



TECHNOPOLICY

AFRICA

This is the official newsletter of the African Technology Policy Studies (ATPS) Network



New Leadership at ATPS

ATPS emerges as best Think Tank in Africa

STI in Advancing Higher Education

ATPS Vision:

To become the leading international centre of excellence and reference in science, technology and innovation systems research, training and capacity building, communication and sensitization, knowledge brokerage, policy advocacy and outreach in Africa

ATPS Mission:

To improve the quality of science, technology and innovation systems research and policy making in Africa by strengthening capacity for science and technology knowledge generation, communication and dissemination, use and mastery for sustainable development in Africa

Overall Objective:

To develop Africa's STI capacity (knowledge basis & infrastructure, knowledge circulation & networks, knowledge conditions & policies) today for sustainable African development tomorrow

ATPS Motto:

Building Africa's capabilities in science, technology and innovation policy research, policymaking and policy implementation for sustainable development

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2014 Global Go To Think Tank Index Report



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CHAIRMAN'S MESSAGE



Prof. Shaukat Abdulrazak

I am pleased to welcome you to the first edition of the revamped ATPS Newsletter– **Technopolicy Africa**. ATPS has recently witnessed remarkable progress as well as changes that are clearly reflected in this edition. I am delighted to introduce Dr. Nicholas Ozor our new Acting Executive Director who has been at the helm of ATPS since August 2014. The Board was convinced that Dr. Ozor has the capacity, experience, drive and goodwill for driving the ATPS in the right direction.

The ATPS is currently implementing the phase VII Strategic Plan (2013-2018) which is a plan that was comprehensively guided by our mandate; building Africa's capabilities in science, technology and innovation policy research, policymaking and policy implementation for sustainable development. The plan focuses on five thematic priorities; STI policy research and research capacity building (STI-RCB), intra- Africa and Global Collaboration and Partnership (IGCP) program, youth and gender empowerment (YGEP), training and sensitization (T&S) and STI knowledge brokerage, commercialization and policy advocacy (KB-CPA).

The ultimate aim of phase VII strategic plan is to improve understanding and functioning of STI policy research and policy-making processes and systems to strengthen capabilities, social responses, and governance of STI- led sustainable development in Africa.

In appreciating our progress, last year ATPS emerged the best think tank network in Africa in about eight different categories

of the criteria used. The 2014 Global Go Think Tanks and Civil Society Index released in January 2015, ranks the ATPS as the best think tank network with the most significant impact on public policy in Africa (31st globally); the best managed Think Tank in Africa (19th globally); best Think Tank Network in Africa (14th globally). These among other outstanding recognitions under this award, made ATPS proud and stimulated to relentlessly continue with its STI endeavors on the continent and beyond. We extend this gratification to our various stakeholders for their support during the period of evaluation, as we would not have achieved this without them.

In our efforts to promote science and technology capacity in the region the ATPS is keen to partner with major institutions that share a common goal. Early this year, in collaboration with the United Nations Educational Scientific and Cultural Organization, (UNESCO) and Kenya's National Commission for Science, Technology and Innovation (NACOSTI) the ATPS co-authored a policy brief on Mainstreaming Gender in the National Science Technology and Innovation Policy of Kenya. This Policy Brief is rated as the second best policy report used in influencing policy in Africa in 2014 by the Global Go Think Tanks and Civil Society Index. The brief has since been disseminated to all the relevant ministries in Kenya as well as the 47 County governments; this is with the aim of influencing the mainstreaming of gender into the national STI policy of Kenya.

We have partnered with other like-minded STI institutions both regionally and internationally. Over a period of 10 months the ATPS has signed 5 memoranda of understanding and a number of partnerships are underway. The institutions include: University of Nigeria (UNN), Pan African Climate Justice Alliance (PACJA), Global Alliance for Livestock Veterinary Medicines (GALVmed), Food, Agriculture and Natural Resources Policy Analysis Network (FANRPAN) and Technical University of Kenya (TUK). We are hopeful that all these partnerships will go a long way in fulfilling our mandate.

Furthermore, ATPS and its partners; United States Department of Agriculture -Agricultural Research Service (USDA- ARS) and Regional Centre for Mapping of Resources for Development (RCMRD) recently launched an exceptional innovation in the agricultural sector, the LandPKS application, which is a significant step in supporting local land management and land use planning to optimize food security, land restoration, and climate change adaptation programs. These and more news stories have been covered in this publication.

I wish to thank all those who have contributed to this maiden edition of Technopolicy Africa and especially our donors and partners for supporting the ATPS in achieving its mandate.

Prof. Shaukat Abdulrazak,
PhD, FKIM, FAAS FASI, FTWAS, MBS
Vice-Chancellor, Umma University
Chair, ATPS Board of Directors

EXECUTIVE DIRECTOR'S MESSAGE

I am pleased to welcome you to the first edition of ***Technopolicy Africa***, the official Newsletter of the ATPS, which was rebranded from the previous 'ATPS news'. This maiden publication highlights the most significant activities, achievements and events from August last year to date; subsequent editions will follow a quarterly plan.

As you may already know, ATPS was established as a Secretariat within the East and Southern Africa Regional Office of the International Development Research Centre (IDRC) emerging from two distinct networks – the Eastern and Southern Africa Technology Policy Studies (EATPS) and the Western Africa Technology Policy Studies (WATPS) in 1994. However, in 2001 ATPS became an autonomous international organization working on transdisciplinary science, technology and innovation (STI) policy research policy making and policy implementation for African development. ATPS has overtime expanded to cover over 51 countries in 5 continents with institutional partnerships worldwide. Membership has grown up to 1,500 members and 3000 stakeholders. We implement our programs through members in National Chapters established in 30 countries (27 in Africa and 3 Diaspora Chapters in Australia, United States of America, and United Kingdom). Our Secretariat is located in Nairobi, Kenya.

We have continued to pursue our vision of becoming the leading international centre of excellence and reference in STI systems research, training and capacity building, communication and sensitization, knowledge brokerage, policy advocacy and outreach in Africa. If African countries are to develop sustainably, STI must be applied to all the different economic sectors including agriculture, energy, health, infrastructure, information and communication technology, environment, industry, commerce, and education among many others. All stakeholders must also work together in a system as innovation does not happen in the mainstream but in the interaction of actors working together.

ATPS has partnered with like-minded institutions both locally and globally by signing five MOU's with the institutions to pursue mutually beneficial goals that aim at improving the Africa's endogenous capabilities in solving their own problems. We look forward to having more partnerships as we progressively implement the ATPS Phase VII Strategic Plan which is focused on promoting the understanding of STI policy research through building capacities, socialization of STI in Africa, democratic governance of STI in Africa, and enhancing value for money invested among other goals.

Due to the nature of ATPS stakeholders spread across Africa, USA, UK, and Australia and across the categories of policymakers, researchers, private sector actors, and the civil society, the demand for services and impacts has been very high. This requires good funding portfolio to be able to match demands and needs adequately. Unfortunately, funding has not been adequate to match this increasing demand for services and impacts by our stakeholders. Nevertheless, the ATPS remains committed to serve its wide



range of stakeholders even better and ensure that we align our programs with the donor priorities without losing focus on our core mandates and the priorities of our stakeholders at the local, national, regional and global levels. We continue to solicit for supports from our consortium of donors and partners and remain open to collaborations and partnerships with like-minded organizations and institutions around the world.

I thank all those who have supported us during this reporting period through development grants, linkages, partnerships and other collaborative activities. Notable among these are: our host country, the Republic of Kenya, United States Department of Agriculture's Agricultural Research Service (USDA-ARS), the JRS Biodiversity Conservation, UNESCO, Australian Aid, Murdoch University, Woodrow Wilson Centre for International Scholars (WWCIS), GALVmed, the African Development Bank (AfDB), African Climate Policy Center (ACPC), and the African Union Commission (AUC). I also express my appreciation to the ATPS Board, National Chapter Coordinators, Secretariat staff, and the entire network members and stakeholders for the firm supports and guidance throughout our efforts to rebrand the ATPS. We look forward to receiving your continued support in the coming years.

Kindly join us to meet our mandate and serve you better.

Dr. Nicholas Ozor
Ag. Executive Director, ATPS

AFRICAN TECHNOLOGY POLICY STUDIES (ATPS) NETWORK AGAIN EMERGES;

Best Think Tank Network; Best Managed Think Tank; and Best Think Tank with the most Significant Impact on Public Policy in Africa, according to a Global Survey

African Technology Policy Studies (ATPS) Network again emerges as the Best Think Tank Network; Best managed Think Tank; and Best Think Tank with the most Significant Impact on Public Policy in Africa, according to a Global Survey.

The 2014 Global Go Think Tanks and Civil Society Index released in January 2015, ranks the ATPS as the best managed Think Tank in Africa (19th globally); best Think Tank Network in Africa (14th globally); and the best Think Tank in Africa with the Most Significant Impact on Public Policy (31st globally). In addition, the ATPS also came first in raking amongst its peers in Africa in most of the criteria relevant to its mandate and strategic priorities, including:

Best institutional collaboration involving two or more Think Tanks (15th globally); Best Trans-disciplinary Research Program at a Think Tank (11th globally); and Think Tanks with the Best Use of the Internet (26th globally). The ATPS came second in Africa amongst Think Tanks with the Most Innovative Policy Ideas/Proposals (28th globally); Top Think Tanks with Annual Operating Budgets of Less Than \$5 Million USD (8th globally); and Best Advocacy Campaign (18th globally). Within its core mandate area of Science and Technology, the ATPS ranked 13th amongst Top Science and Technology Think Tanks globally, coming 2nd in Africa, after South Africa's well-resourced CSIR. ATPS was ranked 44th globally and 4th in Africa amongst Top International Development Think Tanks.

ATPS Policy Paper titled "Mainstreaming Gender in the National Science, Technology and Innovation (STI) Policy of Kenya" was ranked 45th globally and 2nd in Sub Saharan Africa among the Best Policy Study/Report Produced by a Think Tank (2013-2014). This policy report is available online at: <http://www.atpsnet.org/Files/pb44.pdf>

Overall, the ATPS once again ranked amongst the top 100 Top Think Tanks and Civil Society Programs globally, ranking 96th globally amongst Top Think Tanks Worldwide (US and Non-U.S.) and 7th in Africa. The 2014 global go to think tank index report was produced after analysing a total of 6,681 Think Tanks in the world among which 467 are in sub-Saharan Africa. The survey is conducted by Think Tank and Civil Societies Program/University of Pennsylvania (USA). For more details on the 2014 Global Go Think Tank Index, kindly visit: http://repository.upenn.edu/cgi/viewcontent.cgi?article=1008&context=think_tanks.



2014 Global Go To Think Tank Index Report

The ATPS Board and New Management takes this opportunity to thank all its stakeholders – Donors, Partners, National Chapter Coordinators, Grantees, Members, and Staff for their various supports in achieving this enviable global/regional ranking status. We continuously solicit for your financial supports to enable us deliver on our core mandate of building Africa's capabilities in science, technology and innovation policy research, policymaking and policy implementation for sustainable development on the continent.

The 2014 global go to think tank index report was produced after analysing a total of 6,681 Think Tanks in the world among which 467 are in sub-Saharan Africa

LAUNCH OF AFRICA SUSTAINABILITY HUB



ATPS Ag. Executive Director Dr. Nicholas Ozor (seated 1st from right with other Sustainability Hub partners) during the Low Carbon Development workshop at Crowne Plaza Hotel, Nairobi

The African Technology Policy Studies (ATPS) Network in partnership with its core partners, the African Centre for Technology Studies (ACTS), the Stockholm Environment Institute-Africa (SEI-Africa) and the Social, Technological and Environmental Pathways to Sustainability (STEPS) Centre launched the Africa Sustainability Hub during the low carbon economy workshop held from June 10th -12th, 2015 in Nairobi. The Africa Sustainability Hub is part of the STEPS Center Global Initiative tagged “*Pathways to Sustainability Global Consortium*” which links six regional Sustainability Hubs across Africa, South Asia, China, Europe, Latin America, and North America with longstanding partners, strongly developed in grounded research and founded on equal collaboration among researchers and stakeholders.

The Consortium aims to build the evidence base, tools and methods and research capacity for re-conceiving and tackling today’s urgent sustainability challenges. It seeks to understand and support the co-design of pathways to sustainability, integrating environmental integrity with social justice, in favour of the poor and marginalized in both the global North and South. A key emphasis of the consortium is to develop practical tools that enable stakeholders to tackle - rather than deny - the hard realities of complexity, diversity, uncertainty and political contestation.

The Cabinet Secretary of the National Treasury Hon. Henry Rotich officially launched the Africa Sustainability Hub and noted that “the new African Sustainability Hub will make a huge contribution to promoting low carbon economic development in Kenya”. He was represented by the Cabinet Secretary of Environment, Water and Natural Resources in Kenya, Prof. Judi Wakhungu who delivered his speech during the opening ceremony of the workshop.

The launch of the Africa Sustainability Hub brought together 100 international delegates drawn from government, industry, universities and civil society to explore and share ideas and approaches on pathways towards developing low carbon economy for Africa. It included high-level discussions

on how to encourage low-carbon development and promote pro-poor energy access and development.

The workshop was characterized by discussions drawn from practical issues affecting Africa including poverty among other issues as one of the critical constraint that prevent communities’ from accessing energy. Therefore, in order to achieve low carbon energy, alleviation of poverty must be dealt with first by helping poor communities achieve energy access.

Access to modern energy services is a critical human development priority and can be transformative to the livelihoods of poor people and their economic potentials. A tension is sometimes perceived between increasing energy access and pursuing low carbon development. High carbon conventional energy options are often viewed as cheaper and hence easier for poor countries to pursue. However, multiple synergies potentially exist between human and economic development priorities and access to low carbon energy technologies.

To record progress, innovations have to be inclusive, with the right building blocks such as policy, funding (e.g. processes and institutions etc.) human skills, monitoring, reporting and verification. Learning what works and what doesn’t work for the beneficiaries and mobilizing funds is also fundamental in achieving affordable low carbon energy solutions.

Alongside technological innovations, participants at the workshop agreed that in order for low carbon development to be successful social, institutional, and policy changes are needed. Furthermore, ideas from within Africa that are tailored to African contexts are required. “The agenda do not always have to be set from New York” said Perks Ligoya, the High Commissioner of the Republic of Malawi to the Republic of Kenya.

“ATPS has been training policy makers especially members of Parliament on low carbon issues and equipping them with necessary skills for policy making” said Dr. Ozor. Speaking during the workshop, Dr. Ozor, ATPS Ag. Executive Director also emphasized on the need to create a big data platform where stakeholders can gather information on energy usage and needs. This could be used to quantify actual energy demand for a particular location, nation or region as a whole.

With the Sustainability Hub in place, the future for Africa looks brighter in energy access through low carbon development pathway especially for the poor. A report by the [Africa Energy Outlook](#), a Special Report in the 2014 [World Energy Outlook](#) series, shows that more than 620 million people in sub-Saharan Africa (two-thirds of the population) live without electricity, and nearly 730 million people rely on dangerous, inefficient forms of cooking. Access to modern energy is therefore essential for the provision of clean water, sanitation and healthcare and for the provision of reliable and efficient lighting, heating, cooking, mechanical power, transport, and telecommunications services.



ATPS Executive Director, Dr. Nicholas Ozor (4th left) presents copies of the policy brief to NACOSTI Secretary/CEO, Dr. Moses Rugutt at NACOSTI offices, Utalii House, Nairobi.

ATPS Collaborates with UNESCO and NACOSTI to Co-author a policy brief on Mainstreaming Gender in the National Science, Technology and Innovation Policy of Kenya

The African Technology Policy Studies (ATPS) Network, in Collaboration with the United Nations Educational Scientific and Cultural Organisation, (UNESCO) and Kenya's National Commission for Science, Technology and Innovation (NACOSTI) have co-authored a policy brief on Mainstreaming Gender in the National Science Technology and Innovation Policy of Kenya. The brief is aimed at influencing the mainstreaming of gender into the national STI policy of Kenya.

The Policy Brief was developed after a series of consultative workshops and meetings including a Capacity Building Workshops in Science, Technology and Innovation Policy Formulation and Implementation for Sustainable Development in East Africa held from 31st October to 1st November 2011, a capacity building workshop on Gender Mainstreaming in Science, Technology and Innovation Policymaking held between 5th and 6th September 2013 and a roundtable meeting on engendering STI policy in Kenya held on 22nd October 2014.

The brief was officially presented to NACOSTI on 22nd

January 2015 by the ATPS Ag. Executive Director, Dr. Nicholas Ozor, in a ceremony witnessed by the NACOSTI Secretary/CEO, Dr. Moses Rugutt and other senior management staff. The Policy Brief is expected to be disseminated through NACOSTI to all the relevant ministries in Kenya as well as the 47 County Governments in the country.

This policy brief was rated tops in Africa; 2nd in Sub Saharan Africa and 45th globally among the Best Policy Study/Report Produced by a Think Tank (2013-2014).

“ Coming together is a beginning, keeping together is progress, working together is success ”
Henry Ford

NEW LEADERSHIP AT THE ATPS



The ATPS witnessed a significant structural change last year and is pleased to introduce Dr. Nicholas Ozor who has taken up the position of the Executive Director in acting capacity effective August 2014. The ATPS Board undisputedly recognized Dr. Ozor's passion in enhancing a forward movement for the ATPS and acknowledged his strong background in research, fundraising, capacity building, training and leadership. Dr. Ozor worked as a Post-Doctoral Researcher at the ATPS for one year before he was promoted to the position of a Senior Research Officer, a position he held for four years. Prior to his appointment at the ATPS, he was formerly a Senior lecturer in the Department of Agricultural Extension, University of Nigeria, Nsukka. He also worked as an Agricultural Extension Agent for many years in Nigeria.

Dr Ozor holds a PhD in Agricultural Extension and International & Rural Development from the University of Nigeria and University of Reading, United Kingdom under the Commonwealth Scholarship Split-site PhD Program. He also holds an MSc (Distinction) and Bachelor of Agriculture (First Class Honours) in Agricultural Extension from the University of Nigeria and an Ordinary National Diploma in General Agriculture (Distinction) from the College of Agriculture, Ikwo, Nigeria. He holds the Best PhD Thesis Award in Agriculture in Nigeria, 2006, under the Nigerian Universities Doctoral Theses Award Scheme (NUDTAS) and a Wellcome Trust Award for the Best PhD Presenter in 2006 at the University of Reading, United Kingdom. He is a Teaching Fellow and Mentor, African Climate Change Fellowship Programme (ACCFP). Dr Ozor has led and is currently leading many internationally funded research projects bordering on science, technology and innovation (STI); natural resource management; innovation systems; climate change; development issues; policy development, analysis and advocacy; technology management and transfer; and private sector engagements. He is a member of many professional organizations and has published over 70 articles in reputable international journals and as book chapters. He has participated in many international conferences/workshops aimed at evolving sustainable best practices for national, regional and international developments. He holds many distinctive prizes and awards for academic excellence and good leadership. Dr Ozor's vision is to be at the frontier of learning and in the

consequent application of the rich knowledge acquired to make a positive difference to humanity. He is married to Gloria, a literary artiste, and blessed with children.

Dr Ozor's mission at the ATPS is two pronged. First, to rebuild and strengthen relationships between ATPS and its stakeholders including the National Chapters, Donors, partners, staff and ex-staff, and the entire members of the ATPS network and the general public that ATPS is meant to serve. Secondly, is to raise funds to implement ATPS activities as contained in the ATPS Phase VII Strategic Plan Document 2013-2018. This is intended to be all inclusive, participatory, and goal oriented towards building Africa's capabilities in science, technology and innovation (STI) policy research, policymaking and implementation for sustainable development in Africa and pursues four main focus areas namely:

1. STI policy research and research capacity building: Aimed at building capabilities, structures, and conditions for the co-production of scientific knowledge, technologies, innovations, and policies for sustainable development in Africa. Priority research areas include: Agricultural innovations for food, nutrition and biosecurity in Africa; Democratic governance of STI policies, institutions and knowledge systems; integrated management of environmental infrastructure and climate change adaptation and mitigation; renewable energy research and development; health innovation systems; and intellectual property rights, access and benefit sharing.

2. Intra-Africa and Global Collaboration and Partnership: Aimed at developing new forms of intra-Africa and global partnerships within and amongst stakeholders for achieving sustainable development goals (SDGs) in Africa.

3. Youth and Gender Empowerment: Aimed at nurturing and harnessing the innovative potentials of African youth and women. Programs under this include: Youth and women innovation Challenge; Youth and Women Social Entrepreneurship Programs; Youth and Women Internship and mentorship programs; post-doctoral fellowship and staff exchange program; Youth social innovation camps; and African Youth and Women in STI Congress.

4. Facilitative Activities

a. Training and Sensitization: Aimed at enhancing individual and organizational STI skills for sustainable development in Africa

b. STI knowledge brokerage, commercialization and policy advocacy: Aimed at brokering the commercialization and sharing of scientific knowledge, technologies and innovations for sustainable development.

Dr Ozor remains committed to serve and enable ATPS achieve its objective of improving the understanding and functioning of STI policy research, policymaking and implementation processes and systems to strengthen capabilities, social responses, and governance of STI-led sustainable development in Africa. Dr Ozor succeeds Dr. Kevin Urama who served the ATPS as its Executive Director from June 2007 to July 2014.

A NEW DEVELOPMENT IN MOBILE APP TO MATCH LAND USE WITH IT'S POTENTIAL

Farmers, development organizations, extension workers and national governments will soon have an opportunity to share, access and apply the best available knowledge and information to determine the agricultural productivity and erosion risk level of land at field, regional, and national scale using the new Land Potential Knowledge System (LandPKS) mobile application.

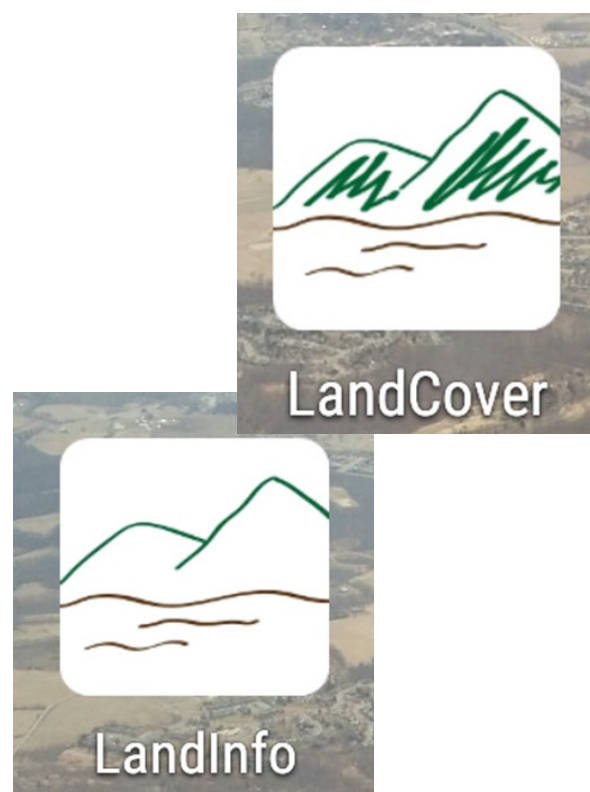
Leveraging the emerging trends in mobile phone technology, the LandPKS mobile phone app allows users principally farmers to make accurate farm decisions on the potential of their land in terms of crop production; types and soil erosion risk based on soil features, and also produces knowledge for creating economic opportunities. The LandPKS mobile app facilitates the integration of local and scientific information and knowledge through crowdsourcing and innovative support system that provides users with robust information with similar characteristics to their land from other places around the world to be able to make farm decisions on production.

The LandPKS mobile app rely on varied sources of global datasets including Digital Elevation Model (DEM) maps, derivatives (slope, curvature, aspect, and land forms), weather data (precipitation, land surface temperature, and solar radiation), wind (NCEP/NCR reanalysis) soil data (depth, texture, toxicity, workability, rock fragment, content etc), land cover, and land use maps among other datasets. The LandPKS project has made considerable effort to partners with database providers such as African Soil Information Systems, world soil database and AFSIS soil database to aggregates all vital information needed to make the

LandPKS mobile app more robust and capable of providing highly accurate predictions.

The African Technology Policy Studies Network (ATPS) and its partners in Nairobi, Regional centre for mapping of resources for development, have been making strides in developing the App. The two partners have been holding several fortnightly meetings to ensure that the success of the LandPKS project is fully achieved.

So far, the system application has progressed to providing relative grass and maize productivity, validation, and testing of model's confidence levels on both maize and grass. Proper predictions are affected by the knowledge ability of the user, light source



and soil condition (wet or dry). A soil colour app (an important feature of the app) is still under development.

In spite of the enormous progress made with the development of the app, there remain some challenges that need to be addressed like inadequate data availability in Africa, unwillingness of institutions to share data, as well as sparse data in arid and semi-arid land (ASAL) where the knowledge system is being piloted. Predictions are therefore relative estimates. Following several feedbacks and information input, the LandPKS mobile app interface and capabilities are being modified the areas size of data capture from 90m by 90m land cover to 30m by 30m to increase higher resolution for precision and accuracy in predictions.

In future, the app will incorporate local knowledge on working practices (indigenous knowledge), globally connect users with similar needs/problems, and improvement of the models predictive capabilities through use of artificial intelligence. This will be one development of its kind that will contribute to sustainable food production, reduction in soil erosion risk and increase income opportunities for future generations.

STI IN ADVANCING HIGHER EDUCATION INSTITUTIONS



By Okuonzi John, ATPS National Coordinator, Uganda Chapter

Kyambogo University in Uganda has made a significant impact in curbing corruption through the use of science, technology and innovation. Between 2009 to 2012 Kyambogo University, under the leadership of John Okuonzi, a team embarked on a research and implemented an integrated management information systems to take care of all business process across the entire university. The e-platform referred to as the **e-Kampus** (**e**-lectronic **K**yambogo University **Campus**) means a one-stop gap system which embraces and integrates academics management, finance/accounting, human resources, student records and the multitude of other essential systems which underpin key functions within the University. The development team that comprised of AYFST and senior ATPS members strongly believed that African problems can be solved by Africans using evidence based research and innovations.

Kyambogo University is a relatively new University created with the main aim of promoting and advancing knowledge and development of skills in Science, Technology and Education and other related fields with regards for quality, equity, progress and transformation of society.

The University is Uganda's third public university established by the Universities and Other Tertiary Institutions Act 2001 and the Universities and Other Tertiary institutions' (Establishment of Kyambogo University) instruments of 2003. I spoke to Okuonzi John from the Faculty of Engineering, Department of Electrical & Electronic Engineering who is also a Lecturer and Principal Investigator-e-Kampus Project/ATPS National Coordinator, Uganda Chapter to critically explore the new development.

Tell us more about the e-platform e.g. It's functionality i.e. speed, components, configuration, data storage e.t.c?

The system applies the latest technology of virtualization, distributed/replicated database systems with high level software engineering principles and design to deliver the users' expectation in the optimum constraints of cost, quality and time. Unlike many system architectures, which are normally based on three tier systems, the e-Kampus system is a five-tier system, engineered using Erlang/OTP platform, Secha Touch, Node. Js and a cocktail of integrated database management systems such as couchdb, Oracle db to allow for flexibility of operations. The business logic and the whole system are ingeniously developed based on the principle of concurrency and they follow a pragmatic philosophy.

The above technologies allow for scalability based on the notion of big-data generation, faulty tolerance and high availability. The system ensures self-service as much as is required while providing over-riding features as well as institution policy interventions, where configured.

The system offers integration with third party systems such as SMS/USSD, Mobile Money, online payments, National Examinations Board, and Commercial Banks to cater for all payments into the institution, admissions and verification of students' academic history, while providing effective on-demand communication with users and all stakeholders.

What does the e-platform framework mean to the operations of Kyambogo University?

With a population of 20,000 students on campus, about 20,000 in affiliate colleges and 1,600 staff both teaching and non-teaching, is a clear indication that big-data is generated from the universities core functions. The previous manual system of managing information at the university could not handle the high density of information. The manual system

was prone to error and taken advantage of by some errant university officers and students.

As a result, the e-kampus system has delivered accountability, auditability, responsiveness, automation and security of the university information and business processes; ranging from students' academic & other information, institution management information, students' payments information e.t.c.

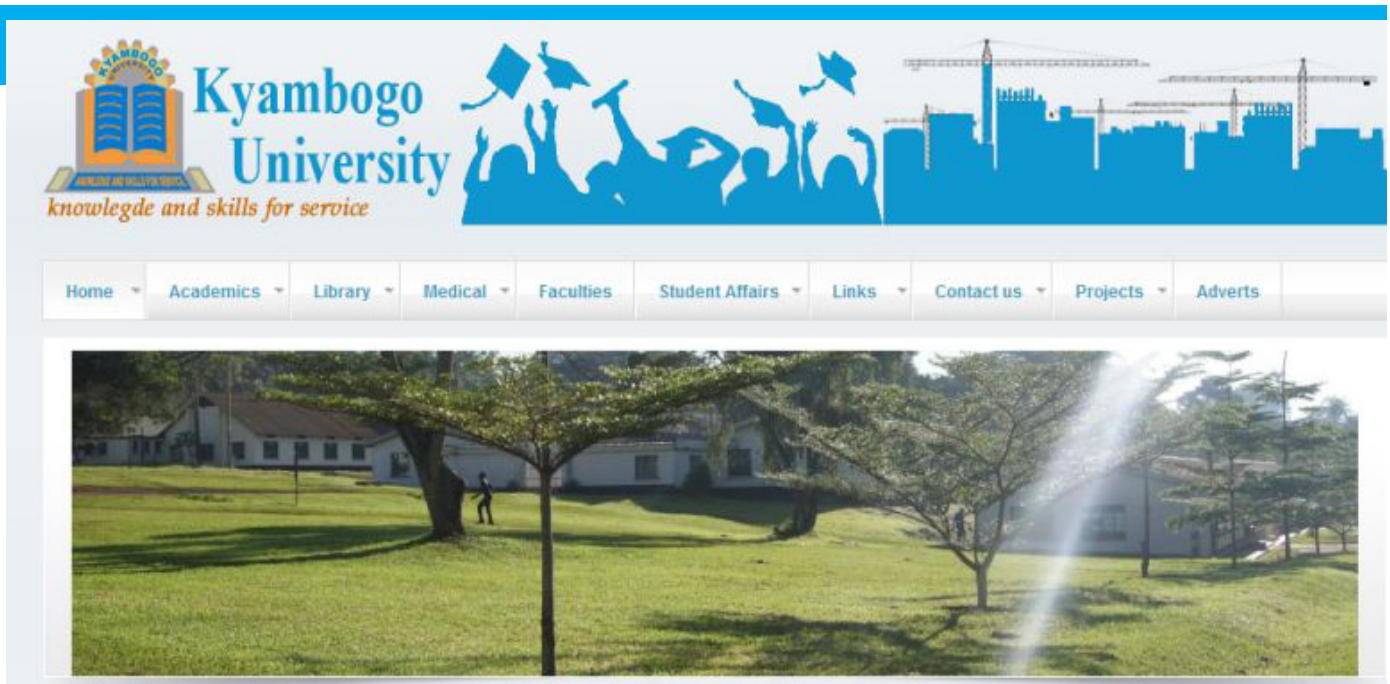
Since all the academic and administrative university business processes are generally technology driven, there are tangible results seen in revenue collection and drastic cost cutting such as in printing, purchase of receipt books and stamps, time wastage in lines and minimum loss and efforts in revenue collection for the university.

A number of activities that require volumes of paper processing are now fully automated, and man-hours saved and redeployed elsewhere. The use of the system has also improved the image and ranking of the university in the country. More efforts are now geared towards using the e-Kampus to improve teaching and learning as well as research and innovations.

What motivated your move to come up with the framework?

There are a number of factors that motivated the design team, first was, the passion in the team to transit the university from previous management and administrative challenges to the desired pathways of academic excellence. The team's association with ATPS, core values and vision informed them with the believe that they can undertake the noble task of transforming the university using technology.

This required a thorough and unprecedented systemic integration of technologies and innovation at all levels of business processes of the university. The implementation



Team therefore undertook the enormous challenge to design and implement an e-platform and infrastructure.

With the in-house capacity built, we were motivated to provide an e-platform that does not only support the university administration and academic functions, but to bring in a whole new set of holistic educational experience to the university community through innovations that addresses local challenges with ease. The thinking here was simple "that we are our own experts and we can do it"

How many activities/operations has it integrated?

The e-Kampus system provides interfaces (portals) for students, institution staff, and top management via internet, Tablet (Mobile) app, as well as designated portals for each category of users. The system is modular but integrated, with each module delivering a range of services/functions, accessible by users and other internal modules. The packages within the system includes; online admissions system, online Registration System, Online Payments System, Identity and Information Center and Results and Examination System for students. Other packages are; system Integrations and Communications Package, calendar and Time Table System, programmes and Courses Mgt. System, documents and Printing Mgt. System, student and Staff Identification Smart Card Printing System, system Reporting Package, system Meta-data and Configurations Module, library Information Management System learning management system, Learning Management System, Human Resource Management System, Linkage with Financial Management System, Online Guild Voting system, University Administration and Project Management System and the Wireless Backbone.

With this inter-related functioning of the system, there are no unnecessary queues for students when applying to the university, students can apply to 24/7 through the online admission system. The new technology is now gradually been integrated in teaching, learning and research activities. The e-learning system and university infrastructure have developed to aid teaching and learning.

To what extent has it minimized corruption?

Each of the above modules have been deployed and integrated in both academic and administrative functions of the university. In addition, there is integration with third party institutions like banks, UNEB, mobile service providers and telecommunication service providers. The integration of the e-Kampus system with the banks and students database removed the loophole revenue collections.

Services linked to students payments and revenue collection can be traced easily and do not require manual intervention for authentication. The proof of payments is not based on receipt or stamping which were subjects of corruption as forged and stamped receipts were used by students to access services. All university transactions and business processes through the e-Kampus system are transparent with alert functions incase of any breach.

The system has reduced corruption in the university to almost zero. The officers and students who participated corrupt tendencies in both academics and administration of university resources have exposed using the system. About 10 staff have been relieved of their duties. And a number of students involved in academic malpractice and defrauding university on payments have been suspended or made to repay even after graduation. The University recovered Uganda Shilling 1.3 billion about USD 430,000 from students and staff. They had fraudulently collected and failed to bank fees collected and from students who defaulted payments taking advantage of manual system.

In guild elections, students had tendencies to rig elections by inflating voter registers and this often causes student riots and strikes. With an e-platform linked to the student's database, transparent voting has been established.

What are the challenges faced in the implementation and how did you overcome them?

Various challenges were faced including; security management that is always a challenge with information system, with some staff and students affected by changes brought by the system, there have been many attempts to

comprise the system. The approaches have been through social engineering and other maneuvers. However, we have also instituted a number of policy driven security measures like; selection of Appropriate Controls e.g authentication which involves verification of the users identity, protection of information from being seen e.g. against spyware installed without consent in a computer to collect information. Technical Countenances e.g. Firewalls. Others include; use of algorithm (cipher), Technical-Virtual Private Networks (VPNs), integrity and non-repudiation. Resistance from some staff members on system implementation has been addressed through deliberate change management policy. The third challenge is delays in releasing funds for project activities since the university solely funds the project, however, the university manages the project funds centrally. This challenge has been difficult to address since there not shortcuts to government procurement process. In addition, university politics somehow affected the project activities, this required personal resources to demonstrate and show the potential of the system.

What is the University management, students and administration response to this framework?

The university management has strengthened the support to the system by approving new policies that support integration of the system and ICTs in its core business function. The management has further fully embraced the system and believes it's the key to the progress of the University with already proven tangible results. The University Council, which is the policy making organ of the university, passed a resolution to ring-fence ICT funds to support the project and other ICT programmes of the University.

Students too have embraced the technology, and are using it to access information. The students can conveniently access key information about their record through their portals anywhere and anytime. The student have responded positively to the use of their portals as and termed them a self-service application to access teaching and learning resources, generating payment invoices to pay university dues and receiving key notifications.

Likewise, the majority of the administrative staff has embraced the system, as it has significantly reduced the workload on them

What is the significant impact that has been witnessed so far e.g. its effectiveness?

The system has greatly enhanced the university functions and provided timely information for decision making. The enrollment function of the system aids the planning of resources such as lecture room allocations, laboratory allocations, timetabling, invoicing of students, course units/subjects registration platform, financial projections, lecture room attendance list, and timely examination material preparation. The system enforces the policy on teaching load allocation by providing information on Teaching load assigned to all teaching staff involved in active teaching and marking of results. The online system of admissions and registration have significantly reduced unnecessary queues that where the characteristic in the previous system. Further, student who clear all university dues are automatically

registered by the system and issued with registration or smart identity cards generated by the system.

The payment system has been used to effectively monitor and fees collection there is minimization of fraud fees collection. In addition, the system provides statistical analysis of data that enable the management to see trends at various function levels of the university and timely availability of compiled reports are used to make strategic decisions in favour of the university and students. The Online system generates significant revenue for the university interns of application fees meanwhile reduces the costs to less than 1/8 of the revenue generated. The ID printing system generates significant revenue and timely issuing of university IDs as the students register.

Similarly, the guild-voting module has reduced and created transparent voting process in the university. Other system functions like the library management systems; e-learning systems are gradually being used to improve access to teaching and learning resources through the existing infrastructure. Finally, the e-Kampus wireless backbone provides access to Internet for students and staff across the university.

From this experience, what advice would you give other Institutions of Higher Learning (IHL) who have not embraced this technology?

Leaders in higher education face mounting pressure to deliver and account for better learning outcomes should embrace technology integration to support and enhance teaching and learning outcomes. Supporting and enhancing the teaching and learning outcomes through use of technology is critical to the success of higher education. Primarily, the use and integration of technology enhanced education occasions slightly more than just providing the technology and infrastructure to allow routine tasks of traditional universities to simply be performed, it encompasses a complete re-engineering of the various educational processes from governance, designing curricula, teaching and learning, research and innovation and providing students' support.

Comment about the effectiveness of ST&I related programs in impacting change, borrowing from this framework?

Scientific advances and technological change are important drivers of excellence in academic performance. The use of ST&I is key in IHL to create, distribute and exploit knowledge as major source of transformation. Some of the main features of this transformation is the growing impact of information and communications technologies (ICT) on the IHL. Primarily, the usage and incorporation of technology augmented education occasions slightly more than just providing the technology and infrastructure to allow routine tasks of traditional universities to simply be performed online, it involves a complete re-engineering of the various educational processes from governance, designing curricula, teaching and learning, research and innovation and providing students' support services. It is also clear that the integration of technology in its different forms into higher education needs to be carefully planned in a systematic manner to ensure that it is successful and delivers its overall objectives.

NIGERIA GETS A BIO-SAFETY LAW

By Prof. Michael C. Madukwe



Nigeria has set the record straight on their commitment in observing bio-safety measures. Recently, on April 20 the President of Nigeria signed the biosafety bill into law. Biosafety, is the prevention of large-scale loss of biological life forms, with particular emphasis on ecology and human health. It is through biosafety that humans and a host of other

biological life are protected from harmful incidents. The law is expected to launch the country into the production of and commercialization of genetically modified organism (GMO). It is expected that the entrance of GMOs will increase crop productivity, lower the cost of production and improve both health and livelihoods of resource-poor farmers. The law specifically provides as follows:

- Establishment of Biosafety Management Agency
- Request and authorization
- Risk Assessment and Management



- Defines offences and Penalty for violation of the act
- Contains powers to authorize release of GMOs and practice of modern biotechnology activities.
- Confers the power to carry out risk assessment/management before the release, handling and use of GMOs,
- Covers all genetically modified organisms/Living Modified Organisms (LMOs) and products thereof including food/feed and processing.
- Covers socio-economic consideration in risk assessment
- The law provides a legal framework to check the activities of modern biotechnology in the country, as well as the importation of genetically modified (GM) crops.

WEB 2.0 AND SOCIAL MEDIA FOR DEVELOPMENT



Participants at the web 2.0 learning opportunity on 22-26th June, 2015 at Pride Inn Hotel, Nairobi

The training was timely and important since technology innovations and advancements are taking place at a remarkably swift pace therefore creating the need for regular updates. These new tools are; Web 2.0 applications and social media that are enabling people to collaborate, create, share and publish information through the simplest methods.

This is a kind of development that facilitates interactivity, communication, information sharing, co-operation and collaboration on the World Wide Web. Web 2.0 for development is the active use of these tools for development purposes. It is notable that the wider public can now enjoy affordable, simple, open source Internet based applications and services designed to enhance on-line collaboration.

Among the topics covered include; advanced online searching, getting information served via alerts and RSS, collaborating remotely using wikis and Google Drive, using VoIP, online mapping and social networking.

This was a good opportunity for participants to get hands on experience and to acquaint themselves with skills on how to use innovative applications and assess how they could adopt these innovations within the context of their work and organizations.

African Technology Policy Studies Network (ATPS) was among the organizations that participated in the Web 2.0 and social media for development training workshop. The workshop was organized by The Eastern Africa Grain Institute (EAGI), a specialized training division of the Eastern Africa Grain Council (EAGC) in collaboration with The Technical Centre for Agricultural and Rural Cooperation (CTA). Participants consisted of professionals drawn from organizations and institutions working towards achieving sustainable development mainly through science, technology and innovations (STI).

INTRA-AFRICA AND GLOBAL COLLABORATION AND PARTNERSHIP (IGCP)

ATPS has continued to build and strengthen partnerships and cooperation with relevant STI institutions not only in Africa but globally. ATPS has signed five (5) Memoranda of Understanding (MoUs) and a number of partnerships are underway. ATPS signed MoU with key institutions like University of Nigeria (UNN), Pan African Climate Justice Alliance (PACJA), Global Alliance for Livestock Veterinary Medicines (GALVmed), Food, Agriculture and Natural Resources Policy Analysis Network (FANRPAN) and Technical University of Kenya (TUK). In a signing overseen by the acting ATPS Ag. Executive Director, Dr. Nicholas Ozor and the Vice Chancellor of the University of Nigeria, Nsukka Professor Benjamin C. Ozumba, on 1 September 2014, the MOU will seek to provide a framework that enables ATPS and UNN collaborate to identify and conduct research and sector studies that generate evidence-based and empirical information in the field of Science, Technology and Innovation (STI).

The collaboration will also focus on areas such as joint training programmes on STI for the quadruple helix (researchers, policymakers, private sector actors and the civil society actors); advocacy and enlightenment programmes on STI; staff exchange and capacity building programmes; and data and resources sharing opportunities among others. The meeting also discussed the progress of the OSF-UNN Program on Climate Change, which has been faced with various implementation challenges. With the recognition that ATPS and Pan African Climate Justice Alliance (PACJA) would benefit from increased collaboration and interaction for addressing the needs for STI across Africa, the parties signed a MoU on 19th August 2014. The parties seek to collaborate in the development and implementation of mutually beneficial programme of activities in capacity building such as provision of training to staff and stakeholders, conducting research and policy research on systems approaches to climate change adaption and mitigation strategies, creating public awareness on issues of climate change, among many others.

In a move to establish a relationship for the purpose of achieving their respective missions, ATPS signed a MoU with Global Alliance for Livestock Veterinary Medicines (GALVmed). A representative from GALVmed Dr. Lois Muraguri who is the Assistant Director Policy and External Affairs presented the MoU to the ATPS acting Executive Director Dr. Nicholas Ozor. The MoU will see both organizations collaborate in the joint development and implementation of mutually relevant projects, knowledge and information exchange. Under the MoU, both parties will continually explore mechanisms of strengthening the existing collaborations and partnerships or joint ventures of any mutual kind. The MoU will also see the two organizations collaborating in sensitization and awareness creation regarding GALVmed supported technologies and products through ATPS network to ensure sustainable adoption among many others.



ATPS Ag. Executive Director, Dr. Nicholas Ozor (left) signs the MoU in presence of the UNN Vice Chancellor, Prof. Benjamin C. Ozumba

Dr. Nicholas Ozor engaged in discussions with Dr Lindiwe Majele Sibanda the Chief Executive Officer and Head of Mission at FANRPAN on entering into a MoU since the two organizations have been working closely in the past having not signed an agreement. The two met during the stakeholder meeting in South Africa, on 3rd December 2014. The MoU will provide an avenue and framework of cooperation and understanding, and facilitate collaboration between the two principals to further their shared goals and objectives. With the strengthened working relationship between ATPS and FANRPAN acceleration of Africa's quest to eradicate poverty, hunger and malnutrition and improve the general well being of its people will be fostered.

Acting within the powers conferred upon their institutions, the African Technology Policy Studies Network (ATPS) and the Technical University of Kenya (TUK) entered into a collaborative agreement on February 13, 2015 at the University's offices. The Vice Chancellor Prof. Dr. - Ing. Francis W. O. Aduol signed and handed the Memorandum of Understanding (MOU) to the ATPS Executive Director in presence of Dr. Arun Datta a lecturer in applied sciences department. The collaborative agreement will enhance relations especially in the mutual goal of Entrepreneurship Development Program through innovation capability building/strengthening and mentorship activities. It will also open new avenues for two organizations to achieve the overall objective in sustainable cooperation, interaction, and knowledge sharing between the Parties on science, technology and innovation policymaking among Kenyans.

TOWARDS THE IMPLEMENTATION OF ATPS PHASE VII STRATEGIC PLAN (2013- 2018)



The ATPS Phase VII Strategic Plan provides a framework for guiding the activities of the ATPS over the period 2013-2018. In setting the strategic objectives and priorities for the Phase VII Strategy, a participatory approach has been adopted recognizing the importance of the “strategic planning process” for ownership; buy-in and effective program implementation for achieving the desired impacts.

The Phase VII Strategic Plan is designed to improving the understanding and functioning of STI policy research and policymaking processes and systems to strengthen capabilities, social responses, and governance of STI-led sustainable development in Africa. The plan reflects ATPS commitment in sealing the gap through knowledge generation, outreach, knowledge brokerage, science communication and policy advocacy.

It targets beneficiaries from relevant science, technology and innovation networks who include African Union Commission (AUC), the African Development Bank (AfDB), New Partnership for African Development (NEPAD), African Regional Economic Communities (RECs), national governments, Universities and Colleges of Education; and Practitioners at the grassroots including youths and women, farmers and community based organisations, the private sector, among others.

The major priorities are:

1. **STI policy research and Research capacity building (STI-RCB):** designed to build capabilities, structures and conditions for the co-production of scientific knowledge, technologies, innovations, and policies for sustainable development in Africa.

2. **Intra-Africa and Global Collaboration and Partnership (IGCP) Program** designed to develop new forms of intra-Africa and global partnerships within and amongst stakeholders for achieving Sustainable Development Goals (SDGs) in Africa.
3. **Youth and Gender Empowerment (YGEP)** designed to nurture and harness the innovative potential of African youth and women.
4. **Training and Sensitization (T&S)** designed to enhancing individual and organizational STI skills for African development.
5. **STI Knowledge Brokerage, Commercialization and Policy Advocacy (KB-CPA)** designed for brokering the commercialization and sharing of scientific knowledge, technologies and innovations for Sustainable development and Innovation.

Cross Cutting Goals (CCGs): Each program will address a set of interrelated Cross Cutting Goals (CCGs), among them: Building social innovations, entrepreneurship and innovation incubation skills for wealth creation and poverty reduction, addressing climate change through adaptation and mitigation technology development, deployment and diffusion, fostering transitions to inclusive green growth, low carbon green economy, and greening industries in Africa, enhancing understanding and up-scaling of emerging and indigenous knowledge, technologies and innovations for sustainable development in Africa; and assisting African governments to develop STI policies for knowledge management and appropriation, including intellectual property rights – access and benefit sharing; technology transfer; resources use contracts in target sectors including land, water, mining, and other mineral resources

This strategic plan VII is forward looking and is well guided by the gaps identified in phase VI and by ATPS vision which is to become the leading international centre of excellence and reference in science, technology and innovation systems research, training and capacity building, communication and sensitization, knowledge brokerage, policy advocacy and outreach in Africa. ATPS seeks to address and achieve all the objectives for building Africa’s capabilities in science, technology and innovation policy research, policymaking and policy implementation for sustainable development.



ATPS Ag. Executive Director, Dr. Nicholas Ozor addressing delegates during the launch of the LandPKS Applications at the Regional Centre for Mapping of Resources for Development (RCMRD) on Wednesday, 22nd April 2015

LANDPKS APPLICATIONS NOW AVAILABLE ON GOOGLE PLAY

The Land-Potential Knowledge System (LandPKS) mobile applications are now publicly available on Google play. This comes 18 months after the design, development and testing of the first two applications: **LandInfo** and **LandCover**. These innovative mobile data collection and analysis tools support local land management and land use planning to optimize food security, land restoration, and climate change adaptation programs.

The LandInfo application allows users to enter point-specific information about soil texture, topography and easily observable soil properties. It provides free cloud storage and sharing, and allows the app to return site-specific data including temperature, rainfall, estimated amount of water the soil can store for plants, and growing season length. The LandCover application functions via the stick method in assessing vegetation cover and structure of pastureland. The outputs of the Land cover provide important information such as percentages of bare ground and vegetation cover, which is important in rangeland health monitoring.

"ATPS has been supporting the development of the LandPKS through field work and data collection and is now looking forward to creating awareness, building the capacity of stakeholders including farmers, rural development planners, policy makers, and extension workers, and mobilizing policy supports on the use of the applications as a tool for farm decision making and land use planning," said Dr. Nicholas Ozor the Ag. Executive Director at ATPS.

Speaking during the official launch of the LandPKS tools and public release at the Regional Centre for Mapping of Resources for Development (RCMRD) on Wednesday, 22nd April 2015, Dr. Ozor welcomed and appreciated the support of all the delegates who were drawn from the academia, civil society and policy-making institutions.

"The launch of LandPKS is a step forward in reducing food insecurity and environmental degradation challenges," emphasized Dr.

Hussein Farah the Director RCMRD. He was pleased with the good turn out of the invited delegates and as the host he officially welcomed them.

Further, Dr. Patrick Wargute the Director The Department of Resource Surveys and Remote Sensing (DRSRS) under the Ministry of Environment, Water and Natural Resources – Kenya, stated that the LandPKS will go a long way in land rehabilitation, climate change adaptation, enhancing food security, and in sustaining ecosystem based adaptations.

Mr. Robinson Mugo of SERVIR- Eastern and Southern Africa brought the project into perspective and informed delegates that "SERVIR is about connecting space technology and science in the village." He further explained that, the LandPKS will globalize access to knowledge and information about land potential for governments and communities, it will also identify the knowledge and information to each type of land and soil and connect people with similar types of lands and challenges with each other.

In addition, Dr. Adam Beh from United States Department of Agriculture -Agricultural Research Service (USDA- ARS) presented the project and demonstrated how the App works. "The LandPKS App is now available on Google play store on Android platform however with time we shall ensure that it is available on I-phone, windows and other platforms" he re-affirmed. He went further to explain that LandPKS is a knowledge engine supported by global databases and models.

The LandPKS team has developed a cloud-based, land potential knowledge system powered by geospatial datasets that allows the potential of land to be defined explicitly and dynamically for unique and constantly changing soil and climate conditions.

The knowledge engine, together with mobile phone and cloud

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GLOBAL SOIL WEEK, 2015

This year the global soil week was marked on 17th to 24th April 2015 in Berlin Germany under the theme “role of soils in redirecting the development pathways towards greater sustainability for achievement of post 2015 development agenda.” The African Technology Policy Studies Network (ATPS) participated in the conference and was represented by Dennis Mugendi the Research Assistant. “The conference was useful as it presented an opportunity to interact and share ideas on how to save the soils,” Dennis noted. The conference attracted a number of young professionals working with complex subjects of soil and land management as professionals or in scientific context. The participants were drawn from all over the world with 3 African countries being represented; Ghana, South Africa and Kenya.

The conference was organized by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) on behalf of the Federal Ministry for Economic Cooperation and Development (BMZ) in cooperation with the Institute for Advanced Sustainability Studies (IASS) and the network World Overview of Conservation Approaches and Technologies (WOCAT).

The major topics covered included: soil and land information, land stabilization using locally available resources and land in light with climate change adaptation. The participants engaged in several activities including; soil and land management practices in 2000m² project and gardens, soil and land management as well as interactive sessions on sprouting new ideas, rooted on conference presentations.

Of significance importance was the discussions on soil protection, which revealed the need to consider diverse methods for improving soil literacy ranging from the arts, sciences and more social or cultural approaches. There was more emphasis on improving land where the audience to whom specific messages are targeted must be clearly identified as well as what is being asked of the audience. Participants suggested methods for strengthening the awareness which includes: increasing funding for science communication strategies



Participants at the global soil week, 2015 in Berlin, Germany

at the grassroots level; enhancing political lobbying efforts; integrating soil issues early in school curricula; and crafting messages about soil ecosystem services and functions.

The participants noted with concern that improving the emotional connection to soil issues requires critical understanding of the gaps between knowledge, and emotion and behavior. There was an agreement on supporting regional soil partnerships; elaborating voluntary guidelines for sustainable soil management; identifying soil-related criteria for sustainable development goals (SDGs); and producing the first Status of the World's Soil Resources Report.

They further discussed about supporting regional soil partnerships; elaborating voluntary guidelines for sustainable soil management; identifying soil-related criteria for SDGs; and producing the first Status of the World's Soil Resources Report. The need to ensure that issues relevant to soil are addressed through cooperation to avoid overlap or contradiction was also discussed, it was therefore resolved that organizations should pursue collaboration while respecting the individual mandates of each institution.

Finally, they addressed the need to develop collective processes and inclusive platforms to enable long-term exchange and cooperation among stakeholders.

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computing technologies, will also facilitate more rapid and complete integration and dissemination of local and scientific knowledge about sustainable land management.

The flow of data in the LandPKS system starts with site data that is collected from the field via mobile phone applications. The users' input data are combined with geospatial data collected based on user location to run simulation models of potential soil productivity and erosion risk. Simulation results are used to create customized outputs that are returned to the user via the mobile application. The LandPKS strategy is efficient, easy to use and provides actionable information with modular, hierarchical (drill down to increasingly complex inputs and output) and open source, it complements and leverages related efforts like; ISCRIC, Africa soil Information Service (AfSIS), Vitalsigns, World Overview of Conservation Approaches and Technologies (WOCAT), United Nations Convention to combat

Desertification (UNCCD), JournalMap.Org among others.

The launch of the app marks the start of connecting knowledge and information that already exists and can be uploaded therefore allowing land owners all over the globe to use their land to the fullest potential. The represented organizations including primary partners and field collaborators consisted of; Regional centre for mapping of resources for development (RCMRD), United States Agency for International Development (USAID), African Technology Policy Studies Network (ATPS), Food and Agriculture Organization (FAO), United Nations Environmental Programme (UNEP), SERVIR-Eastern and Southern Africa, United States Department of Agriculture (USDA- ARS), Department of Resources Surveys and Remote Sensing (DRSRS) under the Ministry of Environment, Water and Natural Resources - Kenya, NASA, Ministry of agriculture livestock and fisheries- Kenya, Kenyatta University (KU), International Livestock Research Institute (ILRI) among others.

ON-GOING RESEARCH PROJECTS

The African Technology Policy Studies (ATPS) Network in its endeavor to achieve its vision has engaged in a number of projects with an aim of building Africa's capabilities in science, technology and innovation (STI) policy research, policymaking and policy implementation for sustainable development. The on-going projects include:

Land potential knowledge system (LandPKS) (2013-2017) which is a project funded by the United States Department of Agriculture (USDA- ARS) and is geared towards enabling farmers, development organizations, extension workers and national governments to have an opportunity to share, access and apply the best available knowledge and information to determine the agricultural productivity and erosion risk level of land at field, regional, and national scale using the new (LandPKS) mobile application among other science technology and innovation ST&I projects.

The LandPKS mobile app facilitates the integration of local and scientific information and knowledge through crowdsourcing and innovative support system that provides users with robust information with similar characteristics to their land from other places around the world to be able to make farm decisions on production. Currently, LandPKS users get information on relative productivity and erosion risk for maize and grass.

The project's research team has completed and launched the first two mobile applications; **LandInfo** and **LandCover** from the LandPKS project. The two applications are now publicly available on Google play. The LandInfo application allows users to enter point-specific information about soil texture, topography and easily observable soil properties. The LandCover application functions via the stick method in assessing vegetation cover and structure of pastureland. To download the new Apps, search the names in the Google Play Store or use the link: <http://landpotential.org/landpks/app>

The **Biodiversity Informatics Policy Landscape** project (2014- 2016) that is funded by The JRS Biodiversity

Foundation, seeks to analyze existing policies, legislation, and institutions in sub-Saharan Africa that influence the access to and value of biop diversity information. This project began with a literature review to identify what is known about biop diversity information policies in Sub-Saharan Africa and how these policies influence nations' achievement of stated conservation goals.

This is after realizing that public policies influence the value and use of biop diversity data and knowledge. However, little prior research has evaluated African public policy through the lens of access to and use of biop diversity data.

The Technical Centre for Agricultural and Rural Co-operation (ACP- EU) has funded ATPS to undertake the project; **Improving Agricultural Productivity and Resilience to Climate Change Using the Land Potential Knowledge System (LandPKS) Mobile Technology (2015)**. The project aims to contribute towards improved food security under a changing climate by promoting practices and policies that help agriculture in ACP regions to become more resilient, increasing its productivity, and encourage practices that reduce greenhouse gas (GHG) emissions where possible.

It aims to globalize knowledge by collecting, sharing and integrating local and scientific knowledge about the potential productivity and resilience in order to support long-term sustainable land productivity. Another objective is to increase awareness to farmers and policy makers of the opportunity to tackle climate change. This will be accomplished through documenting proven practices, tools ad/or policies that promote resilience and help farmers to address the challenges posed by climate change with a view to scaling-up their adoption.



In addition, there is the **Australian Development Research Awards Scheme (ADRAS)** project (2013-2015), which aims at using natural resource wealth to improve access to water and sanitation in Mozambique. This is a partnership project with Murdoch University, United Nations Children's Fund [UNICEF] and University Eduardo Mondalane [UEM] to undertake research in Mozambique on how to improve access to water and sanitation using natural resources.

The project seeks to amplify evidence based advocacy at National and Provincial Levels by analyzing current efforts to increase access to water and sanitation in Nampula province of Mozambique, including along the major Nampula-Nacala economic corridor. The ATPS will provide among other roles support to the program by, leading the survey design and analysis of the mid-line survey including development of a robust household survey questionnaire and economic modelling exercises.

Further, there is a project on; **Driving Policy in Mine Closure and Abandonment Management, Environmental Risk mitigation and Rehabilitation of Abandoned Mine Sites as a Pro-Poor Development Strategy** (2013-2015). ATPS is partnering with Murdoch University, Witwatersrand and Western Australia Department of Mines and Petroleum rolled out a project that seeks to address these fundamental concerns by assessing how Western Australia's (WA) on-going innovation in the mining sector may benefit African countries engaged in mining activities including South Africa, Nigeria, Mozambique, Ghana, Zambia, Kenya, and Tanzania.

The project aims to determine what regulation, policy and securities systems exist for managing mine closure and minimizing risks of enduring harm in South Africa, Nigeria Mozambique, Ghana, Zambia, Kenya and Tanzania (selected countries that have both large abandoned mine legacy issues and /or are emerging extractive-intensive countries).

The principal role of ATPS in this project relates to the

administration of the capacity building subprogram through the established mentorship programs and support of the communication implementation of the project. Specifically, ATPS will use its existing structured capacity building programs: the Women Innovation Challenge (We Can) and the youth Innovation Challenge (Y I Can) to identify suitable candidates to participate in the mentorship program.

The ATPS in collaboration with Murdoch University, the Australian Centre for International Agricultural Research (ACIAR), the Australia-Africa Mining Industry Group (AAMIG), the University of the Witwatersrand, the Beira Agricultural Growth Corridor in Mozambique (BAGC), Curtin University, James Cook University, the Crawford Fund, the International Mining for Development Centre (IM4DC), and Planet Minerals (a member of AAMIG) are engaged in a project - **Towards a model of "patient procurement": Leveraging mining infrastructure and procurement needs in Mozambique and Liberia for robust and enduring agricultural supply chain productivity and development-** (2013-2015) to explore linkages between mining industry investments and agricultural sector in Mozambique and Liberia. The project seeks to create new local markets in the form of a mine workforce coupled with a 'patient procurement approach'.

Finally, ATPS funded by the Global Alliance for Livestock Veterinary Medicines (GALVmed) is undertaking the **Market Scoping Study of Newcastle Disease in Village Poultry in Nigeria and Ghana**(2015) project. The overall purpose of the study is to understand the Newcastle disease epidemiology, socio-economic impact on the livelihood of small scale village poultry producers, especially women and to determine availability, registration status and large scale sustainable distribution mechanisms of ND vaccines including, thermostable I2, Itanew etc., in Nigeria and Ghana. This is in order to gain a clear understanding of the impact of ND on the VP sector in Nigeria and Ghana in terms of disease epidemiology including: prevalence, morbidity, mortality and economic impact of ND.



OPPORTUNITIES

ATPS is seeking to recruit a dynamic transdisciplinary individual to fill the position of **Research Officer** as an **Energy/Environmental Economist**.

Your major responsibilities will be to:

- Contribute to desk studies, literature reviews, data analysis and report writing as may be assigned by Supervisors;
- Organize and undertake fieldwork on case studies as may be assigned by Supervisors;
- Keep up to date with developments in STI policy issues, as well as qualitative and quantitative research methods;
- Assist the research team to manage existing research programs and projects;
- Assist in developing proposals and fundraising for projects/programs;
- Assist the Training and Research Manager to organize meetings, workshops, and seminars for the institution;
- Maintain accurate computerized and manual files and records for ATPS research programs/projects;
- Participate in dissemination and training workshops organized by the ATPS;
- Any other duties associated with the research project, of an occasional nature, which may be assigned by the Supervisor or any Authorised Officer.

We expect applicants to have the following required skills and qualification:

- A Master degree in Energy/Environmental Economics or Master Degree in Economics with specialization in energy, environment or ecology.
- At least two years relevant experience in research and development in similar international organizations, research institutes, or universities.
- Excellent in research data analysis and write-up.
- Excellent in Statistical Computing.
- Fluency in English, written and spoken. Knowledge of a working language in French is an added advantage.

Personal Attributes

The person should have the following personal attributes: good character, self-starter with a strong desire to learn, strong interpersonal skills and a good team player, ability to work as part of a team and ability to work under pressure and meet deadlines.

Qualified candidates should send a detailed letter of interest and curriculum vitae not later than 30 August 2015 to:

executivedirector@atpsnet.org

A competitive salary will be offered to the successful applicant. Please quote the vacancy position "**Research Officer**" as the subject for your email application.

For more information, visit our website on www.atpsnet.org

Call for Abstracts

On behalf of ClimDev-Africa, the African Climate Policy Centre (ACPC) will hold the Fifth Conference on Climate Change and Development in Africa (CCDA-V) in Victoria Falls, Zimbabwe from 28-30 October, 2015. The theme of this year's conference is: "Africa, Sustainable Development and Climate Change: prospects of Paris and beyond". The Climate Change and Development in Africa (CCDA) conference series was conceived as an annual forum to enable linkages between climate science and development policy by promoting transparent discussions between key stakeholders in the climate and development community.

The link for submitting abstracts is

http://www.climdev-africa.org/ccda5/abstract_submission.

For more information on CCDA-V visit the website at

<http://www.climdev-africa.org/ccda5>.

Kenya- France PAMOJA PHC Call for Applications (2015/2016)

Kenya and France have for a long time had scientific cooperation, formalized since 2009 through the signing of a Memorandum of Understanding between the Ministry of Education, Science and Technology and the three French Research Institutes based in Kenya, namely: the French Research Institute for Development (IRD), the International Cooperation Center for Agronomic Research Applied to Development (CIRAD) and the French Institute of Research in Africa (IFRA Nairobi). Kenya and France wish to strengthen those co-operation activities in Higher Education, Science, and Technology as expressed in the bilateral scientific cooperation agreement signed on 5th May 2015 known as "PAMOJA PHC" (Hubert Curien Partnership).

Deadline for the joint submission of applications: **15th September 2015**. For more information visit: <http://nacosti.blogspot.com/>

Innovation prize for Africa (IPA 2016) call for Applications

The IPA is an initiative of the African Innovation Foundation (AIF) started in 2011. IPA honours and encourages innovative achievements that contribute toward developing new products, increasing efficiency or saving cost in Africa. The prize also promotes among young African men and women the pursuit of science, technology and engineering careers as well as business opportunities with potential of contributing to sustainable development in Africa.

For more information visit: innovationprizeforafrica.org

NEW APPOINTMENTS

INTERNS



Ms. Dorothy Njagi joined ATPS on March 9, 2015, as a Communication and Outreach Assistant. She holds a Bachelors of Science Degree in Communications and Public Relations from Moi University, Kenya and a Diploma in Public Relations Management from

the Kenya Institute of Management (KIM). She is currently pursuing a Masters Degree in International Studies and Diplomacy at the University of Nairobi. Her experience has been on developing and implementing communication strategies to enforce a sense of forward movement for organizations. She has extensive work experience in both public and private sector having served at the Kenya National Assembly, Riara University and previously, worked as a Marketing and Public Relations Officer for The Panari Hotels.



Kihara Maina is the Finance and Administration Officer. He doubles up as Human Resource Administrator and is responsible for authorizing all payments and approving financial registers, reviewing financial analysis, approving

expense statements and journal vouchers, preparing and approving the payroll, monitoring leases and related obligations regarding the office premises; supervising the use and maintenance of office equipment and vehicles and monitoring requirements of ATPS-recruited personnel, arranging recruitments among other duties. He holds a Degree in Education and CPAs with enormous experience in finance having worked at Grant Thornton and Deloitte and Touche.



David Muhia Muturi is the Driver/Logistician at ATPS. His main duties include managing the office and Executive Director's transportation and other office transportation tasks. He also works as the Office Messenger, coordinates receipt and dispatch of letters, facilitates document processing with various Government agencies and is in-charge of settling the office utility bills. David Holds an Advanced Diploma in Computer Applications and he is a Bronze member of the Kenya Professional Safari Guides Association.

Bobadoye ayodotun Oluwafemi joined ATPS on November 27, 2014, as a Research Intern. He has 9 years of research and teaching. He previously worked at the Department of Forest Conservation and Protection; and Department of Agricultural Technology, Forest Research Institute of Nigeria (FRIN). He holds a Master's Degree in Animal Science from the Federal University of Technology Akure, Nigeria and an executive Masters Degree in Animal Project Management from the Project Management College, London. He is also a PhD student at the Institute for Climate Change and Adaptation, University of Nairobi, Kenya and currently doing a fellowship at Wilson Centre, Washington DC, USA.

Mugendi Dennis Kaburu joined ATPS on 15th February 2015 as a research Assistant Intern in the Research and training Department. He is responsible for literature reviewing and editing reports. He is currently pursuing a Master's Degree in Agriculture Economics at Moi University and holds a Bachelor of Science Degree in Agricultural Economics and Resource Management from the same University (First class Honours). Prior to joining ATPS, he worked at ETC East Africa as a Field Supervisor in a panel survey.

Miss Ann Mumbua Muoki joined ATPS on 15th Sept 2014 as the Communication and Outreach Assistant Intern. She holds a Bachelor's Degree in Journalism and Mass Communication from the University of Nairobi, Kenya. Ann was previously working for Media Development in Africa [MEDEVA] as an Assistant Editor and Production Assistant Manager.

Mark Arango joined the ATPS on 25th June 2014 as a Research Assistant Intern. His key duties include; assisting in writing proposals, compiling and packaging of documents/materials, assisting with organizing ATPS meetings and conferences and undertaking research. Mark holds a Bachelor of Science Degree in Meteorology from the University of Nairobi.

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