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EXTRAORDINARY CONFERENCE OF THE AFRICAN MINISTERIAL COUNCIL ON SCIENCE AND TECHNOLOGY: 20-24 NOVEMBER 2006

The African Ministerial Council on Science and Technology (AMCOST) held its Extraordinary Conference in Cairo, Egypt from 20-24 November 2006. Organized by the African Union (AU) Commission and hosted by the Government of Egypt, the conference opened with an experts meeting from 20-22 November, followed by a ministerial meeting from 23-24 November. It was attended by representatives from 26 AU member states and agencies, international and continental government and non-governmental organizations (NGOs), and the Diaspora.

Delegates considered a range of proposals and reports on African science and technology matters. These included: a proposal to establish an African Presidents' Committee for Science and Technology; the draft report of the High-level Panel on Modern Biotechnology; the African Strategy on Biosafety; a proposal for the African Strategy for Technology Transfer and Acquisition of Domestic Technological Capabilities; the report of the conferences of the Diaspora and of African NGOs on the popularization of science and technology; a proposal for the formation of the Pan-African Intellectual Property Organization; the report of the first AU Congress of Scientists and Policy Makers; options for the African Science and Innovation Facility; and criteria and guidelines for establishing African networks of centers of excellence in science and technology.

Delegates worked through these agenda items with a view to preparing inputs for the January 2007 AU Summit of Heads of State and Government (2007 Summit), to be held in Addis Ababa, Ethiopia, which has as its primary theme "Science, Technology and Research for Africa's Development." At the close of the meeting on Friday, ministers had agreed to a meeting report summarizing their discussions on each agenda item, and had adopted the Cairo Declaration, containing ministerial commitments on future work in relation to science and technology (S&T) and recommendations for consideration at the 2007 Summit.

In conjunction with the Extraordinary AMCOST Conference, an Inter-Ministerial Dialogue on Building an African Network of Centers of Excellence in Water Sciences and Technology was held jointly by the Bureaus of AMCOST and the African Ministerial Council on Water (AMCOW) on 22 November.

The dialogue was attended by ministers from Lesotho, Senegal, South Africa and Zimbabwe, senior representatives from Algeria, Egypt, South Africa and Ethiopia, and representatives from the Office of Science and Technology of the New Partnership for Africa's Development (NEPAD) and the AU Commission. Throughout the day, delegates considered issues related to criteria and guidelines, financial mechanisms and governance for the network of centers of excellence, before adopting an inter-ministerial declaration, which approves the establishment of the network and its guidelines as a "living document," and requests the AMCOW Secretariat and the NEPAD Office of Science and Technology to work further on governance and financing. For a separate report of the Inter-Ministerial Dialogue, please visit <http://www.iisd.ca/afrika/amcost>.

A BRIEF HISTORY OF AMCOST AND RELATED S&T PROCESSES

AMCOST was established in November 2003 under the auspices of the AU and NEPAD. This high-level forum for AU Ministers of Science and Technology seeks to develop policies and priorities on science, technology and innovation (STI) for Africa's development. AMCOST also provides political and policy leadership for the implementation of Africa's Science and Technology Consolidated Plan of Action (CPA).

AMCOST functions through two subsidiary bodies: the AMCOST Bureau of Ministers and a Science and Technology Steering Committee (AMCOST Steering Committee). The AMCOST Steering Committee oversees the development

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and implementation of programme activities, including the formulation of business plans. It is also responsible for reviewing the progress on implementing the CPA.

In addition to these two bodies, the AU Commission provides political and policy leadership and the NEPAD Office of Science and Technology (NEPAD OST) provides technical and intellectual leadership for implementation of the CPA. The current Chair of AMCOST is Senegal. Bureau members for 2005-2007 are: the Republic of Congo, Egypt, Ethiopia, Nigeria, South Africa and Zimbabwe. Steering Committee members for 2005-2007 are: Madagascar and Rwanda for Eastern Africa; the Democratic Republic of Congo for Central Africa; Ghana and Côte d'Ivoire for Western Africa; Algeria and Tunisia for Northern Africa; and Mozambique and Malawi for Southern Africa.

MINISTERIAL MEETINGS ON S&T

FIRST NEPAD MINISTERIAL CONFERENCE ON S&T: The first NEPAD Ministerial Conference on Science and Technology took place in Johannesburg, South Africa, from 6-7 November 2003, when ministers adopted the outline of an action plan to promote the development and application of S&T in Africa. The outline contained four sections: an overview of challenges that African countries face in developing and applying S&T; proposed flagship programme areas; the establishment of AMCOST, including a governance structure; and funding mechanisms. Ministers agreed this outline would serve as the basis for the formulation of NEPAD's Business Plan on S&T.

On the proposed flagship programmes, the ministers outlined 12 areas for the first round of programmes. These include areas critical to addressing problems of poverty and food security, such as: biotechnology; S&T for manufacturing; energy; information and communication technologies; post-harvest technology; and water research. In each of these areas, networks of centers of excellence and innovation hubs would be created to promote and develop innovations to address the continent's socioeconomic challenges, including human capacity development.

Regarding a governance structure, the key outcome was the establishment of AMCOST itself, comprising all AU member states.

On funding mechanisms, ministers recommended the creation of a NEPAD Science and Technology Fund and asked for a progress report from the NEPAD OST within one year. Ministers committed to increasing funding for R&D to at least 1% of Gross Domestic Product (GDP) (1% GDP goal), and agreed to establish mechanisms to stimulate private sector investment in S&T research and development. Finally, ministers committed to promote the use of national, regional and continental expertise before seeking external expertise. Additionally, ministers requested the NEPAD OST build regional consensus and strategies to address concerns related to new technologies, including biotechnology, and to facilitate Africa's participation in international fora on biotechnology issues

SECOND AFRICAN MINISTERIAL CONFERENCE ON S&T: The second African Ministerial Conference on Science and Technology took place from 29-30 September 2005, in Dakar, Senegal. At this meeting, ministers adopted the CPA and resolved that the AU should provide the necessary policy and political

leadership for achieving the CPA's goals. Ministers also resolved that the AMCOST Steering Committee should monitor and review implementation of CPA programmes and projects.

Ministers further agreed that the AU and NEPAD should explore ways to establish a special African financial and technical facility to ensure sustainable funding for STI programmes, including the proposed African Science and Innovation Facility (ASIF). They rededicated their countries to reviewing their national STI policies and related institutional arrangements and reaffirmed their commitment to promoting the integration of STI considerations into national development plans, Poverty Reduction Strategy Papers and related frameworks for achieving the Millennium Development Goals (MDGs).

Ministers also established an intergovernmental committee to develop and adopt common indicators for surveying and preparing an African STI report. Finally, ministers recommended that the 2007 Summit be dedicated to S&T.

Consolidated Plan of Action: The CPA articulates the continent's commitment to developing and applying S&T. Its overall goals are to enable Africa to harness and apply STI to eradicate poverty and achieve sustainable development and to ensure that Africa contributes to the global pool of scientific knowledge and technological innovations. The CPA outlines five flagship R&D programmes to be implemented between 2006 and 2010: biodiversity, biotechnology and indigenous knowledge; energy, water and desertification; material sciences, manufacturing, laser and post-harvest technologies; mathematical sciences; and information, communication and space science technologies. The programmes and projects outlined in the CPA focus on:

- improving infrastructure and facilities for R&D and promoting the shared use of such facilities;
- creating institutional and policy arrangements that enable African countries to mobilize and share their resources for conducting science and generating technological innovations;
- strengthening the continent's human skills base by increasing the number of scientists, technicians and engineers;
- improving the quality and intensity of regional cooperation;
- building a strong political and civil society constituency for S&T in Africa;
- improving the quality of STI policies of African countries through processes that promote the sharing of experiences;
- strengthening the capacity of regional economic bodies to mainstream S&T into their sectoral programmes and projects;
- promoting the application of S&T to achieve specific MDGs; and
- promoting innovative ways of financing S&T in Africa.

The NEPAD OST provides overall technical and intellectual leadership for the implementation of the CPA. Its specific roles include: mobilizing and directing technical expertise, including networks of centers of excellence, for the implementation of programmes and projects; convening meetings of the AMCOST Steering Committee; providing technical leadership for the establishment of the proposed ASIF; providing technical support to the AU Commission's policy processes and activities; monitoring international trends in S&T and making necessary adjustments to the CPA to respond to these trends; and monitoring and reporting on programme and project implementation.

KEY AU DECISIONS ON S&T

FIFTH ORDINARY SESSION OF THE AU EXECUTIVE COUNCIL – DECISION ON THE FIRST AFRICAN MINISTERS CONFERENCE ON S&T:

The fifth Ordinary Session of the AU Executive Council took place from 30 June to 3 July 2004, in Addis Ababa, Ethiopia. The Executive Council adopted a decision regarding the report of the first NEPAD Ministerial Conference on Science and Technology (EX.CL/Dec.117 (V)). In the decision, the Executive Council:

- reaffirmed the fundamental role of S&T in the continent's development strategies;
- endorsed the Declaration of the first Ministerial Conference on Science and Technology, and its priorities, commitments and governance structure, on the understanding that it will function under the AU under an interim arrangement, pending the operationalization of the Specialized Technical Committees; and
- requested the AU Commission Chair to take all necessary measures to incorporate the NEPAD Science and Technology Programme into the AU Strategic Plan and Work Programme for S&T.

EIGHTH ORDINARY SESSION OF THE AU EXECUTIVE COUNCIL – DECISION ON THE SECOND AFRICAN MINISTERS CONFERENCE ON S&T:

The eighth Ordinary Session of the AU Executive Council took place from 16-21 January 2006, in Khartoum, Sudan. In adopting a decision on the report of the second African Ministerial Conference on Science and Technology (EX.CL/Dec.254 (VIII)), the Executive Council agreed that the AU Commission, the NEPAD OST and member states should be responsible for mobilizing financial and technical resources to implement the programmes of the CPA. The Executive Council also endorsed the call, contained in the report, for member states to raise their national S&T budgets to 1% of GDP. The Executive Council further endorsed the establishment of a high-level AU-NEPAD-UN Educational, Scientific and Cultural Organization (UNESCO) Working Group to prepare a comprehensive programme for establishing and funding centers of excellence in Africa as part of implementing the CPA.

For a detailed institutional history of the AU, NEPAD and processes related to S&T matters in Africa, please visit <http://www.iisd.ca/africa/amcost>.

REPORT OF THE EXTRAORDINARY AMCOST CONFERENCE

This report summarizes the opening and closing sessions of the experts and ministerial meetings. It then addresses each substantive agenda item in turn, summarizing the discussions on that item during the experts and ministerial meetings and the final outcome on that item.

EXPERTS MEETING

OPENING SESSION: In welcoming delegates on Monday, Bothale Tema, Director of Human Resources, Science and Technology (HRST), AU Commission, highlighted that the theme of the 2007 Summit provides a rare opportunity for African leaders to focus on STI issues. She also explained that the HRST Department, together with the UN Economic Commission for

Africa (UNECA), will host an exhibition at the Summit on “Science and Technology in Action” and invited delegates to consider S&T projects that are making a difference to peoples’ lives for inclusion in the exhibition. She further outlined that the January 2006 meetings of the AU Executive Council and the AU Assembly led to the designation of a second African “decade for education” from 2006-2015, and that two of the focal areas for this decade are improving the quality of science and maths education and revitalizing higher education in Africa.

She highlighted consultative conferences conducted in the lead up to the Extraordinary AMCOST Conference and the 2007 Summit, and noted that these conferences emphasized the need to: increase the number of people entering S&T fields; make S&T available to ordinary Africans; and improve education in S&T. She distinguished the Extraordinary AMCOST Conference from other AMCOST conferences, noting its focus on policy-related activities undertaken by the HRST Department and the NEPAD OST was designed to assist delegates in developing ministerial recommendations to the 2007 Summit.

Chair of the experts meeting, Papa El Hassan Diop, Director General, African Biotechnology Agency (Senegal), highlighted that this conference was the “last direct line” in the S&T process leading to the 2007 Summit. He noted that AMCOST should be a source of pride in that it demonstrates how Africa can assist itself via the application of S&T. He emphasized the need to convince heads of state and government of the importance of S&T as a viable tool for development and urged delegates to develop a set of pertinent recommendations for deliberation by national leaders.

ORGANIZATIONAL MATTERS: Chair Diop suggested, and delegates agreed, that Egypt would serve as Vice-Chair.

Regarding the draft agenda (EXT/AU/EXP/ST/1 (II)), Egypt proposed an additional item, namely, consideration of a concept paper on its proposal for an African Supreme Council for Scientific Research. Director Tema suggested discussion of this issue within the agenda item on the AMCOST Bureau's proposal for the African Presidents' Council for Science and Technology (APCST), and delegates agreed, adopting the agenda without amendment. Regarding the draft programme for the experts meeting (EXT/AU/EXP/ST/PROG (II)), Chair Diop proposed, and delegates agreed, that the draft report of the African High-level Panel on Biotechnology (APB) and the African Strategy on Biosafety be presented consecutively and followed by a joint discussion, given the related nature of these items.

PRESENTATIONS AND DISCUSSIONS: On Monday and Tuesday, delegates listened to presentations and engaged in discussions on reports and proposals concerning a range of S&T issues. The presentations and discussions on each issue are summarized, together with the related discussions from the ministerial meeting, in the ‘Summary of Key Issues’ section of this report below.

CLOSING STATEMENTS: On Tuesday evening, Nagia Essayed, AU Commissioner for HRST (Libya), addressed delegates. Among other points, she noted that the ministers would examine the report of the experts meeting to consider what answers S&T can provide for realizing Africa's development and aspirations. She thanked delegates for focusing their attention on these matters. Kenya reaffirmed its offer to host the third



Ordinary Conference of AMCOST in 2007 and, at Chair Diop's suggestion, delegates responded to this offer with a round of applause.

At an additional session of the experts meeting on Wednesday morning, delegates agreed to the text of the draft Cairo declaration and their meeting report. Chair Diop referred to the renaissance of S&T in Africa, emphasized the importance of convincing heads of state and government of the key role of S&T in development, and reiterated his desire to ensure that the period after the 2007 Summit is an "era of action." He closed the experts meeting at 10:59 am.

MINISTERIAL MEETING

OPENING SESSION: On Thursday, Commissioner Essayed welcomed delegates, thanked the Government of Egypt for its hospitality and expressed hope that delegates' deliberations at the conference would be fruitful given the importance of S&T for achieving sustainable development. Noting that the theme of the 2007 Summit provides a golden opportunity to address S&T, she asserted the centrality of S&T in "well-balanced" development and in enabling the continent to fulfill its "deserved position," before summarizing activities undertaken in the lead up to the 2007 Summit.

Walter Erdelen, UNESCO's Assistant Director-General for Natural Sciences, said achieving the goals of the CPA requires empowering people with education and knowledge and that S&T is central to this. Noting UNESCO's readiness to cooperate in the implementation of the CPA and to align its projects with the objectives of the CPA, he summarized its activities in this regard, and outlined the role of the UN's NEPAD cluster on S&T in promoting coherence and coordination within the UN system.

Yaya Kene Gassama Dia, Chair of AMCOST and Senegal's Minister of Science and Technology, stressed that the 2007 Summit signals the determination of heads of state and government to help the continent through an ambitious programme based on STI and to emerge from marginalization. She said it is comforting to observe that the continent is beginning to exploit the potential offered by technology to radically transform the socioeconomic environment, and that doing so requires regional coordination and the allocation of adequate resources to R&D. She said scientific capacity is fundamental to the accumulation of knowledge as a basis for sustainable development, and that investing in S&T is a key component in ensuring sovereignty in development. She also noted the necessity of capitalizing on achievements in implementing the CPA, including the Canadian International Development Agency's commitment towards launching the network of centers of excellence.

Hani Helal, Egypt's Minister of Higher Education and State Minister for Scientific Research, described S&T as a driving force for economic development and underscored the importance of innovation in transforming economies from resource-based to knowledge-based. Noting that Africa shares common challenges and objectives, he said that, while the continent must be open to the international community, cooperation within Africa is vital. He concluded by highlighting Egypt's political will to ensure S&T is a driving force for sustainable development in Africa.

OVERVIEW OF THE PROGRAMME OF THE 2007

SUMMIT: Commissioner Essayed said that the 2007 Summit provides an opportunity to focus on key S&T issues for Africa's development. Discussing the Summit's programme, she noted invited speakers on African STI, including: Mohamed ElBaradei, Director General of the International Atomic Energy Agency; Calestous Juma, APB Co-Chair and Director, Science, Technology and Globalization Project, Harvard University; Koichiro Matsuura, Director-General of UNESCO; Kamil Idris, Director General of the World Intellectual Property Organization (WIPO); Abdoulaye Wade, President of Senegal; and Paul Kagame, President of Rwanda. She stressed that interventions from other heads of state and government would also be welcome.

ORGANIZATIONAL MATTERS: Chair Gassama Dia introduced the programme of activities (EXT/AU/MIN/ST/PROG), which was adopted as the agenda.

Ministers and ministerial representatives from member states, including Algeria, Cameroon, Central African Republic, Chad, Comoros, Republic of Congo, Egypt, Gambia, Ghana, Kenya, Lesotho, Libya, Malawi, Niger, Nigeria, South Africa, Togo, Tunisia, Uganda, Zambia and Zimbabwe, introduced themselves. Some made brief opening statements, including on the importance of collaboration and complementarity and on the need to capitalize on the opportunity presented by the 2007 Summit.

PRESENTATIONS AND DISCUSSIONS: On Thursday and Friday, delegates listed to presentations on the draft report of the APB and the experts meeting report, and discussed these and other issues that had been addressed during the experts meeting. These discussions are included in the 'Summary of Key Issues' section of this report below.

CLOSING SESSION: In her closing address on Friday, Commissioner Essayed thanked the Government of Egypt, the AU Commission and the NEPAD OST Secretariat for ensuring the success of the conference. She stressed that the conference had been one of the most important events held in preparation for the Summit. She suggested that the Summit become a "summit of hope" and called on ministers to continue to collaborate on achieving the vision of STI for Africa's development.

Chair Gassama Dia thanked all delegates, the Government of Egypt, the AU and NEPAD, and welcomed the commitments adopted by ministers. She said the 2007 Summit has the opportunity to bring about a new emergence of S&T in Africa and noted her conviction that the conference recommendations would be adopted at the Summit and signal the successful implementation of the CPA. She urged ministers to implement the recommendation to allocate at least 1% of GDP to S&T research and development.

Minister Helal described the AMCOST conference outcomes as a necessary step in conveying the message of African S&T ministers to the 2007 Summit. He said the Summit outcomes should enhance the implementation and promotion of S&T as a driving force for economic development in Africa. He noted that while declarations are important, it is necessary to be pragmatic in meeting Africa's challenges, which requires cooperation. He thanked Kenya for the offer to host the third AMCOST session in 2007, and expressed hope that the implementation of Africa's

S&T agenda would have a “snowball effect” and ensure greater cooperation across the continent. Chair Gassama Dia closed the meeting at 12:30 pm.

SUMMARY OF KEY ISSUES

AFRICAN STRATEGY ON BIOSAFETY: The African Strategy on Biosafety (the Strategy) was discussed in the experts meeting on Monday (EXT/AU/EXP/ST/4 (II)). The discussions on the Strategy were recorded in the experts meeting report and the AMCOST report, which were agreed to on Wednesday and Friday respectively. In the Cairo Declaration of the Extraordinary AMCOST Conference (Cairo Declaration), ministers also committed to work together to develop a 20-year African Biotechnology Strategy with specific regional technology goals, and to develop and harmonize national and regional regulations that promote the application and safe use of modern biotechnology.

Experts Meeting: Introducing the Strategy, Bather Koné, HRST Department, said a common African position is important for equipping states with the tools necessary to implement the Cartagena Protocol on Biosafety. Noting that biotechnology presents numerous risks, he stated that all countries, regardless of whether they have ratified the Cartagena Protocol, must work on biosafety. He said there are varying levels of development and intentions in Africa regarding biotechnology and biosafety and emphasized the importance of capacity building for international negotiations and of involving the Diaspora in such activities.

Outlining the importance of information exchange, Koné suggested that an AU coordination unit is needed to support an institutional framework, to follow up on the Strategy and to collect, compile and validate information. He also emphasized the importance of national and regional strategies, and of strengthening national focal points and the Regional Economic Communities (RECs), further noting that activities via centers of excellence would be better than addressing problems at the national level alone. On policy and legal frameworks, Koné said the African Model Law on Safety in Biotechnology was conceived to address gaps in the Cartagena Protocol, and that resources for the implementation of legislation are necessary. On international cooperation, he underlined the importance of finding African solutions to African problems, adequate funding for this purpose, and South-South cooperation. Experts discussed this agenda item together with the agenda item on the African High-level Panel on Modern Biotechnology (see below).

DRAFT REPORT OF THE AFRICAN HIGH-LEVEL PANEL ON MODERN BIOTECHNOLOGY (APB): The draft report of the APB (EXT/AU/EXP/ST/3 (II)) was discussed in the experts meeting on Monday and in the ministerial meeting on Thursday. The discussions on the draft report were recorded in the experts meeting report and the AMCOST report, which were agreed to on Wednesday and Friday respectively. Ministers also agreed, in the Cairo Declaration, to endorse the report, and committed to developing a 20-year African Biotechnology Strategy.

Experts Meeting: Presenting the draft report, Ismail Serageldin, APB Co-Chair (Egypt), observed that Africa has traditionally focused on biotechnology risk management without harnessing the potentials of biotechnology. He said that this

over-emphasis on risk had led to Africa’s marginalization from several “technological revolutions.” He highlighted the importance of creating appropriate regulatory measures and recommended a “co-evolutionary” approach that would allow for regulations to evolve as technology changes. Among the APB’s recommendations, he stressed the need for a regional approach and the creation of regional innovation communities and biotechnology missions. He urged investments in infrastructure, outreach to encourage the participation of women and industry, and the commercialization of biotechnology.

Continuing with the presentation, APB Co-Chair Juma (Kenya) said the APB’s remit was to investigate the role of all forms of biotechnology in contributing to Africa’s economic development. He said the APB was guided by the view that it would not be helpful to focus on biotechnology innovation without considering safety and vice versa. He said these two elements must co-evolve and stressed the need to take carefully considered risks when applying new technologies.

Juma said that a new approach was being developed under the leadership of the AU, where leaders are more eager to identify problems, look at the technological options and then assess risks. He highlighted the need for Africa to develop its own technologies and stressed that the APB’s recommendations were developed with the guiding principles of innovation and entrepreneurship in mind. He said the APB had proposed the adoption of 20-year regional programmes in biotechnology development. He also noted that the APB recommended that regional innovation communities develop common regulatory frameworks to facilitate collective decision making based on harmonized legislation and measures.

On the role of international partnerships, Juma noted the need for Africa’s ministers of foreign affairs to conduct “technology diplomacy” to promote technology partnerships. He also stressed the importance of harnessing and expanding the role of the Diaspora in S&T development, and suggested the twinning of universities. Regarding finances, he said the APB recommended diversified funding sources and creative approaches, including tax and banking incentives and private sector contributions. He said significant investment in executive leadership is needed and suggested strengthening the capacity of national leaders to engage in S&T debates by establishing S&T advisory offices at the national and REC level.

In the ensuing discussion, several delegates noted the importance of considering biosafety together with biotechnology. South Africa, with support from Kenya, suggested that regional arrangements for biotechnology need institutional or country leadership. Zimbabwe said biotechnology offers opportunities for addressing Africa’s developmental challenges and highlighted the need to address concerns about modern biotechnology through progressive biosafety frameworks that would still allow countries to take advantage of biotechnology. Kenya expressed support for regional innovation communities but noted the need to balance such initiatives with national systems to ensure that national interests are not compromised.

The Secretariat of the UN Convention to Combat Desertification (UNCCD) suggested delegates develop a recommendation to the UNCCD Secretariat to seek out S&T

partnerships focused on Africa in accordance with its mandate. The International Council for Science (ICSU) noted the importance of considering biotechnology within the context of other areas of science.

In response, APB Co-Chair Juma noted the importance of local-level authorities in promoting technological development and the role of physical infrastructure in advancing science. He also suggested S&T resource facilities be considered part of the core infrastructure needed for development. APB Co-Chair Serageldin emphasized that centers of excellence cannot simply be virtual entities, but need a human dimension. He also noted many technologies have applications not originally envisaged by their developers.

Ministerial Meeting: In introducing the draft report, APB Co-Chair Serageldin said biotechnology is developing rapidly and Africa is being left behind, particularly in terms of knowledge. He said the length of the cycle by which knowledge is transformed into technology is shortening and that life sciences now impact all areas of human activity. In this context, he outlined key questions for Africa: whether education and training systems nurture scientific abilities and innovation; whether the continent has a way to systemically identify technologies; and how to ensure scientific developments are transformed into useful technologies. He discussed the APB's history, its key findings and ways to build S&T capacities, including a focus on, *inter alia*: S&T policies; human resources; institutions, including centers of excellence; public-private partnerships; and innovative funding sources. On organizing for action, he noted the roles of: the 2007 Summit; AMCOST; national entities; the AU Commission; and NEPAD, and said more could be done through developing a multistakeholder forum that includes NGOs, the private sector, media and academia. He also underscored the need for a "special and more permanent advisory structure" to keep S&T on the agenda of national leaders, regardless of whether such a structure takes the form of the proposed APCST. He concluded by noting declarations, plans and targets do not equal action and that moving forward requires concrete capacity building.

PROPOSAL FOR THE FORMATION OF AN AFRICAN PRESIDENTS' COUNCIL FOR SCIENCE AND TECHNOLOGY (APCST): The AMCOST Bureau's proposal for the formation of an African Presidents' Council for Science and Technology (EXT/AU/EXP/ST/2 (II)) and Egypt's proposal for an African Supreme Council for Scientific Research (Supreme Council) were discussed in the experts meeting on Monday and the ministerial meeting on Thursday and Friday. The discussions on this agenda item were recorded in the experts meeting report and the AMCOST report, which were agreed to on Wednesday and Friday respectively.

John Mugabe, NEPAD OST, presented the proposal being developed by the AMCOST Bureau for the formation of the APCST. Noting the lack of follow-up on STI issues in the past, he emphasized that the creation of the APCST could enhance the focus on STI issues over the long term and avoid the isolated consideration of interrelated STI issues. He said the APCST could, *inter alia*: review implementation of decisions taken at AU summits; provide leadership for African engagement with international bodies; promote consideration of STI issues within RECs and subregional development strategies; leverage and

mobilize African and international resources; establish inter-ministerial committees; and stimulate policy processes in AU bodies such as the Pan-African Parliament. He said the APCST could: be composed of two presidents from each of the five regions; report to the AU Summit annually; and be served by the AU Commission as the administrative secretariat. He also noted the possibility of creating a panel that could advise the APCST.

In the ensuing discussion, Kenya and ICSU suggested the APCST proposal specify that the advisory panel would be made up of high-caliber, practicing scientists. Kenya also suggested clarifying whether the advisory panel was intended to be *ad hoc*. South Africa expressed concern about the practicality and aims of the proposed body, and suggested that if such a body were created, it should meet biannually.

Egypt pointed to the proposal of Hosni Mubarak, President of Egypt, to establish a Supreme Council, saying that such a council could complement the APCST and that leaders must play a central role in elevating the priority of S&T issues. Kenya remarked that having presidents reporting to other presidents is impractical and that the relationship between the principal and lower organs should be clarified.

Zambia and Director Tema said the purviews of AMCOST and the APCST need to be distinguished. ICSU noted concern that the APCST and AMCOST would duplicate efforts, suggesting that the APCST be explicitly tasked with funding research. UNECA said it supported the idea of the APCST, noting that since 2003 Africa has turned the corner in terms of managing S&T. Director Tema echoed concerns raised by others and said intellectual property (IP) issues need to be systematized and that greater specificity is needed to ensure the APCST raises the level of discourse. However, she noted that the creation of the APCST would provide a way to convey the importance of S&T.

REPORT OF THE CONFERENCES OF THE DIASPORA AND OF AFRICAN NGOs ON THE POPULARIZATION OF S&T: The report of the conferences of the Diaspora and of African NGOs on the popularization of S&T (EXT/AU/EXP/ST/6 (III)) was discussed during the experts meeting on Monday and in the ministerial meeting on Thursday. These discussions were recorded in the experts meeting report and the AMCOST report, which were agreed to on Wednesday and Friday respectively. Additionally, in preambular language in the Cairo Declaration, ministers "take account" of the recommendations made at these conferences and commit to maximizing the effective use of African scientists in the Diaspora and facilitating the relocation of science-based small and medium-sized enterprises (SMEs) of the Diaspora for the development of the continent.

Experts Meeting: Presenting the report, Ahmed Hamdy, HRST Department, said the 2006 AfriCANDO Hemispheric Summit on Science, Technology and Research for Africa's Development, held in Miami, the United States, from 20-22 July 2006, considered how the Diaspora could contribute to efforts to implement the CPA. He outlined conference recommendations, including: defining the African S&T "destiny" by bringing together all scientific bodies for discussions and collaboration; ensuring that the Diaspora participates in the CPA; convening S&T conferences that emphasize partnerships with the Diaspora; and establishing an African Diaspora Development Fund to finance small businesses and other projects on the continent.

Hamdy then explained that the second African Congress for Scientific Research and Technology, held in Cairo, Egypt, from 6-8 November 2006, was organized around the theme of popularization and public understanding of the importance of scientific research and technology for Africa's development. He outlined conference recommendations, including establishing: national steering committees to draw a "scientific road map" at the country level; an African Council for Scientific Research and Technology; an S&T fund to support R&D in Africa; and mutual cooperation mechanisms among African institutions.

In the ensuing discussion, Egypt provided an example of how it has transformed the "brain drain" into a "brain gain" by allocating certain laboratory facilities to young Egyptian researchers who have undertaken doctoral research outside the country.

Urging collaboration between organizations interested in engaging the Diaspora, ICSU said it is documenting members of the Diaspora involved in high-level global scientific unions, and that it plans to further consider how best to deploy the Diaspora to meet Africa's objectives. The AU's Economic, Social and Cultural Council highlighted the importance of increasing the role of women in S&T, promoting science among Africa's youth, and involving the media and the private sector in promoting S&T programmes. Western Hemisphere African Diaspora Network (WHADN) suggested each AU member state institute a Diaspora policy and highlighted the need to consider how the Diaspora can contribute from elsewhere rather than considering only how to bring the Diaspora home. Calestous Juma outlined strategies for engaging the Diaspora, including having a long-term national programme on some aspect of technology to which individual members of the Diaspora can align themselves.

In response, Hamdy noted that the AU plans to develop a survey and a databank of scientists in the five African regions and in the Diaspora. He noted the importance of creating a domestic environment conducive to the return of Diaspora members and of redefining research priorities and programmes in Africa.

CONCEPT PAPER ON ESTABLISHING A PAN-AFRICAN INTELLECTUAL PROPERTY ORGANIZATION (PAIPO): The concept paper on establishing PAIPO (EXT/AU/EXP/ST/8 (II)) was considered in the experts meeting on Monday and in the ministerial meeting on Thursday. These discussions were recorded in the experts meeting report and the AMCOST report, which were agreed to on Wednesday and Friday respectively. Additionally, in the Cairo Declaration, ministers committed to encouraging effective knowledge management and the better use of IP, and recommended the AU Heads of State and Government approve the establishment of PAIPO.

Experts Meeting: Providing an overview of the concept paper, Khalil Timamy, HRST Department, said there was a desire within the Department to assist the two African regional IP organizations, the African Regional IP Organization and the Organization Africaine de la Propriété Intellectuelle (OAPI), to address problems related to geographical representation and inclusiveness. He identified IP challenges facing Africa, including the lack of an African umbrella institution with inclusive membership and institutional changes at the global level created by the Agreement on Trade-related aspects of Intellectual

Property Rights (TRIPs). He said the PAIPO proposal emerged following discussions between the HRST Department, WIPO and Geneva-based representatives of the African Group. He said PAIPO would fulfill a similar function to that of the EU Patent Office and would increase the visibility of IP issues, particularly within Africa's political leadership. He suggested that AMCOST should, in principle, endorse the establishment of PAIPO, with modalities and functions to be further considered following endorsement at the 2007 Summit.

In the ensuing discussion, South Africa, Zimbabwe, Egypt and Uganda welcomed the proposal as a noble and timely idea. South Africa said the organization could play a significant role in influencing patent registration, particularly the patenting of genetic codes at an early stage in their development. Zimbabwe stressed the importance of identifying arrangements that address existing institutions and involve RECs. Egypt called for the establishment of PAIPO to be accelerated. Uganda said the proposal needs to address the high costs and administrative burdens associated with patenting, particularly for SMEs and traditional medicine practitioners.

Bather Koné, HRST Department, suggested that PAIPO could address the protection of genetic resources and biopiracy, while Calestous Juma suggested the proposal be addressed within the context of knowledge management and not exclusively within the confines of IP protection. Juma also said an important function of PAIPO would be to make information available on the expiration of patents in order for them to be continuously protected before falling into the public domain. Ismail Serageldin, representing Egypt as Vice-Chair of the experts meeting, said the supportive spirit of delegates' discussions was clear and that there was an overarching need for further discussion of the proposal.

AFRICAN STRATEGY FOR TECHNOLOGY TRANSFER AND ACQUISITION OF DOMESTIC TECHNOLOGICAL CAPABILITIES (TTATC): The African Strategy for TTATC (EXT/AU/EXP/ST/5 (II)) was discussed in the experts meeting on Monday. These discussions were recorded in the experts meeting report, which was agreed to on Wednesday. Additionally, in the Cairo Declaration, ministers committed to encouraging effective technology transfer, as well as South-South and North-South cooperation in S&T, and recommended the AU Heads of State and Government support South-South cooperation in STI and enhance its role in international partnerships.

Experts Meeting: Khalil Timamy, HRST Department, presented the Strategy for TTATC, stating that the past emphasis on science resulted in neglect of technology transfer. Noting the vision of a vibrant system of technology transfer to empower Africa, he said that the Strategy for TTATC was guided by several core principles, including the importance of leadership, coherence and sustaining momentum, and the need to promote local ownership, equity and inclusiveness.

On the Strategic Framework contained in the Strategy for TTATC, Timamy discussed the need to develop proactive mechanisms to acquire technology. On technological governance, he said member states must develop umbrella legislation, as well as rules and institutions to influence the rate and direction



of technological change. On the institutional framework, he said agencies were needed to identify technological needs and gaps and to engage in technology planning.

Timamy emphasized the need to train not only scientists but also S&T policy specialists. He also outlined the need for commercialization of R&D outputs and for a robust IP system and funding, suggesting that 25% of R&D funding be directed towards technology transfer.

In the ensuing discussion, Kenya said national innovation should be emphasized, and noted the need to recognize the interconnectedness of agencies concerned with innovation. WHADN noted the lack of policy experts in the area of S&T, and underscored that financial resources depend on highlighting linkages between S&T and wealth creation. Juma highlighted the growing convergence between S&T policy and economic policy and the need for collaboration with the AU's industry and technology sectors on innovation policy.

REPORT OF THE FIRST AU CONGRESS OF SCIENTISTS AND POLICY MAKERS: The report of the first AU Congress of Scientists and Policy Makers (EXT/AU/EXP/ST/9 (II)), held in Alexandria, Egypt, from 27-29 October 2006, was discussed during the experts meeting on Tuesday. These discussions were recorded in the experts meeting report, which was agreed to on Wednesday. Additionally, in preambular language in the Cairo Declaration, ministers "take into account" the report of the Congress.

Experts Meeting: Presenting the report, Director Tema explained that the Congress was held in preparation for this conference and the 2007 Summit, and provided a space for creative thinking and for S&T policy makers and practitioners to engage in dialogue on the role of S&T in Africa's development. She outlined the themes of the Congress, namely: African solutions for African challenges through S&T; growing and sustaining African human capital; and creating an enabling environment for S&T development. She then elaborated on the recommendations of the Congress, which included: building a culture of S&T innovation; development of indigenous knowledge and technologies; community outreach and popularization of S&T; improving the quality of science education; S&T cooperation and networking centers of excellence; encouraging governments to implement their commitment to the 1% GDP goal; ensuring technology transfer and domestication; and encouraging governments to have dedicated S&T ministries.

Director Tema also introduced the Alexandria Declaration, agreed to on 29 October 2006, noting it recommended that heads of state and government: promote S&T by setting up national councils for S&T led by heads of state and government; establish mechanisms to realize the 1% GDP goal, in particular an AU monitoring review committee to ensure faster implementation of the goal; create favorable conditions for the mobility of scientists, engineers and technicians by introducing AU measures such as flexible visa arrangements and an AU mobility fund; declare 2008 the Year of S&T; and dedicate future AU Summits to STI issues.

In the ensuing discussion, Nigeria cautioned against a sectoral approach to S&T budgeting, suggesting countries should consider the S&T implications of other national policies, such as those on water and health. He also said Africa must "decode" S&T components of Indian and Chinese investment in Africa.

Zimbabwe reported that it was considering declaring 2007, rather than 2008, the year of S&T domestically, so as to build on the momentum created by the 2007 Summit. The UNCCD Secretariat urged greater collaboration between the UNCCD and AMCOST, while UNESCO reminded delegates that the Congress sought to look at systemic approaches to making S&T development work for Africa rather than looking at sectoral issues.

In response, Director Tema supported the need to find creative ways to unlock the 1% GDP goal. She also emphasized the need to insist that raw materials be processed in Africa before being exported and noted this requires S&T capacity. She highlighted the time needed to fully prepare for a dedicated year of science and supported UNESCO's comment that the Congress was not sector specific. On collaboration with international agencies, she said Africa is presenting itself as a multilateral entity via the AU and that African solutions to Africa's challenges are important.

DESIGNING A MODEL FOR THE AFRICAN SCIENCE AND INNOVATION FACILITY (ASIF) TO IMPLEMENT THE CPA:

This issue was discussed in the experts meeting on Tuesday, with delegates considering a paper on designing a model for ASIF (EXT/AU/EXP/ST/11 (II)), and in the ministerial meeting on Thursday. These discussions were recorded in the experts meeting report and the AMCOST report, which were agreed to on Wednesday and Friday respectively. Additionally, in the Cairo Declaration, ministers committed to "improving the design, and developing a legal instrument, for the establishment of the African Science and Innovation "Fund" as an intergovernmental mechanism to mobilize technical and financial resources for the implementation of the CPA."

Experts Meeting: Introducing the paper, John Mugabe, NEPAD OST, urged governments to dedicate 5% of GDP to ASIF and ensure that it is functional in 2007. He outlined the history of ASIF and said that, based on a consultative process, the proposed functions of ASIF could include: mobilizing resources and developing and implementing guidelines and procedures for doing so; developing networks of centers of excellence; monitoring and evaluation; and procuring policy advice for the AU and AMCOST.

He explained that three institutional models had been considered, namely: an entity in an existing development bank; a consortium of existing organizations; and an intergovernmental organization. He outlined several concerns related to the first two models and proposed that AMCOST consider the establishment of an intergovernmental arrangement instead. He said that under this arrangement a governing council constituted by AMCOST would oversee ASIF, that a reconstituted AMCOST Steering Committee would serve as the executive board, and an international scientific and technical advisory board would advise the ASIF executive board on which programmes to finance. He said under this model, ASIF would be composed of existing agencies, with a technical secretariat and a fund manager, and could evolve into a chartered organization.

In the ensuing discussion, UNECA said ASIF's objectives are still vague and proposed clarifying the role of development partners, ASIF target markets and available resources. He proposed a fourth institutional model, whereby ASIF would be a fund open to contributions from African countries and development partners that would allocate funds to pre-designated

projects, with an independent monitoring and evaluation function. Algeria questioned whether centers of excellence should be included in ASIF and expressed support for the intergovernmental institutional option with high-level decision making through AMCOST. Nigeria said ASIF should fulfill a coordination function and focus only on multinational projects.

ICSU proposed a minimum allocation of at least US\$1 million per project. He said ASIF should not develop programmes and projects but merely coordinate resource mobilization. He also suggested ASIF not be involved in evaluation and that funding be based on contributions from countries, development partners and the private sector. The UNCCD Secretariat noted concern about the impact of ASIF on the development of national funding facilities and described its experiences in the development of national desertification funds. UNESCO cautioned against the creation of too many institutions and urged the NEPAD OST to clarify the relationship between ASIF, AMCOST, and APCST.

Zimbabwe said Africa requires its own S&T fund to implement the programmes and projects agreed by AMCOST. She reiterated that the AU, NEPAD and AMCOST are part of the same continental body. Director Tema clarified that ASIF emerged from the CPA, which contains Africa's regional programmes and priorities. She said ASIF would not be involved in the development of projects and that it would become the mechanism for mobilizing resources for the implementation of Africa's S&T programmes. WIPO asked if ASIF would address IP issues and if it would be used for commercializing and promoting R&D. The Gambia suggested that ASIF focus on new investment into Africa, particularly from China. WHADN underscored the integral role of the Diaspora in resource allocation, suggested ASIF be a private sector fund, and provided an overview of the African Diaspora Development Fund. UNECA cautioned against the consortium model and urged delegates to take advantage of AMCOST as the appropriate platform to provide political leadership to ASIF.

In response, Mugabe noted that many issues raised in the discussion were clarified in the paper on ASIF. He said that ASIF is not a new organization but an institutional arrangement of existing bodies and urged that AMCOST and countries not shy away from establishing the required institutional arrangements. He said there would be no conflict of interest with the various African institutions working on S&T and clarified that ASIF would not be developing new projects but merely mobilizing technical and financial resources. He clarified that the international scientific and technical advisory board would be responsible for quality control and project evaluation. He further reiterated that ASIF would support regional and continental projects and would not duplicate national efforts.

CRITERIA AND GUIDELINES FOR ESTABLISHING AFRICAN NETWORKS OF CENTERS OF EXCELLENCE IN S&T:

The criteria and guidelines for establishing African networks of centers of excellence in S&T (EXT/AU/EXP/ST/12 (II)), and other issues related to establishing such a network, were discussed in the experts meeting on Tuesday and in the ministerial meeting on Thursday. These discussions were recorded in the experts meeting report and the AMCOST report, which were agreed to on Wednesday and Friday respectively. Additionally,

in the Cairo Declaration, ministers committed to using common guidelines for identifying and establishing networks of centers of excellence in S&T.

Experts Meeting: John Mugabe, NEPAD OST, introduced the criteria and guidelines, outlining that centers of excellence are needed to maximize the benefits of scarce resources and to exploit institutional diversity. Noting that a definition of centers of excellence does not exist and that such centers could take numerous forms, he said key features include, *inter alia*: a critical mass of reputable scientists; an identifiable governance structure; contribution to development; stability of funding, independent of AMCOST; flexibility; and ability to network. He discussed possible guidelines for identifying centers of excellence, including the need for centers to: be geographically distributed; capitalize on regions' comparative advantages; utilize existing institutions; and have a regional, rather than a national or local, outlook.

In the ensuing discussion, South Africa questioned whether minimum outputs would be specified for centers of excellence and, with ICSU, emphasized the importance of the ability of centers to translate results into useful products and services. Nigeria noted concern that benchmarks reflecting international standards may be biased against African institutions and may support "brain colonization" while overlooking African problems. Zimbabwe noted concern that a focus on outputs would disadvantage small institutions and, with UNECA, stressed the need to focus on and scale up best practices. UNECA also discussed the need for both measures to remove barriers and the dynamic vetting of institutions.

ICSU and the UNCCD Secretariat supported capitalizing on existing institutions, and the UNCCD Secretariat cautioned against duplicating the efforts of the African Ministerial Conference on Environment (AMCEN). ICSU also emphasized the importance of extending beyond routine research and suggested that centers should not be "possessed by Africanism," but should accept outside experts. Director Tema said she hoped the centers of excellence would be a cross-cutting model. Ismail Serageldin noted the Egyptian National Research Centers' work to prevent "brain drain."

In response, Mugabe noted that indicators of performance for centers of excellence covered best practices and the generation of products resulting from research. He said the indicators based on percentages do not disadvantage small institutions, and that the involvement of the private sector needs to be discussed. He emphasized the importance of institutional leadership of the centers of excellence and stressed that the organic nature of centers of excellence supported the use of existing institutions. He also said that centers of excellence should prioritize support for scientists not in the Diaspora.

REPORT OF THE EXPERTS MEETING: The draft report of the experts meeting (EXT/AU/EXP/ST/Draft/Rpt. (II)) was discussed in an additional session of the experts meeting held on Wednesday morning, when it was agreed to with amendments (EXT/AU/EXP/ST/Rpt. (II)). The report was then discussed in the ministerial meeting on Thursday, leading to some additional amendments to the agreed document. Additionally, in preambular language in the Cairo Declaration, ministers "noted" the report of the experts meeting.



Experts Meeting: Delegates worked through the text of the draft report page by page, making amendments to the text throughout. In addition to numerous editorial changes, the report was amended to: recognize that international organizations, in addition to countries, could assist Africa in building biotechnological capacities; minimize duplication of information already contained in the report of the first AU Congress of Scientists and Policy Makers; note that the AU should accelerate the formation of PAIPO “with the full participation of existing arrangements” such as the African Regional IP Organization and OAPI.

After a discussion on whether India and China should be singled out with regard to technology transfer, the meeting report was amended to emphasize that African S&T policy makers should “facilitate the decoding and domestication of relevant technologies from all sources for its development needs” and “facilitate and ensure value addition to its vast raw material resources, particularly for export.”

Proposed changes that were not adopted included a WHADN suggestion to include reference to the recommendations arising from the AfriCANDO Hemispheric Summit.

Ministerial Meeting: In presenting the experts meeting report (EXT/AU/EXP/ST/Rpt. (II)), experts meeting Chair Diop outlined key discussions on the various proposals and reports considered by the experts. On biosafety and biotechnology, he emphasized: discussions suggesting the usefulness of biotechnology and of coupling discussions on biotechnology with discussions on biosafety; the need to master technologies to minimize risk; the need to utilize a regional approach to appropriating biotechnology with the aim of improving welfare; the importance of partnerships; and the need for Africa to speak with one voice on matters relating to the Cartagena Protocol.

On the proposal for the APCST, he noted the relevance of Egypt’s proposal for a Supreme Council and discussions on the need to distinguish the roles of the APCST and AMCOST. On the African Strategy for Technology Transfer and Acquisition of Domestic Technological Capabilities (TTATC), he noted the need to emphasize the convergence of S&T with economic and industrial policies and to place technology transfer in the context of innovation. On the proposal to establish PAIPO, he noted the existence of two related organizations, the African Regional Intellectual Property Organization and OAPI, but said their purviews are not continental. On the first AU Congress of Scientists and Policy Makers, he noted their call for: “science for politics and politics for science”; African solutions for African challenges; and the creation of an enabling environment for S&T. On the criteria and guidelines for establishing a network of centers of excellence on S&T, he said that implementation of the CPA depends on dynamic centers of excellence.

Chad supported the creation of networks of centers of excellence. Kenya and Zimbabwe said that the delayed distribution of the experts meeting report hindered meaningful discussion of it. Egypt suggested the importance of convincing heads of state and government of the importance of S&T as a driving force for development. Zimbabwe emphasized the need to consider a “marketing strategy” for S&T, and called for clarification of the theme of the 2007 Summit and for 2007, rather than 2008, to be the Year of S&T. Zambia stressed the

importance of coordination. Nigeria noted the need to improve basic infrastructure to create conditions attractive to those in the Diaspora and to let existing institutions mature prior to creating new institutions. The Republic of Congo questioned ministers’ expectations of their heads of state and government, noting the need for the experts meeting report to: be clear in this regard, prioritize recommendations, and ensure research is conducted “in the service of Africa.” Comoros cautioned against putting science in the hands of politicians. Ghana noted its support for recognizing women in S&T and said it is incumbent on AMCOST to ensure media coverage in its quest to develop Africa through S&T.

On the proposed APCST, Chair Gassama Dia, *inter alia*, said it had been identified as a mechanism for sensitizing heads of state and government to S&T issues. Egypt, with Zambia, South Africa and Chad, opposed the creation of such a body. Chad said that funds should be spent directly on research instead of on the creation of such a body. Egypt suggested the tasks proposed for the APCST are more appropriate for AMCOST and said the number of additional committees should be minimized, however, he also suggested the creation of a “Supreme Council” as a possible alternative. Uganda supported the creation of the APCST given the need to raise the profile of S&T. In response, experts meeting Chair Diop said concerns over creating the APCST reflected experts concerns and ministerial meeting Chair Gassama Dia noted the emergence of an apparent consensus opposing the creation of the APCST.

On biotechnology, Zimbabwe urged the synthesis of discussions on biosafety and biotechnology. South Africa suggested prioritizing areas of interest within biotechnology and emphasizing the transformation of biotechnology into goods and services valuable to Africa. Chad emphasized the importance of biosafety.

On financing, Uganda underscored the need to dedicate resources and South Africa emphasized the need to put measures in place to implement decisions taken. Ghana underscored the importance of financing and supported the 1% GDP goal. Zambia and Egypt opposed the creation of ASIF as a new institution, with Zambia urging instead the strengthening of national-level facilities and commitment to the 1% GDP goal. In response, experts meeting Chair Diop emphasized the need for a flexible and transparent funding mechanism. Zimbabwe said AMCOST had previously recognized that NEPAD has no mechanism to obligate member states to contribute funds and thus had developed the idea of ASIF and emphasized the need not to be entirely dependent on outside donors.

On IP issues, Zimbabwe opposed the creation of PAIPO. In response, experts meeting Chair Diop emphasized the existing IP organizations focus on disparate geographical zones and that Arab states are not covered under existing organizations.

CAIRO DECLARATION: The Cairo Declaration of the Extraordinary Conference of AMCOST (EXT/AU/EXP/ST/13 (II)) was discussed in the experts meeting on Tuesday and Wednesday and in the ministerial meeting on Thursday and Friday, when it was adopted with amendments (EXT/AU/EXP/ST/13 (II), Rev.1).

Experts Meeting: In introducing the draft declaration, Director Tema outlined its components, including ministerial commitments, and recommendations to the AU Assembly of Heads of State and Government. Delegates discussed minor changes to the wording of the text and more substantive amendments.

Regarding a ministerial commitment to promote African research and training programmes, evidence-based policy making, and South-South and South-North cooperation in S&T, Egypt proposed reference to creating an enabling environment for research and training, and ICSU suggested reference to the importance of budgeting for promoting research and training, but these ideas were not incorporated. Noting the importance of innovation, ICSU queried whether the entire declaration should refer to “science, technology and innovation” rather than “science and technology.” Director Tema suggested drafting a separate paragraph to introduce the link between innovation in S&T research and development. After discussion of these ideas, Nigeria and others proposed, and delegates agreed to, the addition of language on promoting African R&D in S&T and developing innovation strategies for wealth creation and economic development.

Delegates also discussed the inclusion of text on cooperation over IP matters. WIPO suggested delegates could draft text referring both to cooperation over IP and to innovation in technology and training because these ideas are related. Nigeria, Malawi, the Gambia and ICSU proposed language committing ministers to the establishment of PAIPO. Egypt proposed language encouraging effective knowledge management mechanisms and better protection of IP. After further discussions, delegates agreed to include a ministerial commitment to establish PAIPO.

On the ministerial commitment to work together to develop a 20-year African Biotechnology Strategy, delegates discussed whether the declaration should explicitly reference the African Strategy on Biosafety. While delegates generally agreed on the interrelatedness of biotechnology and biosafety, opinions differed as to how this should be reflected in the text of the declaration. Some argued that explicit reference was unnecessary, as the connection between biosafety and biotechnology was implied in the text endorsing the APB’s report, while other delegates felt that an explicit reference to the connection was necessary. Delegates agreed to leave the text as drafted.

WHADN suggested adding a paragraph on establishing a national steering committee to draw scientific road maps at the national level. After Algeria, Egypt, Nigeria and ICSU voiced opposition to the idea, as they said such road maps already existed, delegates agreed not to insert the suggested text. The AU Economic, Social and Cultural Council suggested the declaration reflect recommendations from previous conferences concerning the role of youth and women in S&T, and delegates agreed to insert text to reflect this idea.

Regarding a recommendation to establish the APCST, Nigeria and South Africa said there had been no agreement on its establishment during the experts meeting and that the declaration should reflect the nature of those discussions. Director Tema said the draft declaration referred to the proposal from the AMCOST

Bureau and explained this proposal would be refined according to discussions during the experts meeting and resubmitted to the ministerial meeting. Egypt said reference to its proposal for a Supreme Council should also be included in the declaration, while Nigeria and South Africa expressed concern about including such a reference. Director Tema suggested, and delegates agreed, to move the paragraph to the section on ministerial commitments.

Zimbabwe questioned the significance of a recommendation to support the mobility of scientists, an AU fund to promote such mobility and visa flexibility. Director Tema said this recommendation emanated from the first Congress of African Scientists and Policy Makers and emphasized the need to facilitate the movement of scientists across the continent. Nigeria and Egypt noted the need for flexible visa arrangements, and ICSU questioned the establishment of an AU fund and proposed language on the need to promote and facilitate the mobility of scientists, engineers and technicians. Delegates agreed to delete references to the AU fund and to visa “facilitation” and to refer to South-South cooperation.

On the recommendation for a “once-off” endowment to ASIF, Kenya said the declaration should emphasize the establishment of ASIF and, supported by Zimbabwe, said the process should not be limited to a “once-off” endowment. Nigeria, supported by South Africa and Kenya, expressed concern that ministers had already committed to finalizing the ASIF process and that it would be inconsistent to have language urging the 2007 Summit to establish an endowment while the process of finalizing ASIF is ongoing. Delegates agreed to delete this text.

Ministerial Meeting: On preambular language recognizing the critical role of S&T for socioeconomic development, economic competitiveness and the attainment of the MDGs, Uganda suggested explicit reference to the commitment of African governments to meet the MDGs but this language was not inserted. On preambular language “noting” the decision of heads of state and government to dedicate the 2007 Summit to STI for Africa’s socioeconomic development, Uganda suggested text recognizing the key role of S&T ministers in preparing for this Summit, while Zimbabwe suggested, and delegates agreed, that this was already implied through the opening phrase of the declaration, which states “we, the ministers responsible for science and technology.” Egypt suggested the term “noting” might be too weak and Chair Gassama Dia said an alternative word would be found to give greater weight to the decision taken by heads of state and government.

On a ministerial commitment to work together to develop a 20-year African Biotechnology Strategy with specific regional technology missions to be implemented through the RECs, Algeria suggested, and delegates agreed, referring to Africa’s five regions rather than to the RECs given that North Africa does not have a REC. Uganda suggested that 20 years is too long for such a Strategy. APB Co-Chair Calestous Juma clarified that the APB’s research indicated that this timeframe is necessary to ensure full implementation and commercialization and attract international partnerships. Delegates agreed to accept the text as drafted.

On a ministerial commitment to promote African research and training programmes, evidence-based policy making, and South-South and North-South cooperation, South Africa suggested the

inclusion of a concrete target and said a target of 1% of GDP within four years might be appropriate. Supporting South Africa, Uganda said it is not simply a lack of money that prevents African countries from making such commitments but rather a lack of appreciation of the role of S&T in Africa's development. Zambia expressed concern with South Africa's proposal given differing levels of development throughout the continent and Libya queried whether it was within ministers' authority to make such a commitment. Supporting the need for concrete benchmarks, Zimbabwe and Uganda clarified that a target of 1% of GDP has previously been agreed to and Kenya noted such a target would not be mandatory. South Africa also clarified that a percentage-based goal meant the target for each country would vary, allowing richer and poorer states to commit. Nigeria expressed support for South Africa's proposal and delegates agreed to include the proposed reference.

On a ministerial commitment to finalize the process for the establishment of ASIF, Egypt, with Chad, suggested replacing the word "facility" with "fund," as "facility" implies an organization with administrative structures rather than simply a funding mechanism. John Mugabe, NEPAD OST, clarified that in September 2005 AMCOST decided to work toward the creation of a facility as an institutional arrangement for mobilizing financial, as well as technical, resources. Kenya, opposed by Algeria, suggested removal of the paragraph. After Uganda and Zambia sought further clarification as to ASIF's status, Mugabe said AMCOST had previously agreed that the establishment of ASIF would not lead to the creation of a new institution with a new secretariat but rather that be an arrangement between existing institutions, created by way of a legal instrument between those institutions. Lesotho said that she could support use of the word "fund" as long as the entity maintained its mandate to mobilize technical, as well as financial, resources. Delegates agreed to change the word "facility" to "fund."

Regarding a ministerial commitments to promote the importance of S&T and to facilitate the participation of women and youth in science, Zimbabwe, with Malawi, stressed the need to better capture the importance of popularizing S&T among women and children. Delegates agreed that Zimbabwe and Malawi could work on draft text to reflect these ideas.

On a ministerial commitment to establish the APCST, Chair Gassama Dia proposed delegates delete the paragraph but request the AMCOST Bureau to further consider the proposal. Uganda and others suggested that if the paragraph is deleted, ministers should agree to formulate some sort of proposal for consideration by the heads of state and government. South Africa suggested it would not be useful to discuss a proposal that the ministers had already decided is not acceptable. Chair Gassama Dia clarified that the AMCOST Bureau would further consider the idea of having an advisory mechanism rather than simply reconsidering the existing proposal. Delegates agreed to the Chair's suggestion.

On a recommendation to declare 2008 the African Year of S&T, Comoros queried whether 2007 would be a better year. Zimbabwe said one year may not be adequate and that the Summit, together with the designated year, could be used to launch a longer period of accelerating S&T development in Africa. Uganda and Cameroon suggested ministers need time

to clarify what activities and programmes would be a part of a designated year. Uganda also noted the importance of verifiable benchmarks specifying what every member state must do. Egypt proposed ministers recommend that 2007 be declared the "launching year for S&T in Africa," and that the NEPAD OST prepare briefing notes for the 2007 Summit. The Republic of Congo suggested recommending designating a date that could be celebrated perennially in addition to designating 2008 as the Year of S&T. Chair Gassama Dia proposed, and delegates agreed, to the drafting of language recommending the designation of 2007 as the "launching year" for building up S&T in Africa.

On a recommendation regarding the establishment of visa arrangements and an AU fund to promote the mobility of scientists, engineers and technicians, Zambia proposed new text that would support the implementation of visas and protocols, research, and technological development to support implementation of the CPA. Uganda, with South Africa, noted that the ministerial commitments are "loftier" than the recommendations to the heads of state and government. South Africa, with Lesotho, suggested, and delegates agreed, the NEPAD OST draft additional text providing more concrete recommendations regarding implementation of the CPA. The Bureau considered this additional text on Friday morning, after which a revised version of the declaration was presented in the ministerial meeting, when further amendments were made and the declaration was adopted (see summary of the final declaration below).

Delegates agreed to insert text thanking Kenya for its offer to host the next meeting of AMCOST in 2007. Chair Gassama Dia noted that the document would be revised as per the discussion for reconsideration by the ministers on Friday.

After a meeting of the AMCOST Bureau to review the changes prepared overnight, Director Tema presented the revised draft declaration on Friday, highlighting the addition of four recommendations suggesting: the declaration of 2007 as the launching year of STI in Africa; promotion of R&D and innovation though meeting the 1% GDP goal by 2010; approval of PAIPO; and support for South-South cooperation on STI. Uganda suggested editorial amendments, which were accepted, and Zimbabwe requested clarification on "technology missions," which delegates agreed to change to "technology goals."

Chad suggested that biosafety be explicitly added to the commitment on the African Biotechnology Strategy, that training be emphasized in the recommendation on the 1% GDP goal, and that text on the facilitation of the mobility of researchers be reinserted. In response, Chair Gassama Dia said that: biosafety had been taken into account but needed to be addressed in the near-term rather than over 20 years and, thus did not fit with the African Strategy on Biotechnology; capacity building was addressed in the text on establishing the CPA and on the centers of excellence; and the section on South-South cooperation implicitly included the concept of facilitating researchers' mobility.

The declaration, as amended, was adopted by acclamation.

Final Outcome: In the Cairo Declaration of the Extraordinary Conference of AMCOST adopted on 24 November 2006, in Cairo, Egypt (EXT/AU/EXP/ST/13 (II), Rev.1), preambular

language, *inter alia*: reaffirms that S&T is the driving force for socioeconomic development and enhances the economic competitiveness of the continent to assist in attaining the MDGs; takes into account the CPA; recalls the decision of the eighth Ordinary Session of the AU Executive Council calling on the AU Commission, the NEPAD OST and member states to be responsible for mobilizing financial and technical resources to implement the CPA; and notes the report of the experts meeting.

In the operative text, ministers endorse the report of the APB and commit to:

- establishing mechanisms to accelerate and monitor implementation of the CPA;
- working together to develop a 20-year African Biotechnology Strategy with specific regional technology goals to be implemented through regional groupings and to develop and harmonize national and regional regulations that promote the application and safe use of modern biotechnology;
- promoting African R&D in S&T, and develop innovation strategies for wealth creation and economic development;
- encouraging effective knowledge management and better use of IP and technology transfer, as well as South-South and North-South cooperation on S&T;
- improving the design, and developing a legal instrument, for the establishment of the “African Science and Innovation Fund (ASIF)” as an intergovernmental mechanism to mobilize technical and financial resources for the implementation of the CPA;
- maximizing the efficient use of locally-based scientists, including science academies in Africa and African scientists in the Diaspora, and facilitating the relocation of SMEs for the development of the continent;
- popularizing the importance of S&T for development;
- promoting and facilitating the greater participation of women and youth in the advancement of S&T through networks and capacity building interventions; and
- using common guidelines for identifying and establishing networks of centers of excellence in S&T.

Ministers also recommended that the AU Assembly of Heads of State and Government:

- declare 2007 as the launching year of building constituencies and champions for STI in Africa;
- promote Africa’s R&D and develop innovation strategies for wealth creation and economic development by allocating at least 1% of GDP by 2010 as agreed in EX.CL/Dec.254 (VIII);
- approve the establishment of PAIPO; and
- support South-South cooperation in STI and enhance its role in international partnerships.

UPCOMING MEETINGS

CAPACITY BUILDING WORKSHOP ON PARTNERSHIPS FOR IMPROVING THE PERFORMANCE OF WATER UTILITIES IN THE AFRICA REGION:

This capacity building workshop for senior water utility managers in Africa will be held from 6-8 December 2006, in Nairobi, Kenya. Organized by the Division for Sustainable Development of the UN Department of Economic and Social Affairs (UN DESA/DSD) and the UN

Human Settlements Programme (UN HABITAT), the workshop responds to a recommendation from the thirteenth session of the UN Commission on Sustainable Development that emphasized the need to strengthen the capacity of water utilities to meet the challenges of efficient delivery and expansion of water services. For more information, contact: UN Division for Sustainable Development; tel: +1-212-963-8102; fax: +1-212-963-4260; e-mail: dsd@un.org; internet: http://www.un.org/esa/sustdev/sdissues/water/workshop_africa/workshop_africa.htm

TENTH SEARNET CONFERENCE ON RAINWATER HARVESTING AND MANAGEMENT IN AFRICA:

This conference will take place in Mombasa, Kenya, from 4-8 December 2006. It aims to facilitate the sharing of experiences in rainwater harvesting and management through the presentation of technical papers and posters on planning, R&D activities. For more information, contact: Southern and Eastern Africa Rainwater Network (SEARNET) Secretariat; tel: +254-20-722-4422; fax: +254-20-722-4401; e-mail: searnet@cgjar.org; internet: <http://www.searnet.org/newsitem.asp?newsid=106>

AFRICAN REGIONAL WORKSHOP ON SUSTAINABLE USE:

This workshop will take place from 12-15 December 2006, in Nairobi, Kenya. It will address: ecosystem services assessment; financial costs and benefits associated with conservation of biodiversity; and sustainable use of biological resources, with a view to contributing to the review of the work programme of the Convention on Biological Diversity (CBD). For more information, contact: CBD Secretariat; tel: +1-514-288-2220; fax: +1-514-288-6588; e-mail: secretariat@biodiv.org; internet: <http://www.biodiv.org/doc/meeting.aspx?mtg=RWSUAFR-01>

EIGHTH AU SUMMIT OF HEADS OF STATE AND GOVERNMENT:

This meeting is scheduled for 29-30 January 2007, in Addis Ababa, Ethiopia. Delegates will consider issues related to the Summit theme of “Science, Technology and Research for Africa’s Development.” For more information, contact: African Union Commission, Department of Human Resources, Science and Technology; tel: +251-1-51-75-23; fax: +2511-551-7844 or 2511-550-5928; e-mail: hambanim@africa-union.org or hamdya@africa-union.org; internet: <http://www.africa-union.org>

GLOBAL FORUM: BUILDING SCIENCE, TECHNOLOGY AND INNOVATION CAPACITY FOR SUSTAINABLE GROWTH AND POVERTY REDUCTION:

This World Bank-sponsored meeting will take place from 13-15 February 2007, in Washington, D.C., the United States. The forum will seek to understand the lessons of previous and ongoing STI capacity building experiences and to map out new and more effective ways to apply STI capacity building in low and middle income countries. For more information, contact: Alfred Watkins; tel: +1-202-473-7277; fax: +1-202-522-3233; e-mail: awatkins@worldbank.org; internet: <http://www.worldbank.org/STIGlobalForum>

CSD INTERGOVERNMENTAL PREPARATORY MEETING:

The fifteenth session of the Commission on Sustainable Development will be preceded by an Intergovernmental Preparatory Meeting, which will take place from 26 February to 2 March 2007, in New York, the United States. This is the second, or policy year, of the implementation



cycle during which the Commission will continue its focus on the following areas: energy for sustainable development; industrial development; air pollution/atmosphere; and climate change.

For more information, contact: UN Division for Sustainable Development; tel: +1-212-963-8102; fax: +1-212-963-4260; e-mail: dsd@un.org; internet: http://www.un.org/esa/sustdev/csd/csd15/csd15_ipm.htm

IPCC MEETINGS: The twenty-sixth meeting of the Intergovernmental Panel on Climate Change (IPCC) will take place in Bangkok, Thailand, on 4 May 2007, immediately following the ninth session of Working Group III, to be held from 30 April to 3 May 2007. Prior to this, the tenth session of Working Group I will be held in France from 29 January to 1 February 2007, and the eighth session of Working Group II will be held in Brussels, Belgium, from 2-5 April 2007. For more information, contact: Rudie Bourgeois, IPCC Secretariat; tel: +41-22-730-8208; fax: +41-22-7 30-8025; e-mail: IPCC-Sec@wmo.int; internet: <http://www.ipcc.ch/>

FIFTEENTH SESSION OF THE UN COMMISSION ON SUSTAINABLE DEVELOPMENT: The fifteenth session of the UN Commission on Sustainable Development (CSD-15) will be held from 30 April to 11 May 2007, in New York, United States. For more information, contact: UN Division for Sustainable Development; tel: +1-212-963-8102; fax: +1-212-963-4260; e-mail: dsd@un.org; internet: <http://www.un.org/esa/sustdev/csd/policy.htm>

TENTH SESSION OF THE UN COMMISSION ON SCIENCE AND TECHNOLOGY: The tenth session of the UN Commission on Science and Technology takes place from 21-25 May in Geneva, Switzerland. For more information, contact: UNCTAD; tel: +41-22-917-5809; fax: +41-22-917-0057; e-mail: info@unctad.org; internet: <http://www.unctad.org/Templates/Page.asp?intItemID=2696&lang=1>

THIRD ORDINARY SESSION OF AMCOST: The third Ordinary Session of AMCOST is scheduled to take place in 2007 in Kenya. For more information, contact: John Mugabe, NEPAD Office of Science and Technology; tel: +27-12-841-3653/3688; fax: +27-12-841-4414; e-mail: john@nrf.ac.za; internet: <http://www.nepadst.org/>

For more upcoming meetings, please visit: <http://www.iisd.ca/upcoming/linkagesmeetings.asp?id=5>

LIST OF ABBREVIATIONS

1% GDP goal	Commitment to allocate at least 1% of GDP to S&T research and development
2007 Summit	African Union Summit of Heads of State and Government
AMCOST	African Ministerial Council on Science and Technology
AMCOW	African Ministerial Council on Water
APB	(African) High-level Panel on Modern Biotechnology

APCST	African Presidents' Council for Science and Technology
ASIF	Africa Science and Innovation Facility
AU	African Union
Cartagena Protocol	Cartagena Protocol on Biosafety to the Convention on Biological Diversity (Africa's Science and Technology)
CPA	Consolidated Plan of Action
GDP	Gross domestic product
GMOs	Genetically modified organisms
HRST	(AU) Human Resources, Science and Technology
HSGIC	Heads of State and Government Implementation Committee
ICSU	International Council for Science
IP	Intellectual property
MDGs	Millennium Development Goals
MOP	Meeting of the Parties
NEPAD	New Partnership for Africa's Development
NEPAD/ABI	NEPAD/Africa Biosciences Initiative
NEPAD OST	NEPAD Office of Science and Technology
NGOs	Non-governmental organizations
OAPI	Organisation Africaine de la Propriété Intellectuelle
OAU	Organization of African Unity
PAIPO	Pan-African Intellectual Property Organization
R&D	Research and development
RECs	Regional Economic Communities
S&T	Science and technology
SMEs	Small and medium-sized enterprises
Steering Committee	AMCOST Steering Committee
STI	Science, technology and innovation
Supreme Council	African Supreme Council for Scientific Research
The Strategy	African Strategy on Biosafety
TRIPs	Agreement on Trade-related Aspects of Intellectual Property Rights
TTATC	Technology Transfer and Acquisition of Domestic Technological Capabilities
UNCCD	UN Convention to Combat Desertification
UNECA	UN Economic Commission for Africa
UNESCO	UN Educational, Scientific and Cultural Organization
WHADN	Western Hemisphere African Diaspora Network
WIPO	World Intellectual Property Organization