# Science and Technology-Europe Africa Project (ST-EAP)

# Workshop in Nairobi, Kenya 26 & 27 March 2009

# REPORT


*ST-EAP participants at the workshop in Nairobi, Kenya (26-27 March 2009)*

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## 1. Overview

The Science and Technology - Europe Africa Project (ST-EAP) is a European Union Framework Programme (FP6) Specific Support Action (SSA), based on the success of the ESASTAP initiative (www.esastap.org.za), which is focused on creating greater participation of South African organizations (SSA) in the Framework Programmes. ST-EAP is focused on extending this initiative into sub-Saharan Africa. South Africa has become one of the leading four Third Countries in FP6, but the performance of SSA has lagged far behind. The ST-EAP aims to address these shortcomings by creating a greater awareness of the FPs in the region and the modalities to be employed. The change in FP7, where INCO-DEV, will no longer address research issues, will make the task of African SSA countries participating even greater as many have expressed that their own limitation is the lack of expertise and experience with Thematic Projects. Therefore, the timing of ST-EAP is most suitable. The partners in ST-EAP are the Council for Scientific and Industrial Research (CSIR) (www.csir.co.za) and the African Academy of Sciences (AAS) (www.aasciences.org).

Due to the challenges that hinder most African countries from participating in FP Programmes, to encourage African participation and to create awareness, CSIR and AAS organized a ST-EAP workshop in Nairobi, Kenya, at the Hilton Hotel on 26-27 March 2009. The workshop brought together 100 participants from 21 countries including researchers, scientists, executives, managers, MSc and Phd students, undergraduates and funders. A number of presentations were made on FP experiences and success stories, proposal writing and initiatives by the South African Ministry of Science and Technology. The countries represented included: Kenya, South Africa, Mali, Ethiopia, Tanzania, Malawi, Zimbabwe, Morocco, Ghana, Madagascar, Nigeria, Botswana, Mauritius, Uganda, Sudan, Namibia, Benin, Cameroon and the Democratic Republic of Congo.

The workshop sought to achieve the following objectives:

- Raise awareness among African researchers to participate in FP7, as well as looking into its challenges.
- Provide a basis for networking between African researchers to promote cooperation and coordination between African countries to encourage participation in FP7.
- Increase awareness of the role of the science and technology programme.

Participants, and several presenters, highlighted the important role played by the European Union (EU) in supporting African researchers to successfully carry out their researches in the different research areas. It was clear that the EU continues, and will continue, to play a big role in African development and especially in science and technology.

## 2. Workshop Programme

# Agenda

**26-27 March 2009**

**Hilton Hotel, Nairobi, Kenya**

**Organized by ST-EAP Consortium Partners**

**African Academy of Sciences (AAS) & Council for Scientific and Industrial Research (CSIR)**

| | |
|---|---|
| 08:00 – 09:00 | REGISTRATION |

| **Session I:** | **Opening Ceremony** |
|---|---|
| 09:00 – 09:20 | **Welcome**<br>*Dr Thomas Egwang*<br>Executive Director, AAS, Kenya |
| 09:20 – 09:40 | **S&T Initiatives to promote African Cooperation**<br>*Ms Berenice Lue-Marais*<br>WAITRO Africa Regional Focal Point, CSIR, South Africa |
| 09:40 – 10:00 | **EU Programme to support African Development**<br>*Mr. Titus Katembu*<br>European Union Representative |
| **Chair** | **Dr Shem Arungu-Olende**<br>(Secretary General, AAS, Kenya) |

| | |
|---|---|
| Tea Break | Networking Opportunity & Media Engagement |

| Session II: | EU-Africa S&T Partnerships |
|---|---|
| 11:00 - 11:20 | **Overview of ST-EAP**<br>*Ms Jackie Olang*<br>Programme Officer, AAS, Kenya |
| 11:20 – 11:40 | **Overview of FP and Africa FP Lessons Learnt and Success Stories**<br>*Mr Moses Mengu*<br>Danish Technology Institute (DTI), Denmark |
| 11:40 – 12:00 | **South African Mechanisms to Promote S&T Cooperation with EU**<br>*Ms Thabisa Mbungwana*<br>Manager: Strategic Partnerships<br>Department of Science and Technology (DST), South Africa |
| 12:00 – 12:30 | Plenary Discussion |
| **Chair** | **Prof. Ayub Victor Ofulla**<br>Associate Professor, Biomedical Science and Technology Department<br>(Maseno University, Kenya) |
| Lunch | Networking Opportunity & Media Engagement |
| **Session III:** | **Tips and Guidelines to Prepare an EU FP Proposal** |
| 13:30 – 14:00 | **Tips from EU Assessor**<br>*Prof. Seewant Bhoojedhur*<br>Vice Presidemt: Mauritius Academy of Science and Technology<br>Mauritius |
| 14:00 – 14:30 | **Legal and Financial Guidelines**<br>*Mr Tendani Nevondo*<br>NCP Assistant, Legal and Financial, Wits Enterprise, South Africa |
| 14:20 – 15:00 | **Putting together Large Integrated Project proposal within EU FPs: Learning points from an African partners perspective**<br>*Mr Laurie Barwell*<br>Coordinator: Africa Centre for Climate & Earth System Science(ACCESS)<br>South Africa |
| 15:00 – 15:30 | Plenary Discussion |
| **Chair** | **Dr. Iba Kone**<br>(AFORNET Network Coordinator, AAS, Kenya) |
| Tea Break | Networking Opportunity & Media Engagement |

| | |
|---|---|
| **18:00 – 21:00** | **Gala Dinner** |
| **Day 2 - 27 March 2009** | |
| 08:30 | Welcome Coffee |
| **Session IV** | **African FP7 Proposal Examples** |
| 09:00 – 09:20 | **Plant Explo, FP7 Proposal**<br>*Prof Philippe Rasoanaivo*<br>Institut Malgache de Recherches Appliquees, Madagascar |
| 09:20 – 09:40 | **Success Story**<br>*Prof. Francis Mulaa*<br>University of Nairobi, Department of Biotechnology |
| 09:40 - 10:00 | Plenary Discussion |
| Tea Break | Networking Opportunity & Media Engagement |
| **Session V** | **Networking and Discussions on Thematic Areas** |
| 10:30 – 11:30 | **On-going Initiatives Addressing EU-Africa Cooperation**<br>- Health<br>- Food, Agriculture and Biotechnology<br>- ICT<br>- Energy<br>- Environment (including climate change)<br>- Transport<br>- Socio-economic sciences and the humanities<br>- Space<br>- Security |
| 11:30 – 12:30 | Report Back on Thematic Group Discussions |
| 12:30 – 13:00 | Plenary Discussion |
| **Chair** | **Dr Yonas Yemshaw**<br>Scientific Programme Coordinator, Kenya |
| 13:00 – 13:30 | **Closing Remarks**<br>*Dr Thomas Egwang and Ms Berenice Lue-Marais* |
| Lunch | Networking Opportunity & Media Engagement |
| **14:00** | **End of Workshop** |

## 3. Opening Ceremony

The opening of the workshop was presided over by **Dr. Shem Arungu-Olende, Secretary General of the African Academy of Sciences (AAS),** and attended by a representative from the European Union delegation of Kenya**.** The Secretary General thanked all those who attended and introduced the speakers for the first session to give their welcome remarks.

**Dr. Thomas Egwang, Executive Director of the African Academy of Sciences (AAS),** officially opened the workshop. He thanked all present for taking time to attend the meeting and welcomed them to the workshop and encouraged them to learn as much as they can from the meeting. The AAS Director gave brief background information of the African Academy of Sciences, including when it was established, where it is located, who are the members, what are the mission, vision, goals and objectives, members of the academy and finally the activities of the academy. He went ahead to give a presentation on Grantmanship, which is very crucial for every researcher who wants to make it in his/her field. He emphasized the importance of researchers participating actively by competing for grants that are being offered by different donors. Winning grants in the present age is not easy but he encouraged those present to keep trying as the more one tries the greater the chances of getting a grant. He explained the common purposes for grants which include; production of new knowledge and access to more research resources. He mentioned the challenges faced when trying to raise capital and he made it clear that only those who are creative and innovative end up getting the capital they require to start up their researches. He also encouraged those in attendance to write business proposals (venture capital) and research proposals (research funds).

He outlined the main elements of grantmanship as sourcing funds, writing grants, receiving the funds, managing the funds, executing the work, reporting and dissemination. A winning grant proposal must be creative, innovative, be able to push the boundaries of science and move the respective field forward. The funding landscape has changed due to the global economic recession, scarcity of funds, intense competitive advantage, just to mention but a few. He finalized by mentioning some of the expectations/outcomes of the ST-EAP workshop included increased awareness of the EU programs, increased confidence in writing winning EU proposals and finally increased number of submissions to the EU.

### 3.1 EU Programmes to Support African Development

The next speaker, **Mr. Titus Katembu, EU Representative,** welcomed all the participants to the ST-EAP workshop on behalf of the European Commission and especially the EC

delegation to Kenya. He made it clear that S&T cooperation with Africa is not driven by philanthropy, but by common interests and common benefits. The global S&T context is calling for a strengthened cooperation between Europe and Africa.

He went ahead to emphasize on the crucial role of Science and Technology in Africa's socio economic development. He said that Countries' competitiveness depends on their capability to create innovations that are based on science and technology, and on their industries' ability to turn them into products and services for the world market. He echoed the United Nations' (UN) Millennium Development Goals report that calls to action, arguing that building science technology and innovation capacity should be an essential element of every country's strategy for poverty reduction, for achieving the MDGs and producing a more knowledge-intensive economy. He encouraged Africans not to underestimate the role played by science and technology in advancing foreign policy and international trade, economic and development agendas. He emphasized that a commitment to multilateralism and increased international cooperation, especially in science and technology was essential to global sustainable development. There was need for much closer synergies between the EU research and development policies and tools which have for a long time caused serious difficulties for African Research organizations and universities to pass successfully the criterion of scientific excellence in evaluations of FP as is currently designed. To address this issue, the Commission seeks to develop stronger synergies and coherence between FP and the development's instruments. He also explained more about FP7, which is a programme that runs from 2007-2013. FP7 has been structured into four programmes namely cooperation, people, ideas and capacities. Four programmes are open to African research participation but three of them are more related to the African researchers: Cooperation, People and Capacities. It is more inclusive, more integrated, more coordinated and more policy driven. The research projects are selected on the basis of their scientific quality and the scientific consortia presenting the proposals have to be structured and well coordinated. Furthermore, they have to illustrate and demonstrate in the proposal also their capacity to conduct the research, integrating and complementing the scientific and technological competences. All these elements are a matter of evaluation and ranking. The evaluation and selection procedures at the EC level are quite complicated but they are based on competences and analyses of external experts not belonging to the European Commission and in several cases also from outside Europe.

The **Cooperation Programme** covers 10 Themes from Health to Food, Agriculture and biotechnologies; from energy to environment; from transport to security, from space to socio-economic sciences.

The 10 thematic research programmes have the opportunity to make "Special International Cooperation Actions (SICAs) on thematic that could be related also to specific geographical areas. Health, Agriculture and Environment themes are reserved specific SICAs for Africa and its development.

**People Programmes** concern the mobility of researchers. Several instruments are adapted to the African participation. In addition to the classical fellowships (Marie Curie Actions), there are activities facilitating: initial training, long life training, industry driven training, and international research exchange scheme. Each activity is implemented via specific participation selection criteria and *ad hoc* call for proposals to be evaluated by specific panels.

The **Capacities Programme** capitalizes the positive experience of FP6 (ST-EAP was among the pioneer projects in this field). Thanks to them, in FP7 the Capacities programme aims at strengthening coordination of the international cooperation actions under the different Programmes and across Themes.

New tools were defined and opened to proposal calls, including: INCO-NETs (Bi-regional Coordination of S&T Cooperation). INCO-NETs are platforms bringing together policy makers and stakeholders of one target region/country with the EU to:

- Establish a **dialogue** to identify S&T priorities for mutual benefit and interest and define cooperation policy orientations;
- Implement specific activities to promote and contribute to the **participation** of the targeted regions/countries in the Framework Programme

Two INCO-NETs already exist for Africa one of which is CAAST-Net (covering part of the Sub Sahara Africa countries) www.ccast-net.org. He stressed that the Policy context for research in Africa is evolving extremely quickly. Almost monthly there are new inputs that modify the previous context.

Africa and Europe are engaged in the new dimension of cooperation (passing from Donorship to Partnership) defined by the Africa-EU Strategic Partnership and its First Action Plan - officially endorsed in December 2007 in Lisbon. Its Partnership is on "Science, information Society and Space" and it engages all existing mechanisms related to research in Africa to make maximum efforts for its implementation. The Africa-EU Strategy is a solid platform to improve the coordination, coherence and consistency of the EU's policies and instruments supporting Africa jointly with those of its Member States. He finished by

informing the participants that the EC, would launch under FP7 in 2010: a Special Call for Water and Food security in Africa at basin level.

### 3.2 S&T Initiatives to Promote African Cooperation

**Ms. Berenice Lue Marais, Group Manager (CSIR),** also welcomed the participants to the ST-EAP workshop. Her opening remarks were followed by a presentation on the strategic intent of ST-EAP, collective approach, Africa's Science and Technology Consolidated Plan of Action (ASTCPA), Science and Technology-Europe Africa Project, and the World Association of Industrial and Technological Research Organizations (WAITRO). On Africa's Science and Technology Plan of Action (ASTCPA), she said that it articulates Africa's common objectives and commitment to collective actions to develop and use science and technology for the socio-economic transformation of the continent. ASTCPA is erected on three interrelated conceptual pillars which are; capacity building, knowledge production and technological innovation. ASTCPA identifies 12 flagship R&D programmes namely:

- Information and Communication Technologies
- Energy technologies
- Materials science
- Space science and technologies
- Post harvest food technologies
- Water sciences and technology
- Indigenous Knowledge and technologies
- Desertification research
- S&T for manufacturing
- Laser technology
- Biodiversity science and technology
- Biotechnology

Other supporting and related initiatives include: African Laser centre, Southern African Network for Biosciences, NEPAD e-schools, World Association of Industrial and Technology Research Organizations (WAITRO) African Regional Focal Point and several sector plans including water, material science, peace and security, energy, health etc. Ms Lue Marais also informed the participants that the United Nations Economic Commission for Africa (UNECA) has distributed an invitation to an ongoing e-discussion group on science, technology and innovation for development in Africa. It was recommended that interested parties join the discussion to assist in developing African countries. The themes include: science policy, innovation, energy, transport and infrastructure, ICT, health and water.

### 3.2.1 Overview of Science and Technology – Europe Africa Project (ST-EAP)

ST-EAP is an EU Specific Support Action response on FP6 and the overall goal is to enhance Science and Technology partnerships between North and South and to facilitate European Research. The main objective is to increase awareness on EU/FPs goals and expand the European Research Area. The main partners in ST-EAP are The Council for Scientific and Industrial Research (CSIR), Pretoria, South Africa and The African Academy of Sciences (AAS), Nairobi, Kenya. ST-EAP has been involved in:

- awareness campaigns;
- building internet capability; and
- creation of S&T database.

ST-EAP pillars include:

- Project coordination and management
- Administrative and Financial Management
- Project outcomes dissemination
- Gender and transformation promotion

The strategic intent of ST-EAP is to strengthen research capacity in favour of national, regional and continental priorities; focus on developing African S&T based research in a manner that will establish critical mass in areas relevant to country needs and such that scientific institutes can provide national and regional S&T leadership, and seek alignment of research agendas with the objectives of AU and RECs (Regional Communities) through systematic involvement in specific programmes. On the collective approach, ST-EAP endeavors to work hand-in-hand with other organizations both in the private and public sectors. ST-EAPs main objective is to contribute to Africa's development in line with the AU framework through strategic contract R&D engagement and opportunities. The main initiatives include; involvement in the NEPAD S&T Consolidated plan of Action; S&T country bilaterals; strategic partnership with relevant international development agencies; and contract research and development with the public and private sector.

Apart from the consortium partners i.e. CSIR and AAS, other strategic partners of the ST-EAP project include:

- Royal Netherlands Academy of Arts and Sciences (KNAW)
- New Partnership for Africa's Development (NEPAD)
- Department of Science and Technology (DST), South Africa
- Network of African Science Academies (NASAC) and individual country academies
- ICSU (International Council for Science)
- WAITRO (World Association of industrial and Technological Research Associations)

The ST-EAP work packages are:

- WP 1 – Establishment of ST-EAP
  - development of business plan
  - launch of ST-EAP
  - evaluation of ST-EAP structure, impact and sustainability
- WP 2 – Communicating ST-EAP and African S&T expertise with the EU
  - create website
  - map Africa's S&T expertise and produce promotional and communication material
  - fostering networks
  - create opportunities for enhanced networking and partnership development
- WP 3 – Communicating information on EU co-operation instruments across Africa
  - generic briefings and workshops in selected regions of the continent
  - analysis of African FP participation, development of FP success stories and case studies
- WP 4 – Project co-ordination and management
  - administrative and financial management
  - project outcomes dissemination
  -gender and transformation promotion

The purpose of ST-EAP is to strengthen science and technology co-operation between African Scientists and European Scientists and to create an increased awareness of the role of the EU Framework programme. ST-EAP deliverables are as follows:

- Create opportunities for enhanced networking and partnership development
- Promote FP mobility instruments to African partners
- Facilitation of funding instruments for regional participation in FP7
- Targeted initiatives to increase the regional NEPAD involvement in FPs
- Gender promotion

ST-EAP has been able to hold a number of workshops in different countries in Africa and created awareness on the framework programme. The success of ST-EAP can be measured by the number of people who have been able to get the information on the Framework programme and the number of proposals submitted from countries where ST-EAP has held workshops.

### 3.2.2 Overview of World Association of Industrial and Technological Research Organizations (WAITRO)

WAITRO aims to be an enabler for developing action oriented partnerships among member organizations for sustainable development. Its objectives are to:

- Encourage and facilitate transfer of research results and technical know how
- Promote exchange of experience in research and technology management
- Promote technological research and capability building in the developing countries

WAITRO Regional African Focal Point is hosted by CSIR has 60 members across 26 countries, it is supported by WAITRO Secretariat, SIRIM Malaysia and it is also supported by the Department of Science and Technology, South Africa.

The key priority areas of the WAITRO Africa Regional Focal Point (RFP) are as follows:

1. Supporting regional S&T development
2. Mobilising African institutions/researchers for EU-FP7
    - ST-EAP a major boost
3. Mobilising support for NEPAD S&T programmes
    - Africa Laser Centre
    - SANBIO
    - NEPAD e-Schools
4. Capacity and capability building
    - African country priorities
5. Strengthening international partnerships and project cooperation
    - RTO cooperation
6. Joint WAITRO/STEAP awareness workshops
    - Sharing learning and best practices

The WAITRO Africa RFP Activities for 2008/09:

- WAITRO/DST meeting - 9 July 2008, Pretoria, South Africa
- WAITRO 61st EXCOM & 19th General Assembly and Biennial Congress - Malaysia, 12-14 August 2008
- South Africa/Kenya Technical Visit - 11-15 August 2008, Nairobi, Kenya
- Mobility and FP7 Proposal Writing and Evaluation Workshop - 8-10 September 2008, Pretoria, South Africa
- Technical Visit by Congo Brazzaville Delegation - 17 September 2008, CSIR, South Africa
- Sharing Information on Opportunities for Researchers in Social-Economics and Humanities, HSRC - 31 October 2008, Pretoria, South Africa

- The Africa/European Commission Dialogue - 6- 7 November 2008, Brussels, Belgium
- ST-EAP/SANBIO Collaboration meeting - 12 November 2008, CSIR, South Africa
- Africa Investment Forum - 18-19 November 2008, Johannesburg, South Africa
- INCONTACT Workshop - 1-2 December 2008, Pretoria, South Africa
- Conference of African Ministers in Industry (CAMI) - 22 August 2008, Pretoria, South Africa

The ongoing WAITRO Africa RFP activities for 2008/09 include:

- Africa Forum

  DST, CSIR, SANBio, African Laser Centre, NEPAD eSchools, NEPAD S&T office, WAITRO Africa RFP, ICSU, ST-EAP, DOFA, the DTI

The planned WAITRO Africa RFP activities for 2009/10 include:

- 3rd WAITRO Africa RFP EXCOM
  - Cuernavaca, Mexico, 18 March 2009
- ST-EAP Workshop
  - Nairobi, Kenya, 26-27 March 2009
  - IST Africa 2009, Uganda, 6-8 May 2009
  - 3rd African Congress for Scientific Research and Technology, Cairo, Egypt, 10-12 May 2009
  - 4th International Conference on ICT for Development, Education and Training, Dakar, Senegal, 27-29 May 2009
- WAITRO Africa RFP/DST Activities (to be determined)

Challenges ahead include:

- Active involvement by African RTOs
- Cooperation with other regions and RTOs
- Project cooperation amongst African RTOs
- Active S&T support by RTOs to NEPAD and regional programmes
- Preparing project proposals for EU FP7
- Securing new projects in EU FP7
- Securing national, regional and international Contract R&D projects

## 4. EU-Africa S&T Partnerships

### 4.1 South African Mechanisms to Promote S&T Cooperation with the EU

***Ms Thabisa Mbungwana, Manager: Strategic Partnerships, DST, South Africa***

South Africa is one of the leading countries in Africa that is involved with the EU and her science and technology sector is highly developed. South African involvement with the European countries has come a long way. South Africa has been able to come up with mechanisms to Promote S&T Cooperation with EU. Certain issues like; the reasons why South Africa cooperates internationally, Institutional arrangement, instruments used, Department of Science and Technology strategies, the work done so far and the achievements were looked into.

#### 4.1.1 Why do South Africa prioritize international S&T Cooperation?

Through international cooperation, South Africa has been able to enhance its human capacity development, retaining existing capacity and attracting expertise. This cooperation has encouraged joint knowledge generation and development of a critical mass to address global challenges. They have also been able to maximize benefits from national investments by strategically leveraging international investment and have also been able to comprise R&D policy dialogue which has allowed for international benchmarking and identification of best practices.

#### 4.1.2 Institutional Management

The CSIR is organized in such a way that there is a unit dedicated to management of SA-EU science relationship which includes the European-South Africa Science and Technology Advancement Programme (ESASTAP) and Network of National Contact Points (NCPs) and also some financing from the Department of Science and Technology. They also have an S&T representative in Brussels (SSTR). ESASTAP is a specific support action co-funded by DST and EC and implemented by DST and it brings together existing efforts from DST and EC, NCPs and SSTR. ESASTAP came to address issues of insufficient awareness of opportunities in SA and EU, improve the understanding of instruments for cooperation that were frequently perceived as complex, help SA researchers find European FP consortia partners and also to address the need to broaden range of participants especially SMEs, industries, HEI, UT etc. ESASTAP instruments include; awareness raising and marketing partner marching service and advisory and support mechanisms.

#### 4.1.3 What has enabled ESASTAP to come this far?

- Strong political commitment to SA-EU S&T cooperation

- SA's existing knowledge base
- Experience in successful (and unsuccessful) FP participation
- Existing bilateral links with EU countries

### 4.1.4 Some of the benefits include:

- Progressively greater opportunities for international cooperation in FPs
- Connect with global research
- Financial resources leveraged, but also knowledge generation & human capacity development
- Long-term strategic networks built
- Marketing SA S&T excellence

## 4.2 Overview of FP and Africa FP Lessons Learnt and Success Stories: Research on Traditional African Fermented Foods

***Mr Moses Mengu, FP7 Advisor: Danish Technology Institute (DTI), Denmark***

The project was initiated in West Africa in 1990 through DANIDA funding by World Association of Industrial and Technological Research Organizations (WAITRO) and Copenhagen University Faculty of Life Sciences (LIFE). It was then extended to other African Countries within the Third Framework Programme. 6 major projects have been completed since then under the EU Framework Programmes and they are listed below;

- 1994- 1998 : Capability building for research and development in quality assurance and fermentation technology for African fermented foods
  - Partners: WAITRO, DK, D, GH, BF, NIG, TZ, KEN, ZIM
- 1996 – 2000 :Capability building for research and development in traditional fermented African dairy products
  - Partners: WAITRO, DK, D, ETH, UG, SUD
- 1998 – 2002: Biological degradation of aflatoxin A in fermented maize and sorghum products
  - Partners: WAITRO, DK, D, GH, NIG, RSA
- 2001 – 2004: An integrated approach to prevent OTA contamination in post-harvest processing of coffee in East Africa
  - Partners: WAITRO, DK, D, ETH, KEN, TZ
- 2002 – 2007: Developing biochemical and molecular markers for determining quality assurance in the primary processing of cocoa in West Africa
  - Partners: WAITRO, DK, D, GH, NIG, CIV

- 2002 – 2007: Improving the quality and nutritional status of "Gari through the use of starter cultures and fortification with soybean, palm oil and coconut milk. Partners: DK, D, BEL, BEN, KEN, RSA

Some common elements of the projects included;

**Component 1: Microbiology of African fermented foods**

Isolation and preliminary identification of predominant microorganisms in traditional African fermented foods in local laboratories

**Component 2: Advanced molecular studies**

Technological typing and screening for desired properties of the organisms in co-operation with EU partners in European laboratories

**Component 3:** Infrastructure development in the African partner institutions and training of researchers and technicians in advanced microbiological methods

**Component 4:** Development of QA System and pilot plant trials for selected products and training in food safety for local producers

**Component 5:** Business development and entrepreneurship training for local producers and SMEs

### 4.2.1 Network on African Traditional Fermented Foods

Since 1992, they meet every 2 years to share information on research results and establish new areas for collaboration. They hold training workshops in co-operation with International Committee on Food Microbiology and Hygiene and WAITRO since 2003 on Food Safety in Africa

Some of their successes include:

- Capacity building:
  - Ph.D. (Appox. 21)
  - M.Sc. (Approx. 13)
- 1 accredited laboratory with 2 pending
- Pilot plants and upgraded microbiological laboratories
- Training of local processors (SMEs) and food safety agencies
- Quality manuals for major fermented products including gari, ogi, kenkey, cocoa, coffee, etc
- Over 100 publications in reputable international journals, theses, etc

The challenges they face include:

- Lack of uptake and commercialisation efforts by local enterprises
- Lack of continuity and sustainability at the institutional level
- Lack of support from local and other international sources

### 4.2.2 The Gametocyte Story

This was another FP success story on environmental samples.

The objectives and work packages are:

- **Objective A: Development of molecular strategies to estimate the structure of bacterial communities by 16S rDNA fingerprinting**
  - WP1: Provision of environmental samples from Nairobi River and Nakivubo wetland for analysis.
  - WP2: Molecular fingerprinting of microbial community structures and genes.
  - WP3: Community fingerprinting of Nakivubo wetland assemblages using classical methods.
- **Objective B: Comparison of field and laboratory data to generate a biosensor based assay**
  - WP6: Provision of information on presence, nature and levels of pesticides, and heavy metal ions in water and riverbed sediment samples of Nairobi river.
  - WP7: Provision of electrochemical immunosensor for the determination of selected pesticides and/or pathogens in water samples of Nairobi river.
  - WP8: Provision of a one-way optical immunosensor for the determination of selected contaminants and pathogenic bacteria in water samples of Nairobi river.
- **Objective C: Combine CMB and AQUA-SCREEN biosensor technology**
  - WP4: Development of antibodies and DNA probes for use in biosensors
  - WP5: Development of DNA-primers and DNA-probes for use in biosensors

## 5. Tips and Guidelines to Prepare an EU FP Proposal

### 5.1 The EU Framework Research Programme

A brief history of the EU framework programme as follows;

| | | |
|---|---|---|
| 1984 – 1987 | First Framework Programme | *(STD)* |
| 1987 – 1991 | Second Framework Programme | *(STD)* |
| 1990 – 1994 | Third Framework Programme | *(STD)* |
| 1994 – 1998 | Fourth Framework Programme | *(INCO)* |
| 1998 – 2002 | Fifth Framework Programme | *(INCO)* |
| 2002 – 2006 | Sixth Framework Programme | *(INCO)* |
| 2007 – 2013 | Seventh Framework Programme | (SICA**)** |

### 5.2 The Seventh Framework Programme for Research (FP7)

Of the European Union is the largest open competitive R&D funding scheme in the world. FP7 has a total budget of over 50 Billion Euro and will cover the period from 2007 – 2013. FP7 has 5 Domains as earlier mentioned: IDEAS, COOPERATION, PEOPLE, CAPACITIES, EURATOM. COOPERATION Domain supports collaborative Research and Development and it has 10 subprogrammes namely; HEALTH, FOOD & AGRICULTURE, INFORMATION TECHNOLOGY, NANOTECHNOLOGY, ENERGY, ENVIRONMENT, TRANSPORT, SPACE, SECURITY and SOCIAL SCIENCE.

- FP7 Process
  - Priority Areas for Research and Development are provided in Work Programmes annually
  - The Topics within the Priority Areas are announced in CALLS for Proposals in the official EU website: http://cordis.europa.eu/fp7/home_fr.html
  - Applications (or proposals) are submitted under Topics in a Call
- Who can participate?
  - ALL legally recognized persons, companies, institutions can participate. Only those declared by law as insolvent cannot participate
  - Participants must have the competence and capacity to implement the project which they have applied for
  - Participants from developing countries can apply and receive funding in *most* programmes as European Union members
  - Different categories of participants
    - Member States (27)
    - Associated States
    - Cooperation Partners
    - International Cooperation Partner Countries (ICPC); (under Specific International Cooperation Actins or SICA)
  - As a general rule, applicants from non-EU member states must always have partners from at least 2 EU member states
  - Some Topics are devoted to promote co-operation between developing countries and EU member states. They are called “SPECIFIC INTERNATIONAL COOPERATION ACTIONS”
  - Participants must be prepared to sign a Grant Agreement with the European Commission
  - In some cases it is compulsory for applicants to sign a Consortium Agreement
- Rules for Participation

  - There are STRICT deadlines for submitting proposals
  - Submission of Proposals is done through a dedicated online system for FP7. All proposals submitted after the deadline are automatically rejected by the system
  - There is no limit to the number of proposals you can submit
  - Proposals must be prepared using special application forms for each Topic in a Call. Using the wrong form will result in the proposal being automatically rejected
- Keys to Success in FP7
  - Best Science
    - Not science for science sake! FP7 aims at utilizing existing scientific and technological advances for supporting the knowledge-based economy
  - Best partnership
    - Work in Consortia – You can't go it alone!
    - Excellent management and Leadership
  - Maximum Impact
    - Value-added research – show what economic benefits your research can bring about

  (Work with industry and end users as key partners in your project - The 35% Rule!)

### 5.3 Putting together Large Integrated Project Proposals within EU FPs: Learning points from and African Partners Perspective

***Mr Laurie Barwell, ACCESS, CSIR, South Africa***

The importance of FP7, the lessons learnt, opportunities and approach, and the practical guidelines were presented. FP7 was seen to be important because of the opportunities it offers in Science and Technology.

#### 5.3.1 Why focus on FP7?

- Science & Technology is a necessary condition for development, not a luxury.
- S&T partnerships are a key driver of success.
- Success breeds success, new projects learn from successful ones.
- FP7s focus is on S&T partnerships that makes science work locally and globally.

### 5.3.2 Lessons Learnt

- All about KNOWLEDGE
  - **WHO** you know
    - Consortia is key – build networks
    - The Commission is very supportive
    - Personal contact matters
    - NCP networks – here and in EU
  - Who knows **YOU**
    - Consortia again -> do our EU colleagues know us?
    - Awareness of international dimensions of EU lower than expected (here and in Europe)
    - NCP Networks – here and in EU
  - **WHAT** you know
    - Know what the call is about – WORK PROGRAMME & CALL TEXT
    - Excellence is key – exists, but need to create awareness
    - Need for strategic fit – National & Institutional
    - Quality of proposals

NB: Scientific excellence: Science must advance the frontiers of knowledge

  - **WHEN** you know it
    - Long lead times
      - Solicit Governmental support (e.g. seed money)
      - Need for strategic fit
    - Personal networks
  - **WHERE** you know it
    - Leader on xyz -> make it known and team up
    - Interesting case study, historic data, alignment
    - Targeted position within the R&D value chain
    - Portfolio approach (complementary)
      - Link up with experience
      - Knowledge walks on two legs: PEOPLE are the integrators
        - Exchanges
        - "Old" friends
        - ASK!!!

Consortia integration is often difficult but you have to:

- Read the Work Programme www.cordis.europa.eu/fp7
- Find a call

- Find a partner
- Prepare organisational description, CVs short
- Demonstrate your value to the consortium
- Understand and answer the questions in the call!
- Prepare proposal abstract
- Develop scenarios,
- Develop a work package – become a WP leader
- Register as a Specialist Evaluator
  www.cordis.europa.eu/fp7
- Know that FP7 is highly competitive and excellence-based (not a development aid programme),
- You need excellent partners (locally, regionally and European)
- You need to take it seriously (must be strategically aligned to your plans)
- You need seed funding (pre-scoping, scoping and proposal writing)
- You need co-funding (when successful)
- Key ingredients for successful FP7 participation : Networking and Partner-matching
  - Finding top European partners.
  - It's about the European Agenda. Successful FP7 proposals will rarely, except in a few isolated examples where the call is specifically targeting Africa, be initiated in or driven from Africa.

### 5.3.3 Practical Guidelines

- **Step 1:** Early access to intelligence on what will be in the next call, to find out which areas will be of interest to you.
  - Focus is on the European agenda (NOT aid or grant funding for local needs)
  - Excellence (Scientific and/or complementary case study)
  - Make sure it has not been done before! [GOOGLE!]
- **Step 2:** Honestly determine where you have the capability and capacity to add value to a proposal.
- **Step 3:** Appoint a local Coordinator / Project Manager
- **Step 4:** Be clear on the source and availability of Co-funding
- **Step 5:** Team up for success 1: Seek out and partner with regional and national institutions / organizations that have a track record with the FPs
- **Step 6:** Team up for success 2: Find the best European partners to link up with
  - Proposal Coordinator / Leader (Let them worry about the intricacies of the FP7 rules)
  - Scientific collaborators who complement your capabilities.

- **Step 7:** Organize a pre-scoping workshop (personal canvassing)
- **Step 8:** Attend the first Project Scoping Workshop
- **Step 9:** Be the perfect Team Player:
  - Be organized and responsive and deliver required information on Brief and On Time as agreed.
- **Step 10:** Whatever the outcome, Strengthen and build out your local, regional and European networks
  - It's about building synergies and trust

### 5.3.4 Policy and Project Management

Project management is an important skill that helps a researcher or scientist to see the project to an end. Policy is simply a course of action. If one wants to become a competitive proposal writer, or if an organization wants to get funding through proposal writing, then they must make it a policy to always have a proposal handy for submissionr. It has to be an individual, institutional, staff, management, national, international or science policy to write winning project proposals. The more one writes, the better they become as they sharpen their writing skills while doing so.

It is very important to think deeply on what you want to base your proposal on as not just anything can pass for funding in the current economic crunch. Scientists need to be very creative and innovative. More so, the participants were encouraged to choose topics on their area of expertise or look for partners who are experts in the particular area so that they can put together an informed proposal. Most calls for proposals are based on certain themes or sectors, so anyone wanting to submit a proposal must ensure that he/she is within the theme as this will ensure relevance. It must be noted that most calls for proposal are the same only the format and the guidelines change and so one must read the guidelines carefully and follow the correct format.

### 5.3.5 Components of a Project Proposal:

The project should be measureable in terms of:

- Quality – you should be able to send this proposal to several organizations without making so many changes
- Relevance – should make a contribution in the respective field
- Outcomes – should be quantitative or qualitative or both

While writing the proposal, one should first decide on the topic, carry out an analysis to determine the relevance of the title, and carry out a feasibility study.

Every project goes through a certain cycle that every proposal writer must bear in mined. The project cycle entails:

- **Project Background;** you should explain how and why you decided on the topic. This will give the funders and easy time of identifying the problem at hand that need their funding input. Background information should be very solid.
- **Project Objectives;** objectives are defined as the specific results we aim at over a given time frame. They should be clearly stated, precise, concrete and verifiable.
- **Project Design;** this is where you prepare thoroughly for the proposal and carry out fieldwork on how you will go about the project. This is where you get most points over your competitors.
- **Project implementation;** this is the actualization of what the project proposal was all about. You should ensure that you carry out the project as per the proposal and even make it better. Changes should not be made at this level unless it is really inevitable.
- **Project monitoring;** this is where you look at the verifiable indicators. You have to prepare a progress report that clearly shows how far the project has gone. A midterm review can be carried out at this stage. At this stage, one can also identify the risks that can affect the outcomes or the time frame and how these problems can be addressed. These risks usually affect the environmental based researches as they can be affected by disasters like floods, drought e.t.c.
- **Project evaluation;** at this stage you verify if the project outputs have been realized.

### 5.3.2 Project Write Up

**Must be of quality;** the project must be measureable – a measureable project can be evaluated and managed using objectively verifiable indicators. The indicators must be concrete and not abstract and they must also demonstrate the level of achievement like how much has been done, how well it has been done and by when all these were achieved. The indicators should also allow for verification of the outcomes. The hypotheses and assumptions are a prediction about a cause and effect and they provide a relationship that involves uncertainty.

**Criteria must be met;** be precise in your objectives, output, budget breakdown (avoid exaggerating the budget and human resource capital). Ensure that you follow any set guidelines to avoid your proposal from being disqualified.

**Gender analysis;** this is very important especially when applying for funding from international agencies. You should ensure that there is gender balance in your project.

Always try and ensure that in your proposal there is something on poverty reduction as this is the aim of most funders.

Also in your proposal list the available resources to be put into the project before asking for additional funding for purchasing resources.

Adhere to the formats for budgets as they vary from one organization to another.

**Submit your reports on time;** the progress reports and final reports must be detailed and submitted on time. They should include a report on how the project started, what was achieved and what was not achieved within the project time and also what made them not be achieved. The reasons must be very solid.

You should have adequate staff resources put in place so as to achieve the project objectives within the stipulated time frame. Identify the key important assumptions, analyze their importance and probability and decide how to manage them. Identification of risks allows better communication and identifies what is beyond control.

Involve the beneficiaries and stakeholders in the project design.

Ensure also that you include the lessons learnt.

### 5.4 Legal and Financial Guidelines

***Mr Tendani Nevondo, ANCP-Legal and Financial, Wits Enterprise , South Africa***

Mr Tendani Nevondo made a presentation on FP7 budget, funding schemes, main activities and funding rates, eligible and non-eligible costs, preparing a budget, auditing, and contractual aspects.

#### 5.4.1 FP7 Budget

It is the world's largest civil Research and Development fund and it has a budget of +€50 billion over 7 years (from 2007 – 2013). This amount is equivalent to 5% of the EU's public research budget which is approximately €7 billion funding per year. He also reported that 39 countries contribute funding to the program based on GDP, this amount is given to countries independent of the contribution based on excellence i.e. it is competitive. The amount is distributed as follows:

- Cooperative: collaborative research (top down) - € 32 billion

- Ideas: Frontier Research (bottom up) - € 7.3 billion
- People - Mobility (Marie Curie) - € 4.7 billion
- Capacities - € 4.2 billion

### 5.4.2 Funding Schemes

"Types of Projects" or "Instruments"

1. Collaborative Projects (CP)
    - Small or medium-scale focused research actions (STREP)- This is a well defined single focused issue ("project" approach) mainly mono-disciplinary and has 5-10 partners with finding of about 1-4M Euro and goes on for 2-3 years.
    - Large-scale integrating projects (IP) - This is ambitious objective driven research via "program" approach and generally multi-component and multidisciplinary. It has a funding of about 4-25M Euro with around 10-20 partners and goes on for 3-5 years.
2. Networks of Excellence (NoE)
    - Network of Excellence – (NoE) - This supports the long-term durable integration of research resources and capacities and is implemented through joint programme of activities. Around 3-7 research organizations come together but in FP6 around 6-12 partners came together. It has a funding for €4-€10M and goes on for 4-5 years.
3. Coordination and Support Actions
    - Coordination action (CA) - Focused on coordination of research or creation of a network between other research actions for specific purpose. Coordination Action have fixed overall work plan, partnership and deliverables. The size of consortium should be appropriate to coordination activities at least a minimum of 3 independent legal entities from 3 different countries. The funding is approximately €0.5 - €2M and goes on for 1-2 years.
    - Support action (SA) – Was designed to underpin the implementation of the program and complement the other FP7 funding schemes, to help in preparations for future community research and technological development policy activities and to stimulate, encourage and facilitate the participation of SMEs, civil society organizations, small research teams, newly developed and remote research centres, as well as setting up research clusters across Europe. It can cover one off events of single purpose activities. The minimum number of participants is between 1-15 partners and the funding is between €0.3 - €3M.

### 5.4.3 Maximum Grant

A maximum grant is based on an estimation of eligible costs prepared by the consortium partners and partners get reimbursed for eligible costs BUT they must co-finance a

portion of the costs. The amount the partners co-finance depends on the type of organization to which they belong and the activity being funded. What is spent is taken into account to determine the final financial contribution by the EC.

### 5.4.4 Types of Organizations

- **Public body**: legal entity established as such by national law, and international organisations
- **Research organisation**: legal entity established as a non profit organisation which carries out research or technological development as one of its main objectives
- **Secondary and higher education establishments**: includes universities, schools for applied sciences and similar
- **SMEs**: small and medium-sized enterprises as defined in Europe:
  - fewer than 250 employees,
  - annual turnover not exceeding €50 million, and/or
  - annual balance-sheet total not exceeding €43 million

### 5.4.5 The main activities that can be charged include;

- Research and technological activities
- Demonstration
- Coordination (only for CAs)
- Support (only for SAs)
- Other Activities

**RTD ACTIVITIES - Maximum funding rates**

- Public bodies: up to 75%
- Secondary and higher education establishments: up to 75%
- Research organisations (non-profit): up to 75%
- SMEs: up to 75%
- Large Organisations (all Others): up to 50%

**Other activities – Maximum funding rates**

- Demonstration activities: up to 50%
- Management: up to 100%
- Frontier research actions: up to 100%
- Coordination and support actions: up to 100%
- Training and career development of researchers: up to 100%
- Dissemination: up to 100%

### 5.4.6 Eligible Costs

- **ACTUAL, ECONOMIC, USED SOLELY TO ACHIEVE PROJECT OBJECTIVES**
  - Must actually be incurred
  - Must be incurred during the project
  - Must be determined according to your organisation's usual accounting and management principles/practices
  - Must be recorded in accounts

### 5.4.7 Non-eligible Costs

- Identifiable indirect taxes including VAT
- Duties
- Interest owed
- Provisions for possible future losses or charges
- Exchange losses, cost related to return on capital
- Costs declared or incurred, or reimbursed in respect of another project
- Debt and debt service charges, excessive or reckless expenditure

### 5.4.8 Sub-contracting

- Beneficiaries shall implement the indirect action and shall have the necessary resources to that end
- Specialised jobs that it cannot carry out itself or because it is more efficient to use the services of a specialised organisation
- Agreement based on "business conditions"
- Works without the direct supervision of the beneficiary and is not hierarchically subordinate to the beneficiary
- Interest in the project is only the profit that the commercial transaction will bring
- No IPR rights on the foreground of the project
- Responsibility for the work subcontracted lies fully with the beneficiary
- Subcontracting between beneficiaries in the same GA is not to be accepted
- Does not concern the research work itself, but tasks or activities needed in order to carry out the research, auxiliary to the main objective of the project
- Work (the tasks) to be performed by a subcontractor has to be identified in Annex I to the GA
  - identity of the subcontractors does not need to be indicated
  - description of the tasks to be subcontracted should include a financial estimation of the cost
- Best value for money (best price-quality ratio), under conditions of transparency and equal treatment

- Framework contracts with a third party for routine or repetitive tasks – prior arrangement
- Minor tasks / services are not project tasks identified as such in the Annex I - needed for implementation of the project

### 5.4.9 Other Costs

- Consortium management
  - Maintenance of consortium agreement
  - Legal, ethical, financial management
  - Certificates: costs incurred for the certificates on the financial statements and certificates on the methodology constitute eligible direct costs and are charged under management costs which are part of "Other activities".
  - Financial audits and technical reviews
  - Competitive calls (permitted & foreseen)
- Training activities, excluding trainees (permitted & foreseen)
- Networking & dissemination, including publication
- IPR protection

**INDIRECT COSTS**

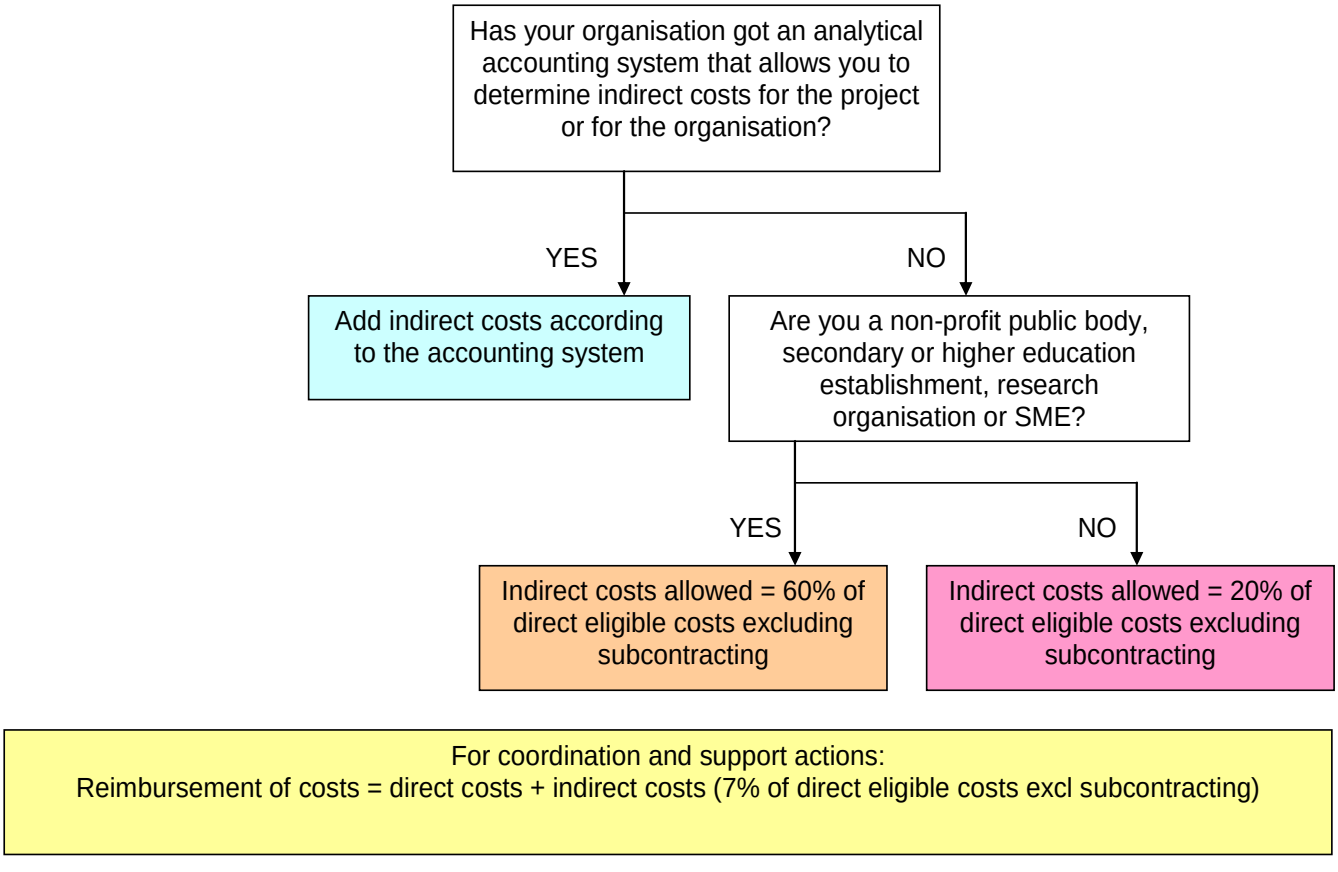
- Determined according to the information you have from your accounting system:
  - Actual indirect costs:
    - If your accounting system allows you to determine your actual indirect costs for the project
  - Simplified actual indirect costs:
    - If your accounting system allows you to determine your indirect costs for the organisation but not for the project
  - Flat rate:
    - If you can't determine your indirect costs from your accounting system then you can use 20% of direct costs less subcontracting costs OR
    - a transitional flat rate depending on the activity and type of organisation (see next slide)
- For Coordination and Support Actions, the maximum indirect costs allowed are 7% of direct costs less subcontracting costs

**INDIRECT COSTS – Transitional flat rate**

- Eligible activities:
  - Research and technological development
  - Demonstration

- Eligible types of organisations:
  - Non-profit public bodies
  - Secondary and higher education establishments
  - Research organisations
  - SMEs
- Transitional flat rate applied:
  - 2007 – 2009: 60% of direct costs less subcontracting costs
  - 2010 – 2013: 40% of direct costs less subcontracting costs

**DECISION TREE ON INDIRECT COSTS**




**EXCHANGE RATES**

- Costs shall be reported in €
- Exchange rate applied either on the basis of:
  - the rate applicable on the first day of the month following the end of the reporting period

**OR**

  - on the date that the actual costs were incurred
- Based on European Central Bank rates http://www.ecb.int/stats/eurofxref/

**CERTIFICATE ON THE METHODOLOGY**

- Certificate on methodology used to calculate the average personnel costs and indirect costs
- Methodology must be consistent with the beneficiary's management principles and usual accounting practices
- Averages calculated according to the certified and accepted methodology must be deemed not to differ significantly from actual personnel costs

**CERTIFICATE OF FINANCIAL STATEMENT**

- Completed by an external auditor selected by the beneficiary
- Contain a number of questions (controls) which the auditor is asked to answer (check) in verifying the beneficiary accounting and control system or document in relation of the execution of the project.
- CFS uses a standard format which is annexed to the grant agreement (Annex VII). The use of this format is mandatory.
- CFS are only required with the cumulated Community financial contribution (not costs!) requested exceeds €375,000
  - if the amount requested by a beneficiary is inferior to 375,000 for the first period, CFS not required.
  - CFS must be submitted as soon as the cumulated requested funding for all former periods (not covered by any CFS) exceeds €375,000.
  - If the total funding received for a project by a beneficiary is below €375,000, a CFS is not required for the project.
- the WEB tool will indicate if a CFS is required for a particular period

**ELIGIBLE AUDITORS**

- Beneficiaries are free to choose an external auditor, but must be:
  - Independent
  - Qualified
- Public bodies, secondary and higher education establishments and research organisations may opt for a Competent Public Officer instead of an external auditor
- The submission of a certificate does not waive the right of the Commission to carry out its own audits

**DISBURSEMENTS**

- One pre-financing (upfront) payment, typically 160% of average yearly budget (or budget for 1st year)
- Followed by Interim Payments based on financial statements
- 10% of amount payable is retained until the project is signed off

**GUARANTEE FUND**

- No collective financial responsibility
- 5% of total project budget set aside at start of project (guarantee fund)
- Reimbursement (of guarantee fund and 10% retention) on project completion and finalisation (final payment – 105 days)

**CONTRATUAL ASPECTS**

- Grant agreement
  - Signed between beneficiaries and EC
  - Establishes rights and responsibilities of the beneficiaries to each other and to the EC
  - Consists of core grant agreement and annexure including Annex 1 (Description of Work)
- Consortium agreement
  - Signed between beneficiaries
  - Implements the grant agreement, establishes provisions related to consortium management, distribution of the Community financial contribution and IP
  - Mandatory unless otherwise specified in Call for Proposals
- It is important to make sure that the grant agreement and the consortium agreement talk to each other, particularly in relation to IP sharing
- Note that there exists *"Technical collective responsibility"*

**CONSORTIUM AGREEMENT**

- A Consortium Agreement is required for all projects financed unless otherwise stipulated in the call for proposals
- EC is not a party to any CA and does not establish the terms and conditions of the CA
- Provisions of a CA should not affect the participants' obligations to the Community and/or to each other arising from the Rules for Participation and the Grant Agreement
- Checklist
- Model consortium agreements

**EXCHANGE OF INFORMATION**

- Beneficiaries exchange information and know-how (software, patents, work methods, etc.) in order to
  - Benefit from each other's resources
  - Carry out tasks
  - Carry out exploitation efforts
- Each beneficiary has the right to request access rights to the other beneficiaries' background and foreground, as long as it needs them in order to carry out its work under the project or to use its own foreground:

- "Background" is project-related information and IP rights beneficiaries hold before entering the project
- "Foreground" is the information and IP rights that beneficiaries generate within the project, the results of the project

**OWNERSHIP OF FOREGROUND**

- Each beneficiary is owner of the foreground it generates.
  - Contractual relationships with its personnel and third parties must guarantee its ownership of foreground
  - Must enable it to comply with its obligations under the grant agreement and the consortium agreement.
- If foreground is generated by common efforts and it is not possible to distinguish individual contributions
  - The contributors will have joint ownership of the foreground
  - A joint ownership agreement will be signed to define the shares and the management of the joint ownership
- If there is no such agreement, the default joint ownership allows:
  - Each joint owner to grant non-exclusive licenses to third parties
  - Provided that it notifies the other joint owners and grants them fair and reasonable compensation

**FOREGROUND**

- Beneficiaries obligations regarding foreground are to
  - protect it if appropriate
  - use it in further research or commercial activities
  - disseminate it to the relevant public or the public in general
- Use of foreground:
  - Beneficiaries may use the foreground themselves or grant licenses to third parties:
    - Access rights of the other beneficiaries must be maintained
    - An exclusive license to background or foreground can only be given with written permission from the other beneficiaries
    - The EC may object to the granting of an exclusive license to foreground in a third country for ethical principles or security considerations.

## 6. African FP7 Proposal Examples: "Biodiv-Health", "PlantExplo"

**PROF. PHILIPPE RASOANAIVO'S Story: Institut Malgache de Recherche Appliquees, Madagascar**

**6.1 How have you been involved in FP7 projects?**

He got involved in FP7 through personal contacts with mutual esteem and came up with the case of "Biodiv-Health" and FP7 Project. He got encouraged after meeting people in international conferences and convinced them of the quality of his proposal. He and other members of the consortia came up with a proposal on Plant resource exploration and characterization for speciality and industrial chemicals. It is a small or medium sized collaborative project.

**6.2 Why Madagascar and IMRA?**

In biodiversity-based projects, Madagascar has a unique biodiversity with unparalleled degree of endemism and archaism.

- IMRA has the required infrastructure and expertise in biodiversity-based projects.
- IMRA has several peer review papers and PCT patents.

**6.3 Industrial chemicals used in the project include:**

- Food ingredients
- Cosmetics
- Pest control
- Surfactants
- Lubricants
- Adhesives
- Bio-fuels

**Lessons learnt from conceptualizing and writing FP7 projects**

- managing the consortium:
  - Mailing list with daily E-mails exchanges,
  - Skype conferences.
- Search for excellence in a highly competitive grant
- Knowledge update

## 7. Networking and Discussions on Thematic Areas

***Dr Yonas Yemshaw, Scientific Programme Coordinator, AAS, Kenya***

In the last session, the participants were allocated into groups, according to their thematic areas of interest. In these groups they discussed possible thematic topics for EU FP7 and show how these topics could benefit the community.

During the discussion sessions, the following points were raised under each thematic area.

### 7.1 Food, Agriculture and Biotechnology - Topic: control of ticks in livestock using bio-pesticides

**Objectives**

1. Extraction and screening of bio-pesticides from plants and micro-organisms against ticks
2. Identification of the active bio-pesticides
3. Upscale production of the bioactive components for application in tick control in livestock in a large scale

**Rationale**

Food security is a major problem in Africa. This problem has been worsened by reduced water availability and prevalence of pests. Animal/livestock pests are prevalent in most areas in Africa and the prevalence is persistent due to pesticides. Chemical pesticides, one of the most available and apart from observed resistance of the pests to chemical pesticides the also resist nature. Therefore, this study is aimed at increasing food production by reducing the menace of ticks to livestock using bio-pesticides. Bio-pesticides are natural and will not persist in the environment. They can easily be accessed from nature.

### 7.2 Health

- African Nutraceuticals for improving of nutritional status for people living with HIV/AIDS
- Improving water availability and quality in rural arid regions from boreholes

### 7.3 Environment - Topic: Fragile trans-boundary ecosystems: implications for food and water security in Sub-Saharan Africa

**Objectives**

- Ascertain the extent of ecosystem change (direction, scope, intensity) based in biodiversity and water variation indicators
- Determine the current status of the fragile ecosystems
- Recommend policies for intervention towards sustainable food and water security

**Rationale**

Trans-boundary ecosystems are exposed to various management practices by concerned countries. However, being fragile and trans-boundary these ecosystems are of interest and important to the countries as sources of water and food security. Their management at

transnational levels will ensure best management practices that are policy advised. The best management practices backed by policies enhance water, food security and ecosystem sustainability.

**Next steps**

- Engagement of local, regional and international stakeholders who include donor agencies, the affected communities, governments and scientists specialized in the areas to be studied (broad stakeholder community).
- An attempt at coming up with a common policy for managing trans-boundary ecosystem

**Topic 2: Strengthening public-private partnership to enhance environmental conservation for food and water security in African Countries**

**Objectives**

1. Applying multi stakeholders approaches for effective environmental governance in Africa
2. To enhance reliable clean water supply and poverty eradication in rural area communities
3. To increase farm land and tree planting
4. Managing water resources for food production
5. To promote use of water harvesting techniques
6. To enhance economic values of environmental services
7. To promote efficient utilization of goods and services

**Rationale**

- A collaboration to learn from each other's experiences and expertise
- Slow down the effects of climate change by increasing forest cover
- Generate income to benefit various stakeholders
- To achieve sustainable supply of water
- To increase forest cover

**Other points raised were:**

- Food and water security for Africa
- Managing water for food production
- Fragile transboundary ecosystems
- Automated network for water resource monitoring

### 7.4 Energy - Topic: 2nd Generation biofuels from non-food sources

**Objectives**

1. Encourage use of bio-energy sources to enhance food security
2. Increase access to energy for farms for enhanced food production and accessibility of water

**Rationale**

- To improve food security we need renewable energy input which is sustainable and can be generated in small stand alone units
- A lot of international concern on depleting petroleum resources and pollution
- A lot of non fertile land that is not being used for food production and thus encouraging desert encroachment

**Next steps**

- Plants like Jatropha, sweet sorghum widely studied collate information onwhat has been done and propose modification
- Genetic modifications of plants rich in biofuels to enhance their energy efficiency
- Improve biomass conversion
- Concentrating solar power generation to improve solar power concentration

### 7.5 ICT - Topic: Mobile e-learning centers for rural communities

**Objectives**

1. Expand access to education and information on issues of food and water security in a sustainable manner

**Rationale**

Low levels of literacy in rural communities, low absorption of information and technologies for agriculture, water and sanitation and food security. Therefore, we would like to provide information to the communities on issues of climate change, climate adaptation, food security, water and sanitation adapted to their needs.

**New knowledge/innovation**

- Research on low cost powering of IT experiment and use of renewable energy
- Survey of e-technologies available and determination of those most suited for use within the rural communities.

### 7.6 Socio-Economic and Humanities - Topic: Natural resources conflicts and service delivery

**Objectives**

The objectives focused on the following:

1. Ecosystem: water and food security
2. Policy governance
3. Socio-economic development:- culture identity, ethnicity and gender empowerment
4. Conflicts and conflicts resolution
5. Gender Empowerment

**Rationale:**

- EU should be involved fully in the project for peace and stability
- Trade between Europe and Africa should be enhanced
- The topic affects the supply of natural resources
- Immigrations
- Cultural crashes
- Quality of service delivery; poverty alleviation, conflict resolution and ensure peace and stability within Africa and between Africa and Europe

**Next Step:**

- Articulating detailed project formulation
- Setting up medium and small scale industries for increasing the income
- State society interface for poverty eradication

ST-EAP and WAITRO will use these topics ideas in the upcoming FP7 calls, to ensure the international participation.

## 8. Conclusion

Succeeding in proposal writing, and receiving EU grants is difficult, but not impossible in the current competitive grants environment. FP7 has a valuable role in assisting the internationalization of African Research and Development. African countries must participate actively in this EU initiative if the countries are to benefit. Africa, being a developing continent, requires researchers who will not only carry out research, but also implement the recommendations. Research has to be taken from the field and applied in a real situation. Only then will the impacts be felt.

Given Africa's cultural and ethnic diversities, the continent is well placed to learn from these cultures and apply lessons learnt where transferrable. Instead of viewing cultural and ethnic diversity as an advantage, it has been viewed as the main cause of strife and other disagreements in society.

Though some African countries are already actively participating in FP programmes, there is a need to encourage those that are not to partake in order for the continent to develop. Researchers need to be creative and think out of the box when applying for an FP programme. No funding agency will risk providing funding if they do not see a return on investment. Therefore, African researchers have to up their game to make it.

The reality is that it is difficult to be successful, but it's not impossible to succeed, and success breeds success!

## Appendix A: Communiqué

### ST-EAP steps up African S&T collaboration at Kenya Workshop

The African Academy of Science (AAS) and the CSIR, South Africa organised a successful workshop, which was held on 26 and 27 March 2009 in Nairobi Kenya as part of their management and administration responsibilities of ST-EAP (Science & Technology Europe-Africa Project).

ST-EAP is a Europe-African project, under Framework Programme 6 (PF6), which was implemented in 2007.

The objectives of the workshop were to:

- Raise awareness among African researchers to participate FP7, as well as looking into its challenges.
- Provide a basis for networking between African researchers to promote cooperation and coordination between African countries to encourage participation in FP7.
- Increase awareness of the role of the science and technology programme.

The workshop was held over two days with over 100 participants including academics, researchers and government officials. Participants were from 20 countries; including Kenya. Among these countries were Mali, Madagascar, Mauritius, Ghana, Nigeria, Morocco, Sudan, Malawi, Tanzania, Ethiopia, Uganda and South Africa.

In the opening remarks session, Mr Titus Katembu, an EU representative based in Nairobi read a speech from the European Commission. It mentioned that “S&T cooperation with Africa is not driven by philanthropy, but by common interests and common benefits. The global S&T context is calling for a strengthened cooperation between Europe and Africa. Our S&T cooperation with Africa should follow two routes: Building a basic S&T infrastructure, and pro-actively pursuing strategic research.”

The speakers included researchers and scientists who have participated in the FP projects and who had a clear understanding of how the PFs work. Topics included tips and guidelines to prepare an EU FP proposal; examples of African FP7 proposals; and the relationships between EU and Africa on S&T.

The last session of the programme, which the participants found to be extremely interesting and challenging was where the participants were allocated into groups, according to their

thematic areas of interest. In these groups they had to discuss possible thematic topics for EU FP7 and show how these topics could benefit the community.

By the end of the workshop, almost 50 participants had already registered as ST-EAP community members and half of those have inquired about the FP7 current open calls.
ST-EAP will be measured or evaluated by the number of African researchers who participated in FP7, while the project was in action.

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