



# TECHNOPOLICY AFRICA

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



## Highlights:

**ATPS Appoints a New Board Chair**

**Scientometrics as a Tool for Effective Evaluation of Science, Technology and Innovation Policy Performance in a Developing Country Context**

**Aligning ATPS Swaziland Chapter Activities with the National Goal to Attain First World Status by 2022**

**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:**

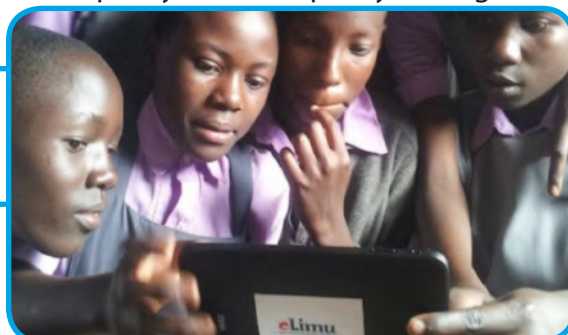
To develop Africa's STI capacity (knowledge basis & infrastructure, knowledge circulation & networks, knowledge conditions & policies) today for sustainable African development tomorrow.

**ATPS Motto:**

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

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## CHAIRMAN'S MESSAGE

A few events worthy to mention occurred at the ATPS during this quarter; Professor Shaukat Abdulrazak retired as Chair of the ATPS Board and he also resigned from the board of directors because of his current position at the International Atomic Energy Agency (IAEA) in Vienna, Austria. Needless to say, we are very grateful for the passion and leadership that Professor Abdulrazak exhibited during the eight years he served as a Director and seven years as Chair of the Board. A decision was also made to expand the number of directors from five to eleven persons; this will allow us expand our core areas of interest and expertise of board members who by charter are mandated to guide and set policies for the ATPS.

The ATPS in partnership with the Stockholm Environment Institute (SEI) Africa Centre, IGAD Climate Prediction and Applications Centre (ICPAC), Observatoire du Sahara ed du Sahel (OSS), AGRHYMET Regional Centre (ARC) and the Regional Centre for Mapping Resource for Development (RCMRD) launched its regional project project tagged ***"Bridging Climate Information Gaps to Strengthen Capacities for Climate Informed Decision-making"*** on 11th September at the Hilton Hotel, Nairobi. The project aims to strengthen the capacities of selected African countries on how to reduce climate change vulnerabilities and foster a food secure Africa. On behalf of the ATPS Board, I extend my gratitude to the African Development Bank (AfDB) under the Clim-Dev Special Fund (CDSF) for supporting this 2 year multi-country project. The project will be implemented in Kenya, Cameroon, Nigeria, Malawi and Tunisia.

The launch came at a very timely time regardless of one's position on the ongoing debate about climate change. The weather related events that have been making news headlines suggest that something is definitely happening to the world's climate and weather; some of these instances include hurricanes that have hit the Caribbean and Easten seaboard of the US, landslide in Sierra Leone and drought which has ravaged some African countries. All of these disastrous events have heightened calls to governments and institutions to formulate and adopt effective policies to help reverse or stem this growing tide of events. Unfortunately, the phenomena involved are so pervasive that it is a challenge to identify, or determine from where to start formulating effective policies. The African continent suffers from the added handicap of inadequate or paucity of data to use in making informed policy decisions.

The CDSF project aims to use a unique grass root approach that will achieve the dual effect of educating farmers and extension agents on effective land usages, as well as collate data that can be used hopefully for effective policy formulation



**Mr. Chuma Ikenze**

and decision-making in the selected African countries. This approach will generate the kind of ground swell that would make it easier for policies to be formulated based on the positive results indicated by the grass roots project. For instance, the success of this ATPS project could encourage universities to incorporate the *LandInfo* mobile app into their agric-extension education programme, or local governments to support farmers on the use of *LandInfo* app for more effective farmland utilization. Either, or both, of these results can ultimately lead to better utilization of land resources, which will mean using less land to grow more food, and therefore less deforestation and clearing of land. All of which in time would begin to address some of the weather and climate issues for which we seek a solution.

At the end of the two year period (2017-2019), the project would have supported selected African countries with adequate climate information, built the capacity of relevant stakeholders and also strengthened institutional capabilities to adopt good national climate sytems. I urge the project partners to ensure that their final report is written in a simple manner for the average man to understand; this way the impact of the project will be felt at the ground level.

I am very optimistic that the combination of these scientific and grass roots approaches will help African policy makers to more easily identify immediate actions to take in combating the very pervasive problems that come under the general umbrella of "Climate Change."

**Mr. Chuma Ikenze,  
CEO Kenzel, LLC,  
Chair, ATPS Board of Directors**



## EXECUTIVE DIRECTOR'S MESSAGE

**G**reetings and welcome to this edition of *Technopolicy Africa Newsletter!* We have made great strides during this quarter and we continue to aim towards becoming the leading international centre of excellence and reference in science, technology and innovation systems research, training and capacity building, communication and sensitization, knowledge brokerage, and policy advocacy.

ATPS is currently implementing its Phase VIII Strategic Plan (2017-2022) which is in line with the Science, Technology and Innovation Strategy for Africa (STISA) 2024 and the global Sustainable Development Goals (SDGs). We have aligned our activities with the current global and regional trends and do hope to use Science, Technology and Innovation (STI) to solve today's challenges such as climate change, poverty, food insecurity, unemployment, and health issues among many others. ATPS has identified four thematic/priority areas in its strategic plan, these include:- Agriculture, Food and Nutrition; Energy; Climate Change and Environmental Management; and Health Innovations. The strategic objectives will focus on STI policy research, policymaking and advocacy; Training, sensitization and capacity building; Youth and gender empowerment; Knowledge brokerage, management and commercialization and, Intra-Africa and global collaboration and partnerships.

During the quarter, ATPS launched a regional project on: *Bridging Climate Information Gaps to Strengthen Capacities for Climate Informed Decision-making* in Nairobi, Kenya. This project is in line with our Strategic Plan under the theme; Climate Change and Environmental Management, and it will be implemented in partnership with Stockholm Environment Institute (SEI) Africa Centre, IGAD Climate Prediction and Applications Centre (ICPAC), Observatoire du Sahara et du Sahel (OSS), AGRHYMET Regional Centre (ARC) and the Regional Centre for Mapping Development (RCMRD). The project aims to strengthen the capacities of selected African countries to understand and deploy appropriate climate information and best practices to inform decision-making. Additionally, the project will reduce vulnerability and foster a food secure Africa. The main components of the project are: synthesis of climate information, capacity enhancement and climate information dissemination, and project management and administration. At the end of the two years period various stakeholders and institutions will be able to integrate climate information into development planning and policies to strengthen their national climate systems. The project is being supported by the African Development Bank (AfDB) under the ClimDev Special Fund (CDSF) and it will be implemented in Kenya, Cameroon, Tunisia, Malawi and Nigeria.

We are also organizing this year's Science Granting Councils



**Dr. Nicholas Ozor**

Initiative (SGCI) Annual Forum which will be held from 22-23 November 2017 in Livingstone, Zambia. The SGCI theme on Networking Africa's SGCs is being implemented by ATPS in partnership with Sciinovent Centre is a 5 year initiative that aims to strengthen the capacities of Science Granting Councils in sub-Saharan Africa (SSA) to support research and evidence-based policies that contribute to economic and social development on the continent. The SGCI is funded by the International Development Research Centre (IDRC), Canada; the National Research Foundation (NRF), South Africa; and the Department for International Development (DFID), UK. The theme of this year's forum is, *"Towards Effective Public-Private Partnerships in Research and Innovation in Africa."*

Lastly, I take this opportunity to congratulate Mr. Chuma Ikenze for his appointment as the Chair of ATPS Board of Directors. His appointment was made during the last ATPS Board meeting held in September 2017 in Nairobi, Kenya. I am very confident that his leadership as the ATPS Board Chair will bring forth good tidings and open new doors to enable ATPS achieve its mission, vision and objectives enshrined in our mandate of building Africa's capabilities in science, technology and innovation policy research, policymaking and implementation for sustainable development on the continent. I also extend my gratitude to Prof. Shaukat Abdulrazak for his dedicated service to the ATPS during his tenure; it was great working with him and we wish him well in his future endeavours. Thank you all for your continued supports for the ATPS programs and activities. We welcome more development partners and donors to support us in using STI as a means for achieving sustainable development in Africa.

**Dr. Nicholas Ozor,  
Executive Director, ATPS**

# SCIENTOMETRICS AS A TOOL FOR EFFECTIVE EVALUATION OF SCIENCE, TECHNOLOGY AND INNOVATION POLICY PERFORMANCE IN A DEVELOPING COUNTRY CONTEXT



Photo: The Guardian

Students in a Science Laboratory.

**By Yusuff Utieyineshola Adeleke**  
**Senior Research Officer,**  
**Science Policy and Innovation Studies Department**  
**National Centre for Technology Management, Abuja**  
**Nigeria.**

**T**he performances of either researchers or knowledge institutions seems to be based on their output while little or no attention is made to actually determine their impact. For Africa to measure-up with other developing countries like India and the rest that fall within this rank where their research activities have translated into developing their economy and improving the standard of living, there has to be an empirical measure of the real value of our research within the Science, Technology and Innovation (STI) sector.

I recently conducted a six month study to determine the amount of value addition and substance of research activities emanating from Africa. The study was conducted at the Centre for Studies in Science Policy, Jawaharlal Nehru University, India under the Research Training Fellowship for Developing Country Scientists (RTF-DCS) 2017-2018 and was fully supported by the Department of Science and Technology, Government of India.

The aim of the study was to evaluate the performance of Science, Technology and Innovation (STI) Policy in a developing country context using Scientometrics approach. However, it specifically assessed Nigeria's performance in the field of S&T using India as a benchmark for this comparison. On this premise, the conceptual framework was built on three indicators as suggested in Glanzel (2003); *Indicators of publications activity* which measure researcher's productivity; *Indicators of Citation Impact* (which measures the credibility and ranking of the journals); and *Indicators of Scientific Collaboration* (which reviews the nature and pattern of scientific collaboration institutions-academic or research- in Nigeria). The study retrieved relevant information on publications in the field of S&T from database mainly, Scopus for the Years 2000 – 2016 and SCImago for Years 1996 – 2015. Statistics on Impact Factor was extracted from Journal Citation Report, 2016, a publication of Institute of Scientific Information (ISI) the database managing company for Thomson Reuter's Web of Science (WoS). To address the fundamental issues guiding the study, selected parameters used to measure Nigeria's performance included; Relative Growth Rate and Doubling Time of publications in Nigeria (Year-wise); Citation Index, Impact Factor, main research subject areas, top researchers in Nigeria, productive institutions, most ranked scholarly journals in S&T, collaborative countries for research, patent statistics and other S&T indicators as prescribed by the World Bank.

## Top 10 most Productive Countries in Africa in the field of Science (All subject area) 1996-2015

Rank Africa	Rank World	Country	Docs	Citable doc	% Citable docs	Citation	Self Citation	% self citation	citations for documents	H Index
1.	34	South Africa	188104	172424	91.66	2125927	454537	21.38	11.3	320
2.	52	Nigeria	59372	56630	95.38	334059	72718	21.77	5.63	131
3.	53	Tunisia	58769	55904	95.12	342429	73636	21.50	5.83	123
4.	55	Algeria	42456	41544	97.85	215922	43297	20.05	5.09	106
5.	56	Morocco	40737	38371	94.19	279731	51031	18.24	6.87	129
6.	67	Kenya	24458	22347	91.37	379560	57594	15.17	15.52	179
7.	78	Ethiopia	13363	12625	94.48	118656	24840	20.93	8.88	101
8.	84	Tanzania	11964	11140	93.11	170144	25866	15.20	14.22	122
9.	86	Ghana	11543	10578	91.64	111205	13874	12.48	9.63	105
10.	87	Uganda	11528	10599	91.94	171367	26995	15.75	14.87	128

\*Egypt ranked 42 in the World but it was not included in the ranking list in Africa as obtained from source

Source: SCImago, Author analysis, 2017

### Productive Countries in S&T

On the basis of the 10 top most productive countries in S&T in the world between 1996-2015, while India ranked 9th position having produced 1,140,717 documents with 94.06% of it citable, and having H-index of 424, it was noted that none of the African countries fall within this range. In Africa, in terms of subject-wise between 1996-2015 (**Table 1.0**), Nigeria is ranked 2nd among the top 10 most productive countries in Africa in all the fields of science subject generally having produced 59,372 documents- a little above India's average production

### Nigeria's Publication Performance in Scientific Research Between the year 2000 – 2016

Nigeria's performance in terms of its publication output by researchers from various scientific fields between the year 2000 and 2016 based on data sourced from Scopus database on 11th of June 2017 shows that between these periods, a total of 194,006 and 131 documents were produced in "All Subjects" and "S&T" fields respectively with articles being their major document types. For the top 10 research subject area in Nigeria, while Medicine is the most ranked in the "all subject" field, "Social Science" top the list in "S&T". The top 10 most productive researchers in Nigeria in both fields were determined. Gureje, Oboh and Wiwanitkit are the top three in the "all subject" category with most of their publications centred on Medicine; and Agricultural and Biological Sciences, while in "S&T" Ezegwui, Ilori, John and Siyanbola are the top four for this field in the respective order. In terms of the most productive institution in Nigeria, while the University of Ibadan ranked first in the "all subject" however, Obafemi Awolowo University is the productive institution in Nigeria in the field of "S&T". One rem-

arkable thing noted here was that no private university was among the top 10 most productive institution in Nigeria. Although in the "S&T" there is the presence of some research institutions like National Space Research and Development Agency (NASRDA) and International Institute for Tropical Agriculture, (IITA) which indicates that S&T research extends beyond academic institution in Nigeria with Federal Agencies and Centres of Excellence contributing to the production of knowledge in this sector, making them fulfil their mandate that guides their existence.

### Top 10 Journals in the Field of S&T Nigeria

The top 10 most ranked scholarly journals in Nigeria in the area of "All Subject" category, according to the Scopus ranking, African Journal of Biotechnology (AJB) is the most ranked journal with a total of 1,737 documents produced representing 3.71. In comparison to its ranking in JCR, this journal is not documented among the list of journals in the JCR ranking for the year under review. The two prominent journals ranked on JCR are Plos One which is ranked 3rd on Scopus but with JCR 2016 rank of 1,873 out of a total of 11,962 journals. In S&T only Advances in Space Research (ASR); International Journal Of Ophthalmology (IJO); and International Journal Of Surgery (IJS); the three main journals with JCR ranking. This implies that despite a number of publications recorded by Authors/researchers in Nigeria, very few of them publish their work in top-rated journals in the world. What this means is that the quality of research may not be appreciable at the global space where other researchers interact. In Nigeria, the choice of selecting which appropriate Journal to publish research work is mostly determined by a number of financial resources available to authors for



publications or some researchers are just eager to publish in Journals (predatory) that will get their work published so as to qualify for promotion in their respective Institutions.

### Comparison in S&T Development within 2005 - 2015: African Countries versus India

Result retrieved shows that in Africa, Tunisia has the highest number of researchers involved in full-time R&D followed by South Africa. In this category, Nigeria recorded a low number. Kenya has the most number of Technicians involved in R&D than the rest of the countries in Africa. In fact, Kenya surpasses India in both indicators despite a higher GERD allocation in India. There is still low R&D funding in Africa as none of the top 10 countries allocate up to 1% of the annual budget expenditure to R&D in the region.

Nigeria's high-technology export is low in terms of percentage of manufactured export and the corresponding capital generated if compared with other African countries. In this category, none of the top 10 African countries exports high-technology more than India. This also explains why there is low revenue being generated from the use of intellectual property in Africa. Therefore, India has a higher comparative advantage in revenue generation from intellectual property than all other African countries as a whole. This is an indication that African countries are still much dependent on technology acquisition and transfer from other regions that are technologically advanced thereby increasing its expenditure on technology acquisition than revenue generation.

Similarly, comparing patent statistics on the basis of number of applications and the total number granted, the result also shows there was no record of Nigeria on this parameter and also that a summation of all the patent applications and patents granted by statistics of the top 10 African countries measure up to half the total output of India. This presents a clearer picture of the technological disparity in production between the whole of African countries and India. Additionally, from information gathered in the study, Africa's patent records are weak in performance as it contributes less than 1% patents as a share of the world total in 2005 and 2015 although its average growth in 2005 out-perform that of Europe, Latin America & Caribbean, and Oceania. This is an indication that Africa has the required capacity to develop technologically sequel to motivation from Government and private sectors in terms of funding, promotion and appreciation of local technologies over foreign sourced ones, skill improvement, especially in areas of Science, Technology, Engineering and Mathematics (STEM).

### Policy Recommendations

Based on the findings of the study, policy recommendations



*A scientist at South Africa's Council for scientific and Industrial Research working on the first Africa's digital laser.*

were suggested for quick action from all the concerned stakeholders involved in promoting S&T development in Nigeria and these include:

- Increasing funding for research by adopting suitable and innovative approaches;
- Performance assessment of researchers should focus less on number of papers rather on the quality of the papers;
- encourage agencies like NACETEM to conduct surveys on STI Indicator to enable data generation for Nigeria which will contribute to international databases such as the World Banks, WIPO, UNESCO, etc; and
- Encourage and support locally-produced technologies and innovations in Nigeria in terms of Technology acquisition.

These recommendations require the support of government at all levels, academic and research institutions, professional associations, industries, venture capitalist/financial institutions and the private sectors involved in the production and utilization of scientific knowledge in Nigeria.

# ATPS LAUNCHES ITS PROJECT ON “BRIDGING CLIMATE INFORMATION GAPS TO STRENGTHEN CAPACITIES FOR CLIMATE INFORMED DECISION-MAKING”



*Various stakeholders came together in Nairobi, Kenya for the launch of a regional project, “Bridging Climate Information Gaps to Strengthen Capacities for Climate Informed Decision-making.”*

**By Sharon Anyango**

**T**he African Technology Policy Studies Network (ATPS) in partnership with the Stockholm Environment Institute (SEI) Africa Centre, IGAD Climate Prediction and Applications Centre (ICPAC), Observatoire du Sahara et du Sahel (OSS), AGRHYMET Regional Center (ARC), and the Regional Centre for Mapping Resource for Development (RCMRD) launched a regional project on “Bridging Climate Information Gaps to Strengthen Capacities for Climate Informed Decision-making at the Hilton Hotel Nairobi, Kenya. The project is being funded by the African Development Bank (AfDB) under the ClimDev Special Fund – a tripartite partnership with the African Union Commission and the Economic Commission for Africa (ECA). The project is in line with the ClimDev Special Fund (CDSF) goal of improving the generation and use of climate information, and to enhance the capacities of national climate institutions and services to build a climate prepared agencies that can respond favourably to extreme weather events.

Africa has made considerable efforts over the past decade in the development of regional and national programs, strategies and institutions for generating robust climate information and providing services for national and regional development planning towards climate resilient and less carbon-intensive economies. Despite these efforts, key challenges remain with regards to the low capacities of African countries to understand, analyse and deploy appropriate climate information to

inform decision-making at various levels including policy and practice. The project aims to strengthen capacities of selected African countries to understand and deploy appropriate climate information and best practices to support decision-making, development planning, reduce vulnerability and foster a food secure Africa. The project will be implemented in Cameroon, Kenya, Nigeria, Malawi and Tunisia. Specifically, the project will identify and analyse climate information needs; build the capacities and knowledge of government agencies, research institutions, extension gents, and contact farmers to utilize high quality, demand-driven climate information for adaptation planning and decision-making; and facilitate the mainstreaming of climate change issues in regional policy so as to strengthen the understanding, use and mastery of climate information.

Mr. Chuma Ikenze, ATPS Board Chair lauded the team for launching the project at an appropriate time. He urged the project partners to ensure that their final report is written in a simple language for the common man to understand. Additionally, he thanked the AfDB for supporting the project and commended them for the good impact they are making in the society.

Dr. Nicholas Ozor, ATPS Executive Director noted that the project discussions had began in 2014 and thanked partners for their patience and cooperation upto the official launch of the project. He promised accountability of the money donated by the bank towards the project.



Mr. Onesmus Maina, Senior Agricultural Economist (AfDB) advised the project partners on the need of having a dedicated project implementation team with subject matter specialists, a proper detailed implementation plan to ensure objectives are met and open communication; these he noted will contribute to the success of the project. He further noted that the findings from the project will inform African stakeholders with adequate capacities needed to create development pathways at institutional, national and regional level. In addition, the findings of the project should be digitized for the future generations to utilize.

Prof. Shem Wandiga from the Institute of Climate Change Adaptation, University of Nairobi made a keynote presentation on Climate Information Needs for Policy and Practice. According to him, there are a lot of climate information gaps that hinder policy making and research. He further noted that in Kenya, it is only the National Drought Management Authority (NDMA) that monitors the food available in the country, sends a signal to the government if there is hunger or if there is need for other supported activities. Unfortunately, data at meteorological

department does not synchronize with the one available at NDMA so as to inform policy.

The project is expected to run for two years (2017-2019) and it will support selected African countries with adequate climate information, provide an opportunity to adopt a development pathway that is climate-resilient, build adaptive capacities of stakeholders and strengthen institutional capabilities to integrate climate information into development planning and policies which in turn strengthens national climate systems.

The launch brought together representatives from government ministries and agencies, non-governmental organisations (NGOs), policymakers, and experts from academia and research institutions across Africa to have deeper discussions on experiences on the critical role of climate information and forge prospective partnerships with relevant stakeholders for the implementation of the project. The project has been allocated 449,360 Euros.

## ATPS APPOINTS A NEW BOARD CHAIR



*Dr. Nicholas Ozor, ATPS Executive Director presents a certificate to Mr. Chuma Ikenze to confirm his appointment as the Chair of ATPS Board of Directors.*

**T**he ATPS congratulates Mr. Chuma Ikenze for his appointment as the new Chair of ATPS Board of Directors. His appointment was officillay made on 12 September 2017 during the ATPS Board meeting . Mr. Ikenze takes over from Prof. Shaukat Abdulrak who served the ATPS from 2011 as the Board Chair.

Mr. Ikenze is the CEO and Founder of Kenzel, LLC, a technology and Financial Management Solutions firm based in the United State of America. He brings a wealth of experience of over 35 years in the private and public sector. He has been variously recognized as an international Business Development Expert who has assisted companies seeking opportunities in the sub-Saharan African market.

His passion is to facilitate effective transfer of technology and management know-how into the African economies. Mr. Chuma holds an MBA degree from Cornell University, Ithaca NY and he is also a Certitified Public Accountant in the United States of America and an Enrolled US taxation (IRS) specialist.

Other ATPS board members include: Prof. Oyebanji Oyeyinka Oyelaran, Dr. Peggy Oti-Boateng, Dr. El Tayed Mustafa, Prof. Cryspus Kiamba, Dr. Catherine Adeya, and Dr. Nicholas Ozor who serves as an ex-officio member and Secretary of the Board. The board is tasked with reviewing and approving the annual programme of ATPS activities and approving the annual budget of the organization amongst other duties.

The ATPS extends its gratitude to Prof. Shaukat Abdulrazak for his manyyears of dedicated service to the ATPS. Prof. Shaukat is currently the Director for Africa, Technical Cooperation Department at the International Atomic Energy Agency (IAEA), Vienna, Austria.

# ATPS RAVAMPS ITS WEBSITE



A cross-sectional view of the new ATPS website (Homepage).

**A**TPS has revamped its website after months of review by an IT expert Mr. Raymond Mumo. The new website is part of ATPS's rebranding effort geared towards increasing continuous conversations between the ATPS and its board members, National Chapter Coordinators, ATPS members, Donors, Stakeholders and the public at large.

The new website boasts of multi-media capabilities and has a new improved look with major sections easily accessible from the homepage. The key sections include: About ATPS, Our focus, Projects, Publications, Media Centre, Blogs, Contact us, Latest News, Current Projects and the National Chapters Column.

The "About Us" section contains detailed information about the organisation, the executive director's statement, and ATPS's Strategic Plan. In this section ATPS stakeholders will be able to get more information about the organisation's structure and how different people in the structure work together to achieve the overall goal, objectives, mission and vision of the ATPS. Additionally, stakeholders will be able to know about ATPS's current and past donors as well as the like-minded institutions that ATPS has worked with in the past or presently working with. Information about the Secretariat, its leadership and staff members is also available under this section

In the "Our Focus" section, there is a detailed explanation of the strategic plan, key thematic priorities and the programmatic priorities of the ATPS. The diverse ATPS stakeholders will be able to know more about the current and past projects; in each project one will also find information about the project outputs. All ATPS publications among them working papers, special papers, research papers, technopolicy briefs, book vol-

umes, annual reports, newsletters, annual conferences and-workshop proceedings, online journals, conference/workshop communiques and annual conference presentations are all available in the publication segment on the website.

The National Chapter section which is very essential because ATPS implements its programs through its Chapter coordinators who are spread across in 30 countries (27 in Africa and 3 in the diaspora namely Australia, United States of America and United Kingdom) is also available on the homepage. This section gives each stakeholder an opportunity to know who their Chapter Coordinator is and their contact information. The platform helps to increase continuous conversation between ATPS members and their Chapter Coordinators as well as getting involved in the Chapter activities.

The media section contains press releases, videos, podcasts and photo gallery of all ATPS activities and projects which the team has undertaken across the globe. The blog section enables members with various expertise in the fields to contribute articles which are published on the website; the blog articles relate to ATPS's work majorly on science, technology and innovation. Anyone interested to join the ATPS as a member can also register through the website, it is very easy and does not take more than two minutes. The latest news segment keeps one updated with the current activities at the ATPS.

The exciting part of the new website is the "contact us" section. All ATPS stakeholders are encouraged to get in touch with the Secretariat and also on ATPS social media pages so that they can participate in the on-going discussions about ATPS's work; the communications team is on stand-by to provide assistance. The ATPS looks forward to engaging with the diverse stakeholders spread in different countries through this media.

# CREDIT ACCESS: CHALLENGES FOR NIGERIAN FARMERS AND THE WAY FORWARD



Farmers tilling the land.

**By Chibuzo Okpokiri**  
**Dept. of Agribusiness and Management,**  
**Michael Okpara University of Agriculture, Umudike,**  
**Abia State, Nigeria**

Every farmer, entrepreneur, or agripreneur have grand business ideas on how to take their activities to the next level but they are handicapped by lack of adequate finance to execute these plans. Every business needs finance to oil the wheels of its operations so as to ensure its smooth running. Finance provides cash reserves required to fast track the process of production and consumption in the next cycle. It provides an opportunity for farmers to meet their consumption requirements and input needs. The role of finance in every human endeavor cannot be overemphasized.

Agripreneurs face an uphill task in accessing finance in form of loans from commercial banks in Nigeria. Most commercial banks avoid giving loans to farmers and agripreneurs. They are seen as bad investments because of the variations in farm output, subsistence nature of production, risk inherent in the course of production which includes pest and disease attack, inadequate records keeping by farmers, crop failure, utilization of crude implements, and lack of farm mechanization. Some of the problems associated with inadequate funds include:

- Inability of farmers to adapt to climate friendly techniques and equipment as they do not have the funds to attend trainings and purchase the needed tools.
- Most farmers who cannot afford modern equipments to increase their output still operate at a subsistence level. This is a big set back to the self sufficiency plan of the Nigerian government and Africa at large.
- Large scale production seems like a fairytale as majority of the farmers in Nigeria lack the financial might to mechanize their farms and make use of improved varieties.

- Lack of finance limits farmers' quest for research and implementing new ideas and techniques for fear of a negative outcome.

The Nigerian government through the Central Bank of Nigeria (CBN) approved the disbursement of about N75billion as loan to farmers in the 36 states and the Federal Capital Territory (FCT) under the Nigerian Incentive-Based Risk Sharing in Agricultural Lending (NIRSAL). The programme is designed to create access to finance for farmers by integrating end-to-end agriculture value chains, such as input producers, farmers, agro dealers, agro processors and industrial manufacturers with agricultural financing value chains – loan product development, credit distribution, loan origination, managing and pricing for risk, and loan disbursement. The Nigerian government through the CBN and other agencies are making efforts to ensure that farmers have the funds needed to carry out their activities. Although the Nigerian government is making efforts to ensure that farmers are provided with cheap sources of funds; reports show that the target audience for which these scheme were put in place have been marginalized. The target audience who are poor farmers especially those in the hinterlands are deprived of these opportunities while rich farmers and in worst case scenarios those who are not farmers enjoy the benefits of these schemes. The contributing factors to these problems include:

- Lack of proper record keeping by farmers which makes it difficult for the disbursing agencies to substantiate their loan claims
- High level of illiteracy among poor farmers
- Lack of awareness of the scheme by most farmers
- Unwillingness of most farmers to join cooperative societies which will increase their chances of obtaining credit from these schemes
- Unethical practice of some financial institutions of diverting funds meant for farmers to people who do not belong to the target group.

In a bid to provide credit to farmers to help foster growth in agriculture and also to ensure that farmers benefit from various agricultural schemes the government should ensure that:

- Financial institutions adhere to the instructions pertaining to agricultural loan schemes and defaulters punished severely to serve as deterrent for others.
- Seminars, talk shows, training programs should be organized to enlighten farmers on proper farm management practices, record keeping and ways to successfully apply for loans.
- Farmers should be encouraged to form and join cooperative societies as most donor agencies prefer to work with people as a group and cooperatives provide such platforms and more extension agents should be trained and sent to the rural areas to create awareness of government programs to the rural farmers.



# INNOVATIONS IN THE HEALTH SECTOR HELPS IMPROVE LIVELIHOODS



*An Electronically Controlled Gravity Feed Infusion (ECFG), a new technology that controls the rate of fluid flow administered to patients.*

**By Sharon Anyango**

**G**ood health and good sense are two life's greatest blessings. Health is a very critical sector in each country and when the sector is not functioning well; the fatalities who are often the public suffer more. The world today is grappling with different kinds of diseases which are killing people for instance Cholera. The World Health Organisation, aid agencies and donors have made a global pledge to end cholera which is killing millions of people today. According to WHO two billion people globally lack access to clean water and are at a potential risk of cholera due to weak health systems and outbreaks which are not detected early enough. Recently, the Kenyan doctors after a hundred days strike signed a return to work formula that will now see doctors earn higher than they used to receive from the government. It is estimated that 40 people died during the strike and majority of those who suffered were the poor people who cannot afford to be treated in private hospitals due to the cost factor.

Despite the efforts globally to improve the health sector, challenges still remain; for instance health gaps in different countries have widened due to the inability to absorb new technology. This has led to medical tourism whereby some Africans travel abroad in modernized hospitals so as to get treatment. Additionally there is unequal distribution of health problems in each country.

The promising thing is that a lot of innovations have been made in this sector. Penda health is a Kenyan social enterprise that provides healthcare services to women especially those in the rural areas, the team uses innovative delivery models to assist those who are not in easily accessible areas.

mHealth is a new technology that is available on mobile phones and also on patient monitoring devices. The premise on mHealth was that the integration of health sector and technology will improve livelihoods. The app has been successfully deployed in Nigeria, South Africa and Ethiopia.

Mr. Brian Turyabagye from Uganda Invented a biomedical smart jacket that detects pneumonia, the invention came after years of seeing a friend's grandmother fall sick and diagnosed with malaria instead of pneumonia. The friend's grandmother later on succumbed to death, according to the United Nations Children's Fund (UNICEF) pneumonia kills half a million of children under five in Sub-Saharan Africa. The smart jacket is able to distinguish the symptoms of pneumonia which often include: temperature, breathing rate and sounds of the lungs.

I recently caught up with Ms. Philipa Ngaju Makobore, one of this year's runners up in the 2017 Innovation Prize for Africa which was recently conducted in Ghana. Ms. Makobore and her team at the Uganda Industrial Research Institute, Department of Instrumentation Division invented the Electronically Controlled Gravity Feed Infusion (ECGF), a new technology

that regulates the rate of fluid flow to patients. Clinical trials of the ECGF will be rolled out in October so that the technology can be deployed in different hospitals in Uganda. Read more

about the interview I had with her and with her innovation which is expected to save a lot of lives which are usually lost due to the wrong dosage of drugs administered to a patient.

## Interview

***Ms. Phiipa Ngaju Makobore is the innovator of the Electronically Controlled Gravity Feed Infusion (ECGF), a new technology designed to accurately administer fluids and drugs to patients based on the feedback from a drop sensor. The ECGF emerged second in this year's Innovation Prize for Africa. Ms. Makobore has a Bsc. in Electrical Engineering from the University of Alberta, Canada and she also has a professional certificate in Embedded Engineering from the University of California.***



*Ms. Phiipa Ngaju Makobore (Second from Right) receiving her award after emerging 2nd at Innovation Prize Africa Awards which was held in Accra, Ghana, July 2017. The award is recognition of the ECGF which aims to improve livelihoods in the health sector.*

### 1. What is an Electronically Controlled Gravity Feed Infusion (ECGF)?

The ECGF is an automated infusion controller that regulates the rate of fluid flow during intravenous (IV) delivery of fluids and drugs to patients.

### 2. What is the niche that you discovered in the health sector that inspired you to come up with this unique innovation?

My team and I from the Instrumentation Division at Uganda Industrial Research Institute were aware of gaps in the Ugandan healthcare sector and we wanted to see if we could address some of these problems with engineering solutions. We therefore carried out a needs finding assessment at Mulago National Referral Hospital in Kampala to investigate on the general clinical challenges with a focus on limitations with the medical equipments. Our results indicated that the regulation of IV fluids and drugs was a big problem with heavy reliance on manual control by clinicians and limited appropriate equipment. It was from these findings that we decided to develop a concept on regulation of IV fluids and drugs.

### 3. How does the Electronically Controlled Gravity Feed Infusion (ECGF) work?

The ECGF monitors the drop rate and automatically controls the rate of fluid flow with an accuracy of below  $\pm 7\%$  (% difference between prescribed and actual flow rates).

### 4. What are some of the key features of the Electronically Controlled Gravity Feed Infusion (ECGF)?

The ECGF is a low cost non-invasive medical device that can clamp onto existing drip sets. The ECGF comprises of a dynamic control of the flow rate, rapid flow rate alarm, over and under infusion alarms (more than 10% of fluid/drugs being infused), faulty/unplugged sensor alarm, easy to use interface, battery powered / Hybrid solar and AC mains charging bed, and an estimated cost of US\$100 per unit at production which is significantly cheaper than similar infusion pumps on the market.

### 5. What are the advantages and disadvantages of the Electronically Controlled Gravity Feed Infusion (ECGF)?

The advantages are that it can be used in rural health facilities that would otherwise not have access to an electronic medical device for regulation of IV fluids and drugs, the modular design of the ECGF makes maintenance and troubleshooting a lot easier, in country design and development of the device significantly reduces preventive and corrective maintenance costs, a good proportion of the materials used to fabricate the device have been sourced locally, and the device's high accuracy makes it applicable for use on young children.

The disadvantages of the ECGF is that the Initial development and testing of medical devices are fairly costly and time



consuming, lack of adequate funding to continue its development and very competitive as numerous companies and institutions globally are competing for the same funding calls i.e. Grand Challenges, Bill and Melinda Gates Foundation etc and there is also limited support from the government.

#### **6. What impact has the Electronically Controlled Gravity Feed Infusion (ECGF) had in Uganda's health sector?**

The first clinical pilot on adults will be started in early October and thereafter clinical trials on children. The ECGF has the potential to improve clinical outcomes by ensuring patient safety and care through accurate delivery of IV fluids and drugs. In addition to improving access to quality medical devices the automation of the infusion process will save on clinician's time required to manually regulate and infusion therapy.

#### **7. Is the innovation already available in hospitals and is it affordable to the common citizen?**

The ECGF device is still undergoing testing and will be in the hospitals under clinical trials starting from October 2017. The Instrumentation Division is working on registration with the National Drug Authority and acquiring a CE mark (indicates conformity with health, safety & environmental standards) to eventually sell the device on the market.

#### **8. Are there any challenges with the Electronically Controlled Gravity Feed Infusion (ECGF)?**

The Initial development and testing of medical devices are fairly costly and time consuming, lack of adequate funding to continue its development is time intensive and very competitive as numerous companies and institutions globally are competing for the same funding calls i.e. Grand Challenges, Bill and Melinda Gates Foundation etc and there is also limited support from the government

#### **9. What some of the challenges you encountered that led to the birth of Electronically Controlled Gravity Feed Infusion (ECGF)?**

According to the FEAST trials over 10% of children that are admitted to hospitals in East Africa require immediate IV therapy. Over infusion increased the absolute risk of death by 3.3% at 48 hours and by nearly 4% at 4 weeks after infusion. The current practice for IV fluids and drugs regulation is manual control by clinicians. With a doctor to patient ratio of 1: 25000, infusion is prone to human error and compromises on patient safety and care. New equipment is complicated to use, prohibitively expensive to procure and maintain and is prone to frequent breakdown due to intermittent power supply in both rural and semi-urban areas of Uganda. 70% of donated equipment is more than 10 years old, 50% of this equipment is either broken or functioning unsatisfactorily due to the lack of manufacturer support, difficulty in sourcing spare parts and the lack of user training.



*Ms. Philipa Ngaju Makobore receiving the 2015 1st Place Innovation Award for the ECGF from the Patient Safety Movement Foundation, Dana Point, California, USA – January 2016.*

#### **10. Congratulations for emerging second in the 2017 Innovation Prize for Africa which was recently held in Ghana. What are your future plans with the Electronically Controlled Gravity Feed Infusion (ECGF)?**

Thank you, we are currently busy preparing for clinical trials and are currently testing 5 additional prototypes that will be deployed in the hospitals. We have secured Institutional Review Board (IRB) approval to conduct the first clinical pilot on adults to prove the efficacy and safety of the ECGF medical device. Thereafter we will commence clinical trials on children. We are also pursuing a CE mark as the device has applicability both in developed and developing world settings.

#### **11. Engineering is often perceived as a field of men on the Continent, what message would you give to young women who aspire to become engineers and in your opinion how can Africa bridge the gap of the ratio of men to women in an engineering class?**

To the women who aspire to become engineers my advice would be to pursue a discipline that you are passionate about and never think of your gender as a hindering factor to achieving your dreams. Find a mentor who is accomplished to guide you along. To bridge the gap of the ratio of men to women in an engineering class, STEM needs to be introduced to girls as young as primary school level, with talks on accomplished women engineers and science camps like 'she codes'.

#### **12. Are there any other innovations that you have come up with? If yes please explain**

Yes, we have designed a diagnostic device for Pneumonia that





*Ms. Philipa Ngaju Makobore (Sitted Left) with some of her colleageous at the Insrumentation Division Team at Uganda Industrial Research Institute (UIRI).*

measures respiratory rate, blood oxygen saturation and heart rate. We have also designed a Transport Infant Warmer that regulates the temperature of newborn babies that are being transported from rural communities to health facilities.

### **13. Is the concept of Science, Technology, Engineering and Maths (STEM) education working in Africa and how best can we improve it?**

STEM needs a lot more attention and the African governments need to invest more in improving infrastructure and human capital for better results not just at the primary and secondary school levels but also at tertiary and research institutions to nurture research driven technology that can improve on quality as well as the economy.

### **14. You are currently the head of department Instrumentation Division at the Uganda Industrial Research Institute (UIRI). What are some of the efforts by the institution to promote Innovation in Uganda?**

UIRI is well positioned to nurture innovation as it has strong local and international partnerships that include membership with the World Association for Industrial and Technological Organizations (WAITRO) of which the Executive Director for UIRI is a past president. The government of Uganda has created an Innovation Fund under the new Ministry of Science, Technology and Innovation to commercialize innovations of which UIRI is a beneficiary. The Institute has also implemented a Machining Manufacturing and Industrial Skills Training Center for commercialization of mechanical and electronic based products that will build in country capacity for small scale manufacturing, train technologists and create jobs.

### **15. How does the patent system in Uganda work? Is it encouraging or discouraging to the upcoming innovations?**

The Uganda Registration Services Bureau is responsible for evaluating patentability of innovations and works closely with the World Intellectual Property Organization. All patent applications are however filed with ARIPO in Zimbabwe as Uganda is still in the process of implementing an IP policy. There is also limited capacity with the local patent attorneys especially for the assessment of specialized technology, so these services are usually outsourced to International Law Firms.

### **16. What is your message to upcoming innovators?**

It is important to achieve proof of concept in order to access funding both locally and internationally. It is also important that you have a committed team with multi-disciplinary expertise to tackle all aspects of the concept design and development. Business modelling must also be started fairly early to assess whether the innovation is financially viable and can be sustained.

### **17. What is your favourite quote**

'There are still so many causes worth sacrificing for, so much history yet to be made' – Michelle Obama

# KENYA BANS PLASTIC BAGS: IS IT A MENACE TO THE ENVIRONMENT OR THE ECONOMY?



A section of plastic bags disposed in the environment.

By Alfred Nyambane

**T**he Ministry of Environment and Natural Resources, Kenya banned the usage of plastic bags on 28th August 2017; this resulted to a serious debate among the public and the business community on whether the ban was untimely, done prematurely and if the consequences looked upon.

The National Environmental Management Authority (NEMA) under the Ministry of Environment and Natural Resources is in-charge of enforcing the new law. NEMA also banned the use, manufacture and importation of all plastic bags used for commercial and household packaging which falls under two categories: carrier bags and flat bags. Anyone found carrying, manufacturing or importing plastic bags will be jailed for upto four years or receive a fine between \$19,000 to \$38,000. In an environmentalist point of view, plastic bags pose a serious danger to the environment; it is difficult to discard them because they are non-biodegradable, meaning it takes a long time to breakdown these compounds hence its disposal becomes difficult and costly. While there are objections towards the ban which is solely based on convenience, the negative effect plastic bags have to the environment needs to be controlled.

Reusing them is the first step however, most people do not or cannot reuse the same plastic bag for the same purpose more than twice since they wear off quickly. Plastic bags are also not durable enough to stand up to numerous trips to and from shops. The biggest problem with this is that once they have been soiled they end up in the trash, which then ends up in the landfill or burned. Either way it is hazardous to the environment; burning emits toxic gases that harm the atmosphere and increase the level of Volatile Organic Compounds (VOCs) in the air while landfills hold them indefinitely as part of the

plastic waste problem throughout the globe. The United Nations commended the Kenyan government for these move, which came three weeks after UN Environment declared war against plastics through its "Clean Seas Initiative" was launched. Other African countries which have instituted taxes, full or partial bans on the use of plastic bags include; Rwanda, Mauritania and South Africa. Is the ban on plastic bags for shopping/carrier bags alone the solution? Many companies continue producing the bags for packaging but the waste continues to be generated nevertheless! Has the ban had any positive impacts on the environment? Well....not visible for now.....although it is still in the early days and there have not been any serious enforcement from NEMA.

There are other alternatives to the use of plastic bags and the search for more alternatives continues. Paper bags (bags made out of paper) are a possible option but they also take toll on the environment; the use of trees to increase the production of paper products combined with the increased energy that is required to make paper bags has a negative environmental effect. This can however be corrected if the raw materials for packaging bags are waste from saw milling or from waste paper. Reusable plastic bags have been introduced in regions that have outlawed the plastic bag altogether. These are stronger and more durable and can be used for three to five trips to the store. But the question remains.....where do they finally end? The reusable cloth bags have fast become a favourite among environmental supporters; there are also efforts to manufacture biodegradable bags from fibre (banana, water hyacinth, sorghum, & sisal) but the technology is still either rudimentary or uneconomical.

Kenya Association of Manufacturers (KAM) said the ban would affect the country more negatively than positively. *"We have over 176 plastic manufacturing companies in Kenya which directly employ 2.89 per cent of all Kenyan employees and indirectly employ over 60,000 people,"* said KAM in a statement. *"These jobs and livelihoods will be negatively affected."* KAM also argued that the notice of six months was not enough for the affected firms to clear stocks and close shops or for the country to find a suitable alternative to plastic bags. This is the third attempt by the government since 2005 to rein in the plastic bag menace, which has been associated with adverse environmental effects. This ban needs to accompany polluter pays principles to ensure that those manufacturers of the packaging plastic bags for items like bread, sugar, soap etc. bear the cost of cleaning it up from the environment. Hopefully, this time round there will be no turning back and that the anticipated environmental goals will be eventually achieved.

# ALIGNING ATPS SWAZILAND CHAPTER ACTIVITIES WITH THE NATIONAL GOAL TO ATTAIN FIRST WORLD STATUS BY 2022



Prof. Musa Dube, ATPS National Chapter Coordinator in Swaziland.

**By Prof. Musa Dube**  
**ATPS National Chapter Coordinator, Swaziland**

Swaziland has taken a firm position to attain First World Status by 2022. This goal has sensitized many Swaziland entities which include among many others: small and large scale businesses, educational institutions from pre-school to tertiary level, academicians, ministries, research associations/societies, networks like the ATPS Swaziland Chapter, Swaziland Educational Research Association (SERA), and the newly established Royal Science and Technology Park (RSTP). The RSTP was established through the RSTP Act of 2012 Legal Notice Gazette No. 117 of 2012 with a mandate to ensure furtherance of research in science and related fields. The vision of the RSTP is to make Swaziland internationally renowned for swiftness in exploring science, technology and innovation as a means to increasing the country's economic growth and capacity by developing a knowledge based economy and infrastructure, thus substantially alleviating poverty.

The Swaziland Chapter experienced a setback because most of its key members focused on their professional growth especially the university employees. The good news is that most of them got promoted to become senior lecturers, associate professors and professors. Congratulations to them all and I hope they will participate and remain committed to the ATPS Swaziland Chapter activities.

The ATPS Swaziland Chapter is currently composed of

the National Chapter Coordinator and Members of the Executive Committee present in various initiatives brought by the establishment of the RSTP which has one section that comprises of the Innovation Park and is nearly completed. The ATPS Swaziland Chapter recently participated in a consultative meeting with Jeane Kamau the Kenyan Ambassador in South Africa in discussing about the establishment of a Memorandum of Understanding (MoU) on Science, Technology and Innovation. The Chapter is also working on a collaborative arrangement with RSTP which will help increase membership from the admitted incubated Officers on ICT, Business and many other fields. When the Innovation Park is completed it is expected that the Chapter will find a tier where members can actively participate in research and transform their findings into products, process and services.

The Swaziland Chapter is keen to participate in all activities that are meant to facilitate the attainment of a first world status by 2022 and also for the Memorandum of Understanding with Kenya to be expedited. This developments will allow the Chapter to open up negotiations with RSTP for partnership so that we can endeavour to exploit Science, Technology and Innovation (including eliciting youth involvement in ICT and entrepreneurship).



## SCHOLARSHIPS

### Google Women Techmakers Scholars Program

Applications are now open for the google women techmakers scholars program for the year 2018-2019. The award is open to undergraduate and graduate students and it will also be awarded based on the strength of each candidate's academic background and demonstrated leadership. Successful candidates will be invited to attend the annual Women Techmakers Scholars' Retreat in summer 2018 to connect with fellow scholars, network with Googlers and participate in a number of workshops.

#### ELIGIBILITY

- Currently be enrolled at an accredited university for the 2017-2018 academic year
- Intend to be enrolled in or accepted as a full-time or part-time student in a Bachelor's, Master's or PhD program at a university in Europe, Middle East or Africa for the 2018-2019 academic year
- Be studying computer science, computer engineering, informatics or a closely related technical field
- Demonstrate a strong academic record
- Exemplify leadership and demonstrate passion for increasing the involvement of women in Computer Science

**DEADLINE:** 1 st December 2017

For more information, please visit: <https://www.womentechmakers.com/scholars>

### African Innovation Foundation (AIF) 2018 Innovation Prize for Africa

The call for the 2018 Innovation Prize for Africa is officially open. The award aims to strengthen African innovation ecosystems through supporting a culture of innovation and competitiveness, whilst spurring growth of innovative, market-driven African solutions to African challenges. This season the award will recognize innovative breakthroughs that unlock new African potential in five key priority areas namely; agriculture and agribusiness, environment, energy and water; health and well-being; ICTs; manufacturing and service industry.

The IPA is focused on:

- Honouring and encouraging innovative achievements that contribute toward developing new products, increasing efficiency or saving cost in Africa.
- Providing unique platforms for entrepreneurs, innovators, funding bodies and business development service providers to network, exchange ideas and explore innovative business opportunities.
- Promoting innovation across Africa in key sectors through the competition
- Mobilizing leaders from all sectors to fuel African innovation and strengthen the African innovation ecosystems
- Promoting science, technology and engineering as a rewarding career path among African youth and women.

**DEADLINE:** 3rd January 2018

For more information, please visit: <http://innovationprizeforafrica.org/>

## NEW APPOINTMENTS



Mr. Alfred Nyambane is the research assistant at the ATPS. He holds Master's degree in Environmental Science (Agro-forestry and Rural Development) and a Bachelor's degree in Environmental Sciences. He is knowledgeable and experienced in community development, agriculture, forestry and climate change adaptation and mitigation projects. He has skills in data collection, compilation and analysis and has also crop modelling experience using Decision Support System for Agro-technology Transfer (DSSAT). He has taught part-time in several universities in Kenya. He worked as a Research Assistant at CIAT in the Soybean Project. Mr. Nyambane has also done a lot of work on solid waste management, drainage and sanitation as an Assistant Project Officer and as a consultant. He has done consultancy assignments with Kenya Agriculture and Livestock Research Organization (KARLO), Kenya Institute for Public Policy Research and Analysis (KIPPRA), ActionAid International, Pamoja Trust, Lake Victoria Environment Management Project II (LVEMP II), Lake Victoria Basin Commission, among others. He is a registered Lead Expert with NEMA.

# VACANCY ANNOUNCEMENTS

The ATPS is seeking to recruit dynamic transdisciplinary individuals to fill the following positions:-

## 1. RESEARCH OFFICER

Major responsibilities will include:-

- Generating and translating new concepts and research ideas into projects and/or programmes;
- Developing proposals and raising funds for the implementation of projects and/or programmes;
- Managing the grants process and the regional research programmes;
- Managing the publication of research outputs into various publications and assist identify during proposal development various outputs that would come out of the new projects using specific timelines;
- Developing and implementing strategies for promoting the work of the network; and particularly establishing dynamic policy outreach and advocacy processes with National Chapters;
- Collaborating and liaising with ATPS national chapters in 30 countries in the development, planning and reporting of chapter activities and projects;
- Initiating and coordinating training activities with partner institutions for various stakeholders;
- Liaising with the national coordinators and researchers on administrative and non-technical issues;
- Ensuring that the relevant information on issues on science and technology in Africa is disseminated to network members;
- Overseeing coordination of conferences, seminars and workshops and representing the Executive Director at workshops and meetings when assigned;
- Ensuring that results of all ATPS research meet international standards by organizing and managing appropriate peer review mechanisms; in liaison with the Executive Director ;
- Advising on, coordinating and managing the translation and dissemination of technical information to meet the needs of specific audiences;
- Overseeing the coordination of capacity building workshops and related activities to strengthen the capacity of ATPS National Chapters and other constituents;
- Ensuring efficient and effective collaboration with ATPS international, regional and national partners;
- Developing and strengthening collaboration with the private sector and civil society including the media;
- Publishing at least three techno-policy briefs and two journal articles each year;
- Managing individual and institutional grant and consultancy contracts and oversee development of an electronic grants management system;
- Managing the preparation of work and budget for research

projects, communication and outreach activities;

- Managing the quality and delivery of all communications outputs to ensure that they meet the highest international editorial standards;
- Representing the Executive Director when assigned during meetings with donors, conferences and various forums to promote work of the network;
- Assisting the Executive Director by organising and managing appropriate peer review mechanisms on all ATPS research results;
- Any other duties as may be assigned by the Supervisor or the Executive Director.

## REQUIRED SKILLS AND QUALIFICATIONS

- A Professional with good character and strong ability to work in a team and under work pressure;
- A Masters Degree in Science, Technology and Innovation or related subjects including natural or social sciences, or equivalent expertise. Possession of a PhD in the relevant field will be an added advantage;
- At least two years experience in research/research management in science and technology policy in a similar international organization;
- Demonstrate capacity and ability to fundraise and manage knowledge networks;
- Strong interpersonal skills and a good team player ;
- Strong analytical skills;
- Experience in STI policy analysis in Africa will be an advantage ;
- Proficiency in French will be a major advantage.

## 2. FINANCE AND ADMINISTRATION OFFICER

Your major responsibilities will include:

### A: Finance

- Authorize payments and approve financial registers;
- Review financial analysis;
- Approve expense statements and journal vouchers;
- Review and approves bank reconciliation;
- Prepare or approve ATPS payroll;
- Review weekly cash requirements;
- Approve file closures;
- Prepare/review quarterly statistics;
- Prepare/review contractual correspondence with donors and recipients;
- Assist with fundraising activities and review project budget proposals, contract and participant letters and revised budgets;
- Check accuracy of physical count of inventory of fixed assets;
- Ensure that proper financial project-monitoring records are maintained;



- Prepare ATPS' annual budget and work plan and monitor periodically actual expenditures in relation to approved budget;
  - Visit ATPS-assisted projects in the region to assist recipients in resolving financial difficulties and to monitor project's financial administration;
  - Liaise with ATPS National Coordinators in order to assist with the smooth operation of their respective chapters;
  - Ensure timely preparation of ATPS budgets and submission of financial statements to the Board;
  - Work with the external auditors in performing their statutory duties to ATPS;
  - Ensure implementation of overall ATPS financial policies and procedures; and
  - Supervise the day-to-day activities of accounting staff and ensures proper coordination between their functions.
- Monitor deployment of staff and work allocation to ensure that ATPS's resources are efficiently utilized to serve clients and that all employees have an equal opportunity for development and progression;
  - Review and recommend alternative work allocation methods and/or use of temporary staff with heads of departments, in instances of excessive overtime;
  - Monitor, on a monthly basis, utilisation of employees and advise heads of department and the Executive Director;
  - Annually revise daily per diem rates and establish and update appropriate per diem rates on a regular basis;
  - Ensure that department heads conduct project appraisals, quarterly and annual Appraisals for each employee and ensure training and development takes place and is evaluated;
  - Prepare the total revenue and operating costs of the organization during the annual salary review process in consultation with department heads for consideration by a remuneration review committee for approval by the Executive Director;
  - Review the medical insurance scheme and group life insurance scheme on an annual basis and make recommendations to the Executive Director on renewal of the scheme;
  - Authorize absence from work in the absence of employee's immediate supervisor; compile quarterly Absence Reports, to be reviewed by the Executive Director and Heads of Department;
  - Take corrective action through counselling, training and/or instituting disciplinary procedures, where problems of lateness and absenteeism persist;
  - Investigate all disciplinary cases with the respective head of department and will be a member of the Disciplinary Committee.
  - Arrange for new employees' orientation with the immediate supervisor

## B. Administration

- Ensure order and cleanliness in the office premises;
- Monitor leases and related obligations regarding the office premises;
- Supervise the use and maintenance of office equipment and vehicles;
- Administer insurance policies for office property;
- Ensure regular and timely transmission and delivery of mail and other communications;
- Maintain and update inventory of office assets;
- Maintain data on relevant supplies and their sources;
- Procure and maintain office equipment and supplies;
- Consult with the Executive Director and Research Coordinator on equipment to be purchased for projects and arranges the relevant purchases according to existing policies and procedures;
- Supervise the handling of all incoming and outgoing shipments;
- Correspond with project personnel on purchasing and shipping matters;
- Examine and endorse delivery notes/invoices prior to payment; and
- Process documentation for work permits, visas, house leases, and in other matters relating to expatriate employees and their dependants.

## C: Human Resource Management

- Monitor requirements of ATPS-recruited personnel and advise the Executive Director on recruitments;
- Administer staff benefits, i.e. medical, insurance, and provident fund schemes;
- Maintain personnel files and data and process leave applications for all ATPS staff
- Arrange performance appraisal and review of ATPS-recruited staff;
- Co-ordinate training programs for ATPS locally recruited staff;

## Required Skills and Qualifications

- A Professional with good character and strong ability to work in a team and under work pressure;
- A Degree in a Business-related field with a relevant certificate as a Certified Public Accountant. An MBA will be an added advantage;
- At least two years relevant progressive experience working in an International NGO or equivalent;
- Excellent administrative skills;
- Excellent budgeting skills with Spreadsheets
- Fluency in English, written and spoken/Knowledge of French will be a distinct advantage;
- Experience in human resources management will be a distinct advantage

Qualified candidates should send a detailed letter of interest and curriculum vitae immediately to: [executivedirector@atpsnet.org](mailto:executivedirector@atpsnet.org). The positions will remain vacant until a suitable candidate is found.

# LAUNCH OF THE ATPS-CDSF PROJECT



**From Left:** Mr. Onesmus Maina-Senior Agricultural Expert AfDB, Mr. Chuma Ikenze-ATPS Board Chair and Dr. Ernest Acheamong-Senior Research Officer ATPS during the opening remarks session.



Prof. Shem Wandiga from the Institute of Climate Change, UoN delivered his keynote presentation on Climate Information Needs for Policy and Practice.



Mr. Onesmus Maina-Senior Agricultural Expert AfDB officially launched the ATPS-CDSF project.



A cross-section of participants follow proceedings of the ATPS-CDSF project launch.



A cross-section of participants follow proceedings of the ATPS-CDSF project launch.



Participants interacted with each other as they enjoyed their snacks during tea break.



# REGIONAL STEERING COMMITTEE MEETING



Members of the ATPS-CDSF Project steering committee held a meeting to discuss further on the project implementation, review the workplan and assign roles for specific activities.



**From Left:** Mr. Japer Mwesigwa (ICPAC), Dr. Philip Osano (SEI Africa), Mr. Louis Blanc (OSS) and Ms. Stacey Noel (SEI Africa) at the Regional Steering Committee Meeting.



Dr. Nicholas Ozor, ATPS Executive Director and the project coordinator of the ATPS-CDSF Project chaired the meeting.



Representatives from various organisations who have partnered together to implement the ATPS-CDSF Project.



**From Left:** Ms. Stacey Noel (SEI Africa) and Mr. Louis Blanc (OSS) follow the proceedings of the meeting.



Dr. Nicholas Ozor (**Left**), project coordinator of the ATPS-CDSF Project and Ms. Ann Nyambane (SEI) at the Regional Steering Committee Meeting



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