

Brussels, 1<sup>st</sup> October 2008

## **EU/AU Joint Statement on "Implementation of the EU-AU Partnership for Science, Information Society and Space" - Presentation of the 19 "Lighthouse" Projects**

*The European Commission (EC) and the African Union Commission (AUC) agreed on an EU / Africa Strategic Partnership during the EU/ AU Summit in Lisbon in December 2007. 8 thematic partnerships were identified, the 8th of these being the partnership for Science, ICT, and Space.*

In this framework, a book of 19 lighthouse projects have been identified; 6 of them are considered as "early deliverables" and will receive immediate attention. These are underlined in the list below.

The significance of these projects is that they are:

- identified and designed by the African Union Commission<sup>1</sup> (AUC) to respond to African needs and challenges; and
- agreed with the European Commission (EC) as the basis for implementing the 8th Partnership (on Science, ICT and Space) of the Africa-EU Strategic Partnership.

The 19 projects are split into 3 groups, corresponding to the 3 Priority Actions included in the Partnership:

- Group 1 - Support for the development of an inclusive information society in Africa (5 projects).
- Group 2 - Support Science and Technology (S&T) capacity building in Africa and implement Africa's Science and Technology Consolidated Plan of Action – CPA (12 projects).
- Group 3 - Enhancing cooperation on Space applications and technology (2 projects).

### **GROUP 1 - ICTs**

- Africa connect
- The African internet Exchange System
- The African Leadership ICT Program
- African Virtual Campus
- Harnessing information & Knowledge for Youth Development

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<sup>1</sup> Human Resource Science and Technology Department

## **GROUP 2 - S&T**

- African Research Grants
  - Capacity Building: EU-AU Africa research grants
- Popularization of S&T
  - Popularization of science and technology and promotion of public participation
- Capacity building in S&T - African level
  - Development of a Common African Union Science and Technology Policy Framework
  - Science and technology for the development of African Small Medium Enterprises (SMEs) and support business incubator networks
  - Securing and Using Africa's Indigenous and Traditional Knowledge
  - Pan African intellectual Propriety Organization (PAIPO)
  - African Observatory of Science, Technology, and Innovation (AOSTI), and Policy Development
- Capacity building - Thematic level
  - Water and food security in Africa
  - Building Africa's Scientific and Institutional Capacity (BASIC) in Agriculture and natural Resource Management
  - Harnessing Biotechnology for the Advancement of African Agriculture
  - African Pole of Excellence on Desertification and Forestry
  - African Union Initiative on Climate Change (African Institute on Climate Change-AICC)

## **GROUP 3 - SPACE**

- Kopernicus - Africa: African global Monitoring for Environment and Security
- Implementation of the African Reference Frame (AFREF) Capacity building in the AUC on Geospatial Sciences

## **GROUP 1 – Summaries of ICT Projects**

### **Africa Connect ("early deliverable")**

The Africa Connect project will support the development of regional research and education networks in Sub-Saharan Africa and their interconnection with the European GEANT2 network<sup>2</sup>, building on a similar initiative, EumedConnect implemented in North-Africa (currently interconnecting around 1,5 Million users across more than 500 research organisations). The objective will be to contribute integrating the African research community both at regional and international levels, through interconnection with the most cost-effective high bandwidth capacity. This project will contribute to the modernization and development of education and research in African countries by supporting research networking and internet connectivity. The target group would be the emerging National Research and Education Networks in Sub-Saharan countries to ensure digital connection for their students and researchers in sufficient capacity and on affordable terms.

### **African Internet Exchange System (AXIS) ("early deliverable")**

This project aims to support the establishment of a continental African internet infrastructure through national and regional internet exchange points. Such deployment is considered crucial for the development of the internet in Africa, generating huge cost savings by keeping local traffic local and offering better quality of service and new applications opportunities. AXIS activities will include technical assistance on planning, regulatory/policy issues, and human training to achieve this objective.

- The African Leadership ICT Programme: a pan-African ICT training programme for policy-makers and IT professionals;
- African Virtual Campus: extension of the Avicenna e-learning network (implemented in the Mediterranean Region through the MEDA/EUMEDIS programme) to Sub-Saharan Africa. This is a flagship UNESCO project for Africa aiming to interconnect African Universities, provide online training facilities and develop ICT-related curriculae;
- Harnessing information & Knowledge for Youth Development: a pan-African programme for youth e-skills development as well as incubation centres.

### **The African Leadership ICT Program**

This is a pan-African ICT training programme for policy-makers and IT professionals. It aims to provide management expertise to potential leaders in African countries to become change agents in the ICT sector. The training will be delivered in a selective variety of qualified training centres and institutions in Africa's five regions.

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<sup>2</sup> GÉANT2 is the high-bandwidth, academic Internet serving Europe's research and education community. Connecting over 30 million researchers with a multi-domain topology spanning 34 European countries and links to a number of other world regions, GÉANT2 is at the heart of global research networking. GÉANT2 is co-funded by the European Commission and Europe's national research and education networks, and is managed by DANTE. <http://www.geant2.net/>

### **African Virtual Campus**

An extension of the Avicenna e-learning network (implemented in the Mediterranean Region through the MEDA/EUMEDIS programme) to Sub-Saharan Africa, this is a flagship UNESCO project for Africa aiming to interconnect African Universities, provide online training facilities and develop ICT-related curriculae.

### **Harnessing information & Knowledge for Youth Development**

This is a pan-African programme for youth e-skills development. It will target the establishment of 35 youth training and information centres as well as 15 community information and multimedia centres in all African sub-regions. It will also plan the design, setup and disbursement of an ICT Youth Incubation Fund for selected incubator projects in at least 5 countries.

## **GROUP 2 – Summaries of S&T Projects**

### **Africa research grants ("early deliverable")**

Whilst many African countries are active in national and international research, their capacity needs strengthening by coordinating, structuring and integrating their efforts for Africa's development. This project will do that by setting up a continent-wide research programme focused on developing sustainable science and technology research responding to Africa's technical, economic and social development. The challenge for African researchers will be to work together creating supranational consortia complementing their scientific competences. Proposals by consortia will be selected via open and competitive selection procedures. The capacity of the AUC to manage and implement the programme itself will be developed so that it can launch, implement and monitor calls for proposals, in different thematic areas related primarily to the earth and life sciences.

### **Popularization of science and technology and promotion of public participation**

In Africa, not only is public understanding of R&D weak, but public opinion is often ignored by the scientists. Application of science and technology will remain ineffective until politicians and the general public understand its benefits. Better public understanding of science will also increase interest of young students in taking up science and technology careers. The AUC has designed a number of activities for increasing public understanding, participation and awareness of the role of science and technology as a driving agent for social and economic progress for Africa and its integration process.

## **Development of a Common African Union - Science and Technology Policy Framework**

Science and Technology is a development instrument for AU Member States to achieve the Millennium Development Goals. But several recent reports show that Science and Technology gaps exist between the African Regions. The AUC has a mandate to facilitate and support the development and harmonization of Science, Technology and ICT policies for Africa's socio-economic development. In this context the S&T policy programme will create a permanent inter-governmental structure able to analyse and implement S&T policies. The project will lead to improved policy approaches for the Socio-economic development via Science and Technology at African Continent level coordinated by the AUC<sup>3</sup> and complementing the work of UNESCO at African Union Member State level.

### **Science and technology for the development of African Small Medium Enterprises and support business incubators network**

Turning research into results in terms of innovation and products needs more than support for research organisations. Technology incubators, parks or innovation clusters help turn ideas into commercially viable products and services. This project will focus on applying new technologies to helping existing small medium enterprises create more efficient and sustainable production activities. It will also enhance the capacities of African industry to integrate into the global economy. Specific scientific support will be given to the business incubators by providing inclusive environments that link innovators and researchers with African industry and business communities.

### **Securing and Using Africa's Indigenous and Traditional Knowledge**

The objective of the project is to strengthen Africa's capacity to harness and apply as well as protect indigenous knowledge and technologies in view to solve specific problems and improve the Africa's economies. Institutions to valorise the indigenous and traditional knowledge are weak in most countries. In addition, there are weak links between the formal R&D institutions and local communities that hold and use the knowledge. This has denied Africa the opportunity to better understand and use its own indigenous / traditional knowledge tools techniques. This project will build on the analysis of UNESCO, which has gathered and made available data on such knowledge, and of the work of NEPAD in developing framework documents devoted to the protection and promotion of indigenous knowledge and related technological innovations.

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<sup>3</sup> AUC Division of Science, Technology and ICT within the Department of Human Resources Science and Technology (HRST)

### **Pan African intellectual Propriety Organization (PAIPO)**

Considerable progress has been made under Trade-Related Intellectual Property Rights (TRIPS) and the Convention on Biological Diversity (CBD) that requires a common policy front by African countries. Growing pressures of globalization mean that many countries require effective guidance. With the right policy and institutional framework, African countries can forge ahead in stimulating both inventiveness and the generation of productive innovations. Africa needs a continental structure to respond to institutional initiatives at the global level in order to ensure the protection of innovations and promotion of inventive activity. The project will provide a broad-based platform for African Member States to benefit from a coordinated stock of specialized intellectual property knowledge and services with a view to promoting innovation, techno-industrial competitiveness, and economic growth in Africa

### **African Observatory of Science, Technology, and Innovation (AOSTI), and Policy Development**

Africa needs to develop new strategies to confront the myriad of challenges facing her peoples. Harnessing the forces of science and technology to these ends has become more urgent than ever before. But this must be done through practical actions that institutionalise the robust application of scientific and technological achievements. The process requires the evolution and management of capacities to map the STI terrain and analyse what is already available, and what needs to be built over time. The project will provide a comprehensive survey of capacity in science, technology, and innovation in Africa. Member States will benefit from a dynamic stock of specialized knowledge that would provide countries with means to address the gaps in STI capacity. Its ambition is to facilitate the harnessing of opportunities for knowledge management in STI, and provide governments with material that would enhance their policy-making processes in science, technology, and innovation.

### **Water and food security in Africa ("early deliverable")**

The main aim of this project is to strengthen the capacity in science and technology in order to cope with food security problems while promoting sustainable management of land and water resources. In this context, demonstration activities in one or more African river basin, such as the Nile basin, will be considered to consolidate the research and work methodology. Agriculture, industry, human health and settlements, environment, and land and water resources are all affected by climate change. Many studies are investigating the possible consequences, and suggesting measures to counteract the undesired outcomes. So far there has been little effort to integrate water availability and water demand with the on-going demographic changes and globalization process. They trigger the socio-economic changes at global level including population migration, urbanization, destabilization of national food reserves, increase of food and oil prices, etc. The project will analyze the negative effects of interaction of the abovementioned factors in strategic and fragile river basins; and it will define the appropriate remedial strategies and measures.

## **Building Africa's Scientific and Institutional Capacity (BASIC) in Agriculture and natural Resource Management**

Raising African agricultural productivity depends on improving the productivity of land holdings of between 0.5 and 0.7 hectares per person. Appropriate technologies and policies must be derived locally in the context of Africa's unique farming and socio-economic circumstances to cope with poor soils, tropical pests, plant and animal diseases and inadequate infrastructure. Africa's Science and Technology Consolidated Plan of Action (S&T CPA) actions for the conservation and sustainable use of biodiversity with a specific objective to promote the development and diffusion of a range of sustainable use technologies. The main objective of the project is to reposition African tertiary agricultural education to produce effective entrepreneurs, change agents and policy makers and render capacity strengthening more responsive to the agricultural development agenda.

### **Harnessing Biotechnology for the Advancement of African Agriculture**

To promote harmonised, efficient and safe use of biotechnology for smallholder development it is essential to facilitate interactions between various actors. The Forum for Agricultural Research in Africa (FARA) established the African Biotechnology and Biosafety Policy Platform (ABBPP) to facilitate biotechnology and biosafety policy dialogue and stakeholder consensus-building in policy formulation and implementation. Many research and regulatory bodies exist that are concerned with biotechnology and biosafety at the continental, sub-regional and national levels. This project will contribute to the establishment of an enabling policy environment that allows Africa to take full, but safe advantage of modern biotechnology application in improving food security and reducing malnutrition among poor African rural and urban dwellers.

### **African Pole of Excellence on Desertification and Forestry**

The African Pole of Excellence on Desertification and Forestry is identified as a research establishment of the Pan African University (PAU) on life and earth Sciences. It advises the AU Member states in the fields of desertification and forestry and serves as a focal point for Knowledge/technology transfer between the African Scientists. This project will not start new research so much as rationalise the existing accumulated knowledge in Africa. Sharing information, data and methodologies will enhance the capacity of African scientists and researcher to analyse problems and provide options and solutions to African decision-makers.

### **African Union Initiative on Climate Change (African Institute on Climate Change - AICC)**

The African Institute on Climate Change (AICC) is identified as a research establishment of the Pan African University (PAU) on the thematic priority areas related to life and earth Sciences. It aims mainly to advise and to guide AU Member States in the issues related to climate change. The AICC will develop and/or improve the capacity of African Climate change scientists. I will also be the focal point for knowledge/technology transfer between the African Scientists and their counterparts worldwide, and particularly in Europe. Therefore, the research to be taken under the AICC will help in identifying the potential impacts and effective adaptation methods for Africa, particularly with regards to ecological resources, water resources, agriculture and human health.

## **GROUP 3 – Summaries of Space Projects**

### **Global Monitoring for Environment and Security (Kopernicus<sup>4</sup> – Africa)**

("early deliverable")

The potential role of space science and applications as a means of addressing development and poverty alleviation was recognised during a meeting held alongside the EU-AU Summit of December 2007 on "Developing space for developing countries: the case of GMES and Africa". Kopernicus-Africa is now taking this view forward by ensuring a wide consultation process involving users and policy makers within the AUC, its Member States and RECs<sup>5</sup>. The process will result in a "Kopernicus - Africa Action Plan" detailing infrastructure needs, thematic priorities and financial instruments to be submitted to the third EU-Africa Summit, foreseen early 2010 in Libya.

### **Implementation of the African Reference Frame (AFREF);**

#### **Capacity building in the AUC on Geospatial Sciences ("early deliverable")**

ICTs can now harness the power of geospatial data, leading to new services capable of estimating crop yields, of monitoring surface water resource location and availability, of mapping and measuring deforestation and of quantifying land degradation trends.

Strengthening the capacity for handling and using ICT applications within the AUC and, in the long-term, ensuring pan-African access to ICT in the geospatial domain are the goals. In a first phase EC staff seconded to the AUC will examine modalities for integrating resource management geospatial information systems developed in the EC into the AUC. Development of the system, databases and applications on natural resources, food security, crisis management and renewable energies will continue, and steps will be taken to ensure technology transfer via training and staff exchanges and the promotion of thematic regional centres of excellence, building on existing capacities.

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<sup>4</sup> Kopernicus is the new name for GMES – Global Monitoring for Environment and Security

<sup>5</sup> The 5 Regional Economic Communities