



# Strengthening Linkages between Policy Research and Policymaking for African Development

**Proceedings of the 2011 ATPS Annual Conference and Workshops  
7 - 11 November | Mombasa Continental Hotel | Mombasa, Kenya**



**A PUBLICATION OF THE AFRICAN TECHNOLOGY POLICY STUDIES NETWORK (ATPS)**



# Strengthening Linkages between Policy Research and Policymaking for African Development

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**Delegates at the ATPS 2011 Annual Conference**

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The African Technology Policy Studies Network (ATPS) is a multi-disciplinary 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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# Acknowledgement

The African Technology Policy Studies Network (ATPS) has for over a decade been engaged in processes aimed at strengthening linkages between policy research and policymaking, with a view of prioritizing innovative ideas aimed at strategically addressing the science-policy divide. This report provides a summary of these ongoing engagements through the proceedings of the 2011 ATPS Annual Conference and Workshop on *Strengthening Linkages between Policy Research and Policymaking for African Development*.

The conference was held from 07 – 11 November 2011 at the Mombasa Continental Resort in Mombasa, Kenya and was a follow-up to an earlier 3-day workshop held from 16-18 February 2011 in the same city. The conference engaged a dynamic mix of scientists, policy-makers, science journalists and policy research advisors in stimulating debates addressing the gap between policy research and policymaking with a view to designing a proactive way forward for bridging this gap for African development.

On behalf of the ATPS, I wish to acknowledge the financial support received towards the organization of this workshop from our various donors including the Ministerie van Buitenlandse Zaken (DGIS) the Netherlands, the Rockefeller Foundation. I am also grateful to the Government of the Republic of Kenya for hosting the ATPS Secretariat and especially the National Council for Science and Technology (NCST) for continued support and collaboration with the ATPS.

I wish to thank all the delegates from various global locations who participated in the conference. It is my hope that the interactions and debates that ensued during the discussions will be carried on pro-actively steps and innovative solutions are implemented to achieve the ultimate goal of ensuring Africa's sustainable development.

Finally, I would like to express my gratitude to the entire team at the ATPS Secretariat whose collective and dedicated efforts contributed to the success of the conference. A particular vote of thanks goes to the ATPS Senior Research Officer, Dr. Nicholas Ozor for chairing the Executive Conference Organization Committee (ECOC) and for leading the ATPS Secretariat team of rapporteurs who compiled the reports to inform the proceedings. Special thanks also go to the logistical and financial management teams for their excellent conference administration.

**Prof. Kevin C. Urama**

*Executive Director*

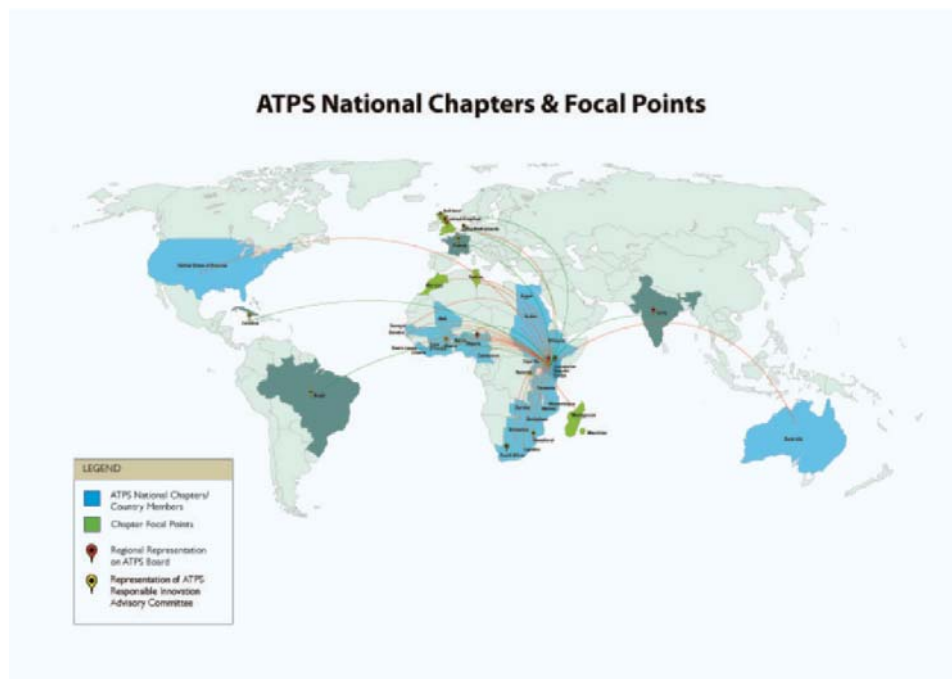
*The African Technology Policy Studies Network (ATPS)*

# About ATPS

ATPS is a trans-disciplinary network of researchers, private sector actors, policy makers and civil society actors promoting Science, Technology and Innovation (STI) generation, use and mastery for development in Africa. Its vision is to become the leading international center of excellence and reference in STI systems research, training and capacity building, communication and sensitization, knowledge brokerage, policy advocacy and outreach in Africa. ATPS is a key institution in Africa with significant experience and mastery in knowledge generation (through Research and Training), knowledge brokerage (through stakeholders dialogue), knowledge dissemination and outreach (through publication, STI journalism and policy advocacy), and knowledge valorization (through innovation challenge programs). ATPS collaborates with relevant institutions within and beyond Africa to achieve knowledge sharing, and use through research and capacity building, international cooperation and partnership, and youth and gender empowerment.

It acts as a broker between knowledge and technology generators, the policy makers, the private sector, and the local communities on the one hand, and between regions and countries on the other. The institution's reach-out mechanism and reach-out systems include Research Capacity Building (RCB), Training and Sensitization (TS), Communication and Stakeholder Dialogue (CSD), Outreach, Knowledge Brokerage and Policy Advocacy (OKBPA), International Cooperation and Partnership (ICP), Youth and Gender Empowerment (YGP), and Participatory Monitoring and Evaluation (PME).

With a regional secretariat in Nairobi, ATPS operates through national chapters in 30 countries including Diaspora chapters in the United Kingdom, the United States of America (USA) and Australia (Figure 1).



ATPS has an expansion plan to cover the entire Africa. The ATPS has since been involved in many funded Research, Capacity Building and Advocacy programs in Africa on issues of STI including, but not limited to Climate Sense program, Agricultural Innovation program, Health Innovation program, Water and Sanitation, Socialization of Science, Research Policy and Practice Linkages, among others.



# Acronyms

AAU	Association of African Universities
ACASWA	Association of Christian Artists in Swaziland
ACCE	African Carbon Credit Exchange
ACET	African Centre for Economic Transformation
ACPC	African Climate Policy Centre
ADPs	Agricultural development programmes
AFSJ	African Federation of Science Journalists
AGM	Annual General Meeting
APHRC	African Population and Health Research Center
ARIPO	African Regional Intellectual Property Organization
ATPS	African Technology Studies Network
AU	African Union
AUCC	Association of Universities and Colleges of Canada
AWFST	African Women Forum for Science and Technology
AYFST	African Youth Forum for Science and Technology
CBD	Convention on Biological Diversity
CBOs	Community Based Organisations
CEDR	Centre for Entrepreneurship and Development Research
CSOs	Civil Society Organizations
DFID	Department for International Development
DPD	Directorate of Planning and Development
ECA	Economic Commission for Africa
ECOC	Executive Conference Organizing Committee
ECOWAS	Economic Community Of West African States
EMCA	Environmental Management and Coordination Act
FANRPAN	Food, Agriculture and Natural Resources Policy Analysis Network
FAO	Food and Agriculture Organization
FES	Fair and Equitable Sharing
FGDs	Focus Group Discussions
FSAC	Farming Skills Acquisition Centre
FSAP	Farming Skills Acquisition Programme
GCI	Global Competitive Index
GDP	Gross domestic product
GSEEP	Grassroots Socio-Economic Empowerment Programme
ICT	Information and communications technology
IDRC	International Development Research Centre

IFPRI	International Food Policy Research Institute
IK	Indigenous Knowledge
IPCC	Intergovernmental Panel on Climate Change
IPR	Intellectual Property Rights
KEPHIS	Kenya Plant Health Inspectorate Service
KIE	Kenya Industrial Estates
KIPI	Kenya Industrial Property InstituteKWSKenya Wildlife Service
LEDs	Low emission development strategy
LGAs	Local Governments Areas
MAT	Mutually Agreed Terms
MDG	Millennium Development Goals
MITC	Manzini Industrial Training Center
MOU	Memorandum of Understanding
MTA	Material Transfer Agreements
NARIS	National Agricultural Research Institutes
NASA	National Aeronautics and Space Administration
NEMA	National Environment Management Authority
NEPAD	New Partnership for African Development
NHIS	National Health Insurance Scheme
NIAS	Nigerian Institute of Animal Science
NIS	National Innovations Systems
NISER	Nigerian Institute of Social and Economic Research
NITC	National Information Technology Center
NSC	National Steering CommitteeNTANigerian Television Authority
ODI	Overseas Development Institute
PIC	Prior Informed Consent
Q&A	Questions and Answer
R&D	Research and Development
RD&I	Research, Development and Innovation
REFILS	Research-Extension-Farmer-Input Linkage System
RPP	Research, Policy and PracticeS&TScience and Technology
SITC	Siteki Industrial Training Centre
SSA	Sub-Saharan Africa
STEPRI-CSIR	Science and Technology Policy Research Institute - Council for Scientific and Industrial Research
STI	Science, technology and innovation
SWAMA	Swaziland Arts and Music Association
SWASA	Swaziland Standards Authority

TH	Traditional Healer
TKDL	Traditional Knowledge Digital Library
TOT	Training the Trainer
TTO's	Technology Transfer Offices
UNECA	United Nations Economic Commission of Africa
UNESCO	United Nations Educational, Scientific and Cultural Organization
WFSJ	World Forum for Science Journalism

# 1. About the Conference & Workshop

## 1.0 Introduction

For research to have the impact of guaranteeing development gains in Africa, research results must inform and shape policies and programmes, and be adopted into practice. Developments at various levels are hinged on the generation and implementation of appropriate policies, the building of requisite human capabilities, adequate technological infrastructure, as well as enterprise capital base to bolster the various development initiatives.

While the linkage between policy and national development is often moderated by other factors, it cannot be denied that the absence of a strong and appropriate policy framework, that incorporates solid theoretical and empirical research and the points of view of multiple stakeholders, may spell disaster for any national development agenda. Fortunately, African leaders have seen the wisdom on the need to empower policy creators, even though this effort is in its early stages, in virtually all the domains linked to national development, particularly in science and technology, economic transformation, food security and health – key factors in any positive national growth agenda.

In spite of sporadic progress in some African countries such as South Africa, Nigeria, Kenya, Lesotho, and Malawi, the use of policy heavily informed by research evidence in critical domains in policymaking still leaves much to be desired. Africa's policy agenda has not fully exploited the expertise of African professionals, leaving the African policy landscape much too influenced by the agendas of external development agencies, consultants, and bilateral development partners. This has raised the question of whether Africa's priorities are truly at the heart of its development agenda. There exists a high propensity for African governments to readily overlook local research capacity in favour of expatriate researchers and ad hoc consultancies<sup>1</sup>.

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<sup>1</sup>Hoffman J. 1995, *Linking Economic Research and Policy-Making: The Role of AERC*

It has therefore become imperative to review the linkages between research, policy and practice with a view to identifying strategies for strengthening the uptake of development research into policy and practice in Africa. It is important to note that sustainable policy research and implementation linkages in Africa will require the development of a strategic vision and a proactive approach that contextualizes the research agenda and its consequent activities. It requires a proper understanding of research communication and knowledge translation so as to facilitate the use of research evidence to influence policies and effect change in practice. This can be achieved through sustained systematic interactions and capacity building amongst key stakeholders including researchers, policymakers, and the practitioners. This formed the focus of the conference.

The international conference aimed to strengthen the gains from an initial consultative workshop on strengthening linkages between policy research and policymaking for African development held in Mombasa, Kenya in February 2011 and organized by the African Technology Studies Network (ATPS), in partnership with the African Population and Health Research Center (APHRC), Food, Agriculture and Natural Resources Policy Analysis Network (FANRPAN) and African Centre for Economic Transformation (ACET). During the consultative workshop, stakeholders recognized the importance of appropriate policies derived from research evidence in fostering national priorities for African development.

Stakeholders were cognizant of the gap between policy research and policymaking in Africa and its negative influence on national developments. They recalled the commitments of African leaders to the African Union (AU) and the New Partnership for African Development (NEPAD) flagship programmes including; agriculture and food security; climate change and natural resource management; regional integration and infrastructure; human development; economic and cooperative governance; gender and capacity building; and their pledge to allocate 10% of national budgets to agriculture, and 1% of GDP for research and development (R&D) in support of the above programmes.

The outcomes from this workshop has further guided the consultative group on the way forward for engaging a wider stakeholder group for making better impacts on strategies for strengthening linkages between research, policy and practice for African development.

## **1.2 Conference Sub-themes**

The conference offered opportunity for our range of stakeholders including researchers, policy makers, private sectors, civil society organization, non-governmental organization, farmers' organization, etc, to deliberate on the following interlinking subthemes with the aim of fostering better linkages between policy research and policy making for African development:



*i. Conceptualizing research, policy and practice for sustainable African development*

Papers under this subtheme addressed the concepts of research, policy and practice; the theory and practice of research engagement for policy and implementation; strategies and methodologies for conducting policy relevant research; strategies for use of research evidence in policymaking and policy analysis; pathways for translating research evidence through policy to practice; and institutional arrangements for stakeholders' engagement in strengthening linkages amongst researchers, policymakers and practitioners.

*ii. Youth and Gender empowerment*

Papers under this subtheme addressed youth and gender issues that would promote effective linkages between research, policy and practice; youth and gender contributions in research, policy and practice; challenges faced and how they can be overcome to enhance their contribution to policy, research and practices linkages; lessons that could be drawn from gender mainstreaming initiatives, where the relationships between researchers, policymakers and practitioners have arguably been better institutionalised.

*iii. Mechanisms and Approaches for effective linkages amongst researchers, policymakers and practitioners*

Papers under this subtheme addressed various functional models, mechanisms, tools and approaches for effectively linking research, policy and practice especially in the African context. Case examples of successful models, mechanisms, tools and approaches that have led to successful linkages of the stakeholders form top of the list of the papers under this subtheme. Papers should examine factors that interact dynamically to determine the sort of evidence likely to be adopted by policymakers and also discuss enabling tools to build a broader consensus on the role of empirical evidence in good policymaking and implementation. Other issues covered under this subtheme included; investments in research, policy and practice; international cooperation and partnerships; curriculum reforms; and intellectual property rights, access and benefit sharing.

*iv. The role of capacity development*

Papers under this subtheme focused on new knowledge, skills, and infrastructure required for effective research, policy and practice for African development. It discussed how best the capacity of the relevant actors can be strengthened in the short, medium and long terms in order to achieve effective policy research that will lead to policymaking and implementation. Papers emphasized the good practices that exist in capacity development to realize effective linkages among the actors.

*v. Research uptake, communication, advocacy and brokerage*

Papers under this subtheme emphasized the innovative strategies and channels for communicating research outputs for policymaking and policy implementation. It emphasized

the role of the media in research uptake, communication, advocacy and brokerage. Others include; the incentive structures and enabling environment for effective communication of research outputs to policymakers for use by practitioners.

*vi. Challenges and Opportunities for effective linkages between research, policy and practice*

This subtheme placed emphasis on the economic, social, political, environmental, cultural and other factors that constrain effective linkages between and amongst the actors. Papers showed the prospects and opportunities of an effective linkage under prevailing African conditions.

### **1.3 Conference objectives**

The overall purpose of the conference was to engage relevant stakeholders to address the gap between research, policy and practice with a view to designing a proactive way forward for bridging this gap for African development. The specific objectives were to:

- i) understand the context-specific reasons for the gaps between research, policy and practice in Africa;
- ii) enhance knowledge brokerage and communication among researchers, policymakers and practitioners for African development;
- iii) identify and prioritize strategies to improve linkages amongst researchers, policymakers and practitioners in Africa;
- iv) improve the use of home-grown policy research evidence in policymaking and policy implementation;
- v) draw lessons learnt from the successive cases of good partnerships amongst researchers, policymakers and practitioners in Africa and elsewhere; and
- vi) establish a trans-disciplinary consortium/network of policy research institutions, policymakers and practitioners in Africa for African development.

### **1.4 Expected Outputs**

- i) Proceedings of the international conference on strategies for strengthening linkages between research, policy and practice for African development.
- ii) Documented practical examples of successful partnerships between research, policy and practice in Africa and elsewhere.
- iii) A framework of planned actions for the operation of the trans-disciplinary consortium/network of policy research institutions, policymakers and practitioners in Africa.
- iv) Book volume from the conference papers
- v) A communiqué

## **1.5 Expected Outcomes**

- i) Improved linkages amongst researchers, policymakers and practitioners in Africa
- ii) Improved utilization of home-grown research evidence for policymaking and practice;
- iii) Establishment of a trans-disciplinary consortium/network of like-minded institutions that will promote effective linkages amongst researchers, policymakers and practitioners in Africa.

## **1.6 Conference Methodology**

In order to unearth the context-specific lessons from the mix of researchers, policymakers and practitioners; learn from the successful cases; as well as identify and strategize on how to improve the linkages between research, policy and practice, the workshop adopted multiple approaches to ensure active participation of each stakeholder grouping in the dialogue, identification of gaps and prioritization of strategies for improvement. These included:

- > Plenary sessions: This involved keynote lectures by selected renowned researchers, policymakers and practitioners in the different thematic areas. These keynote presentations focused more on practical experiences and less on theoretical issues. They provided details on the experiences of the presenters and their institutions (both successes as well as frustrations) and the contextual reasons for the successes and failures.
- > Facilitated questions and answer (Q&A) sessions: This session afforded the presenters the opportunity to respond to specific issues raised by the participants using practical experiences.
- > Country case studies: This aimed to highlight the experiences of different countries and regions in the linkages between research, policy and practice. These case studies emphasized specific scenarios of linkages amongst research, policy and practice and the roles of each stakeholder in fostering the relationship for a specific development initiative/agenda. It also buttressed on the lessons learnt from the process.
- > Working group sessions: Participants were divided into groups representing a mix of researchers, policymakers and practitioners with the aim of identifying and prioritizing strategies to improve linkages amongst researchers, policymakers and practitioners in Africa for African development. The group sessions also included other ATPS thematic areas in the Phase VI Strategic Plan.

## **1.7 Conference Venue and Date**

The conference and workshops were held at the Mombasa Continental Hotel, Mombasa Kenya from 7-11 November 2011.

## 2. Conference & Workshop Opening Session

### 1.1 Welcoming remarks by the Chair, ATPS Executive Conference Organizing Committee

*Dr. Nicholas Ozor, Senior Research Officer, ATPS*



*Dr. Nicholas Ozor  
Senior Research Officer, ATPS*

On behalf of the Executive Conference Organizing Committee (ECOC), Dr. Ozor welcomed all the delegates and participants to the 2011 ATPS Annual Conference and Workshop in Mombasa. He expressed optimism that all the delegates and participants had hitch-free travels from their various global locations. Dr. Ozor familiarized the delegates with the ATPS delineating it as a leading trans-disciplinary network of researchers, private sector actors, policy makers and civil society actors promoting the generation, dissemination, use and mastery of science, technology and innovation (STI) for

African development, environmental sustainability and global inclusion in Africa. Its mission is to improve the quality of STI research, policy, and practice for sustainable development in Africa by Africans and for Africa.

In collaboration with likeminded institutions, the ATPS provides platforms for regional and international research, capacity building and knowledge sharing for the identification and prioritisation, development, use and mastery of STI for sustainable social, economic and environmental development in Africa. With a Secretariat Headquarter in Nairobi, Kenya, it operates through national chapters in 29 countries (including Anglophone, Lusophone, Francophone and Diaspora countries) with an expansion plan in place to cover the entire Africa by 2015.

The choice of the theme for the 2011 ATPS Annual Conference was agreed following various

consultations with key stakeholders including the policy makers, private sectors, researchers, and the civil society leading to the theme “*Strengthening Linkages between Policy Research and Policymaking for African Development*”. Dr. Ozor noted that the consensus on the theme was reached after the stakeholders identified poor linkages amongst researchers, policymakers and practitioners which have become the bane for development in Africa. They noted that the nations which have built bridges across these key stakeholders have prospered and progressed tremendously especially in the area of science, technology and innovation. This is because they not only understand each other but work harmoniously complementing each other in the journey towards development. The challenge for Africa therefore is to learn from these nations especially the emerging countries - China, Korea, India, Brazil and the developed economies including Europe and America. **If they did it we can do it better.**

The delegates and participants were taken through the six subthemes of the conference namely:

- i) Conceptualizing research, policy and practice for sustainable African development
- ii) Youth and Gender empowerment
- iii) Mechanisms and Approaches for effective linkages amongst researchers, policymakers and practitioners
- iv) The role of capacity development
- v) Research uptake, communication, advocacy and brokerage
- vi) Challenges and Opportunities for effective linkages between research, policy and practice

As described in the conference methodology, Dr. Ozor noted that lead papers would be presented on each of the subthemes to provide more insights to provide direction for other paper presentations on each of the subthemes. The conference aims and expected outputs highlighted in Chapter 1 were also explained briefly to the audience.

In his summation, Dr. Ozor informed delegates and participants that the four-day conference would adopt a dynamic participatory process to encourage networking, knowledge circulation and collaborative strategic planning in the form of plenary sessions, facilitated parallel breakout sessions and plenary participatory dialogue to frame common response strategies. Dr. Ozor once again appreciated the delegates and participants wishing them fruitful deliberations and stay in Mombasa. On a lighter note, he urged delegates and participants to create time sample the beach and visit tourist places while at the same time remain security conscious and any issues related to the conference to the ATPS Secretariat or the hotel management. Most importantly, delegates and participants were reminded to duly register for the conference and pay their membership fees to enable them participate in all the events including the ATPS Annual General Meeting (AGM).



## 1.2 Welcoming remarks by the ATPS Kenya National Chapter Coordinator

*Mr. Kenneth Aduda, ATPS National Chapter Coordinator, Kenya /Projects and Resource Mobilization Manager, KIRDI*



*Mr Kenneth Aduda  
Coordinator, ATPS Kenya Chapter*

On behalf of the ATPS-Kenya Chapter Members as well as the whole Kenyan community, Mr. Aduda extended a cordial welcome to all the delegates and participants of the 2011 ATPS annual conference and workshop. He likened ATPS with a typical great African family with many homesteads and the Kenyan homestead was the venue of the 2011 family gathering, which also hosts the Regional Secretariat. He was delighted that the ATPS had continuously endeavoured to bring together renowned scholars, researchers and bureaucrats to exchange experiences in research, share expertise and profound perspectives, which in turn lead to a deeper understanding of our commitment, as well as more effective responses to the challenges of STI. He expressed his sincere appreciation to the audience and the sponsoring organizations who made significant contributions to the success of the conference and workshops. He also apologized for any inconveniences or difficulties that delegates may have encountered enroute to Kenya and wished them a successful stay in the country.

## 1.3 Opening remarks by the ATPS Chair of the National Chapter Regional Council

*Dr. George O. Essegbey, ATPS Regional Council Member/ Director, STEPRI-CSIR, Accra, Ghana*



*Dr. George O. Essegbey,  
ATPS Regional Council Member*

Dr. Essegbey, who represented the National Chapter Regional Council highlighted the importance of the theme of the conference and added that, strengthening linkages between policy research and policymaking for African Development is perhaps a theme we should have had long ago. Dr Essegbey, recounted an important lesson from the training session by Prof. Osita Ogbu's which emphasized on having a plan in order to win. He indicated that winning in Science Technology and Innovation, in any of our countries, begins with the plan, with the policies that we have put in place. He was of the view that the theme should have been dealt with a long time ago because of how crucial it is to the development of Africa. He raised the question about the extent to which African countries place emphasis (if at all) on policy research. Dwelling on an old African adage, he

highlighted that a policy researcher is that person who performs the important role of telling the policymaker that the path being cut is going crooked, or to encourage the policymaker that the path being cut is going very straight and hence to the destination. Using the example of industries and enterprises, which undertake market research with their business plans and feasibility studies before they enter the marketplace, he threw the question of how often this process is undertaken in policy research and policymaking. He then emphasized on the urgency and timeliness of the theme and looked forward to successful deliberations.

#### 1.4 Opening remarks by the representative of the ATPS-AWFST

*Prof. Norah Olemba, Former Chair, ATPS Board/ Patroness AWFST*



*Prof. Norah Olemba  
Former Chair, ATPS Board/  
Patroness AWFST*

In her capacity as Patron for the African Women Forum for Science and Technology (AWFST) and on behalf of all the women at the conference, Prof. Olemba welcomed the delegates to the 2011 ATPS annual conference. She expressed hope that all delegates were well settled and geared to engage in the conference activities including the innovation challenge program. Prof. Olemba was pleased to note what she described women awakening to the challenge of moving forward in science and technology. She was gratified by the number of women present at the conference in spite of the numerous challenges that women encounter in the area of employment and education. She lamented that, various customs and other issues have hindered the progress of women in development often relegating them to the back, and this had disadvantaged women in so many ways. She noted that many women were reluctant to pursue science and technology at university level or high school level due to fear and the difficult nature of science. However, Prof. Olemba was very encouraged by the fact that this fear of pursuing science and technology among women in Africa is gradually dissipating.

She expressed her conviction of the rejuvenation of women's desire to go into all aspects of challenges of the nature for our development in Africa, and saluted all women who had come to join ATPS in this very interesting and very useful conference. She further urged them to put in their maximum participation and thoughts, and not to shy away from sharing new ideas that could contribute towards the development agenda for Africa.

## 1.5 Opening remarks by the Chair ATPS African Youth Forum for Science and Technology (AYFST)

*Mr. Tennyson Magombo, Chair, AYFST*



*Tennyson Magombo  
Chair, AYFST*

The Chair of the African Youth Forum for Science and Technology (AYFST), Mr. Tennyson Magombo, expressed his profound humility and privilege to be called upon to welcome all the delegates to the 2011 ATPS Annual Conference and workshop. He emphasized the importance and relevance of the conference theme “Strengthening Linkages between Policy Research and Policy Making for African Development” by sharing a story of how Mr. Bata, founder of the Bata Shoe Company identified a market potential for shoes in Africa. He noted that several unlocked market potentials exist in Africa and

the onus lies on Africans to unlock these potentials rather than waiting on external influences from Europe, America and Asia to take up the initiative.

He also drew lessons from Prof. Osita Ogbu's wise saying that, “a pair of shoes is all we need” to help us trample upon snakes and scorpions, thorns, and sharp stones as we move forward in building Africa's capacity in science technology and innovation today for sustainable development tomorrow. He added that a pair of shoes is all Africans need they we scale up the mountain not of despair but of hope in the move to developing solutions to Africa's complex problems through research, science, technology and innovation.

He recalled the launch of the Youth Innovation Challenge (Y I Can) under the umbrella of AYFST in 2009 in Mombasa, thanks to the vision of ATPS and support from partners. He remarked that the AYFST was elevating higher prioritised areas of activities in climate change and the environment, agriculture and food security, water and sanitation, and health. In his words, “*Our vision is to see empowered communities that are able to enjoy sustainable livelihoods*”. He extended a special welcome to the grantees of the Climate Change Innovation Challenge which falls under the Youth Innovative Challenge programme.

He seized the opportunity to announce the end of tenure of the current AYFST Steering Committee, and with the powers vested upon him as the Chair by the AYFST constitution he declared the steering committee dissolved. He further announced that elections of the new steering committee members would be conducted drawn from the pool of young and innovative people present at the meeting.

In conclusion, he quoted Henry Ford who once said, “*If you say and believe you can do it, you are*

*right. If you say and believe you cannot, you are also right.*” He encouraged fellow youths and Africans at large to be confident and lift up Africa from the pit of despair and hardships to the mountain of hope and prosperity.

## **1.6 Opening remarks by the representative of the ATPS Partners**

*Dr. Jeremy Webb, African Climate Policy Centre (ACPC), Addis Ababa, Ethiopia*



*Dr. Jeremy Webb  
African Climate Policy Centre (ACPC)*

Dr. Webb, speaking on behalf of ATPS partners, extended greetings from the ACPC. He said that the ACPC was a forward-looking policy think tank established by the Economic Commission for Africa (ECA) in the framework of ClimDev/Africa to address the impact of climate change by assisting member states to mainstream climate change into their development strategies and programmes.

He underscored the commitment of ACPC to support ATPS in their bid to strengthen the linkage among policy, practice and research communities. He highlighted the strong synergies between ACPC's areas of engagement and that of ATPS and described ATPS as a very important partner especially from the research community that bridges key issues related to climate change and development already. Owing to that, he stated that ACPC is preparing, in collaboration with the secretariat, an MOU to work with the ATPS in this particular area. In particular, Dr Webb stressed that ACPC was very eager to go forward and look together at areas of renewable energy, low carbon development and technology transfer, and as such, looking forward to this partnership both with the secretariat and all researchers across Africa.

Dr. Webb remarked that, while ACPC was based in Addis Ababa, its reach is to all the 54 countries in Africa as per the program. In his concluding remarks, he expressed high expectations through his participation at the conference and looked forward to networking opportunities with all the delegates and hopefully forge closer working relationships in various issues in the future.

## 1.7 Welcoming/Opening remarks by the ATPS Executive Director

*Prof. Kevin Chika Urama, Executive Director, ATPS*



*Prof. Kevin Chika Urama,  
Executive Director, ATPS*

Prof. Kevin Urama, Executive Director of ATPS, was delighted to welcome all delegates to the 2011 ATPS annual conference and workshops and encouraged them to be forthcoming with ideas and participate actively in the plenary and breakout sessions. He noted that, delegates were allotted slots to present their papers following the submission of abstracts in response to the call for proposals circulated by the ATPS, and hence had valuable information and knowledge to share on the conference theme. Noting that majority of the delegates gathered were experts in various fields, he urged them to join

hands in trying to establish a stronger linkage among researchers, policy makers and practitioners in Africa.

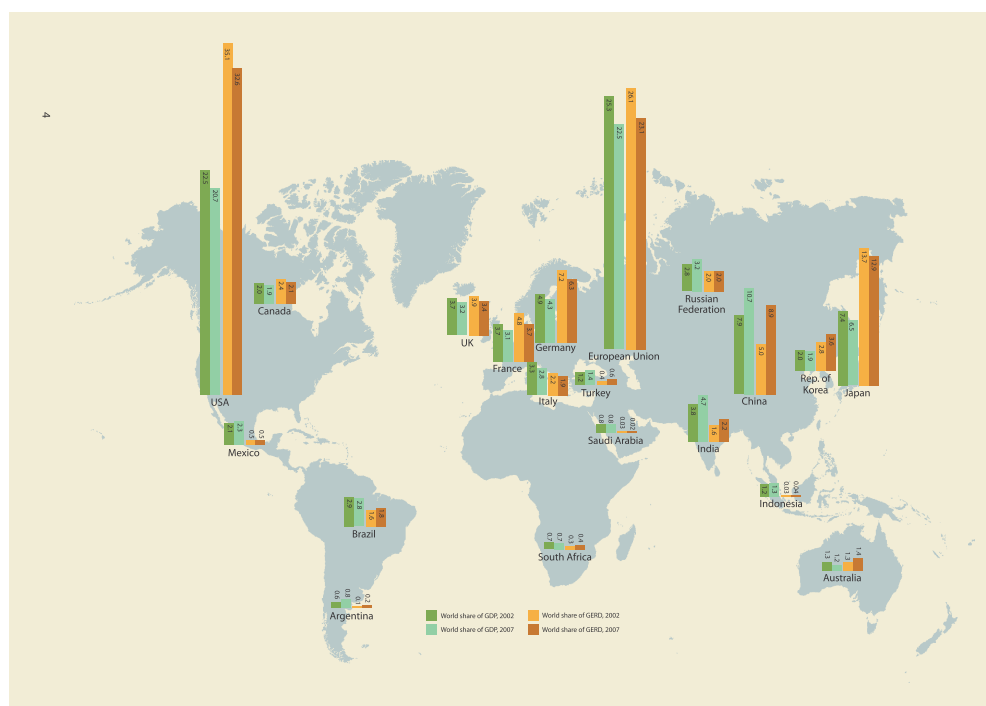
Prof. Urama retraced the steps from Cairo, Egypt where a promise was made by ATPS delegates to step out of self-flagellation (which Africa is known for), to take action and provide solutions and not only to talk about the problems. Following this, the ATPS launched *The African Manifesto for Science Technology and Innovation* after several years of dialogue with Europe to learn how they did it, with India and Asian countries, the emerging tigers, to learn how they are doing it and also with Africa to learn what we are doing and find solutions to African problems. *The African Manifesto for Science Technology and Innovation* identified the issue of linkage as a major gap. Prof. Urama expressed his appreciation to Hon. Obed Dlamini, Former Prime Minister of Swaziland who has been proactively following up on this problem and expressed trust in ATPS as the only Network in Africa that can address the gaps.

Prof. Urama pointed out that ATPS had collaborated with UNESCO in analyzing the state of STI in Africa and why it was not working. This initiative led to the publication of the *2010 UNESCO World Science Report* in which ATPS took a lead role in the development of the sub-Saharan African chapter. He urged country delegates present to read the report and make it accessible to their respective Ministers and Presidents as science and technology is the engine of development, rather than aid, for Africa. He stressed that the conclusion of the 2011 ATPS conference would symbolize the beginning of a journey for all Africans interested in making Africa develop, doing what others have done well in order to move forward and also learning from their broken pots to ensure that those in Africa do not break. He added that the ATPS was actively trying to identify partners to work with to advance the interests of Africa.

Prof. Urama presented the map (Figure 1) showing the tracking investment in science and



technology by the G20 countries, which places South Africa, the giant economy in Africa as a dot on the map in terms of GDP growth and investment. In assessing global investment in science and development both in absolute and relative terms, it is also apparent that Africa can only find itself at the lower end which makes it extremely difficult to influence change in livelihoods thereby depriving future generations of a better Africa.



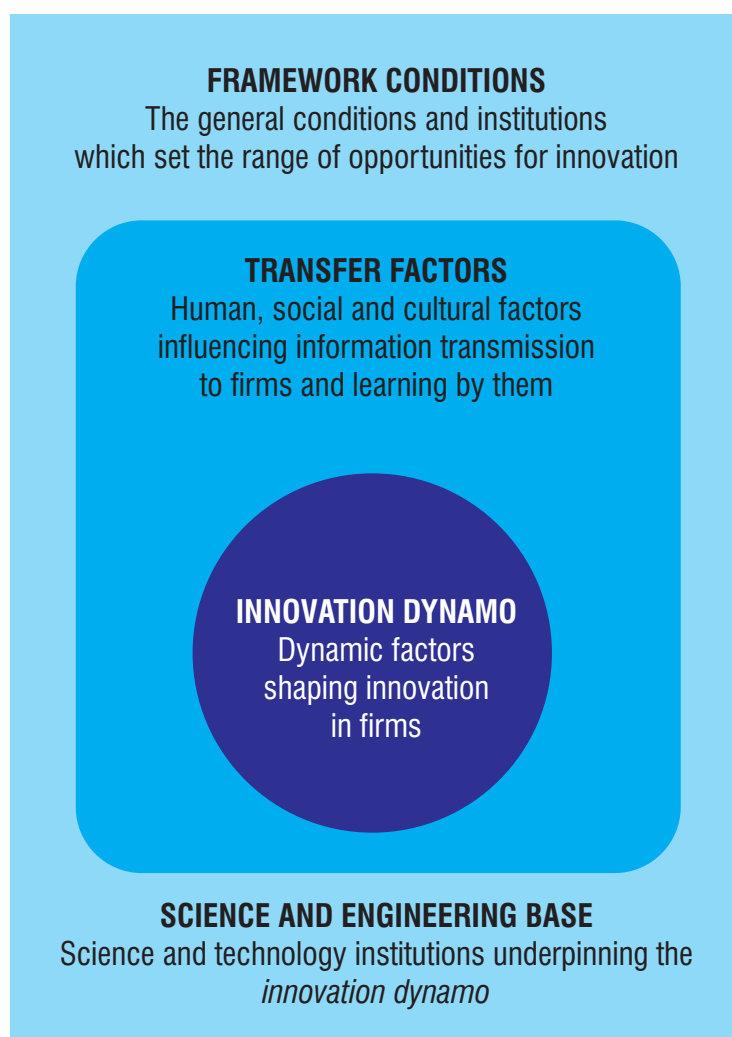
Source: UNESCO Science Report, 2010

**Figure 1: World share of GDP and GERD for the G20, 2002 and 2007 (%)**

During the process of drafting *The African Manifesto for Science and Technology*, Prof. Urama shared a lesson learnt on innovation. He discovered that Africa possessed a lot of scientific knowledge and experience and even brilliant scientists citing the example of a Ghanaian working at the National Aeronautics and Space Administration (NASA). In his view, the main problem is the lack of an enabling policy environment to work in - the frameworks to make innovations thrive does not exist in Africa. On the other hand, the lack of a proper working environment in Africa had drastically reduced the productivity of Africans.

Prof. Urama further presented an Innovation Systems Framework (Figure 2) which takes into account two salient factors namely; the innovation dynamo and transfer factors. The innovation dynamo is comprised of the factors that can make these innovations thrive. He emphasized that the only a difference can be made is by being part of the solution, though the identification of all the critical factors to ensure that dynamic innovations happen in Africa. The second aspect noted was the transfer factors or issues related to bridging the gaps between the innovations. Through his interaction with the AYFST and AWFST programs,

Prof. Urama discovered the existence of many innovations in Africa but due to lack of sufficient capacity to nurture these ideas, they are never harnessed for the benefit of Africa. He gave an example of initiatives like the M-PESA technology in Kenya, the M-pedgree technology in Ghana as an examples of brilliant ideas that should be harnessed for African development. If left undeveloped, some other entrepreneurs elsewhere would pick them and then repackage as different innovations. He also touched on the framework conditions, the general conditions for innovation, then science and engineering as the base and challenged the audience to think about how African could ensure the efficient functioning of the framework.



Source: Jamie Speirs, et al. 2008

## Figure 2: Innovation Systems framework

Prof. Urama recounted the challenges and constraints encountered among the various sectors including science, private sector, the community and NGOs and policy makers thereby creating big walls that divided them such as disciplines, sectors, ministries, parastatals, conceptual boundaries, preventing them from working together in order to progress. To address this, he referred to his concept of the quadruple helix as the DNA, the fabric of

innovation (Figure 3). The fabric of success in every economy is collaboration amongst the quadruple helix, he said. There is need for collaboration in order to make this things work better in Africa. The scientists are at the base as shown in the innovation dynamo, and then the private sector must be facilitating the scientists in order to transfer it through the civil society actors and also the policy makers that provide the enabling environment for all other stakeholder actors to thrive.



Urama 2009

**Figure 3: Quadruple Helix<sup>2</sup>**

In conclusion, Prof. Urama reiterated that, the ATPS goal for the conference was to ensure the effective functionality of this DNA of innovation. If the strands do not operate in tandem, African will simply be repeating what has already been done before. He encouraged delegates to be bold and practive in coming up with ideas on how Africa can do development differently, rather than doing different development projects, often driven from outside the contnent. He noted that uni-disciplinary and non-cooperation has hindered development in Africa for too long. He cited Einstein's wise saying that “it is only a mad man who does the same thing over and over and expects different results”.

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<sup>2</sup>Urama, K. C. (2009): *The Quadruple Helix: A cooperative model for fostering innovations for development. A Presentation at an ATPS Workshop on Science Ethics and Technological Responsibility in Developing and Emerging Countries, Hilton Hotels, Nairobi Kenya.*

## 1.8 Opening remarks by the Chair ATPS Board of Directors

*Prof. Turner Isoun, Former Minister for Science & Technology, Fed. Republic of Nigeria / ATPS Board member*



*Prof. Turner Isoun  
ATPS Board Member*

Prof. Turner Isoun, speaking on behalf of the Chair of the ATPS Board Prof. Sam Wangwe, expressed delight on the remarkable attendance marked by the large number of delegates at the 2011 ATPS annual conference and workshop. He was also impressed with the progress made by ATPS in increasing the number of chapters to 29 as well as the incorporation of Francophone, Anglophone and the Lusophone countries. He congratulated all the key players of ATPS, both internationally and nationally for building a very credible and formidable institution over the past decades. He noted that, having been in

the field for long, he could confirm the uniqueness of the ATPS in fostering STI policy in Africa, noting that the network was a great resource for his Ministry during his two term tenure in Nigeria. He added that the great strides of Nigeria in the space technology and satellite communication technology was largely driven by experts drawn from ATPS stakeholders in Africa and elsewhere. He used the opportunity to call on Ministers for S&T, higher education, trade and industry, etc and the Africa union Commission to make full use of the richness and uniqueness of the African expertise that the ATPS represents. He noted that the ATPS has, through sustained efforts and good leadership, proven that Africa can build credible and sustainable institutions and more so, that Africans can work together across policy, research, private sector and civil society to come up with sound technologies and policies for development of the continent. He recalled his excitements in Egypt in November 2010 when the African Manifesto was launched and in reading the focus on building Africa's confidence in African technology policy researchers, policymakers, etc to make development work in the continent. He added that *"Africa should learn to run before it walks"* by learning for success stories in Africa and elsewhere. The examples of China and the emerging countries clearly suggests the countries could re-write their development story within a decade by learning from others and taking advantage of science, technology and innovation.

Prof. Isoun also re-emphasized the appropriateness of the conference theme by taking a step backwards to remind the delegates about the research-policy process where researchers provide data to feed into policy research which would later feed into policy making. In addition to this process, he cited policy implementation as a critical component which deserves much attention in order to produce desired results. He was of the view that even as Africans learn from partners from abroad, there is need to breed home-grown alternatives as ultimately, the responsibility of solving Africa's problems rested with the Africans in their own

way. As attempts to establish a roadmap for development in Africa are structured, Africa should not only learn from other countries but draw important lessons to create its own development path. Africa must think about its capacity to deliver and the sustainability of all efforts invested.

Prof. Isoun shared the success story of the mobile phone revolution in Africa which he noted did not happen by accident. He recounted that, up to 616 million people have subscribed to mobile telephone revolution in Africa which is bigger than Europe and North America, and second to Asia. This is happening because of the adequate planning and right policies that tapped into experiences from other places and adopted to fit the African system. He shared his role in policy making which contributed to the mobile phone revolution in Nigeria following which Nigeria has plans to launch a satellite in the near future to compete in the bandwidth market.

Prof. Isoun welcomed all delegates and stressed that ATPS was at the heart of the revolution that will deliver the new renaissance in the continent. He ended with his pet idea that Africa should learn to be at the fore front of cutting edge technology. According to him, Africa should not continue learning and depending on obsolete technologies. He was optimistic that if Africans would take that bold step and also believe that they can do it, then Africa would be able to produce enough food, produce the technology that is required to advance the continent.

## 1.9 Opening keynote speech on 'Understanding the Link between Research, Policy and Practice

*Prof. Shaukat A. Abdulrazak, Chair-elect ATPS Board of Directors and Executive Secretary/CEO National Council for Science and Technology, Kenya*



*Prof. Abdulrazak, Chair  
ATPS Board of Directors*

Prof. Abdulrazak kicked off his presentation by echoing a strong statement from *The African Manifesto for Science, Technology and Innovation (STI)* which stipulates that, for Africa to achieve self-rule and democratic governance in STI for African development; African governments must adopt proactive policies that fully embed African STI in African societies. He defined policy research in three aspects namely: research that answers the why and how and relates issues with implementation in society; applied research geared towards informing/influencing policy decisions; and research that ends up with policy recommendations. He then presented the various processes in the policy cycle necessary for the development of a good policy including: definition of the problem to be



addressed; policy formulation; and policy implementation which results in the final output as an established policy.

Prof. Abdulrazak tackled the issue of why a sustained linkage between and amongst researchers, policymakers and practitioners was necessary. He noted that most of the African countries lie at the bottom of the Global Competitive Index (GCI) ranking due to Africa's inability to harness science and latest technologies for productivity enhancements. The inability of researchers to communicate technologies and innovations to policy makers and practitioners to come out with innovative products has also diminished the competitive edge of most countries on the global arena.

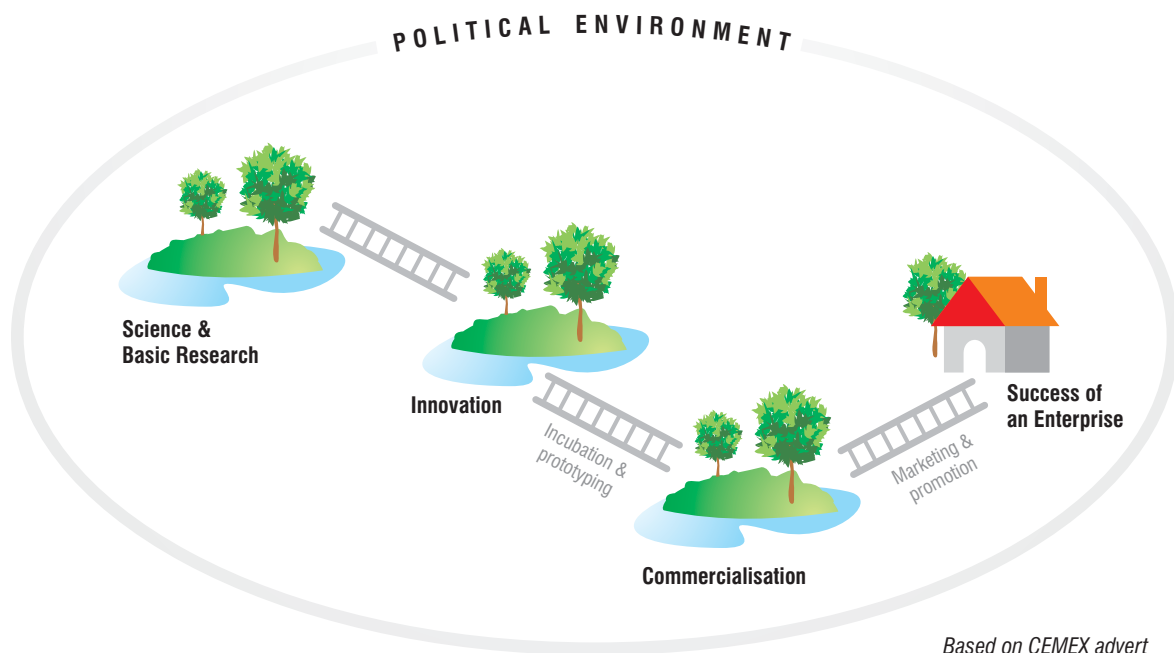
He identified some issues that have contributed to the existing gap between research and policy including:

- > Lack of collaboration between the key stakeholders in the research, policy and practice process
- > Lack of skills in trans-disciplinary research to inform effective and efficient policymaking
- > Poor communication between and among the stakeholders
- > Lack of understanding of policymakers' language by policy researchers - attributes of policymakers include among others: concise and focused presentation; lobbying, advocacy, dialogue and consensus-building.

He emphasized on the need for effective linkage among researchers, policy makers and practitioners as it potentially leads to:

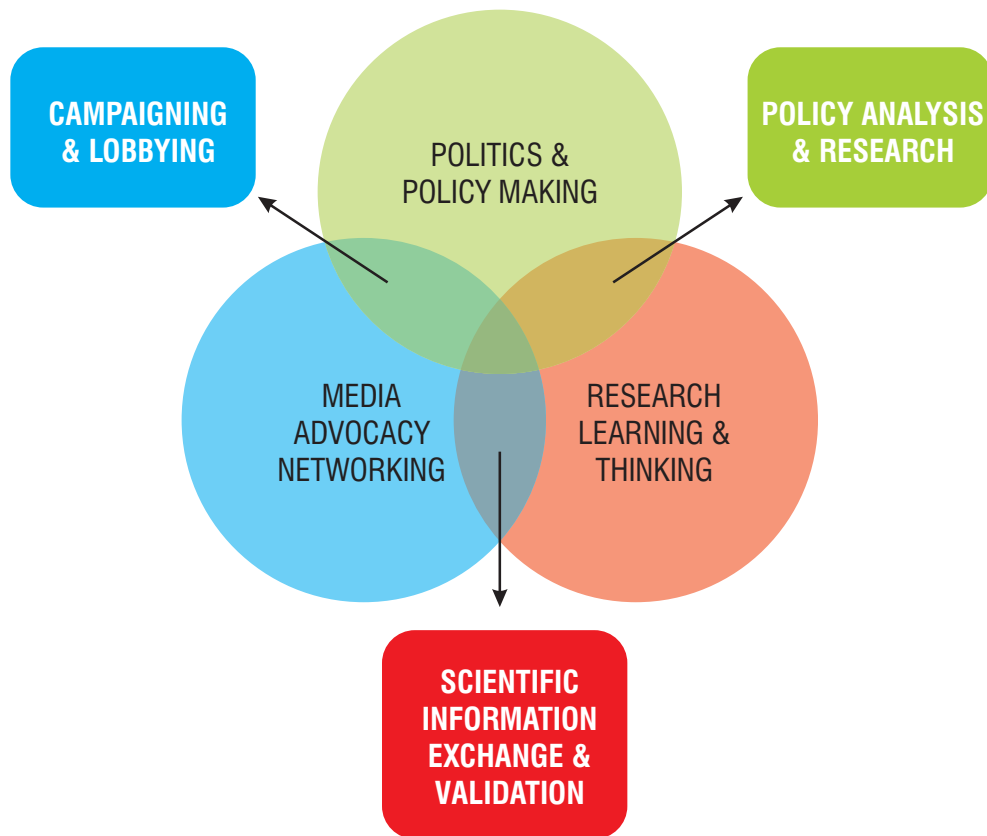
- > effective communication, understanding, and collaboration among these stakeholders for sustainable development
- > effectively addressing societal problems which are complex and can only be solved through the interaction of key stakeholders including researchers, policymakers, private sectors and the civil society
- > the development of a functional, acceptable and implementable policy
- > free flow of knowledge to policymakers, entrepreneurs and the society at large
- > improved information for evidence-based policies

For Africa to become successful in entrepreneurship and enterprise development, Prof. Abdulrazak noted that it was crucial to build the necessary bridges that connect the various stakeholders by implementing science and research that breeds innovation with incubations and prototypes that have strong market potential for commercialization (Figure 4). This process can thrive only when there is a favourable political environment.



**Figure 4: Building bridges for strong linkages in research, policy and practice**

Prof. Abdulrazak revealed some critical elements often overlooked in policy research and policy making dialogue, which are very necessary in the implementation of a successful dialogue between the various stakeholders. Out of politics, policies emerge and therefore, researchers should engage policy makers in policy analysis and research in the bid to know the demands of policy makers whilst they obtain insights from the research agenda. Researchers ought to engage the media to establish a network for advocacy that could potentially strengthen the campaign and lobbying process with politicians and policy makers (Figure 5).



**Figure 5: Elements in policy research and policymaking process**

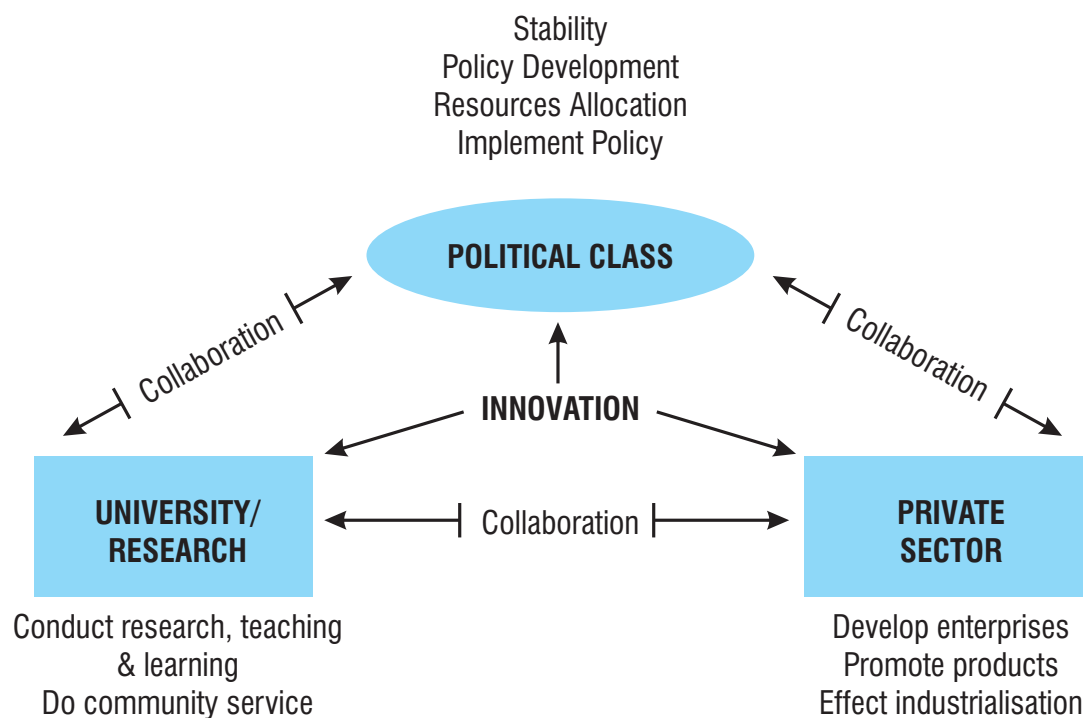
Prof. Abdulrazak's presentation critically examined the strategic role of researchers in knowing every detail about the policy makers, their demands, their strengths and weakness, the policy making process, the opportunities and timing for input into the processes. Using table 1 below, he elaborated on how the interaction between researchers and policy makers work and provided full details of the strategies required by researchers to break the barriers and establish a strong linkage with policy makers, thereby influencing the policy making process and policy at large with evidence based research.

**Table 1: What Researchers need to know and do and how to do it**

What researchers need to know	What researchers need to do	How to do it
<b>Political Context:</b> <ul style="list-style-type: none"> <li>• Who are the policymakers?</li> <li>• Is there policymakers' demand for new ideas?</li> <li>• What are the sources / strengths of resistance?</li> <li>• What is the policymaking process?</li> <li>• What are the opportunities and timings for input into formal processes?</li> </ul>	<ul style="list-style-type: none"> <li>• Get to know the policymakers, their agendas and their constraints.</li> <li>• Identify potential supporters and opponents.</li> <li>• Keep an eye on the horizon and prepare for opportunities in regular policy processes.</li> <li>• Look out for – and react to – unexpected policy windows.</li> </ul>	<ul style="list-style-type: none"> <li>• Work with the policymakers.</li> <li>• Seek commissions.</li> <li>• Line up research programmes with high-profile policy events.</li> <li>• Reserve resources to be able to move quickly to respond to policy windows.</li> <li>• Allow sufficient time and resources.</li> </ul>
<b>Evidence:</b> <ul style="list-style-type: none"> <li>• What is the current theory?</li> <li>• What are the prevailing narratives?</li> <li>• How divergent is the new evidence?</li> <li>• What sort of evidence will convince policymakers?</li> </ul>	<ul style="list-style-type: none"> <li>• Establish credibility over the long term.</li> <li>• Provide practical solutions to problems.</li> <li>• Establish legitimacy.</li> <li>• Build a convincing case and present clear policy options.</li> <li>• Package new ideas in familiar theory or narratives.</li> <li>• Communicate effectively.</li> </ul>	<ul style="list-style-type: none"> <li>• Build up programmes of high-quality work.</li> <li>• Action-research and Pilot projects to demonstrate benefits of new approaches.</li> <li>• Use participatory approaches to help with legitimacy and implementation.</li> <li>• Clear strategy for communication from the start.</li> <li>• Face-to-face communication.</li> </ul>
<b>Links:</b> <ul style="list-style-type: none"> <li>• Who are the key stakeholders?</li> <li>• What links and networks exist between them?</li> <li>• Who are the intermediaries, and do they have influence?</li> <li>• Whose side are they on?</li> </ul>	<ul style="list-style-type: none"> <li>• Get to know the other stakeholders.</li> <li>• Establish presence in existing networks.</li> <li>• Build coalitions with like-minded stakeholders.</li> <li>• Build new policy networks.</li> </ul>	<ul style="list-style-type: none"> <li>• Partnerships between researchers, policymakers and policy end-users.</li> <li>• Identify key networkers and salesmen.</li> <li>• Use informal contacts.</li> </ul>

What researchers need to know	What researchers need to do	How to do it
<b>External Influences:</b> <ul style="list-style-type: none"> <li>• Who are the main international actors in the policy process?</li> <li>• What influence do they have?</li> <li>• What are their aid priorities?</li> <li>• What are their research priorities and mechanisms?</li> <li>• What are the policies of the donors funding the research?</li> </ul>	<ul style="list-style-type: none"> <li>• Get to know the donors, their priorities and constraints.</li> <li>• Identify potential supporters, key individuals and networks.</li> <li>• Establish credibility.</li> <li>• Keep an eye on donor policy and look out for policy windows.</li> </ul>	<ul style="list-style-type: none"> <li>• Develop extensive background on donor policies.</li> <li>• Orient communications to suit donor priorities and language.</li> <li>• Cooperate with donors and seek commissions.</li> <li>• Contact (regularly) key individuals.</li> </ul>

Prof. Abdulrazak used Figure 6 below to illustrate the linkages that exist among the various stakeholders and the favorable condition under which such linkages may thrive. He stressed the need for effective collaboration among the relevant stakeholders with innovation at the heart of the interaction.



**Figure 6: Roles of Stakeholders in Innovation development**

He emphasized that, facilitating the linkage amongst research, policy and practice requires mutual interest as the driving force. According to him, what constitutes the mutual interest that will facilitate research policy and practice linkage includes:

- > When the research agenda is aligned to national priorities
- > When research generates a tangible solution rather than just criticism
- > When there is common development problems, challenges and common agenda
- > Mutual interest in delivery and implementation of the policy that must have been formulated through collaboration and consultation
- > When both researchers and policy makers have the interest in getting policies right and they are implemented effectively
- > When both researchers and policy makers “work for the people” and the “wellbeing of society”
- > When both researchers and policy makers want “high impact, workable, affordable and implementable solutions to problems”
- > When researchers and policy makers define clear indicators for evidence-based research



and framework to measure progress/success towards realizing the desired goals between research and policy

- > When both parties want to have an impact on society and bring about positive change.

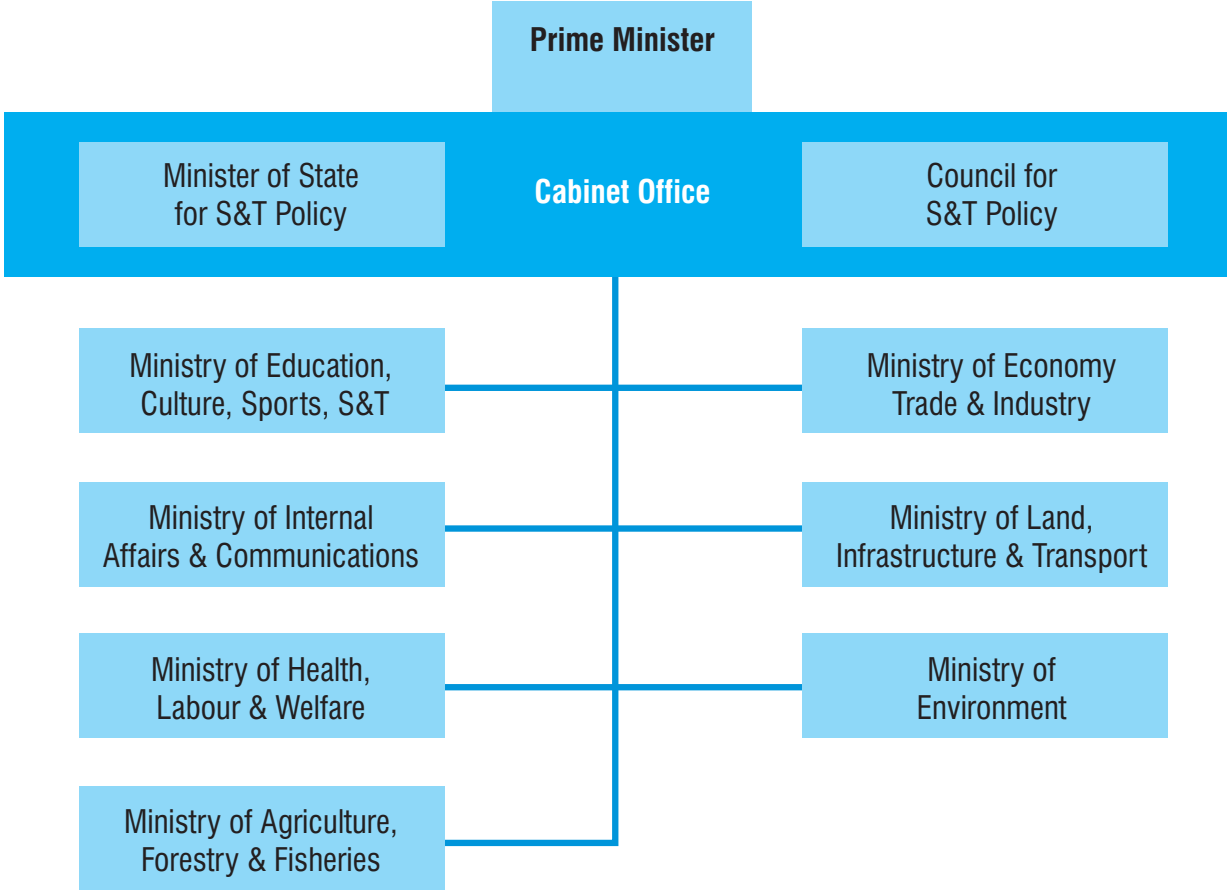
Having identified the conditions for mutual interest to occur, Prof. Abdulrazak outlined the mechanisms for improving networking amongst policymakers and policy researchers. These included:

- > Setting up regular forums for interaction/multi-stakeholder dialogue on research and national priorities to ensure researchers & policy makers are on the same page
- > Underscoring their mutual benefit, relevance and complementarities in development
- > Investing time in building networks and understanding the key drivers and motivation of each other
- > Creating a harmonized agenda which addresses each other's goals. This can be achieved through participatory/ collective process
- > Improving networking with policymakers, providing them with simple, clear language and concise reports on the status of the current research evidence
- > Facilitating the media i.e. print, electronic etc. to influence the policymakers to ensure implementation
- > Investing in communication expertise

Communication amongst relevant stakeholders was further identified as a crucial tool in facilitating policymaking process for development. He suggested that for effective policy to be made, research results and policy needs need to be communicated via a professional knowledge brokering unit, staffed with knowledge transfer skills and feeding back to both sides. Other important mode of communication include; disseminating copies of reports; policy briefs/summaries; seminars; lobbying through media – electronic, print, radio; content packaging and targeting a feedback loop; writing policy memos; publications; organizing workshops/seminars; policy dialogues and strategic planning processes involving policymakers to determine research priorities.

In designing a proactive way forward towards strengthening the linkages amongst research, policy and practice, Prof. Abdulrazak admitted that it was necessary that research must be known and trusted to influence policy and translate to action. He noted that researchers need to grasp and adapt to the dynamics of the political debate and bring to the fore relevant evidence at the right time as well as engage closely with policymakers throughout the policymaking process; from identifying the problem, undertaking the research itself and drawing out recommendations for policy and practice from the results. He suggested that Think-tank institutions could use a single regional or national Knowledge Transfer/ Knowledge Brokerage platform to foster the linkages.

Citing the case of science and technology administration in Japan as responsible for the high-tech development in the country (Figure 7), Prof. Abdulrazak noted that the application of science and technology had tremendously transformed Japan as is evident in their current status. He opined that Africa must emulate Japan in placing science and technology high on government's agenda if we are to meet our development goals.



**Figure 7: Administrative structure Science and Technology of the government of Japan**

In conclusion, Prof. Abdulrazak remarked that innovation does not happen in the disciplinary silos but in the interactions amongst the key actors in an innovation system, including policymakers, private sector actors, science experts and the civil society. These interactions must be profound and mutually re-enforcing – competitiveness and productivity.

### 3. Conference Plenary Presentations



#### 3.1 Conceptualizing research, policy and practice for sustainable African Development

*Mr. Alex Alusa, Office of the Prime Minister, Federal Republic of Kenya/Member, ATPS Kenya Chapter*



*Mr. Alex Alusa, Member,  
ATPS Kenya Chapter*

In his presentation, Mr. Alusa pointed out that the lack of attention given to research is the bane for Africa's development. He indicated that there have been numerous challenges and uneasy alliances between policymakers and researchers. Practitioners have considered research as an ivory tower theorizing that it is irrelevant to challenges on the ground. To this effect, research outputs have failed to make the necessary impact on the development agenda of many African countries.

He approached the subject by first examining the gaps that exist among researchers, policymakers and practitioners, and their origin. He further suggested ways of removing these gaps and then elaborated on the need for research policies as a development imperative in Africa.

He stressed that communication gaps have resulted in different perceptions from the various stakeholders that do not augur well for the linkages. The “ivory tower” attitude of some researchers makes it extremely difficult to establish links which creates a misconception about the value of research by policymakers and practitioners. The presenter also pointed out that, complicated research findings, without appropriate applications for policy and practice often led to limited understanding of substance and appreciation of each other's comparative advantage.

In addressing the identified gaps, Mr Alusa indicated that there was need for research organizations to develop and implement communication strategies, in addition to fully engaging the media, at large, in effectively communicating research findings. Governments should involve researchers in policy positions so that researchers would understand their demands and also take on board the practitioners' viewpoints in research prioritization. Researchers should prepare summaries of research findings for policy makers in a more simple and understandable manner (e.g. IPCC summaries). He also argued that it was very essential for researchers to receive training in effective communication skills to enhance their deliberation during dialogue between researchers, policymakers and practitioners.

Mr Alusa further pointed out that in pursuing research policy agenda for sustainable development; there is need for comprehensive national research policies which must take advantage of research in various sectors whilst ensuring that all sectoral policies are coordinated. Policy research must respect the three pillars of sustainable development – economic, social and environmental and it must specifically address the linkage between theory and practice and provide for modalities for its implementation. He also emphasized that policy research must be informed by national development priorities and challenges whilst providing a strategic approach for implementation of findings.

For research to aid development in Africa, Mr Alusa alluded to the fact that the research policy process must be participatory and relevant to the real needs and inclusive in its applications. He opined that research must lead to a net gain in the livelihoods of ordinary people (e.g. Katumani maize) whilst engendering the potential uptake by the private sector.

Using examples from weather and climate science, Mr. Alusa presented IPCC as a good example of research findings availed for policy decisions. He explained that the IPCC

provides multi-faceted outputs to meet the needs of various stakeholders. For example, the IPCC gives the hard technical science and summaries for the scientific community and scientists outside climate science. The IPCC also provides summaries for policy makers, contextualizing their application and offering options for action (e.g. the use of renewable energy as mitigation and/or adaptation to climate change, low emission development strategy (LEDS) and green economic growth: a new development paradigm).

In conclusion, Mr Alusa agreed that research was useful for policy and practice but research results must be customized for policy and practice if they are to be useful. In his view, properly utilized research will help inform policy and practice and ultimately national sustainable development and therefore research policies in various disciplines should be properly harmonized for sustainable development. He concluded his presentation by noting that the ATPS is the only institution he is aware of that has tirelessly worked on this interface to make research useful for policymaking and vice versa. He therefore encouraged African governments and development partners to proactively support the ATPS programs and activities. He noted that, *“if he were in a position to make decisions where funding should be committed for African development, he would put a 100% in ATPS”*.

### **3.2 Mechanisms and approaches for effective linkages among researchers, policy makers and practitioners**

*Dr. George Essegbey, Director, STEPRI-CSIR, Ghana/Member ATPS Regional Council*



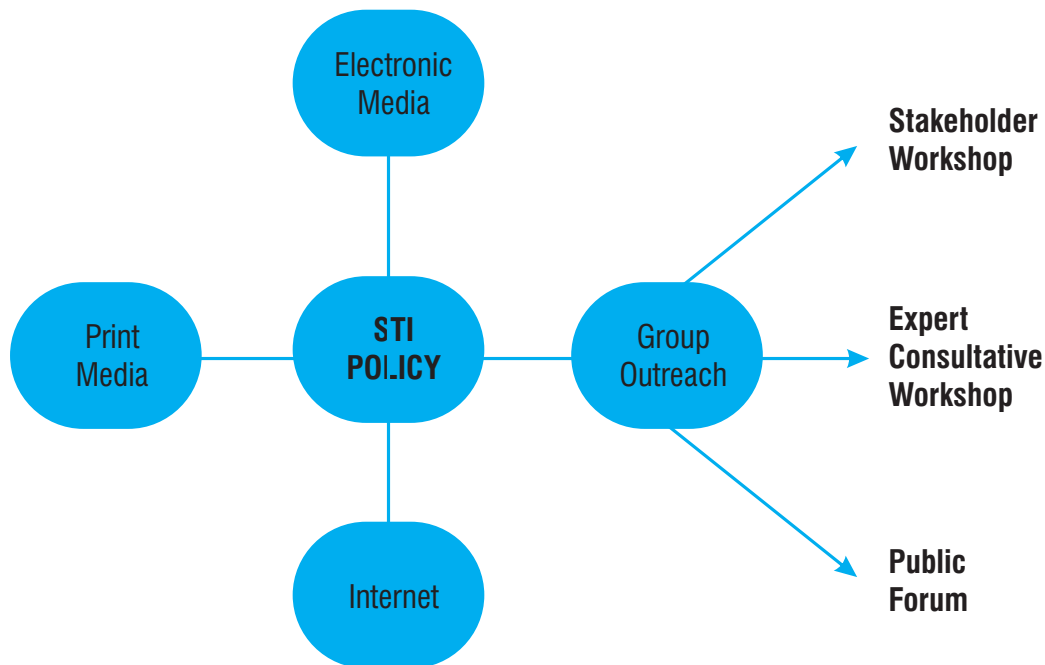
*Dr. George O. Essegbey,  
ATPS Regional Council Member*

Dr. George Essegbey presented the case of Ghana on the processes of establishing a National Science, Technology and Innovation policy as a strategy for effectively linking researchers, policymakers and practitioners. Quoting from the speech of the first president of Ghana, Kwame Nkrumah, during the 4th anniversary dinner of the Ghana Academy of Sciences in 1963, Dr. Essegbey emphasized that, only the mastery and unrelenting application of science and technology can guarantee human welfare and human happiness.

Dr. Essegbey shared that the vision of Ghana was to become a middle-income status of an advanced human society with a better quality of life reflected in all aspects of socio-economic and environmental conditions. To this effect, an immediate goal of the policy is to create the conditions for accelerated scientific and technological infrastructure for R&D and innovation whilst the long term goal seeks to create an endogenous science and technology capacity appropriate to national needs, priorities and resources; and create a science and technology culture.



Through a series of consultations with the various stakeholders, roundtable meetings, public fora, workshops and retreats, the Ghana National Science, Technology and Innovation policy was formulated. At the core of the entire process, Dr. Essegbey pointed out the important role of the media in communicating the process to the various stakeholders (Figure 8).



**Figure 8: Communication Strategies for the Policy Process**

While maintaining that communicating science was essential to influencing policy decisions, Dr. Essegbey stressed on the urgent need to cultivate interests in science communication noting that STI policy was not an end in itself but rather a medium to facilitate programs. He was emphatic on the need for institutional collaboration particularly between research institutions and the media in communicating science to policy makers and practitioners.

To sum up his presentation, Dr. Essegbey examined the characteristics of scientists-media-public relationship, which has become essential in strengthening the linkage among researchers, policy makers and practitioners. He defined scientists as proactive with values; the media people as out-of-the-box thinkers and the public as open to receive whatever information that comes. In effect, scientists should effectively communicate their findings to the media who would decode the messages for public consumption.



### 3.3 Research uptake, communication and brokerage - the role of science writers and the media

*Mr. Diran Onifade, Nigerian Television Authority (NTA), President African Federation of Science Journalists (AFSJ) and Editor in Chief AfricaSTI and Mr. Otulah Onuor, Editor, ScienceAfrica, Nairobi*



*Mr. Diran Onifade  
Member ATPS Nigeria Chapter*

While commencing his presentation, Mr. Onifade relayed to the audience the apologies of his co-presenter Mr. Otulah, who was unable to attend the conference due to a conflicting schedule. He then proceeded to tease out some salient questions which formed the premise of his presentation. These include; what the scientists want to say and if Africa has enough information on science to report.

Making information more accessible to enhance research uptake for Africa's development is linked to effective and relevant communication and brokerage directed at various stakeholders especially policymakers, end users and researchers. Science journalists must challenge the myth that Africa has minimal or no research for uptake. Following this, he elaborated on the challenges and gaps that exist using the case of science outreach in Nigeria. The lack of capacity to understand how science work and the lack of appreciation of science on the part of journalists were identified as constituents of the stumbling block to the propagation of scientific and technological innovations in Africa. Against this backdrop, the World Forum for Science Journalism (WFSJ) and the African Technology Policy Studies Network have invested in mentorship and training programs as a way of capacity building of journalists in the reporting of science in Africa.

The presenter indicated that, these programs are beginning to yield positive outcomes through the establishment of media platforms such as *ScienceAfrica* based in Nairobi, Kenya and the newly established weekly online science and development news and features, *AfricaSTI*, based in Abuja, Nigeria and South Africa's *Science in Africa*. He revealed the positive impact of these media platforms in placing STI information from Africa on the global arena. This he said had generated interest across the globe with many organizations such as the African Union, ECOWAS, UNECA, and UNESCO engaged in collaboration with *AfricaSTI* to establish regional networks that would promote STI use in Africa. He lauded the ATPS for this focus on building bridges between the Science Communicators, Research and Policymaking in Africa.

In situations where government officials do not feel accountable to the people, the presenter

noted that information sharing and access to these policymakers and government officials becomes a huge challenge. He added that the main role for journalists is to fish out for stories that can sell easily. He opined that journalism can be said to be at a threshold of shifting to advocacy, and that makes science journalism very crucial in the communication of science to policymakers and practitioners.

In Nigeria, the presenter revealed that over 100 commercialisable research and development products sit in the shelves awaiting commercialization. Quoting the Minister of science and technology, Mohammed Ka'oje Abubakar, the presenter noted that “the failure to commercialize existing research is holding back Nigeria's economic development” stating further that “the lack of demand-driven research, and poor links between research institutes and the private sector are the main culprits”.

The scientists, researchers, and policymakers in the audience were reminded of their responsibility to the public with the presenter noting that the basic human needs should be at the core of research uptake, science communication and brokerage in Africa. He remarked that relevant and easily understood information can empower individuals, families and communities with new knowledge and applicable skills including those from “do-it-yourself” information packages.

To wind up, Mr. Onifade noted that journalists in Africa must clearly separate reality from myths, superstition, exaggerations and lack of technology for culture adding however that communication and brokerage for research uptake should be sensitive to indigenous knowledge, customs, beliefs, language, religion, proximity, gender, youth, levels of education, socio-economic and political status, and other related issues which can halt, slow or facilitate research uptake. He pointed out that technical jargons or scientific terminologies do not constitute science communication and recommended that scientific concepts/activities can be packaged into locally appropriate key messages including use of native/local languages. Finally, he further underscored the need for appropriate training workshops specially and regularly organized for African science journalists and scientists.

### 3.4 Challenges and opportunities for effective linkages between research, policy and practice

*Prof. John Gowland Mwangi, Egerton University, Kenya/Member, ATPS Kenya Chapter*



*Prof. John Gowland Mwangi  
Member, ATPS Kenya Chapter*

In his presentation, Professor Gowland Mwangi noted that a country's pace of development was dependent on how well its leaders harnessed research findings for development. He noted that research can be used to challenge old thinking, to provide better ways of doing things or to guide allocation of scarce public resources for development. It can also help a nation to set correct development agenda and priorities and to deal with development challenges e.g. providing water for humans, crops and livestock.

Prof. Mwangi noted that effective linkages between research, policy and practice had great potential to increase policy-makers' use of research in decision-making and improving government performance and accountability in service delivery, enhance stakeholders' convergence of needs; passion, interest and motivation to participate; and understanding of mutual benefits and to enhance team work; integrate research into leaders' day-to-day decision-making; help them to harness local talent; and to create ideas for problem-solving, policy formulation, and for improving research impact on policy action.

Professor Gowland-Mwangi identified three important factors that enhance the prospects for effective linkages. First, he observed that there are more innovative ways to communicate research findings through: media, ICT, annual and biennial scientific conferences, seminars, sensitization and reflective workshops (if the target audience are educated and enlightened people). Secondly, stakeholders have a lot to share and learn from one another; one's strengths complement another's weaknesses if the capacity exists for developing linkages, and finally, an important ingredient was the goodwill for establishing effective linkages such as in joint research, training and development endeavours. The importance of assessing the existing linkages between research, policy and practice in order to identify the areas of strengths and weaknesses was once again underscored. To this effect, Prof. Mwangi recommended the development of a system of evaluating linkages which entailed increased intensity and formality of contact whether one-way or two-way contact, flexibility of participating organizations, knowledge of stakeholders' functions, accessibility, relevance, urgency and timeliness of services, resources and people required to initiate and maintain linkages, quality of communication, progress being made and the mandate and legitimacy of representatives.

### 3.5 Linking science, policy and practice: The role of ethics and belief systems

*Rev. Fr. Uchechukwu Obodoechina, Director, Justice, Peace and Development, CARITAS Commission, Nsukka, Nigeria/Member ATPS Nigeria Chapter*



*Rev. Fr. Obodoechina,  
Member ATPS Nigeria Chapter*

Rev. Fr. Uche Dr. Obodoechina's presentation underscored the place of ethics and religion in the critical scientific enterprise of independent inquiry. In his view, religion has always been a powerful force in the world that has inspired people to their highest and noblest best, and has often provided the excuse or justification for some of the worst things human beings have done to one another through the centuries. He gave a brief historical background of how ethics and belief systems are considered as inhibiting to science and development. He also gave an example of the superstition of a river deity who was said to have prevented the construction of a bridge on a river to facilitate the transportation of goods and services.

From his research findings, the presenter identified some key human characteristics that determine the missing link among ethics and religion, science and policy in the context of the common good. These included the dignity of the human person, solidarity in human promotion, vide the ethical principle of subsidiary, and the common values of life, freedom, peace, and security.

He outlined key ways to strengthen the research-policy-practice linkage including:

- > Reforms and commitment of all parties engaged in the linkage
- > Establishment of a viable work ethic
- > Recognition and reward of excellence
- > Enhancement of civic and moral education
- > Implementation of the relevant laws and sanctions
- > Institution of campaign for moral re-armament
- > Encouragement of tolerance and peaceful co-existence
- > Upholding of the rule of law in the secular states
- > Encouragement of sincerity in constructive dialogues
- > Establishment of ethics of responsibility

In conclusion, he emphasized that ethics and religion are essential for the authentic development of a nation whereby 'true religion' offers to redeem the people from loneliness by teaching the people how to see their neighbors as themselves, to be aware of their humanity, their fears and feelings. Such true religion teaches not how to win friends but how

to be friends; how to be concerned with alleviating the loneliness of others, and learning to hear their cry instead of wondering why no one hears us.

### **3.6 Linking policy research and policymaking for African sustainable development: The role of the private sectors**

*Mr. Billy Katontoka and Prof. Lloyd Chingambo, African Carbon Credit Exchange (ACCE), Lusaka, Zambia/Member ATPS Zambia Chapter*



*Mr. Billy Katontoka  
Member ATPS Zambia Chapter*

Speaking on behalf of the private sector actors, Mr. Katontoka called for more creative use of knowledge products than previously done so as to promote sustainable economic transformation and growth as well as reduce poverty in Africa. He noted that baseline data and information should be on what we already know in order to promote sustainable development rather than a new deeper understanding of the development challenges facing Africa. He underscored the need for evidence-based policy research to serve as inputs to national development through its contributions to policymaking and emphasized the need for all stakeholders to cooperate and work closely together in setting research agenda and priority, disseminating outcomes widely and putting to practice policy recommendations. He reiterated the fact that the impact of development research on policy action cannot be assumed but has to be consciously and concertedly developed. African policymakers like other policymakers across the world need to base their decisions on information from reliable sources and they need to know what kinds of research can help them make the right decisions.

He stated that researchers should try to disseminate information about current research projects as widely as possible by inviting concerned government officials to conferences and make presentations on their research, organize specific events that bring together policymakers and researchers, develop and distribute policy briefs to relevant ministries, and be ready to discuss work in progress with policymakers after initial contacts have been established. Researchers should attempt to get in direct contact with, for example negotiators, by providing them with short notes/abstracts of relevant research findings, establish contact and build a long-term cooperation with relevant ministries.

In his message to the policymakers, Mr. Katontoka advocated for the involvement of researchers in policy consultations and the policymaking processes to make them aware of specific country needs and priorities. He was also of the view that policymakers ought to establish partnerships, multi-sectoral committees or policy fora where policymakers, private



sector actors and the academia can interact and discuss national development strategies and priorities. He recommended that policymakers should consider making researchers members of official delegations and inviting senior researchers to participate in trade policy reviews to expose them to relevant questions. He stressed that policymakers should facilitate the access of researchers to relevant data, for instance, by creating a "trade data desk" or data banks within the relevant ministries in order to facilitate research or other dissemination activities.

In his conclusion, he emphasized that there is no linear trajectory from research to policy outcome, and no single actor in that trajectory can determine a particular policy outcome. Each of the actors and institutions has a role to play and their relationships with each other are paramount in ensuring a successful outcome.

### 3.7 Intellectual property issues for effective policy research and policymaking

*Dr. Mohamed Khalil Timamy, Head, Environmental Division, Department of Rural Economy and Agriculture, African Union Commission, Addis Ababa, Ethiopia*



*Dr. Mohamed Khalil Timamy*

Recalling an intense debate in the mid-60s regarding the role of the scientist and the connections to policymakers, Dr. Khalil described the difficulties in linking up science and policy as an extremely disturbing feature of Africa's economic revolution. He explained that development planners who were profoundly interested in drawing information from the domain of science, so as to try and improve the welfare of the people by commercializing the information coming from science, were faced with numerous challenges.

In his view, research and innovation are expected to influence policy making, however, this has not been the case. He gave an example of fibre glass technology in Kenya, where in the 1980's, as was typical, the lack of linkage between policy and research led to the neglect of innovative outputs. He went on to share how the emergence of fibre-glass technology as durable replacement for collapsed grid imported from Japan for the water towers system for the geo-thermal industry. However, the failure to promote this innovation within the policy framework, with respect to a reduction or ban in importation of grids, resulted in the demise of the fibre-glass technology as local innovation that ought to have been protected.

He presented two key traits that characterized human behaviour, as contributing factors to shaping research, innovation and policy. First, he portrayed man as a creative animal driven by curiosity to try and understand the world around him, but also driven by the desire to generate solutions to deal with the challenges around him. The idea is to try and save time, to save



energy; to save the use of resources, but many of these people driven by this mission oriented instincts are expecting rewards. In most cases, government would grant protection for a specified period of time in order to enable them derive rewards and also encourage and promote creativity for the benefit of society. Secondly, he portrayed man as not only a creative and inventive animal, but a covetous one; one who admires what belongs to others and very calculatedly seeks to personalize what others have sweated for.

He indicated that issues of Intellectual Property Rights (IPR's) fall within scientific governance. He defined scientific governance as ability of institutions to exercise authority in order to influence, directly and indirectly, scientific change in an economy with particular emphasis on Biotechnology and Agricultural systems. He reflected on the challenges in the 1990's when imported technologies undermined agricultural systems and tended to disempower local systems. Some of these technologies had very damaging effects on African agriculture. In that regard, he stressed the importance of policy research in those areas with specific emphasis on intellectual property rights.

Dr Khalil discussed other topical development areas in Africa where strong emphasis in relation to intellectual property rights should be given. He emphasized on the lack of compensation for community knowledge on medicine resources that have offered important pharmaceutical leads to major multinational companies, ending up patented and Intellectual property rights granted at the expense of communities. He stressed that policy research should concentrate on conditions that do not allow for benefit sharing when access to genetic resources have been given.

In the area of trade related IP rights, he pointed out that major technologies were emerging in the field of solar, wind, etc, and these products need to be patented. Therefore, the IPR's that are granted to these technologies should be an area of focus for policy research. In the field of environmental friendly innovations, he was of the view that, a lot of pseudo-solutions would emerge. He enumerated two major ones that have come up recently, all associated with climate change: Spraying aerosols in the atmosphere in order to prevent the rays of the sun and therefore cooling the earth; and spraying iron fillings on the ocean floor which has a potential to absorb huge quantities of carbon dioxide, again cooling the earth. All these he said, had been found to be pseudo solutions but they had been challenged very seriously, because their effects had not been fully known.

In his conclusion, he stressed that it is important that any new innovations facing the prospects of protection should be clearly looked at from their advantage points of view to the continent. This, he said is the work of policy research.

### 3.8 Linking policy research and policymaking: Lessons from the IPCC on climate change policy and implementation in Africa

*Dr. Jeremy Webb and Dr. Youba Sokona, African Climate Change Policy Centre, UNECA, Addis Ababa, Ethiopia*



*Dr. Jeremy Webb  
African Climate Policy Centre (ACPC)*

Dr Webb's presentation drew from the lessons learnt from the African Climate Policy Center (ACPC) as well as other international processes. He emphasized the importance of research in policymaking and practice. He noted that Africa needs an improved climate, and will need information and data to make informed decisions. He decried that these data and pieces of information most times are inadequate for decision making. He stressed that even with good information, in some cases, decisions can be wrong. He suggested that policy decisions, necessarily, should be able to address complex and

interrelated options. He went further to state that when policy research feeds into policy making, there is a change of ownership from the research community to the policy community, and there is a change in process from peer review to a process that takes into account wider political dimensions. He stressed that international organizations are part of a wider process in decision making for policy research and policy making including governments, civil society, private sectors and researchers.

### 3.9 Linking university research to policy and practice: Strategies and implications

*Prof. Bartho Okolo, Vice Chancellor, University of Nigeria, Nsukka/Member ATPS Nigeria Chapter*



*Prof. Bartho Okolo  
Member ATPS Nigeria Chapter*

Professor Okolo began his presentation by placing Africa's development within the context of globalization. For Africa to become a strong competitor at the global level, in addition to research and policy, he noted that it is necessary to install adequate infrastructure, high standard facilities and well-trained human resources as is the case in the developed world.

He reminisced about one of his greatest encounters during his role as the Chief Executive Officer of one of the largest institutions of higher education in Africa, where he experienced resistance and conflict while pushing for internal policies that encourage innovative research relevant in this modern era and a driver for local, national and regional economic development and policy dialogue. He asserted that the lack of confidence and trust

in the quality of higher education research output on current and emerging needs of the continent may have contributed to the minimal engagement of researchers in policy development across Africa. If current trends of executing research at the universities continue, the presenter warned that a new generation of scholars will accept universities' lack of engagement and relevance in the policy discourse as normal and acceptable.

In his view, Professor Okolo noted that restoring the confidence in university research output would require adequate capacity for change in the policy process. Institutions must encourage systems processes that are built on an adoptive and culturally responsible model, and problems of the society have to be examined within, to derive solutions from there. He reiterated that creating internal policy structures that encourage a nexus between the institutions, government and industry is critical. He further noted that functional internal processes lie at the heart of several successful experiences, both institutional and governmental, and within innovative cases of private sector organizations. He stressed the need to advocate for tertiary education institutions that reflect a new mindset towards the historical focus to research practices and outputs, as a critical success factor. Most importantly, African universities should be in the forefront of innovative practices that lead to economic development in Africa.

Professor Okolo encouraged higher education and research institutions to establish strategic alliance (north-south, south-south) and build collaborations with industries as a way to move forward in this era of internationalization/globalization. He stressed that any academic institution that does not embrace diversity and global outreach cannot advance. He proposed that the establishment of good ICT infrastructure with good base is what is required in this century for good research, and in the creation of a team of change managers. Young academicians should thus be empowered and exposed to international best practices so that they can be ready and poised for this global and competitive era.

In conclusion, Professor Okolo challenged the belief that tertiary education has little role in promoting economic growth and policy development in Africa. He was of the view that, research relevance and the quality of universities in Africa may improve technological innovations and, in doing so, maximize Africa's potential to achieve its greatest possible economic growth given current constraints. He emphasized the importance of engaging in dialogue with policy makers and other stakeholders as it affords Africa the opportunity to examine the current situations and explore ways to engage available resources in re-engineering our universities' structural processes.

### 3.10 Linking policy research to policymaking: What researchers, policymakers and practitioners need to know and do

*Hon. Obed Dlamini, Former Prime Minister, Kingdom of Swaziland/ Member ATPS Swaziland*



*Hon. Obed Dlamini  
Member ATPS Swaziland*

Honorable Dlamini's presentation addressed the mechanisms and responsibilities of all stakeholders in the research, policy and practice linkage. He identified three key elements that facilitate the use of evidence: trusted relationships among researchers, users, and/or intermediaries; the quality and format of the research evidence; and organizational structures that promote active involvement of research evidence users.

He noted that there is a high likelihood for policymakers to use research evidence in policymaking if:

- > research reports are brief (no more than one to two pages), in a larger font, and written in non-technical language
- > when research is locally relevant and credible, and offers analysis across multiple studies, and
- > when research evidence links to local contexts and considers how interventions impact an entire system and whether such interventions are sustainable over the long term, as well as evidence that takes into account the local political environment.

To improve the use of research in policymaking, Hon. Dlamini noted that research should be conducted in a way that it: develops and sustains a closer relation between researchers and policymakers; provides researchers with access to information on the priorities of policymakers; includes a strategy to disseminate research results to policymakers and stakeholder groups; and is cognisant of timing, to take advantages of opportunities when policymakers' interests coincide with the implications of research.

For researchers or research institutions, he emphasized the importance of involving policymakers in the research process. Regular interaction during the research project can help adjusting the questions researched and the tools used to the needs of policymakers. Research institutions should develop a dissemination or marketing strategy, which could involve holding conferences at the university, sending regular policy briefs to relevant ministries and NGOs, and establishing personal contacts with policymakers.

He also recommended the use of intermediaries institutions such as the ATPS as brokers for linking research evidence with policymaking. He lauded the ATPS in the role it is playing in the front for Africa, noting that as a Prime Minister in Swaziland, he found the ATPS a

credible source of scientific and technological knowledge for policymaking. He specifically referred to the equal partnership ethic which has been the basis of ATPS relationships with policymakers noting that this has endeared the ATPS within the policy corridors as a friendly institution which not only brings credible science and technology knowledge but acts as an independent broker and friend who shows due respect for policy contexts and addresses policy needs of the continent. He recommended that other research institutions, professional organizations, development partners, coalitions, networks, peers, and constituents, who are in a prime position to help users aggregate, translate, and apply research evidence directly to specific, local issues should seek to adopt the ATPS model. They must learn to act as intermediaries - unbiased organizations and individuals who can help locate, sort, and prioritize the available research for policymaking.

Prof. Dlamini noted that African leaders are aware of the wisdom on the need to empower policy creators in virtually all the domains linked to national development, economic transformation, food security and health which are key factors in any positive national growth agenda. Better use of research-based evidence in development policy and practice can help save lives, reduce poverty and improve the quality of life. However, the current research ethics and practices in African institutions need to change to make this happen effectively. He stressed the need to take the African Manifesto for Science and Technology launched by the ATPS and its partners in Cairo Egypt seriously. He also stressed the need for the Africa Union Commission to recognize, adopt and support institutions such as the ATPS to help bridge the gaps between policy research, policymaking and implementation. He referred to the communique developed by the expert consultation workshop of policymakers, private sector actors, science experts who were convened by the ATPS, and its partners Food, Agriculture and Natural Resources Policy Analysis Network (FANRPAN), African Center for Economic Transformation (ACET), African Population and Health Research Center (APHRC) as a preamble to this 2011 annual conference and workshops. He re-iterated the call for the African Union to invest in these institutions to leverage the new thinking that they champion for sustainable development in Africa.



## 4. Parallel Sessions



The parallel sessions comprised of presentations from delegates along the line of the subthemes of the conference. Submissions were received from delegates in response to the Call for Conference papers circulated by the ATPS earlier. These papers were peer reviewed and recommended for presentation at the conference thus forming the basis of the three parallel sessions for paper presentations that included:

**Session One:** Comprised of papers under the subthemes - Conceptualizing research, policy and practice for sustainable African development (subtheme 1); and Mechanisms and approaches for effective linkages amongst researchers, policymakers and practitioners (subtheme 3).

**Session Two:** Comprised of papers on Youth and Gender empowerment (subtheme 2); and The role of capacity development (subtheme 4).

**Session Three:** Comprised of papers on Research uptake, communication, advocacy and brokerage (subtheme 5); and Challenges and Opportunities for effective linkages between research, policy and practice (subtheme 6).



**Session Four:** Comprised of the Intellectual Property Program progress review and training of trainers workshops.

#### **4.1 Parallel Session One**

The session was chaired by Prof. Michael Madukwe, the National Coordinator of ATPS Nigeria Chapter. The session combined two subthemes that dealt with conceptualization of research, policy and practice (sub-theme 1) and the mechanisms and approaches for effective linkages among researchers, policymakers and practitioners (sub-theme 3). The papers presented under these subthemes were presented as follows:

##### **4.1.1 Legislative and Institutional Pathways interfacing the Research, Policy and Practice Nexus**

*B. T. Costantinos, PhD, Professor of Public Policy, School of Graduate Studies, Association of African Universities (AAU)*



*B. T. Costantinos*

Dr. Constantinos's presentation examined the challenges and opportunities in interfacing pathways for translating research evidence through policy to practice for sustainable African development. He posed a key question on what the research protocols and models of public management that can be deployed to reform the research, policy and practice interface. He hypothesized that Policy formulation pluralism and practice is most likely to happen when initiatives emanated from society rather than the state or international actors. The effectiveness of state and non state organisations at promoting policy pluralism depends on their autonomy, capacity, complexity, and coherence.

Dr. Constantinos was of the view that, a determinate order of institutions, interests, powers and activities, operates through complexes of ideas and values, filling out, specifying, anchoring and often short-cutting their formal content or meaning. This raises the questions whether all ideas and values allowed contestation or there are laws or unwritten codes which prevent or hinder intellectual and cultural freedom; and whether the views and perspectives of society have a significant and legitimate place in policy projects and processes.

On mainstreaming the nexus, he enumerated several approaches which include:

- > Participatory Situation analysis: Policy, strategy, processes and structures for Public Sector Management - Think tanks, Legislature, Executive
- > Political economy strategic analysis of institutions, stakeholders and rules collected and collated

- > Develop political economy tools and institutional arrangements for implementation
- > Blend RPP to national Strategic Governance Frameworks
- > Mainstreaming and integration RPP operational plans
- > RPP Decentralised Management at District and Community levels
- > Sustained implementation of RPP and active feedback on accomplishments
- > Managing strategic Information

He further provided some guiding rules and tools that are crucial in order to understand the nexus. With reference to policy pluralism and governance, the rules are policy contest (i.e. unrestricted expression of social interests); policy participation (i.e. channels for citizen involvement); and administrative accountability, transparency, and predictability. The research should focus on four key generic characteristics namely; Organisational Autonomy: which looks at the independence of the organisation set to pursue its own goals; Organisational Capacity: which looks at the effectiveness of the organisation at achieving its stated objectives; Organisational Complexity: which entails the bureaucratisation of internal structure; and Organisational Cohesion: which means sharing of common values, goals and organisational culture among leaders and members;

In his concluding remarks, Dr Costantinos recommended an open inclusive policy making which takes into consideration

- > Careful planning: preparation and learning, transparency
- > Inclusion: Governments benefit from active citizens and dynamic civil society
- > Shared vision , purpose, trust, impact, participatory culture, action and sustained engagement
- > Leadership and strong commitment to information and consultation; active participation in policy-making is needed.
- > Public consultation and active participation should be undertaken as early, in the policy process, as possible

#### 4.1.2 The research-policy nexus: Mapping the terrain of the literature

*Tracy Bailey, Centre for Higher Education Transformation, South Africa/Member ATPS South Africa*



*Dr. Tracy Bailey  
Member ATPS South African Chapter*

Dr. Bailey's presentation examined the connection between research and policy by reviewing existing literature around the subject matter. Drawing from the 'utilisation studies' of the 1970s, it was concluded that there was little evidence of direct or immediate use of research in policy-making. One of the explanations for non-use was the misunderstanding on the part of researchers and policy-makers about processes involved. She further enumerated two key models essential for the policymaking process and research use namely; the rational model which conceive policymaking process as rational and knowledge as neutral or apolitical and political model which conceive the policymaking process as a political bargaining process characterized by conflicting interest, and limits on rationality. Other models exist under the political models which include the Garbage-can model, Policy paradigm, policy networks models and policy narratives and policy discourses.

Addressing the research-policy nexus in the African context, Dr Bailey stated that relatively little research is done on the research-policy nexus in developing country / African contexts, although more focus was by international agencies (e.g. IFPRI, ODI, IDRC, DFID) in the last decade. She indicated that empirical work has shown limited use of research in policy-making, especially research produced by Africans for Africans. On the political and policy contexts in Africa, she observed that developing countries face four key challenges at the macro political context in relation to utilisation namely; democratization, markets, Civil society, and Information and communication technologies.

Examining knowledge production and research capacity in Africa, she noted that there are under-developed, resource-poor higher education research and science systems. Negative perceptions on the part of international agencies and African governments about skills and quality of local researchers have resulted in a trend towards buying in foreign consultants and researchers. The control over research and policy-making by international financial institutions via financial aid, 'ideas aid' and capacity-building for African civil servants and policy-makers raise the issue of colonial overflow but positive is financial contribution towards building research capacity within Africa.

In her concluding remarks, Dr. Bailey noted that a number of authors note positive

developments in relation to research capacity over the past decade. The supply and demand for policy research in Africa has become more competitive with the growth in establishment of policy research organisations on the supply side and the democratization of many African countries has seen strengthening of national legislatures and increase in influence of other groups on the policy-making process on the demand side.

#### **4.1.3 Triangulation of Research, Policy and Practice: Pathway for African Development**

*Nnamani, C. V., PhD and Oselebe, H. O., PhD, Department of Applied Biology, and Department of Crop Production & Landscape Management, Ebonyi State University, Abakaliki, Nigeria/Member ATPS Nigeria Chapter*



*Dr. Catherine Nnamani  
Member ATPS Nigeria Chapter*

Dr. Nnamani's presentation underscored the importance of strengthening the links between research, policy and practice. She reiterated that in both local and international communities, economic, social and professional advancement and development are increasingly driven by the advancement and application of knowledge from evidence-based research. She was of the view that Universities, Research institutes, NGOs, CBOs are dependent upon evidencebase pure research findings to secure a robust foundation of knowledge for solving societal problems to enhance development and to improve livelihood. However, in reality the translation of these evidence base research findings into implementation strategies for proper intervention is the sole responsible of Policy makers, administrators, bureaucrats, government of executives and Politicians. She opined that most of these policy makers are often in conflict, bias, rebuff, unable to interpret, completely not attuned to the values of evidence base pure research findings.

She explained that the scenario in most African countries at the level is that, the various stakeholders of development: researchers, policymakers and practitioners who are the main actors of development often live in separate worlds without synergy of goals, aspirations or orientations. Researchers often baffle on why much resistance is found within, in the use of research findings; good, clear and strong evidence base is not forthcoming. Policy makers on their own bemoan the inability of proactive researchers to communicate effectively and to make their research findings accessible, digestible and timely policy implementation, while practitioners go on with life as they trade on the threshold of events. In a bid to remedy the situation, she called for proper linkages and integration of all the actors of research, policy and practice by understanding that we are one and working for one another based on the premise that synergy in purpose, goals and aspiration will lead to growth and development.

She further illustrated the effective linkages among research, policy and practice through the triangulation pathway from which lessons were drawn from the Association of African Universities (AAU) and Association of Universities and Colleges of Canada (AUCC) collaboration. The project aimed at strengthening higher education-stakeholder relation in Africa. Effective linkages could be enhanced through interactive forum such as workshops, colloquiums, training, conferences where each the stakeholders could present, discuss, air their views, ask questions and bridge communications gaps.

In her concluding remarks, she stressed that effective linkages between research, policy and practice is a must for African countries, for without that, social and economic development cannot thrive. Triangulation pathway is an innovative model of how research, policy and practice can be integrated, with the aim of enhancing development in African countries.

#### **4.1.4 Bridging the Gap between Research, Policy and Practice: A Model for Real-Time Strategic Response to Change**

*Abel Niyibizi, Petro Systems Limited, Kampala, Uganda/ ATPS Member, Uganda Chapter*



*Abel Niyibizi  
Member ATPS Uganda Chapter*

Mr. Niyibizi's presentation dwelt on some basic models for management of strategic change. He enumerated four key behavioral responses that are crucial to the managing strategic change namely: Reactive Management, Decisive Management, Planned Management and Reactive Organization. He emphasized that these responses play a crucial role in the linkage of researchers, policy makers and practitioners. He pointed the circumstances under which behavioral resistance to change may occur.

Relating this to the policy maker, individuals will resist strategic change when it makes them insecure under the following conditions:

- > When a manager is uncertain about the implications of the change
- > When a manager is called upon to take risks which are uncongenial to him/her
- > When a person feels incompetent to perform in the new role defined by the change
- > When a person feels he/she will lose face with his/her peers
- > When a person is incapable and/or unwilling to learn new skills and behaviors (the difficulty of teaching new tricks to an old guard)

He outlined a four step model for strategic response to effectively manage behavioral resistance to change:

- > *Step one:* Build a launching platform in order to minimize start-up resistance, marshal a



- power base adequate to give momentum and continuity to the change
- > *Step two:* Diagnosing the nature of the change by deciding whether the change is singular and won't recur in the future or whether it is one in a series which will recur and represent an environmental shift to a new turbulence level.
- > *Step three:* Diagnose behaviors to determine the extent of political/cultural disturbance likely to occur in the affected units, the key individuals expected to support/resist the change
- > *Step four:* Build a supportive climate by eliminating misconceptions and exaggeration through clarification of the need for the change

#### 4.1.5 Linking business incubation research, policy, and practice – for creation and growth of new technology-based firms – the case study of Brazil

*Prof. Atieno Ndede-Amadi, Head of Business School Kenya Polytechnic University College, Kenya/ Technical Coordinator, Africa Youth Forum for Science and Technology (AYFST)*



*Prof. Atieno Ndede-Amadi  
Technical Coordinator, AYFST*

Prof. Amadi defined incubation as the process of nurturing and nourishing a new, fragile, and dependent 'creation' (chicken, person, idea, and business). She provided some statistics of business incubation research which indicated that independent (non-incubated) new and start-up businesses have a survival rate of less than 50% five years on; incubated new and start-up businesses have a survival rate of greater than 87% five years on, and therefore, business incubation enhances the success rate of new and start-up businesses.

She pointed out that, the role of new businesses in Africa's sustainable economic development is major, and include: employment creation, poverty eradication and a larger tax base for the government. Although business incubation is a relatively new phenomenon in Africa, it could be argued that its apparent newness is due, partly, to governments' failure to adequately embrace it in earnest. Using Kenya as a case point, she revealed that, the Kenya Industrial Estates (KIE) was a business incubation initiative by the Government of Kenya in or around 1967, that has been diluted to become a real-estate management agency. In her view, there are no real success stories of business incubation in Kenya (and Africa) in spite of its pivotal role in sustainable economic development. She indicated that the single most significant reason for failure of business incubation programmes in Kenya (and Africa) can be attributed to absence of policy directions. She was of the view that there has been no research to inform policy – and therefore there is no policy to inform practice – and so practice has failed – for more than 45 years on.



She hypothesised that, there is a strong positive association between a strong business incubation programme and sustainable economic development in a country (however measured); and the large failure rate of incubation programmes in Kenya (and Africa) has a strong and negative association with research in the subject matter. She therefore set out to establish that (using case studies from other countries – including Brazil): strong business incubation programmes (especially for new technology-based firms) lead to speedier sustainable economic development; and that research in business incubation leads to greater success in business incubation programmes.

Citing the example of Brazil, she argued that it is safe to assume that business incubation and related laws in Brazil have been informed by research – as it is incomprehensible that lawmakers would formulate and pass laws without pertinent information from its stakeholders. In addition to research, universities generally provided space (real-estate) for business incubation. In 2005, Brazil launched a regulatory framework for business development and innovation (innovation policy) that included the 160% tax exemption on Research, Development, and Innovation (RD&I) expenditures; legalizing the act of a researcher at a federal university setting up a company in his/her name; using money from the government to support (private) companies; and the mandatory provision of federal grant to companies for specific research by government agency. Buttressing the earlier point, she emphasized that, the Brazilian government made business incubation a priority area when it launched the National Programme for Incubators and Technology Parks (PNI) in 2007 – under which several laws were passed.

In her concluding remarks, she pointed out that business incubation is a very expensive proposition and no one individual or organization can do it alone successfully – necessitating strong partnerships between several stakeholders. Its success rests on the ability of several stakeholders coming together to pull resources for the support of new and start-up companies – as Brazil had done with much success. She re-emphasized that, the survival rate of new technology-based firms in Brazil is well above 90% over a five-year period (This is also significant in terms of savings from the cost of failed businesses). By 2009, Brazil was able to attribute its GDP growth to the higher survival rate of small businesses – especially in the technology sector.

#### 4.1.6 Innovative Ways of Integrating Traditional Medicine into Agricultural Extensions and Advisory Services for Production of Complementary Medicines in Lesotho

*Eric B. Maliehe, Consultant, Ethno Herbal Products, Lesotho/Member ATPS Lesotho Chapter*



*Mr. Eric B. Maliehe  
Member ATPS Lesotho Chapter*

Mr. Maliehe provided a historical overview of the development of traditional medicine in Lesotho. He indicated that, in the late 1970s, the international community started taking steps aimed at developing traditional medicine for the 'benefit' of local and indigenous communities around the world. He pointed out that, from the 1990s to the present, this interest in developing traditional medicine intensified. At the centre of it, this is because traditional medicine is both effective and affordable. It is within local communities' reach and its efficacy has been tested across generations. To that end, resources and efforts have been channelled to achieve 'best' ways of reaping the benefits of traditional medicine for the impoverished and disease stroke local communities. He lamented that, despite such initiatives, these 'promises' of the contemporary renewed interest in traditional medicine seems not to filter to local communities and custodians of traditional medicine in Lesotho.

He proposed the inclusion of traditional medicine in agricultural extensions and advisory services for production of complementary medicines that local communities and custodians of traditional medicine benefit from their heritage. We suggest that already existing infrastructure for agricultural extension and advisory services should be used to integrate traditional medicine. Thus, the paper is geared towards suggesting innovative ways of integrating traditional medicine in Lesotho into existing extension and advisory services' policy and programmes

He recommended that detailed research should be backed by intellectual property right as well as holistic policy framework that would integrate traditional medicine into government health policy.

#### 4.1.7 Critical Actors and their Roles in Science, Technology and Innovation: Matching Expectations with Reality in Ghana

*Adelaide A. Asante, Research Officer, Science Technology and Innovation Directorate, Ministry of Environment, Science and Technology, Ghana, and Dr. George Owusu Essegbey Director, CSIR-STEPRI, Ghana/ ATPS Regional council*



*Ms. Adelaide A. Asante,  
Member ATPS Ghana Chapter*

Ms Asante's presentation specifically analyzed the linkages between the scientists/ researchers and policymakers on one hand and practitioners on the other hand, taking into account the peculiar functions of these critical actors and the implication of effectiveness for national development. This paper further discussed the roles of the critical actors in Ghana's national innovation system assessing the relevance of roles in the country's current development context, the nature and strength of linkages among the critical actors and the options for enhancement. She pointed out that, Ghana has a National Science, Technology and Innovation Policy document which also elaborates extensively on the connection between the broad national development aspirations, the sectoral goals and objectives and STI applications. All these define for the nation the expectations for STI development and applications.

She presented the trajectory of Ghana in the formulation and implementation of Science, Technology and Innovation policy which stresses on revitalizing the country by linking all critical actors as the primary productive force, thereby bringing their roles into full play to enhance productivity, increase competitiveness and develop the economy of the country. She indicated that, the quest for economic development is a true vision of the nation as is clearly spelt out in several national development plans since independence in 1957. The vision which fuelled the passion for science-led development considerably waned after the fall of the first nationalist government of Dr. Kwame Nkrumah in 1966.

From the National Innovations Systems (NIS) perspective, she further elaborated on critical actors in the development and application of Science, Technology and Innovation (STI), whose roles and functions are very crucial in achieving goals and objectives outlined in national development plans. From this, she hypothesized that, the effective performance of the roles determines the state of the national STI.

She noted that, there was need for stronger linkages amongst critical actors of STI in Ghana to address the economic developmental challenges facing the country. Having established partnerships with critical actors within the country, there was also a need for well established

linkages with the international partners to promote STI development. The political stability existing now gives Ghanaian institutions and organizations the opportunity to attract international partners to increase STI activities there by fostering learning exchanges and technology transfer.

She emphasized that, the National Innovation System in Ghana was neither too strong nor discouraging. Adequate institutions exist to perform the necessary R & D activities and national policies, plans and regulations to bring about the desired economic development. She pointed out that, commitment of the critical actors in performing their roles effectively will provide a framework within which to consider research collaboration, teaming for capacity building, joint research, technology transfer, funding and investment priorities among R & D institutions as well as in partnerships with industry. It is important to note that through strong linkages and partnerships even between two or more R & D institutions, limited resources available will be utilized effectively and productivity will be maximized.

#### **4.1.8 Commercialization of Research Findings: A Tool towards More Effective Pharmaceutical Research in Africa**

*Uduma Eke Osonwa, PhD, MPSN, Faculty of Pharmaceutical Sciences, Nnamdi Azikiwe University, Awka, Nigeria*

Dr Osonwa indicated that, a major gap exists between the input and output for research in Africa due to a poor reward system. He was of the opinion that most researches were splintered and at the rudimentary level often lacking continuity. The impact of research is not being adequately felt by the vast populace. He claimed that, politicians were seeking to undertake visible projects with quick returns rather than embarking on long term research. He defined the commercialization of research findings as taking the research from the laboratory table to the end-users with a financial benefit to the researcher. This he said is a strong reward system which would motivate researches, policymakers and practitioners. He lamented that, the commercialization of research has not been well exploited in Africa.

Using the pharmaceutical industry as a case in Africa, Dr Osonwa enumerated several impediments to Commercialization of Research Findings. These include: lack of adequate funding; fulfilling the research agenda of donors and development partners at the expense of research growth in Africa; Lack of exposure of African researchers to the Business World.

He suggested seven different mechanisms that would promote the commercialization of research in Africa. This included: the establishment of Technology Transfer Offices (TTO's) in the Universities and Research Centers; entrepreneurial development of the researchers; researching with a view to getting the product of the research to the vast populace in as short a

time as possible and as cheaply as possible thereby aiding commercialization; employee participation; public-private partnership; Proper project management and Government participation.

In his concluding remarks, Dr. Osonwa was optimistic that the commercialization of pharmaceutical research findings will provide a drive for further innovation while providing for the needs of the researchers. It is expected that the implementation of the proffered suggestions will strengthen the financial reward system which will give a boost to research activities in Africa.

#### **4.1.9 Swaziland's Experiences with Developing a National STI Policy: Implications for Linking Policy Research with Policy Making**

*Mgidi D. Dlamini and Musa M. A. Dube, University of Swaziland*

Dr. Dlamini's presentation provided insights gained from the development of the National Science, Technology and Innovation (STI) Policy in Swaziland. Dr. Dlamini re-echoed the call for African countries to develop their own Science and Technology (S&T) Policies for self-sufficient economies and sustainable development of Africa. He pointed out that there is a general recognition of the shift from S & T to STI policies. He was of the view that, African countries must: accept the role of STI in addressing endemic diseases, hunger, illiteracy, environmental degradation etc.; endorse the need for the promotion of competitive S & T policies that focus on innovation systems as well as transfer, application and diffusion of technologies; and acknowledge the new approach and recommendation that to develop (even revise) a national policy, it must be based on empirical evidence (research).

He enumerated the Initiatives that had led to the development of STI in Swaziland. In 1996, it was recommended that a National Research, Science and Technology Council be established; the 2006 consultancy recommended the establishment of a S&T ministry; The 2006 consultancy further recommended that in order to sensitize policy makers, a forum for exchange between Government, Parliament and Scientists be established by National Research Council as part of its committees or institutes. The 2008 survey revealed that 85.7% of the institutions used S & T in their daily operations. Major constraints affecting S&T application were shortage of competent S&T personnel and absence of a national policy on S&T with no institutions to coordinate Science and Technology.



#### 4.1.10 Linking research to policy and development: the case of agricultural development programme (ADPS) In Nigeria (1986-2011)

*Nnadozie, A. K. O. and Mkpado M., Agricultural Economics department, University of Nigeria, Nsukka*

Mr. Nnadozie presented a practice model called Research-Extension-Farmer-Input Linkage System (REFILS) which is the umbrella organ that co-ordinate the research and extension activities of the Agricultural Development Programmes (ADPs) in Nigeria. It is a representation of institutional dynamics of linkage between National Agricultural Research Institutes (NARIS), Agricultural Development Programmes (ADPs), farmers and inputs agencies. The study determines the strategies that worked for their effectiveness such as the research component, the NGO input linkage and technology transfer of REFILS, among others. According to Mr. Nnadozie, the REFILS strategy has linked the ADPs staff with the Universities and research institutes. It has also created easy access to farmers acquiring farm inputs. On the other hand, farmers productivity in the zone have increased while sales by NGO marketing inputs have also doubled with a higher rate.

Based on the success and effectiveness of REFILS in technology transfer in the agriculture sector; it is recommended as a moral for other sectors of the economy for the improvement of the Nigeria economy in particular and Africa in general.

Mr. Nnadozie concluded that ADPs' REFILS approach is effective in research, policy and technology transfer in Agricultural Development in Nigeria.

#### 4.1.11 Linking Livestock Research to Policy in Nigeria: The Intervention of the Nigerian Institute of Animal Science; *Anselm Ego Onyimonyi, Department of Animal Science, University of Nigeria, Nsukka/ ATPS Nigeria Chapter*



*Anselm Ego Onyimonyi  
Member, ATPS Nigeria Chapter*

Mr. Onyimonyi began his presentation by re-emphasizing the successful contribution of Animal Scientists to the improvement of nutrition, physiology, genetics and environment of livestock breeds in Nigeria. He however indicated that there is a disconnection between the researchers and the end-users of research findings. He was of the view that, research findings have failed to address the needs of the end-users, they have not been packaged in a way that the farmer can easily understand, and thus farmers are thus left with the option to continue production in their old ways. He

enumerated some major gaps that exist between research and policy which included the gross under-utilization of research findings in policy making in Nigeria. He also pointed out that existing innovations and products are not properly and adequately communicated and



disseminated to end-users in forms and manners that elicited desired buy-ins. There is poor correspondence between expectations/needs of the private sector and the research priorities in the universities. To this effect, the Nigerian Institute of Animal Science took the bold step to bridge the research policy divide as concerns livestock research in Nigeria.

Mr. Onyimonyi presented lessons and experience drawn from the Nigerian Institute of Animal Science (NIAS) which can be replicated in other sectors and other parts of Africa. Established by Act No. 26 of 2007, NIAS is run by a governing council which membership include the Ministers of Agriculture, Education, Water Resources, Science and Technology and Environment, with representatives from The Nigerian chamber of Commerce, Industry, Mines and Agriculture, Agro-Allied Industries, State Directors of livestock services and Universities that offer courses in Animal Sciences. He pointed out that the import of the composition of NIAS Council was to create an enabling interface for all livestock stakeholders in the country to meet and to ensure an effective link between institutional partners and practitioners.

In his concluding remarks, Mr. Onyimonyi indicated that, NIAS has played key roles in nurturing the links between research and industry by creating an enabling platform for all stakeholders in the livestock sector and universities to meet.

## **QUESTIONS, COMMENTS AND REMARKS**

At the end of the presentations, the group deliberated and came up with recommendations that sought to address the following questions raised.

### **1. What are the principles of engagement for Research, Policy and Practice (RPP)?**

- > Researchers are well placed to be the bridge/ link for knowledge production and development
- > Researchers should also take the lead to initiate linkage and tailor the communication to suite the policy makers
- > There should be increased internal funding for research by Government
- > Stability of Africa's political institutions and good governance are required to enhance collaboration
- > Research should be demand-driven
- > More stakeholder participation and joint ownership should be encouraged
- > There should be a well-established research agenda at various levels
- > There is need for communication specialists to foster the linkages across various stakeholder groups
- > National agenda rather than political agenda should be followed
- > Multidisciplinary forum for interaction should be encouraged

## **2. What are the institutional best practices for strengthening RPP?**

- > Agreement and commitment to evidence based policy making
- > Mainstreaming policy research in existing research institutions
- > Strong innovation infrastructure

## **3. What are the mechanisms and approaches for effective linkage among RPP?**

- > Institutionalization of multi-actor negotiation framework.
- > Establishment of Common Assessment Framework that enable inter/ intra agency working
- > Establishment of intermediary organizations that facilitate interaction between researchers and policy makers
- > Policy makers should fund research
- > Enactment of legislation to create an enabling interface between research and policy

## **4. What are the strategies for building consensus amongst stakeholders?**

- > Legitimizing the supports from banks and financial institutions for research and innovation development
- > Frequent review and harmonization of existing policies
- > Developing capabilities in research and policies
- > Effective use of ICT for smooth flow of information among actors

## 4.2 Parallel Session Two

The session was chaired by Dr Mrs. Anthonia Achike, from the University of Nigeria and Ms. Manal Samra, the Egypt Focal Point Coordinator. The session comprised of papers on Youth and Gender empowerment (subtheme 2); and the role of capacity development (subtheme 4). These papers were presented as follows:

### 4.2.1 Youth Mobilization under the Agricultural Development Programme: Lessons for Effective Linkages between Research, Extension Organization and Farmers for Agricultural Transformation Policy in South East Nigeria

*Ezeh, Ann N. and Dr. S.O. Ezeh, Ebonyi State University, Abakaliki, Nigeria*



*Ann Ezeh  
Member, ATPS Nigeria Chapter*

Mrs. Ann Ezeh's presentation identified strategies for youth participation in agricultural development programmes and extension service as a transformational option for development in South East Nigeria. She pointed out that some of the strategies to build their capacity were through excursions, youth competitions and youth clubs. She noted that the use of mass media is necessary to galvanize their supports. However, she decried that these strategies are not yet effectively put in place to adequately mobilize the youth to action, hence leading to poor or lack of participation of the youth in agriculture. She identified lack of basic infrastructure, poor socio-economic conditions and inadequate leadership as the bane for youth participation in agricultural development programmes.

Mrs. Ezeh enumerated some lessons which can be learnt from the study for research, extension and farmer linkages for agricultural transformation Policy in South-East Nigeria. She noted that the youth possess desirable potentials (regenerative energy, potential intelligence and skills) which can propel them for necessary linkages and participation in development initiatives. The study showed that rural youth in South Eastern Nigeria have remarkable differences in their personal characteristics and socio-economic conditions.

In conclusion, Mrs. Ezeh pointed out that improved extension services, harmonization of youth group efforts and improved financial supports for youth programmes could facilitate their participation in agricultural development and linkages between research, policy and practice.

#### 4.2.2 Effective Linkage between Research and Policy Making in the Area of Soil Sustainability: The Role of Youth and Gender Empowerment via Collaborative Mentorship/Training

*Umeugochukwu, O. P., Department of Soil Science, University of Nigeria, Nsukka*



*Ms. Patience Umeugochukwu  
Member, ATPS Nigeria Chapter*

Ms. Umeugochukwu defined soil as the loose part of the earth's surface. Soil resources and the environment heavily depend on each other; however, poor capacity limits the involvement of the youth in research and policy for sustainable soil and environmental management. She noted that soil is a very complex concept and the need for soil management research cannot be over emphasized. She expressed some concerns on how the youth and the women who use the soil most frequently are so uninformed scientifically about their environment as a result of lack of knowledge and proper

policies.

She pointed out that women's involvement at all levels provides an answer to sustainable development. Furthermore, she noted that lack of basic infrastructure prevents youth and women from participating adequately in development programmes and therefore recommended capacity building of the youth and women as a panacea for sustainable development.

She cited the workshop training programme on principles and applications of soil physics to development challenges in West Africa organized by the collaborative efforts of the Abdus Salam International Centre for Theoretical Physics in Trieste, Italy; the Nigerian Special Program on Agriculture and Food Security of FAO; the Soil Science Society of Nigeria; and Ahmadu Bello University as a case example of capacity building for youth and women. The capacity building focused on research methodologies and the need for effective use of natural resources and its conservation. She pointed out the need for collaboration among key stakeholders for effective soil management and recommended the establishment of youth parks in many regions of Africa and called for government's support for youth and women initiatives.

#### 4.2.3 Strengthening Linkages between Policy Research and Policy Making for African Development: Youth and Gender Empowerment

*Ms. Akola Constancia, TNS RMS Centre, East Africa*



*Ms. Akola Constancia  
Member, ATPS Kenya Chapter*

Ms. Akola's presentation was on the need for youth and gender empowerment in strengthening linkages between policy research and policy making for Africa's sustainable development. She introduced her work as a case of Kenya and expressed that the term “gender” in her presentation had been used in favour of the women. For Kenya to fulfil its vision 2030 and be relevant globally, it must have to address this important issue on gender. It was her opinion that one way of addressing this issue is by looking at the aspect of population which tilts towards the women and the youth, thus making them the majority of the current population. She also examined the issue of empowerment as a multi-level construct consisting of practical approaches and applications, social action processes, and individual and collective outcomes in order to improve equity and quality of life. These constructs have been grouped under these categorizations: gender and poverty, gender and employability, gender and health, gender and agriculture and gender mainstreaming. The other aspects include; youth and governance, youth and education, youth and employability, and youth and health.

Ms. Akola was of the view that majority of the Kenyan labour force comes from both women and youth, and Kenya's agriculture depends largely on them. However, concern arises in that both categories are not duly considered in the determination of policies, even before they are implemented. Invariably, Kenya cannot fully develop when more than half of its human resources do not fully participate in the spheres of the economy. The presenter made this concern clear by the posing a question on the number of youth engaged in leadership.? The answer revealed that most youth are only in the informal sector. To prove this point further, she logically expressed that 75% of the youth are unemployed, and this alone brings down the productivity of the economy at large. In both policy and practice therefore, youth and gender empowerment are highly encouraged, although with their seemingly many challenges including:

- > Lack of coordination between government agencies charged with the role of implementing youth and gender policies and programs
- > Exclusion of the issues of demographics as a policy priority
- > Low awareness levels of youth and gender related government policies and programs
- > Programs categorized under broad topics which are assumed to have youth as core participants



> And lastly, corruption and fraudulence in the polity and economy.

In conclusion, she provided some guidelines in attaining the well desired empowerment and development. According to her, critical youth and gender empowerment must be adopted, and to achieve that, there is urgent need for provision of a safe and welcoming environment; meaningful participation and engagement of all stakeholders; equitable power sharing between the youth and adults, men and women; engagement in critical reflection on interpersonal and socio-political processes; participation in socio-political processes to influence change; and integrated individual-and community-level empowerments.

#### **4.2.4 An Empirical Analysis of the Influence of Country Quality of Institutions on Gender Empowerment in Sub-Saharan Africa**

*Damilola Olajide and Divine Ikenwilo, University of Aberdeen, Scotland*



*Dr. Damilola Olajide, Member,  
ATPS UK Diaspora Chapter*

Mr. Damilola's presentation examined the influence of the quality of institutions on gender empowerment in sub-Saharan Africa. He remarked that available evidence shows that Africa is not devoid of gender related issues as entrenched in MDG 3 (2000), AU charters and mission statements (2004) and African heads of state pledges (2005). However, the gains of these efforts are yet to be realized because of the obstacles facing gender equality including institutional factors such as strong cultural and traditional practices. His literature summarized the role of institutions in terms of the set

of formal rules, informal rules and norms that shape behaviour in society, and their role in empowering people, in economic and social development, and as an incentive. The overall objective focused on gender empowerment in sub-Saharan Africa (SSA) by modelling the relationships between availability of quality institutions and women political representation at national legislatures. Using various free sources of data (e.g. UN, World Bank, Frazer Institute, Heritage Foundation) to gather information about the current situation in sub-Saharan Africa and a repeated specific country experiment over time, between 2000 to 2009. The study measured the share of women in national parliaments, gender parity indices (primary, secondary, and tertiary), per capita GDP growth, legal structure and security of property rights, business freedom and regulation, and freedom from corruption.

The authors found out that generally there has been increased gender empowerment over time, even though there were considerable regional differences e.g. differences between policymaking and practice. This was further expressed from the graph showing that Eastern Africa had gained the most capacity in terms of gender empowerment because as shown,



from 2000 to 2009, women representation had progressively risen from about 11% to about 29% while Central Africa had gained the least of only about 3% increase in those years. The results further showed that there was a clear link between institutions and gender empowerment i.e. the differences between formal and informal institutions, and the quality of those institutions necessary for the linkage between policy research and policy making, which altogether brings about the need for institutional reforms. The study further highlighted the importance of understanding context-specific issues for effective linkages between evidence-based research, policy and practice.

Examining the regional differences in sub-Saharan Africa, the authors revealed that there was a clear gap between the pre and post 2005 MDG. This gap as shown by the experiment represented the failure of the African government to support appropriate policies, and the extent to which these gaps can be bridged cannot be the same across the countries. Finally, the presenter clarified that he did not generalize regions as institutions, but instead his team had decided to look critically at the post MDG era which results point out emphatically the fact that any policy making process should be accompanied by institutional reforms.

#### **4.2.5 Entrepreneurship as a Cutting Edge for Rural Development**

*Adaku. B. C. Ezeibe, Centre for Entrepreneurship and Development Research (CEDR), University of Nigeria, Nsukka*



*Ms. Adaku Ezeibe  
Member, ATPS Nigeria Chapter*

Mrs. Ezeibe's presentation underscored the fact that poverty still persists in Africa and Nigeria in particular despite the numerous efforts made by development agencies and organizations. She restated the achievements of political independence in Nigeria, in 1960, for which institutions and individuals seem to agree that it brought with it some high level of expectations for social and economic development. Moreover, rural development was adopted as a new strategy “bottom up” which was supposed to make Nigeria one of the greatest economies of the world, but it failed in that mandate for several reasons. Therefore, entrepreneurship is increasingly gaining relevance in the pursuit for rural development, as a vehicle to improve the quality of life for individuals, families and communities and to sustain a healthy economy and environment.

She explained that the concept of entrepreneurship addresses “a force that mobilizes other resources to meet the unmet market demands”, “the ability to create and build something from practically nothing” and “the process of creating value by pulling together a unique package of resources to exploit an opportunity”. On the other hand, rural entrepreneurship

as defined by Bayero, is the process whereby concerted efforts are made in order to facilitate significant increase in rural resources productivity with the overall objectives of enhancing rural income.

She further recounted some of Nigeria's experience on rural development which included:

- > Since political independence, successive Nigerian governments have been grappling with how to develop rural areas and various policies and programmes have been formulated to transform the rural areas
- > The objectives of these programmes which have been laudable were made to develop the rural areas through boosting agricultural production, provision of roads, water, electricity, and to operate and administer land among others, but unfortunately, these institution's performances have not been significantly positive, partly for lack of entrepreneurial skills and women empowerment

Further looking at entrepreneurship as a force for economic change, she illustrated that women are behind in entrepreneurship development and also too often, their names are not specifically mentioned even when evidence shows that there are many activities in rural areas pursued by female entrepreneurs such as trade, food processing, catering, etc.

Her study also revealed that besides individual or group entrepreneurial activities, the enabling environment supporting these initiatives is of utmost importance. National agricultural policies such as price subsidies to guarantee minimum farm incomes and the keeping of land in production when over population already exist are definitely counterproductive to entrepreneurship.

In her concluding remarks, Mrs Ezeibe stressed that rural development is increasingly concerned with improving the living standards of over 70% of the population of the country who are living in rural areas. She added that women entrepreneurship is necessary for sustainable rural development because despite the fact that women make up more than 50% of Nigeria's population, they encounter many constraints when trying to take part in the transformational process.

She therefore urged the government and NGOs to more progressively organize entrepreneurship trainings in the rural areas in order to facilitate the adoption of new innovation in the rural areas. She ended her presentation with a remark that entrepreneurship and women empowerment must be achieved if the process of rural development must be sustainable.

## QUESTIONS, COMMENTS AND REMARKS

At the end of all the presentations, the group deliberated and came up with the following recommendations on how to mainstream youth and gender in African development through research, policy and practice:

### **1. The role of youth and women in RPP linkage will include:**

- > Dissemination of information, facilitating information transmission in and outside the systems e.g. farmers
- > Networking with individuals, institutions and organizations
- > Pro-active participation in all socio-economic and political events
- > Exercising of women rights
- > Greater access to resources
- > Initiation of policy dialogue
- > Advocacy
- > Operationalizing gender-related development policy
- > Implementation of research outputs

### **2. Strategies for enhancing participation of youth and women in RPP**

- > Participation in key leadership positions
- > Institutional reform to accompany policy making and practice (e.g. education, property rights, attain quality, etc.)
- > Appropriate training of youth and women especially the girl child
- > Team work - accessible forums for brainstorming and resource sharing
- > Reward and motivation systems review - youth and women efforts in research should be recognized and appropriately rewarded
- > Adoption of training the trainer (TOT) strategy

### **3. Knowledge, skills and infrastructure required for effective linkage amongst RPP**

- > Appropriate entrepreneurial knowledge and skills should be built in youth and women programs
- > Multi/Trans-disciplinary knowledge systems
- > Building effective networks and fora e.g. public and private partnerships
- > Role model and mentorship
- > Exposure and exchange visits
- > Appropriate infrastructure development e.g. Roads, ICT, Health

### **4. Small and long term measures required for effective RPP**

- > Short-Term Measures
- > Empowerment through training, mentorship, capacity building, apprenticeship
- > Long-Term Measures
- > Mind-set/attitude change, breakdown of cultural barriers- reorientation of cultural mind edifices

### 4.3 Parallel Session Three

The session was chaired by Mr. Diran Onifade, from the Nigerian Television Authority (NTA). The session comprised of papers under; research uptake, communication, advocacy and brokerage (subtheme 5); and the challenges and opportunities for effective linkages between research, policy and practice (subtheme 6). These papers were presented as follows:

#### 4.3.1 Providing the right incentives to promote evidence-based policy

*Ms. Christelle Chapoy, International Initiative for Impact Evaluation (3ie)*



*Ms. Christelle Chapoy*

Ms. Chapoy's presentation focused on how best evidence from impact evaluation can be used to improve the effectiveness of governments' social programmes. She argued that development resources in Africa are limited and because of that, there is a growing pressure for government and development agencies to be able to show that the money spent has an impact on improving people's lives. Her general observation was that the context is not in favor of such initiatives/processes because of the conflicting interests between researchers and policymakers. This has led to a situation where a number of programmes were terminated despite their positive impacts but others with no impact, being expanded. One reason for this she maintained is that policies are equally influenced by good and/or bad evidence and not necessarily based on scientific evidence. The need to improve the demand for evidence and create a cultural change to use evaluation for improvement was also stressed. An overview of the different approaches and mechanisms developed by 3ie in order to effectively link its funded research to policy and practice was provided. The approach developed by 3ie involves a combination of incentives from both sides – researchers and policymakers.

The author further explained that on the supply side (researchers), there is need to support research activities and provide incentives to engage in the policy sphere. To achieve this, a set of requirements was defined (modalities of funding) by 3ie for its grantees that need funds to conduct their research activities. In addition, 3ie as an organization provides capacity development support in the area of communications for policy influence. 3ie also requests its grantees to report on their policy influence activities and to provide evidence in accessible formats. On the other hand, from the demand side (policymakers), the idea is to provide policymakers with incentives to learn from evaluations and engage them in promoting evidence based policies. The proposed mechanisms included a letter of endorsement of implementing agency, policy dialogue and conferences, thematic window providing a specific entry-point to engage with key policymakers and practitioners in specific sectors. She also

mentioned alternative incentives to generate demand-led research through the policy window.

At the level of governments, the author indicated that *3ie* was planning for a more systematic approach with its '*Commitment to Evaluation Index*' to be launched in 2012. The objectives of this index will include a scoring of donor agencies' and governments' efforts to base policy on evidence, the selection of donors who are using evidence to design their programme, and provide an incentive to others to do the same. A full ranking would initially not be published, but good performers will be publicized and will receive awards. The author finally presented the major results achieved so far in terms of generating more policy relevant research and turning it into effective policies around the world.

#### **4.3.2 Towards Effective Research Uptake and Innovative Communication of Development Research Projects in Nigeria**

*Foluso Adeyinka M. and Ajala A. O., Nigerian Institute of Social and Economic Research (NISER), Oyo State Nigeria*



*Foluso Adeyinka  
Member, ATPS Nigeria Chapter*

The paper focused on how best innovative communication strategies can stimulate effective uptake of development research. The authors addressed the need to engage in the research process. She argued that since scientists have to work in conjunction with other stakeholders, research is expected to demonstrate a problem-solving attribute but also research results need to be appropriately communicated to targeted audiences. After conceptualizing and presenting research uptake activities and components, that is, the collaboration between researchers and

users, dissemination of research findings, capacity development and social influence, the authors described the pattern of research uptake in Nigeria using the National Health Insurance Scheme (NHIS) as a case study.

The authors stressed that like many interventionist development programmes in Nigeria, the NHIS programme is an outcome of a broad framework for reform of health policies and institutions but the uptake of the programme by those for whom it is intended remains a crucial problem. The presenter analyzed this situation using the major steps of the innovation process to simulate the activities of the development research. The process covers all inductive and experimental stages of research and development. Following this innovation process, the presenter observed that in Nigeria, many projects never get to the dissemination stage and even when a few of them reach this stage, those projects are rarely sustainable. The authors mentioned that this seemed to be the case for the NHIS which had been able to

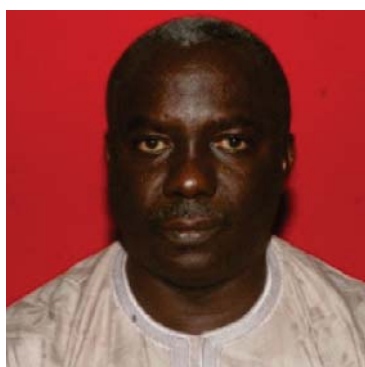


survive the first major steps in the innovation process. The current challenge of the NHIS programme is how to ensure that it is effectively taken up by the intended beneficiaries. To achieve this, research uptake as a process should start, following a broad dissemination of the research results, highlighting the recommendations and action plans for each of the stakeholder and/or beneficiary of the potential outcomes. Effective communication of research should involve the construction of shared meaning and dialogue between different stakeholders. The presenter also identified a variety of tools (technical reports, policy briefs, web-based information services, online social media tools, etc.) which are necessary for communicating development research to targeted audiences.

The authors concluded with a discussion on key issues to be considered in order to ensure effective research uptake in Nigeria. The presenter talked about the explicitness of goals from the outset of research, the identification of stakeholders of the research process, the improvement of capacity and skills in using evidence through training and development programmes for policy-makers and other policy agents, the involvement of mass media using different languages. The presenter also addressed the issue of proper funding for research uptake and the need for regulations and appropriate infrastructure that will support the outcome of the research process.

#### **4.3.3 Overview of the Farming Skills Acquisition Programme (FSAP) Implemented by the Adamawa State Government in Nigeria**

*Dr. Hasuruna Amos<sup>1</sup> and Dr. Ibrahim Abdullahi<sup>2</sup>, <sup>1</sup>Department of Vocational Education, Federal University of Technology, Yola, Adamawa State, Nigeria. <sup>2</sup>Adamawa Agricultural Development and Investment Ltd, Nigeria,*



*Dr. Hasuruna Amos  
Member, ATPS Nigeria Chapter*

After providing an insight into the Adamawa region, Dr Amos indicated that there are many issues related to agricultural development in Adamawa State. Several bottlenecks militated against agricultural productivity in the State, these included; Pests and diseases of plants and animals widely distributed in Adamawa State; lack of finance and access to credit facilities; postharvest losses of crops and animals; inadequate agricultural education; low level of technology; poor rural road network and lack of energy development schemes.

In order to adequately address the issues enumerated above and empower a large number of families in the region, the FSAP was developed under the *Grassroots Socio-Economic Empowerment Programme* (GSEEP) introduced by His Excellency, Murtala Hammanero Nyako, the Executive Governor of Adamawa State. He described the FSAP as the platform



on which the farming community in Adamawa State is made to experience accelerated and sustainable development. The main objectives of the FSAP program were to:

- > Train farmers on modern crop and livestock production practices, so that they increase their yields in a sustainable manner and become sufficiently skilled to provide the same kind of training to other target groups such as community leaders and individual producers;
- > Form cooperative groups for trained farmers; and
- > Facilitate linkages between financial institutions, input suppliers, research institutions and farmers for the provision of support and advisory services.

These objectives were envisioned, based on the premise that agriculture remains the single biggest employer of labor all over Nigeria. Dr. Amos further noted that the FSAP programme in its efforts to promote a set of innovative strategies to empowering farmers, has also established a Farming Skills Acquisition Centre (FSAC) in each of the 21 Local Governments Areas (LGAs) with the aim of providing different levels of training (train- the- trainer, intensive farmers' training and extensive farmers' training) and competences to the farmers. He highlighted some of the activities carried out within the FSAC including; agricultural inputs and outputs distribution and service delivery point, fairs and farmers' field days, training in corporate management, partnership with NGOs to conduct trainings for farmers (technical assistance) and the coordinated use of media (mass media, folk media and audio-visual aids).

Dr Amos summarized the main achievements of the FSAP in terms of transforming the agricultural sector of the Adamawa state. From the testimonies made by the beneficiaries of the programme, it appeared that their per capita income has increased from less than US\$1\$/day to about US\$2.5 to US\$3/day. Crop yields have tremendously increased from 1.1t/ha to 3.7t/ha and from 2.5t/ha to 3.7t/ha for maize and rice crops, respectively. He also reported similar increases in livestock, poultry, beekeeping and fish production within the region.

#### 4.3.4 From Economic Growth to Sustainable Development: Challenges and Opportunities for Realistic Policy Responses

*Chidi Magnus Onuoha and Chucks Enronobi, Green Economics, Abuja, Nigeria*



*Chucks Enronobi  
Member, ATPS Nigeria Chapter*

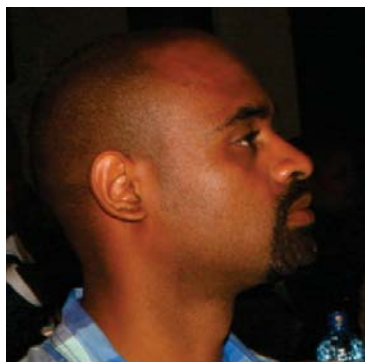
After providing an overview of the trends in development theory and a discussion around green economics models, the presenter Mr. Enronobi addressed some opportunities for sustainable development policies. 'Green GDP Initiative' was presented as one of those opportunities in Africa because of the incorporation of ecosystem services and biodiversity challenges in the measurement of the economy. The authors also pointed to the importance of small groups Tree Planting Initiatives (TPI) in areas affected by drought and desertification. Mr. Enronobi presented the 'Briquettes-Alternative to firewood Initiatives' as environmentally friendly energy sources and suggested that governments should ensure the enhancement of such initiatives. He talked about the 'Green Wall Sahara Vulnerability Initiatives' which aims at checking the advancement of Sahara Desert into the hinterland through massive forestation and reforestation and industrialization initiatives.

He further introduced two projects initiated by Green Economics. He explained that the aim of the first project called 'Green Oil and Gas Mandate' (GOGAM) was to promote development and dissemination of clean fossil fuel technologies. The second project 'Campus Project Greening Initiatives' (CPGI) on the other hand, was initiated for the purpose of prompting the awareness about the importance of living in harmony with our environment in a sustainable way as well as adopting the attitude of saving culture in our tertiary institutions.

He concluded with the idea that realistic sustainable development policies and practices call for greater responsibility on the part of governments, trade regimes and multinational corporations in order to strengthening partnerships, promoting technological innovations and facilitating cooperation in global programs on environment, employment, human health and freedom.

#### 4.3.5 Rationale for Local Entrepreneurship Development Policies and Programmes in Post-Colonial Lesotho: lessons from the Past

*Sean Maliehe, National University of Lesotho*



*Sean Maliehe  
Member, ATPS Lesotho Chapter*

Mr Mahiele noted that the post-colonial governments of Lesotho, in their attempts to develop a vibrant private sector led by local entrepreneurs, had demonstrated a lack of understanding by propagating the view that Basotho traders' poor performance in local trade is due to lack of adequate spirit of entrepreneurship and entrepreneurial skills. The presenter identified and examined some of Lesotho's Local Entrepreneurship Development Initiatives. They included Business Extension Services, Basotho Enterprises Development Corporation, Business Training Centre and International Labour Organization's "Know Your Business" programme. Based on these entrepreneurial initiatives, the presenter further noted that the basis for local entrepreneurship policies in Lesotho is not founded on the results of research conducted to inform local entrepreneurship programmes. He recommended more focus on policy research, the need to deal with influences of profiteering groups and long-term policies and programmes to create a fair starting point and inclusive business opportunities for all those participating in local business.

#### QUESTIONS, COMMENTS AND REMARKS

At the end of all the presentations, the group deliberated based on the innovative strategies for communicating research results for policy making and implementation; the role of the media in effective communication of research outputs for policymaking and implementation; and the enabling environments required for effective communication of research outputs to policymakers for use by practitioners. The following recommendations were proposed:

- > Innovative strategies for communicating research results should consider the use of impact evaluations which can be designed either ex post or ex ante depending of the communication objectives; the methodologies for communication planning and trainings for communication specialists; the formats used to disseminate research results as well as the nature of evidence provided. Effective communication strategy would also involve professional teams and/or pressure groups (lobbies) forcing things to move forward through the preparation of forums and participation in the follow-up research.
- > Media should play an important part in effective communication of research outputs. They should be engaged at every stage of the communication process so that visible practical impacts from research activities can be seen. Successful initiatives like the FSAP programme are commendable but there is also a need to duplicate these experiences at

different levels for the purpose of sustainability (regional, sub-regional, national, etc.). Media can help to showcase the benefits of such initiatives.

- > Incentive structures and enabling environment for effective communication of research outputs should include capacity building (proper communication skills) for stakeholders, a system of dynamic institutions that can efficiently ensure that scientists engage key stakeholders. There is need for substantial funding in order to put up the programmes properly.

#### **4.4 Parallel Session Four**

The session was co-chaired by Dr. Maurice Bolo from the ATPS and Mr. Joseph Wekundah from the Biotechnology Trust Africa (BTA). Issues that were examined under this session included; legal frameworks on intellectual property rights (IPRs); IPRs policy and institutional frameworks; traditional knowledge/traditional medicine and expressions of folklore; and principles of access and benefit sharing, with special focus on Nagoya and Swakopmund Protocols. The sessions were facilitated by Prof Dr. Dr. Moni Wekesa and Miss Millicent Ligare both from Mount Kenya University, Kenya.

The IPR training session began with a welcome address by the chair, Dr. Maurice Bolo who then introduced the facilitators and the IP National Steering Committee members from the different national chapters of the ATPS. The chair noted that the training was aimed at strengthening IP policies in the participating countries as well as their accompanying legal frameworks and the traditional knowledge (TK) systems. According to him, it also aimed at establishing networks of IP regionally and internationally to be able to strengthen linkages with policymakers.

The chair mentioned that some of the studies from the program were complete in Ethiopia, Lesotho, Malawi, Swaziland and there was an ongoing one in Uganda as well as a pending study in Zimbabwe. The participants then raised the issue of getting the case studies to influence policymakers to help protect TK, and getting a link with policymakers and people on the ground – the owners of the resources. A participant noted in agreement that IP exists but questioned; “How much does it benefit Africa which has many resources?” he further urged participants to ensure that the training being received will assist them in protecting the vast resources in Africa.

#### 4.4.1 Training of Trainers on Intellectual Property Rights (IPR), Traditional Knowledge (TK), Access and Benefit Sharing (ABS)

*Prof. Moni Wekesa, Dean, School of Law, Mount Kenya University, Nairobi Campus*



*Prof. Moni Wekesa  
Member, ATPS Kenya Chapter*

Prof. Wekesa outlined the specific objectives of the training of trainers' workshop on IPR, TK, ABS, which were to:

- > identify the various forms of Intellectual Property Rights (IPRs);
  - > provide an overview of intellectual property rights and linkages to access and benefit sharing;
  - > understand patents and the patent application process and linkages to ABS;
  - > To introduce key concepts concerning disclosure and certificates of origin/source/compliance;
- > provide an overview of patent registration offices in Africa, their roles and linkages with international and other offices (e.g. the Patent Cooperation Treaty, the European Patent Office, the United States Patent and Trademark Office);
  - > understand how a patent registration office examines and grants patents, patent opposition, and patent filing and maintenance costs; and
  - > understand the international legal framework related to IPRs.

#### Intellectual Property Rights (IPR) and Types

Intellectual property is the legal rights which result from intellectual activity in the industrial, scientific, literary and artistic field (WIPO Publication No. 489 (E), p. 3). IPRs are private rights recognized and enforced by the state. An intellectual property right is a right generally granting the right holder the exclusive right to use the respective intellectual property (e.g. an invention) and the right to exclude others from certain activities, such as using a product or process for a defined period of time (e.g. in the case of patents which is 20 years as from the application date). Prof. Wekesa gave examples of different types of IPRs as follows:

##### *Copyrights*

Copyrightable works must be original, in fixed form and is protectable for up to 50 years after life of author. The subject matter of the IPR in copyright includes; literary, musical and artistic works; sound recordings; films and broadcasts; etc. Copyright arises automatically and an example was given of Kenya, where they are protected under the Copyright Act, 2001, for example, rights of a novelist to sell copies of his or her own novel.

##### *Trademarks (TM)*

Trademarks are distinctive signs capable of being represented graphically, granted in order to



distinguish the goods and services of a TM proprietor from those of their competitors. It must be registered to be protected, can exist indeterminately, but has to be renewed after a certain period (10 years in Kenya; at least 7 years under TRIPS), e.g. Microsoft.

#### *Geographical indications*

Geographical indications are used to protect goods from a given geographical region with characteristics unique to that region and the quality, reputation or other characteristic of the goods attributed to the geographical origin of the goods, e.g. Champagne as a region for sparkling wine.

#### *Industrial designs*

Industrial designs are features of shape, configuration and pattern or ornamentation applicable to an article or designs that deal only with what the eyes can see. This form of protection is limited, e.g. the Wagenfeld lamp.

#### *Patents*

Patentability requires novelty. This means that the invention must be new, inventive step (non-obviousness) taken and must be commercially viable. It is obtained via an application to the Kenya Industrial Property Institute (in Kenya). Patents can be granted for products or processes or both and grants exclusive rights for a limited period of time in respect of an invention (20 years), e.g. Thomas Edison's light bulb.

#### *Trade secrets*

Trade secrets consist of confidential information with commercial value, protected in order to guard technological know-how. They last until the information is released into the public domain, for example the Coca Cola's secret recipe.

#### *Plant variety protection*

Plant breeders rights are also known as plant variety protection (PVP) and are granted by the state to persons who have developed new varieties of plants, for a limited period of time. The protection is marked by a grant of special title of protection. The conditions for protection include; distinct from any other existing variety; uniform in its relevant characteristics and stable, that is; unchanged even after repeated propagation.

## QUESTIONS, COMMENTS AND REMARKS

FEARS/ CONCERNS ON IP	EXPECTATIONS	QUESTIONS RAISED	COMMENTS
<ul style="list-style-type: none"> <li>IP is not propagated by the local communities that are custodians of indigenous knowledge</li> <li>IP is mostly used to curtail people from getting knowledge</li> <li>We lose ownership of our inventions to foreigners</li> <li>The domain where IP lies is separated from society</li> <li>How do we demystify local knowledge systems – there is too much secrecy surrounding traditional/indigenous knowledge especially medicine, indigenous knowledge system vs. technology</li> <li>There is too much Bureaucracy in IP management</li> <li>IP exploitation of indigenous knowledge i.e. Biopiracy</li> <li>IP exploitation of natural resources i.e. Biopiracy</li> </ul>	<ul style="list-style-type: none"> <li>To know the importance of IP and how it can contribute to Africa's development</li> <li>Get enriched in IP knowledge and get to the practitioner on ground and stimulate the rest to get on board to protect IP</li> <li>Get information to support the chapter and put it at par with other countries, own knowledge and know how to protect the future generations and have influence on women to do the same</li> <li>I would like to make people know the value of IPR and give the traditional healers knowledge and help them take advantage of existing IP system to benefit from their resources.</li> <li>Solve the IP paradox, opening up to ensure knowledge is shared to all; a transient intermediate cross to cut across</li> <li>Have better capacity to pose many questions on IP</li> <li>I thought it was for lawyers but I will be liberalized to gain more awareness so as to pass it to the people in the rural communities</li> <li>I interact with the youth and would like to protect the intellect in them; to pass over more with confidence to help link them up with institutions; know what is to be protected or not</li> <li>Learn the legal procedures involved in obtaining, commercializing and protecting an invention/patented product/patent</li> <li>Stimulate trained colleagues to take up IP activities, protect indigenous knowledge especially as concerns discovery of medicinal plants and their therapeutic potential</li> <li>Know whether copyrights are territorial as IPRs</li> <li>Liberia to be included in ATPS IP programme to enable her have control over its resources</li> <li>Learn experiences of IP project and how to use IP experience to initiate action on Cote d'Ivoire or other francophone countries</li> </ul>	<ul style="list-style-type: none"> <li>How do we harvest and protect knowledge in traditional medicine/folklore?</li> <li>Why don't we refer to traditional knowledge as traditional scientific knowledge?</li> <li>How do we broaden and strengthen our campfire programmes in access benefit sharing?</li> <li>What are the gaps that lead to Africa's exploitation in IPs?</li> <li>How do you harvest knowledge from reluctant or superstitious elders?</li> <li>What role does ARIPO play vis a vis WIPO?</li> <li>Does Africa invent anything? If so, what are some of these inventions? Are they protected, if not, why not?</li> <li>How do we protect that which belongs to the community?</li> <li>What does the 'NAGOYA PROTOCOL' have on IP and what is IP in International Trade?</li> </ul>	<ul style="list-style-type: none"> <li>Protect what people have and make it accessible to those who need it the most</li> <li>I am a member of a research committee interested in IP</li> <li>The Zimbabwe Chapter intends to reactivate its working groups across the country. It intends to make a dedicated strategy to involve women and youth in its approach to STI. Universities will be key partners in the next strategic plan. The same applies to relevant government agencies and NGOs, Higher degree students will be encouraged to undertake projects under ATPS (HOODIA GORDONI CASE)</li> </ul>

<ul style="list-style-type: none"> <li>• Conflict between the role of a scientist vs. the role of an IP generator</li> <li>• The lack of IP awareness at the grass root level.</li> <li>• Ignorance of the IPR laws and their application</li> <li>• The process of applying for IPR is long and expensive.</li> <li>• Inadequate inventors/innovators who really need IPR might not have easy access to it</li> <li>• Loss of IPR to foreigners</li> </ul>	<ul style="list-style-type: none"> <li>• To learn new challenges in order to raise awareness among traditional healers, young scientist; to protect indigenous or local scientific knowledge</li> <li>• Understanding collaboration and partnerships in relation to IP ownership/sharing and the implications of open sources for IP</li> <li>• Learn more on how benefit sharing can be equitably organized especially in areas of drug discovery</li> <li>• We shall be able to ensure 100% ratification of Swakopmund Protocol and NAGOYA Protocol, Develop a database on traditional knowledge and associated genetic resources for offence and defense.</li> <li>• To use the experience/knowledge/information to increase the effectiveness of any organization in service delivery to rural communities</li> <li>• To establish networks with others with whom knowledge/information could be shared now and the future on IP issues</li> <li>• Research on philosophies of hypnoses/ethnographic research, review purport system for innovations on TM, Monopoly team review for African healers, Secrecy regime to be addressed later after innovations, adaptation of protection systems in TM for present soil genesis</li> <li>• The training will show us how to overcome the fears</li> <li>• Know how to bridge the gap that exists between those who are pro-IPR and against IPR during promotion of IP at national level</li> </ul>	<ul style="list-style-type: none"> <li>• How can I expand my consciousness on issues of IPR when one or four people are involved in a cure?</li> <li>• How can we tap on the energy(spiritual) that accompany or influence the curing properties of plants – in the case of traditional healers and indigenous system?</li> <li>• What is community property rights?</li> <li>• How can grassroots innovators and artists benefit from this exercise e.g. artists like musicians who have so much plagiarism? Next week we have Belgians coming to our community to produce a film. How can our community produce a film? How can our community be assisted to have IPR legally? I need to go back and discuss with our communities how next week we can handle the situation.</li> <li>• Who is going to ensure that the IP legal &amp; policy framework is implemented?</li> <li>• How can we practically carry out bio prospecting in Africa?</li> </ul>	<ul style="list-style-type: none"> <li>• IP is an incentive for promoting STI at personal level it protects material right and raises self-actualization. At national level, it helps define state of STI as it serves as indicator for innovation.</li> </ul>
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#### 4.4.2 Examples of International Agreements and Organizations for the Protection and Enforcement of Intellectual Property Rights

*Ms. Millicent Ligare, Mount Kenya University, Nairobi Campus*



*Ms. Millicent Ligare  
Member, ATPS Kenya Chapter*

Ms. Ligare started by giving examples international agreements and organizations for the protection and enforcement of intellectual property rights. She discussed two international agreements/organizations as follows:

##### **World Intellectual Property Organization (WIPO)**

According to Ms. Ligare, WIPO was established by the WIPO Convention in 1967 with a mandate from its member states to promote the protection of intellectual property throughout the world through cooperation among states and in collaboration with other international organizations. It is dedicated to the promotion of innovation and creativity for the economic, social and cultural development of all countries through a balanced and effective international intellectual property (IP) system.

Its diverse activities include:

- > Administering multilateral treaties and working with Member States to support the evolution of the international legal framework for IP
- > Providing global IP services that make it easier and more cost-effective to obtain protection internationally for new inventions, brands and designs; and providing arbitration, mediation and other alternative dispute resolution services
- > Assisting governments and organizations in establishing national IP and innovation strategies, developing appropriate regulatory frameworks and building the infrastructure and human capacity needed to harness the potential of IP for economic development
- > Developing technical platforms to facilitate work sharing among IP offices; and developing free databases of registered trademarks, designs and the technological information contained in patents to facilitate access to knowledge
- > Building awareness, understanding and respect for IP
- > Working in partnership with the UN and other organizations to identify IP-based solutions to climate change, food security, public health and other global challenges

##### **The World Trade Organization**

The World Trade Organization came into being in 1995. WTO therefore:

- > Looks at IPR's as instruments of trade
- > Administers the trade-related IPR agreements
- > Has a mechanism of dispute resolution which falls under the Dispute Settlement

- Understanding and Dispute Settlement Board
- Has a system of sanctions

## QUESTIONS, COMMENTS AND REMARKS:

QUESTIONS	ANSWERS	COMMENTS
<ul style="list-style-type: none"> <li>Why is it that we call this Intellectual Property Rights (IPR) instead of Intellectual Community Property Rights (ICPR)?</li> </ul>	<ul style="list-style-type: none"> <li>- We move to what we do not know from the one we know. IPR is what is known.</li> </ul>	
<ul style="list-style-type: none"> <li>Is there lack of government involvement?</li> </ul>	<ul style="list-style-type: none"> <li>- The government is often involved as the foreigners will always come and go straight to the ministries involved.</li> </ul>	
<ul style="list-style-type: none"> <li>Why is it that the trade is replicated?</li> </ul>	<ul style="list-style-type: none"> <li>- Africans let out a lot of information leading to biopiracy making communities lose out on TK.</li> </ul>	<ul style="list-style-type: none"> <li>➤ We ought to talk to people so as they know what can be released and to what level.</li> </ul>
<ul style="list-style-type: none"> <li>We protect work among the English and French speaking countries, can one marry the two?</li> </ul>	<ul style="list-style-type: none"> <li>- IPR are territorial. once you register in a country it remains local to that country, one should register in as many countries as possible.</li> </ul>	
<ul style="list-style-type: none"> <li>Were we (Africans) not able to write in the manner it was wanted to be written?</li> </ul>	<ul style="list-style-type: none"> <li>- Most of TK was passed orally, it was never documented</li> </ul>	
<ul style="list-style-type: none"> <li>People reason that using money from government for research means that the product should not be on sale as they already paid for it earlier. How do we go about this?</li> </ul>	<ul style="list-style-type: none"> <li>- An invention benefits the world, the research will depend on the country of origin then the outcome should benefit the country.</li> </ul>	<ul style="list-style-type: none"> <li>➤ We should restrict what belongs to the public into private hands</li> </ul>
<ul style="list-style-type: none"> <li>Is there a legal framework on animal breeds?</li> </ul>	<ul style="list-style-type: none"> <li>- The fact that it is not available doesn't mean that it is not in the community. It should be taken up. You may not be able to access the information but are able to develop the animal protection on breeding. One looks at the genetic resources done under FAO. It is available but a bit quiet unlike plant breeding. There are no IPRs for plants and animals. People are secretive on it. Animals may be protected by trade secret, design and trademark.</li> </ul>	



<ul style="list-style-type: none"> <li>• WTO's applies sanctions; why can't Aripo do it too?</li> </ul>	<ul style="list-style-type: none"> <li>- WIPO is for a country/individual to choose whereas WTO is more compulsory.</li> </ul>
<ul style="list-style-type: none"> <li>• We did not look at TK in the traditional way; they can be used to cure but it is not in the Westernized way, there is energy coming from a traditional healer. How do you patent the spirit/energy? Why can't Africa come up with something new to be able to patent the resources?</li> </ul>	
<ul style="list-style-type: none"> <li>• Which type of IP applies beyond borders of trade secrets?</li> </ul>	<ul style="list-style-type: none"> <li>- With trade secrets, one is globally protected but for the others one has to register in as many countries as possible. <ul style="list-style-type: none"> <li>➢ Scientists never want to find out what is registered and one should either improve on it or come up with a new one.</li> <li>➢ Wish to see and discuss the components gotten from IP; use existing IP not to repeat what is there, Africa should not shy away for example start agitating for animal breeding protection</li> </ul> </li> </ul>
<ul style="list-style-type: none"> <li>• IP is territorial does it hold the same for copyright?</li> </ul>	<ul style="list-style-type: none"> <li>- Many scientists publish a lot of papers which are later used by others to enrich themselves. Make it a trade secret. <ul style="list-style-type: none"> <li>➢ Many Africans do not use IPR as the ideas are there but not put into practice. Be inventive for a purpose to make progress and have monetary value.</li> </ul> </li> </ul>

#### 4.4.3 Traditional Knowledge (TK)

*Prof. Moni Wekesa, Dean, School of Law, Mount Kenya University, Nairobi Campus*



*Prof. Moni Wekesa  
Member, ATPS Kenya Chapter*

Traditional Knowledge is generally communally owned and passed on from generation to generation orally or through apprenticeship developed by communities or individuals in certain communities e.g. Traditional cultural expressions, Traditional medicine, Spiritual forces, Organic causes. The knowledge is mostly not in fixed form, and no individual can claim ownership to it and it includes intangible elements and indigenous materials, handicrafts and services. The said knowledge is 'in the public domain', is not new, and belongs to the community from which it came and relates to methods and

processes used in many areas.

#### Objectives of the training on TK

Prof Wekesa stated that the objectives of the training on Traditional Knowledge were to:

- > distinguish between Western and traditional conceptions of property
- > analyze the limitations of modern (Western) forms of intellectual property regimes in the protection of traditional knowledge
- > understand the various forms of 'alternative' approaches to protection of traditional knowledge
- > discuss the importance of traditional knowledge
- > examine the relevance of traditional knowledge in the context of ABS
- > discuss community experiences with protecting traditional knowledge

#### Classifications of TK

TK is classified as follows:

- > Traditional cultural expressions (TCE)/Expressions of Folklore (EoF)
- > Traditional medicine (TM)
- > Spiritual/metaphysical causes - Soothsaying, witchcraft, prophecies, etc.
- > Organic causes - Herbal medicine

#### Western Philosophy of Property Ownership

The following characteristics were given as Western philosophy:

- > Deontological/natural school
- > Each person has property in his/her person and labor
- > To reward an individual for his/her efforts at "creating" a new product
- > Consequentialist/utilitarian school

- > Presumes that the invention is useful to society
- > Protection is therefore granted to ensure availability of new products to society

NB: IPRs are granted to individuals

### **Traditional Philosophy**

He further noted that in TK:

- > Knowledge and property is communally owned
- > Knowledge about music, dance, medicine, arts and crafts is passed on orally
- > Knowledge is passed on from generation to generation
- > No one can claim “ownership”

Property belongs to:

- > Entire community
- > Several people spread across a community
- > Individual (e.g. powers of spiritualism)

### **Consequences of the different philosophies**

The following are the consequences that were given, of the different philosophies of property ownership:

- > Current IPR regime is based on Western philosophy of property ownership
- > Under such philosophy, traditional knowledge becomes un-protectable and subject to abuse by others
- > Local communities cannot benefit from their TK
- > There is need for a new approach to protect TK

### **Modern IPRs versus TK**

The modern IPRs were compared to TK as follows:

#### *Patents*

Patentability requires novelty - invention must be new, inventive steps followed (non-obviousness), have commercial viability, whereas TK collapses at the first requirement. “Owners” of TK do not qualify as joint “inventors”. It is possible to revoke/cancel a patent based on TK. E.g. European Patent Office revoked Azadirachta indica, USPTO revoked turmeric powder.

#### *Copyright*

Copyrightable works must be original and in fixed form. It is protectable for up to 50 years after life of author whereas most TK is not original, TK is passed on orally hence not in a fixed form. TK has existed for generations – difficult to ascertain period of protection. TK can be copyrightable through CDs, DVDs, photography, etc.

### *Trademarks*

Trademarks are used to distinguish goods or services dealt with. Collective marks are a sign used by members of an association. Trademarks and collective marks are used by indigenous communities in some countries. An individual can register a trade mark and hold it in trust for a community. Indigenous communities should be allowed to register words and symbols as trademarks.

### *Geographical regions*

They are used to protect goods from a given geographical region with characteristics unique to that region. Different regions have similar handicrafts (i.e. carvings). Medicinal plants bestride wide regions with similar climatic conditions, e.g. *Prunus africana* is found in Ethiopia, Kenya, Uganda, Cameroon and may be in other countries, the resources are more or less the same as in other countries wide spread.

### *Industrial design*

They are features of shape, configuration, pattern or ornamentation applicable to an article. Traditional culture is full of designs, motifs, emblems, patterns and other cultural objects. These cultural products have a significance attached to their use. Designs deal only with what the eye sees – not function. This form of protection is thus limited. It does not deal with the function of the resource.

## **Why protect TK?**

TK is protected in order to:

- > enable indigenous communities share in the benefits of their resources
- > prevent biopiracy
- > prevent abuse of cultural artifacts
- > prevent desecration of shrines

## **Forms of protection**

TK can be protected in the following forms:

- > Defensive (negative) protection - Prohibits abuse of TK
- > Offensive (positive) protection - Facilitates communities to benefit from TK

## **Positive protection**

Positive protection includes:

- > Use of existing IP laws where appropriate
- > Contracts (including MTA)
- > Bio-cultural protocols
- > *Sui generis* legislation

## Defensive protection

Defensive protection includes:

- > Secrecy
- > Enforcing disclosure requirements e.g. Certificates of origin, Prior Informed Consent
- > Use of Databases e.g. Traditional Chinese Medical Database, Tulalip tribes of Washington, TKDL of Ayurveda.

## International legal frameworks

The following are examples of International legal frameworks that protect TK:

- > CBD – art 8(j) – traditional knowledge
- > TRIPS art. 27(3) (b) – sui generis system
- > Nagoya Protocol – genetic resources
- > Swakopmund Protocol

## Sui generis protection

Examples of countries with Sui generis protection systems are as follows:

- > The **Philippines** Indigenous People's Rights Act 1997 recognizes community rights of indigenous people and sets to allocate benefits to communities
- > **South Africa's** Intellectual Property Amendment Bill, 2007: Seeks to integrate TK in conventional IP regimes, seeks to amend - the Performers' Protection Act, 1967; the Copyright Act, 1978; the Trade Marks Act, 1993; and the Designs Act, 1993, create a national framework to administer the protection system; a National Council for Traditional Intellectual Property, a National Database for Traditional Intellectual Property, a National Trust Fund for Traditional Intellectual Property, to administer income derived from the exploitation of TK.
- > **Kenya** - Constitution of Kenya, 2010 Act. 11(2)(c) & 40(5): The State shall promote the intellectual property rights of the people of Kenya for moveable and immoveable property. EMCA 1999 makes provisions on ABS.
- > Land Mawe project in Baringo Kenya for the Aloe Vera plant was a contract between community, investor, and Government. The investor was to put up a factory to process products from Aloe vera, pay farmers for their raw material, build/improve social facilities (schools, hospitals, churches) in the area, and avail products of Aloe vera. On the other hand, the Community was to grow, nurture and sell the crop to the Investor. The project is sustainable as government would have created jobs and a better environment around the people and ABS is guaranteed.



## GROUP WORK AND REPORTS



QUESTIONS	ANSWERS
1. In which ways are modern IPRs unsuitable for protecting traditional knowledge?	<ul style="list-style-type: none"> <li>&gt; They mostly protect individuals rather than the communities</li> <li>&gt; They are foreign based hence not suitable in African context</li> <li>&gt; It is difficult to explain the nature of TK</li> <li>&gt; TK is inherited, hence becomes difficult to be captured in incremental novelty</li> <li>&gt; In TK there is no: Absolute ownership, Commercial philosophy, Application of scientific principles and thus cannot pass some of the essential requirements of IPRs</li> <li>&gt; TK is passed from generation to generation: Continuous: Modern IPRs are time-bound</li> </ul>
2. Identify various forms of TK from your countries/communities	<ul style="list-style-type: none"> <li>&gt; Orthopedic therapy, dental care, rainmaking, food preservation Traditional farming methods, plant materials, fire making, beautification, dances, songs, land management and conservation, facing challenges to make resilient fertilizers.</li> <li>&gt; Language – music drama dance, herbal medicine, rituals, norms, communication science specific to different areas e.g. how to stop a taxi, form of dressing, religions or spiritual, hierarchies in various communities, empirical, dreams and interpretations, food and drink.</li> <li>&gt; Curative: Herbal medicines, Orthopedic therapy, Spiritual healing, Dental care, Food processing, Traditional farming, Fire making, Beautification, Folklore.</li> </ul>
3. Should the Swakopmund Protocol be the Prototype for National legislations?	<ul style="list-style-type: none"> <li>&gt; Yes, it covers wide knowledge on IP, biopiracy, cross borders but has to be modified to be across borders for Aripo to put into legislation.</li> <li>&gt; There is need to domesticate the protocol to suit indigenous national TKs</li> </ul>

4. How does the Swakopmund Protocol navigate the challenges associated with protection of TK using current forms of IPR?

- > The framework can be used but they have to make the legislature for their own country.
- > It can accommodate most of the issues we are concerned with; develop Africa, setting of our tradition; Arusha was given as an example of a place where people are going for Traditional Medicine but some quacks may be damaging the lives of people, so restrictions and sanctions should be settled to sue for damages.
- > Recognizes the diversity of TKs and provides a good framework for analysis and further deliberation.

#### 4.4.4 Concepts and Principles of Benefit Sharing: The Nagoya Protocol and Swakopmund Protocol

*Prof. Moni Wekesa, Dean, School of Law, Mount Kenya University, Nairobi Campus*



*Prof. Moni Wekesa  
Member, ATPS Kenya Chapter*

##### **Introduction to Access and Benefit Sharing (ABS)**

Originating from the 1992 Convention on Biological Diversity, the terms access and benefit sharing stem from the unequal distribution of biodiversity throughout the world, the desire by biodiversity-poor but technology-rich industrialized countries to have continued access to these resources, and the concern of biodiversity-rich but technology-poor developing countries to benefit from exploitation of their resources. Sectors involved in natural resource management such as water, mining, forests, wildlife and fisheries are now

embracing the concepts of access and benefit sharing as a way of spreading the costs and benefits of using and conserving ecosystems and their resources across actors.

##### **Learning Objectives**

Prof Wekesa described the learning objectives of Access and Benefit Sharing (ABS). These included to:

- > clarify some of the terminologies regularly used within the context of ABS
- > introduce the concepts and principles which underpin the concept of ABS
- > provide a brief overview of the actual status of international negotiations regarding ABS
- > explain the relationship between the Nagoya Protocol and other international frameworks such as the International Convention for the Protection of New Varieties of Plants; Antarctic Treaty System; the United Nations Convention on the Law of the Sea; Trade Related Aspects of Intellectual Property Rights; and the World Intellectual Property Organization
- > ensure participants understand that alternative access and benefit sharing mechanisms exist within other international frameworks

## **The Convention on Biological Diversity (CBD)**

The Convention on Biological Diversity (CBD) provides for Access and Benefit Sharing of genetic resources. This is premised on the need to conserve biodiversity. The Convention therefore recognizes three main principles of ABS. These include:

- > Prior Informed Consent (PIC)
- > Mutually Agreed Terms (MAT)
- > Fair and Equitable Sharing (FES)

These principles are echoed in the Nagoya Protocol. The SWAKOPMUND protocol also mentions these but with reference to traditional knowledge.

## **Principles of ABS**

ABS runs on 3 key principles. These include:

- > Prior Informed Consent (PIC): This entails acquiring the explicit permission of a provider country's government before access takes place, upon truthful declaration and full disclosure of the intended use of a resource. Each member state may formulate conditions under which prior informed consent is to be granted. Prior informed consent at a local level, for example from indigenous communities, is not a CBD requirement, but it is implied.
- > Mutually Agreed Terms (MAT): These are terms which commonly stipulate the legal requirements for acquisition, permitting arrangements, supply restrictions and the conditions for benefit sharing.
- > Fair and Equitable Benefit Sharing: This requires user countries to negotiate agreements with provider countries where access to genetic resources is rewarded through monetary and non-monetary means. Monetary rewards may be in the form of upfront or milestone payments, royalties on net sales or licensing agreements, these terms will vary according to country.

## **Tools of ABS**

Prof Wekesa stated that the objectives of learning the Tools of ABS were to:

- > provide a basic understanding of the concept of the particular situation and needs of the agricultural sector
- > provide a basic understanding of the background to the International Treaty on Plant Genetic Resources for Food and Agriculture
- > instil a working knowledge of the standard material transfer agreement and associated processes
- > review the evolving ABS policy framework in specific African countries pursuant to the CBD
- > outline the general legal process for ABS
- > provide an overview of African countries that have signed the Nagoya Protocol

## **International Treaty on Plant Genetic Resources in Agriculture**

The International treaty in Agriculture has a framework for sustainable use of plant genetic resources for food and agriculture. Access and benefit sharing is for limited crops. There is an agreement on standard material transfer; the terms are standardized, there is no need for individual negotiation, there is no fear of being taken advantage of and the enforcement is by a neutral body. The agreement facilitates production of a new variety and more materials can be produced then the new one can be commercialized and the money goes back to the treaty to provide support to; where the materials came from.

## **Country case studies on ABS**

### *Kenya*

The Environmental Management and Co-ordination Act (EMCA) created the National Environment Management Authority (NEMA) in 1999. The rules on ABS exist based on CBD and Bonn Guidelines. The Ministry of Gender, Culture and Social Services licenses traditional healers. But there is no co-ordination between the ministry and NEMA in conservation of genetic resources.

### *Seychelles*

Seychelles has an Access to Genetic Resources and Benefit Sharing Bill aimed at taking care of their marine environment and to encourage and develop research in genetic resources.

### *Tanzania*

ABS in wildlife conservation: The Tanzanian wildlife policy was approved in 1998. It advocates for the participation of local communities in the conservation of wildlife resources and in the sharing of accruing benefits. The vision of the wildlife sector in Tanzania is to; promote fair and equitable sharing of benefits and promote sustainable utilization of wildlife resources.

### *South Africa*

The 2004 Biodiversity Act promulgated for fair and equitable sharing. In April 2008, the ABS rules involved Stakeholders including landowners and indigenous communities. Benefit-sharing was to involve both stakeholders as the Act stipulates what forms the contents of Benefit-sharing agreements. The Minister is empowered to approve agreements including MTAs and Bio-prospectors.

## QUESTIONS, COMMENTS AND REMARKS

QUESTIONS	ANSWERS
<ul style="list-style-type: none"> <li>Concept ownership, in Africa, means one thing whereas in the modern society another. There is no absolute ownership in Africa, how do we harmonize the concepts?</li> </ul>	<ul style="list-style-type: none"> <li>Owning the property on behalf of others. The benefits approved from it go to members of the community.</li> </ul>
<ul style="list-style-type: none"> <li>What is considered a national competent authority?</li> </ul>	<ul style="list-style-type: none"> <li>It is usually handled by different offices in the government. The government should come up with the authority to know how they all benefit from TK.</li> </ul>
<ul style="list-style-type: none"> <li>Do governments involve the communities before giving authority to investors?</li> </ul>	
<ul style="list-style-type: none"> <li>What is the knowledge basis of; for example, traditional healers to share information; who may register it?</li> </ul>	<ul style="list-style-type: none"> <li>The TH should register. Being territorial, the country will have control in the particular country it is registered. We should accept that it is bound to be shared.</li> </ul>
<ul style="list-style-type: none"> <li>How does the protocol relate to the AU?</li> </ul>	<ul style="list-style-type: none"> <li>AU is broader in scope and swakopmund is newer and not much on biopiracy.</li> </ul>
<ul style="list-style-type: none"> <li>IPR protects in countries where it is registered or has cooperating channels, if one came and took TK and replicated it, what would happen to them?</li> </ul>	<ul style="list-style-type: none"> <li>One will solve the case at WTO</li> </ul>
<ul style="list-style-type: none"> <li>If my country is not under Aripo - How will an African country who wants to join it go about the issue?</li> </ul>	<ul style="list-style-type: none"> <li>The country has to register to be under Aripo.</li> </ul>
<ul style="list-style-type: none"> <li>How do you ensure that the other party coming to the community will not exploit the community?</li> </ul>	<ul style="list-style-type: none"> <li>The protocol is between the nations, the understanding that they have.</li> </ul>
<ul style="list-style-type: none"> <li>How will the investors take serious the IP issue?</li> </ul>	
<ul style="list-style-type: none"> <li>In Kenya; Nema, Kenya Forest services, KWS are going head to head, what is the way forward?</li> </ul>	<ul style="list-style-type: none"> <li>There have been walls with the different organizations and the policies need to be harmonized and have them working toward the same goal.</li> </ul>
<ul style="list-style-type: none"> <li>What is the role of national government in the protocol, what is expected of the member of state to do?</li> </ul>	<ul style="list-style-type: none"> <li>If a nation commits itself to the swakopmund protocol then they have to deliver on it.</li> <li>They ratify and domesticate the protocol</li> </ul>



## GROUP WORK

The participants broke into groups to discuss the following questions:

1. Discuss the principle of ABS in relation to the SAN HOORDIA PLANT. The SAN PEOPLE (BOTSWANA, NAMIBIA, SOUTH AFRICA)
  - > Own knowledge on the hoordia plant
  - > Have used this knowledge for centuries
  - > Appetite suppressant
  - > Medicine for obesity
  - > CSIR registered patents
  - > Commercialized internationally
2. Is traditional medicine “witchcraft”

## REPORTS FROM GROUP WORK

QUESTION 1: Discuss the principle of ABS in relation to the SAN HOORDIA PLANT	QUESTION 2: Is traditional medicine “witchcraft”
<p><b>GROUP 1</b>  <b>Key Observations from the Case study</b></p> <ul style="list-style-type: none"> <li>&gt; CSIR included <i>Hoordia gordonii</i> in project without knowledge or prior informed consent of the San people contravening the principles of sui generis</li> <li>&gt; The patenting process is subject to abuse by CSIR. The plant presents a lot of opportunities for the benefit of the San people but with limited access to benefit sharing due to exclusive IPR claimed by CSIR in the patent</li> </ul> <p><b>Internal strengths of the San to increase access and benefit sharing</b></p> <ul style="list-style-type: none"> <li>&gt; Recognition as custodians of the body of TK associated with <i>Hoordia</i> by agreement</li> <li>&gt; Presence of SASC as negotiating agency mandated to represent the San in Botswana and Namibia</li> <li>&gt; Indigenous knowledge on use of <i>Hoordia</i> as suppressant for hunger</li> </ul> <p><b>Internal weaknesses of the San</b></p> <ul style="list-style-type: none"> <li>&gt; Inadequate negotiating capacity that gave CSIR an upper hand: exclusivity clause, low percentage of royalties (6%)</li> <li>&gt; Inability for collaboration with other potential investors due to exclusive rights transferred to CSIR</li> <li>&gt; Low capacity for active engagement in bio-prospecting in collaboration with CSIR without engaging other parties</li> <li>&gt; Vulnerability to bio-piracy since prior informed consent is not sought by CSIR</li> </ul> <p><b>Opportunities</b></p> <ul style="list-style-type: none"> <li>&gt; Portfolio balance of the patents claims good for risk management and increasing benefits to the San people at fixed percentage</li> <li>&gt; Access and benefit sharing agreement with royalties of 6 % and milestone income of 8 % a good start for the San</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Witchcraft has been defined as 'abuse of traditional medicine' and hence has negative connotations; the term witchcraft is regarded as abusive itself</li> </ul> <p>Affirmative nomenclature uses 'spiritual healing' as an alternative positive connotation of the term 'witchcraft' and the two are no longer considered as synonymous. Thus witchcraft is applied necessarily to inflict harm or even homicide on intended victims, while spiritual powers are applied for example in rain making, fighting enemies, treatment of fractures, foretelling the future or arresting imminent future bad omens.</p>



- > Application of best practice procedures in plant collection good for sustainability
- > Collaboration in future prospecting
- > High market growth due to increasing global concern for obesity: opportunities for international trade
- > Opportunities for additional benefits for the San from additional trade in raw harvested materials not covered by the CSIR patents
- > Opportunities for packaging of non-patented products in form of bars, herbal pills and beverages

#### **Threats**

- > Exclusivity clause in the agreements tantamount to monopoly, limits future negotiation opportunities
- > Withdrawal of hoordia licensees from the business stalling hoordia development
- > Limited opportunities for further partnerships due to appropriation of exclusive rights to CSIR

CSIR's attempt to do research on the *Hoordia gordonii* without prior consent or knowledge of the San is precedent for possible future exploitation and bio-piracy

#### **How can access and benefit sharing opportunities to the San be increased?**

- > Engage independent IPR expert and/or international advocacy agency in further negotiations on the appropriation ratios for the San (6 % still low: others in the Southern countries are using 51 % for the TK owners/custodians)
- > Increase capacity building for the San for increased awareness creation, and skills in bio-prospecting
- > Benefits should be shared in proportion to the stock levels among the three countries where the San live
- > Examine the possibility for rescinding the CSIR agreement/patent or at least the exclusive rights clause so that the San gain higher negotiating leverage by engaging other institutions to compete with CSIR

#### **GROUP 2**

- > Revoke the patent
- > Draft a contractual agreement with all parties.
- > Engender legislative framework in the 3 countries based on the Swakopmund Protocol
- > Commercialization.
- > It is under tradition knowledge
- > There are good practices and bad practices

#### **GROUP 3**

- > Joint ownership and negotiations for compensation according to Nagoya
- > Once they have made Nagoya and Swakopmund into country legislatures, then they can take them into task according to law to make sure that the San people benefit (Trans-boundary challenge - harmonize amongst the countries, SADC).
- > No: But the traditional medicine can be used to practice witchcraft!
- > Witchcraft is the use of magic or herbs to do bad upon others or just benefit self through unclear means!!
- > Traditional medicine is the use of herbs or practices to heal or bring about good to other people!

#### **GROUP 4**

- > Alleged use of supernatural power to do bad deeds
- > Witchcraft exists all over the world.
- > It was used to teach children to grow up morally upright with the fear that if they do something wrong, something will happen to them

#### GROUP 5

##### Principles

- > SAN People were entitled to benefit sharing from Hoordia plant
  - > At the time when plant products were commercialized, there were protocols compelling benefit sharing like CBD conventions, Nagoya, Swakopmund.
  - > SAN people ended not benefiting from profit-sharing
  - > Once they have domesticated Nagoya and Swakopmund can negotiate for benefit sharing of profits from the commercialization of the plant products.
  - > If negotiations fail, the patents can be challenged and cancelled.
- > No: traditional medicine has positive connotation, while witchcraft has negative connotations.
  - > Witchcraft is abuse of traditional knowledge, herbs and spirits to cause harm.
  - > Traditional medicine is the use of herbs and traditional practices to heal or cure diseases.

#### 4.4.5 Nagoya and Swakopmund Protocols

*Ms. Millicent Ligare, Mount Kenya University, Nairobi Campus, Moi Avenue*



*Ms. Millicent Ligare  
Member, ATPS Kenya Chapter*

##### The Nagoya Protocol

According to Ms. Ligare, the Nagoya protocol was adopted at the tenth meeting of the Conference of the Parties on 29th October 2010, in Nagoya, Japan. It advances the Convention on Biological Diversity's (CBD) third objective by providing a strong basis for greater legal certainty and transparency for both providers and users of genetic resources. Nagoya has been premised on the basis of it being a legally binding instrument, linked to the idea of promoting a more genuine consensus. Nagoya Protocol does not provide significantly more detail than the original CBD text. Protocol creates a dedicated forum for addressing and resolving the myriad challenges around access to genetic resources. It creates some form of obligation for countries to consider policing the use of genetic resources in terms of compliance with commitments to providers. It does not add so much on the CBD but gives the legal authority to the countries.

##### The Swakopmund Protocol

The Protocol defines traditional knowledge as any knowledge originating from a local or traditional community. That is the result of intellectual activity and insight in a traditional context, including know-how, skills, innovations, practices and learning, where the knowledge is embodied in the traditional lifestyle of a community, or contained in the codified knowledge systems passed on from one generation to another. The term shall not be limited to a specific technical field, and may include agricultural, environmental or medical knowledge, and knowledge associated with genetic resources on the protection of Traditional Knowledge and Expressions of Folklore within the Framework of the African Regional Intellectual Property Organization (ARIPO). It was adopted on 9 August 2010 (Harare). It

was signed by nine ARIPO member states, namely, Botswana, Ghana, Kenya, Lesotho, Liberia, Mozambique, Namibia, Zambia and Zimbabwe. Any state that is a member of the African Union or the United Nations Economic Commission for Africa may also sign up to the Protocol. It affirms the principle that traditional or local communities are the custodians of their TK, its associated GRs and TCEs, and empowers them to exercise rights over their knowledge and resources. It provides the necessary tools to prevent the ongoing misappropriation of traditional knowledge and traditional cultural expressions in Africa. It recognizes the need to respect, recognize and protect Africa's abundant multi-ethnic character, as well as its rich cultural heritage and TK. It articulates and amplifies the shared position of African countries relating to collective or community rights and the sharing of benefits accruing from the commercial exploitation of their biological resources, TK and TCEs.

#### 4.4.6 Bioprospecting and Biotrade

*Prof. Moni Wekesa, Dean, School of Law, Mount Kenya University, Nairobi Campus*



*Prof. Moni Wekesa  
Member, ATPS Kenya Chapter*

Prof. Wekesa noted that the objectives of the training on bioprospecting and biotrade were to:

- > expose participants to the concept and characteristics of bioprospecting and biotrade
- > explore approaches adopted towards benefit sharing within the biotrade context
- > highlight recent developments with the Nagoya Protocol and their relevance to biotrade

#### **Bioprospecting**

Biodiversity Act recognizes land owners and communities as stakeholders. Bioprospecting entails exploration of biodiversity for commercially valuable genetic and biochemical resources. World Conservation Union puts it as research, collection and utilization of biological and genetic resources for purposes of applying the knowledge derived therefrom for scientific or commercial purposes. The 2004 Biodiversity Act recognizes land owners and communities as stakeholders. Bioprospectors must therefore seek permission from stakeholders and guarantee that benefits are shared with them.

#### **Biotrade**

There is commercial collection, processing and sale of products from biodiversity, e.g.

- > Devils claw tubers for pharmaceuticals
- > Gum arabic for food industry

> Argan oil for cosmetics industry

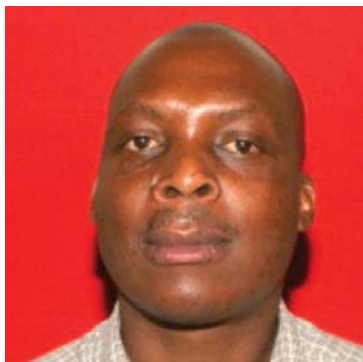
Biotrade is poorly developed in Africa and stakeholders rarely benefit from it, for example the Landmawe case in Kenya. The plant *Prunus africanas* fetches about 200m USD annually for pharmaceutical companies outside Africa. In Kenya's Shimba hills, a plant having an agent for curing cancer was picked to make products for curing cancer.

Prof Wekesa encouraged the participants to learn more on the knowledge we have in Africa as we have untapped source of information in biotrade and bioprospecting yet it is not exploited.

COMMENTS/QUESTION	RESPONSE
Lesotho had a culture where the women belonged to everyone after their husband died and they would be given some liquid to take to fatten them, which was later used to make medicine that helped patients with AIDs to add weight. The community is not benefiting from it. How can one deal with cross borders biopiracy?	The government has powers to make contracts and agreements and it is upon them to do just that.
Bioprospecting is as it is because trading, marketing and conservation take long procedures yet people want to take shortcuts hence the nation loses out. Research should be encouraged not referred to as biopiracy. With the treaties that are in place we know that we have rights. The Nigeria case where the researcher wrote a paper and someone used knowledge from it was not biopiracy. The conflict lies between trade control, marketing and application of the legislature.	The products from research should benefit the society that IP looks out for the community, to get something for their information and not to have one millionaire.
COMMENTS	
<p>In Swazi, old women who stay alone and have no one to help them are killed stating that they killed their children. There are rituals performed that the knowledge is not shared with others, and said that Africa should write books on their rich culture but it is kept secret as it should not be given to all.</p> <p>On research ethics for TH and which has benefits operant to the TH, the Botswana look down on a particular sub tribe and use the people to run errands and aren't paid anything for their services.</p> <p>Bioprospecting and Biotrading is like when the MPs in Zimbabwe resisted circumcision as they claimed that the fore skin is taken to the laboratories and is amplified and creams and skin generating products are manufactured from them.</p> <p>My organization stopped getting funds and exploitation carried the order of the day. It then took the CSR, National level, policy level and the organization to change the policy of the institution.</p> <p>In Kenya, the western culture is aped more and there is a tendency to forget the African culture. No one wants to be seen taking traditional medicine hence we lose the knowledge on it and the next generation does not have an opportunity to learn from the older generation. There is a need to find means to conserve the knowledge lest it be exploited.</p> <p>Witch hunting is not coined from Africa but Europe; it has not been developed to be a big picture. He urged the other participants to combine different tools and look into the area to enhance development in Africa. Indigenous knowledge entails a lot and should be integrated in the curriculum. He said that before we take up the westernized version, we should take up the African one too.</p>	

#### 4.4.7 Zimbabwe Camp Fire: A Case Study

*Darlington Ndlovu, IDS/UZ, Research Assistant, Harare, Zimbabwe*



*Darlington Ndlovu  
Member, ATPS Zimbabwe Chapter*

Mr. Ndlovu presented the case of Zimbabwe Camp fire noting that the project is based on conservation of resources in particular game reserves so that they can be tamed and be used as valuable resources. The communities get 80% of the proceeds derived from the project. He stated that the challenge they have is that its sustainability depends on other bodies.

#### 4.4.8 Patent Registration

*Mr. Stanley Atsali, Patent Examiner and Head, Traditional Knowledge and Genetic Resources Unit, Kenya Industrial Property Institute (KIPI), Nairobi*



*Mr. Stanley Atsali  
Member, ATPS Kenya Chapter*

According to Mr. Atsali, patents are documents that offer exclusive rights to a patent holder on his/her product or process. He informed the audience that most patents come from universities, and gave an example of the Michigan State University which has patents that are more than those of the entire Africa. He said that all patent agreements should have a closure agreement with interest to the community. He said that Africa was awakening, and urged everyone to be like the Maasai morans who take the prey from the lion. He also cited an example with the snake bite remedy, which he urged researchers to identify the resources then carry out tests on it and then make a patent out of it.

#### Patent requirements

Describing the requirements for a patent, Mr. Atsali noted that a good patent must have; a good title, abstract, disclosure, area, background - what is there, what is not and then the solution. Then one should link the claim to the title and add characteristics of the patent. He stated that patent protection is given for 20 years; afterwards, it becomes available for use by anyone. He asked the participants a question that should linger in their minds: “How many patents are available?” He said that the patent comes with conditions that if an application is given, it should be able to work after four years.



QUESTION	ANSWER
Does Kenyan law patent TK and how does it apply?	Under Kenyan law we can protect Traditional Healers (TH) as long as one shows how they do it; using utility model which looks at the knowledge and whether there is industrial use for it.
What are the financial implications for the communities in relation to ABS?	The community benefits; patents being expensive, there is a maintenance fee, if one knows there is no commercial value, think twice about handing it in. Technology transfer offices are in place in universities, they should assess if they have commercial value. One can start contractual gains with different bodies and gain from their inventions.
The patenting of plant – active ingredients coming from plants; can one patent an organism?	One can have several protections for several things, a trademark, patent, etc. depending on one's needs.
Factoring the community rights in the community, having a disclosure, what can be done if the procedure legally requires the community?	Outsiders come in to exploit our resources, some patents are pathetically written with no consideration on the Traditional Healers; the processes need to be rethought as it is the link point to repackage TK to the modern environment. The institutions are key to the issue of the mechanisms put in place to integrate TK with classical knowledge. The cost of patenting can be high and tiring.
When applying for patent is the model part of the application?	Other than patents, there are utility patents and there are models used to determine whether it is a patent or not.

#### 4.4.9 Work plans for National Chapter IP Programmes on Public Awareness on Traditional Knowledge and Access and Benefit Sharing for 2012

##### UGANDA

*Prof. Joseph Obua, Regional Coordinator, Lake Victoria Research Initiative (VicRes), The Inter - University Council for East Africa*



*Prof. Joseph Obua  
Member, ATPS Uganda Chapter*

##### Preamble

Uganda is one of the ATPS Chapters implementing the IP programme under the ATPS Phase VI Strategic Plan (2008 – 2012). The 2012 Work Plan is anchored on the need to recognize traditional knowledge systems and to increase access to benefit sharing (ABS) as part of the wider effort to protect intellectual property.



## Goal

To build on the achievements made during the year 2011 with a view to increasing ATPS' contribution in strengthening IP Policy and Legal Framework in Uganda.

Objectives of the planned activities including sharing of information on the importance and relevance of TK and IP in Uganda. Through the IP programme, the chapter will also seek to demonstrate linkages between IPR and ABS and also provide evidence-based policy guidance.

The strategies/methodologies proposed by the chapter to ensure that the success of the activities include:

- i. Breakfast meeting and consultative dialogue: to sensitize and increase awareness on IK and IPR in Uganda (target group include Members of Parliament sitting on the Science and Technology Committees)
- ii. Dialogue with and Training of civil society organizations
- iii. Sensitization and Training of IK and IPR Practitioners and Users
- iv. Sensitization, collaboration with and involvement of the Media

## SWAZILAND

*Prof. P.S. Dlamini, Prof. N.A. Sukati, Prof. P.E. Zwane, Prof. A.M. Dlamini, Dr. R.L. Vilakati, Dr. M. A. Dube, Ms. Queen Matsebula*



*Prof. P. E. Zwane  
Member, ATPS Swaziland Chapter*

### Background

Swaziland is party to many IPRs agreements, such as TRIPs and Convention of Biological Diversity (CBD). The challenge is in operationalizing these agreements for national concerns such as food security, poverty alleviation, economic development, biodiversity and health.

However, more challenging is balancing the national aspirations with community and private rights. In Swaziland, there are no laws on Traditional Knowledge (TK), despite having participated in the development of the TK protocol. On legislation, the national IPR has legislation on trademarks and industrial designs which include copyright and related rights. One of the major challenges faced by the public in Swaziland is the lack of awareness on the importance of TK and ABS issues in economic development.

### Purpose and Objectives

The overall aim of the project is to create public awareness on TK and ABS issues in order to facilitate the establishment of laws on TK and ABS, based on the Swakopmund Protocol.

Specifically, the project is meant to:

- > Sensitize the public on TK and ABS.
- > Improve access to information on TK and ABS.
- > Develop a broad understanding on the need to integrate ABS in innovation strategies and business planning
- > Enhance the protection of TK and ABS achievements through increased registration of rights
- > Facilitate the drafting of laws for the protection of TK from infringements and bio-piracy.
- > Enhance intellectual property management and licensing

### **Methodology**

Public awareness on TK and ABS would be created using print, audio and electronic media.

- > Phone-in programmes through radio and television will be established. Articles on TK will be written in newspapers.
- > Brochures on TK will be developed and distributed around the country.
- > Open lectures will be conducted to educate the public on TK and ABS.
- > Awareness workshops, seminars, focus groups and round table discussions for different stakeholders.
- > Individual consultative meetings with policy makers.

### **List of Stakeholders**

- > Association of Swaziland Theatre Groups
- > Association of Christian Artists in Swaziland (ACASWA), Swaziland Arts and Music Association (SWAMA), Media Association
- > Umdlandla writers, Author's Association of Swaziland
- > Traditional Healers Association
- > Royal Swaziland Police
- > Swaziland Revenue Authority (Customs) Officials
- > Swaziland Standards Authority (SWASA)
- > Swaziland Enterprise Development Company
- > Vocational Institutions (MITC, SITC, NITC etc.),
- > Researchers, Tertiary Education Institutions or academia, home-industry businesses.
- > Government ministries (Environment, Health, Agriculture, Natural Resources, Sports Youth and Culture, Information Technology and Communication, Justice),
- > Royal Science and Technology Park, National Trust Commission, NGO's, Farmer's Union, Association of Plant Breeders and Gene Pool.

## Conclusion

Public awareness will aid the stakeholder's involvement in giving input towards the development of a policy framework on TK and ABS.

## ETHIOPIA

*Mr. Wondwossen Belete, Ag. National Coordinator, Director of Intellectual Property Protection and Technology Transfer, Ethiopian Industrial Property Organization (EIPO)*



*Mr. Wondwossen Belete  
Coordinator, ATPS Ethiopian Chapter*

### Legal framework

The law for the protection of Plant Breeders' rights (2006) gives farmers the right to:

- > save, use, exchange and sell farm saved seed or propagating material of farmers' varieties
- > use protected varieties including materials obtained from gene banks to develop farmers' varieties
- > save, use, multiply and process farm saved seeds of protected varieties

The law on Access to Genetic Resources and Community Knowledge (2006) gives local communities the rights to:

- > regulate access to their community knowledge
- > use and exchange their genetic resources and knowledge
- > share the benefits arising out of the utilization of their genetic resources and community knowledge

### The Administrative framework

- > Institute of Biodiversity conservation responsible for the administration of the law on access to genetic resources and community knowledge
- > Ethiopian Intellectual Property Office responsible for IP policies including those which relate to the protection of TK
- > Ministry of Agriculture responsible for plant breeder's rights and farmers' rights related issues

### Membership in International Treaties

- > Convention on Biodiversity
- > International Treaty on Plant Genetic Resources for Food and Agriculture
- > Agreed to the African Model Law on Community Farmers' and Plant Breeders' Right and Access to Biological resources.
- > Negotiating to join the World Trade Organization (TRIPS Agreement)

## Challenges

Despite the laws, existence of administrative agencies and membership to international treaties, the problems of TK holders persist in Ethiopia. Key challenges include:

- > Misappropriation of the knowledge by outsiders
- > TK holders do not get fair benefit from the exploitation of their knowledge
- > Erosion of traditional practices due to increasing dominance of modern knowledge in different sectors
- > Lack of interest by the young people to acquire the knowledge and carry on with the traditional practices
- > Low level of awareness about the nature of traditional knowledge and its significant role in the socioeconomic life of the people

In order to address these challenges, the following suggestions have been made for the key stakeholders in the country:

- > *Policy makers* - should commit to integrating traditional knowledge in the relevant government policies.
- > *Researchers* - should commit to creating a mutually beneficial relationship with the holders of traditional knowledge.
- > *Local communities* - should commit to the protection of TK for the purposes of economic, environmental, social and other values.
- > *The media* - should commit to the dissemination of proven information on TK and its role in the development of the economy.

## Objectives of the plan

1. Contribute to evidence-based policy making for the protection of traditional knowledge and the establishment of an effective access and benefit sharing regime in Ethiopia by providing the necessary information for consideration of policy makers.
2. Equip traditional knowledge holders and traditional communities with the necessary information and encourage their active participation in the formulation of national policies
3. Create a network of policy analysts, researchers, representatives of civil society organizations, the private sector and policy makers for sustained policy dialogue on the key issues of intellectual property rights, traditional knowledge and access and benefit sharing

## Expected outputs/impacts

1. Integration of intellectual property and traditional knowledge-related considerations in government policies, laws and plans
2. Improved participation of stakeholders in the policy and law making process on IP and

traditional knowledge

3. Increased numbers of public and private sector institutions and local communities with enhanced awareness about the protection of traditional knowledge and the key issues of access and benefit sharing
4. A networked community of scholars, policy makers, civil society organizations and private sector actors who collaborate to promote the rights of traditional knowledge holders in Ethiopia

### Major activities

- > Identification of relevant target groups for the awareness creation activities
- > Preparation of awareness creation materials
- > Dissemination of information through electronic and print media
- > Deliberate on the changes required at the policy and institutional levels to strengthen traditional knowledge systems
- > Draw up strategies and methods to influence policies
- > Discuss on findings of studies made on the situation of traditional knowledge and intellectual property rights in Ethiopia
- > Identify the support to be extended to TK holders to acquire, exercise, manage and enforce their rights
- > Initiate the development of strategies for wider popularization activities on traditional knowledge, genetic resources and intellectual property protection.

## LESOTHO

*Prof. Ramoshebi I. M. Moletsane, Mentor/ Consultant, Training Skills Centre, Lesotho*



*Prof. Ramoshebi Moletsane,  
Member, ATPS Lesotho Chapter*

In his opening remarks, Prof Moletsane informed participants that the election processes in Lesotho had affected the implementation of the case study in the country. However, he noted that the chapter had put in place the following plan of actions:

1. A meeting in December to update members on the outcomes of the 2011 ATPS workshop and AGM.
2. A special meeting with stakeholders on Intellectual Community Property Rights (ICPR). Such meetings will be held regularly after the elections to train others in ICPR and involve institutions and communities in raising awareness regarding protection of TK.



3. Evaluate activities to find out the current position in the country and seek on how to partner with other international organizations such as the United Nations Programmes in specific activities of interest.
4. Invite delegates to Lesotho during the next ATPS Annual Conference and workshops.

## ZIMBABWE

*Dr. Donald Peter Chimanikire, University of Zimbabwe, Institute of Development Studies*



*Dr. Donald Chimanikire  
Member, ATPS Zimbabwe Chapter*

### Introduction

In his opening remarks, Dr. Chimanikire noted that Zimbabwe had made commitments to ToT, TK and IP and observed that they have plans to revitalize the groups by including universities as key stakeholders. He informed the audience that IP was very active in Zimbabwe which is also the host country for the African Regional Industrial Property Organization (ARIPO), thus making the government very supportive to IP issues in the country.

He proceeded to discuss the Zimbabwe IP Work Plan 2012 comprised of two components. The first is the research in traditional knowledge and dissemination of the findings and the second component is the general awareness on the Intellectual Property with regard to Traditional Knowledge.

### Research Activities

The overall objective of the research project which will be carried out in 4 districts in Zimbabwe is to contribute towards better understanding and strengthening of national policies and the legal framework which governs TK, Access and Benefit Sharing (ABS) and effective Intellectual Property (IP) systems in Zimbabwe.

A research proposal has already been submitted to ATPS, comments were made on the proposal and it was resubmitted. The research work is expected to conclude by March 2012.

### Dissemination of findings and Awareness campaign on IP on Traditional Knowledge

For greater effect, the dissemination of findings and awareness campaign targeted the following groups and institutions:

*Traditional herbalists' communities* – The participatory methods will entail capacity building in terms of sharing information with traditional healers on national policies and legal framework for traditional medicine (TM) practice and intellectual property rights. Dissemination seminars of the report will have a training component.



*The wider public* - The project will sensitize the public on the importance of protecting TK and traditional medicine through the media, dissemination through posters and other appropriate promotional materials and training of media personnel.

*Key institutions* - These will be involved in the research process where appropriate while ensuring that the sharing of information and other key resources is fair and acceptable to all. The sharing of information will also involve training in IP on traditional knowledge.

*Government* - A ministerial committee was set up to look into issues of IP in Zimbabwe. This project is intended to compliment the national efforts in IP policy formulation, dissemination and awareness. In a way this is also in response to the approaches made by the IP Office to ATPS for technical and financial support in their efforts to come up with an IP national strategy and Policy, which they are yet to put in writing.

## **MALAWI**

*R. Chirwa, PhD; J. Bokosi, PhD; Mloza-Banda, PhD*



*Dr Chirwa  
Member, ATPS Malawi Chapter*

Dr Chirwa identified institutions and personnel ear-marked to participate in the intellectual property rights (IPR) program in the Malaaawi to include all STI stakeholders such as universities, research institutions (private, government), NGOs, District Officers, Enviromental Officers, Agricultural Officers, and Natural Resource Manager at the district and national levels. He noted that with the support of the National Steering Committee members, the ATPS/BTA, the country will be able to review existing legislations on IPR, ABS, and TK, and move ahead to awareness creation on the need to have a robust policy on IPR with achievable strategies for implementation.

## KENYA

Mr. Kenneth W. Aduda and Prof. Francis B. Mwaure



Prof. Francis B. Mwaure  
Member, ATPS Kenya Chapter

### Introduction

Kenya is endowed with a wealth of traditional knowledge (TK) and traditional cultural expressions (TCE) which currently are being exploited at a very low level. This is even as the administrative and legal frameworks for management of Intellectual Property (IP) rights are already in place in the country. Such frameworks are embedded in institutions charged with the mandates of managing IP issues in the country such as the Kenya Industrial Property Institute (KIPI), the Kenya Plant Health Inspectorate Service (KEPHIS) and the Copyright

Board. There are existing Laws on IP and more are still being considered as a Bill in the parliament. Nevertheless, there are no laws in place currently for protection of TK and TCE. Whereas the existing laws may be used in the meantime to protect certain aspects of TK, however, for effective protection, TK may require development of *sui-generis* kind of law to protect it given its diverse nature which comprises physical, cultural and even spiritual components.

### **The administration of TK and TCE are being handled by NEMA, KEPHIS, and KWS.**

Enactment of laws for protection of TK and TCE has been difficult given the divergent interests of the stakeholders. Presently there is no information regarding benefit sharing of accessed TK and TCE.

It is therefore recommended that further research to identify the intellectual property (IP) needs and expectations of traditional knowledge (TK) holders as well as the mechanisms of identifying the benefits and beneficiaries of TK Protection should be carried out. There should be proper documentation of TK and cultural expressions (TCE) and the mechanisms on benefit sharing for accessed and commercialized TK and TCE that are known by more than one community should be developed. A Sui-generis law for the protection of TK and TCE should as well be developed. Again, capacity building and sensitization programs on the subject should be intensified especially among policymakers and practitioners. Similarly, research on the role of cultural industries for economic development in Kenya should be carried out.

Some of the activities already ear-marked in the Chapter include:

- > Establishment of the regional steering committees and network in IPR (R)

- > Establishment of the national steering committee and network in IP (N)
- > Establishment of current status of existing IP, gaps that are existing, incoherencies with the international treaties (R)
- > Inventorisation of key stakeholders in IP (TK, ABS and effective IP) (N).
- > Development of case studies in areas of TK and ABS (N).
- > Communication strategy for the program detailing the necessary publications websites and other strategies for the dissemination of the information (R & N) (This includes policy briefs, Newsletter booklets etc).
- > Creation of awareness through capacity building at various Institutions identified as stakeholders and training of TOTs (R & N).
- > Creation of awareness at the grassroots' levels by TOTs from the Institutions that were trained (N)

(Key: R= regional, N= national)

Other activities will include regional conference, regional round tables for policy makers, national round tables for policy makers, network activities with connectivity to programme website.

#### **Concluding Remarks on Session Four**

The concluding remarks for Session Four were provided by the session's co-chair, Mr. Joseph Wekundah and a representative of the IP-Regional Steering Committee, Prof Norah Olembo.

In his part, Mr. Wekunda appreciated all the participating delegates for their active contributions and interest in the training programme. He was optimistic that the participants gained tremendous new knowledge on the subject matter and implored all to put to practice the things learnt. He urged the National Coordinators to work towards the realization of their set objectives for the year 2012 given that the IP project life would culminate in the same year. On her part, Prof. Olembo also appreciated all participating delegates for participating. For maximum impact, she advised that the people on ground (community members, traditional healers, etc) should always be involved and invited for these kind of trainings so that the deliberations are not always tilted towards scholars only.

*Jacinta Kabi, Communications Assistant, African Technology Policy Studies Network (ATPS)*



*Jacinta Kabi  
ATPS*

The following is an evaluation report of the IP TOT programme. Delegates responded to specific questions and their perceptions about the training. Below are the collated responses:

### **1. Comments on specific aspects of the training**

#### *a) Time/ time management*

A number of participants felt that it was good despite the fact that the time was short, a lot was covered and they hoped that there was more time. A participant felt that the sessions took long to resume after the health breaks.

#### *b) Content of the training*

Most of the participants thought that the content was good, comprehensive and to the point, there were lots of new content for some, another thought that more time was needed for its conceptualization.

#### *c) Trainers/facilitators*

All the participants were impressed by the trainers/facilitators; they said that they did a great job, had mastered the subject content, and were good communicators, articulate, congenial, lively and beautiful.

#### *d) Training methods*

The participants felt that the training methods used were quite good and most of them thought that more time should have been allocated to the group discussions. Most of them complained of there being not enough training manuals but explanations were given to them that the manuals are in making.

### **2. What would you like us to do more?**

The issue of more time for group discussions was brought up again, many of the participants said that the training manuals were not enough, others also said that there should be more case study reports provided, another thought that time should have been spared for site seeing, another felt that the reading materials be provided in advance to the training, others asked for the materials to be sent electronically.

### 3. What should we do differently?

The participants asked for: more materials, more case studies on how IP regimes have been set up in the countries that are doing better, information to be circulate in advance of the workshops, inclusion of illustrations e.g. example of a trademark

### 4. Any other general comments

The participants showed their appreciation for the training, a participant requested for a certificate of attendance, another thought that government officials should be invited to such fora, another asked for a follow up on the trainees, another asked for creation of grants and research into promoting understanding of indigenous knowledge systems and IP protection and there was one who was eager to attend the next training.

### Quantitative Rating of the TOT Programme

1. *On a scale of 1-5; where 1=Poor and 5=Excellent, how would you rate the ToT training?*

The average score on this question was **4.15** depicting that the participants rated the training to be **Very good**.

2. *On a scale of 1-5; where 1=not addressed and 5=fully addressed, to what extent have your fears (if any) been addressed.*

The average score was at **3.76**, showing that the participants had their fears addressed **Satisfactorily**

3. *On a scale of 1-5; where 1=not met and 5=fully met, to what extent has your expectations been met?*

The average score for this question was at **3.85** showing that the participants' expectations were met **Satisfactorily**

### 4. What would you like us to include in the training manuals?

Most of the participants asked for more case studies, real drafts of patents, copyrights and trademarks, to be included in the manual. Another asked for learning tours to model IP sites, another on how government can be stimulated to take the lead in IP issues especially identifying and ensuring patents for national inventions and discoveries

### 5. Suggestion for improvements?

The participants suggested as follows- More time to be given in the future; Key speakers from successful and unsuccessful IP/ABS projects be invited; IP training be organized at regional levels especially for Francophone countries; Start an e-mailing newsletter for the trainers; Circulate mailing addresses for all participants; Include more countries in the IP Program; The proper steps to follow when developing a policy should be documented.

## 5. International Roundtable on Effective Strategies for Strengthening Linkages between Policy Research and Policymaking for African Development

The international roundtable was chaired by Prof. Bob Orskov of the Orskov Foundations, United Kingdom. It comprised of five panelists who made lead presentations onto which discussions were made. The presentations are as below:

### 5.1 *Prof. Herman Musahara, Associate Professor and Director, Directorate of Planning and Development (DPD), National University of Rwanda*



*Prof, Herman Musahara  
Member, ATPS Rwanda Chapter*

Professor Musahara commended the ATPS and its partners for organizing the conference on the topical issue of linking policy research to policymaking. He specially appreciated the caliber of papers that had been presented on the selected themes. Narrating his experience during his University's visit to the University of Western Ontario to investigate how they link with industry and the rest of the community, Prof. Musahara informed the audience that while making his remarks on the relevance of research to policy, a lady asked him whether he regarded himself as a sun or a moon. Analyzing this opinion,

he noted that in linkage, we should be able to get the right mix of people in order to generate useful knowledge. He argued that it is more important to address the gap in research, policy linkage with respect to ability to conduct quality evidence-based policy research, ability to make right policies, and ability to effectively implement the policies. He suggested that Africa needed to learn from experience citing examples of developments from 1950s including



capitalization, economic growth, technological change, human development, and more recently the structural adjustments programmes. He maintained that as Africans, there was a lot we could learn from the 1950 development revolutions and that we need to look at the past and see where we have gone wrong with the aim of taking corrections and moving forward in development. This we can achieve also by thinking outside the box and doing business in a different way, not as usual. He stated that Africa needs strong political will in order to foster effective linkage between policy research and policymaking for African development. He cited Rwanda as a case example where the government is now becoming supportive in issues of STI policy research and policymaking despite all the challenges they have faced in the past. He noted that currently in Rwanda, there has been a political environment that supports the interaction between the policy maker, the academics and the people. This has led to the development of a clear vision, tagged vision 2030 which the entire nation believes in.

He concluded by stating that there are several challenges in the proposed linkages but maintained that the use of homegrown solutions must be acknowledged even in the face of the current globalization. He cited an example where traditional methods had been used to try genocide suspects in Rwanda which looked very naive at the beginning but finally was successful.

**5.2** *Dr. Chidiebere Udeb Ibe, Public Finance and Policy Consultant and Executive Director Institute for Public Policy Analysis and Management, Abuja, Nigeria*



*Dr. Chidiebere Ibe  
Member, ATPS Nigeria Chapter*

Dr. Ibe commended the ATPS for a well chosen theme for this year's conference stating that it was very timely. In his opinion, the conference highlighted re some salient points that need to be considered in the efforts to strengthen linkages between policy research and policymaking for African development. To start with, he noted that policymaking was not a linear process but a complex undertaking involving a mix of stakeholders and different situations. He went ahead to explain that policies are not usually evidence-based as researchers would expect but can be based on other circumstances including coercion. Researchers should therefore look out for opportunities that will help maximize their research approach to link into policymaking process especially where there is a demand for their research outputs. Researchers need to as much as possible make their researches demand driven in order for it to make any policy impact.

Secondly, he suggested that it will be important for the research community to be able to “read” the minds of the policymakers and direct their research activities towards outputs that

will aid the policymakers in making informed decisions using their research outputs. He further stressed the need to evaluate previous research activities and outputs to be able to understand their contribution to effective policymaking. The evaluation will be able to direct the line of actions and priorities of researchers and ensure that research outputs are used for informed policy decisions. It will also show the amount of contributions by research towards policymaking process. Dr. Ibe stressed on the need to strengthen political unity and networks among relevant stakeholders including collaboration and knowledge sharing with other policy and research networks within Africa and across the world so that knowledge sharing could be enhanced.

He argued that networking and collaboration among stakeholders could occur anywhere and at anytime including the type of forum provided by the ATPS in the 2011 conference and workshops. He encouraged more interactions among key stakeholders in the linkages especially policymakers and urged them to come forward with proactive measures to sustain policy research and policymaking linkage.

Finally, Dr. Ibe pointed out that to ensure effective policy research for policymaking, efforts must be made to have wide stakeholder consultations and discussions on the impacts of such policies on the target audience. This is necessary in order to ensure that there are milestones set out for any policy to achieve. He lamented that most times, policies are not effectively implemented due to inadequate consultations with relevant stakeholders and ineffective planning of the expected milestones.

### 5.3 *Prof. Kevin Urama, Executive Director, African Technology Policy Studies Network (ATPS), Nairobi, Kenya*



*Prof. Kevin Chika Urama,  
Executive Director, ATPS*

Prof. Urama highlighted some of the strategies that could be adopted to effectively bridge the gap between policy research and policy making for African development. One of such strategies, is by strengthening boundary institutions. By this he meant people and institutions such as the media, NGOs like the ATPS with specialized skills, who can actually take research outputs to the policymakers through systematic advocacy programmes and capacity building strategies. He noted that, researchers, most often from the universities lack the requisite skills to communicate effectively to the policymakers and be able to win their confidence to use research outputs for policymaking. He again noted that there is need to use transdisciplinary knowledge in both policy research and policymaking adding that the ATPS in liaison with other like-minded

institutions including the African Union Commission is currently championing this course in Africa. He supported a conference presenter who called for STI based on no-nonsense research and policymaking - no-nonsense in the sense of clear integrity of the research that we do and then to make sure that the policy maker is never disappointed because there is a lot at stake. The policymakers will only pay attention to researchers that produce sensible research.

On the issue of on social ethics, norm and our attitudes regarding the way researchers and policymakers relate, Prof. Urama noted that there was need for all stakeholders to learn how to transfer their own core values, and things they deem as important as this knowledge might be able to bridge the gap to each another (effective communication). If an audit on who-is-who in the various African research endeavors is conducted, policymakers will be able reach out to them especially when such researchers are authenticated through a formal process. This will also reduce over reliance on external resource persons by African policymakers for key decision making. In order to achieve this, Prof Urama informed the audience that the ATPS had initiated and launched a biennial STI report project in Cairo in 2010 aimed at documenting the state of STI in Africa and identifying who is who in specific areas of STI. This will serve as a good reference material for African governments and policymakers when key professionals are sought for decision making.

Prof. Urama went further to state that there is need to encourage strategic alliances between and among relevant stakeholders in the STI arena. Forging alliances with policy makers, the media group and the civil society actors will enhance the acceptability of research results and direct such results more to the needs of the people that it is meant to serve. While presenting output from an ATPS research on water and environment sometime before, Prof. Urama noted that the policymakers were not satisfied. They complained that they were not in any way involved in the project initiation, development and implementation and hence found it difficult to accept some of the recommendations from the work. The lesson taken from this experience is that researchers need to engage the policymakers as much as possible in their research activities so as to win their confidence if the research findings are to make policy impacts. Building alliances therefore remains a key strategy to achieve this linkage.

Prof. Urama concluded his presentation by calling on stakeholders to move away from competition to competitiveness. This will help to strengthen their collective efforts because collaboration builds innovation. He further stressed on the need to identify policy champions who will most times facilitate research policy and policymaking processes. He noted that the ATPS has been able to foster policy processes in different countries not only because of the capacity at the Secretariat but because of the champions we have in those countries. In his view, through these champions and networks, effective linkage between

policy research and policymaking for Africa's sustainable development can be achieved.

**5.4** *Prof. Atieno Ndede-Amadi, Founder/Chief Executive Officer, Kenya Kountry Business Incubator*



*Prof. Atieno Ndede-Amadi  
Technical Coordinator, AYFST*

Prof. Ndede-Amadi highlighted three points in her presentation. The first was the issue of research culture which she argued could pose as a hindrance to the linkage being addressed since most of the time researchers focus on efforts that could fetch them money rather than policy relevant research that could be used for policymaking. She stressed that researchers should embrace time management, proper research agenda setting, quality assurance, demand-driven and impact oriented research. The change in the culture of business as usual in research management will enable researchers compete favourably in the global arena.

Secondly, Prof Ndede-Amadi noted that there is great need to change the reward system for researchers; as currently, the system does not encourage as expected: innovativeness, entrepreneurship and policy impact. The culture is to “publish or perish” hence most researchers strive only to publish without paying attention to other issues as mentioned above. Finally, she explained that the ultimate user of the research results is the practitioner. She recalled that in her time at the university, most researchers perceived research as very expensive. In this regard, it will be necessary for other stakeholders including private sectors, governments, policymakers and donors to work closely with the researchers and render necessary support to enable them conduct research at minimal costs to them. If this happens, it will be easier to conduct demand-driven research that will solve the needs of the people and also feed into policymaking. Researchers on the other hand will be satisfied that they are contributing effectively to the growth and development of their economies. However, her view was that research is very cheap as sometimes it can only involve something as simple as one standing at a junction and counting the number of cars that pass by and then basing the increase in production on the number of cars.

**5.5** *Prof. Turner T. Isoun, Member, ATPS Board of Directors and Former Honourable Minister, Science and Technology, Federal Republic of Nigeria*



*Prof. Turner Isoun  
ATPS Board Member*

Prof. Isoun hinged on the points raised by the Vice Chancellor of the University of Nigeria, Prof. Bartho Okolo on access and quality of university education in Africa. Prof. Isoun argued that more important to these points is the issue of relevance. He emphasized that university education and research must be relevant to the specific needs of the people, the community, the nation and Africa in general. He maintained that any research that does not solve the problems of the people, community, nation and continent as a whole is not relevant. This should drive the research agenda in African

universities.

Prof Isoun asserted that there was need to build on what Africa already has, citing the ICT revolution as an example. He urged all ICT stakeholders to embrace the numerous gains from the technology. He called for an ICT revolution in the entire education sector in Africa that will enable some reforms such as long distance learning, e-learning and data management to be easily realized. According to him, there is need to also link university research with economic productivity and also craft a new definition of a “professor” in Africa. This will happen only when the university authorities revise the criteria for the promotion of a professor especially based on the individual's contributions to the local community. He challenged university stakeholders to come up with reforms for an African university professor whose work will lead to economic productivity and whose work will impact on the community. This will also encourage community ownership of research that could impact on policy for development.

In conclusion, Prof. Isoun stressed on the need for continued capacity building of stakeholder actors in the STI industry. He advocated capacity building and strengthening at every level in the research, policy and practice arena. He however noted that he had observed a steady improvement in the quality of STI being promoted in Africa but called for more vigorous efforts to sustain Africa's development through STI research, investment, support and so on.

### **General Comments, Remarks and Contributions by Delegates**

Overall, the general comments, remarks and contributions by delegates during the international roundtable emphasized the need to:

- > Strengthen capacities of African Researchers to address African policy needs and



Policymakers to use research evidence in policymaking;

- > Encourage multi-stakeholder involvement in Science, Technology and Innovation policy research, policy making, and policy implementation processes;
- > Foster high moral and ethical standards in research and policymaking, learning from existing norms in African society;
- > Support appropriate capacity building and Mentorship programs for African Youth and Women to participate in STI policy research, policymaking and policy implementation.
- > Link research to economic productivity in Africa

Based on these needs the delegates recommended that the African Union and its member States and other development agencies should:

- > Adopt and proactively support leading African institutions engaged in policy research such as ATPS, FARNPAN, ACET, APHRC and facilitate their inputs into policy processes. This is in recognition that these institutions are already leading in the various key areas of need including STI capacity building for African Development, agricultural policy research for attaining the food security, in the economics of transformations, and population and health research for African development respectively;
- > Create a consolidated fund for African Policy Research and Development at continental and national levels, recognising that “he who pays the Piper dictates the tune”;
- > Honour their commitment to increase their budgetary support to research and development to the recommended one percent (1%) of the GDP;
- > Create favourable policy environment to promote private sector engagement in science, technology and innovation for African development;
- > Support existing initiatives that encourage Mentorship for active engagement of youth and women in STI policy research, policy research and policy implementation;
- > Encourage the promotion and propagation of STI in the mass media; and
- > Encourage the appointment of STI policy advisors for national governments.



## 6. Progress Review of AYFST & AWFST Climate Change Innovation Program

As part of the ATPS research, training and communication programme, all research grantees under the ATPS programmes are expected to provide updates of their research activities at twice during their project life span. This activity is meant to enable the researchers adjust and conform early to the expectations from their research. It provides a form of monitoring and evaluation for the grantees' research. During the 2011 ATPS Annual Conference and Workshops in Mombasa, these grantees were convened to give the updates in two categories of the ATPS Climate Sense Program including the African Youth Forum for Science and Technology (AYFST) and the African Women Forum for Science and Technology (AWFST). The reports are given below.

### 6.1 Review of Grantees Progress under the African Youth Forum for Science and Technology (AYFST)

#### Introduction

The Programme Coordinator Professor Atieno-Amadi in her opening speech welcomed all the grantees and participants to the AYFST Grantees review workshop. She emphasized on the agenda of reviewing the progress work of the grantees whilst giving feedbacks and constructive critiques that would enhance the research work of the grantees. Overall fourteen out of the fifteen AYFST grantees were present, and presented their progress report.

### 6.1.1 The Integration of Conservation Agriculture to Agro-forestry as an Adaptation Strategy to Climate Change

*Sekaleli Ts'epo, Lesotho*



*Sekaleli Ts'epo  
AYFST Grantee*

Mr. Sekaleli enumerated the challenges confronting agricultural production in the Mafeteng District of Lesotho. This included drought, high pest and disease infestation, increasing rates of soil erosion and consequent soil fertility decline, short growing season due to late rainfall which has contributed to low agricultural production coupled with reduced household income subjecting communities to high levels of poverty and very limited livelihood option. He was of the view that there was dearth of information about the potential of agro-forestry and conservation agriculture systems as adaptation strategy to climate change in Mafeteng district of Lesotho.

Against this background, his study assessed the overall response of farmers in the following age categories: (15-25), (26-35), (36-45), (46-55) and (>50) to climate change and its impact on their livelihoods. Farmers in these age categories actively participate in agricultural production hence their response to climate change formed the basis of this study.

The study also assessed the potential of three agricultural systems namely; agro-forestry, conservation agriculture and conventional agriculture to climate change adaptation coupled with their soil fertility statuses in order to get a clear picture of the productivity potential of the three agriculture systems.

Using structured questionnaire and soil property lab analysis, the result revealed that about 93% of farmers were aware of climate change and its impacts. Observable Consequences of climate change as reported by farmers included reduction in crop yield, shortened growing season, prolonged drought and heavy rains, soil erosion and low quality of crops. The results also revealed that conservation agriculture had the highest soil fertility, followed by agro-forestry and conventional agriculture.

He concluded that climate change does have a significant impact on the livelihoods of farmers. Though farmers have developed own local strategies to adapt though such have not helped enough in reducing the impact of climate change. He recommended the integration of conservation agriculture to agro-forestry as an adaptation strategy to climate change.

### 6.1.2 Design and Analysis of a 1MW Grid-Connected Solar PV System in Ghana

*Ebenezer Nyarko Kumi, The Energy Center, KNUST, Kumasi-Ghana*



*Mr. Ebenezer Kumi  
AYFST Grantee*

Mr. Kumi presented a progress report of his research project aimed at designing a 1MW grid-connected solar photovoltaic system for Kwame Nkrumah University of Science and Technology (KNUST), Ghana using the roofs of buildings and car parks as platforms. The project also aimed at analyzing the technical and financial performances of the technology based on the results of simulation software packages. To develop a standard procedure for the development of institutional large scale grid-connected solar PV systems, he conducted a pre-feasibility analysis which looked at the area required, suitability of roofs of buildings and car parks for orientation, pitch, shading effects, etc. He also tested developed procedure in the design of a 1MW grid-connected solar PV system in KNUST-Ghana. Following this, the performance of the 1MW grid-connected solar PV system was simulated using suitable software packages, and conducting technical as well as financial analysis based on the software simulation results.

His preliminary results revealed that 73% of the roofs assessed were Gable roof, whilst 24% were flat roof with 3% being hipped roof contributing to a total surface area of 48,000 m<sup>2</sup>. The result also revealed a low financial viability of the project looking at the current cost of electricity and initial investment cost. From the technical analysis, the performance ratio of the design was estimated to be 73% making the design an efficient one.

He concluded that lessons learnt from the design of the 1MW grid connected system will be used to update the draft procedure developed at the beginning of the project and the updated procedure can then be used to replicate projects of this nature in other institutions.

### 6.1.3 Detailed Measurements of Vehicular Carbon Footprints Emissions Concentration Level in Minna, Niger State, Nigeria

*Francis Okelola Olumayokun, Center for Climate Change and Fresh Water Resources (CCCCFR), Federal University of Technology, Minna, Nigeria*



*Francis Okelola Olumayokun  
AYFST Grantee*

Mr. Olumayoku's presentation revealed preliminary findings of his research on the measurements of vehicular carbon footprints emission concentration levels in selected flashpoints spread across the road network in the city of Minna in Niger State, Nigeria. The measurements were carried out at the peak and off peak traffic times within the city due to temporal variations. The average emission values for the peak and off- peak times were calculated and also represented with the Arc-GIS software. A gasman meter was used for each type of gas investigated.

The results revealed the high concentration of emissions level of carbon dioxide from vehicular emission, found to be more than the internationally accepted safe limits of its concentration in the atmosphere. The emission levels particularly for the major greenhouse gas, carbon dioxide, measured was found to deviate from the internationally accepted safe limits of 350 parts per million in the road ambient environment.

He pointed out that, through the preliminary outcome of this research, necessary measures for climate change mitigation via emissions reduction were being documented even in relation to urban and regional planning mitigation tools upon the completion of the research.

#### 6.1.4 Near Real-Time Application and Validation of a Multi-Temporal Threshold Algorithm in Active Forest Fire Detection & Monitoring in Zimbabwe using MSG Satellite

*Tawanda Manyangadze, Saveteck Solutions, Zimbabwe*



*Tawanda Manyangadze  
AYFST Grantee*

Mr. Manyangadze's presentation was based on the premise that the application of remote sensing technique was efficient and an effective method in forest fire detection for near real-time monitoring which may contribute to the reduction of impacts of fire. He noted that fire was a highly changing (temporal and spatial) environmental phenomenon that required a careful validation plan. Against this background, he examined the accuracy of the multi-temporal threshold algorithm, in forest fire detection and monitoring, compared to MSG FIR-G product in Zimbabwe. The multi-temporal threshold algorithm was developed in 2009 by Mr. Manyangadze as a student at ITC, The Netherlands as a way of augmenting the efforts in forest fire detection and monitoring.

Using MSG 2007 and 2009 data from FIR-G and CLM and MODIS fire products, SPOT burned area products and Multi-temporal Threshold Algorithm, the preliminary results of this study have shown that the multi-temporal threshold algorithm has a higher forest fire detection rate (50.5%) as compared to MSG FIR-G product (24.1%) which uses the contextual algorithm.

This finding is expected to give more reliable results that may give more confidence to the potential users and any interested stakeholders in forest fire management in Zimbabwe and around the globe.

### 6.1.5 Youths as the driving force behind community adaptation to climate change in Karimama and Malanville (Benin)

*Abdelaziz Lawani, Benin*



*Abdelaziz Lawani  
AYFST Grantee*

Mr. Lawani presented an early stage action research project which emphasized on the engagement of youths as a driving force for community adaptation to climate change in Karimama and Malanville in Benin. The research posed three key questions which when addressed would motivate young people in these communities to lead the debate on climate change and adaptation strategies in order to prevent, act and reduce the vulnerability of their communities as well as inform researchers, policy-makers, and development actors on the capacity of local communities to adapt to climate change and the nature of their needs. These questions include; what is the place of young people in climate change adaptation strategies, how do and/or will these strategies affect them and can young people play a critical role in resilient communities?

Using participatory assessment, training and essay competition among the youth, the research project has provided a platform for the youth to implement the priority actions. The preliminary results demonstrated an increased level of awareness about climate change and its impact. The youths have been placed at the center of the communities to spearhead climate change adaptation for resilient communities. The project is working towards informing policy-makers, researchers and NGOs about the capacity of the youths to lead local population to adapt to climate change.

There have been some difficulties encountered by the project team but with motivation and willingness to bring about constructive and positive impact in people's life, the project is soldiering on to contribute to building local climate change adaptation capacity.



### 6.1.6 Assessing indigenous knowledge practices in relation to climate change adaptation, food security and environmental resilience in Tigray, Northern Ethiopia

*Kiros Meles Hadgu, Institute of Climate and Society, Mekelle University, Ethiopia*



*Kiros Meles Hadgu  
AYFST Grantee*

Dr. Hadgu presented the empirical case of Tigray, which demonstrated indigenous knowledge practices turning the degraded lands into viable ecosystems capable of improving food security as well as improving environmental resilience. The research work identified and documented farmers' perception on climate change and its impacts, analyzed indigenous knowledge practices (land management and associated practices) in response to the extreme climate change and variability and finally documented indigenous knowledge case examples of best practices for climate change adaptation, food security improvement and environmental resilience that could be scaled-up.

Through the analysis of desk information, field survey data and remote sensing data, the study revealed the impact of climate change and variability to include; low agricultural productivity, food shortage and water scarcity. These impacts have contributed to reduced livelihood of the farming communities.

However, through local adaptation practices such as small water reservoirs, destocking, mulching, crop rotation, crop diversification, soil and water conservation practices, farmers have enhanced their coping strategies to adverse climate change impacts. There were visible improvements in the vegetation over the years due to improved land rehabilitation and management measures.

### **6.1.7 Developing the Capacity and Improving Access of Small-scale Farmers to Low Cost Artificial Substrate Mushroom Cultivation in South-Eastern Nigeria**

*Mkpado Mmaduabuchukwu, Centre for Rural Development and Cooperatives (CRDC), University of Nigeria, Nsukka*



*Mkpado Mmaduabuchukwu  
AYFST Grantee*

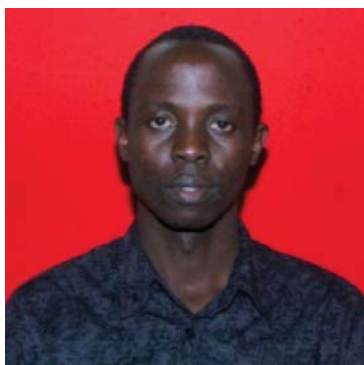
Mr. Mmaduabuchukwu's presentation gave an overview of capacity building and mentorship that sought to empower the youth and farmers on low cost artificial substrate mushroom cultivation in South Eastern Nigeria. He noted that the impact of climate change and deforestation limit the quantity and quality of natural mushroom, a delicacy collected from the forest. Again, efforts to scale up the cultivation of mushroom Nigeria have been limited due to poor innovation transfer and poor capacity development. To this effect, the study provided knowledge and skills in the cultivation of low

cost mushroom substrate to selected group of youths and farmers.

The innovation acquired included major steps of low cost mushroom production such as: mushroom house construction, arts of making a composted substrate, pasteurization, spawn maintenance, spawn production procedure, spawning, substrate supplementation, casing to trigger reproductive stage, watering or irrigation, monitoring the pinning processes to harvesting, harvesting and sorting and marketing. In the process of scaling, selected and trained personnel would transfer the innovations to other farmers and interest groups.

### 6.1.8 Identification and scaling-up of the Indigenous Rain Water Harvesting Technology for Climate Adaptation and Food Security in Dry Areas; The Case of Bahi District

*Deusdedit Kibassa, Assistant Research Fellow, Ardhi University (ARU), Dar es Salaam, Tanzania*



*Deusdedit Kibassa  
AYFST Grantee*

Mr. Kibassa presented findings from his study which identified the best indigenous technology for water harvesting in the Bahi with the intention of scaling up of such technology. He pointed out that the Bahi district in Dodoma region of Tanzania is among the driest districts in the country receiving less than 400mm of rainfall coupled with the impact of climate change. Opportunity to improve agricultural production lies in rain water harvesting potential. The study therefore identified the indigenous rain water harvesting technologies for climate adaptation and food security in dry areas of Bahi

district, in Dodoma region. The study also documented sustainable indigenous knowledge practice on climate adaptation, impact mitigation and resilience capacity building in Bahi district based on rain water harvesting.

Using research tools such as questionnaire instruments, focus group discussion, checklist, observation, soil samples and literature review, this study established that 15 percent of the households practice traditional rainwater harvesting. The technology involves hanging pieces of clothes on the roof end to collect and filter dust and mud particles from water drops before they are collected in the bucket placed on the floor. This is because water collected through flat roofs is usually muddy and dusty.

He pointed out that, water collected through rooftops made up of logs, grasses and soil can be increased to a significant amount by using thin plastic sheet or animal skins to prevent water from mixing with mud while in the roof tops. The study also revealed that, households get half of their water demand per day during wet season and less than quarter of their demand during dry season due to lack of water as a result of little rainfall and lack of water collection and storage infrastructures. As a coping strategy, communities in the two villages have increased the use of cow dung which they mix with soil in order to increase its water holding capacity and nutrient content. Communities in Bahi have adapted to climate change by planting drought resistant crops such as millet, sunflower and sesame instead of relying in maize and beans whose water demand is high. Mr. Kibassa further noted that with some improvement, indigenous rain water harvesting technologies have potentials to improve water availability and food security in the area.

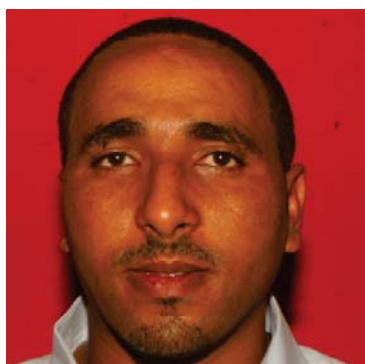
### **6.1.9 Harnessing Indigenous Knowledge on Soil and Water Conservation Innovations to Enhance Farmer Adaptation in Central Malawi**

*Loma Nyangulu, Research Fellow, Kirk Development Research and Training Centre (KIDERTCO), Lilongwe, Malawi*

Ms. Nyangulu's presentation assessed the vulnerable smallholder farming communities in dry land environments in order to understand the threat posed by climatic change. The study also investigated how farmers are adapting to climatic change through the adoption of indigenous small-scale soil and water conservation innovations. The result indicated a high level of awareness of climate change by the farming community mainly through radio with about 87% understanding climate change as erratic rainfall. The farming community was of the view that tree planting was a very important adaptation strategy to climate change. Based on the outcome of the study, it was recommended that intensification of afforestation activities whilst promoting farmer to farmer dissemination of climate change information be encouraged.

### **6.1.10 Climate Change Analysis: Improving Farmers' Resilience to Climate Related Hazards in the Upper Catchment of Blue Nile, Ethiopia.**

*Bewket Amdu, Haramaya University, Ethiopia*



*Bewket Amdu,  
AYFST Grantee*

Mr. Amdu's research work analyzed farmers' adaptation in three dominant agro-ecological zones in Ethiopia including; Dega, W/dega, and Kolla of the upper catchment of Blue Nile in Ethiopia, based on farm-level data collected from 384 households for 2010/2011 cropping season. The study described farmers' perceptions to changes in long-term temperature and precipitation, various farm-level adaptation measures, barriers to adaptation, and determinants of adaptation options.

Using descriptive statistics to investigate farmers' perceptions, baseline adaptations, and multinomial logit model to examine the determinants of adaptation to climate change and variability, it was revealed that most of the interviewed farmers experienced the changes in temperature and rainfall; the majority believed that temperature has increased and the rainfall pattern has become unpredictable. As evidence to perceived changes, the majority of the respondents took remedial actions to counteract the impacts of climate change. The most common adaptation options include: implementing soil conservation practices, changing cropping calendar, planting trees, changing crop types, diversification of crop types, and adjustment to crop and livestock management. However, he noted that the lack of knowledge

and information, lack of inputs, inappropriate policy, land scarcity, shortage of labor, lack of market, water scarcity, poverty and lack of extension services were identified as barriers to adaptation.

#### **6.1.11 Evaluation of the CMIP3 Models on the Simulation of the South Atlantic Ocean Dipole**

*Hyacinth C. Nnamchi and Jianping Li, State Key Laboratory of Numerical Modelling for Atmospheric Sciences and Geophysical Fluid Dynamics (LASG), Institute of Atmospheric Physics (IAP), Chinese Academy of Sciences (CAS), Beijing, China*



*Hyacinth C. Nnamchi,  
AYFST Grantee*

Mr. Nnamchi presented his research work which sought to evaluate the ability of the coupled ocean-atmosphere general circulation models participating in CMIP3 (Coupled Model Intercomparison Project 3) of the IPCC to simulate the SAOD. The CMIP3 models are start-of-the-art models that provided much of the materials underlying the assessment reports and future climate projections of the IPCC Fourth Assessment Report (IPCC-AR4). Using outputs from all the available twenty four (24) coupled General Circulation models (CGCMs), he diagnosed the SAOD from the CMIP3 model simulations, compared the CMIP3 simulations with observational dataset and inter-compared the simulations of the SAOD by the various CMIP-3 models.

The results revealed that, Multi-model CMIP3 ensemble shows agreement with observation in two periods: 1950 to the early 1960s and then mid-1980s to 1999. However, the variations from one model to another were quite marked and characteristic of the CMIP3 models. He reported that, one tentative point that can be drawn from the analysis was that the disagreement of these models on the future of African precipitation in the IPCC report (Solomon et al 2007) may possibly relate to their disagreement on the simulation of the SAOD.

He concluded that, the ability of climate models to realistically simulate the climate is dependent on the ability of the models to capture those mechanisms that give rise to the climate. Recent studies highlight the existence of a dipole mode in the SAO and its impacts on climate variations in the sub-Saharan Africa and the Americas. As such, the success of the future climate projections in these regions will be affected by the ability of the models used to simulate this dipole mode.



#### 6.1.12 **Assessment of the rationale and competence of pastoral community innovative adaptation to the incidence of climate change in Ethiopia**

*Tibebu Solomon, Technology Transfer Team Leader, Ministry of Science and Technology, Ethiopia*



*Tibebu Solomon,  
AYFST Grantee*

Mr. Solomon's research sought to understand the perceptions of climate change and adaptation processes among pastoralists in Ethiopia. Using multi-segment methodology which included a series of brainstorming sessions, in-depth interview, focus group discussions (FGDs) and key informant interviews, the study assessed the rationale and competence of pastoral community innovative adaptation to the incidence of climate change. The study also sought to identify, describe and document effective indigenous and emerging technologies and innovations for climate change adaptation used by Pastoralists.

The study revealed that since the past few years the rainfall pattern has changed and decreased the rainfall duration into two months rather than the four months period. He indicated that 100% of the respondent have experienced in their life time periods characterized by more or less favorable rainfall and temperature, with 97% of the respondents faced with extreme heat from 2006-2010.

He further pointed out that pastoralists are adapting to these changes in a local innovative way. The typical pastoralist innovations include change in house construction materials, traditional early warning system through sharing of information (Dagu), maximization of female animals in their herds, behavior of goat used as indicator for seasonal forecasting and also traditional air conditions (cooling system) of potable water.



### 6.1.13 Optimization of a Continuous Biodiesel Plant

*Joel Nwakaire, Department of Agricultural and Bioresources Engineering, University of Nigeria, Nsukka*



*Joel Nwakaire,  
AYFST Grantee*

Mr. Nwakaire's research examined the potential of biodiesel production as an alternative fuel as well as a contributor to low carbon emission in Nigeria. His research project entailed the development of automated biodiesel plant control, development of software/program for scaling up a biodiesel plant, and the construction and testing of the efficiency of 100 liters per hour plant. His findings revealed that automated biodiesel plant control is able to adapt to varying plant capacity parameters. The Scalability Software was able to scale the plant from 30 liters per hour to 10,000 liters per

hour even though the present design is 100 liters per hour. He recommended the establishment of an independent biofuel development agency geared toward fully tapping the outputs from researchers and ensuring that there is proper linkage between the renewable technology needs and the researchers focus.

### 6.1.14 Analysis of the Role of Information and Communication Technologies (ICTs) in Climate Change Awareness in Seke and Murewa Districts of Zimbabwe

*Shakespear Mudombi, Institute for Economic Research on Innovation, Tshwane University of Technology, Pretoria, South Africa*



*Shakespear Mudombi  
AYFST Grantee*

Mr. Mudombi's presentation analysed the important role of information and communication technology (ICTs) in creating public awareness in climate change. He opined that for meaningful adaptation to and mitigation of climate change, it was essential to have access to information and knowledge. He hypothesised that, rural community's access to information on climate change would enhance their awareness, adaptation and mitigation capacity for climate change. Against this backdrop, the study analysed the level of climate change awareness amongst rural people in Seke and Murewa districts of

Zimbabwe, and analysed the significance of information and communication technologies (ICTs) in contributing to climate change awareness in the two districts. Using a multi-stage sampling approach, the result indicated high level of awareness of farming communities to climate change, with very high access to radio and television. However, a deeper probing

revealed that some of them were not sure of the causes of climate change. This necessitates the need to provide accurate and reliable information on climate change.

### **Session Conclusions**

Following all the presentations Prof. Atieno-Amadi congratulated the grantees for the level of progress made. She presented some general observations about the reports and papers that have been submitted for review. These included:

*The literature review* - the researchers were reminded to take note that the literature review should feed into the objective of the research work being undertaken. She emphasized on the need for the grantees to pay attention to the review of literature which would also help them in the discussion session of their report.

*Reducing the number of objectives and staying focused* - The grantees were encouraged to reduce the number of objectives which created a lot of work and made their work cumbersome. They were reminded of the fact that research objectives should always be SMART.

*Avoid Personalized Knowledge* - Grantees were asked to be wary about throwing in the own knowledge but were instead asked to stick to the facts on the ground. In research, opinions do not matter but the facts and evidence are crucial to effective research outputs.

In conclusion, Dr. Nicholas Ozor, ATPS Senior Research Officer took the grantees through the ATPS guidelines for writing working paper, research paper, policy brief and technical report. He urged grantees to strictly adhere to the guidelines to make the work of the Secretariat Program Officers and the External Reviewers more effective. In all, the grantees were applauded for the progress made so far in their research works.

## **6.2 Review of Grantees Progress under the African Women Forum for Science and Technology (AWFST)**

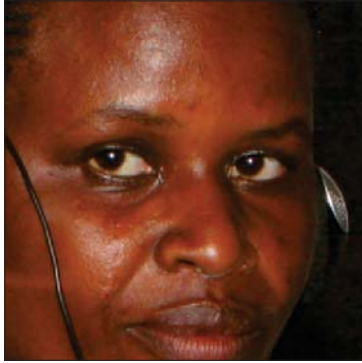
### **Introduction**

The Programme Coordinator Dr. Mrs Anthonia Achike welcomed all the grantees and participants to the AWFST Grantees review workshop. She took the participants through the agenda focussing on reviewing the progress work of the grantees whilst giving feedbacks and constructive critiques that would enhance the research work of the grantees.

The session attracted participation of nine AWFST grantees who proceeded to present their progress report.

### 6.2.1 Moving Forward in a Changing Climate: Poverty Reduction through Sustainable Environmental Management (PRESEM)

*Joy Samantha Bongyereire, Bongyereire Biodiversity Conservation for Rural Development (BCRD), Uganda*



*Joy Samantha Bongyereire  
AWFST Grantee*

Ms. Bongyereire presented a mid-stage action research project which emphasized on the poverty reduction strategies for coping with climate change through managing the environment sustainably. She defined her project goals with seven objectives which included analyzing the trends in degraded ecosystems in Kisoro, restoring the degraded hills using income generating projects, documenting all the project's innovative outputs for use by others and for possible incubation and up scaling, identifying the barriers to effective application, strengthening the capacity of women and other stakeholders in Kisoro and other affected areas in Uganda to adopt the sustainable environmental management practices, developing an effective communication strategy for disseminating research results, and engaging relevant stakeholders.

Against this background, her study aimed at restoring the degraded hills of some strategically identified areas and improving the livelihoods of the smallholder farmers by empowering the men and women to grow trees such as essential oil herbs and grasses on the bare hills, fruits and agro forestry trees on their farms, as a means of combating climate change. The findings revealed that the major causes of ecosystem degradation in Kisoro district were over cultivation, uncontrolled grazing, bush burning, heavy rainfall, poor farming methods, charcoal making and other observed causes including the use of synthetic fertilizers by irish potato farmers, and chemical sprays not only on irish potatoes but also on other crops (Arabic coffee, beans, onions, tomatoes).

Additionally, brick makers in Busanza and Kirundo Sub-counties who use a lot of firewood to burn and harden bricks, poor solid waste disposal and such farming practices as growing of climbing bean that require stakes all contribute to the ecosystem degradation.

## 6.2.2 Climate Change Awareness and Indigenous Innovative Adaptation Measures applied by the Maasai Society in Tanzania

*Elinorata Mbuya, Institute of Human Settlement Studies, Ardhi University, Tanzania*



*Elinorata Mbuya,  
AWFST Grantee*

Ms. Mbuya presented a progress report of her research project whose broad objective was to assess the climate change awareness and indigenous innovative adaptive measures applied by the Maasai society in Tanzania. She identified several potential indigenous adaptation strategies which include:

- > Small scale rangelands of planting grass-planting some grasses around home gardens which is a rare and almost nonexistent practice, considering their nomadic nature
- > Destocking in dry seasons and restocking during rainy seasons - this actually appears more appealing to the pastoralists than full scale destocking, which is a challenge and a likely barrier.
- > Rainwater harvesting and water conservation which offsets water stress and scarcity

Some of the emerging issues and barriers to effective adaptation strategies identified were; traditional beliefs, financial obstacles, further climate variability and change in weather conditions, and land ownership by females (though outlawed but land ownership by women is traditionally banned).

According to her, for effective adaptation, there should be involvement of multi stakeholders particularly in development of strategic framework and incubation. These stakeholders included: agricultural extension (cum livestock officer) and forest officers, policy and decision makers, community and traditional leaders, and women and small scale farmers.

### 6.2.3 Farm Level Responses to Climate Change and Sustainable Agro-Ecosystem Management in Marginal Lands of Ebonyi State, Nigeria

*Ann Nnenna Ezech, Department of Agricultural Economics, Management and Extension Ebonyi State University, Abakaliki, Nigeria*



*Ann Nnenna Ezech  
AWFST Grantee*

Ms. Ezech presented her research activity which is being undertaken in marginal lands of Ebonyi state, Nigeria. The study focused on farm-level responses to climate change and sustainable agro-ecosystem management in those areas. One of her key objectives was to assess the nature of relationships and linkages between climate change elements and ecosystem services (food security, health, economic, socio-cultural, recreational and educational). Using purposive sampling, she discovered that mainstreaming gender into development research is a crucial factor in achieving equitable distribution of resources as well as eliminating possible obstacles to the meaningful contributions of the male and female folks to community development. Part of her long run expectation is that the results will go a long way in filling some existing gaps in knowledge towards the formulation of evidence-based policy options in sustainable agro-ecosystem management for human well being. She further noted that farmers were aware of the concept of climate change, though the extent of their knowledge has not been empirically determined.

### 6.2.4 Smallholder Rice Farmers in South Eastern Nigeria: Constraints, Impact, Mitigation and Adaptation to Climate Change

*Dr. Happiness Oselebe, Department of Crop Production and Landscape Management Ebonyi State University, Abakaliki, Nigeria*



*Happiness Oselebe  
AWFST Grantee*

Dr. Oselebe's research was based on the premise that rice is a food security crop in Nigeria and its production is not growing fast enough in relation to the available potentials. She explained that drought is one of the major constraints of rice production in the rain-fed ecological zones in sub-Saharan Africa (SSA). She remarked that currently, rice production was facing serious challenges like aging farming population, poor production systems and unimproved seed varieties. Against this background, she examined the various environmental factors causing climate change such as flooding and wildfire.



She further highlighted that a major challenge for research and development activities in south-eastern Nigeria and indeed SSA region is to develop drought-tolerant varieties with wide adaptability across rice-growing ecologies. To contribute towards enhancing rice production, the research study focused on increasing the level of awareness of climate change and its impact on rice production among smallholder farmers within the study area. This to increase their capacity to deal with issues arising therein, the project also investigated and disseminated the high yielding, disease resistant and drought tolerant rice varieties which ensures increased food production under stressed environments.

#### **6.2.5 Effective Dissemination Pathways for Delivering Climate Information and Services to Vulnerable Groups for Adaptation in Semi-Arid Kenya**

*Viola Kirui, Crops, Horticulture & Soil Sciences Department, Egerton University, Kenya*



*Viola Kirui,  
AWFST*

Ms. Viola Kirui presented results of her investigation into the effective dissemination pathways for delivering climate information and services to the vulnerable groups for climate change adaptation in semi-arid region of Kenya. She explained that women, children, and the elderly are vulnerable to climate change impacts which expose them to food, nutrition, income and health insecurities. She bemoaned that those generating climate information and packaging supportive services use dissemination pathways that could not appropriately be useful to the vulnerable people who are most in need of adaptation. She declared that access and use of climate information and services are essential for building adaptation to impacts of climate change. These climate information include early warning systems, weather forecasts, research outputs, health services, food aid and financial support. She further stressed that climate information and services would help these vulnerable groups to increase awareness and build capacity for disaster preparedness and community resilience to a changing climate.

Using random sampling of vulnerable people in five location where climate change impact has been severest at Marigat area of Baringo, she was deeply concerned that despite concerted efforts by research institutions and climate scientists to generate and disseminate climate-related information and services, millions of vulnerable groups in arid lands continue to experience food, income and health insecurities due to climate change. Media sources (mass, print and electronic) and communication via community channels have been used to disseminate vital climate information and services, but their efficiency in reaching vulnerable groups is not well-established. In addressing some of these challenges, she characterized dissemination pathways for climate information and services to which vulnerable groups of



Marigat area in Baringo, Kenya semi-arid environment can access climate information. The overall objective was to contribute to improved dissemination pathways of climate change information and services to vulnerable people in hotspots of climate change in semi-arid environments. Preliminary findings show that although the locals have cell phones, they use it in reaching their friends and families and not necessarily for gathering climate change information.

#### **6.2.6 Identifying Indigenous Knowledge and Effective Communication Systems for Adaptation to Climate Change by Smallholder Farmers of Kilifi District, Kenya**

*Grace A. Achiando, Department of Crops, Horticulture and Soil Sciences, Egerton University, Kenya*



*Grace A. Achiando  
AWFST Grantee*

Ms. Grace Achiando in her presentation noted that low production by Kenya's smallholder farmers (SHF) is aggravated by their limited access to farm inputs, lack of appropriate technical skills, lack of access to appropriate Agricultural Information Communication Systems (AICS), lack of IT package and insufficient use of yield-enhancing technology, and unreliable rainfall patterns. Already, it is a well-known fact that farmers have lived with climate variations for many years and have consequently developed their own coping strategies, referred to as Indigenous Technical Knowledge (ITK). However, she reported that food production in Kilifi district has been declining over the years (food sufficiency has reduced from 30%-50%) and farmers' ITK have largely not been recognized or documented, thus AICS has lacked feedback and has therefore missed out on ITK.

The study was carried out using a purposive, multi-stage random sampling technique. In Kilifi district, Kikambala and Ganze divisions were purposively selected based on their diverse agricultural practices, and random sampling technique was used in selecting four locations (Palakumi, Ganze, Mtwapa and Junju) where questionnaire instruments and interviews were administered to randomly selected SHF and opinion leaders. Observably, she claimed that this local knowledge related to adaptation to climate variability has largely not been recognized or documented, and it is now deemed to be critical in formulating policies used to mitigate the harsh effects of the rapidly changing climate. In addition, communication systems devoted to these strategies lack feedback from information users, and have therefore missed out on the benefits of ITK. To address this gap, she study investigated the influence of incorporating ITK in climate change adaptation, and in

agricultural communication systems for increased food production in Kilifi district of Kenya. She therefore concluded that the outputs of the study would be used in the development of an information flow framework to be used by policy makers in climate change management, and development of a database of indigenous knowledge that is relevant to climate change adaptation in Kilifi district. This she hopes will contribute towards the development of ITK mainstreaming frameworks in agricultural information and communication systems.

#### **6.2.7 Strategies for Promoting Sustainable Indigenous Practices in Adaptation, Resilience Capacity Building and Mitigation of Deforestation, Desertification and Drought in Rural African Communities**

*Onyeke Kingsley, Nigeria*



*Onyeke Kingsley  
AWFST Grantee*

Barrister Onyeke presented a progress report of his research project addressing the strategies for promoting sustainable indigenous practices in adaptation, resilience capacity building and mitigation of deforestation, and desertification and drought in rural African communities. The research activity focused on exploring the opportunities for promoting green cooking, using a sun oven in Nsukka region comprising seven Local Government Areas namely; Igbo-Eze North, Igbo-Eze South, Igbo-Etiti, Isi-Uzor, Nsukka, Udenu and Uzo-Uwani. To develop a standard strategy aimed at combating climate change in the area, his team conducted Focal Group Discussions (FGDs) to ascertain the acceptability of the sun oven, creating awareness on the use of the oven as a mitigation strategy to climate change and improving the involvement of youths in the campaign of identifying locally available materials for the fabrication of the oven.

Following this, the prototype of the sun oven will be tested to further prove its workability, devise ways of installing a thermostat to the existing prototype to regulate the oven, devise ways of installing solar batteries to the existing prototype and identify materials that are readily available to the local population for the manufacture of the traditional oven.

Preliminary results revealed that the traditional solar oven can only achieve about 200 -300 degrees Fahrenheit, and even then, only under direct sunlight. The oven produces slow cooking at low to moderate temperatures, and the heat loss is quick because of poor insulation. The sun oven, as demonstrated, will utilize locally fabricated materials from agricultural waste products such as rice husk, palm kernel shell, coconut shell, palm oil extraction residue, furniture saw dust, polythene materials, cow dung and other waste materials as fuel. It is hoped that eventually this strategy will address specific challenges of

climate change like reducing the rate of deforestation, and improving the health of women and children by reducing the risks of contracting respiratory diseases. It will also contribute towards the reduction of the rate of emission of CO<sub>2</sub> into the atmosphere.

He concluded that the inhabitants are quite willing to adopt new innovations that may better their condition in the area of domestic cooking, water supply, farming techniques and health matters because the existing strategies which are also aimed at combating climate change in the area are carried out mostly by women and youths, and yet the attempts are not properly coordinated, thus leading to failure of projects and loss of income.

## **6.2.8 The Effect of Human Activities on the Role of Forests as a Carbon Sink – The Case of Mau Forest, Kenya**

*Aliet Ondicho, Eldoret, Kenya*



*Aliet Ondicho  
AWFST Grantee*

Ms. Aliet Ondicho's presented on the effect of human activities on the role of forests as a carbon sink – the case of Mau forest, Kenya. The study obtained a sample of 200 out of a population of 315,758 in western Mau proportionately drawn from each of the six divisions (Elburgon, Mau summit, Kuresoi, Keringet, Molo and Chepsion), but a sample of 30 was purposively selected from an NGO group that carries out tree planting activity (FOMWA).

The results revealed that out of 200 interviewed respondents, 42% were females while 58% were males, and their level of literacy in reference to formal education was within suitable bracket of reading and writing, hence high likelihood of accessing information on climate change and other forestry related issues. She reported that due to the vital role that forests play in carbon sequestration, the research aimed to document the extent of human influence on the Mau forest located in Kenya. To achieve this goal the study investigated the carbon stock in undisturbed forests as a basis for estimating carbon lost due to deforestation and forest degradation, and to determine the community's conservation involvement in tree planting.

She hoped that the findings from the study will justify initiation of carbon projects in the area and define the beneficiaries particularly women who largely control rural livelihood initiatives. It is also hoped that the study will provide useful information for influencing policies on climate change mitigation and will promote better management and conservation of forest resources in Kenya.

## 6.2.9 Waste Minimisation Programme

*Martha Ada Ugwu, UK*



*Martha Ada Ugwu  
AWFST Grantee*

Ms. Martha Ugwu's presentation was based on the premise that everyone either produces or handles waste in their work environment and that wastes which have not been treated appropriately can cause damage to the environment and to the human health. Against this background, she examined the different types of wastes categorized under hazardous and non hazardous wastes, and mentioned that the statutory duty of care applies to everyone in the waste management chain through packing wastes securely, describing wastes accurately, storing wastes safely on site, completing and signing a transfer

note, and transferring wastes to registered carrier and facility.

The study adopted the use of questionnaire instruments, focal group discussions, participant observation and literature review in obtaining data for the study. Results show that the major constraints to climate change adaptation by health care professionals in Bishop Shanahan Hospital, Nsukka which was the institution examined were due to general lack of knowledge, lack of directives from management, lack of information, low awareness level, lack of government enforcement of rules, poor government attention to climate issues, difficulty and inability to access available information, low staffing capacity, and absence of government policy on climate change. However, for most of the focus group discussion, the participants kept posing the question, “why do we have to segregate when there is only one bin where everything goes?”

She pointed out that the reason why a full functioning waste disposal system in developed countries may not cause a lot of anxiety is because they have introduced legislations that affect everyone, so as to ensure an effective system which prevents high levels of waste generation that emit noxious odour. Having conducted her pilot study at Bishop Shanahan Hospital, Nsukka-Nigeria, she sympathized with the waste management situation in Africa which she termed as low and characterized by uncollected waste often dumped into the streets, vacant plots, water bodies, etc. She remarked that there may be vast open spaces in developing countries but open dumps pollute the air, water and land. Since wastes pose significant risks to human health and the environment, she declared that the study would contribute towards waste management by building the capacity of African healthcare staff. This will be done through training, information sharing, networking and dialogue in relevant topical and developmental issues to managing waste more effectively, raising awareness on waste management, and compliance with legislation. In addition, the project will sensitize health

workers on correct identification, and segregation of clinical wastes to avoid risks to staff, patients and the environment. These she believes will be important in contributing towards the general minimization of the amount of waste going to landfill and in maximizing the benefits of recycling.



## 7. Training for ATPS National Chapter Coordinators & Secretariat Staff on the Ethics of a Winning Institution



### Introduction

The ATPS held an intensive training workshop on the *Ethics of Winning Institutions* for its National Chapter Coordinators and the Secretariat staff during its 2011 Annual Conference in Mombasa, Kenya. The training workshop was carried out by Prof. Osita Ogbu of the African Development Solutions International (ADSI), Abuja, Nigeria. The main objective of this training was to raise the participants' awareness on the importance of ethics in our African institutions. Prof. Ogbu said that training was expected to consistently contribute to strengthening organizations like ATPS and help them expand all over the continent. ATPS Secretariat staff, National Chapter Coordinators and other delegates attended the training workshop and exchanged their views on work ethics.

The training was divided into two sessions. The first session focused on the ethics of a winning institution while the second session was articulated around the relevance of the concepts of character, values and work ethics in a workplace.

### **7.1 Ethics of a Winning Institution – Lessons from Selected World Cup Winning Coaches and Other Matters**

The trainees were informed of the importance of improving access to learning as well as enriching the quality of the learning process in African Institutions. Prof. Ogbu noted that the essence of learning is not the competencies and skills acquired but rather an experience which should effect a personal transformation. The winning approaches of three world cup coaches from Brazil, France and Argentina were used to illustrate this personal transformation as highlighted below:

- > The Brazilian coach described a winning team as one which has a definite plan and does not concentrate only on the best players but also on their character and personality.
- > The French coach on his part, emphasized on different aspects of a winning management. According to him, this management should be based on key elements which are a good human rapport, professionalism and good communication with team players.
- > The coach from Argentina had another vision of a winning team based on the nature of the goals. The objective was not just to win but to use appropriate strategies or tools to achieve intended purposes.

Various lessons that can be drawn from the above different soccer experiences for the management of winning institutions in Africa were summarized as below:

- > First, a *Scenario planning* is vital for any winning institution. Good managers are visionary leaders. They should always have a plan and consider the effective role of their team players in this scenario planning;
- > Second, *effective human resource management* is an ongoing challenge. Indeed, people are different in terms of character, personality and culture. Therefore, managers must be extremely professional but they should also have good relationship with their employees. A good manager is one who gives a clear message and orientations to his team. He encourages them, pays special attention to the concerns expressed by his team members and values them;
- > Third, *a set of actions needs to be taken by the managers* to improve their work environment. Among others, managers should review the performance of their workers regularly. They should constantly raise their standards and stay focused on the task in hand. It is also important for them to avoid premature celebrations.

Prof. Ogbu also explored other winning instincts that winning organizations can adopt.

He pointed out that even if determination to win is the better part of the winning process, *failing* should also be considered as a part of this process. He noted that individuals can learn from their failures, and this effectively makes them stronger. The need for *inclusive leadership* was also emphasized as an important essential component to inspire transformation. In many organizations, Prof. Ogbu explained that people often feel alienated from the goals of an institution this affects their capacity to delivery more . Leaders and managers have an important part to play in creating an inclusive environment that will allow their team members to work together toward a common vision. In such an environment, workers will feel accountable due to the respect, the values and the relationships in the workplace. For this to be achieved, Prof. Ogbu recommended that leaders should keep in mind different aspects of risk taking such as encouraging and accommodating individuals from different backgrounds and culture and using the diversity in realizing diverse goals.

The role that *emotional connectivity and factors* can play in strengthening relationships in the workplace was also discussed. An approach based on emotional factors could be helpful in the process of winning the hearts of the workers. Prof. Ogbu therefore noted that there is need to work on how to effectively incorporate these elements into the institution's culture and relationships.

Prof. Ogbu further stressed on the importance of *positive reinforcement and the need to recognize staff performance*. According to him, leaders should not just evaluate the performance of their workers but they should as much as possible share the evaluation with them. Moreover, much attention should be paid to the best and hardworking members of a winning team.

Prof. Ogbu also highlighted on the issue of handling and differentiating *stories and facts* in relationships. He argued that while facts and ideas help to develop a winning team objectively, stories created (imagination) to make sense of the facts can often destroy relationships within the workplace. The trainees were therefore urged to always 'stay with the facts' since they cannot be changed. However, he also emphasized on the need to accept responsibility in order to dissipate the stories that can be told around the facts. Other crucial points were also mentioned in the winning process of institutions which included candor and trust, celebrations, humility and winning leadership. Prof. Ogbu shared the following points to elucidate on these aspects:

- > Winning teams should be built upon candor and transparency. Trust is the major factor that makes it possible for organizations to work. It is built on honesty, fairness and integrity. But it can also mean helping colleagues and other team members to succeed;
- > Celebrating small or big events will teach people how to win;
- > Leaders with humility should direct their attention away from themselves for the greater

goal of fostering a positive and sustainable work environment;

- > Winning leaders are those who can avoid a culture of discipline with excessive control so that they can get the best from their employees.

At the session, the trainees were reminded that winning institution should counter destructive forces such as *“suspicion, jealousy and fear”* by replacing them with constructive forces such as *“faith, love and courage”*. Prof. Ogbu underscored this by remarking that stimulating constructive forces requires personal work within oneself to change before one can change others.

## 7.2 Character, Values and Work Ethics

This session focussed on the importance of the concepts of character, values and work ethics. Prof. Ogbu presented the results of a staff survey in Nigeria where workers were asked to describe themselves in the workplace. Key findings from the study showed that most of the workers possessed a negative opinion of themselves at work. Prof. Ogbu further explained that this was a result of the current practices influenced by the wrong values and signals channeled by society nowadays. He mentioned a list of social thoughts that included phrases such as:

- > The end justifies the means;
- > The more pleasure we have, the better off we are;
- > Hard working is no longer the way to succeed;
- > No commitment to relationship – be kind to only those that matter;
- > Discipline does not matter;
- > We alone cannot make the difference;

Prof. Ogbu stressed on the need for individuals to understand ethical values as they form the foundation of any civilized society. He noted that managing ethics in the workplace is probably challenging but it also holds tremendous benefits for both managers and workers. At a personal level, he argued that this has more to do with character as it is one of the attributes or features that make up and distinguish an individual. However, he clarified that character is not reputation: while someone's reputation is based on a public project, the character is revealed by our actions and focuses on how we deal with issues.

He also described the six ethical values that are critical to improving the ethical quality of any decision, and thus the character. These are; **Trustworthiness** (honesty, integrity, loyalty and reliability), **Respect** (decency, tolerance and acceptance), **Responsibility** (accountability, perseverance), **Fairness** (impartiality and equity), **Caring** (good relationship, altruism) and **Citizenship** (civic virtues and duties).

Prof. Ogbu further observed that more often people respond to incentives. As such, they are driven to act because of a reward or fear of punishment. However, he argued that a truly moral person does the right thing without any threat because his good character involves striking an appropriate balance among competing interests. He therefore advised the trainees that having ethical values is always advantageous no matter the religion or rules. Prof. Ogbu also encouraged the trainees to be a positive force in the workplace. This positive force requires hard work, pro-active attitude, integrity, team spirit and excellence all achievable with discipline and sacrifice.

Finally, he recommended that institutions should develop their work ethics policy based on fundamental principles such as purpose (vision and values), pride (dignity and self-respect), patience (focus on long-term results) and persistence (commitment to the ethics). As he quoted Rabbi Hillel: *"If I am not for myself, who will be for me but if I am for myself alone, what am I?"* Prof. Ogbu urged the participants to work closely together in order to effectively implement ethical practices in their institutions and therefore to create hope for change in their actions and deeds.



## 8. Conclusion & Policy Recommendations

The 2011 ATPS Annual Conference and Workshop which was held from 7-11 November in Mombasa, Kenya was designed to engage relevant stakeholders in addressing the gaps between research, policy and practice in Africa. This is based on the rational that for research to have the impact of guaranteeing development gains in Africa, research results must inform and shape policies and programmes, and be adopted into practice. The conference engaged a dynamic mix of scientists, policy-makers, science journalists, private sector actors, the civil society, students and policy research advisors in stimulating debates addressing the gap between policy research and policymaking with a view to designing a proactive way forward for bridging this gap for African development. Deliberations during the conference/workshop focused on understanding the context-specific reasons for the gaps between research, policy and practice in Africa and hence identify and prioritize strategies for improving the linkages for a better use of home-grown policy research evidence in policymaking and policy implementation. Lessons from successful cases of good partnerships and linkages amongst the stakeholders in Africa and beyond were drawn so as to enhance experiential learning from a transdisciplinary perspective.

Delegates at the conference/workshops concluded that there is still lack of collaboration and linkages between and amongst researchers, policymakers and practitioners in Africa for African development. They strongly emphasized the lack of effective communication and supports for knowledge brokerage platforms as responsible for the gap. They also blamed the lack of understanding of each other's 'language' as fuelling the gap between and amongst the stakeholders. They further noted that policy research efforts are yet to fully operate in transdisciplinary manner which ideally should give the opportunity for all stakeholder engagements in problem solving for a sustainable development. They also blamed inadequate capacity to conduct policy research that could translate into an effective policy as the bane for the much desired linkage. Stakeholders were encouraged to learn from the few successful case examples of good practices in research, policy, and practice linkages in Africa

which were highlighted during the conference/workshop. It was noted that sporadic progress in linking policy research to policymaking have been recorded in some African countries such as South Africa, Nigeria, Kenya, Lesotho, and Malawi, nevertheless, the use of policy heavily informed by research evidence in critical domains in policymaking still leaves much to be desired. Africa's policy agenda has not fully exploited the expertise of African professionals, leaving the African policy landscape much too influenced by the agendas of external development agencies, consultants, and bilateral development partners.

Based on the conclusions derived above, delegates proffered the following policy recommendations:

1. There is need for a “Knowledge Broker” that will facilitate the linkage between and amongst research, policy and practice. The knowledge broker should be able to link the people who create and use knowledge, assist the research community in identifying research problems that are relevant to policymakers and facilitate the uptake of research knowledge by policymakers. The ATPS as a transdisciplinary policy research institution has been championing this knowledge brokerage role in the area of science, technology and innovation for African development for over a decade and will need governmental and intergovernmental as well as non-governmental supports in Africa and beyond in order to fully realize this competitive role. This they should accomplish through their unique networks across Africa and in Diaspora.
2. There is need to strengthen capacities of African researchers to be able to address African policy needs and for policymakers to use research evidence in the formulation of policies.
3. There is need for policy research institutions such as universities to set up their curricula across transdisciplinary themes so as to be able to address the multi-faceted challenges of the society. Because policy research institutions are suppliers of knowledge, they should focus on training, advocacy and outreach to policymakers.
4. The communication of policy research results and policy needs should be symmetric flowing both ways between policy research and policymaking and in simple understandable language.
5. The influence of development partners on policy research agenda in Africa should only be marginal and subject to critical review by local experts to be able to determine areas of development priorities, problems and needs in specific localities. Sometimes, their motive to impose their own external development agenda and market oriented perspectives limits the implementation of internally developed priorities.
6. There is need for regular networking and interactions between and amongst the researchers, policymakers and practitioners so that they can understand each other's interests, challenges and forge common ground. Through such fora, a harmonized agenda which addresses each stakeholder's interests can be created.

Finally, the delegates through a communiqué (See Appendix 1) called on the African Union and its member States to adopt and proactively support leading African institutions engaged in policy research such as the African Technology Studies Network (ATPS), the African Population and Health Research Center (APHRC), Food, Agriculture and Natural Resources Policy Analysis Network (FANRPRAN) and African Centre for Economic Transformation (ACET), and facilitate their inputs into policy processes. Recognizing that these institutions are already leading in the various key areas of need including STI capacity building for African Development, agricultural policy research for attaining the food security, in the economics of transformations, and population and health research for African development respectively should;

- > Create a consolidated fund for African Policy Research and Development at continental and national levels, recognising that *“he who pays the Piper dictates the tune”*;
- > Honour their commitment to increase their budgetary support to research and development to the recommended one percent (1%) of the GDP;
- > Create favourable policy environment to promote private sector engagement in science, technology and innovation for African development;
- > Support existing initiatives that encourage mentorship for active engagement of youth and women in STI policy research, and policy implementation.
- > Encourage the promotion and propagation of STI in the mass media; and
- > Encourage the appointment of STI policy advisors for national governments.

# APPENDICES

## Appendix 1

### COMMUNIQUE ON STRENGTHENING LINKAGES BETWEEN POLICY RESEARCH AND POLICYMAKING FOR AFRICAN DEVELOPMENT

By

The Delegates of the 2011 African Technology Policy Studies (ATPS)  
International Conference and Workshops, 8TH – 9TH November 2011, MOMBASA, KENYA

#### **Preamble:**

We, the delegates comprising policy researchers, policymakers, private sector actors (business and industry), civil society, and the media drawn from 29 countries in Africa, Europe, North America, the Caribbean, and Asia, met in Mombasa, Kenya 8 – 9 November 2011; for an International conference on “Strengthening Linkages between Policy Research and Policymaking for African Development”

The conference was organised by the African Technology Policy Studies Network (ATPS) as an implementation activity in response to the recommendations of the African Manifesto for Science, Technology and Innovation launched in Cairo, Egypt in 2010, and the UNESCO Science Report, 2010. Both publications demonstrated the role of STI as the engine of development globally and the fact that Africa still lags behind in the various indicators of progress in STI development. The need for strengthening linkages between Policy Research, Policymaking and Policy Implementation were identified as a key challenge to the growth of STI in Africa by both reports.

This international conference organized by the African Technology Policy Studies Network (ATPS) and its partners including the African Population and Health Research Consortium (APHRC); the African Centre for Economic Transformation (ACET) and the Food, Agriculture and Natural Resources Policy Analysis Network (FARNPAN) sought to address the weak linkages between policy research and policymaking for African development, recognising that:

“Only the mastery and unremitting application of science and technology can guarantee human welfare and human happiness” (President Kwame Nkrumah, 1993).

This important role for science, technology and innovation in fostering socio-economic development has been recognized by African Heads of States in their various declarations including the Lagos Plan of Action, the AU/NEPAD Consolidated Plan of Action and other regional economic communities;

Whereas there are pockets of success in application of science, technology and innovation including the mobile telephony and telecommunications, the continent generally lags behind and has not fully reaped the benefits afforded by science, technology and innovation for its development endeavours;



While this failure to harness science, technology and innovation can be attributed to many factors, key amongst these is the lack of appropriate policies to guide and foster an African science, technology and innovation agenda.

**In our deliberations, we have further noted the need to:**

- > Strengthen capacities of African Researchers to address African policy needs and Policymakers to use research evidence in policymaking;
- > Encourage multi-stakeholder involvement in Science, Technology and Innovation policy research, policy making, and policy implementation processes;
- > Foster high moral and ethical standards in research and policymaking, learning from existing norms in African society;
- > Support appropriate capacity building and Mentorship programs for African Youths and Women to participate in STI policy research, policymaking and policy implementation.
- > Link research to economic productivity in Africa

**We recommend that the African Union and its member States should:**

- > Adopt and proactively support leading African institutions engaged in policy research such as ATPS, FARNPAN, ACET, APHRC and facilitate their inputs into policy processes.

Recognizing that these institutions are already leading in the various key areas of need including STI capacity building for African Development, agricultural policy research for attaining the food security, in the economics of transformations, and population and health research for African development respectively;

- > Create a consolidated fund for African Policy Research and Development at continental and national levels, recognising that *“he who pays the Piper dictates the tune”*;
- > Honour their commitment to increase their budgetary support to research and development to the recommended one percent (1%) of the GDP;
- > Create favourable policy environment to promote private sector engagement in science, technology and innovation for African development; and
- > Support existing initiatives that encourage Mentorship for active engagement of youth and women in STI policy research, policy research and policy implementation.
- > Encourage the promotion and propagation of STI in the mass media
- > Encourage the appointment of STI policy advisors for national governments

On behalf of all the delegates and other partners, we mandate the African Technology Policy Studies Network to send a delegation to the African Union Commission for further discussions and consideration of these recommendations.

**Signed on this 9th day of November 2011**

## Appendix 2

Programme for the 2011 ATPS annual conference and workshop from 7-11 November in Mombasa, Kenya

<b>DAY 1 – Monday, 07 November 2011</b> <b>Venue: Mombasa Continental Resort, Mombasa, Kenya</b>			
<b>ATPS BUSINESS – NATIONAL CHAPTER COORDINATORS’ &amp; REGIONAL COUNCIL ACTIVITIES</b> <i>Rapporteur: Ms. Ada Osisioma, ATPS Administrative Intern</i>			
<b>Time</b>	<b>Topic/Presentations</b>	<b>Participants</b>	<b>Session Chair</b>
08:30 – 09:00 a.m.	Registration		
09:00 – 11:30 a.m.	<b>Parallel Session:</b> National Chapter Coordinators & Regional Council annual meeting	ATPS National Coordinators ATPS Regional Council Members ATPS Secretariat Staff Members	<b>Dr. George Essegbey</b> Director, STEPRI, Ghana
	<b>Parallel Session:</b> Meeting of AYFST and AWFST Officials	AYFST & AYFST Officials	<b>Mr. Ernest Acheampong,</b> <i>ATPS Research Officer Post Doctoral</i> <b>&amp;</b> <b>Dr. Michèle Mbo'o</b> <i>ATPS Research Officer Post Doctoral</i>
11:30 – 11:45 a.m.	<b>PHOTO SESSION &amp; HEALTH BREAK</b>		
<b>ATPS BUSINESS – TRAINING SESSION FOR ATPS NATIONAL CHAPTER COORDINATORS &amp; ATPS SECRETARIAT STAFF</b> <i>Rapporteur: Michele Mbo'o-Tchouawou ATPS Research Officer – Post Doctoral</i>			
11:45 – 01:00 p.m.	<b>Training Workshop on The Ethics of Winning Institutions</b>	ATPS National Coordinators ATPS Regional Council Members ATPS Secretariat Staff Members	<b>Prof. Osita Ogbu,</b> Executive Director, ADSI, Nigeria
01:00 - 02:00 p.m.	<b>LUNCH BREAK</b>		
02:00 – 03:30 p.m.	<b>Training Workshop on The Ethics of Winning Institutions</b> <i>cont'd...</i>	ATPS National Coordinators ATPS Regional Council Members ATPS Secretariat Staff Members	
03:30 – 04:00 p.m.	<b>TEA/COFFEE &amp; HEALTH BREAK</b>		
04:00 – 05:30 p.m.	<b>Training Workshop on The Ethics of Winning Institutions</b> <i>...conclusion</i>	ATPS National Coordinators ATPS Regional Council Members ATPS Secretariat Staff Members	
<b>CLOSE OF BUSINESS FOR DAY ONE</b>			
<b>DAY 2 – Tuesday, 08 November 2011</b> <b>Venue: Mombasa Continental Resort, Mombasa, Kenya</b>			
<b>Time</b>	<b>Topic/Presentations</b>		
8:30 – 9:00 a.m.	Registration		

PLENARY SESSION 1: OPENING SESSION			
Rapporteur: Dr. Maurice O. Bolo, Post-Doctoral Research Officer, ATPS			
Time	Topic/Presentations	Proposed Presenters	Session Chair
09:00 – 09:05 a.m.	Welcoming Remarks by Chair, ATPS Executive Conference Organizing Committee	Dr. Nicholas Ozor Senior Research Officer, ATPS	Prof. Samuel Wangwe, Chair, ATPS Board & Executive Director, REPOA Tanzania
09:05 – 09:10 a.m.	Welcoming Remarks by The ATPS Kenya National Chapter Coordinator	Mr. Kenneth Aduda National Coordinator, ATPS -Kenya Projects & Resource Mobilization Manager, Kenya Industrial Research Development Institute (KIRDI)	
09:10 – 09:15 a.m.	Welcoming Remarks by a representative of the National Chapter Regional Council	Dr George O. Essegbey, Director, STEPRI - CSIR, Accra, Ghana	
09:15 – 09:20 a.m.	Welcoming Remarks by the Chair of African Women's Forum for Science and Technology (AWFST)	Prof. Agnes Mwang'ombe, University of Nairobi and ATPS Board Member	
09:20 – 09:25 a.m.	Welcoming Remarks by the Chair of the African Youth Forum for Science and Technology	Mr. Tennyson Magombo, Chair, AYFST, ATPS Malawi	
09:25 – 09:35 a.m.	Welcoming Remarks by ATPS Key Stakeholders & Key Partners	ATPS Stakeholders and Key Partners present	
09:35 – 09:45 a.m.	Welcoming Remarks by ATPS Secretariat	Prof. Kevin C. Urama, Executive Director, ATPS	
09:45 – 09:50 a.m.	Welcoming Remarks by the Chair of ATPS Board	Prof. Samuel Wangwe Chair, ATPS Board Executive Director, REPOA Tanzania	
09:50 – 10:10 a.m.	Opening Keynote Speech on Understanding the Link between Research, Policy and Practice	Prof. Shaukat A. Abdulrazak Chair Elect, ATPS Board & Executive Secretary, Kenya National Council for Science and Technology (NCST)	
10:10 – 10:30 a.m.	PHOTO SESSION & TEA/COFFEE & HEALTH BREAK		
PLENARY SESSION 2: KEYNOTE PAPERS			
	Keynote Paper Presentations	Proposed Presenters	Session Chair
10:30 - 10:50 a.m.	Conceptualizing research, policy and practice for sustainable African development	Mr. Alex Alusa Office of the Prime Minister, Federal Republic of Kenya	Prof. Shaukat A. Abdulrazak Chair Elect, ATPS Board & Executive Secretary, Kenya National Council for Science and Technology (NCST)
10:50 - 11:10 a.m.	The Role of Youth and Gender in policy research and policymaking	Dr. Peggy Oti-Boateng Senior Programme Specialist in Science and Technology Coordinator, African Network of Scientific and Technological Institutions (ANSTI) UNESCO Nairobi office, Kenya	
11:10 – 11:30 a.m.	Mechanisms and approaches for effective linkages amongst researchers, policymakers and practitioners	Dr Abdulai Baba Salifu Director-General, CSIR P.O. Box M 32, Accra, Ghana	

11:30 – 11:50 a.m.	The Role of Capacity development in policy research and policy making	<b>Prof. Julius Okojie</b> Executive Secretary, National Universities Commission, Abuja, Nigeria	
11:50 – 01:00 p.m.	Q&A Facilitated Discussion Session		
<b>01:00 - 02:00 p.m.</b>	<b>LUNCH BREAK</b>		
<b>PLENARY SESSION 3: KEYNOTE PAPERS</b> <i>Rapporteur: Mr. Ernest Acheampong, ATPS Research Officer</i>			
02:00 – 02:20 p.m.	<b>Keynote Paper Presentations</b>	<b>Proposed Presenters</b>	<b>Session Chair</b>
	Research uptake, communication and brokerage – the role of science writers and the media	<b>Mr. Diran Onifade</b> Nigerian Television Authority (NTA) & <b>Otulah Owuor</b> , Editor, Science Africa, Nairobi, Kenya	<b>Prof. Turner Isoun</b> , ATPS Board Member & former Minister for Science and Technology, Federal Republic of Nigeria
02:20 – 02:40 p.m.	Challenges and opportunities for effective linkages between research, policy and practice	<b>Prof. John Gwland Mwangi</b> , Council Member and Former Dean, Faculty of Education and Community Studies, Egerton University, Kenya	
02:40 - 03:00 p.m.	Linking Science, Policy and Practice: The role of ethics and belief systems	<b>Fr. Uchechukwu Obodoechina</b> Director, Justice, Peace and Development / Caritas Commission Nsukka, Nigeria	
03:00 - 03:20 p.m.	Linking Policy Research and Policymaking for African Sustainable Development: The Role of the Private Sectors	<b>Prof. Lloyd Chingambo</b> Chairman, African Carbon Credit Exchange, Lusaka, Zambia	
03:20 - 04:00 p.m.	Q&A Facilitated Discussion Session		
<b>04:00 - 04:20 p.m.</b>	<b>TEA/COFFEE &amp; HEALTH BREAK</b>		
04:20 - 04:40 p.m.	Intellectual Property Issues for effective policy research and policymaking	<b>Dr. Mohamed Khalil Timamy</b> Head, Environment Division, Department of Rural Economy and Agriculture, African Union Commission Addis Ababa, Ethiopia	<b>Prof. Oyebanji Oyeyinka</b> , Director, Monitoring & Research Division, UN-HABITAT & ATPS Board Member
	04:40 - 05:00 p.m.	Linking Policy Research and Policymaking: Lessons from the IPCC on Climate Change Policy and Implementation in Africa	
05:00 – 05:20 p.m.	Linking University Research to Policy and Practice: Strategies and Implications	<b>Prof. Bato Okolo</b> Vice Chancellor, University of Nigeria, Nsukka	
05:20 – 05:40 p.m.	Linking Policy research to Policymaking: what researchers, policymakers and practitioners need to know and do	<b>Hon. Obed Dlamini</b> , Member ATPS Swaziland/Formal Prime Minister, Kingdom of Swaziland	
05:40 – 06:10 p.m.	Q&A Facilitated Discussion Session		
<b>CLOSE OF BUSINESS FOR DAY 2</b>			

<b>DAY 3 - Wednesday, 09 November 2011</b>			
<b>PLENARY SESSION 3</b> <b>Venue: Mombasa Continental Resort, Mombasa, Kenya</b>			
<b>Time</b>	<b>Topic/ Presentations</b>	<b>Proposed Presenters</b>	<b>Session Chair/Lead Discussants</b>
08:40 – 09: 00 a.m.	Recap of Day 2	<b>Dr. Maurice Bolo</b> , Post-Doctoral Research Officer, ATPS	<b>Prof. Oyebanji Oyeyinka</b> , Director, Monitoring & Research Division, UN-HABITAT & ATPS Board Member
<b>Day 3: PARALLEL SESSION (D3:P1 – P3)</b> <b>See Annex 1 – 3 for specific break-out rooms for the parallel sessions: P1 – P3</b> <b>Rapporteurs: Mr. Ernest Acheampong, ATPS Research Officer (D3-P1)</b> <b>Ms. Ada Osisioma, ATPS Administrative Intern (D3-P2)</b> <b>Dr. Michele Mbo'o-Tchouawou, ATPS Post-Doctoral Research Officer (D3-P3)</b>			
09:00 – 11:00 a.m.	<b>Parallel Session (D3-P1): (Morning)</b> <ul style="list-style-type: none"> <li>Conceptualising research, policy and practice for sustainable development (Subtheme 1);</li> <li>Mechanisms and approaches for effective linkages amongst researchers, policymakers and practitioners (subtheme 3)</li> </ul>	<p>All delegates that submitted papers under this subtheme (see <b>Annex 1</b> for time allocations and venue) Guideline for preparing group recommendations:</p> <p><b>Subtheme 1:</b></p> <ol style="list-style-type: none"> <li>What are the principles of engagement for research, policy and practice (RPP)?</li> <li>What are the institutional best practices for strengthening RPP linkages?</li> </ol> <p><b>Subtheme 3:</b></p> <ol style="list-style-type: none"> <li>What are the mechanisms and approaches for effective linkages amongst RPP?</li> <li>What are the strategies for building consensus amongst relevant stakeholders in RPP processes?</li> </ol>	<p><b>Chair:</b> <b>Prof. Michael Madukwe</b> University of Nigeria, Nsukka</p> <p><b>Rapporteur:</b> <b>Mr. Ernest Acheampong</b>, ATPS Research Officer</p>
09:00 – 11:00 a.m.	<b>Parallel Session (D3-P2):</b> <ul style="list-style-type: none"> <li>Youth and Gender empowerment (subtheme 2)</li> <li>The Role of capacity development (subtheme 4)</li> </ul>	<p>All delegates that submitted papers under this subtheme (see <b>Annex 2</b> for time allocations and venue)</p> <p><b>Subtheme 2:</b></p> <ol style="list-style-type: none"> <li>What are the roles of youths and women in RPP linkage?</li> <li>What are the strategies for enhancing the participation of youths and women in RPP?</li> </ol> <p><b>Subtheme 4:</b></p> <ol style="list-style-type: none"> <li>What are the knowledge, skills and infrastructure required for effective linkage amongst RPP?</li> <li>What are the small, medium and long term capacity measures required for effective RPP?</li> </ol>	<p><b>Chair:</b> <b>Ms. Manal M. Samra</b> Development Advisor AIDme, Egypt</p> <p><b>Rapporteur:</b> <b>Ms. Ada Osisioma</b> ATPS Administrative Intern</p>

09:00 – 11:00 a.m.	<p><b>Parallel Session (D3-P3):</b></p> <ul style="list-style-type: none"><li>Research uptake, communication, advocacy and brokerage (subtheme 5)</li><li>Challenges and opportunities for effective linkages between research, policy and practice (subtheme 6)</li></ul>	<p>All delegates that submitted papers under this subtheme (<b>Annex 3</b> for time allocations and venue)</p> <p><b>Subtheme 5:</b></p> <ol style="list-style-type: none"><li>What are the innovative strategies for communicating research results for policymaking and implementation?</li><li>What are the roles of the media in effective communication of research outputs for policymaking and implementation?</li><li>What are the enabling environments required for effective communication of research outputs to policymakers for use by practitioners?</li></ol> <p><b>Subtheme 6:</b></p> <ol style="list-style-type: none"><li>What are the challenges and opportunities for effective linkages amongst RPP?</li></ol>	<p><b>Chair:</b> <b>Mr. Diran Onifade</b> Nigerian Television Authority (NTA)</p> <p><b>Rapporteur:</b> <b>Michele Mbo'o -Tchouawou</b>, ATPS Research Officer – Post Doctoral</p>
11:00 – 11: 30 a.m.	TEA/COFFEE & HEALTH BREAK		
11:30 – 01:00 p.m.	Day 3: PARALLEL SESSION (D3:P1 – P3) CONTINUES (cf : Annexes 1 – 3 for time allocations and respective venue)		
01:00 – 02:00 p.m.	LUNCH		
02:00 – 03:30 p.m.	Day 3: PARALLEL SESSION (D3:P1 – P3) CONTINUES <b>Discussions and development of group recommendations</b>		
03:30 – 04:00 p.m.	TEA/COFFEE & HEALTH BREAK		
<p><b>PLENARY SESSION 4 – International Roundtable</b> <b>Venue: Mombasa Continental Resort, Mombasa, Kenya</b> <b>Rapporteur: Dr. Maurice O. Bolo</b>, ATPS Post_Doctoral Research Officer</p>			
Time	Topic/ Presentations	Proposed Presenters	Session Chair/Lead Discussants
04:00 – 04:30 p.m.	Recap from the Parallel Sessions	<p><b>Mr. Ernest Acheampong</b> ATPS Research Officer (<b>P1</b>)</p> <p><b>Ms. Ada Osisioma</b> ATPS Administrative Intern (<b>P2</b>)</p> <p><b>Dr. Michele Mbo'o -Tchouawou</b>, ATPS Post - Doctoral Research Officer (<b>P3</b>)</p>	<p><b>Chair:</b> <b>Prof. Agnes Mwang'ombe</b> Member, ATPS Board &amp; <b>Principal</b>, College of Agriculture and Veterinary Sciences (CAVS), University of Nairobi, Kenya</p>
04:30 – 06:00 p.m.	<p>International Roundtable and Recommendations on Effective Strategies for Strenghtening Linkages between Policy research and Policymaking for African Development.</p> <p><i>A Communique to be produced from the recommendations of the parallel group discussions and recommendations from the international roundtable</i></p>	<p><b>PANELISTS</b> (to make 5 minutes presentation each on the subject)</p> <ol style="list-style-type: none"><li>Prof. Kevin Urama, ATPS Executive Director, Kenya</li><li>Prof. Turner Isoun, ATPS Board, Nigeria</li><li>Prof. Peter Onwualu, RMRDC, Nigeria</li><li>Prof. Joseph G. Massaquoi, UNESCO, Kenya</li><li>Prof. Francis Bisong, University of Calabar, Nigeria</li><li>Dr. Chidiebere Ibe, Institute of Public Policy Analysis and Management, Nigeria</li><li>Alfonso Alfonsi, CNR, Italy</li><li>Dr Christine Gasingirwa, Director General of S&amp;T, Rwanda</li><li>Dr. Dennis M. Wanchinga, Executive Secretary, NSTC, Zambia</li></ol>	<p><b>Facilitator:</b> <b>Ms. Deepa Pullanikkatil</b> LEAD Southern and Eastern Africa Chancellor College, University of Malawi P. O. Box 280 Zomba, Malawi</p>
06:00 – 06:30 p.m.	CONFERENCE CLOSING REMARKS BY THE CHAIR, ATPS BOARD		



19:00 – 21:30 p.m.	Conference group dinner hosted by ATPS (TBC)		
CLOSE OF BUSINESS FOR DAY 3			
DAY 4 - Thursday, 10 November 2011 Day 4: PARALLEL SESSION (D4:P1 – P4) See Annex 1 – 4 for specific break-out rooms for the parallel sessions: P1 – P4			
Time	Topic/Presentations	Proposed Presenters/Participants	Session Chairs
09:00 – 11:00a.m.	<b>Day 4 - Parallel Session (D4-P1):</b> IP Program Progress Review Workshop and Training of Trainers Workshop	All IP program researchers, national steering committee members and ToT delegates  Separate programme ( <b>Annex 4</b> for time allocations and venue)	<b>Program Coordinators</b> <b>Dr. Maurice O. Bolo, ATPS</b> and <b>Mr. Joseph Wekundah, BTA</b>  <b>Trainer</b> <b>Prof. Moni Wekesa</b> , Mount Kenya University (MKU)  <b>Rapporteur:</b> <b>Ms. Jacinta Kahi</b> Communications Assistant, ATPS
	<b>Day 4 Parallel Session (D4-P2):</b> Program Review Workshop for ATPS 2010 Grants on <b>AYFST Climate Change Innovation Program</b>	Separate programme ( <b>Annex 5</b> for time allocations and venue)	<b>Program Coordinator:</b> <b>Prof. Atieno Ndede-Amadi</b> , Chairperson Business Incubation Association of Kenya (BIAK)  <b>Rapporteur:</b> <b>Mr. Ernest Acheampong</b> ATPS Research Officer
	<b>Day 4 - Parallel Session (D4-P3):</b> Program Review Workshop for ATPS 2010 Grants on <b>AWFST Climate Change Innovation Program</b>	Separate programme ( <b>Annex 6</b> for time allocations and venue)	<b>Program Coordinator:</b> <b>Dr. Anthonia Achike</b> University of Nigeria  <b>Rapporteur:</b> <b>Ms. Ada Osisoma</b> ATPS Administrative Intern
11:00 – 11: 30 a.m.	TEA/COFFEE & HEALTH BREAK		
11:30 – 01:00pm	Day 4: PARALLEL SESSION (D4:P1 – P3) CONTINUES (cf : Annexes 4-6 for time allocations and respective venue)		
01:00 – 02:00 p.m.	LUNCH		
02:00 – 03:30 p.m.	Day 4: PARALLEL SESSION (D4:P1 – P3) CONTINUES (cf : Annexes 4-6 for time allocations and respective venue)		

03:30 – 04:00 p.m.	Tea/Coffee & Health Break		
04:00 – 05:30 p.m.	Day 4: PARALLEL SESSION (D4:P1 – P3) ENDS (cf : Annexes 4-6 for time allocations and respective venue)		
Day 4: PARALLEL SESSION P4 – ATPS BOARD COMMITTEES MEETINGS			
02:00 – 05:30 p.m.	ATPS Board Committee Meetings	Respective Board Committee members only	Respective Board Committee Chairs
Close Of Business For Day 4			
Day 5 - Friday, 11 November 2011			
ATPS BUSINESS – ATPS BOARD MEETING			
Time	Topic/Presentations	Participants	Session Chair/
09:00 – 12:30 p.m	Day 5 - Parallel Session (D5 -P1): 20 <sup>th</sup> ATPS Board Meeting and Briefing from External Evaluators	ATPS Board Members only	Chair ATPS Board
09:00 – 1:00 p.m	Day 5 - Parallel Session (D5-P2): IP Program Training of Trainers Workshop	All IP program researchers, national steering committee members and ToT delegates  Separate programme ( <b>Annex 5</b> for time allocations and venue)	<b>Program Coordinators</b> <b>Dr. Maurice O. Bolo,</b> ATPS Post- Doctoral Research Officer & <b>Mr. Joseph Wekundah</b> Executive Director, BTA, Kenya  <b>Trainer</b> <b>Prof. Moni Wekesa,</b> Mount Kenya University (MKU)  <b>Rapporteur:</b> <b>Ms. Jacinta Kahi</b> Communications Assistant, ATPS
11:00 – 11: 30 a.m.	Tea/Coffee & Health Break		
01:00 – 02:00 p.m.	LUNCH		
02:00 – 06:30 p.m.	Plenary Session: ATPS Annual General Meeting and Briefing from External Evaluators	For registered members only	Chair ATPS Board
03:30 – 04:00 a.m.	Tea/Coffee & Health Break		
Close Of Business For Day 5			

# Appendix 3

## Parallel Session Day 3 (D3-P1) Wednesday, 09th November 2011

SUB-THEME 1: CONCEPTUALIZING RESEARCH, POLICY AND PRACTICE FOR SUSTAINABLE AFRICAN DEVELOPMENT		
<b>Session Chair(s):</b> Prof. Eric C. Eboh, Executive Director, African Institute for Applied Economics (AIAE), Nigeria <b>Rapporteurs:</b> Dr Maurice O. Bolo, ATPS Research Officer, Post-Doctoral		
Time	Topic/Presentations	Presenter
09:00 – 09:15a.m.	<b>(D3-P1.1):</b> Indigenous Knowledge in research, policy and practice for Development: Institute of Indigenous Knowledge (IIK)	Anke Weisheit, PhD Fellow, Mbarara University of Science and Technology
09:15 – 09:30a.m.	<b>(D3-P1.2):</b> Legislative and Institutional Pathways interfacing the Research, Policy and Practice Nexus	BT Costantinos, PhD Professor of Comparative Public Policy, School of Graduate Studies, AAU
09:30 – 09:45a.m.	<b>(D3-P1.3):</b> The Research - Policy Nexus: Mapping the Terrain of the Literature	Tracy Bailey
09:45 – 10:00 a.m.	<b>(D3-P1.4):</b> Triangulation of Research, Policy and Practice: Pathway for African Development	Nnamani, C. V. and Oselebe, H. O. Ebonyi State University, Abakaliki, Nigeria
10:00 – 10:30a.m.	Facilitated Q&A and Discussion Session	
10:30 – 10:45a.m.	TEA/COFFEE & HEALTH BREAK	
SUB-THEME 3: MECHANISMS AND APPROACHES FOR EFFECTIVE LINKAGES AMONGST RESEARCHERS, POLICYMAKERS AND PRACTITIONERS		
<b>Session Chair(s):</b> Prof. Eric C. Eboh, Executive Director, African Institute for Applied Economics (AIAE), Nigeria <b>Rapporteurs:</b> Dr Maurice O. Bolo, ATPS Research Officer, Post-Doctoral		
10:45 – 11:00a.m.	<b>(D3-P1.5):</b> Bridging the Gap between Research, Policy and Practice: A Model for Real-Time Strategic Response to Change	Abel Niyibizi, Petro Systems Limited
11:00 – 11:15a.m.	<b>(D3-P1.6):</b> Strategies for enhancing linkage in the innovation transfer sub-system in south-eastern Nigeria	Dimelu, M. U Department of Agricultural Extension & Emodi, A.I
11:15-11:30p.m.	<b>(D3-P1.7):</b> Linking business incubation research, policy, and practice for creation and growth of new technology-based firms – the Case Study of Brazil	Prof. Atieno Ndede-Amadi Head of Business School; Kenya Polytechnic University College
11:30 – 11:45a.m.	<b>(D3-P1.8):</b> Innovative Ways of Integrating Traditional Medicine into Agricultural Extensions and Advisory Services for Production of Complementary Medicines in Lesotho	Eric B. Maliehe Lesotho
11:45 – 12:00noon	<b>(D3-P1.9):</b> Critical Actors and Roles in Science, Technology and Innovation: Matching Expectations with Reality in Ghana	Adelaide A. Asante and Dr. George Owusu Essegbey, Ministry of Environment, Science and Technology, Ghana
12:00 – 01:00p.m.	Facilitated Q&A and Discussion Session	
01:00 – 02:00p.m.	LUNCH BREAK	
02:00 - 02:15p.m.	<b>(D3-P1.10):</b> Commercialization of Research Findings: A Tool Towards More Effective Pharmaceutical Research in Africa	Uduma Eke Osonwa, PhD, MPSN Faculty of Pharmaceutical Sciences, Nnamdi Azikiwe University, Awka, Nigeria
02:15 - 02:30p.m.	<b>(D3-P1.11):</b> L'intelligence Collective Pour Une Approche Globale de la Recherche en Réseau	Robert Mba, PhD, Certificat de Santé Communautaire, Université de Yaoundé 1, Centre de Développement Pour les Bonnes Pratiques en Santé. Yaoundé, Cameroun
02:30 - 02:45p.m.	<b>(D3-P1.12):</b> Swaziland's Experiences with Developing a National Policy for Science, Technology and Innovation: Implications for linking policy research with policy making	Mgidi D. Dlamini and Musa M. A. Dube, Swaziland
02:45 – 03:00p.m.	<b>(D3-P1.13):</b> Linking Research To Policy and Development: The Case of Agricultural Development Programme (ADPS) Nigeria	Nnadozie, A.K.O. and Mkpado M Agricultural Economics Department, University of Nigeria, Nsukka
03:00 – 03:15 p.m.	<b>(D3-P1.14):</b> Linking Livestock Research to Policy in Nigeria: The Intervention of the Nigeria Institute of Animal Science	Onyimonyi, Anselm Ego Department of Animal Science University of Nigeria, Nsukka
03:15 – 03:50p.m.	Facilitated Q&A and Discussion Session	
03:50 – 04:00p.m.	TEA/COFFEE & HEALTH BREAK	
04:00 – 06:00p.m.	PLENARY SESSION 4 – International Roundtable (see main programme for details)	

## Appendix 4

### Parallel Session Day 3 (D3-P2) Wednesday, 09th November 2011

<b>SUB-THEME 2: YOUTH AND GENDER EMPOWERMENT</b> <b>Session Chair(s):</b> Dr. Lindiwe M. Sibanda, CEO, FANPARN, Pretoria, South Africa <b>Rapporteurs:</b> Mr. Ernest Acheampong, ATPS Research Officer		
Time	Topic/Presentations	Presenter
09:00 – 09:20a.m.	<b>(D3-P2.1):</b> Youths Mobilization under the Agricultural Development Programme: Lessons for Effective Linkages between Research, Extension Organization and Farmers for Agricultural Transformation Policy in South- east Nigeria	Ezeh, Ann N. and Dr S.O Ezeh. Ebonyi State University, Abakaliki
09:20 – 09:40a.m.	<b>(D3-P2.2):</b> Effective Linkage between Research and Policy Making In the Area of Soil Sustainability: The Role of Youth and Gender Empowerment via Collaborative Mentorship/Training.	Umeogochukwu, O.P Department of Soil Science, University of Nigeria Nsukka
09:40 – 10:00a.m.	<b>(D3-P2.3):</b> Strengthening Linkages Between Policy Research and Policy Making for African Development: Youth and Gender Empowerment	Akola Constancia TNSRMS Centre, East Africa
10:00 – 10:20 a.m.	<b>(D3-P2.4):</b> An empirical analysis of the influence of country quality of institutions on gender empowerment in Sub-Saharan Africa	Damilola Olajide & Divine Ikenwilo University of Aberdeen, Scotland
10:20 – 11:00a.m.	Facilitated Q&A and Discussion Session	
11:00 – 11:30a.m.	<b>TEA/COFFEE &amp; HEALTH BREAK</b>	
<b>SUB-THEME 4: THE ROLE OF CAPACITY DEVELOPMENT</b> <b>Session Chair(s):</b> Dr. Lindiwe M. Sibanda, CEO, FANPARN, Pretoria, South Africa <b>Rapporteurs:</b> Mr. Ernest Acheampong, ATPS Research Officer		
11:30 – 11:50a.m.	<b>(D3-P2.5):</b> The role of capacity development	Angela Aluko Mbeya Institute of Science and Technology
11:50 – 12:10p.m.	<b>(D3-P2.6):</b> An Analysis of Market Infrastructure Improvement: Has It Really Developed Informal Sector Agro-Based Micro-Enterprises In Bayelsa State, Nigeria?	Idani, Corinthian Potoki Bayelsa State Senior Secondary Schools Board, Yenagoa
12:10-12:30p.m.	<b>(D3-P2.7):</b> Entrepreneurship as a Cutting Edge for Rural Development	A.B. C. Ezeibe Centre for Entrepreneurship and Development Research (CEDR) University of Nigeria, Nsukka
12:30 – 02:00p.m.	<b>LUNCH BREAK</b>	
02:00 – 03:30p.m.	Facilitated Q&A and Discussion Session	
03:30 – 04:00p.m.	<b>TEA/COFFEE &amp; HEALTH BREAK</b>	
04:00 – 06:00p.m.	PLENARY SESSION 4 – International Roundtable (see main programme for details)	

# Appendix 5

## Parallel Session Day 3 (D3-P2) Wednesday, 09th November 2011

<b>SUB-THEME 5: RESEARCH UPTAKE, COMMUNICATION, ADVOCACY AND BROKERAGE</b> <b>Session Chair(s):</b> Mr. Diran Onifade, Nigerian Television Authority (NTA) <b>Rapporteurs:</b> Dr Michèle Mbo'o-Tchouawou, ATPS Research Officer, Post-Doctoral		
Time	Topic/Presentations	Presenter
09:00 – 09:15a.m.	<b>(D3-P3.1):</b> Providing the right incentives to promote evidence -based policy	Ms Christelle Chapoy International Initiative for Impact Evaluation
09:15 – 09:45a.m.	<b>(D3-P3.2):</b> Towards Effective Research Uptake and Innovative Communication of Development Research Projects in Nigeria	Adeyinka, F. M and Ajala, A.O Nigerian Institute of Social and Economic Research
09:45 – 10:00a.m.	<b>(D3-P3.3):</b> An omitted research infrastructure/Arena: assessing the relevance of engaging small rural grassroots NGOs and CBOs on the research agenda	Bende, Andrew Julius Monitoring & Evaluation inspirator, YWCA – Zambia
10:00 – 10:15 a.m.	<b>(D3-P3.4):</b> Research Uptake, Communication, Advocacy and Brokerage: A Look into the Farming Skills Acquisition Programme, Adamawa State, Nigeria.	Hasuruna Amos, Department of Vocational Education, Federal University of Technology
10:15 – 11:00a.m.	Facilitated Q&A and Discussion Session	
<b>11:00 – 11:30a.m.</b>	<b>TEA/COFFEE &amp; HEALTH BREAK</b>	
11:30 – 11:45a.m.	<b>(D3-P3.5):</b> Research-based evidence in African Policy Debates – Chieftaincy Reform in Sierra Leone	Emma Justine Broadbent, Sierra Leone
11:45 – 12:00p.m.	<b>(D3-P3.6):</b> From Economic Growth to Sustainable Development: Challenges and Opportunities for Realistic Policy Responses	Chidi Magnus Onuoha Executive Director, Green Economics Nigeria
12:00-12:15p.m.	<b>(D3-P3.7):</b> Linking Research to Policy: The African Development Bank as Knowledge Broker	Basil Jones, PhD Principal Institutional and Capacity Development Expert, ADB, Tunisia
12:15 – 01:00p.m.	Facilitated Q&A and Discussion Session	
<b>01:00 – 02:00p.m.</b>	<b>LUNCH BREAK</b>	
<b>SUB-THEME 6: CHALLENGES AND OPPORTUNITIES FOR EFFECTIVE LINKAGES BETWEEN RESEARCH, POLICY AND PRACTICE</b> <b>Session Chair(s):</b> Mr. Diran Onifade, Nigerian Television Authority (NTA) <b>Rapporteurs:</b> Dr Michèle Mbo'o-Tchouawou, ATPS Research Officer, Post-Doctoral		
Time	Topic/Presentations	Presenter
02:00 – 02:15p.m.	<b>(D3-P3.8):</b> Rationale for Local Entrepreneurship Development Policies and Programmes in Post-colonial Lesotho: Lessons from the Past	Sean M. Maliehe Lesotho
02:15 – 02:30p.m.	<b>(D3-P3.9):</b> Policy analysis, niche management and civil society in the energy market	David Ndegwah Lecturer in the Department of Philosophy and Religious Studies at Kenyatta University
02:30 – 02:45p.m.	<b>(D3-P3.10):</b> From Indicators to Policy: Issues from the Nigerian Research and Development Survey	Sanni M. Oluwatope National Centre for Technology management, Obafemi Awolowo University, Nigeria
02:45 – 03:00p.m.	<b>(D3-P3.11):</b> The emerging issues in Intellectual Property: Pharmaceuticals and Traditional Medicines	Raban Wilfred Masuka, Zimbabwe
03:00 – 03:45p.m.	Facilitated Q&A and Discussion Session	
<b>03:45 – 04:00p.m.</b>	<b>TEA/COFFEE &amp; HEALTH BREAK</b>	
04:00 – 06:00p.m.	PLENARY SESSION 4 – International Roundtable (see main programme for details)	

## Appendix 6

### Parallel Session Day 4 (D4-P1) Thursday, 10th & Friday 11th November 2011

<b>THURSDAY, 10<sup>TH</sup> NOVEMBER 2011</b> <b>PROGRAMME FOR IP TRAINING OF TRAINERS (ToT) WORKSHOP</b> <b>Programme Coordinator(s):</b> Dr Maurice Ochieng Bolo, ATPS Research Officer and Mr. Joseph Wekundah, Executive Director, BTA <b>Rapporteurs:</b> Ms. Jacinta Kahi, Communications Assistant, ATPS <b>Facilitators:</b> Prof. Moni Wekesa and Ms Millicent Ligare, Mount Kenya University (MKU)		
Time	Topic/Presentations	Presenter
<b>08:00 – 11:00      SESSION 1: LEGAL FRAMEWORKS ON INTELLECTUAL PROPERTY RIGHTS</b>		
08:00 – 08:30a.m.	Overview, Structure and Objectives of the ToT/Case studies progress review	Dr. Maurice O. Bolo, and Mr. Joseph Wekundah
08:30 – 09:00a.m.	Self-introductions by participants including their expectations and fears	Dr. Maurice Bolo (Chair)
09:00 – 09:30a.m.	Setting the stage: Introduction to the different types of IPRs and their legal frameworks	Prof. Moni Wekesa
09:30 – 10:30a.m.	<sup>2</sup> <b>Group Discussions</b> – Questions/guidelines to be provided <ul style="list-style-type: none"> <li>• Overview of IPRs in Ethiopia – Solomon Tibebe</li> <li>• Overview of IPRs in Kenya – Anne Mwayo</li> <li>• Overview of IPRs in Lesotho – Pitso Masupha</li> <li>• Overview of IPRs in Uganda – Job Wanakwakwa</li> </ul> <i>NB. Each presentations has been allocated 5 minutes</i>	Chairpersons, Pls and Rapporteurs
10:30 – 11:00a.m.	Feedback/group reports and wrap-up of session 1	Group Rapporteurs and Facilitators
11:00 – 11:30a.m.	<b>TEA/COFFEE &amp; HEALTH BREAK</b>	

THURSDAY, 10 <sup>TH</sup> NOVEMBER 2011 PROGRAMME FOR IP TRAINING OF TRAINERS (ToT) WORKSHOP		
SESSION 2: IPRs POLICY AND INSTITUTIONAL FRAMEWORKS		
11:30 – 12:00noon	Policy and Institutional frameworks for IPRs – International, regional and national perspectives	Prof. Moni Wekesa and Millicent Ligare
12:00 – 12:45a.m.	<b>Group discussions:</b> questions and guidelines to be provided <ul style="list-style-type: none"><li>• Policy and institutional frameworks in Ethiopia – Solomon Tibebe</li><li>• Policy and institutional frameworks in Kenya – Anne Mwayo</li><li>• Policy and institutional frameworks in Lesotho – Pitso Masupha</li><li>• Policy and Institutional frameworks in Uganda – Job Wanakwakwa</li></ul>	Chairpersons, Pls and Rapporteurs
12:45 – 01:00p.m.	Feedback/group reports and wrap-up of session 2	Rapporteurs and facilitators
01:00 – 02:00p.m.	LUNCH BREAK	
2:00 – 3:30 pm	SESSION 3: TRADITIONAL KNOWLEDGE/TRADITIONAL MEDICINE AND EXPRESSIONS OF FOLKLORE	
02:00 – 02:30p.m.	Introducing traditional knowledge/traditional medicine and expressions of folklore	Prof. Moni Wekesa and Millicent Ligare
02:30 – 03:15p.m.	<b>Group discussions</b> – questions and guidelines to be provided <ul style="list-style-type: none"><li>• Status of traditional knowledge/traditional medicine and folklore in Ethiopia – Solomon Tibebe</li><li>• Status of traditional knowledge/traditional medicine and folklore in Kenya – Anne Mwayo</li><li>• Status of traditional knowledge/traditional medicine and folklore in Lesotho – Pitso Masupha</li><li>• Status of traditional knowledge/traditional medicine and folklore in Uganda – Job Wanakwakwa</li></ul>	Chairpersons, Pls and Rapporteurs

<sup>2</sup>For all the group discussions, participants will be provided with questions and guidelines to focus their deliberations. There will be four (4) working groups and each group will select their chairperson and rapporteurs. The rapporteurs will be responsible for reporting back to plenary the key highlights of their discussions/conclusions. The principal investigators (PIs) of the country case studies will be distributed amongst these groups (each group will have one (1) PI) and they will be allocated time to give brief presentations to the groups to enrich their discussions and receive comments on their findings



03:15 – 03:30p.m.	Feedback/group reports and wrap – up of session 3	Rapporteurs and facilitators
03:30 – 04:00p.m.	TEA/COFFEE & HEALTH BREAK	
4:00 – 5:30 pm	SESSION 4: PRINCIPLES OF ACCESS AND BENEFIT SHARING (WITH SPECIAL FOCUS ON NAGOYA AND SWAKOPMUND PROTOCOLS)	
04:00 – 04:30p.m.	Principles of access and benefit sharing (ABS)	Prof. Moni Wekesa and Millicent Ligare
04:30 – 05:15p.m.	<b>Group works</b> – questions and guidelines to be provided <ul style="list-style-type: none"> <li>• Status of ABS in Ethiopia – Solomon Tibebu</li> <li>• Status of ABS in Kenya – Anne Mwayo</li> <li>• Status of ABS in Lesotho – Pitso Masupha</li> <li>• Status of ABS in Uganda – Job Wanakwakwa</li> </ul>	Chairpersons, Pls and Rapporteurs
05:15 – 05:30p.m.	Feedback/group reports and wrap – up of session 4	Rapporteurs and facilitators
END OF SESSION		
<b>FRIDAY, 11<sup>TH</sup> NOVEMBER 2011</b> <b>PROGRAMME FOR IP TRAINING OF TRAINERS (ToT) WORKSHOP</b> <i>Programme Coordinator(s): Dr Maurice Ochieng Bolo, ATPS Research Officer, and Mr. Joseph Wekundah, Executive Director, BTA</i> <i>Rapporteurs: Ms. Jacinta Kahi, Communications Assistant, ATPS</i> <i>Facilitators: Prof. Moni Wekesa and Ms Millicent Ligare, Mount Kenya University (MKU)</i>		
8:00 – 11:00	SESSION 5: TOOLS FOR ACCESS AND BENEFIT SHARING (ABS)	
<b>Time</b>	<b>Topic/Presentations</b>	<b>Presenter</b>
8:00 – 8:30a.m	Tools for ABS	Prof. Moni Wekesa and Millicent Ligare
8:30 – 9:30a.m	<b>Group discussions</b> – questions and guidelines to be provided <ul style="list-style-type: none"> <li>• Tools for ABS in Ethiopia – Solomon Tibebu</li> <li>• Tools for ABS in Kenya – Anne Mwayo</li> <li>• Tools for ABS in Lesotho – Pitso Masupha</li> <li>• Tools of ABS in Uganda – Job Wanakwakwa</li> </ul>	Chairpersons, Pls and Rapporteurs
9:30 – 10:00a.m	Feedback/group reports and wrap – up of session 5	Rapporteurs and facilitators
10:00 – 11:00a.m	SESSION 6: BIOPROSPECTING AND BIOTRADE	
10:00 – 10:30	Bioprospecting and Biotrade	Prof. Moni Wekesa and Millicent Ligare
10:30 – 11:00	Plenary discussions and wrap- up of session 6	All participants
11:00 – 11:30a.m.	TEA/COFFEE & HEALTH BREAK	
11:00 – 01:00p.m	FORWARD PLANNING FOR 2012: PRESENTATIONS OF CHAPTER WORKPLANS <sup>3</sup>	
11:00 – 11:15a.m	Work-plan for IP activities in Ethiopia in 2012	Wondwossen Belete, National Coordinator, Ethiopia
11:15 – 11:30a.m	Work-plan for IP activities in Kenya in 2012	Kenneth Aduda, National Coordinator, Kenya
11:30 – 11:45a.m	Work-plan for IP activities in Lesotho in 2012	Sekoja Phakisi, Ag. National Coordinator, lesotho
11:45 – 12:00p.m	Work-plan for IP activities in Tanzania in 2012	Chair, NSC, Tanzania
12:00 – 12:15p.m	Work-plan for IP activities in Uganda in 2012	John Okunzi, National Coordinator, Uganda
12:15 – 12:30p.m	Work-plan for IP activities in Malawi in 2012	H. Z. Mloza -Banda, National Coordinator, Malawi
12:30 – 12:45p.m	Work-plan for IP activities in Zimbabwe in 2012	Chair NSC, Zimbabwe
12:45 – 01:00p.m	Work-plan for IP activities in Swaziland in 2012	M.A. Dube, National Coordinator, Swaziland
01:00 – 02:00p.m.	LUNCH BREAK	
02:00 – 06:00p.m.	PLENARY SESSION – ATPS ANNUAL GENERAL MEETING (For Registered Members ONLY)	

<sup>3</sup>In this session National Chapters Coordinators and/or National Steering Committee Chairpersons will present activity plans and budget for 2012

## Appendix 7

### Parallel Session Day 4 (D4-P2) Thursday, 10th November 2011

<b>Programme for AWFST Progress Review Workshop</b> <b>Programme Coordinator(s):</b> Dr. Anthonia Achike, University of Nigeria <b>Rapporteurs:</b> Ms. Ada Osioma, ATPS Administrative Intern		
Time	Topic/Presentations	Presenter
09:30 – 10:00a.m.	<b>(D4-P2.1):</b> Moving Forward in a Changing Climate: Poverty Reduction through Sustainable Environmental Management (PRESEM) <i>CSP/0504/10-05</i>	Joy Samantha Bongyereire Biodiversity Conservation for Rural Development Kisoro-Uganda -Uganda
10:00 – 10:30a.m.	<b>(D4-P2.2):</b> Waste Minimisation Programme (WIP) <i>CSP/0502/10-01</i>	Martha Ada Ugwu 59 Highgrove Road, Walderslade, Chatham Kent, ME5 7SF, UK
10:30 – 11:00a.m.	<b>(D4-P2.3):</b> Climate Change Awareness and Indigenous Innovative Adaptation Measures applied by the Maasai Society in Tanzania <i>CSP/0504/10-01</i>	Elinorata Mbuya Institute of Human Settlement Studies, Ardhi University, Tanzania
11:00 – 11:30a.m.	<b>TEA/COFFEE &amp; HEALTH BREAK</b>	
11:30 – 12:00noon	<b>(D4-P2.4):</b> CSP/0504/10-02 arm Level Responses to Climate Change and Sustainable Agro -Ecosystem Management in Marginal Lands of Ebonyi State, Nigeria	Ann Nnenna Ezeh Department of Agricultural Economics, Management & Extension, Ebonyi State University Abakaliki- Nigeria
12:00 – 12:30a.m.	<b>(D4-P2.5):</b> Smallholder rice farmers in South Eastern Nigeria: Constraints. Impact, mitigation and adaptation to climate change <i>CSP/0501/10-01</i>	Dr. Happiness Oselebe Department of Crop Production & landscape Management, Ebonyi State University, Abakaliki, Nigeria
12:30 – 01:00p.m.	<b>(D4-P2.6):</b> Effective Dissemination pathways for delivering Climate information and services to vulnerable groups for adaptation in semi-arid Kenya <i>CSP/0504/10-07</i>	Viola Kirui Crops, Horticulture and Soil Sciences Department, Egerton University, Kenya
01:00 – 02:00p.m.	<b>LUNCH BREAK</b>	
02:00 – 02:30p.m.	<b>(D4-P2.7):</b> Identifying Indigenous knowledge and effective communication systems for adaptation to climate change by smallholder farmers of Kilifi District, Kenya <i>CSP/0504/10-08</i>	Grace A. Achiando Department of Crops, Horticulture and Soil Sciences, Egerton University, Kenya
02:30 – 03:00p.m.	<b>(D4-P2.8):</b> Strategies for Promoting Sustainable Indigenous Practises in Adaptation, Resilience Capacity Building and Mitigation of Deforestation, Desertification and Drought in Rural African Communities <i>CSP-0504/10-09</i>	Barrister Onyoke Kingsley Nigeria
03:00 – 03:30p.m.	<b>(D4-P2.9):</b> The Effect of Human Activities on the Role of Forests as a Carbon Sink - The Case of Mau Forest, Kenya <i>CSP/0501/10</i>	Aliet Ondicho Eldoret, Kenya
03:30 – 04:00p.m.	<b>TEA/COFFEE &amp; HEALTH BREAK</b>	
<b>END OF SESSION</b>		

# Appendix 8

## Parallel Session Day 4 (D4-P3) THURSDAY, 10th November 2011

<b>Programme for AYFST Progress Review Workshop</b> <b>Programme Coordinator(s): Prof. Atieno Amadi, BIAK</b> <b>Rapporteurs: Mr. Ernest Acheampong, ATPS Research Officer</b>		
Time	Topic/Presentations	Presenter
09:00 – 09:25a.m.	<b>(D4-P3.1):</b> Assessment of the vulnerability and adaptation strategies to climate variability and change of the Bos-aurus dairy dairy genotypes under diverse production environments in Kenya CP/0404/10-06	Kiplangat Ngeno International livestock research institute, Biotechnology theme (ILRI), Nairobi, Kenya
09:25 – 09:50a.m.	<b>(D4-P3.2):</b> The Integration of Conservation Agriculture to Agro-forestry system as an adaptation strategy to climate change CP/0401/10-05	Mr. Sekaleli Ts'epo Stephen Roma, Maseru, Lesotho
09:50 – 10:10a.m.	<b>(D4-P3.3):</b> Design and Analysis of a 1MW Grid-Connected Solar Photovoltaic System In Kumasi-Ghana CP/0401/10-06	Ebenezer Nyarko Kumi The Energy Center Kwame Nkrumah University of Science and Technology, Kumasi, Ghana
10:10 – 10:35a.m.	<b>(D4-P3.4):</b> Detailed measurements of vehicular carbon footprints emissions concentration level in Minna, Niger State, Nigeria and the Environmental Pollution cum Climate Change Effect CP/0401/10-08	Francis Okeleola Olumayokun Geography Department Federal University of Technology Minna, Niger state, Nigeria
10:35 – 11:00a.m.	<b>(D4-P3.5):</b> Near real-time applicatin and validation of a multi-temporal threshold algorithm in active forest fire detection and monitoring in Zimbabwe using MSG satellite CP/0402/10-04	Tawanda Manyangadze Department of Sustainable Environment and Development Savetack Solutions, Office no. 18, Guni House, Masvingo, Zimbabwe
11:00 – 11:30a.m.	<b>TEA/COFFEE &amp; HEALTH BREAK</b>	
11:30 – 11:55a.m.	<b>(D4-P3.6):</b> Les Jeunes moteurs des Communautés résilientes face au changement climatique dans les villes de Karimama et de Malanville CP/0405/10-03	Abdelaziz Lawani Ingénieur Agronome spécialiste en Economie Rurale, Cotonou Bénin
11:55 – 12:20p.m.	<b>(D4-P3.7):</b> Assessing Indigenous Climate Change Adaptation and Mitigation and Improving Resilience and Decision Making Capacity of Smallholder farmers in response to climate risks in Tigray, Northern Ethiopia CP/0404/10-05	Kiros Meles Hadgu Mekelle University, Ethiopia
12:20 – 12:45p.m.	<b>(D4-P3.8):</b> Developing the Capacity and Improving Access of Small-scale Farmers to Low Cost Artificial Substrate Mushroom Cultivation in South-Eastern Nigeria CP/0403/10-02	Mr. Mmaduabuchukwu Mkpado Centre for Rural Development and Cooperatives (CRDC) University of Nigeria
12:45 – 01:10p.m.	<b>(D4-P3.9):</b> Utilization of the Potential Rain Water Harvesting Technology for Improving Food Security in Dry Areas, The Case of Bahi District, Dodoma CP/0404/10-01	Deusdedit Kibassa Ardhi University (ARU) Institute of Human Settlement Studies (IHSS), Dar es Salaam, Tanzania
01:10 – 02:10p.m.	<b>LUNCH BREAK</b>	

02:10 – 02:35p.m.	<b>(D4-P3.10):</b> Harnessing Indigenous Knowledge on Small-Scale Soil and Water Conservation Innovations to Enhance Farmer Adaptation to Climate Change in Central Malawi <i>CP/0404/10-02</i>	Ms Loma Nyangulu Kirk Development Research, Training & Consultancy (KIDERTCO) Lilongwe, Malawi
02:35 – 03:00p.m.	<b>(D4-P3.11):</b> Climate Change Analysis: Improve Farmers' Resilience to Climate Related Hazards in the Upper Catchment of Blue Nile, Ethiopia <i>CP/0404/10-04</i>	Mr. Bewket Amdu Wondogenet College MA in Env't and Dev't
03:00 – 03:25p.m.	<b>(D4-P3.12):</b> Evaluation of the CMIP3 Model on the Simulation of the South Atlantic ocean Dipole <i>CP/0403/10-01</i>	Hyacinth C. Nnamchi Department of Geography University of Nigeria
<b>03:25 – 03:45p.m.</b>	<b>TEA/COFFEE &amp; HEALTH BREAK</b>	
03:45 – 04:10p.m.	<b>(D4-P3.13):</b> Assess the rationale and competence of pastoral community innovative adaptation to the incidence of climate change in Ethiopia <i>CP/0401/10-02</i>	Tibebu Solomon, Tibebu Solomon Senior Technology Transfer Expert Ministry of Science & Technology Ethiopia
04:10 – 04:35p.m.	<b>(D4-P3.14):</b> Optimization of a continuous biodiesel plant <i>CP/0402/10-05</i>	Mr. Joel N. Nwakaire Dept. Of Agricultural & Bioresources Engineering, University of Nigeria Nsukka
04:35 – 05:00p.m.	<b>(D4-P3.15):</b> Analysis of the role of ICTs in Climate Change Awareness; Adaptation and Mitigation in Rural South Africa and Zimbabwe <i>CP/0405/10-07</i>	Shakespear Mudombi Institute of Economic Research on Innovation (Tshwane University of Technology)
<b>END OF SESSION</b>		

## Appendix 9

### List of Delegates that attended the 2011 ATPS Annual Conference and Workshops

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