDRC supported since November 2003.

The International Development Research Centre (IDRC) is a public corporation of Canada, created in 1970 to help developing countries use S&T to find practical, long-term solutions to the social, economic and environmental problems they face. Support is directed towards developing indigenous research capacity to sustain policies and technologies that developing countries need to build healthier, more equitable, and more prosperous societies. In response to the question posed to the participants on each organization's potential role, mandate and programs fit with NEPAD S&T, Dr. Isnor explained how IDRC's four program areas of: i. Environment and Natural Resource Management, ii. Social and Economic Policy, iii. ICTs for Development, and iv. Innovation, Policy and Science" address issues of relevance to the South. (www.idrc.ca)

Specific reference was made to the Centre's new program area, "Innovation, Policy and Science" which he directs. The IPS Program Area supports the development of science, technology and innovation policies to alleviate poverty in developing countries. IPS funds research on governance, public understanding, access and benefits associated with new technologies like biotechnology and nanotechnology. Research supported by IPS aims at strengthening the evidence base for science, technology and innovation policy-making processes at local, national, regional and international levels. IPS encourages the involvement of all concerned stakeholders in order to bring the perspective of low and middle income countries, as well as marginalized groups in addressing the social, environmental and economic impacts of new science, technology and innovation policies. (www.idrc.ca/ips)

Examples of projects currently being funded by IDRC include: the African Economic Research Consortium, the African Technology Policy Studies Network, SciDev, drafting of Mozambique's S&T Plan, IPRs and the South to name a few.

WBI

Mr Jean-Eric Aubert mentioned that there were a number of S&T related projects in Africa where the World Bank was involved, in particular with respect to capacity building for S&T in East Africa. Activities also took place within the context of the African Institute of Science and Technology, an initiative of the Nelson Mandela Institution for Knowledge Building and the Advancement of Science and Technology. Projects from this initiative were crystallizing in Nigeria and Burkina Faso.

The WB-sponsored conference on "Knowledge for Africa's Development: Innovation, Education, and Information and Communications Technologies" held in Johannesburg in May 2006 aimed to enhance understanding and awareness among key African policymakers and interested stakeholders on the key issues that all African countries need

to address to access and use knowledge to strengthen their competitiveness and increase their economic and social well-being.

The WB is a large and diverse institution and is trying to harmonize its S&T activities. The Bank has recently recognized the pivotal role of Higher Education as an important factor in the development of a knowledge-based society and now links this factor with the lending process.

He suggested organizing working groups comprised of international organizations and bilateral partners best informed on specific policy topics of direct interest to NEPAD:

- ST statistics: UNESCO, OECD,
- ST policy evaluation/reviews: OECD, UNESCO, IDRC, UNCTAD etc
- Technology monitoring: WIPO, UNIDO, etc.

Such international working groups could/should preferably operate with video conference systems making the process cost effective.

Science and Development Network

Mr David Dickson stated that the S&T Development Network was planning to allocate part of its website from mid-August to reporting on the build-up to the AU summit. It will be a two-way process, the platform acting as a repository for information. Sci.DevNet will commission a series of short opinion articles relevant to the Summit. Following this meeting, SciDevNet published an editorial on its website on the importance of the AU Summit emphasizing the need for concrete proposals.

Annex 1

Second Meeting of the UN Science and Technology Cluster in Support of NEPAD

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Agenda

Morning Session (10 am to 1 pm)

10:00-10:10 Welcome and introductory remarks by UNESCO

10:10-10:30 S&T in the context of the lead –up to the AU Summit in 2007

Prof. Dr. Eng. Nagia Essayed, African Union Commissioner for Human Resources, Science and Technology

10:30-11:00 Africa's Science and Technology Consolidated Plan of Africa (CPA) and possible UN S&T support for the CPA and AU/NEPAD

Dr John Mugabe, Science and Technology Advisor to NEPAD

- 11:00-11:30 Coffee
- 11:30-12:30 Round table response from UN agencies to the needs of NEPAD
UNESCO, UNECA, UNCTAD, UNIDO, UNEP, WIPO, IAEA...
- 12:30-13:00 Open discussion and conclusions
- 13:00-15:00 Lunch

Afternoon Session (3 pm to 5.30-6 pm)

- 15:00-15:10 Welcome and introductory remarks by UNESCO

*Mr Walter Erdelen, Assistant Director-General for Natural Sciences
Mr Nouréini Tidjani-Serpos, Assistant Director-General, Africa
Department*
- 15:10-15:20 Synthesis of the discussion and conclusions of the morning session-
briefing of other invited partners in S&T in Africa

UNESCO and UNECA (Convener & Vice-Convener of the S&T Cluster)
- 15:20-15:40 Overview of AU and NEPAD S&T Plans for Africa (*AU/NEPAD*)
- 15:40-16:30 Responses of other relevant partners

IDRC, WBI, DFID, S&D Network, CERN....
- 16:30-16:45 Coffee
- 16:45-17:30 Open discussion on the role and contribution of the different agencies in
the lead-up to the AU Summit in Addis Ababa in 2007

Annex 2

Second Meeting of the UN Science and Technology Cluster in Support of NEPAD

UNESCO Headquarters, Paris, Friday 9 June 2006

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