



Shaping the Future of Science, Technology and Innovation in Africa

Report on the Fourth African Youth Forum
on Science and Technology (AYFST) Steering
Committee Meeting and Launch of the Youth
Innovation Challenge Programme (Y I CAN)

July 13-16, 2009 - Mombasa, Kenya



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A report of the 2009 fourth African Youth Forum on Science and Technology (AYFST) steering committee meeting and launch of the Youth Innovation Challenge Programme (Y I CAN) held in Mombasa, Kenya from July 13 - 16, 2009.

Published by the African Technology Policy Studies (ATPS) Network with support from the Technical Centre for Agricultural and Rural Cooperation (CTA)

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ISBN: 978-9966-7434-8-0

List of Abbreviations:

ACTS	African Centre for Technology Studies		Building in Agriculture
AGM	Annual General Meeting	SET-DEV	Science, Ethics and Technological Responsibility in
ARIPO	African Regional Intellectual Property Organization		Developing and Emerging Countries
ASEE	African Society for Ecological Economics	S&T	Science and Technology
ASTI	Agricultural Science, Technology and Innovation	SSA	Sub-Saharan Africa
ATPS	African Technology Policy Studies Network	ST&I	Science, Technology and Innovation
AWFST	African Women Forum for Science and Technology	SWOT	Strengths, Weaknesses, Opportunities and Threats
AYFST	African Youth Forum for Science and Technology	UDS	University of Development Studies
BTA	Biotechnology Trust Africa	UNCST	Uganda National Council for Science and Technology
BUZARDI	Bulindi Zonal Agricultural Research and Development Institute	USPTO	United States Patent and Trademark Office
CIAT	Centro Internacional de Agricultura Tropical	UYASTI	Uganda Youth Association of Science and Technology Innovation
CTA	Technical Centre for Agricultural and Rural Cooperation	W&E	Water and Environment
ECOWAS	Economic Community of West African States	WE CAN	Women Innovation Challenge Programme
EML	Einstein Minds Lesotho	YADSTI	Youth Agency for Development of Science Technology and Innovations
EPO	European Patent Office	Y I CAN	Youth Innovation Challenge Programme
ESRI	Economic and Social Research Institute		
EU	European Union		
FARA	Forum for Agricultural Research in Africa		
HIV/AIDS	Human Immunodeficiency Virus/ Acquired Immunodeficiency Syndrome		
ICT	Information and Communication Technology		
IFPRI	International Food Policy Research Institute		
IK	Indigenous Knowledge		
ILRI	International Livestock Research Institute		
IPR	Intellectual Property Rights		
ISEE	International Society for Ecological Economics		
JPO	Japan Patent Office		
KEPSA	Kenya Private Sector Alliance		
MDGs	Millennium Development Goals		
NARO	National Agricultural Research Organisation		
NEPAD	New Partnership for Africa's Development		
NGOs	Non Governmental Organisations		
NIS	National Innovation Systems		
OAPI	Organisation Africaine de la Propriété Intellectuelle		
RUFORUM	Regional Universities Forum for Capacity		

About The African Technology Policy Studies (ATPS) Network

The African Technology Policy Studies (ATPS) Network is a leading multi-disciplinary network of researchers, practitioners and policy makers that promotes science, technology and innovation (ST&I) policy research, dialogue and practice, for African Development.

Its mission is to improve the quality of science, technology, and innovation research, policy and practice for sustainable development in Africa, by Africans and for Africans. The fundamental strategic goal of the ATPS is to build Africa's ST&I capacity today for sustainable development tomorrow. With a Secretariat Headquarters in Nairobi, the ATPS works through national chapters in 23 countries of sub-Saharan Africa with a vision to cover the whole of the region by 2015 (see Figure 1). The regional secretariat and the national chapters provide ground facilities and platforms for ST&I capacity building at both regional and national levels.

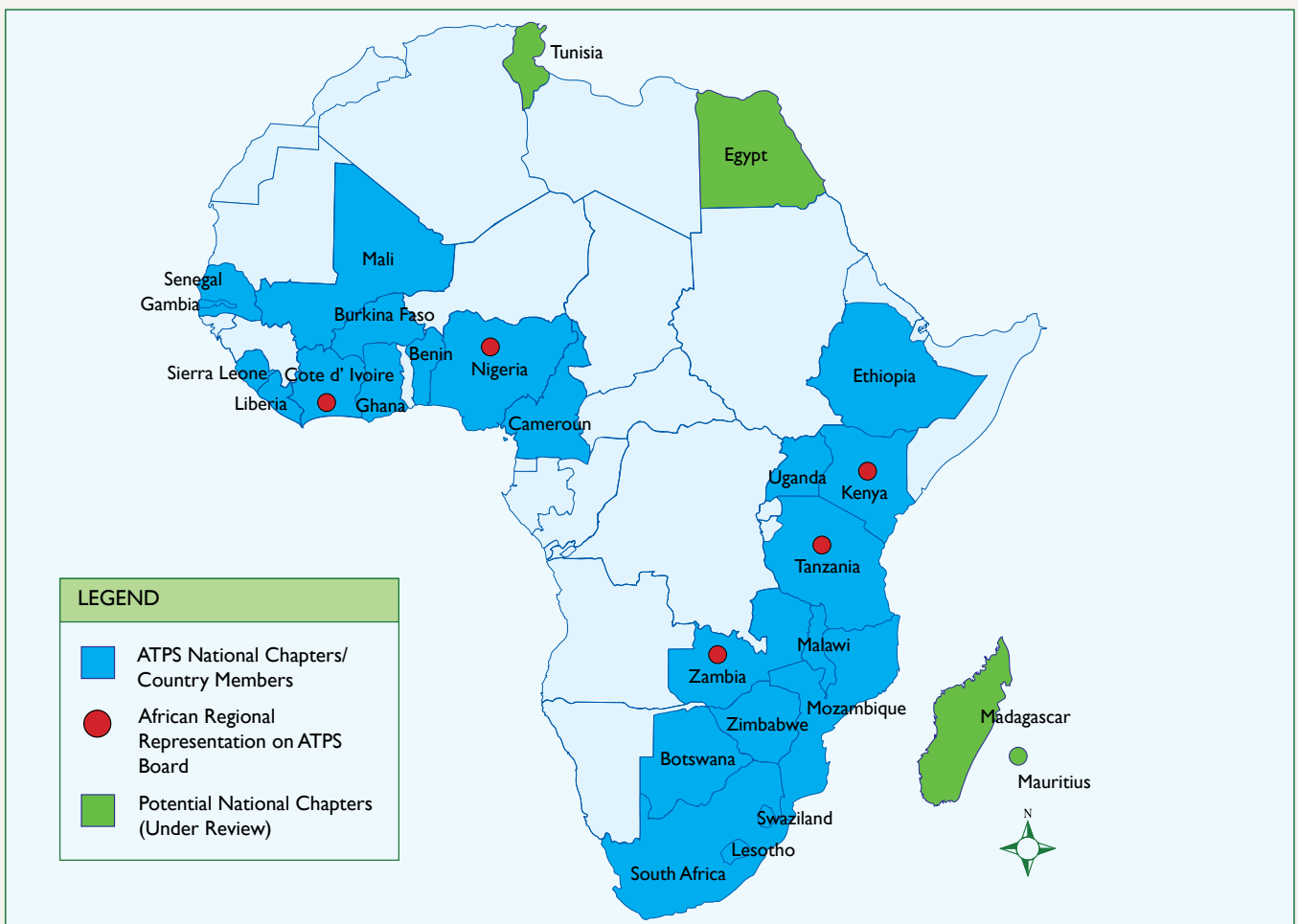


Figure 1: Where we work

About the Technical Centre for Agricultural and Rural Cooperation (CTA)

The Technical Centre for Agricultural and Rural Cooperation (CTA) was established in 1983 under the Lomé Convention between the ACP (African, Caribbean and Pacific) Group of States and the European Union Member States. Since 2000, it has operated within the framework of the ACP-EC Cotonou Agreement.

CTA's tasks are to develop and provide services that improve access to information for agricultural and rural development, and to strengthen the capacity of ACP countries to produce, acquire, exchange and utilise information in this area. CTA's programmes are designed to: provide a wide range of information products and services and enhance awareness of relevant information sources; promote the integrated use of appropriate communication channels and intensify contacts and information exchange (particularly intra-ACP); and develop ACP capacity to generate and manage agricultural information and to formulate ICM strategies, including those relevant to science and technology. CTA's work incorporates new developments in methodologies and cross-cutting issues such as gender and social capital.



Foreword

The African Youth Forum on Science and Technology (AYFST) was initiated by the ATPS in 2005 in collaboration with the Technical Centre for Agricultural and Rural Cooperation - CTA, the Netherlands. The success of the AYFST during its first three years after its formation in providing a platform for African Young Professionals to build capacity in ST&I policy research, policy dialogue and policy practice, has been very encouraging.

At the 2006 youth congress in Kampala Uganda, I dared the youth to dream big. Borrowing from a spiritual phrase, I challenged them saying, "If your dream doesn't scare you, then it is not good enough." Today I can proudly declare that they have truly lived up to that challenge. From their Plan of Action 2007 – 2010, it is clear that they have dared to dream big. To sustain the momentum gathered and propel it to flight, now more than ever, the AYFST needs to re-visit its plans, seek new strategies for improvement and accelerate its execution. As the common adage goes, "failing to plan is planning to fail."

Time and again the youth in Africa have elaborated the issues that prevent them from realizing their potential and overcoming the constraints of Africa's development. The AYFST provides an ideal vessel for the youth to realise their dreams of overcoming these challenges through science technology and innovation. The ATPS pledges its unflagging support for the AYFST by investing in their plans but more importantly by offering the much needed guidance and mentorship through its national chapters.

While being cautious not to take over the mantle of leadership from young people, we believe it is necessary to walk beside them and help nurture and transform their ideas into practical solutions through capacity building in science, technology and innovation. In doing this, we envisage a new crop of empowered youths emerging to take forward their own activities in their countries under the careful mentorship of the more experienced members of the network. These youths will in turn vitalize the activities of the ATPS chapters and also ensure good governance at both national and regional level, through their active



participation in programmes. It is for this reason that I am pleased to note that during the fourth Steering Committee Meeting, the AYFST resolved to mainstream its activities under the ATPS Phase VI Strategic Plan 2008 - 2012. This brings some level of clarity in the communication between the ATPS National Chapter Coordinators and the AYFST National Chapter Coordinators in their countries.

I am also pleased to report that the launch of the new Youth Innovation Challenge Programme (Y I CAN) which followed the Steering Committee Meeting was a major success. The Y I CAN 'read as "Why I Can" has been developed under the auspices of the ATPS Phase VI Strategic Plan, 2008 – 2012 and will be implemented through the AYFST. The programme is designed to build a culture of innovation amongst young people in Africa through targeted partnerships within the quadruple helix (Researchers, Private Sector Actors, Policy Makers and Civil Society) and through entrepreneurship incubation programmes. The activities of the Y I CAN programme were also successfully mainstreamed under the ATPS Phase VI Strategic Plan 2008 – 2012.

ATPS would like to congratulate these young people for their commitment in seeing through a week of action and accomplishment and would like to assure them of its continued support.

Dr. Kevin Chika Urama
Executive Director, ATPS

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1.0 Introduction:

The African Youth Forum on Science and Technology (AYFST) was initiated by the African Technology Policy Studies Network (ATPS) in 2005 in collaboration with the Technical Centre for Agricultural and Rural Cooperation - CTA, the Netherlands. Since then, the AYFST has provided a useful platform for African Young Professionals to build capacity in ST&I policy research, policy dialogue and policy practice. The forum (and its website <http://www.ayfst.org>) was formerly launched during the second African youth congress on science and technology in Accra, Ghana co-organised by the African Technology Policy Studies Network (ATPS) CTA, CSIR, among other partners. The ATPS will continue to manage the AYFST website and its secretariat based at the ATPS headquarters in Nairobi Kenya.

1.1 AYFST Vision

Empowered African communities that enjoy sustainable livelihoods

1.2 AYFST Mission

To build the capacity of African youth in agriculture, science, technology and innovation and empower them to participate in policy formulation processes and advocacy for sustainable development

1.3 Objectives

To build the capacity of African youth through training, information sharing, networking and dialogue in relevant topical and developmental issues

To promote youth participation in policy formulation and implementation processes at all levels concerning agriculture science, technology & innovation and development

To promote a culture of science technology and innovation consciousness among the African young generation

To promote youth-led, demand-driven research and development initiatives in agriculture, science, technology and innovation



1.4 Goal of the fourth Steering Committee Meeting

The AYFST is amongst the priority programmes of the ATPS Phase VI Strategic Plan, 2008 - 2012. The ATPS therefore wanted to take stock of AYFST progress and engage with the AYFST steering committee to inform its implementation of planned youth activities under the Phase VI Plan. The Steering Committee is one of the decision making organs of the AYFST. With a representation from ten sub-Saharan African countries, its key mandates include:

- To draw the programme and plan of action to guide the pursuit of AYFST's strategic objectives
- To provide support in planning and execution of AYFST programmes in consultation with the ATPS Secretariat
- To review the progress of AYFST and advise the Secretariat on necessary changes/ adjustments in order to achieve its targets

The Steering Committee started the process of developing the strategic plan of action (PoA): 2007 – 2010 at its sitting in June 2006 in Accra, Ghana. This PoA was approved during the third congress in July 2007 in Kampala, Uganda. The PoA includes the top priorities for AYFST and may be revised from time to time by the steering committee in order to meet the overall goals.

The objective of this PoA is to provide the impetus to the African youth-led actions and interventions in agriculture science and technology for Africa's economic growth and development by redefining and improving the strategies



AYFST delegates together with ATPS staff and international partners during the Mombasa forum

in priority areas in order to enable the African youth and their communities realize sustainable livelihoods. The PoA is anchored on the following key strategies:

- Building the capacity of youth in agriculture, science and technology.
- Sharing of information and networking amongst the youth.
- Promoting youth-led research and innovation projects
- Enhancing youth participation in S&T policy and decision-making
- Facilitating career mentorship by senior researchers

Cognizant of the important role of monitoring and evaluation in improving efficiency, sustainability and timely achievement of targets, the Steering Committee provided for a mid-term review of the implementation of the action plan at the end of 2008.

1.5 Objectives of the fourth Steering Committee Meeting

The objectives included; reviewing progress made in the implementation of the PoA (2007 – 2010) and deliberate on strategies for improvement, revising the activities carded for 2009 – 2010 in line with the ATPS

phase VI strategy and youth capacity building initiatives, reviewing AYFST communication and outreach strategies, including revamping its website reviewing its membership recruitment drive and how to increase and sustain its membership, and consolidating the membership of the AYFST Steering Committee and elects its leadership.

1.6 Expected Outcomes

- The progress of implementation of the PoA (2007 – 2010) reviewed and recommendations made for improvements/adjustments;
- The themes for 2009 – 2010 deliberated, agreed and harmonized with the ATPS phase VI strategy (2008 - 2012);
- AYFST communication and outreach strategy reviewed and recommendations adopted;
- AYFST governance structures under the ATPS discussed and agreed;
- Election of new AYFST Executives completed; and
- The membership recruitment and retention strategies discussed and agreed.

The ATPS planned the Steering Committee meeting to run alongside the launch of the Youth Innovation Challenge (Y I CAN) Programme. The launch was scheduled to take place the day after the conclusion of the Steering Committee

“...impossible is not a word you will find in any innovators dictionary. I can only become an innovator if I begin to dwell less on the why I can't, and more on why I can.”

Dr. Kevin Urama, Executive Director, ATPS

Meeting to include a series of engaging and interactive sessions culminating in an official launch reception. It was expected that the Y I CAN activities would complement the AYFST programme and be integrated into the Plan of Action (2007 – 2010). The ATPS reached out to partners who collaborated on the recently concluded Women and Young Professionals in Science Competitions in 2008 (AGRA, RUFORUM, FARA and NEPAD) inviting them to partner with the ATPS in the new Y I CAN programme.

1.7 Methodology

Einstein is often credited for saying “The definition of insanity is doing the same thing over and over again and expecting a different result.” The primary purpose of the entire week of events was to promote a culture of innovation and stimulate a renewed sense of creativity amongst the youth.

The events of the week were therefore planned and structured with aim of inspiring the young men and women present to become the change agents Africa needs and instill in them a renewed sense of hope and confidence in Africa's renaissance through science technology and innovation. “We set out to assemble and reinvigorate a group of young people who are equipped and ready to lead

“We set out to assemble and reinvigorate a group of young people who are equipped and ready to lead a critical mass of African youth; young people who believe in our vision enough to stir up a science technology and innovation movement for development in Africa.”

Dr. Sheila Ochugboju (ATPS Senior Communications Officer)

a critical mass of African youth; young people who believe in our vision enough to stir up a science technology and innovation movement for development in Africa.” said Dr. Sheila Ochugboju, ATPS Senior Communications Officer during the opening session. In bringing together this group of young people, the meeting also served a secondary purpose; to gather feedback about past AYFST activities and their valuable input on the planned Y I CAN initiative and more importantly to design the next stage of activities. To achieve these objectives, a methodology known as “Peer Assist” was therefore deployed for the meetings.

About Peer Assist

A peer assist is a meeting that brings together a group of peers to get feedback on a problem, project, or activity. The meeting seeks to learn from participants' knowledge and experience with topics related to the problem, project or activity. A peer assist can happen before an activity to help with the planning process, or during an activity to help steer the direction. The benefits of Peer Assist include helping you to:

- Learn how others would approach your issue
- Develop ideas and solutions to your problems with the collective input of your peers
- Gain input and insights from people outside your team
- Learn new approaches or methods to solving problems
- Develop stronger bonds with your colleagues

Diversity

Diversity was the underlying motivation throughout the planning and implementation stages of the Mombasa forum with an aim to stimulate creativity, full participation and above all innovation. The event featured a diverse range of activities including; formal presentations, break out discussions, informal discussions, plenary discussions and a gala reception on the penultimate night (Refer to Annex 2 for the full programme of events). Perhaps one its most unique elements was the opportunity created for youths to interact with other participants from



William Kamkwamba from Malawi was forced to drop out of school at age 14 because his family could no longer afford tuition. He set out to study energy and build windmills on his own. Kamkwamba, now 20, built his windmill, by lashing blue-gum tree trunks together for the base and adding flattened plastic pipes for the blades and bike parts for the turbine, all the while relying on a textbook donated to his local library.

His story traveled over the Internet, and environmental activists and venture capitalists have since teamed up to fund his education and projects. Kamkwamba's story demonstrates how need and motivation, along with a tiny spark of globalization, contribute to innovation that's both powerful and inspirational.

parallel workshops organised by the ATPS namely;

- The Women Innovation Challenge Programme (WE CAN) composed of Strategic women leaders who are driving a new innovation network to promote women's engagement in ST&I
- Science, Ethics and Technological Responsibility in Developing and Emerging Countries; SET-DEV, which gave the youth delegates a chance to contribute to the process of writing an African manifesto for science technology and innovation

The organizers invited an eclectic mix of key speakers drawn from diverse disciplines in agriculture, science and technology who have excelled in their respective fields of expertise. They delivered presentations which inspired the young people present to work on turning brilliant ideas into tangible technologies or innovations for addressing explicit challenges facing Africa. As Dr. Kevin Urama puts it, "impossible is not a word you will find in the innovators dictionary. I can only become an innovator if I dwell less on the why I can't, and focus more on why I can."

1.8 Participation and Funding

To ensure proper regional representation and ownership of the ATPS Phase VI Planned activities, the ATPS committed funding to support participation by the wider youth community in all its national chapters. One participant from each selected country was invited to ensure equal distribution between countries.

The AYFST National Chapter Coordinators automatically qualified for participation and their attendance was endorsed by the ATPS National Chapter Coordinators. In ATPS National Chapters that do not have AYFST members, the respective National Chapter Coordinators were requested to nominate one participant, with the potential for recruitment as AYFST champions in their respective countries. They were encouraged to nominate young innovators or science professionals in their respective countries especially young women in the interest of gender balance due to a predominantly male representation in past AYFST events. The meeting was funded jointly by ATPS and CTA.

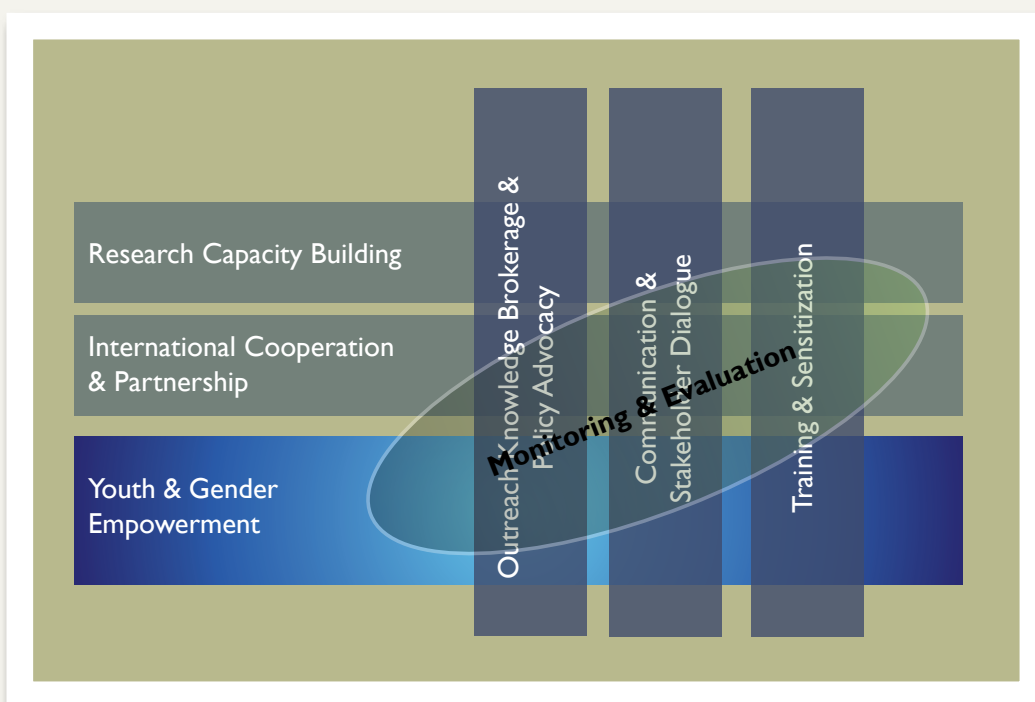
2.0 ATPS Phase VI Strategic Plan and Planned Youth Capacity Building Activities

Following the opening remarks by Dr. Kevin Urama, ATPS Executive Director which was read on his behalf by Dr. Sheila Ochugboju, ATPS Senior Communications Officer, The ATPS Communications and Outreach Officer, Marsden Momanyi gave a brief presentation about the ATPS Phase VI Strategic Plan and its vision for the youth in Africa. The following is a summary of the presentation:

The planned youth activities have been designed within the **Youth and Gender Empowerment Strategic objective** of the ATPS Phase VI Strategic Plan. Youth and Gender Empowerment is one of three key strategic objectives, the other two are Research and Capacity Building and International Cooperation and Partnerships. As with the other strategic objectives there are three main cross cutting themes in the youth programme i.e.: Training and sensitization, Communication and Stakeholder Dialogue and Outreach, Knowledge Brokerage and Policy Advocacy. The activities under the youth programme are designed to mobilize youths to build their capacities in S&T research and policy decision making thereby empowering them to contribute positively to efforts to achieve the MDGs in sub-Saharan Africa.

2.1 Strategic Priorities of the phase VI youth programme:

- Mobilize the youth and empower them to harness ST&I for development in Africa;
- Support and facilitate regional knowledge sharing and cooperation among African youth;
- Facilitate and promote youth engagement in agriculture, science and technology, and social entrepreneurship programmes in their countries,
- Facilitate ST&I career mentoring for African youths by their senior colleagues in Africa and in Diaspora;
- Provide targeted research training and capacity building especially in agriculture, S&T research and practice to address the declining expertise and growing disinterest in the sector; and
- Promote youth involvement in ATPS research and other MDG related S&T projects elsewhere.



ATPS Strategic Priority pillars; Youth and Gender is one of the strategic priorities of the ATPS under the phase VI strategic plan 2008 - 2012

2.2 Expected Outcomes:

- Enhanced skills/capacities in agriculture, S&T research and policy advocacy;
- Improved skills in S&T research and project management and implementation practices among African youths;
- Increased youth participation in S&T research projects and other innovative and productive interventions at local, regional and national levels;
- Increased internships at various ST&I related research institutions and non-governmental organisations in Africa and elsewhere;
- A functioning networking platform; forum [online and offline] in which the youth can exchange views and opinions; and
- Increased awareness among the youth on inter-related policy issues in agriculture, science and technology and the need for multi-disciplinary approaches in ST&I research and policy making.

2.3 Planned Activities

The planned youth capacity building activities will be carried out under the umbrella of the ATPS phase VI strategic plan (2008-2012) Y I CAN programme as the flagship for AYFST:

- **Innovation Challenge Awards:** A competitive award of annual prizes for outstanding achievements by African Youths in addressing development challenges in specific sectors, including climate change adaptation and mitigation in Africa; agricultural innovation systems; public health and disease prevention; water and sanitation, and sustainable management of ecosystem services
- **Innovation Incubator Initiatives (3-Is):** This is a strategic mentorship initiative where competition winners are given a chance

to translate their ideas (tacit or codified) into actual technologies or innovations for addressing specific challenges in a production or service chain in specified sectors or stakeholder communities.

- **Youth Internship and Post Doctoral Fellowship programme:** opportunities for short-term mentoring of students at college, undergraduate and postgraduate levels in ST&I policy related subjects. The 3-6 month Placements and staff exchange programmes.
- **Integrated leadership & Entrepreneurship Training:** Aimed at molding innovative youth leaders with courses which place an emphasis on self-discipline and self-mastery to guide principled actions. This also includes training and mentorship for scientific writing; science publications, and science journalism.
- **Integrated Peer-to-Peer Collaboration:** Organizing an annual African Youth congress/ ST&I career development programme, formation and lending support to Youth in science clubs. Facilitating an online network to increase membership in AYFST, strengthen communication, sharing of experiences and learning.
- **Maintenance of the AYFST website by the ATPS**

3.0 Review of Progress in Implementation of the PoA (2007 – 2010) & Strategies for Improvement



Presentation by Winnie Alum

2.1 Overview of AYFST - History

Young people world wide and in Africa particularly are disadvantaged in many ways. They have countless concerns that need to be addressed but very minimal channels at their disposal. Such major concerns include bridging the inter and intra-generational isolation, mentorship avenues, fabricating a popular constituency for science and technology in Africa, disseminating information and expertise as well as embracing the voices of the youth in policy making.

ATPS in conjunction with CTA organised the first youth congress, which was held in June 2005 in Nairobi, Kenya. That year's theme was *Youth and Unemployment/Wealth Creation: Opportunities in Agriculture, Science and Technology*. It marked the beginning of broad collective youth engagement in youth led development network. This forum drew over 80 brilliant innovators from 21 African countries with diverse backgrounds. Among other issues, the obstacles facing the young generation in their pursuit for employment and wealth creation for Africa were tackled. Several key outcomes emerged in the process. An e-forum; african_youth_congress@yahoogroups.com was one of the outcomes of the process. Additionally, a resolution to form a youth led forum on science & technology (AYFST) materialized as well. AYFST arose as a platform that would advance the

African youth agenda in agriculture, science and technology in Africa's development process. Further, it had the potential of advancing its role as the key driver of economic development.

Challenges that AYFST Set Out to Address:

- Limited and declining capacities for agricultural and scientific research
- The changing paradigm of research in agriculture, science and technology
- Lack of adequate channels for networking and information sharing
- Exclusion of the youth from the policy process

AYFST Plan of Action (2007 – 2010)

This Plan of Action informed the discussions and design of the youth and gender capacity building programme of the ATPS phase VI strategic plan 2008 - 2012. (Refer to page 12)

Young people in Africa have countless concerns that need to be addressed but very minimal channels at their disposal to do so. There is need to bridge inter and intra-generational isolation, access mentorship opportunities and fabricate a popular constituency for science and technology in Africa. There is an urgent need to amplify the voices of the youth to ensure their input into crucial policy making decisions.

Strategic Approaches	Aim	Expected Outcomes
<p>Capacity building of youth organisations in Agriculture Science and Technology and the development of principles of cooperation among youth development organisations.</p>	<p>To equip the youth with skills and knowledge needed to generate and manage relevant development initiatives</p>	<ul style="list-style-type: none"> • Improved project management practices for better production and delivery of services to communities • Improved capacity through skills development and “knowledge products” generated by the network on a series of pilot subjects to serve the priorities established by the group in its action plan.
<p>Advocacy action to advance science and technology, sustainable agriculture and development and mobilise political and community support.</p>	<p>To mobilise political, private sector and community support for Agriculture Science and Technology in Africa To promote meaningful youth participation in Agriculture Science and Technology Policy development and implementation processes</p>	<ul style="list-style-type: none"> • Increased political, private sector and community support for agriculture, indigenous knowledge and appropriate technologies. • Increased budgetary allocation for Agriculture Science and Technology within the national budgets and community decentralised funds • Increased meaningful participation of the African youth in Policy formulation and implementation processes at both national and regional levels
<p>Youth led, demand driven research and innovation on priority themes on, science and technology, sustainable agriculture and development to inform new initiatives and management.</p>	<p>To promote generation of new information and knowledge that will stimulate innovation among the African youth.</p>	<ul style="list-style-type: none"> • Improved access to indigenous knowledge • Improved project management and implementation practices • Increased number of innovative and productive interventions implemented • Increased productivity
<p>Extending scientific and technical support in Community Extension & Education programmes, Youth Centres of excellence in Agriculture, Science & Technology and sustainable development</p>	<p>To catalyse the adoption of appropriate technologies to improve the local farming systems</p>	<ul style="list-style-type: none"> • Increased number of local projects scaling up their activities • Increased productive capacities at the local communities • Increased awareness of the existing and appropriate technologies.
<p>Sharing of information and networking to build a strong youth led coalition championing Agriculture Science, Technology and innovation as a key driver to sustainable development</p>	<p>To enable replication and expansion of best practices in Agriculture Science and Technology</p>	<ul style="list-style-type: none"> • A functioning networking mechanism; forum [online and offline] in which all parties can participate effectively at will on broad basis and/or in specific cooperation topics, involving its ongoing evaluation, feedback of the results, and adaptation. • Increased awareness among the youth on Agriculture, S&T issues • Greater cross border cooperation

Objectives of the AYFST Strategic plan and Plan of Action

- Spell out strategies of implementation that will enhance the achievement of the goal and objectives of the AYFST
- To identify priority activities and responsible persons/action partners
- To provide an avenue and basis for resource mobilization and management of AYFST
- To outline the logical framework for implementing the AYFST proposed activities

2.2 Overview of Progress towards the Implementation of Plan of Action 2007 – 2010

The second youth congress was held in June 2006 in Accra, Ghana under the theme of “*Food security and health for sustainable development in Africa: Perspectives from the youth.*” The key outcomes included the launch of AYFST and its website <http://www.ayfst.org>. National level youth workshops were held after the congress in Kenya, Uganda, Ghana, Nigeria, Benin, Malawi and Lesotho. A radio talk show was conducted over the Ghana national radio station on the theme of the congress.

The third youth congress was held in Kampala - Uganda in June 2007 under the theme of “*Role of the youth in achieving the MDGs: Implications for ST&I.*” Some of the key outcomes include a national radio talk show that focused on the theme. The draft AYFST strategic plan (2007 – 2010) and organizational/governance structure was discussed and approved. The ATPS/CTA/AGRA/FARA/RUFORUM/NEPAD youth competition was announced.

Achievements of AYFST Programme

Over 230 African youths from 21 African countries have benefited from three regional youth congresses held in Kenya, Ghana and Uganda in 2005, 2006 and 2007 respectively. The congresses focused on youth employment and youth leadership in HIV/AIDS prevention; addressing

food insecurity and health for sustainable development in Africa, and more recently, the role of youths in achieving the MDGs in Africa. These programmes have been very successful in creating awareness and sustaining interest amongst African youths in ST&I research and policy related issues in Africa, empowering the youth to participate actively in ST&I research, local interventions and social entrepreneurship programmes. The continued engagement and dialogue among the youths is enhanced through the AYFST Website <http://www.ayfst.org>.

AYFST has been able to build the capacity of African youth through training, information sharing, networking and dialogue in relevant topical and developmental issues. The website offers information on training opportunities for instance E-forum discussions on topical issues.

AYFST has been represented in the YPARD strategic planning meeting in 2006 - Netherlands, GFAR triennial meeting 2006 New Delhi, Women scientist conference, 2006 – Uganda, ATPS 2006 Annual meeting in Maputo, and 2007 CTA sixth Advisory Committee Meeting. Young scientists have been nominated for Capacity building in scientific writing to take place this year (2009) in Ghana. Furthermore, there is promotion of knowledge development through essay/knowledge contests such as the 2005 essay competition and 2008 ATPS/CTA/AGRA/FARA/RUFORUM/NEPAD youth in science competitions.

AYFST has increased youth participation in Policy formulation and implementation processes at all levels concerning Agriculture Science, Technology & Innovation and development. In 2006, post congress country workshops were held and they involved relevant government officials. In Kenya, the Permanent Secretary in the Ministry of Science and Technology, Professor Crispus Kiamba, and the commissioner for trade and industry graced the occasion. In 2006, AYFST Kenya chapter presented to the government and development agencies a paper on youth perspectives on Science, Technology & Innovation in Kenya. This paper contained key issues and action areas for the youth. In July 2007, AYFST was invited to make a presentation and a case for the youth in the ST&I

Policy Stakeholders workshop.

AYFST has also managed to promote a culture of science technology and innovation consciousness among the African young generation. AYFST members have had several exhibitions including the national science week in Uganda in July 2007, Institute of electric and electrical engineering institute exhibition in 2007, which was held in Nairobi, and the science symposium conference in Uganda

AYFST has promoted youth-led demand driven research and development initiatives in agriculture, science, technology and innovation. AYFST Uganda chapter in collaboration with NARO BuZARDI and CIAT is working with youth groups to promote agriculture for income generation.

“AYFST has succeeded in building the science, technology and innovation capacity of African youth through training, information sharing, networking and dialogue in relevant topical and developmental issues.”

Members of the AYFST on a field trip to the Elmina Castle during the second youth congress held in June 2006 in Ghana



it aims at promoting a culture of science, technology and

4.0 AYFST In-Country Briefs

4.1 AYFST Uganda (UYASTI)



“The limited input of science and technology (S&T) to development has led to wide disparities between the poor and the rich in Uganda and there is no way Africa and Uganda, in particular, can attain a booming economy

without the utilization of S&T.” Engineer Sam Ssenkungu, the Ugandan commissioner of Industry and Technology, said during the launch of the Uganda Youth Association for Science, Technology and Innovation (UYASTI) in Kampala.

After the formation of the African Youth Forum on Science and Technology (AYFST) at the second African Regional Youth congress in Accra, Ghana, Ugandan youth participants at the congress formed the Ugandan Youth Association for Science Technology and Innovation (UYASTI) with an aim to bring AYFST closer to the Ugandan youth and to empower them through science, technology & innovation for wealth creation and employment.

Mission:

The Ugandan national chapter aims to empower the Ugandan youth through science, technology & innovation for wealth creation and employment.

Objectives:

One of the objectives of this chapter is to build the capacity of Ugandan youth through training, information sharing, networking and dialogue in relevant topical and developmental issues. It also strives to promote youth participation in policy formulation and implementation processes at all levels concerning agriculture science, technology and innovation for development. In addition,

Science and technology outreach programme	<ul style="list-style-type: none"> • Intended to publicize ST&I. • Attract young people into S&T carriers
Capacity building programme	Training young scientists in a number of areas (management skills, entrepreneurship skills, communication skills etc
Mentorship programme	Aimed at mentoring young Ugandan scientists

Table showing UYASTI's Key Programme areas

it aims at promoting a culture of science, technology and innovation among the Ugandan youth as well as youth-led, demand-driven research and development initiatives in agriculture, science, technology and innovation.

Achievements:

The association has a management committee headed by the chairperson. Members are involved in several ST&I activities such as exhibitions & ST&I contests. Remarkably, the association has been able to create a number of linkages with a number of key sector actors both locally and internationally like UNCST, UNAS, and NARO. The programme has an advisory council headed by the ATPS national coordinator. AYFST Uganda chapter has on several occasions been invited in a number of conferences for presentations and knowledge sharing.

Challenges

Major challenges to scientific talent development include; identifying ways to make science attractive and accessible to young people, and generating a research climate in Uganda. Research allows creativity, innovation and open communication, free flows of ideas, knowledge and talents. Like many other sub-Saharan countries young people in Uganda are faced with society's lack of confidence in

As Presented by Herbert Lwanga, AYFST Uganda Vice Chair

youth scientific endeavors. This is accompanied by the lack of access to adequate resources to facilitate the smooth operationalisation and effective performance of the AYFST Uganda chapter.

Future Plans

Future plans include training AYFST members in enterprise development based on science and technology approaches. This training will cover all aspects of gender and enterprise development, as well as the upgrading of their technical abilities to transmit their knowledge effectively to community partners.

UYASTI also plans to promote the development of ideas into practice and commercialization of youth generated products. Its members will liaise with relevant national institutions in measures to boost sales, produce trade publications, business guides and sales procedures. They will also organise and publicize public auctions to provide market access for products generated by the youth. UYASTI also plans to enhance networking to provide linkages with organisations and institutions working in the areas of science and technology. The chapter also aims to track progress by implementing an effective monitoring and evaluation strategy and carry out regular visits to all project activities to report on progress.

4.2 AYFST Malawi



The importance of science and technology is recognized by Government of Malawi. The Government has established a Science and technology commission. It's Science and technology policy promotes participation of all Malawians in the development and application of S&T with special emphasis on women, youth and other special interest groups.

Role of Malawian Youth in Science & Technology

- Campaign for strategic education in S&T
- Behaviour change
- Entrepreneurship engagement
- Advocacy

AYFST-Malawi

- The AYFST-Malawi sensitisation forum was conducted in 2007
- The youth were sensitized on science and technology issues and were recruited into AYFST
- Participants were mainly drawn from educational institutions and research institutes
- AYFST was established with a national steering committee
- Composition of the steering committee was based on institutions and not individuals.
- The National Steering Committee was mandated to come up with an action plan

Objectives for AYFST Malawi

- Mobilize the Youth and empower them to harness ST&I for development in Malawi.
- Support and facilitate knowledge sharing and cooperation among Malawian Youth.

- Facilitate and promote youth engagement in agriculture, science and technology and social entrepreneurship programmes.
- Facilitate ST&I career mentoring for Malawian Youths by their senior colleagues.
- Promote Youth involvement in related ST&I project.

Challenges and recommendations

Since its inception in 2007 progress has been slow for the AYFST in Malawi, due to lack of adequate support from key institutions, the absence of a secretariat and the transient nature of the youth demographic with several members proceeding for further studies, employment and in search of business opportunities. The following are the recommendations for improvement:

- Learn from AYFST-Malawi progress
- Establish a secretariat within an institution: Department of science and technology
- Garner support from institutions
- Increase awareness and networking
- Take advantage of funding opportunities that have been created for the youth: Push for support of entrepreneurship projects that make use of science and technology

“One of the major challenges of the African Youth Forum on Science and Technology - Malawi Chapter has been the transient nature of the youth demographic where several members proceed each year for further studies, employment and in search of business opportunities,”



A hydro-power project designed and managed by youths in Malawi

4.3 AYFST Nigeria



AYFST Nigeria was officially launched in March 21, 2007 by the former Minister of Information and Culture, Federal Republic of Nigeria, Barr John Nnia Nwodo. The event took place

during a conference organised by the AYFST Nigeria in collaboration with ATPS. The theme of the conference was **“Basket of Opportunities: Refocusing the Youth towards Agriculture Wealth Creation and HIV/AIDS Prevention”**. The conference was organised in line with AYFST plan of action 2007-2010. This plan of action is a result of several consultations amongst the African youth on how to organise their voices and consolidate their activities to make substantial impacts on Africa’s development

Objective of the Workshop:

- To build the capacity and enhance the skills of youth in school and out of school
- For inclusive participation
- To officially start off the AYFST Nigeria Network
- Catalyst for action

Outcomes of the Workshop:

The workshop exposed youth participants to a new, critical and creative thinking on the essence of entrepreneurship, wealth creation, agricultural practices and skills acquisition. They were provoked to discussion and finding solutions to the theme of the workshop and challenged to participate actively in policy processes, policy dialogue and policy practice on issues that have direct effect on them. It also resulted in the recruitment of 92 youths into the membership of AYFST.

Communiqué:

The youth looked at how they can be involved in tapping

the potentials of agriculture in creating employment and wealth in Nigeria.

The government and other agencies should intensify efforts to promote the acquisition of entrepreneurship in agro-business by youth

Agricultural education should be encouraged through scholarships and provision of soft loans to the young graduate agriculturalists who are ready to go to the farm

The youth should form co-operative organisations to enable them access credit facilities

There should be improved agro-research to increase yield and reduce risk in agro-business

The youth should be recruited for agricultural extension services to provide peer to peer education on the need to embrace agro-business

The participants also analyzed the reasons for vast unemployment among the youth in Nigeria which include:

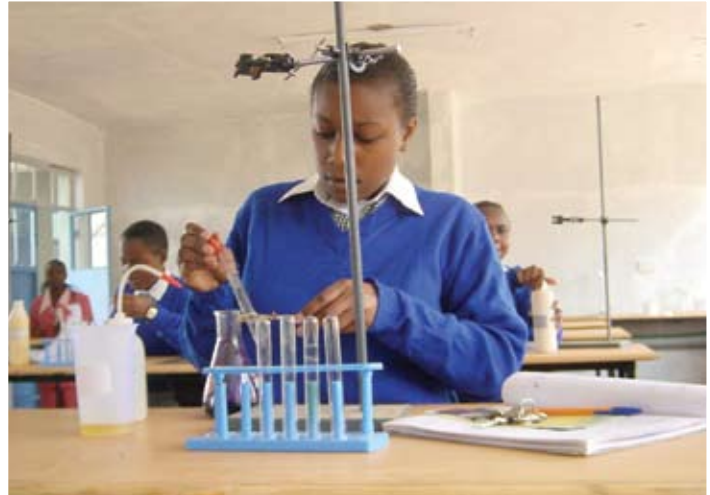
- The inability of the government to develop sources of revenue outside the oil sector
- The negative perception of the youth towards agriculture and a strong bias towards white collar jobs
- The problem of “ghost” workers in Nigeria’s civil service
- The refusal by the over aged workers to retire
- Lack of innovation exposure and expertise
- High level of corruption and political instability
- Poor policy formulation and implementation by those in authority.
- Lack of motivation, energy and vigour
- The decaying educational system

As a prelude, AYFST Nigeria successfully participated in

a live call in show with the Nigerian Television Authority (NTA) with the aim of creating public awareness about AYFST especially among the Nigerian youths. The group used the opportunity to explain the vision, mission and objectives of AYFST.

AYFST Nigeria also organised a public forum on **“Examination Malpractice: A threat to Development of Science and Technology.”** Another seminar was held on the theme **“The Challenges of Nsukka youths in the contemporary society”** under the auspices of 5-golden stars in collaboration with ATPS Nigeria on December 27, 2007. The objectives of the workshop were:

- To provoke the youth to find solutions to their problems.
- To educate the youth on the essence of innovation on youth employment, poverty reduction and wealth creation.
- To exchange ideas that will pave way for new actions and collaborations.
- To provide a forum for youth and stakeholders to exchange ideas on the challenges facing the youth in Nigeria.
- To create opportunities for peer-peer networking



“There is a need to inspire the youth to find solutions to their problems and educate them on the essence of innovation on youth employment, poverty reduction and wealth creation.”



4.4 AYFST Sierra Leone



Most African countries are endowed with rich natural resources but their improper utilization and the omission of science and technology for development has jeopardized the continent's potential for

economic growth. In June 2006, the African Youth Forum on Science and Technology (AYFST) was formally launched, with the motive of bringing the African youth into the centre stage for participation in Africa's development.

AYFST – Sierra Leone was formally launched on the April 7, 2007 following a two-day national youth workshop on Science and Technology. The workshop was mainly designed to build the capacity of the Sierra Leonean youth in Science & Technology, and break the chain of social exclusion of the youth in policy decision-making for sustainable development in Sierra Leone. The central theme of the workshops was **'food security and health for sustainable development: the Sierra Leone youth perspective'**. The meeting also served as a follow-up of the formal launching of the AYFST in Accra Ghana, in June 2006.

The workshop was well attended bringing together thirty youth drawn from various disciplines including agriculturalists, medical practitioners, engineers, technologists and social scientists.

The role of youths in addressing food security and health issues in Sierra Leone.

Youth empowerment through science and technology for socio-economic development in Sierra Leone.

The role of science and technology, agriculture and health in the educational system of Sierra Leone.

The workshop was flavored by rich presentations from various resource persons including officials of the ministry of Youths and Sports and the National Science and Technology Council (NaSTeC) of Sierra Leone, as well the AYFST Coordinator and National Chairman. Although the ATPS country chairman was unavoidably absent, he gave his full backing to the workshop and its outcome. The presentations served as a spring-board for the youth participants to brainstorm and come up with suggestions and viable recommendations for the country's development.

According to the AYFST Chapter coordinator, Festus Amadu, science, technology and human capital are closely interlinked for economic growth and development but these linkages were not prominent in the Sierra Leone context. During the workshop, the Director of Youths and Sports acknowledged that the present youth policies in Sierra Leone neglect the role of science and technology and advised the AYFST- the Sierra Leone to advocate for the integration of science and technology into the then forthcoming renewed youth policies. Another issue highlighted during the workshop is that science and technology must not only be promoted, but that the supporting institutional structures and facilities should also be provided in order to enhance capacity building, training and research.

The Government of Sierra Leone should enact a Science and Technology Opportunities Act (STOA), which will encourage a culture of science and technology in the country. There should be a strong national scientific research coordinating unit established in Sierra Leone. Appropriate technology should be encouraged and adopted in the agricultural, educational and health sectors for food self-sufficiency and economic growth in the country.

Other recommendations made during the workshop include an immediate integration of science and technology policies in the national youth policies in Sierra Leone; and young Sierra Leoneans should be involved in the formulation and implementation processes of such policies

Among the key issues tackled during the workshop

As presented by Festus Amadu, Sierra Leone
AYFST National Chapter Coordinator

No country today can boast of sustainable economic development without a strong scientific base and a critical mass of scientists and technologists.

There is an exclusion of the youth (in SL and most of Africa) from mainstream macroeconomic policy formulation and implementation, which has relegated them (the youths) to an oblivious position of indifference, thereby worsening the underdeveloped state of the continent, and completely dampening the prospects of sustainable development.

At the end of the workshop, participants produced a communiqué addressing impediments, opportunities and recommendations for effective application of S&T in Sierra Leone's development. The Communiqué was shared with stakeholders in government and the ATPS national Secretariat for action to be initiated.

Following the formal launching of AYFST-SL, several moves were made by the national executive to rally members of the Sierra Leone government to adopt and incorporate the AYFST vision into a national Programme for the benefit of all Sierra Leonean youths. Consequently, there have been some successes recorded so far. The Sierra Leone PRSP II recognizes the role of youths in the development process of the country; therefore it has vital sections committed to youth empowerment. This includes the Youth Employment Scheme, which provides/caters for the provision of jobs to unemployed youths; and The Youth Agricultural Engagement Scheme, which is intended to provide, among other things, support for production centres for young people to receive training in agricultural productivity for a specified period.

The ministry of Agriculture now has a Youth Coordination Division. The Sierra Leonean Parliament now has about 25% youthful population compared to previous years when it had less than 5%.

Present Challenges

- **Resource constraints.** This is a major factor, as it dictates our level of operations, and limits our activities to smaller scales. It goes without saying that most government policies are not always backed by action when it comes to the disbursement of funds. This seems to be the

case in Sierra Leone.

- **Low awareness and interest amongst the youth populace concerning AYFST-SL and its activities.** There is a risk that some youth may begin to see the AYFST as a another 'talk shop'. They see it as highly academic yielding very little by way of financial rewards which seems to be the major interest of youths today.
- **Poor coordination between the AYFST-SL, the ATPS Country Chapter, and the AYFST Global Chapter.** Time lapse in communication between the global chapter and the country chapter tends to dampen the spirit of committed country chapter members.
- **Lack of an improved ICT facility for the country chapter to help the chapter transform itself from a passive to an active and effective partner in national development.**

Recommendations

AYFST and ATPS should actively be involved in the sourcing of funds for national chapters, through the publishing of quarterly bulletins which will detail the plans and financial needs of national chapters.

An effective website for AYFST should be operationalised

National Chapters should be empowered to have operational websites which will effectively market the activities of AYFST in their countries. This will help raise youth and national awareness about AYFST in the countries.

Proposals from AYFST national chapters should be funded either partly or wholly from funding Agencies contacted through ATPS.

ATPS/AYFST should have a Journal where research by African youths whether funded directly by ATPS and/or its donors, or from other sources, should be published. This helps to promote the culture of research in S&T amongst African youths.

4.4 AYFST Ghana



Ghana, like most developing nations, faces serious developmental challenges that could be met if the country's enormous potential was adequately harnessed. Ghanaian

youth can also play a key role in this process by showing a keen interest in the country's political development, developing a positive work ethic, demanding accountability fully developing their capacities, defending the principles of sustainability and adopting positive lifestyles.

This declaration was made during the African Youth Forum for Science and Technology Ghana (AYFST-G) in-country workshop under the theme "Health, the Key to Sustainable Development-the Role of the Ghanaian Youth", which was held at the Faculty of Applied Sciences of the University for Development Studies (UDS), Navrongo Campus from the 28 – 29 March, 2007. A communiqué was agreed upon and adopted which charted the course for youth involvement in the developmental programmes and/or policies of Ghana.

4.5 AYFST Lesotho



The AYFST Lesotho was launched by Einstein's Mind Lesotho on the 28 June 2007 with funding from the ATPS.

The launch event was held at the NUL, ISAS Auditorium with twenty five participants

in attendance including five eminent researchers from Lesotho, and twenty students who included members of Einstein's Mind Lesotho. AYFST Lesotho is working towards promoting the appreciation and awareness of science and technology among high school pupils. The chapter is currently collaborating with Lesotho National Commission for UNESCO in the girls and science programme.

Due to his delay in arrival, Phakamile Xingwana, AYFST Lesotho was unable to make a presentation. He however he submitted the above key points

AYFST Ghana, presented by Okpara Ikenna Goodyear



Participants during the AYFST Ghana Youth Workshop on 28 and 29 March 2007

"Ghanaian youth have a unique role to play in harnessing the country's enormous potential to tackle the developmental challenges it faces."



Ms. Makhetha, AYFST member from Maseru, Lesotho presents her girls and science project on Astronomy

5.0 Revised Plan of Activities

“Our shared vision; ‘empowered African communities that enjoy sustainable livelihoods’ is like our atlas map, showing us the boundless opportunities that exist and all the wonderful places we can go; the Plan of Action is our compass, pointing us towards the right direction”

Marsden Momanyi, Communications and Outreach Officer, ATPS

The progress of implementation of the Plan of Action (2007 – 2010) was reviewed and recommendations made for improvement; The plan was anchored under the ATPS Phase VI Strategic Plan 2008 - 2012 and it was agreed that the AYFST National Chapter activities must be guided by AYFST’s vision, mission and objectives in the context of agreed core areas of research and development in Africa. The core areas for research and development in Africa for the period 2009 to 2012 should be: Food Security and Poverty reduction, Health, and Environment. The following is a matrix showing the revised plan of activities by Strategic Objective:



AYFST’s revised Plan of Action aims to expose young people in Africa to innovative ways of thinking and open up new opportunities to enhance their scientific, entrepreneurship and agricultural capacities.

ID	Strategies/Activities	Targets/Indicators	Responsible Agent/ Person
1.1	Human and Institutional Capacity building		
1.1.1	Training programmes through conferences, seminars, workshops	Membership of AYFST increased by 50%, 2, Youth trained in Policy analysis, Leadership and Entrepreneurship, Action research skills and methods etc	AYFST National Executive Committees/AYFST Steering committee
1.1.2	Information sharing	A functional website operationalized, Increased number of country chapter members interacting through the AYFST website.	AYFST Steering committee
2.1	Policy Advocacy		
2.1.2	Review national policies in the areas of Food security, Health and Environment and lobby for necessary changes and implementation	Food Security, Health and Environmental Policies reviewed and changes lobbied for.	AYFST National Executive Committees
3.1	Creating an enabling environment for research and innovation		
3.1.1	Research competitions e.g. Innovation Challenge awards.	Linkages established and functioning between AYFST National Chapters and various Science and Technology oriented institutions	AYFST National Executive Committees
3.1.2	Channel grants facilities for various action research projects	Increased number of Research projects implemented	AYFST National Executive Committees
3.2	Induce behaviour and attitudinal change towards ST&I		
3.2.1	Facilitate information sharing through conferences, workshops, seminars, etc.	Increased number of motivated young scientists and professionals.	AYFST National Executive Committees/AYFST Steering Committee
4.1	Coordinating Action oriented research		
4.1.1	Facilitate mentorship programmes	Increased number of youths mentored	AYFST National Executive Committees
4.1.2	Facilitate the innovation incubator initiative	Increased Number of youth innovations identified and supported	AYFST National Executive Committees
4.1.3	Identify core areas for research and development that calls for youth action	Core areas of research and development identified	AYFST Steering Committee

6.0 Review of Deliberations and Resolutions Made

6.1 AYFST Organisation and Management

The ATPS believes that development will be driven by a generation of youth who value their ideas and visions for the future. We need ideas, not money, to be the engine of development. It is the vision of ATPS for innovation to become the norm among this community of youths. At its core, the incentive structure of AYFST must be reflective of our passion for innovation and curiosity about new ideas. These, and not financial incentives, must motivate the youth to membership in AYFST. Some motivational programmes constructed by the AYFST must include information sharing, science, technology and innovation training, career mentorship, and dialogue.

Relationship with ATPS

Members discussed the feasibility of registering AYFST Chapters in their respective countries thus allowing them to transact business legally when implementing various in-country AYFST initiatives. The matter was debated extensively; while a few participants rooted for autonomous AYFST National Chapters through registration (as societies, associations etc), the majority opted for mentorship of the AYFST as a programme under the ATPS supervised and supported by the ATPS National Chapters. There was consensus over the need to tap into opportunities that the ATPS avails through its Responsible ST&I Policy Advisory Council, National Coordinator's Regional Steering Committee and the Board of Directors. Through its established networks, the ATPS can afford the youth the critical backing of established regional bodies such as the ECOWAS, SADC, EAC, the AU and NEPAD among others.

Victor Emeka (AYFST Nigeria) urged fellow participants to align with their respective ATPS Chapter Coordinators who already enjoy legal status and have a mandate to oversee all of ATPS operations in their countries including AYFST. Marsden Momanyi called on participants to avoid reinventing the wheel and adopt the already existing recognized structures under the ATPS country chapters. He advised participants to work hand in hand with the

ATPS in their countries to receive guidance and mentorship from senior and more experienced ATPS staff. He also expressed concern that as part entities under the ATPS, it was important for the AYFST to remain accountable to the wider ATPS Network. He said that if at any given point an AYFST chapter was found in breach of their respective Government's laws, then by proxy the ATPS would be held liable. It is therefore the prerogative of ATPS to work in close collaboration with AYFST in the interest of maintaining its brand but more importantly to nurture the growth of the AYFST. He reminded participants that the AYFST is one of the priority programmes of the ATPS Phase VI Strategic Plan 2008 - 2012, and as a result, a significant proportion (in some countries, the whole) of the funding for the forthcoming AYFST programmes comes from the ATPS through its donors. The funds he said have been accessed on the basis of an existing network of ATPS country chapters with the requisite financial and technical structures to implement those programmes. The ATPS is therefore accountable to them over the utilization of those funds.

It was resolved that a transparent, responsible, communicative AYFST national chapter should never be limited by a slow moving ATPS chapter. Over half of the population of Africa is under the age of 18. The AYFST believes that one of the principles behind underdevelopment in Africa is the exclusion of an educated and empowered youth. Youth are the engine for innovation. In pursuit of the ATPS commitment to facilitate opportunities for the youths in African development, it believes that the AYFST programme must be directed by the youth.

Sustaining strength

More harmful than funding restraints may be poor communication between key AYFST members, including the ATPS coordinator. This meeting marks an important launching point for coordination and further planning. If inactive for six months, a member of the steering committee must be removed from that position having been notified and warned at least two times.

7.0 Review of Communication and Outreach Strategies

7.1 Review of the current Website

During the period under review, The African Youth Forum on Science and Technology (AYFST) contracted LOG'EL Project Ltd. to develop, design, construct, install and launch a web-site that would enable its members to communicate to each other and to other partners of their interest. This was mainly for the furtherance of identifying and tapping opportunities that would see them exploit their talents, abilities and potentials to the maximum while at the same time, promoting sustainable development for themselves, their families, communities, countries and the world at large. Consequently, the website was developed and operationalized in line with the facets detailed hereunder

Overall Objective

Overall, the AYFST website's objective was to enable AYFST members identify and tap their talents, abilities and potentials in the fields of Science and Technology undertakings.

7.2 Activities

In order to realize the overall objective stated above, AYFST members and stakeholders utilized their website to conduct a number of activities including:

On-line Forum Tool set-up – a forum tool for on-line communication and interaction was established and accordingly utilized. Regularly the ATPS administration team compiled and shared reports of what was discussed.

Research Work – generating information on the available opportunities for young people in the fields of Science, Technology, entrepreneurship and any other area of occupational value was done but not optimally; more efforts are needed in this area.

Sourcing of web Networks – sourcing for web networks in Africa and beyond that could be of interest in promoting such varied talent(s) among AYFST members was carried out. But more efforts are needed to provide access

for members to opportunities such as apprenticeship, internship and other hands-on capacity building activities.

Knowledge Sharing – efforts were made to create and sustain forums for sharing knowledge and information from the various sectors of government, business, education, health, the environmental and others. Hopefully, the lessons learned and best practices obtained will be exploited further in the future. ATPS needs to expand the functions of the website to make it more user-friendly.

Monitoring and Evaluation – on-line monitoring of the AYFST website performance was done accordingly though there is an urgent need to upscale this function

AYFST Website Achievements

A number of achievements were registered following the operationalization of the AYFST Web-site namely;

- An on-line interaction forum tool was developed, designed operationalized and utilized.
- The Web-site was managed and monitored and feed-back shared,
- Topics such as; “Our vision for Africa – 2050: African Youth have the Potential to Transform African societies” were formulated, debated, discussed and resolved upon.
- The web-site was updated regularly.

AYFST Website Challenges

Despite these achievements several challenges were noted including:

- Not many AYFST members participated and contributed towards the forum interactions as regularly as would be expected,
- Certain limitations emerged in the management of the website especially the lack of close-knit monitoring and support, to ensure its optimum and effective performance,
- The website was updated but not adequately

so, to suite the current trends in a highly dynamic information age; it was not regularly updated. This was due to lack of the adequate resources and information required to do the job to the required capacity and in a timely manner.

- Generally, there was lack of adequate resources to facilitate the smooth operationalization and effective performance of the website.

AYFST Website Methodology

The AYFST website was operationalized through a number of methods which among others, included, on-line planning meetings; on-line planning and review forums; on-line information sharing, accessing information from key periodicals, visiting key job/occupational centres; Monitoring and evaluation.

Targeted Beneficiaries

The project benefited all interested members of AYFST across Africa especially those who had the zeal of enriching their occupational potential. Technical support was provided on-line whenever it was requested.

7.3 Recommendations

Considerable efforts need to be directed towards sensitizing and interesting more AYFST members and other youth in Africa to participate and contribute more frequently, in the on-line forum interactions. Here three things could help; Firstly there is need for a more attractive and fairly advanced features and functions, second, as web managers, we need to post to it with new and though provoking topics of interest and, thirdly, we need to invite the participants to propose which topics could be discussed during the forum – to make them become owners as they get involved in the forum discussions.

There is need for more research work to be done in order to bring more user-friendly information to the website which in turn will attract and retain more users. Sharing

experiences and networking with other web-sites will be equally valuable. Adequate resources need to be made available, for regular and frequent update of the web-site, preferably once every two months in order to keep up with the highly changing pace of new information delivery and sharing, during this HI-TECH era.

It is also recommended that translation of the forum discussions into French be done, to involve more of our Francophone African youngsters. This activity is definitely valuable but it needs to be budgeted for and resourced adequately. Adequate resources should be budgeted for and disbursed timely, to ensure the facilitation of a web-site that serves AYFST members in a timely manner which is in step with the contemporary trends in technology, innovation and general development processes. Finally, there is an urgent need to improve the site monitoring process i.e. frequent (daily/weekly/monthly) sharing of web analytics between parties concerned.

7.4 Key Resolutions

The website needs to be operationalized and enhanced to include modern features.

Having realized that International journals are virtually inaccessible to young people in Africa it was discussed and resolved that there is need for ATPS to intervene and make sure that international journals are accessible by the young scientists and professionals through the ATPS/AYFST website.

Action: The African youths to identify key areas of interests and ATPS to subscribe to journals in line with the interests of the youths

The youth in Africa should have their own journal of science, technology and innovation with the opportunities to peer review and publish innovative ideas and empirical evidence.

Action: ATPS to take leadership in providing this resource

8.0 AYFST Membership and National Chapters

Designating a reliable mechanism for absorbing new members is a priority in the plan of action. We must be innovative in the ways we create interest in AYFST. This mechanism must align with the values of AYFST. The Millennium Development Goals defines 'youth' between age 18 and 35. AYFST references this same definition in pursuit of its objective to build youth capacity in science, technology, and innovation for sustainable development in Africa. AYFST is committed to a 'knowledge-based' development of Africa, and it believes that harnessing the knowledge and ability of the youth is vital to this pursuit. Knowledge for development is not just in universities, libraries, and books. Knowledge exists beyond these boundaries, with youths outside formal institutions for education. For that reason, while AYFST will be involved with institutions of education, it must also reach youths outside the academia. The membership criteria include:

- Any scientist, professional and innovator within the age limit of 18-35 qualifies to be a member of AYFST and are eligible to be elected into AYFST leadership positions if they meet the requirements.
- Young scientists, professionals or innovators who are Africans and have the passion and drive to see Africa experiencing sustainable socio-economic growth and development.
- The AYFST activities should extend beyond academia, and **NOT** exclude young innovators outside the university.

The AYFST National Executive Committees will work closely with the ATPS National chapter coordinators in their countries, to receive mentorship and access opportunities for funding for youth activities in their countries.

The maximum term of office for AYFST committees at National level shall be two (2) years and members could be re-elected only once for another term if they are still within the age limit of 18 to 33.

The AYFST National Chapter Coordinators shall be eligible members of the Regional Steering Committee.

8.1 Constitution of the AYFST country chapter committee:

Composition:

- Members would preferably be drawn from multidisciplinary backgrounds.
- The members should share the vision, mission and values of AYFST.
- The membership preferably has regional and gender representation.
- The committee shall be composed of nine members.

The designated responsibilities shall be as follows:

- Chairperson
- Co-chairperson
- General secretary
- Treasurer
- Communication officer
- Committee Members

Qualification:

- The chairperson and the co-chairperson shall have a minimum of first degree and at least two years of leadership role from a recognized institution.
- The general secretary shall have a minimum of 'A' level education, or its equivalent, from a recognized institution.
- The treasurer shall have a minimum of 'A' level education, or its equivalent, in a recognized institution.
- The communication officer shall have a minimum of 'A' level education, or its equivalent, in a recognized institution.
- All steering committee members shall have a minimum of 'A' level education, or its equivalent, in a recognized institution.
- All the above candidates should be of a minimum of 18 years.

Terms of reference:

- The chairperson shall oversee all the activities of the AYFST national chapter.
- Shall report the country activity progress to the steering committee.
- Liaise with ATPS country chapter coordinator.
- Liaise with donors to support national programmes.
- The co-chair shall assist the chairperson in executing AYFST activities.
- General Secretary shall be responsible in taking minutes for the meetings, prepare reports and disseminate information to all committee members and the rest of the group members.
- Treasurer shall be responsible for receiving and taking care of any petty cash for the country chapter.
- Communication officer shall liaise with chairperson and the rest of the committee members and arrange meetings and invite the necessary participants.

Election Mechanism

- To be decided by national chapters and subject to the approval of the steering committee.
- The person sitting on the national steering committee must be an AYFST country coordinator/Executive Committee chairperson or a designated representative.

9.0 Election of AYFST Steering Committee:

“Coming together is a beginning, and staying together is progress, but only when teams sweat together do they find success.”

John C. Maxwell

The election criteria for election of a steering committee was discussed and the following are the resolutions reached:

The maximum term of office for AYFST committees at both Regional and National levels shall be two (2) years and members could be re-elected only once for another term if they are still within the age limit of 18 to 33.

The AYFST shall have a steering committee which shall be answerable to the ATPS Management structure. The AYFST secretariat shall continue receiving support from ATPS and shall report to both AYFST Steering committee and the ATPS Management.

The AYFST steering committee shall have regional and gender representation. The regions were defined as follows: East Africa, West Africa (Anglophone), Francophone, and Southern Africa.

The number of member countries to be represented in the steering committee should be thirteen (13) of which Four (4) shall be from East Africa, Three (3) from West Africa (Anglophone), Three (3) from Francophone countries and Three (3) from Southern Africa.

Through an agreed democratic process the following countries were elected to be members of the steering committee:

Malawi (Chairperson), Sierra Leone (Co-Chairperson), Ghana, Nigeria, Uganda, Kenya, Tanzania, Ethiopia, Benin, Zambia, Lesotho, Cameroon and Cote d'Ivoire.

9.1 Constitution of the AYFST Regional Steering Committee

Composition:

- Members would preferably be drawn from multidisciplinary backgrounds.
- The members should share the vision, mission and values of AYFST.
- The membership must have regional and gender representation.
- The membership will grow in accordance with the growth of AYFST.
- The committee shall be composed of thirteen (13) initial members.

The designated responsibilities shall be as follows:

- Chairman
- Vice chairman
- Secretary
- Members

Qualification:

- Should possess at least a first degree with experience relevant to agriculture, science, technology, innovation, advocacy and policy formulation for sustainable development.
- A steering committee member must be a national chapter coordinator of a country that has been active for the past two years.

Tenure of Office:

- Term of office shall be two years, and the term may be renewed by election.
- Countries may hold seats for more than two terms, but individuals may not.

Terms of Reference:

- Coordinate AYFST activities.
- Encourage a standard of quality regarding submissions.
- Report the affairs of AYFST to ATPS coordinator semi-annually.
- Shall collaborate with ATPS coordinator in making sure there is a good relationship between AYFST and ATPS national chapters.
- Shall meet at least once in a year to deliberate on annual congress themes and other related matters
- Shall guide incoming steering committee members in their duties.

Election mechanisms:

- Countries, not individuals, will be nominated for steering committee membership.
- One vote is given for any member country that has been active for the past two years.
- Regional representation on the steering committee will be determined based on a region’s relative percent membership in AYFST.
- The chairperson, vice chairperson and the secretary shall be elected by members of the steering committee.

1. **Marsden Momanyi** - AYFST Coordinator

2. **Tennyson Magombo** - AYFST Chairperson: Malawi

3. **Festus Amadu** - AYFST Vice Chairperson: Sierra Leone

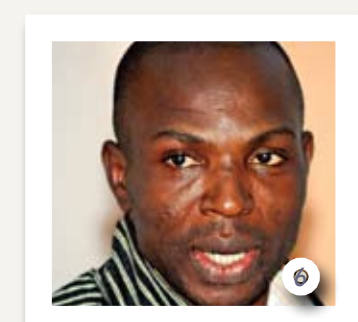
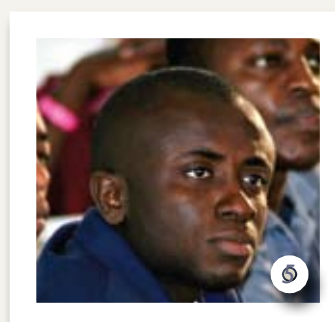
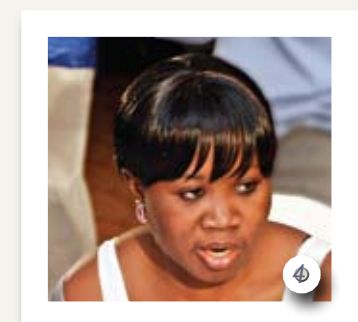
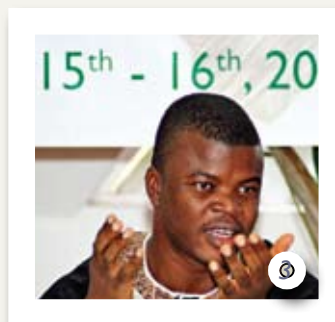
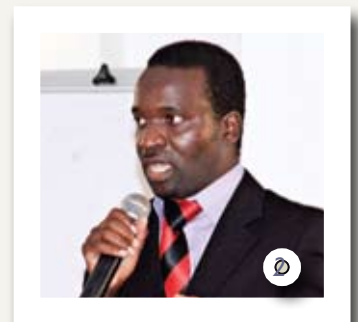
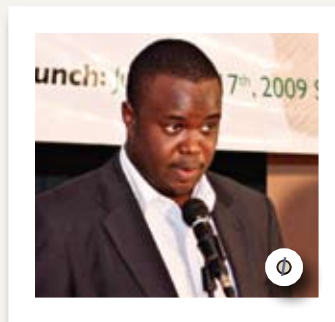
4. **Phina Magara** - AYFST Secretary Kenya

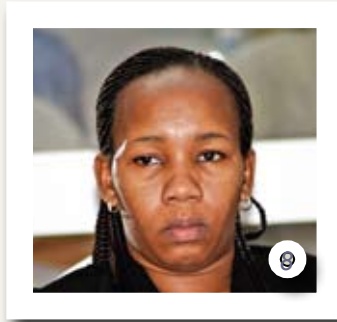
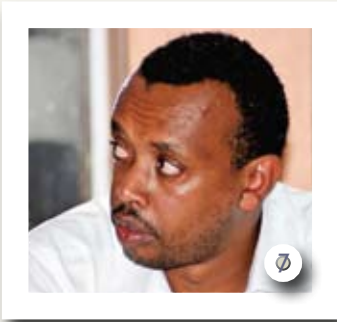
5. **Okpara Ikenna Goodyear** - AYFST Steering Committee; Ghana

6. **Emeka Victor Ngwoke** - AYFST Steering Committee; Nigeria

9.2 Newly elected Steering Committee

Leadership:



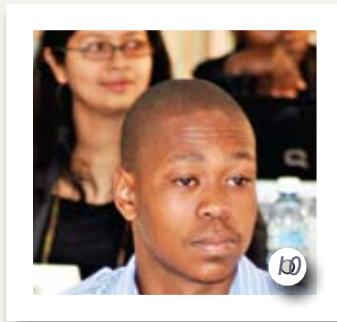
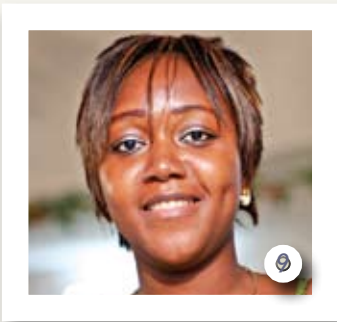


7. Jifar Tarekegn Nata - AYFST Steering Committee; Ethiopia

8. Esther Isaka - AYFST Steering Committee; Tanzania

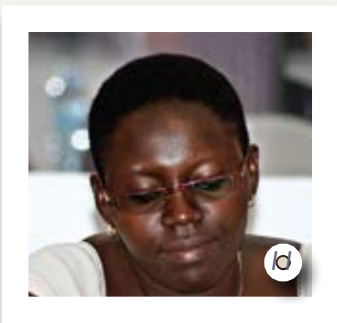
9. Mireille Pélagie Akouavi Houensou - AYFST Steering Committee; Benin

10. Phakamile Xingwana - AYFST Steering Committee; Lesotho



11. Winnie Alum: AYFST Steering Committee (Ex-Officio Member); Uganda

12. Maurice Bolo: AYFST Steering Committee (Ex-Officio Member and former Coordinator of AYFST), Kenya



“ There’s always something new from Africa ”

Pliny the Elder (23-79 AD)



10.0 Launch of The Youth Innovation Challenge Programme - Y I CAN



Private Sector Actors, Policy Makers and Civil Society) and through entrepreneurship incubation programmes. The AYFST is amongst the priority programmes of the African Technology Policy Studies (ATPS) Phase VI Strategic Plan, 2008 - 2012. The meeting took stock of AYFST progress to inform its implementation of planned youth activities under the Phase VI Plan 2008 - 2012. The meeting resolved that AYFST National Chapter Committees would work closely with the ATPS National chapter coordinators in their countries, to receive mentorship and access opportunities for

Africa's youths met in Mombasa, Kenya to map the future of Science Technology and Innovation in the continent through the new innovation programme

Traveling from East, West, South, and Francophone Africa, country representatives, steering committee members and advisors of the African Youth Forum for Science and Technology (AYFST) converged in Kenya's port city of Mombasa to seek ways to strengthen and deepen their collective influence through the AYFST.

The forum founded in 2005, held its fourth annual Steering Committee Meeting from 13th to 14th July, 2009 and was followed by the launch of the Youth Innovation Challenge Programme (Y I CAN). The Y I CAN 'read as "Why I Can" has been developed under the auspices of the ATPS Phase VI Strategic Plan, 2008 - 2012. The programme is designed to build a culture of innovation amongst young people in Africa by promoting innovation through targeted partnerships within the quadruple helix (Researchers,

funding for youth activities in their countries. It was also agreed that they shall be answerable to the ATPS Management structure and shall report to both the AYFST Steering committee and the ATPS Management.

The meeting saw the consolidation of the membership of the AYFST Steering Committee and the election of its leadership. Through an agreed democratic process the following countries were elected to be members of the steering committee: Malawi, Sierra Leone, Ghana, Nigeria, Uganda, Kenya, Tanzania, Ethiopia, Benin, Zambia, Lesotho, Cameroon and Cote d'Ivoire. Tennyson Magombo (Malawi) was elected AYFST Chairperson



and Festus Amadu (Sierra Leone) its vice chair. Phina Magara from Kenya was elected as the secretary.

The meeting also called for a reliable mechanism for absorbing new members emphasizing the need to be innovative in the ways it creates and sustains young people's interest in AYFST. At the same time the AYFST reaffirmed its dream of having 'knowledge-based' development in Africa, and its belief that harnessing the knowledge and ability of the youth is vital to this pursuit.

Speaking to the youths' during an open session, Dr. Kevin Urama, the Executive Director of the African Technology Policy Studies Network (ATPS) asserted that "Knowledge for development is not just in universities, libraries, and books. Knowledge exists beyond these boundaries, with youths outside formal institutions for education." He called on the AYFST leadership in its work with formal education institutions to strive to reach youths outside the academia. He added that the ATPS believes that development will be driven by a generation of youth that value their ideas and visions for the future. "We need ideas as the engine of development," said Dr. Urama. Furthermore he challenged the young people to think outside the box and dared them to dream big, because true innovators dare to dream. "If your dream does not scare you, then it is probably not good enough," he added. The meeting reaffirmed the vision of AYFST for Africa, "empowered African communities that enjoy sustainable livelihoods."

The youth further expressed their dream of living in a continent where innovation is the norm. "We dream of an AYFST which is reflective of our passion for innovation and curiosity about new ideas, said Mr. Tennyson Magombo the newly elected Chair person of AYFST during his maiden speech to participants. The meeting also called for an expansion of its website functions to include membership recruitment and e-learning activities. Additionally, plans began for the annual Youth Congress. The AYFST expressed a mission to showcase AYFST outreach and capacity building programmes as well as the skills and inspiration they engender among youth. It was noted that the AYFST's country chapters operate in

very different contexts, and the youth were drawn from various disciplines in agriculture, science and technology. Despite this eclectic range of backgrounds, the common, guiding vision of the AYFST – to participate in educational reform, policy advocacy, and youth empowerment in order to facilitate capacity building among African youths in areas of science and technology – proved that they have more in common than apart. Commitment to this vision propelled a fruitful week of dialogue and agreement.

ATPS would like to congratulate these young people for their commitment in seeing through a week of action and accomplishment and would like to assure them of its continued support ■

"If your dreams do not scare you, they are simply not good enough..."

Anonymous

10.1 Creating an Innovation in system in Africa

Interview with Bright Simons, renowned Youth Innovator

Q: What brings you to Mombasa, Kenya?

A: I am here to take part in the launch of the Youth Innovation Challenge Programme (Y I CAN) but more importantly I am here at the behest of my conviction that Science, Technology and Innovation are way out of Africa's problems. I along with a few other young people who are independent innovators in their own right came here at the invitation of the ATPS to share experiences across borders in Africa. It is my belief that innovation knows no frontiers which is why we promote shared learning across the continent. I believe the Y I CAN is a noble idea which aims to ensure that ST&I is mainstreamed into African Development.

Q: What would you say is needed to build a culture of innovation in Africa?



Bright Simons, Innovator of MPedigree (a technology that uses mobile phones in the fight against counterfeit drugs), addresses youths during the Launch

A: So many things need to be done concurrently and at the same pace to build a culture of innovation in Africa but fundamental to all of them is the need to develop a mind-set that is both reactive to innovation, but more importantly is proactive in using innovation to spur development. The problem is that the ordinary people in Africa do not realize that innovation is tied directly to development and until they do, they will not be able to amass the political capital and social capital and the cultural dynamism that is required in order to achieve the needed results. There has to be clear notion that innovation is directly tied to development outcomes so that the people at the grassroots can feel the impacts of innovation directly in their lives. Without that mind-set change, innovation will continue to be confined to a small elite and we are not going to go far.

Q: Talk us through any one innovation that you have successfully championed

A: Through the mPedigree project which I started in Ghana we are showing how technological innovation can save people's lives by making it possible for consumers, patients and ordinary people to find out if the medicines that they have just bought from a pharmacy are genuine and safe. About 30 per cent of all medicines sold in many parts of Africa are counterfeit and thus ineffective and dangerous.

There are too many people who take medicines not knowing if these medicines will cure them or kill them, it is that bad. In my part of the world you have one in three chance of swallowing something that can send you to your grave which is tragic. At mPedigree, we have given them a tool, a technology that allows them to use their mobile phones to verify every time they buy medicine, whether what they're buying is authentic.

If people can understand that technology can help them to certify that the medicines they are about to take are the right ones, then they will begin to see a direct correlation between innovation and development.

Q: What would you say is the biggest obstacle to building a culture of innovation in Africa?

A: The biggest obstacle I see is the lack of awareness about the direct correlation between innovation and development which is so vital. If you don't provide the linkages between what we do in the ST&I arena and the daily lives of people, we are going to lose the connection were not going to see the mind-set emerge that will ensure that we mobilise the political capital to make the transformations needed in Africa. This includes the big things like increasing the funding for tertiary research, equipping laboratories and so

on. But that political mobilisation must come from certain grassroots awareness that innovation directly impacts our lives.

Q: What would you say is the biggest obstacle facing young innovators in Africa?

A: The major obstacle we face as young innovators is the lack of political will, there are vested interests bent on obstructing progress and new ideas. Ordinarily you would expect that every innovation will encounter obstacles but for young people in Africa, it is particularly pronounced because they often lack the power to counter these forces. We are talking about young people with meager financial resources and often without all the skills they require trying to change a status quo that has developed over several years and for which there are several vested interests in maintaining that status quo. That is why it is important to have direct correlation between innovation and the daily lives of ordinary people in Africa so that we can collectively amass the political capital needed to surmount these obstacles. For that change to happen, it requires a modicum of political and social mobilization, a cunning ability to reel in allies, to develop and strengthen alliances and those partnerships cannot occur if they are not empowered by those who are already enlightened.

Q: What words of advice do you have for any young innovators out there?

A: The first thing you've got take into mind as a young innovator in Africa is that it's not going to be easy. The complex dynamics that have put this continent in this

“Victor Hugo, a French philosopher said; There's nothing more powerful than an idea whose time has come. The youth innovation challenge programme is an idea whose time has come,”

quagmire of poverty has evolved over centuries. Any attempt to change it will be met with stiff resistance by those who have an interest in maintaining things the way they are, so you have to be politically conscious and understand the impact of your innovation. If it is revolutionary you have to find ways of overturning these vested interests. You have to be culturally aware because not every innovation is suited either due to factors such as time and place. Above all else you have to be socially savvy and know where you can build alliances and places where you can develop partnerships. You then have to use every means to leverage those partnerships to overturn the vested interests that exist and are embedded in the status quo. If you have these three dynamics in play for you, then you can begin to effect change.

Make sure that the grassroots are in touch with your particular perspective, and the way to achieve this is by being in touch with the grassroots. You have to look critically at society and see what it is you are changing, see the dynamics in play. What are the forces which have vested interests in your particular situation? How will they react? Is there a way that you can change their opposition to some kind mutual benefit? You may come across some instances where people have vested interest in a certain situation due to their ignorance. They think that the current situation favors them when in fact it doesn't.

Q: What would you say, is the role of Y I CAN in creating an Innovation in system in Africa?

A: The youth innovation challenge programme is an idea whose time has come, Victor Hugo, a French philosopher once said, “There's nothing more powerful than an idea whose time has come.” To create an award scheme which recognizes and celebrates youth innovation, allows youth to rally together around the recognition they can garner from innovating. It ensures that at least, people are listening to them and therefore people can be convinced to contribute in some way to enabling further innovation to take place. It ensures the policy makers, industrialists, research institutions; civil society and private sector actors know how they can support these particular young innovators

and entrepreneurs. The ability to highlight a particular innovators work and put them in the spotlight opens up a channel of communication. The public then hear about it, celebrate it, and hopefully, are then compelled to support it. So above all the other great aspects of this programme is the fact that it ensures support for young innovators which can then feed directly into the task that they are faced with in changing the status quo, in overturning vested interests. The Y I CAN programme is one of the most extraordinary that we have seen in Africa in a very long time, it understands the fact that you cannot localize or isolate innovation and that innovation thrives in an ecosystem. You therefore have to ensure that the various elements of the ecosystem are in harmony, so the culture is important, the social factors and the politics of the situation are equally important.

The ATPS has developed one of the few comprehensive programmes looking at how for instance policy dialogue and practice is tied to youth culture and how youth culture is tied to political outcomes. This comprehensive approach will definitely broaden the horizon of all those who participate in the Y I CAN programme and make them among the most formidable advocates and proponents of change this continent has ever seen.

10.2 Key Speakers and an Overview of their Presentations

The event featured a mix of key youth speakers drawn from diverse disciplines in agriculture, science and technology who have excelled in their respective fields of expertise.

They delivered presentations which inspired the young people present to work on turning brilliant ideas into tangible technologies or innovations for addressing explicit challenges Africa. They presented the obstacles they encountered when transforming their innovations into practice offering the participants a chance to learn from their mistakes and find practical solutions on how to surmount the challenges. In describing the power of learning from the experience of others, Dr. Urama quoted a famous

“The Y I CAN programme is one of the most extraordinary that we have seen in Africa in a very long time, it recognizes the fact that you cannot localize or isolate innovation and that innovation thrives in an ecosystem. You therefore have to ensure that the various elements of the ecosystem are in harmony”

Nigerian saying “The one who starts cooking first has the most broken pots.”

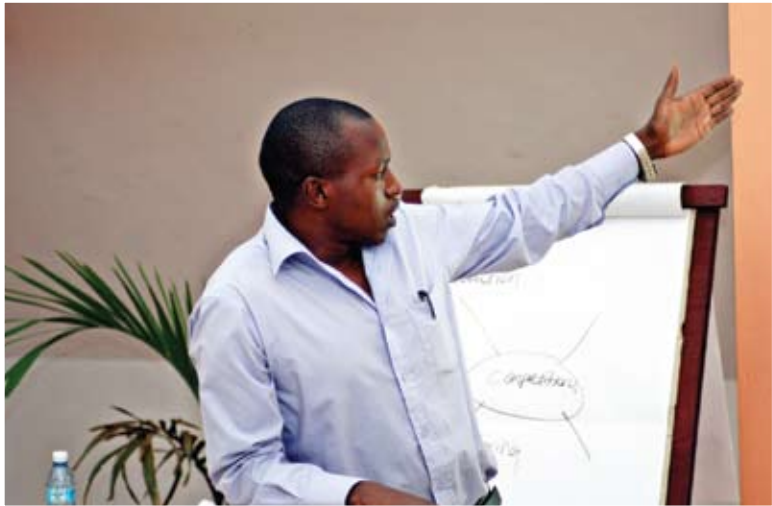
Stingless Bees; Impact on Forest Conservation and Income Generation

By Joseph Macharia

Joseph Macharia works at BIOTA East Africa where he is implementing a project on stingless bees and rural livelihood in the community around Kakamega forest. This project extends from Joseph's experience and published works focused on the nexus between entomology, poverty alleviation, and sustainable development. Joseph recently received a Master of Science in Zoology from Jomo Kenyatta University of Agriculture and Technology where he has also been a lecturer.

Overview of presentation:

The poor often have little option but to use the environment in non-sustainable ways for their everyday survival. A degraded environment cannot sustain continued use of its natural resources and hence cannot sustain food production, wild animals or natural pollinators. It is against this background that the stingless bee project was initiated in Kenya, to seek alternative strategies to develop linkages



Joseph Macharia

between diversity of resources and sustainable livelihood through income generation options.

Meliponiculture, the name given to stingless bee keeping, is a practical activity that can be integrated into forestry, horticulture and contribute to the increase of the agricultural production and regeneration of natural vegetation through pollination. Deforestation and poor management are the main problems faced by this incipient industry. In Africa, stingless bee honey is mostly obtained by harvesting from feral colonies, an activity which kills or destroys the colonies.

Replacing destructive harvesting of stingless bees with well designed management practices would provide honey for food, income, medicine, and enhance pollination of both commercial and indigenous plants. The development of meliponiculture provides new opportunities for people in the rural areas as a source of income and can improve the economics of many households though income from sale of the highly valued honey and increased food production through pollination services.

Pollination services from these bees increases the agricultural production especially of horticultural crops and regeneration of natural vegetations. Stingless bees nest in tree hollows/cavities for their natural reproduction and colony growth and are dependent on older trees and

natural flora in the forest for their survival. Hence, they are vulnerable to deforestation and habitat fragmentation as these processes diminish nesting-sites and food plants.

Not much attention has been given to these threatened and valuable bees. Furthermore, little knowledge exists on their biology, behavior and domestication in most parts of Africa. The objective of this project was to initiate stingless beekeeping by documenting the folk knowledge, analysing their honey to set standards and test the antibacterial activity of stingless bee's honey.

Honey from stingless bees is highly valued for its medicinal value. The local community in Kenya also shared the same belief. This also corresponds with my findings on the antibacterial effect of stingless bee's

honey.

Intellectual Property Rights - Challenges and opportunities for youth in translating innovations into practice:

By Isaac Rutenberg

Isaac Michael Rutenberg is a patent agent in Palo Alto, California. He has a PhD in Maths and Chemistry, both has a special interest in IPR and is involved in both the practice and study of patent law. In addition to his role as an agent/ representative for over 20 U.S. patents, has done a lot of important work in the developing world looking at the relationship between intellectual property laws, foreign investment, and innovation.

Overview of presentation:

Intellectual Property is a central topic in wide array of interests including business managers, scientists, staff, university professors, students, researchers, entrepreneurs and inventors. It is an important aspect to consider when developing an innovation and commercializing it but the biggest challenge in Africa remains the lack of awareness on IPR. Intellectual Property can be defined as ideas, information, art, inventions, designs, and expressions of



Isaac Michael Rutenberg

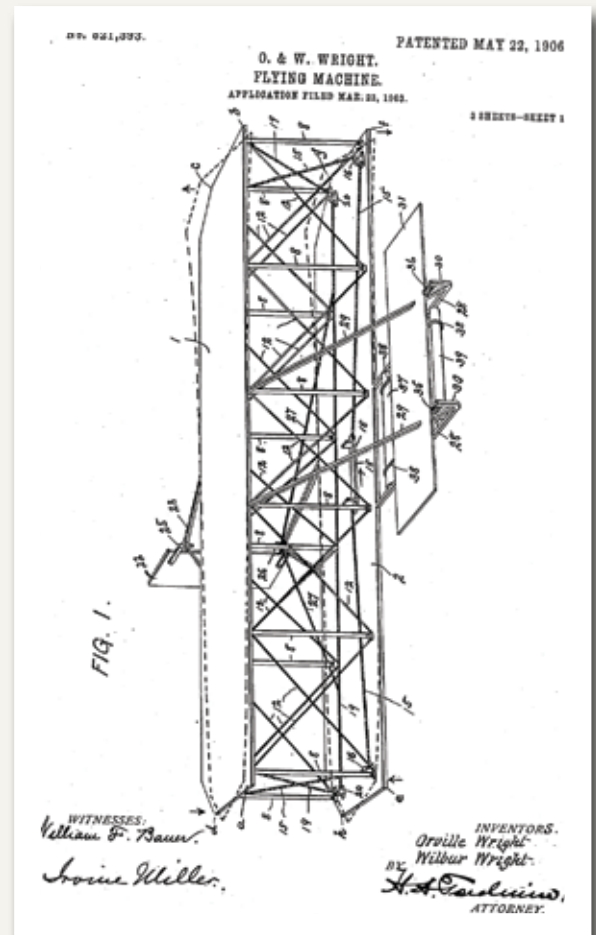
creativity. Furthermore, these are legal rights that are used to control who uses IP. The common forms of protection include Patents, Trademarks and Copyrights.

There are four main types of Patents are: 1. Utility Patents; these includes methods, machines, and compounds. 2. Design Patents; These are Designs with no functionality. 3. Plant Patents 4. Utility Model Certificate (Kenya).

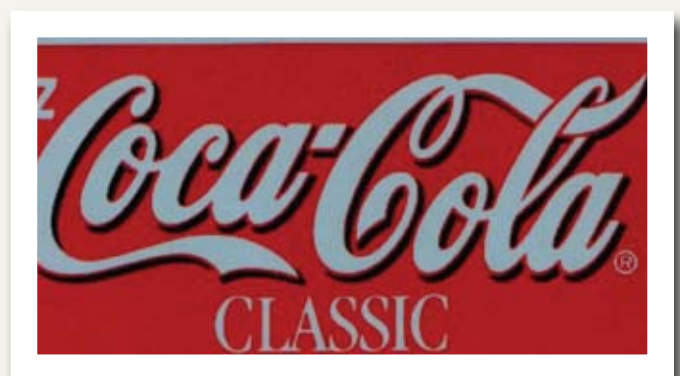
Patents:

The first requirement in registering an idea, information, art, invention, design, or any expressions of creativity as a Utility Patent include is Novelty. This means that it has to be new and original (non-obvious) and must be accompanied with a full disclosure (written specification). This patent lasts about 20 years from filing and allows the public to see exactly what you are doing, generally speaking it allows for further innovation.

Patents can be issued at Country level through patent offices in line with a countries laws and enforcement. They can also be registered with regional organisations such as the African Regional Intellectual Property Organization (ARIPO) or the Organisation Africaine de la Propriété Intellectuelle (OAPI). They are also bound by International treaties such as the Patent Cooperation Treaty (PCT). The most used office is the United States Patent and Trademark Office (USPTO). The USPTO which is an Agency Of The United States Department of Commerce has registered up



The Wright Brothers patent of the air plane wing dubbed the "Flying Machine"



Arguably the most famous trademarks.

to 7.5 million patents. Others which register a large number of patents are the European Patent Office (EPO) and the Japan Patent Office (JPO).

Trademarks:

A trademark is a type of intellectual property, and typically a name, word, phrase, logo, symbol, design, image, or a combination of these elements. Identified by the symbols ™ (not yet registered) and ® (registered), a trademark is a distinctive sign or indicator used by an individual, business organisation or other legal entity to identify that the products and/or services to consumers with which the trademark appears. The owner of a registered trademark may commence legal proceedings for trademark infringement to prevent unauthorized use of that trademark. However, registration is not required. The owner of a common law trademark may also file suit, but an unregistered mark may be protected only within the geographical area within which it has been used or in geographical areas into which it may be reasonably expected to expand. Requirements include application to trademark offices by the first user and its duration is indefinite if maintained.

Copy Rights:

Copyright gives the author of an original work exclusive right for a certain time period in relation to that work, including its publication, distribution and adaptation, after which time the work is said to enter the public domain. Copyright applies to any expressible form of an idea or information that is substantive and discrete and fixed in a medium. Some jurisdictions also recognize “moral rights” of the creator of a work, such as the right to be credited for the work. Copyright is described under the umbrella term intellectual property along with patents and trademarks.

MPedigree technology:

By *Bright Simons*

Bright B. Simons is the Director of Development Research at IMANI, and the Coordinator of the mPedigree Network. He performs a range of functions for IMANI related to social marketing, research and coordinating alliances. These duties have involved speaking engagements around the world and led to numerous quotations in the international press, ranging from opinions in the Asian Times to appearances on the BBC. In 2009, he joined the

World Economic Forum’s Technology Pioneer Community at Davos. Bright, a TED and Ashoka Fellow, is a member of the Evian Group, and an active member of other development-focused societies in Africa and elsewhere, including the Global Agenda Council on the Future of Mobile Communications of the World Economic Forum. He is a recipient of numerous awards, ranging from Marie Curie and Commonwealth Vision Grants in migration studies and social videography to a PPARC Scholarship in Gamma Ray Astronomy.

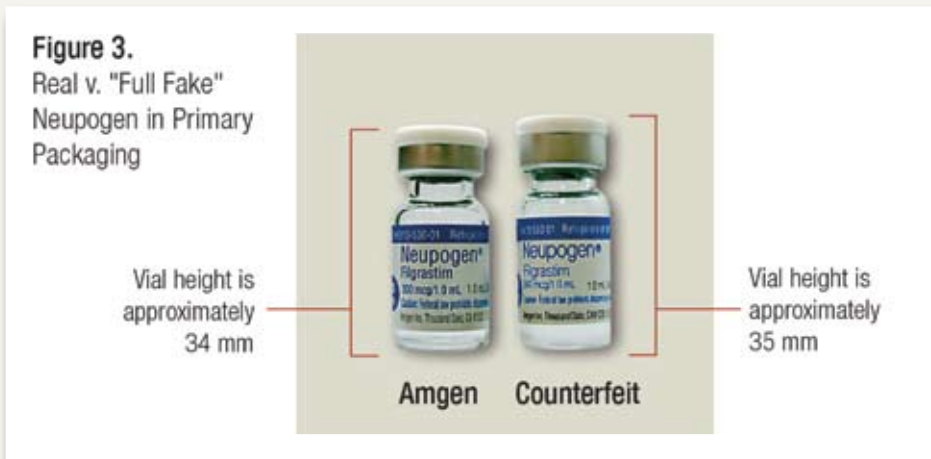
Overview of presentation:

Counterfeiting costs Pharmaceutical companies an estimated \$50 billion in lost revenues. Worse than that, it creates untold suffering for millions around the world. In 1995, 50,000 infants in Niger were inoculated with fake meningitis vaccine leading to thousands of fatalities. Indeed, the World Health Organization estimates that in many places in Africa, India and parts of South-East Asia, up to a third of medicines are compromised.

A recent study in East Asia discovered that 50% of artesunate (an anti-malarial) holograms have been successfully faked. Regardless how complex a hologram is made to look, all the counterfeiter needs to do is produce something passably like it, and consumers wouldn’t know any better. Through the mPedigree project which Bright



mPedigree technology used for verifying authenticity of drugs. started in Ghana consumers, patients and ordinary people can now find out if the medicines that they have just bought from a pharmacy are genuine and safe.



They have developed a simple Pharmaceutical Quality Grid placed on medicine packaging, similar to the recharge mobile talk time cards used in many African countries.

Above the many benefits that come with the technology, it allows them to use their mobile phones to verify every time they buy medicine, whether what they're buying is authentic. Consumers will be able to check whether a chemical seller or pharmacy is in good standing with the Authorities over the internet or by sending a text message

to a special shortcode (easily memorized 4-digit mobile number). Consumers also will be able to check if a product is duly registered and authorized for sale in Participating countries and report adverse reactions and other complaints by calling a shortcode or by sending, in a text message, the registration number along with a pre-defined tag to a special shortcode. This will have a big impact on the fight against malaria given the extreme prevalence of fake anti-malarials, and the exceptional contribution of malaria to participating countries' health burden.

11.0 Conclusion

On the whole the meeting was a success in achieving its objectives. The AYFST delegates successfully reviewed progress made in the implementation of the PoA (2007 – 2010) and developed several strategies for improvement.

They revised the activities slated for 2009 – 2010 in line with the ATPS phase VI strategy and youth capacity building initiatives and incorporated the new ATPS Youth Innovation Challenge Programme as the AYFST flagship initiative. The team further reviewed AYFST communication and outreach strategies, including revamping its website and came up with concrete strategies on how to increase and sustain its membership. Lastly the delegates successfully consolidated the AYFST leadership structure and elected its steering committee.

Speaking to the youths' during an open session, Dr. Kevin Urama, the Executive Director of the African Technology Policy Studies Network (ATPS) asserted that "knowledge for development is not just found in universities, libraries, and books. Knowledge exists beyond these boundaries, with youths outside formal institutions of education." He called on the AYFST leadership in its work with formal education

institutions to strive to reach youths outside the academia. "Innovation does not occur in the mainstream," he said.

He added that the ATPS believes that development will be driven by a generation of youth that value their ideas and visions for the future. "We need ideas and visionaries as the engine of development, not skeptics or conservatives," said Dr. Urama. Furthermore he challenged the young people to think outside the box and dared them to dream big, saying that true innovators dare to dream. "If your dream does not scare you, then it is probably not good enough," he added. In closing the workshop, Dr. Urama advised the youths to go back to their respective stations thinking about the obstacles they face as stepping stones and the threats as opportunities. "You must align your thinking to 'Why I Can', and away from 'Why I Can't.' Be the change that brings the new African Renaissance through science, technology and innovation. This is the spirit and the essence of the Y I CAN programme, to create a crop of African youths who believe that they can change Africa. The only people who can truly cause the change that we need for Africa's renaissance is the youth," he told them.

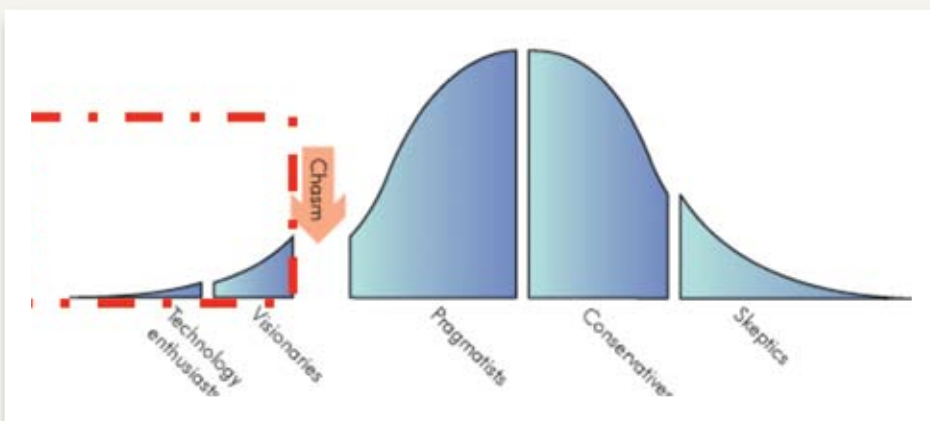


Diagram used by Dr. Urama to illustrate the demographic chasm of innovation
Moore, G.A. (1991) *Crossing the Chasm*, Harper Business, New York

Annex I: Consolidated Participants List:

1 **Ms. Mireille Pélagie Akouavi Houensou**
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Annex 2: Programme

<u>Day 1: Sunday, July 12th 2009</u>	
16:00 – 18:00	Arrival and Registration
<u>Day 2: Monday, July 13th 2009</u>	
<u>Morning Session</u>	
08:00 - 08:30	Registration
Chairperson	<i>Marsden Momanyi, Communications and Outreach Officer ATPS</i>
08:30 – 09:00	Welcome , Introductions and Preview of the Week– <i>Marsden Momanyi</i>
09:00 – 09:15	Opening Remarks - <i>Sheila Ochugboju, Senior Communications and Outreach Officer - ATPS</i>
09:15 –09:30	Keynote Address – <i>Dr. Kevin Chika Urama, Executive Director ATPS</i>
09:30 – 09:45	Opening of the AYFST Steering Committee Meeting and adoption of the Agenda
09:45 - 10:00	Overview of AYFST and progress made towards the implementation of the PoA (2007 – 2010) - <i>Winnie Alum (Uganda)</i>
10:00 – 10:15	ATPS phase VI strategy and planned youth capacity building initiatives 2009-2010 - <i>Marsden Momanyi</i>
10:15 – 10:30	Tea/Coffee Break
10:30– 10:45	Update of AYFST in Nigeria - <i>Emeka Victor Ngwoke</i>
10:45 – 11:00	Update of AYFST in Sierra Leone – <i>Festus Amadu</i>
11:00– 11:15	Update of AYFST in Uganda – <i>Herbert Lwanga</i>
11:15– 11:30	Update of AYFST in Malawi – <i>George Kanthiti</i>
11:30 – 11:45	Update of AYFST in Lesotho – <i>Phakamile Xingwana</i>
11:45 – 13:00	Open Session – Question and Answer
13:00 – 14:00	Lunch Break
<u>Afternoon Session</u>	
Chairperson	<i>William Firestone, Harvard University – Intern ATPS</i>
14:00 – 14:30	AYFST Communication and Outreach strategies & Website Presentation - <i>Herbert Lwanga</i>
14:30 – 15:00	Open Session – Question and Answer
15:00 – 16:30	Working Group Sessions to Review AYFST activities 2009 – 2010 (Details to be provided)
<u>End of Day 2</u>	
<u>Day 3: Tuesday, July 14th 2009</u>	
Chairperson	<i>Marsden Momanyi</i>

08:30 – 09:00	Group 1: Review of AYFST activities 2009 – 2010
09:00 – 09:30	Group 2: Review of AYFST activities 2009 – 2010
09:30 – 10:00	Group 3: Review of AYFST activities 2009 – 2010
10:00 – 10:15	AYFST strategies for membership recruitment and strategy to increase and sustain its membership - <i>Emeka Victor Ngwoke</i>
10:15 – 10:45	Open Session – Discussion
10:45 – 11:00	Tea/Coffee Break
11:00 – 11:30	Election of New AYFST Steering Committee & Definition of mandate and term duration
12:00 – 13:00	Wrap up Session – Summary of the outcomes and key action points
13:00 – 14:00	Lunch Break
Afternoon Session	
14:00 – 16:30	Cultural Field Trip to Ngomongo Villages (<i>Optional</i>)
End of Day 3	
Day 4: Wednesday, July 15th 2009	
Chairperson	William Firestone, Harvard University – Intern ATPS
08:30 – 08:45	Introduction to the Youth Innovation Challenge Programme and the Pay it Forward Initiative - Marsden Momanyi (<i>Programme Coordinator</i>)
08:45 – 10:30	Group Break out Sessions to discuss each theme of the Y I CAN Programme
10:30 – 11:00	Tea/Coffee Break
11:00 - 11:20	Group 1 Presentation and discussion; Innovation Incubation Initiatives
11:20 - 11:40	Group 2 Presentation and discussion; Innovation Challenge Competitions and Awards
11:40 - 12:00	Group 3 Presentation and discussion; Youth Internship and Post Doctoral Fellowship Programme
12:00 - 12:20	Group 4 Presentation and discussion; Integrated leadership and Entrepreneurship Training
12:20 – 12:40	Group 5 Presentation and discussion; Integrated Peer to Peer Collaboration
13:00 – 14:00	Lunch Break
Chairperson	Marsden Momanyi (<i>Programme Coordinator</i>)
14:00 – 14:30	Stingless Bees Research and their impact on Bee Keeping in Kenya, commercialization and impact on the community – Followed by Q&A and Discussion - Joseph Kimunge Macharia
14:30 – 15:00	Intellectual Property Rights - Challenges and opportunities for youth in translating innovations into practice – Followed by Q&A and Discussion - Isaac Rutenberg PhD
15:00 – 15:30	mPedigree technology and it's impact in saving lives – Followed by Q&A and Discussion - Bright Simmons
15:30 – 16:00	MEGASEEDS: Bringing technological innovations and knowledge transfer through agricultural franchise with local farmers in Madagascar - Followed by Q&A and Discussion - Harinjaka Andriankoto Ratozamana
16:00 – 16:30	Introduction to SET-DEV and the role of the youth in Day 5 – Marsden Momanyi (<i>Programme to be provided</i>)
End of Day 4	



The African Technology Policy Studies Network (ATPS) is a multidisciplinary network of researchers, private sector actors and policy makers promoting the generation, dissemination, use and mastery of science, technology and innovation (ST&I) for African development, environmental sustainability and global inclusion. ATPS intends to achieve its mandate through research, capacity building and training, science communication/dissemination and sensitization, participatory multi-stakeholder dialogue, knowledge brokerage, and policy advocacy.

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