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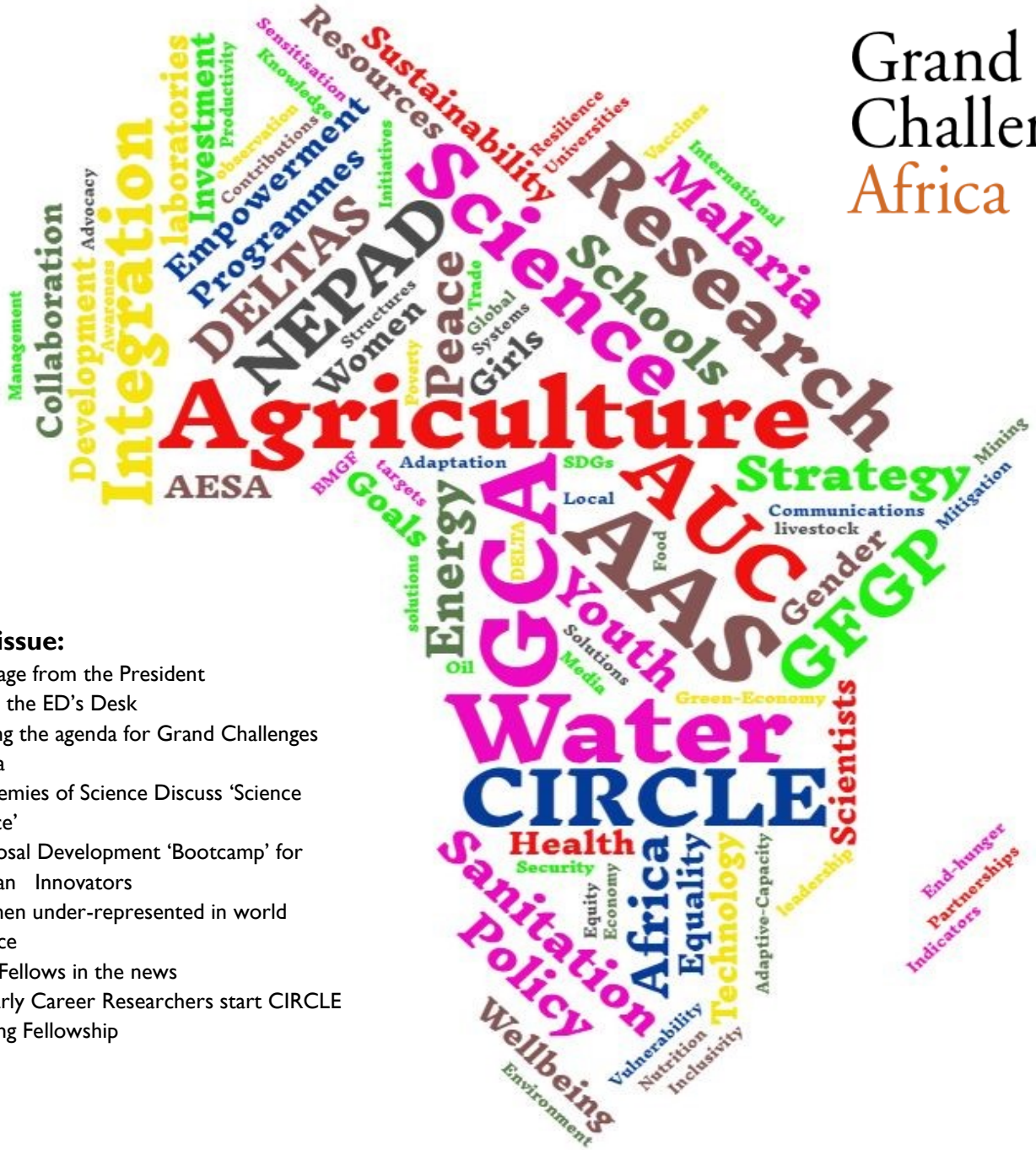
Grand Challenges Africa



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Message from the President

Aderemi Kuku, AAS President

Some recent major AAS activities reported in this Newsletter involve the Launching and Community meeting of the Grand Challenges Africa (GCA), which is a programme intended to addressing African developmental problems and is the African edition of such global Grand Challenges programmes already existing in India, Brazil, Canada, etc. The Bill and Melinda Gates Foundation had started Grand challenges programmes some twelve years ago to encourage and support Innovators all over the world. The GCA is in the process of determining its unique priorities and making new grants to African innovators. The GCA community meeting which took place in Nairobi, Kenya, featured 475 participants from 43 countries and provided a platform for African Scientists to network, share their experiences and ideas about how Grand challenges can best support and engage local innovators.

The collaborative research conference which took place at AAS, Feb 17-19 2016, is very note-worthy. It brought together early career scientist representing 19 collaborative research teams from Benin, Burkina Faso, Ghana, Tanzania and Uganda to present the progress in their research supported by International foundation for Science while interacting with various international Scientific Organizations at the conference.

The CIRCLE--Climate Impact Research Capacity and Leadership Enhancement---programme continues to make tremendous progress at the AAS. It is a programme funded by the UK DFID--Department for International Development-- and implemented by the AAS to help the research of early career African scientists in the field of climate change. CIRCLE Fellows spend a year in an African Institution to undertake research under the supervision of senior scientists at the host institution. 34 such young scientists completed their fellowship year in December 2015 while 29 of them have started their fellowship in January 2016-making the total number of fellows 63. These fellowship awards have gone a long way to promote and enhance quality research in various areas of climate change--Agriculture, health and livelihood, water, energy and policy--on our continent.

From February 28 to March 2, 2016, there was a gathering of about seventy Scientific Academies in Hermanus South Africa under the auspices of the IAP--Inter Academy Panel--for a conference on "Science Reporting" that is reported in this Newsletter by Peter Mcgrath, the IAP co-ordinator. There was also a General Assembly of IAP on March 2 where election of members of the IAP Executive Committee was held. I am happy to report that AAS was elected a member of the Executive committee of IAP for 2016-2018.

This Newsletter contains the full article of Professor Hounkonnou, Chairman of the AAS Commission on Pan-African Science Olympiads(PASO) that tells the full story about how the first AAS Pan-African Science Olympiads came to be held in Abuja, Nigeria in August 2015 without any financial contribution from the AAS--thanks to the National Mathematical centre and the Nigerian Federal Ministry of Education which set up a National Ministerial planning committee whose meetings were faithfully attended by the AAS President because he was based at the National Mathematical centre as a Distinguished Professor of Mathematics and was able to attend the meetings. Needless to say that his presence in Abuja and at these meetings contributed immensely to the success of the Olympiads. There is an on-going preparatory effort by Togo to host the 2016 Olympiads --thanks to Prof Yawovi Gumedzoe and we feel optimistic that we shall also have a successful AAS PASO in Togo this year

The second AAS-KAST (Korean Academy of Science and Technology) Bilateral Symposium will take place in Seoul, South Korea, April 20-21. The first one took place in Nairobi in 2015 and the title was" Recent Advances in Bio-Sciences and Biotechnology for socio-economic development". This year, the topic is "Bio-Natural resources and their utilization". The bilateral symposia constitute an important part of the MoU between KAST and AAS and it takes place in alternate years in Africa and Korea where each Academy contributes five speakers. Those representing AAS as speakers at the Seoul symposium are Professors Titanji, Awuah, Mshigeni, Babalola and Dakora.

The preparations for the forthcoming AAS-AMU (African Mathematical Union) Symposium on "Current Research Trends in the Mathematical Sciences and applications" May 17-20 and pre-symposium School are in top gear. This is an AAS initiative and activity that is meant to address the lack of enough focus of African Science Academies on STEM disciplines and is being carried out in collaboration with the AMU. There will be ten AAS fellows as invited speakers at the Symposium, namely Professors Abdel-Aty, Ekahguere, Gumel, Hounkonnou, Ilori, Kuku, Lubuma, Makinde,Ogana and Tchuente. Also the pre-symposium school will provide advanced courses for young mathematicians, postdocs and graduate students in the areas of Algebra and its ramifications in other areas of mathematics, Mathematical Physics, Analysis on Manifolds and Financial Mathematics.

It is now my pleasure to congratulate Prof Anthony Youdowei for his International Plant Protection Award of distinction; Botswana Academy of Sciences for the Inauguration of the Academy. and Evelyn Gitau for her Next Einstein Fellowship.

I seize this opportunity to congratulate all new Fellows of AAS elected in 2015 and cherish the strong hope that you will all contribute your very best towards more progress of AAS and more rapid development of Science and Technology on our continent ■

From the ED's desk

The year 2016 began with a series of workshops and conferences organized by The African Academy of Sciences (AAS). Two of them were on the new Good Financial Grant Practice (GFGP) Program held at AAS on the 27th of January, followed by a second one at the Wellcome Trust in London 12th February, and a third one in Senegal on 9th March. We are grateful to Michael Kilpatrick (AAS) and Genny Kiff (WT) for providing strong leadership to this program.

The second group of workshops were part of our CIRCLE program; three workshops, almost back-to-back in February – the first marking the end of one year research of 34 CVFs of Cohort one (1), and a second one launching the start of Cohort two (2), followed by a third Proposal Development workshop dedicated to women potential applicants for Cohort three.

The International Foundation of Science (IFS) had piloted the use of social media among young researchers in Africa to develop a collaborative research proposal which was subsequently reviewed and funded. AAS joined IFS to host a conference to share experience in this mode of developing collaborative research which was held at AAS Secretariat during the third week of February.

Perhaps the most colourful and exciting was the Grand Challenges Africa (GCA) meeting which brought ca 500 participants most of which were African innovators. This Newsletter is filled with the highlights and conclusions of all the forgoing workshops and conferences and more.

There are a number of important events that we are looking forward to during the coming months. Foremost is the formal handover of the DELTAS (Developing Excellence in Leadership, Training and Science) programme management from the Wellcome Trust to AAS/AESA. There are strict deliverables i.e. systems, procedures and policies that must be in place and agreed timelines that must be met for this to happen. We are optimistic that we will take complete charge of the program in June.

The second upcoming event is the 10th meeting of AAS Fellows which will be held in Botswana 21-22 June 2016. We are grateful that the Botswana Institute for Technology Research and Innovation (BITRI) in collaboration with the Botswana International University of Science and Technology are hosting us. This occasion will also mark the inauguration of the Botswana Academy of Sciences and we at AAS are delighted in joining our Batswana colleagues in these celebrations, which will be noted as one of the event marking the 50th year of the founding of the Botswana nation. As many of our readers know I have special feelings for a country that I have served for 17 years before I joined AAS. There is a lot we look forward to during this GA: the induction of new Fellows 2014 and 2015; welcoming the first cohort of AAS affiliates, and hopefully making amendments to some clauses of our constitution which relate to governance and procedural issues.

As I write this message I am aware that we are about reaching the deadline for the nomination of new fellows into the Academy which is 10 April 2016. As usual, I issued the call pointing out the status of our Fellowship, making references to under-represented and non-represented countries and disciplines and encouraging the nomination of women. The goal of AAS is to have full pan-African representation by 2018 and hope that this will be achieved. I would like to call upon AAS Fellows to make more effort to engage with us at the Secretariat. You can increase your engagement by nominating Fellows, Affiliates, as reviewers, grantees, as members of the various expert and advisory committees, etc. I encourage you to

Berhanu Abegaz, Executive Director, AAS

regularly update your profiles on our website.

Finally, I want mention the growing partnerships with a number of organizations. Our partnership with The New Partnership for Africa's Development (NEPAD) and the global funding partners, Department for International Development (DFID), Wellcome Trust and the Bill & Melinda Gates Foundation (BMGF) have been extremely important and we appreciate working with our "thought partners" from these organizations. Our partnership with the Stellenbosch Institute for Advanced Study (STIAS) has enabled us to jointly host the third workshop on Stem Cell Sciences and Applications. This will take place at STIAS and will be attended by ca 20 mentees and ca 10 resource persons and experts of Stem cell science. We are also forming institutional partnerships with key organizations, national academies, the Lindau Nobel Laureate Meetings, the Planet Earth Institute, etc. and look forward to explore new relations with the Department of Science and Technology (DST) of South Africa, the Next Einstein Foundation (NEF) and the African Institute for Mathematical Sciences (AIMS) ■

Africa's innovators for Africa's challenges

In February 2016 at a panel discussion about innovation and the future of Africa, Gilbert Kokwaro of the Strathmore Business School said, "The very first innovation is leadership with a dream." The goal of Grand Challenges Africa, the brand new initiative that we represent and that hosted the panel, is to help innovators from across the continent lead bold and dream big.

Grand Challenges Africa is a partnership among the Bill & Melinda Gates Foundation (BMGF), the Alliance for Accelerating Excellence (AESA) of the African Academy of Sciences (AAS), and the New Partnership for African Development (NEPAD). There are times when partnerships are just funding arrangements, but this one represents something more—deeply shared values and a joint understanding of how progress is made.

Twelve years ago, the BMGF launched Grand Challenges, its flagship innovation initiative. Over the years, Grand Challenges has supported thousands of innovators with ideas that range from reimagining vaccine science based on new discoveries to inventing better condoms that men will want to use.

Gradually, BMGF learned that even when it comes to the most purely scientific innovations, it helps to understand the local context of where the innovations are to be used. As a result, the foundation started looking specifically for ideas from innovators in developing countries (including, as of this writing, 380 from about 30 African countries). Eventually, it started forming partnerships with scientific institutions in other countries, including Brazil, China, and India.

Meanwhile, as the BMGF was refining its approach, AAS was celebrating almost 30 years of doing something very similar. As AAS fellows, hundreds of top scientists from across the continent and across disciplines had turned the AAS into a hub of thinking about innovation. The AAS and its fellows advocated a science-led development agenda for Africa; as a way to further this agenda, and with help from the Bill & Melinda Gates Foundation, the Wellcome Trust, the UK Department for International Development, and NEPAD, they created AESA last year to manage several programs designed to build scientific and technical capacity in Africa.

Bring these two stories together, and what you get is Grand Challenges Africa, which is now also receiving support from Grand Challenges Canada and the United States Agency for International Development (USAID). At Grand Challenges Africa, we believe in two things. First, we believe that innovation—ambitious problem-solving that crosses the traditional boundaries of hard and social science in creative ways—is essential to improving people's health and well-being around the world. Second, we believe that the best way to make life better for Africans is to support great ideas from African innovators.

Most attendees at the inaugural meeting of Grand Challenges Africa were Africans who'd received grants from the Gates Foundation through its Grand Challenges program. It was an impressive group. To name just three: a parasitologist working on a new malaria diagnostic that doesn't require electricity or a microscope, an AIDS researcher who started a pioneering school-based nutrition program in hard-hit areas, and a microbiologist using photography to help Rwandan women farmers build self-confidence and develop leadership skills.

Soon, Grand Challenges Africa will start the process of determining its unique priorities and making new grants to African innovators. Over time, what will emerge is not just successful innovations but a community of innovators dedicating their careers to innovating for impact. Through the other Grand Challenges programs, this African community of innovators will be linked to similar communities from around the world. We can't think of another global network dedicating to spreading ideas about how to help the poor in quite the same way.

We saw the power of this community at last week's conference when we ran a workshop designed to identify key areas of need and start a debate about strategies for addressing them. Essentially, we were crowd-sourcing a development agenda from hundreds of African leaders, and the insights we gained from those dialogues will drive our grant-making priorities over the next few years.

Our hope is that Grand Challenges Africa helps African scientists not only do great work but also advocate for more funding. AESA is creating the eMarketplace to link grantees to potential funders, but there is a larger challenge: building up African science so that it's able to deliver the solutions the continent needs. Less than one-half of one percent of global R&D funding goes to Africans. The ratio of African scientists and engineers in the population is at least 20 times lower than in industrialized countries. It's simple: without the funding and without experts, African science cannot realize its full potential to change the continent.

But the innovators in Nairobi are a positive leading indicator. The research budgets may not be there yet. The science scholarships may not be there. But the brilliance and ingenuity and passion are, and they are there in abundance. With a little support, that brilliance and ingenuity and passion will take flight, and Africans will change the world ■

About the Authors

This article is written by Tom Kariuki is and Steve Buchsbaum. Tom Kariuki is the Director of the AAS' Alliance for Accelerating Excellence in Science in Africa. Steve Buchsbaum is Deputy Director for Discovery and Translational Sciences at the Bill & Melinda Gates Foundation

Editor's Note: This article was first published by "Impatient Optimists".

Setting the agenda for Grand Challenges Africa

The Africa Academy of Sciences' Alliance for Accelerating Excellence in Science in Africa (AESA) convened 400 of the most promising innovators in Africa in February 2016 to set a scientific and innovation agenda for Africa and to lay the groundwork for a sustained, scientific advocacy effort to increase international and local African investment in R&D. The Grand Challenges Africa Community Meeting, which took place in Nairobi, Kenya from 24-26 February featured 475 participants from 43 countries. Grand Challenges Africa will help address the issue of low investment in African R&D and drive the innovation necessary to achieve the continent's long-term Sustainable Development Goals (SDGs). Science*Policy*Africa spoke to Evelyn Gitau, the Grand Challenges Africa (GCA) Programme Manager, for more details about the meeting and the programme.

Why was Grand Challenges Africa Created

Grand Challenges Africa (GCA) is a flagship programme of AESA, created last September as part of AESA's mission to build scientific capacity and to mobilise African innovators to contribute to solving the continent's pressing health challenges and meeting the SDGs. GCA will build on the success of local Grand Challenges programmes in India, Brazil and South Africa, as well as the strong base of African Grand Challenges grantees funded by the Bill & Melinda Gates Foundation, Grand Challenges Canada and USAID.

Our focus is on supporting the existing Grand Challenges grantees in Africa. Grand Challenges partners have invested $120 million in 380 projects in 29 African countries since 2010. The GCA will also develop, launch and manage Africa-specific Grand Challenges targeted to the development challenges preventing African countries from reaching the SDGs.

Sadly in Africa as a whole, the gap between the knowledge being created and commercialisation is still too wide. To help change this, GCA seeks to bridge the gap between industry and innovators and to bring together innovators and potential funders including angel funders, brokers, private equity investors and governments departments. We will do this through the eMarketplace to bring innovators and potential funders together.
We are also developing the GC African innovation Network (GCAiN), a web based innovation network to encourage partnerships and discussions to develop innovation in Africa.

Evelyn Gitau, Programme Manager, GCA

Why the Grand Challenges Africa Community Meeting?

Part of the mandate of GCA is to support the existing Grand Challenges grantees. This includes convening them, which we did in February. The meeting provided a platform for African scientists to network, share their experiences and expertise on how Grand Challenges Africa can best support and engage local innovators. Sessions drew on the experience of participants to help define the shape and focus of Grand Challenges Africa, including how it can help countries achieve the SDGs, and potential challenges.

Grand Challenges Africa

What are some of the grand challenges that innovators think you should be focusing on?

We rolled out a survey and had brain-storming sessions during the GCA Community Meeting to discuss what challenges should our initiative be focusing on. We are still compiling the data but the effect of climate change on health nutrition and wellbeing is one of the suggestions. Innovators also want to see improved maternal and child health.

What are the future plans for Grand Challenges Africa?

Our big plan is to launch our first call within the next few months. We are in negotiations with several partners to facilitate the launch of the call, whose priorities will be guided by discussions from the meeting and results of our survey.

As mentioned earlier, GCA is also developing the eMarketplace to bring innovators and potential funders together. Innovation is generally a risky, long-term investment, requiring a long-term funding strategy to provide innovators with the resources they need to succeed. We are hoping the eMarkeplace will be one of the ways to achieve that.

We are also planning to lobby governments to fund and provide a conducive environment for innovation to grow. Governments play an integral role in promoting a culture of innovation ■

Collaborative Research has immense benefits

By: Nighisty Ghezae, Director, International Foundation for Science (IFS)

What do the twelve alphabetized words in this list have in common: biodiversity, birds, disease, feed, fish, food, forest, insects, nanoparticles, plants, soil, weeds? They were all topics of projects being talked about at the Collaborative Research Conference held at the African Academy of Sciences from 17-19 February 2016.

The International Foundation for Science, with support from Carnegie Corporation, the Carolina Mac Gillavry Fund, and the Belgian Science Policy Office, has piloted a system to support collaborative research in Africa through a facilitated social networking platform and a web-based application review system.

The objectives of the conference were to showcase the pilot approach and engage with organizations who wish to fund or support research collaboration using a similar approach. Early-career scientists representing the 19 IFS-supported collaborative research teams came from Benin, Burkina Faso, Ghana, Tanzania and Uganda to present the progress of their research through professionally prepared posters and to interact with participants from organizations such as AAS, ACPC, AfDB, AGRA, BecA, Carnegie, CODESRIA, IDRC, IFS, ICIPE, PASGR, RISE, SEARCA and WIOMSA.

A widespread feeling among the conference-goers was that the collaborative research projects brought together women and men from across disciplines, languages and regions to find African solutions to development issues on the continent. While there was a clear professional benefit to each young researcher in terms of what they are learning and experiencing, and also a potentially wide scope to disseminate their results, it was acknowledged that efforts are needed to make clear the economic benefits of the research and the approach to a non-scientific audience.

Constructive discussions took place on improving collaborative research teamwork, mentoring, progress reporting and internet connectivity. IFS and AAS are committed to working together toward policy changes across the continent and within institutions.

Although there is a recognition that collaborative research is needed in Africa there is little political will or commitment to support it. Examples of relatively small steps that could lead to significant change include the facilitation of visas for scientific exchanges, the transport of experiment samples and equipment, and the transfer of funds to research and educational institutions.

In her remarks at the end of the conference, the IFS Director, Dr Nighisty Ghezae, encouraged the representatives to look inside themselves for all the energy and potential they have to be unleashed, and to define the role of young researchers in Africa. For his part, Prof Berhanu Abegaz, Director of AAS, described the early-career scientists present as calm, confident, articulate, serious, content-rich and forward-looking ■

Participants at the IFS Collaborative Research Conference held at the African Academy of Sciences from 17-19 February 2016

Academies of Science Discuss 'Science Advice'

By: Peter McGrath, IAP Coordinator, Trieste, Italy

From 28 February to 1 March, representatives of more than 70 academies of science and medicine met at Hermanus near Cape Town, South Africa, to discuss the issue of 'Science Advice'.

Academies are typically independent institutions that recognize and promote excellence and achievement. They are merit-based, with members selected from among the leading scientific minds within a country or region. In addition to their honorific roles, academies are vital civil society institutions that have the credibility to inform the public and policy-makers about problems and potential solutions. Their credibility comes not only from the scientific excellence of their members, but also from the fact that they are free of vested political and commercial interests.

The meeting was opened by Madam Naledi Pandor. Minster of Science and Technology of South Africa. Madam Panda challenge science academies to include more female. Discussions at the meeting covered over-arching themes on how best to present advice to governments, as well as the differing landscapes for such advice in different countries.

Sir Peter Gluckman, science adviser to the Prime Minister of New Zealand and chair of the International Network on Government Science Advice (INGSA), made the point that science and policy are fundamentally different cultures, adding that modern science is becoming increasingly non-normal, with non-linear relationships leading to uncertainties and disputed values. He addes that scientists should aim at building trust with governments and their agencies to inform policy by translating scientific results into understandable language and concepts.

Prof Norbert Hounkonnou, a fellow of the African Academy of Sciences pointed out that the impact of science advice depends on the level of scientific development in a country, and in many African countries the critical mass of scientists living and working in the country is low and the advice framework is minimal. He added that academies are typically well-equipped to take on the role of science advice, but there is a need to develop relations with the government, including its agencies and possibly finding a direct route, too, to the relevant minister or head of state.

Jacqueline McGlade, Chief Scientist, United Nations Environment Programme (UNEP), highlighted UNEP's work on a variety of environmental issues and called on IAP, its member academies, and leading scientists around the world to engage more with the UNEP process and broaden the base of expertise that is feeding into its reports.

Virginia Murray, Vice-Chair, United Nations Office for Disaster Reduction (UNISDR) Scientific and Technical Advisory Group (STAG), encouraged academies to get involved in communication to the public and to policy-makers by joining the Scientific and Technology Partnership for the Implementation of the Sendai Framework on Disaster Risk Reduction 2015-2030.

Over the two-day meeting, key issues that came up included:

- Avoid the hubris of thinking science has all the answers. Be an honest broker. Build trust.
- There is a need to be inclusive and solicit diverse inputs, especially from women, social scientists and young scientists.
- Training in communicating to the public and to policy-makers should be included in university curricula, and ways of rewarding scientists for communicating in such ways should be developed – in contrast to many current systems whereby career development is based on the publication of papers in high-impact-factor journals.

There were many discussions on how academies and other scientists can be helped to understand society better so that the scientific message can be tailored in the most appropriate way.

The meeting also saw the launch of the report 'Women for Science: Inclusion and Participation in Academies of Science', marking the culmination of studies into the numbers of women in academies of science around the globe as well as how active they are within those academies. The report confirms that the global average for women's membership in science academies is poor, at around 12%.

The IAP Conference was followed by the IAP General Assembly. Member academies elected a new co-chair representative for developing countries and Krishan Lal of India was elected to replace Mohamed Hassan of Sudan. The African Academy of Sciences, represented by its president, Aderemi Kuku, was elected onto the new Executive Committee ■

IAP Executive Committee: 2016-2019

Co-chairs Krishan Lal (India) and Volker ter Meulen (Germany) (seated). Standing (left to right): Takashi Onishi (Science Council of Japan), Daya Reddy (ASSAf), Juan Asenjo (Academia Chilenas de Ciencias), Reza S Ardekani (Academy of the Islamic Republic of Iran), Marcello Barcinski (Brazilian Academy of Sciences), Kurt Lambeck (Australian Academy of Science), Jeremy McNeil (Royal Society of Canada), Sergio Pastrana (Cuban Academy of Sciences), Myung Chul Lee (Korean Academy of Science and Technology), Aderemi Kuku (African Academy of Sciences) and Martin Poliakoff (Royal Society, UK).

AAS Fellows in the News

Quarraisha Abdool Karim named as the 2016 L'Oréal-UNESCO Laureate for Africa and Arab States

Quarraisha Abdool Karim, AAS Fellow

AAS Vice President for Southern Africa, Prof Quarraisha Abdool Karim is among five leading women scientists across five regions who were honoured at the 18th edition of the L'Oréal-UNESCO For Women in Science Ceremony at the Maison de la Mutualité in Paris on 24th March. Prof Quarraisha Abdool Karim was presented with the 2016 L'Oréal-UNESCO Women in Science award for Africa and the Arab States region in recognition for her "remarkable contribution to the prevention and treatment of HIV and associated infections and greatly improving the quality of life of women in Africa."

The awards were presented by Irina Bokova, Director General of UNESCO and Jean-Paul Agon, Chairman and CEO of L'Oréal and Chairman of the L'Oréal Foundation who also officially launched the Manifesto For Women in Sciences www.forwomeninscience.com to draw attention to the under-representation of women in the sciences.

An advocate for social justice of adolescent girls and young women in Africa, Prof Abdool Karim said she was deeply honoured and privileged to be recognised as a L'Oréal-UNESCO laureate - "I hope that this award inspires young women in Africa and the Middle East to pursue careers in science and technology as the world needs more women in science. Our region needs more scientists addressing the many challenges that face us locally including ways to prevent HIV infection in adolescent girls and young women who continue to bear a disproportionate burden of HIV infection in the region".

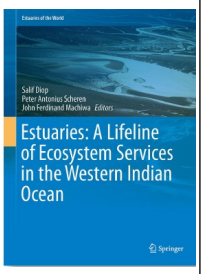
Prof Abdool Karim was the co-Principal Investigator of the landmark CAPRISA 004 tenofovir gel trial which provided proof-of-concept that an antiretroviral microbicide can safely prevent HIV infections with consistent use of the product. The study was highlighted by the journal Science as one of the Top 10 scientific breakthroughs in 2010. The study also provided the first evidence that an antiretroviral microbicide can prevent the risk of acquiring HSV-2 infection. Her scientific and research contributions in understanding the evolving HIV epidemic span over 25 years and has made a profound impact on HIV treatment and prevention policies at a global level ■

HE Gurib-Fakim Honoured

The French Government honoured Her Excellency, Mrs. Ameenah Firdaus Gurib-Fakim, GCSK CSK by awarding the prestigious "Grand Officier de La Legion d'Honneur" to her on 30th March in Paris.

François Hollande, President of France, with Ameenah Gurib-Fakiim, President of Mauritius and AAS Fellow

New Book: "Estuaries: A Lifeline of Ecosystem Services in the Western Indian Ocean"



The new book on estuaries in the Western Indian Ocean is a compilation of 20 chapters, each contributing to a better understanding of the structure and function of major estuaries located in the Mainland and island states of the WIO Region. It is intended to serve as a reference source for researchers in estuarine and nearshore ecology of the WIO Region.

Salif Diop, AAS Fellow

AAS Fellow, Salif Diop is the main editor of this book. Salif Diop has been working at the United Nations, in particular at UNEP's Division of Early Warning and Assessment (DEWA) as a Senior Officer for nearly 16 years. He is a water specialist with extensive experience in various aspects of coastal oceanography, freshwater assessment, aquatic and marine issues, sustainable management and development. He has more than 40 referred publications with 6 books as main author and co-author and has been awarded a Nobel Peace Prize Certificate – IPCC 2007. He is a University Professor, Member of the National Academy of Sciences and Techniques of Senegal since February 2006, Member of The World Academy of Sciences (TWAS). For more on Prof Salif DIOP, visit http://www.esalifdiop.org ■

Workshop: Cell Biology & Regenerative Medicine

The African Academy of Sciences (AAS) and the Stellenbosch Institute for Advanced Study (STIAS) will organize the third workshop dealing with stem cell science and applications (inclusive of regenerative medicine) from 27th June to 1st July 2016 in Stellenbosch, South Africa. The theme of the workshop will be "Health in Transition".

The goal of this workshop is to impart knowledge and skills in stem cell science and applications including regenerative medicine to early career scientists. The workshop is also intended to provide opportunities for networking among a multidisciplinary team of experts in the field. The workshop will assess the progress of collaborations established so far from on-going CB/RM activities, highlight new training and research opportunities and present the participants with a platform to plan or launch their careers in this field.

In addition to previous workshops in this series, seven mentees have to date received training at institutions in Brazil, India and South Africa under the AAS CB/RM program. Further capacity development will require strong institutional collaboration and sharing of resources. This third workshop is an excellent example of such a collaboration.

Participation

Target participants are early career professionals in the field of medical sciences i.e. MD/PhD level or postdoc fellows aged 40 or below, who have a demonstrated research interest or with a background in stem cell biology or regenerative medicine, **and who have identified a mentor at their present institution.** Applicants for postdoctoral training must have completed the MD/PhD degree within the past five years.

To qualify, applicants must:

(1) be 40 years or below
(2) be employed in a research institution or a university
(3) provide a full CV and a motivation statement of not more than 500 words
(4) provide a written support from a mentor from the same institution describing the suitability of the candidate for professional development in the field of CB/RM and how the training would fit into the institutional plan.

Interested applicants must fill in the application form which can be downloaded from www.aasciences.ac.ke/cbrmworkshop and www.stias.ac.za. Applications must be received on or before 25th April 2016. The applications will be reviewed and only successful candidates will be contacted.

Format of the Workshop

The sessions will consist of a series of lectures as well as hands on practical work in selected laboratories in Stellenbosch and Cape Town. The mix of plenary and panel discussions will offer participants opportunities to interact and learn the latest ideas and practices in Cell Biology and its applications including Regenerative Medicine ■

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Dr Christoff Pauw, cpauw@sun.ac.za

STIAS Iso Lomso Fellowships for Early Career African Researchers

stias
STELLENBOSCH INSTITUTE FOR ADVANCED STUDY
STELLENBOSSE INSTITUUT VIR GEVORDERDE NAVORSING

Iso Lomso Fellowships provide an exceptional early career opportunity for Africa's brightest minds in academia. Fellows will enjoy:

- a three-year attachment to STIAS during which time they may spend a total of ten months in residence at STIAS to develop and pursue a long-term research programme;
- the possibility of a residency at a sister institute for advanced study in North America, Europe or elsewhere;
- funding to attend up to three international conferences or training workshops anywhere in the world; • support to convene a workshop with collaborators at STIAS;
- lecturer replacement subsidy for the fellow's home institution during residency periods. The programme is aimed at African scholars who have obtained a doctoral degree within the preceding eight years and who hold an academic position at a university or research institution anywhere in Africa. All disciplines will be considered.

Application deadline: Wednesday, 25 May 2016. Visit: www.stias.ac.za/iso-lomso Contact: Christof Pauw, STIAS Programme Manager, Tel. +27 21 808 9331, Email cpauw@sun.ac.za

29 Early Career Researchers start CIRCLE Visiting Fellowship

In January 2016, twenty-nine African early career researchers started a one year CIRCLE (Climate Impacts Research Capacity and Leadership Enhancement) Visiting Fellowship . The 29 CIRCLE Visiting Fellows (CVFs) are from 18 African Institutions in 7 African countries. Each CVF will be hosted at one of13 African institutions for the one year fellowship period. The Host Institutions are: Makerere University; International Livestock Research Institute, Kenya; University of Ibadan, Nigeria; Addis Ababa University, Ethiopia; Muhimbili University of Health and Allied Sciences, Tanzania; The Organisation for Social Science Research in Eastern and South Africa (OSSREA), Ethiopia; and the Kwame Nkrumah University of Science and Technology (KNUST), Ghana. The rest are University of Dar es Salaam, Tanzania; University of South Africa; University of Cape Town, South Africa; University of Nairobi, Kenya; Obafemi Awolowo University, Nigeria; and the University of Ghana (UG).

The awarding of 29 CVFs for the cohort 2 of CIRCLE Visiting Fellowships brings the total fellowships awarded to 63. The cohort 1 had 34 fellows ■

CVFs awarded per Home Institution

Home Institution	Number of CVFs
Chinhoyi University of Technology (CUT), Zimbabwe	1
Ebonyi State University, Nigeria	1
Ethiopia Institute of Agricultural Research	1
Hawassa University (HU), Ethiopia	1
Ladoke Akintola University of Technology (LAUTECH), Nigeria	2
Makerere University, Uganda	1
Mekelle University, Ethiopia	1
Michael Okpara University of Agriculture, Umudike, Nigeria	1
Muhimbili University of Health and Allied Sciences (MUHAS), Tanzania	1
Obafemi Awolowo University (OAU), Nigeria	3
Science and Technology Policy Research Institute of the CSIR (STEPRI-CSIR), Ghana	1
University for Development Studies (UDS),	1
University of Dar es Salaam, Tanzania	1
University of Energy and Natural Resources (UENR), Ghana	4
University of Fort Hare (UFH), South Africa	2
University of Ibadan, Nigeria	4
University of Port Harcourt (UNIPORT),	2
Wollo University, Ethiopia	1

63
No of CVFs awarded over 2 cohorts

60%
Post-PhD Fellowships awarded; 38/63

48%
Female CVF over the 2 cohorts; 30/63

37%
Post-PhD CVFs who are females; 14/38

64%
Post-Masters CVFs who are females; 16/25

Cohort 2 of CIRCLE Visiting Fellows (CVFs) at their induction workshop at the AAS Secretariat in February 2016. Their fellowship if from Jan to Dec 2016

Enhancing the wellbeing of people under a changing climate

As the global impacts of climate change become more clearly understood, so too does the need for people to effectively respond and adapt to these changes.

Home to hundreds of millions of people, the semi-arid regions of Africa and Asia are particularly vulnerable to climate-related impacts and risks. These climate change hotspots are highly dynamic systems that already experience harsh climates, adverse environmental change, and a relative paucity of natural resources. People here may be further marginalised by high levels of poverty, inequality and rapidly changing socio-economic, governance and development contexts. Although many people in these regions already display remarkable resilience, these multiple and often interlocking pressures are expected to amplify in the coming decades. Therefore, it is essential to understand what facilitates the empowerment of people, local organisations and governments to adapt to climate change in a way that minimises vulnerability and promotes long-term resilience and wellbeing.

To date, most current practical adaptation efforts have focused on reactive, short-term and site-specific solutions to climate-related vulnerabilities. Although important, these responses often fail to address the root causes of vulnerability, nor do they shed light on how to proactively spur larger-scale and longer-term adaptation that has positive effects on socio-economic development. Using both research and practice to address this information shortfall, the primary aim of the Adaptation at Scale in Semi-Arid Regions (ASSAR) project is to produce future-focused and societally-relevant knowledge of potential pathways to well-being through adaptation.

About ASSAR

ASSAR is one of four hotspot research projects in the Collaborative Adaptation Research Initiative in Africa and Asia (CARIAA) programme, funded by Canada's International Development Research Centre (IDRC) and the United Kingdom's Department for International Development (DFID). ASSAR aims to use insights from multiple-scale, interdisciplinary work to improve the understanding of the barriers, enablers and limits to effective, sustained and widespread adaptation out to the 2030s. Working in a coordinated manner across seven countries in East Africa, West Africa, Southern Africa and India, ASSAR's research is case-study based and strives to integrate climatic, environmental, social and economic dimensions of vulnerability, resilience and adaptation. Dynamics of gender roles and relations form a particularly strong theme throughout our approach. The international and interdisciplinary ASSAR team comprises a mix of research and practitioner organisations, and includes groups with global reach as well as those deeply embedded in their communities. Each of ASSAR's teams is conducting regionally-relevant research focused on specific socio-ecological risks/dynamics that relate to livelihood transitions, and access, use and management of land and water resources in water-stressed environments. Focal research themes in each region are: agro-intensification in West Africa; land and water access in East and Southern Africa; and land use, land cover and livelihood changes in India.

Over its five-year lifespan (2014-2018), the cross-regional comparison and integration of research findings will enable ASSAR to develop a unique and systemic understanding of the processes and factors that impede and enable adaptation and cause vulnerability to persist.

Putting our work in practice

To ensure that our research responds to the needs and realities of people living and working in semi-arid regions, and that the findings and recommendations have an influence on policy and practice, ASSAR seeks to build meaningful and long-lasting relationships with a wide spectrum of stakeholders from communities, civil society organisations, research institutions, governments and non-governmental organisations.

By using stakeholder mapping and analyses in the early phases of the project, the ASSAR teams aimed to better understand the power dynamics among different stakeholder groups and to identify which stakeholders would be most effective to work with. By guiding a select group of stakeholders through participatory scenario planning processes in the course of 2016-17, ASSAR will seek to explore a number of alternative futures which look at the interaction among different factors ranging from resource availability and access, to governance and institutional set-ups, under a changing climate and shifting biophysical conditions. In addition to building the adaptive capacity of primary stakeholders, decision makers, practitioners and academic researchers, the scenario process will promote the co-production of adaptation responses which could go as far as including previously inconceivable strategies for change and transformation.

By engaging in a range of effective communication and capacity building activities, ASSAR intends to inform and promote sustainable development pathways that have the best prospect for enhancing the wellbeing of the most vulnerable and/or marginalised in the coming decades. Through these activities, ASSAR will better integrate the domains of adaptation research, policy and practice. In time, these efforts could also contribute to a change in the attitudes and behaviours of key stakeholders, prompt easier and better access to resources by vulnerable groups, and enhance the power and agency of vulnerable groups to lessen or remove adaptation barriers, and exploit adaptation enablers.

To find out more, visit:
www.assaradapt.org

ASSAR
Adaptation at Scale in Semi-Arid Regions

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AAS — AMU Symposium and School

The African Academy of Sciences (AAS) and the African Mathematics Union (AMU) is organizing a symposium under the theme "Current Research Trends in Mathematical Sciences and applications," from May 17-20, 2016. There will be a pre-symposium school from May 3-16, 2016, to be hosted by UNESCO Chair of Mathematics, National Mathematical Centre (NMC), Abuja Nigeria.

Aims and Objectives

Among the aims and objectives of the symposium are

1) coordinate ideas from leading African Mathematical Scientists
2) Provide a forum for younger generation of Mathematical Scientists to interact with and be inspired by mature and established mathematicians and possibly create more and improve on current mentor-mentee relationships.
3) pave the way for more specialized symposia/conferences/workshops to be arranged all over the continent and also to spearhead more emphasis on STEM research and education among African Science Academies and Educational Institutions.

Pre-symposium school

The pre-symposium school from May 3-16, 2016 will have four courses of lectures as follows:

2) Algebra and ramifications with other areas of mathematics (Prof Aderemi Kuku, Nigeria)
3) Analysis on Manifolds (Prof Leonard Todjihounde, Benin Republic)
4) Theoretical Physics (Profs Samuel Howusu (Ghana) and J Tossa (Benin Republic)
5) Financial Mathematics (Prof Matteo Marsili, Italy)

Activities

Activities include invited lectures, contributed Research presentations, panel discussion and instructive lectures.

For further information: http://aas-amusymposium.org/ ■

2nd AAS - KAST Bilateral Symposium

The second Bilateral Symposium of the African Academy of Sciences (AAS) and the Korean Academy of Science and Technology (KAST) will take place in Seoul, South Korea, from April 20-21, 2016.

The first AAS-KAST (Korean Academy of Science and Technology)Bilateral Symposium took place in Nairobi in 2015 under the theme "Recent Advances in Bio-Sciences and Biotechnology for socio-economic development".

The second bilateral symposium is under the theme **"Bio-Natural resources and their utilization"**. The bilateral symposia constitute an important part of the MoU between KAST and AAS and it takes place in alternate years in Africa and Korea where each Academy contributes five speakers.

Speakers from the AAS at the second bilateral symposium are:

1. Prof Vincent P K Titanji
2. Prof Richard T Awuah
3. Prof Keto Mshigeni
4. Chinedum Peace Babalola
5. Prof Felix Dakora

Some key messages from the first symposium were:

- Africa has problems that cut across nations yet there is little intra-Africa collaboration.
- Africa needs to build a critical mass of scientists by mentoring and defining career paths for young scientists to address the attrition of skills in Africa
- African governments should invest more in malaria control ■

Sixth Masamu Advanced Study Institute (MASI) and Workshops

The sixth Masamu Advanced Study Institute (MASI) and Workshops will be held November 18-27, 2016, in Pretoria, South Africa, during the 34th Annual SOUTHERN AFRICA MATHEMATICAL SCIENCES ASSOCIATION (SAMSA) conference. The research focus areas for the sixth MASI are:

- Algebra,
- Coding Theory,
- Graph Theory,
- Mathematical Modeling of Biological Systems,
- Mathematics of Finance, and
- Statistics.

In addition to the research workshop, the program will organize two additional workshops: one on career development targeting graduate students and another one on leadership and collaboration targeting department chairs and senior research scientists. MASI is being supported by SAMSA, US National Science Foundation (NSF), Simons Foundation, and various centers, institutes, colleges, and universities.

There are limited positions available for junior researchers and graduate students to participate in MASI. Detailed information about participation and the Masamu Program is available at https://masamu.auburn.edu

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Dr Ash Abebe (abebeas@auburn.edu)
Dr Moatlhodi Kgosimore (mkgosi@bca.bw, kgosimor@gmail.com).

Program website:
http://masamu.auburn.edu ■

AAS General Assembly

From 21-22 June 2016, AAS will hold its 10th General Assembly (GA) in Kasane, Botswana, in collaboration with the Botswana Institute for Technology Research and Innovation (BITRI) and the Botswana International University of Science and Technology (BIUST).

The GA is a gathering of AAS Fellows which takes place every three years to assess programmes and review its activities and finances in line with its strategic goals. The GA will also have in attendance the first batch of AAS Affiliates and will include lectures and two panel discussions over the course of two days.

The theme of this year's GA is "Academies as the voice of science in Africa". The theme is particularly important as it comes at a time when Botswana is inaugurating its own science academy, and celebrating 50 years as a nation. It also comes amid discussions of how science academies in Africa can contribute to evidence-based policymaking. The meeting will explore how to bridge the gap between science academies and policymakers. AAS Fellows will, during the business meeting, receive reports of activities since the last meeting and also make inputs to the future programs of the Academy.

Event Objectives

1. To induct the AAS 2014 and 2015 Fellows
2. Issue certificates to the first cohort of AAS Affiliates, http://aasciences.ac.ke/affiliates
3. Join in the celebrations to inaugurate Botswana Academy of Science"
4. To provide a platform for selected AAS Fellows to give lectures on topical issues
5. Panel discussions on topical issues;
6. Award ceremony and lecture of the Olusegun Obasanjo Prize.

More information: http://aasciences.ac.ke/updates/events/african-academy-of-sciences-10th-general-assembly/ ■

1st AAS PAN-AFRICAN SCIENCE OLYMPIAD (PASO)

The AAS Commission on PanAfrican Science Olympiad (PASO) was created by the AAS Governing Council in 2014, along with three other commissions-Commission on Science Education, Commission on African Scientific heritage, and Commission on Women in Science in Africa--and I feel very delighted to report that the AAS PASO place actually took place August 23-28, 2015 in Abuja, Nigeria--thanks mainly to the Nigerian Federal Ministry of Education and the National Mathematical Centre, (NMC) Abuja which served as Hosts for the Olympiads without involving AAS in any financial cost.

Soon after Nigeria agreed to host the Olympiads, the Nigerian Federal Ministry of Education at the instance of Professor A. R. T Solarin, the Director of the National Mathematical Centre decided to set up a Ministerial National committee with members drawn from several other Federal Ministries -- Science and Technology, Foreign Affairs, Internal affairs, Communications Technology etc with various subcommittees--Security, Finance, Publicity, Technical and Awards etc. each of them facilitating the implementation of the various activities connected with the Olympiads. The President of AAS was able to attend most of these meetings on behalf of AAS (being on the ground in Abuja as a Distinguished Visiting Professor at the National Mathematical Centre) and reports that it was indeed a lot of hard work for the committee and its Subcommittees to be able to actualize the Olympiads.

Even though we wrote letters inviting many countries to participate, there were eventually eight participating countries--Nigeria, Benin Republic, Burkina Faso, Ghana, Mali. Niger Republic, South Africa and Tanzania. Nigeria came first overall and got the winner's trophy. The second place went to Burkina Faso while Ghana came third and both countries got plaques as second and third place countries.

AAS President, Prof Kuku at the 1st AAS PAN-AFRICAN SCIENCE OLYMPIAD (PASO)

Medals were also given to first, second and third contestants in addition to medals and certificates. Nigeria got gold, silver and bronze medals, Burkina Faso got silver and bronze, Ghana got silver and bronze medals, South Africa bronze medals and Tanzania bronze medals.

The President of AAS delivered speeches at the opening and closing ceremonies and it was clear that some of the cardinal aims of the AAS-PASO were achieved, including
1) stimulating and developing the interest of African Youths in solving scientific problems, 2) promoting positive interactions and healthy competition among African Youths thus furthering African unity through sciences.
It is our hope that this fist AAS PASO will open the way for more AAS PASO's in the future and that there will be many more participating countries in the future. At this point, we appeal to other African countries to come forward and host forthcoming AAS PASO'S

It is now our great pleasure to thank most heartily those who have contributed to the actualization of this first AAS PASO---The Nigeria Federal Ministry of Education, Professor A. R. T. Solarin, all those who served on the National Ministerial committee and subcommittees, the Secretariat and members of the NMC, and those who have donated in cash and kind, corporately and individually towards the success of the Olympiads ■

This report is by: Prof Nobert Hounkonnou, Chair, AAS Commission on PanAfrican Science Olympiad.

Proposal Development 'Bootcamp' for African Innovators

AAS in collaboration with Ifakara Health Institute held a 3 day 'bootcamp' for early-career African innovators and scientists in Nairobi, Kenya, February 21-23, 2016. The bootcamp helped the innovators to receive intensive coaching developing successful grant proposals. Twenty-five innovators were coached on how to write proposals as well as how to complement their writing with a 2 minute pitch of their innovation. Facilitators from Ifakara, AAS, Grand Challenges Canada, the Bill & Melinda Gates Foundation and Institute Pasteur helped participants refine their proposals. Over 90% of the participants felt that the workshop was extremely useful and felt that the activities over the 3 days gave them sufficient practice.

'The bootcamp gave the participants a great opportunity to improve their writing skills, present their work, meet with experts, researchers, healthcare providers and policy-makers across the globe, and learn more about innovations in Africa. GCA plans to hold at least one bootcamp every year ■

Participants and Facilitators at the Proposal Development 'Bootcamp' for African Innovators

Evelyn Gitau - Next Einstein Fellow

Evelyn Gitau, Programme Manager for African Academy of Sciences' Grand Challenges Africa initiative is one of 15 young African scientists selected as Next Einstein Fellows, an initiative that recognises Africa's best young scientists and technologists.

Evelyn Gitau receives fellowship symbol from President Kagame of Rwanda

She was selected for her pioneering research in cellular immunology, which includes developing a diagnostic tool to quickly and accurately identify children with severe malnutrition, who are likely to die from preventable infections.

As a Next Einstein Fellow, Gitau had the opportunity to present her work to about 1,000 delegates from across the world who attended the Next Einstein Forum in March 2016 in Dakar, Senegal. She also has the opportunity to be mentored by leading senior scientists and industry representatives.

Gitau has in turn been selected to inspire other young scientists and young people to pursue careers in science.

Visit http://nef.org/nef-fellows/ to read about other Fellows ■

Kenneth Ndua's winning pitch

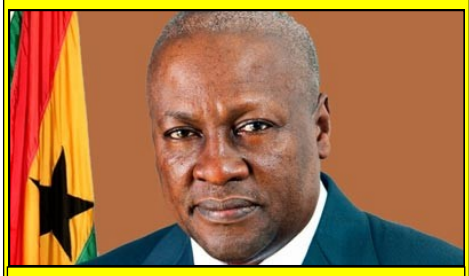
Kenneth Ndua presents his innovation

Social entrepreneur, Keneth Ndua, gave the winning pitch at the Grand Challenges Africa's "Pitching Your Innovation" session. Nduah has added an extra component to the Jiko Kenya (firewood stove) and Jiko Africa (charcoal and briquettes), fuel-efficient biomass stoves that can be filled with 3 litres of water, enabling the homes to simultaneously boil and sanitise water while cooking. This feature, which helps to insulate the stove and makes it more efficient, also traps waste heat and uses it to rid water of impurities and micro-organisms, leaving it clean and safe for drinking. The stove is also cheap and sells at Kshs 3,000.

"Pitching Your Innovation" was organized as part of the Grand Challenges Africa Community Meeting held in Nairobi, Kenya, from 24-26 February. The session involved scientists pitching their ideas to journalists and being judged on how well they presented their ideas to a non-scientific audience. The goal was to provide a platform for scientists to build partnerships with journalists and to train scientists to deal with and pitch their stories to the media and potential funders ■

News

Ghana to introduce visa-on-arrival for citizens of AU Member States



HE John Dramani Mahama, President of Ghana

His Excellency, John Dramani Mahama, President of Ghana, has announced that Ghana is to introduce a visa-on-arrival policy for citizens of African Union Member States. This decision by Ghana was warmly welcomed by the Chairperson of the African Union Commission (AUC), Dr. Nkosazana Dlamini Zuma.

With effect from July 2016 year, citizens of AU Member States would enter Ghana and obtain visas on arrival with the option to stay for up to thirty. President Mahama said "this measure, with time, should stimulate air travel, trade, investment and tourism".

The decision is a result of a resolution adopted at the African Union Executive Council meeting held earlier this year in Addis Ababa, which stipulated that AU Member States review their internal and external security realities in an attempt to implement mechanisms allowing for the issuing of visas on arrival for citizens of Member States, with the possibility of a 30-day stay.

This decision by Ghana, it is hoped, will further enhance intra-African collaboration at many fronts, including research collaboration. Such African continental integration will further drive a speedy realisation of the African Union's 'Agenda 2063 - The Africa We Want' ■

Africa Visa Openness Report 2016

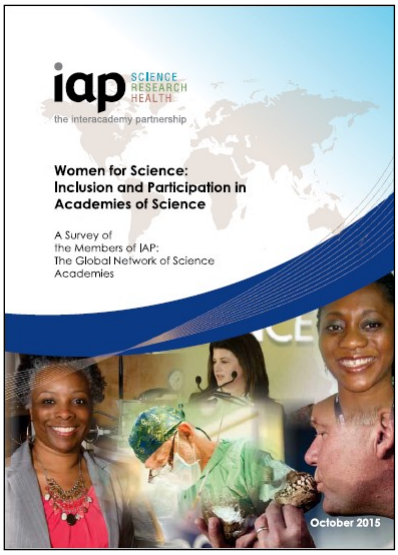
The African Development Bank has published "The Africa Visa Openness Report 2016". The document was prepared by the NEPAD, Regional Integration and Trade Department at the African Development Bank.

The report defines 'visa openness' as how easy it is for African travellers to visit another country on the continent. So the Africa Visa Openness Index measures how open African countries are when it comes to visas by looking at what they ask of citizens from other countries in Africa when they travel. It aims to show at a glance which countries are facilitating travel for citizens of other countries and how: whether they allow people to travel to their country without a visa, if travellers can get a visa on arrival in the country or if visitors need to get a visa before they travel.

The report highlights that 75% of countries in the top 20 most visa-open countries are in West Africa and East Africa; only one country in North Africa and none in Central Africa. Only 13 out of 55 countries offer liberal access (visa free or visa on arrival) to all Africans; 8 out of 9 of Africa's Upper Middle Income Countries have low visa openness scores; and 9 African countries offer eVisas.

The report is available at: http://www.afdb.org/fileadmin/uploads/afdb/Documents/Generic-Documents/Africa_Visa_Openness_Report_2016.pdf ■

Women under-represented in world science



A survey of member academies of IAP: The Global Network of Science Academies, found the average share of women members across 69 national science academies to be 12%. In just under one half, 30 academies from 69, the share of women members was either 10% or less. This is despite efforts to promote the role of women in science.

The report points out that great strides have been made in enrolling more women in undergraduate courses, especially in the biological and chemical sciences. There has been little success has been more limited in the areas of physics, mathematics and engineering. So there remains significant challenges in ensuring that the best women scientists are able to have fulfilling careers with increasing levels of responsibility, eventually taking up leadership and decision-making positions

The report is available at: http://www.assaf.org.za/ASSAf%20news/ASSAF_IAP%20Report%20Final.pdf ■

Science*Policy*Africa

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Opportunities

Call for Abstracts: IDRC Davos 2016

The 6th International Disaster and Risk Conference IDRC Davos 2016 has extended the abstract submission deadline to 30 April 2016. Join as a speaker, poster presenter, session organizer, exhibitor, or participant to celebrate the 10 year IDRC Davos anniversary. The conference is held 28 August – 1 September 2016 in Davos, Switzerland under the theme of "Integrative Risk Management – towards resilient cities".

The IDRC Davos 2016 programme enables active knowledge sharing, helping to drive good practice and build capacity. Social events and exhibitions also offer the opportunity to discuss ideas, foster partnerships and strengthen professional and personal networks. IDRC Davos 2016 will build on the outcomes of the UNISDR Science and Technology Conference held in Geneva end of January 2016 and will further develop the S&T Road Map. Scientists, practitioners, and policy makers from the various science and technology fields and from all geographical regions, at local, national, regional and international levels are invited to submit abstracts for oral or poster presentations within the overall framework of the IDRC Davos 2016 conference topics.

Papers shall address the whole risk cycle, focusing on risk prevention and risk reduction, but also on disaster preparedness, early warning, response and recovery, as well as on risk financing options. Of particular interest are papers addressing the HOW? to transfer, translate and implement knowledge from science into know-how and practical application.

To contribute to the parallel sessions with an oral or poster presentation, to submit a session or to run a workshop, please follow the IDRC Davos 2016 call for abstracts. ■

GLOBAL INNOVATION EXCHANGE

The Global Innovation Exchange is a new online community for connecting students, scientists, entrepreneurs, and businesses to global funding and markets, as well as free talent and services around the world that can help them accelerate their vision. The Exchange was co-created by USAID and over 100 international organizations from across government, business, academia and civil society who believe that ingenuity is everywhere. The Exchange is already home to over 1200 innovations in Africa and over $170 million funding opportunities for Africans. Across the world, the Exchange is home to over 3,000 members, over $290 million in funding opportunities, and almost 4,000 innovations.

Scientists and entrepreneurs can share their products and ideas; find new funding sources; discover resources and collaborators to help advance; see competitors, customers, emerging trends, and possible partners. Investors can identify new ideas, compare them with other solutions on the market, and access evidence and expert analysis to assess an idea's potential return. Experts can review and evaluate new innovations, and validate and share feedback on new ideas. People who have used innovations can rate their experiences to inform others about innovations.

Create a profile to share your inventions and research with international networks. Share within your networks, encourage students, scientists, businesses, and technologists to create a profile on the Exchange. Connect the Exchange with local science, computer, and tech centers to make sure anyone with Internet access has the opportunity to access the Exchange. Email: info @globalinnovationexchange.com ■

By Alexis Bonnell, Division Chief of Applied Innovation & Acceleration in the U.S. Global Development Lab at the U.S. Agency for International Development