



INTERNATIONAL  
FOUNDATION FOR  
SCIENCE



The African  
Academy of Sciences

Belgian Science Policy Office



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## **IFS Collaborative Research Conference**

**Supported by the Carnegie Corporation of New York**

**Hosted by the African Academy of Sciences (AAS)**

**17-19 February 2016  
Nairobi, Kenya**

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## Summary

What do the twelve alphabetised 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 in February 2016.

The International Foundation for Science, with support from Carnegie Corporation of New York, the Belgian Science Policy Office (Belspo), and the Carolina MacGillavry endowment 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 which 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, AfDB, AGRA, BecA, Carnegie Corporation, CODESRIA, icipe, IDRC, IFS, PASGR, RISE, SEARCA and WIOMSA.

Wide-ranging discussions and suggestions were made on collaborative research and the differences between it and individual research; crossing boundaries of languages, countries and disciplines; sharing of equipment; mentorship and risk management; relevance and dissemination of the research; and defining success and sustainability. Representatives of other organizations also spoke about their own programs and efforts and interests in collaborative research. The collaborative research team representatives gave presentations on forming groups, conceptualising research topics, meeting face to face, carrying out the research, and taking what they learned into their workplaces, careers and countries. A virtual presentation from the Philippines informed conference-goers about the IFS-SEARCA collaborative research grants pilot in Southeast Asia.

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 exchange, the transport of experimental 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.

In general, participants expressed positive views on the conference atmosphere, time-keeping, participation and interaction, presentations and facilitation. The most comments about what could have been done differently concerned the poster session, that not enough time had been allocated to it, and that team representatives should have had an opportunity to speak briefly about their projects. Also, there was a recognition that the range of participants could have been broader, especially from other funding organizations. People felt like they learned a lot about many dimensions of collaborative research. They were grateful for the opportunity to network and to represent their teams. For the most part, participants were appreciative of the conference logistics, organization and communications, though there were some issues with flight bookings and information about immigration requirements.

## Background

IFS has, with Carnegie Corporation support, piloted a system to support collaborative research in Africa. A facilitated social networking platform and a web-based application review system have been built. The IFS support to collaborative research has also gained financial backing from the Belgian Science Policy Office (Belspo), the Carolina MacGillavry endowment, and the South East Asian Regional Center for Graduate Study and Research in Agriculture (SEARCA). Two pilot iterations of the system each attracted around 500 eligible scientists who expressed interest to join, with 40-45 multi-country teams forming on each occasion, developing and submitting proposals over a 14-week window. The first call went out for collaborative research proposals within the theme of neglected and underutilized species, with backing from the Carnegie Corporation and the Carolina MacGillavry endowment. A workshop on collaborative research was held in Ghana in July 2013 for the members of teams passing pre-screening. In the first pilot, in five African countries (Ghana, Nigeria, South Africa, Tanzania and Uganda), ten teams were ultimately successful in gaining grants.

A second call for collaborative research proposals within the theme of biodiversity, with multi-donor support (Carnegie Corporation, Belspo and Carolina MacGillavry endowment) went out to an expanded range of African countries (Benin, Burkina Faso, Côte d'Ivoire, Ghana, Nigeria, South Africa, Tanzania and Uganda). A second workshop was held in Benin in November 2014 for the members of teams passing pre-screening. Nine teams were ultimately successful in gaining grant funding.

There is an emerging story<sup>1</sup> to be told about the collaborative research approach and IFS welcomed the opportunity of this AAS-hosted conference to share it with interested parties through professional in-person interaction and creatively produced and distributed outputs.

## Why did AAS host this conference?

AAS has a long-standing fruitful collaboration with IFS. The two organizations believe in collaboratively addressing the challenges that scientists in Africa face in doing research. AAS and IFS have collaborated on laudable initiatives such as Getting and Using Equipment for Scientific Research in Africa, Developing an Enabling Science Equipment Policy in Africa, workshops on scientific writing, and workshops on applying for research funding.

AAS also actively participated in the conference to further its interest in promoting excellence in science on the African continent and particularly in improving intra-African collaboration in scientific research. Whereas the scientific production of the AU member states, although small, grew 22% faster than that observed at the world level from 2005-2010, collaboration between AU members is minimal, occurring in only 4.1% of AU scientific papers from 2005-2007 and 4.3% of papers from 2008-2010<sup>2</sup>. AAS is working hard to boost intra-African collaboration in science while maintaining strong collaborations outside Africa. Current programmes at AAS – such as Climate Impact Research Capacity and Leadership Enhancement (CIRCLE)<sup>3</sup> and the Developing Excellence in Leadership, Training and

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<sup>1</sup> For more details, see the *2015 Update on the Collaborative Research Approach* on the IFS website at [Update on Collaborative Research Approach](#). This document includes information on the planning and preparation, pilots, teams and workshops, as well as some of the process timelines and templates. Other useful resources are *Breaking Fences May Make for Good Neighbours in Collaborative Research: Why the International Foundation for Science will introduce a Collaborative Research Approach*, available at [Breaking Fences May Make for Good Neighbours](#); and *Investigating Costs and Benefits of Collaborative Research: The results of surveys of IFS collaborative research aspirants and grantees regarding IFS efforts to promote the benefits and reduce the costs of research collaboration assessed after one year*, available at [Investigating Costs and Benefits of Collaborative Research](#).

<sup>2</sup> <http://aosti.org/index.php/report/finish/5-report/15-assessment-of-scientific-production-in-the-african-union-2005-2010>

<sup>3</sup> <http://aasciences.org/index.php/projects/circle>

Science (DELTAS) initiative through the Alliance for Accelerating Excellence in Science in Africa (AESA) – both focus strongly on strengthening intra-African collaboration whilst maintaining extra-African collaboration. AAS is looking at ways of ensuring more effective intra-African research collaboration and was thus happy to host this conference.

## Goal and objectives

The goal of the conference (schedule in Appendix 1) was to successfully showcase the Carnegie-supported and IFS-developed approach to enabling and supporting research collaboration and leveraging “buy-in” from those who have demand for such an approach. Specific strategic objectives included:

- Broader promotion of the pilot approach and IFS platform in support of research collaboration to stakeholders who wish to promote research collaboration across Africa and elsewhere
- Engagement with those who wish to fund or support IFS research collaboration using this approach, and
- Sharing and learning with those who have had similar experiences.

## Invited participants

Representatives of the 19 ongoing research teams, along with IFS and AAS staff, participated and presented in the conference. Representatives were also invited to attend the conference from the organizations below that have shown significant interest in the IFS collaborative research approach (the list of actual participants is in Appendix 2):

- African Academy of Sciences (AAS)
- African Development Bank (AfDB)
- African Network for Agriculture, Agroforestry and Natural Resources Education (ANAFE)
- African Union Commission (AUC) Human Resources, Science and Technology Department (HRSTD)
- Alliance for a Green Revolution in Africa (AGRA)
- Belgian Science Policy Office (BELSPO)
- Biosciences Eastern and Central Africa – International Livestock Research Institute (BecA-ILRI)
- Carnegie Corporation of New York
- CGIAR Research Program
- CGIAR Research Program – Climate Change, Agriculture and Food Security (CRP-CCAFS)
- Conseil Ouest et Centre Africain pour la Recherche et le Développement Agricoles (CORAF) [West and Central African Council for Agricultural Research and Development (WECARD)]
- Council for the Development of Social Science Research in Africa (CODESRIA)
- DFID
- Economic Community of West African States (ECOWAS) Commission for the Department of Agriculture, Environment and Water Resources
- Ford Foundation
- German Academic Exchange Service (DAAD)
- IDRC
- Inter University Council for East Africa (IUCEA)

- International Centre of Insect Physiology and Ecology (*icipe*)
- International Land Coalition
- Organization for Social Science Research in Eastern and Southern Africa (OSSREA)
- Pan-African University
- Partnership for African Social & Governance Research (PASGR)
- Regional Initiative in Science and Education (RISE)
- Regional Universities Forum for Capacity Building in Agriculture (RUFORUM)
- The Rockefeller Foundation
- Southeast Asian Regional Center for Graduate Study and Research in Agriculture (SEARCA)
- Southern African Development Community (SADC)
- Swedish International Development Cooperation Agency (Sida)
- Tanzania Commission for Universities
- University of Abomey Calavi (UAC), Benin
- USAID
- Western Indian Ocean Marine Sciences Association (WIOMSA)
- The World Bank

## **Welcome remarks**

### **Dr Nighisty Ghezae, IFS Director**

Distinguished guests, ladies and gentlemen, it is a pleasure to welcome you all to this Conference on Collaborative Research. Before I continue, let me thank Prof Berhanu Abegaz and all of the staff of AAS for collaborating with IFS and being our gracious hosts for these days.

The International Foundation for Science supports and empowers young scientists in the developing world. We do this because we believe that human capital in science is a sound investment in sustainable development, generates return in the form of talented young scientists, and increases developing country science capacity. We believe that investment in science capacity can support improved food and nutrition security, help mitigate climate change and underpin sustainable development, to help societies to thrive.

As one of many players devoted to enabling early-career scientists to contribute to the global research community that is reducing poverty and supporting sustainable development, IFS is a central player in this evolution. Our new strategy responds directly to the Sustainable Development Goals outlined by the United Nations. Globally we are facing an immense challenge to sustainable development. We cannot simply tread familiar paths in response to global challenges. We must look for new opportunities based on research and innovation.

Today it is widely accepted that “collaborations become necessary when researchers wish to take their research programs in new directions. As a result, innovations and advances that were not possible within one laboratory working in isolation are now emerging from collaboration and research teams that have harnessed techniques, approaches and perspectives from multiple scientific disciplines.” There is evidence in the form of publications and patents that diverse team efforts result in greater productivity, research, innovation and scientific impact.

Ladies and gentlemen, let us turn our eyes to Africa. The interlinked development challenges facing Africa increasingly require scientists to work with each other, as well as with other professions and specialists. The role of higher education in Africa’s sustainable

social, political and economic development is not contestable. With few resources, inadequate capacity and a history of neglect, the sector has been struggling over the years to respond to increasing demands. One of the main issues facing the sector is its research and innovation capacity and the ability to use these for the continent's transformation.

Even though Africa has started looking to science for answers, current African science is carried out in disciplinary silos with little knowledge flow between them. Neither is there much knowledge flow between scientific laboratories and non-academic sectors, i.e., industry and other user groups. In addition, little knowledge exchange is taking place among African scholars, and knowledge production through collaborative research among African countries is minimal. Among other recommendations from some studies, this one is pertinent to our current efforts:

... subjects or topics of common research interest should be identified and explored for possible collaborative research; researcher networks should be encouraged in Sub-Saharan Africa; regional conferences where scholars can network should be held more frequently; and funding for collaborative research should be prioritized.

The Carnegie-supported IFS Collaborative Research Project is playing a fundamental role to fill this gap by training 112 individuals linked with different higher education institutions across the region. Through the three pilots I will talk about later, we were able to identify and unearth talent in Africa (and now in Asia) and provide early-career researchers with the chance to work under expert guidance on identified topics that are particularly relevant in the region. In these two-and-a-half days, we would like to share with you our experience of the collaborative research approach. I hope that this conference will serve as a platform for exchange of experiences and mutual learning among all of us who have been involved in one way or another in collaborative research.

I hope that you will share your successes and failures with us for the common good, i.e., develop further our approach to collaborative research and take this initiative forward rather than reinventing the wheel. We need wide-ranging cooperation on all levels to achieve and address the interlinked challenges that our continent is facing.

I want to conclude with a resounding urge for research collaboration. I am of the view that greater collaboration between and among African institutions of higher education and advanced science is the way forward. We must work together in solidarity, and show that beyond our differences and geographical boundaries lies a common interest and a responsibility to address the problems that our people are facing. Once again on behalf of IFS, I welcome you all to this conference and I look forward to our discussions. Thank you for your interest and collaboration.

**Prof Berhanu Abegaz, AAS Director**

Welcome to this rare kind of conference. AAS is an Africa-born, merit-based academic institution, an academy of all knowledge – embracing the natural, applied, social and human sciences. It is a truly independent academy whose creation 30 years ago was based on profound thinking and articulation of incredibly well stated foundation documents. AAS is an academy that rejects various historical, colonial, linguistic and geographical divides, anglophone, lusophone and francophone divides, Sub-Saharan and North African divides. The academy had a glorious beginning, and also had great leaders such as Thomas Odhiambo and Mohamed Hassan and it also had difficult periods.

It was during the peak of its difficulties that I came to AAS and was able to work with an incredible group of Fellows in the Governing Council, to name a few, the late Joseph

Massaquoi, Dr Tom Kariuki, former Treasurers, Dr Arungu Olende, former Secretary General and more recently, Prof Quarraisha Abdool Karim, HE Ameenah Gurib Fakim, Dr Boitumelo Kgarebe, Prof Burton Mwamila from Tanzania, Prof Chaibi Thameur from Tunisia, Prof Abdel-aty from Egypt, Prof Titanji and Guiguemde, among others – and just regular Fellows – who served in various MACs and committees; Kevin Marsh, senior advisor at AAS and the phenomenally efficient super-staff that we were able to recruit over the last few years.

The recent achievements could not have been possible without our project partners including the International Foundation for Science, the Association of Commonwealth Universities, the International Organization of Chemical Sciences in Development and so on; and funders – who have not only provided us with financial support (key international organizations, Wellcome Trust, B&MGF and DFID) but also key thought partners from each of these three organizations.

I want to take a moment to mention three strategic organizational and institutional arrangements:

1. Strategic relations and programmatic activities: As a pan-African merit-based organization it was necessary to establish strategic links with the pan-African political, economic and financial institutions. We still have a long way to go but much has also been done. We have robust relations with the African Union and its technical arm – NEPAD. We were able to get the recognition of the summit of African Heads of States (January 2015) to establish and operationalize the Alliance for Accelerating Excellence in Science in Africa – an agenda setting and funding platform. AESA was established jointly by AAS and NEPAD – and it now leads the STI programmatic activities of the academy – you may have heard of the CIRCLE, DELTAS, Grand Challenges Africa, and the Good Financial Grant Practice programs of the academy that fall under AESA.
2. Strengthening the AAS Fellowship: At senior level and early-to-mid-career levels, AAS Fellowship has grown in quality and quantity – from 183 in 2011 to 330 at present; female members were 3 in 2011 to about 40 at present. We have also identified the first cohort of 17 Affiliates – young early-to-mid-career researchers. Our goal is to have 600 Fellows by 2018, with 15% women.
3. Think tank services: We are working under the auspices of NEPAD on the Africa Health Research Strategy 2013 – for the Africa Union.

Ladies and Gentlemen, let me now turn my attention to the objectives of this meeting, why we are meeting today as was eloquently articulated by the Director of the IFS who just spoke before me.

The African Academy of Sciences has a long-standing fruitful collaboration with the International Foundation for Science. The two organizations believe in collaboratively addressing the challenges that scientists in Africa face in doing research. AAS and IFS have collaborated on laudable initiatives such as Getting and Using Equipment for Scientific Research in Africa, Developing an Enabling Science Equipment Policy in Africa, Workshops on Scientific Writing, and Workshops on Applying for Research Funding.

AAS is an active participant in this conference to further its interest in promoting excellence in science on the African continent and particularly in improving intra-African collaboration in scientific research. What are the facts on the ground as regards collaboration of African scientists? It is pleasing to note that Africa's impressive performance during the last 15 years is not in the economic sphere only. Indeed now some 24 countries are regarded as middle



income countries by the World Bank definition of GDP/capita exceeding USD1,000. But what is equally exciting, and some of you may not be aware, is that there has been growth in scientific production as well. Two major reports that clearly demonstrate growth in scientific publications are the AU report that was published in 2013 (African Science, Technology and Innovation Outlook Bibliometric Series No. 1, 2013; *Assessment of Scientific Production in the African Union, 2005-2010*, produced by AOSTI) and more recently the World Bank report of 2014, entitled *A Decade of Development in Sub-Saharan African Science, Technology, Engineering & Mathematics Research*<sup>4</sup>.

The first report states that whereas the scientific production of the AU member states, although small, grew 22% faster than that observed at the world level from 2005-2010, collaboration between AU members is minimal, occurring in only 4.1% of AU scientific papers from 2005-2007 and 4.3% of papers from 2008-2010. The second report also refers to the fact that all three SSA regions more than doubled their yearly research output from 2003 to 2012. SSA's share of global research has increased from 0.44% to 0.72% during the decade examined. Citations to SSA articles comprise a small but growing share of global citations, increasing from 0.06% to 0.16% for each of the regions to 0.12% to 0.28%. All regions improved the relative citation impact of their research, with East Africa and Southern Africa raising their impact above the world average between 2003 and 2012. The percentages of each of the SSA region's total output that are highly cited have grown steadily over time.

But it also says that international collaboration is mostly focused on a north-south axis rather than on horizontal collaboration. SSA's research capacity appears fragmented across regions, with each of the regions collaborating little with one another. Inter-African collaboration (without any South African or international collaborator) comprises 2% of all of East Africa's research, 0.9% of West and Central Africa's, and 2.9% of Southern Africa's. A large share of SSA research is a result of international collaboration. In 2012, 79%, 70% and 45% of all research by Southern Africa, East Africa, and West and Central Africa, respectively, were produced through international collaborations. (In contrast, 68%, 45%, and 32% of Vietnam, South Africa and Malaysia's research output, respectively, was produced through international collaborations.) A large percentage of SSA researchers are non-local and transitory; that is, they spend less than two years at institutions in SSA. In particular, 39% and 48% of all East and Southern African researchers, respectively, fall into this category.

AAS is working hard to boost intra-African cooperation in science while maintaining strong collaborations outside Africa. Current programmes at AAS – such as Climate Impact Research Capacity and Leadership Enhancement (CIRCLE) and the Developing Excellence in Leadership, Training and Science (DELTAS) initiative through the Alliance for Accelerating Excellence in Science in Africa (AESAs) – both focus strongly on strengthening intra-Africa collaboration whilst maintaining extra-Africa collaboration. AAS is looking at ways of ensuring more effective intra-Africa research collaboration and is thus happy to host this conference.

By organizing this conference, AAS and IFS would like to send a strong message emphasizing the great importance of international collaboration. In doing so we wish to stress the need to close the huge gap that needs to be addressed to enhance collaborative research across the continent and to call upon African governments, and bilateral and multilateral donor agencies, to double their efforts in supporting collaborative research. There is a need for continuing this successful initiative on collaborative research, of bringing

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<sup>4</sup> [http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2014/09/26/000456286\\_20140926094154/Rendered/PDF/910160WP0P126900disclose09026020140.pdf](http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2014/09/26/000456286_20140926094154/Rendered/PDF/910160WP0P126900disclose09026020140.pdf)

together more funding and implementing partners, and of widening the reach and scope of the efforts across Africa's institutions.

We hope that this occasion will be used to emphasize the need to think big and to imagine and realize all the possibilities for collaborations of many kinds.

## **Background of the project**

IFS is a non-governmental organization dedicated to supporting and empowering young scientists in the developing world. It provides competitive scientific research grants to individual scientists and to those collaborating in small teams, helps to build capacity to apply for funds, conduct research and report science. IFS has provided 8,000 grants in 105 developing countries over four decades. Of these, 35% have gone to Sub-Saharan Africa, 31% to South and Southeast Asia and the Pacific, 28% to Latin America and the Caribbean, and 6% to the Middle East and North Africa.

IFS supports research on sustainable management of biological, water and energy resources in developing countries, by developing country scientists, within three clusters of research topics:

- Biological resources in terrestrial systems, biodiversity, forestry, natural products, renewable energy and climate change
- Water and aquatic resources, all aspects of research on freshwater, brackish and marine aquatic organisms and their environments
- Food security, dietary diversity and healthy livelihoods, research on food production, animal production, crop science including underutilized crops, food science, health and nutrition, and food security and equity

IFS support is divided into three approaches:

1. Research grant support to individuals
2. Collaborative research support to small groups of 3-5 researchers
3. Support for researchers to contribute to innovation (through linking with people who can help to put their research into use)

For our approach 2 on collaborative research support, we:

- Characterized challenges and requirements
- Built on our understanding of science research funding
- Visited and sought learning from experienced organizations
- Reviewed the academic literature and articulated our new ideas
- Invited eligible scientists, who expressed interest into an online environment where they are able to interact with other applicants
- Organized collaborative research training workshops
- Provided mentors to support the process
- Investigated, designed, built and tested ICT tools
- Selected Podio software and negotiated free user licences as a donation to IFS
- Provided relevant tools that enabled searching, interaction and collaboration, and facilitated their use

The first call for Expressions of Interest in 2012-13 asked for people to express their interest to collaborate to research Neglected and Underutilized Species. The Pilot 1 countries were Ghana, Nigeria, South Africa, Tanzania and Uganda and the undertaking was financed by

the Carnegie Corporation of New York. Eligible “aspirants” were invited into a specially designed social networking platform built on Podio software. In a “plenary workspace” people discovered each other’s profiles and against a call for collaborative research applications advertised on the platform, coalesced into 40 teams, each receiving access to a private team workspace built on the social networking platform where they could plan and write their team applications. At the submission deadline (we adjudged 14 weeks for the submission), 25 teams submitted proposals, 17 passed pre-screening and were sent out for review to multiple advisers. We convened a Collaborative Research Scientific Assessment Committee to recommend teams for funding, and following the Director’s decision, ten teams were funded.

The seventeen teams which passed pre-screening were invited to a three-day workshop in July 2013 in Ghana, associated with the Forum for Agricultural Research in Africa (FARA) Science Week and run in conjunction with the Stockholm School of Entrepreneurship (SSES) collaborative research specialists. All but two of the 64 scientists accepted the invitation and joined the workshop, entitled “When Scientists and Poets were Friends; A Workshop on Interdisciplinary and Creative Problem Solving Methods”. We provided a wide range of media to support learning.

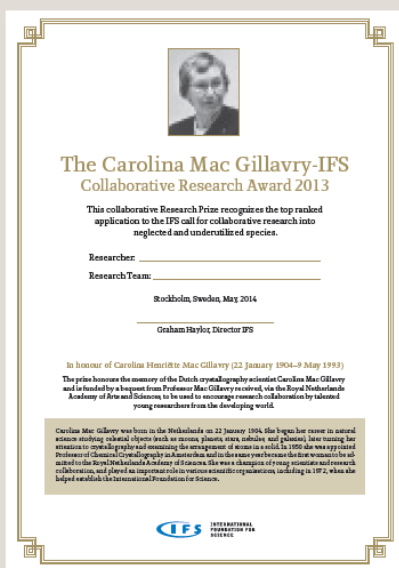
The second call for Expressions of Interest in 2013-14 asked for people to make proposals to collaborate on the theme of Biodiversity. The Pilot 2 countries were Benin, Burkina Faso, Côte d’Ivoire, Ghana, Nigeria, South Africa, Tanzania and Uganda, financed by Carnegie Corporation and Belspo. Eligible “aspirants” were again invited into the Podio platform. In a “plenary workspace” people discovered each other’s profiles and against a call for collaborative research applications advertised on the platform, coalesced into 45 teams, each receiving access to a private team workspace built on the social networking platform where they could plan and write their team applications. At the submission deadline (we adjudged 14 weeks for the submission), 26 teams submitted proposals, 13 passed pre-screening and were sent out for review to multiple advisers. We convened a Collaborative Research Scientific Assessment Committee to recommend teams for funding, and following the Director’s decision, nine teams were funded.

The teams comprised 35 researchers with 17 women and 18 men. There were six women coordinators and three men. Seven teams were mixed Anglophone-Francophone and two teams Anglophone only. After two pilots we can say that the process takes 18 months.

The thirteen teams which passed pre-screening were invited to a four-day workshop in December 2014 in Benin associated with the University of Abomey Calavi (UAC) Benin and run in conjunction with the Belgian Science Policy Office (Belspo). (See appendix 4). The workshop was a collaborative research capability-building event. Part of the workshop program was designed to overlap with the workshop entitled “Sharing Our Progress” held simultaneously, bringing together coordinators from nine of the ten research teams that received IFS Collaborative Research Grants in 2013 to investigate Neglected and Underutilized Species. This arrangement allowed for the 2014 cohort of applicants to learn from the experiences of the 2013 grantees regarding different aspects of planning, organizing and carrying out collaborative research.

Additional funding for collaborative research teams came from the Carolina MacGillavry endowment, as described on the next page.

# The Carolina MacGillavry Award



The prize honours the memory of the Dutch crystallography scientist Carolina MacGillavry and its purpose is to encourage research collaboration by talented young researchers from the developing world.

Carolina MacGillavry was born in the Netherlands in 1904. She began her career in natural science studying celestial objects such as moons, planets, stars, nebulae, and galaxies, later turning her attention to crystallography and examining the arrangement of atoms in a solid. In 1950 she was appointed Professor of Chemical Crystallography in Amsterdam and in the same year became the first woman to be admitted to the Royal Netherlands Academy of Sciences.

She was a champion of young scientists and research collaboration, and played an important role in various scientific organisations, including in 1972, when she helped establish the International Foundation for Science.

She was a champion of young scientists and research collaboration, and played an important role in various scientific organisations, including in 1972, when she helped establish the International Foundation for Science.

## Poster session

Each of the 19 research teams produced a poster of their research projects and progress to date. Workshop participants were invited to view the posters, talk with the team representatives and to make notes about any questions or comments they had, with regards to:

- The progress and/or results of the research
- Differences between collaborative and individual research
- The process and technologies for carrying out the research
- The funding, supporting and promoting of collaborative research
- Anything else that came to mind

The 19 teams, their research topics and team members (with representatives in italics):

African Researchers	Characterization of taro ( <i>Colocasia esculenta</i> (L.) Schott) biodiversity in Africa <i>Renan Ernest Traore</i> , Florent N'guessan, Pius Kavana, Ann Kanu, and Asomani Antwi Naomi
Amaranths	An assessment of the leafy amaranth value chain and utilization of grain amaranth in fish feed for improved livelihoods <i>Mutambuka Martin</i> , Amusan C and Anwa-Udondiah E
AMKID	Determination of selected heavy metals and pesticides concentration in surface water, sediment, soil, fin-fishes and shell-fishes of African wetlands: Niger, Volta and Wami with their effects on aquatic organisms' biodiversity <i>Afolayan Adedotun Onoyinka</i> , <i>Isabela Thomas Mkude</i> and Kingsley Kodom
Arthropod Diversity	Diversity and role of mosquito species in the ecology of <i>Mycobacterium ulcerans</i> in East and West Africa <i>Claire Mugasa</i> , Joy Anogwih, <i>Barnabas Zogo</i> , Moses Olotu
Avian Gen	A window to population genetic differentiation and phylogeography of neglected and underutilised intra-African migratory landbirds in Sub-Saharan Africa <i>Desire Dalton</i> , Samuel Temidayo Osinubi and Monica Mwale (no representative)
Avi West	Habitat impact and assessment of concurrent pathogen infections on avian immune response and sperm quality <i>Constance Agbemelo-Tsomafo</i> , <i>Léonce Kouakanou</i> , Jesca Nakayima and Tiawo Crossby Omotoriogun
Bambara nut	Enhancing Bambara groundnut production and marketing for improved food security in Africa <i>Ddamulira G</i> , <i>Alenoma G</i> , <i>George Karwan</i> , Uzoh I M, Umeugochukwu O P
Campnut	Unlocking the potential of Bambara groundnut ( <i>Vigna subterranea</i> ) for food security and improved livelihoods in Africa <i>Moses Kiryowa</i> , Adeola Ayano and Christopher Antwi
Diamond	Forage potential of five neglected and underutilized (NUS) species from West and East Africa <i>Robert Amayo</i> , Salamatu J F, Azizua D and Ansa T
InvAfrica	Ecosystem impacts of <i>Chromolaena odorata</i> (Asteraceae) invasion in Africa: The case of Banco National Park, Côte d'Ivoire, South Africa, South West Nigeria and Uganda <i>Palesa Natasha Mothapo</i> , Biplang Yadok Godwill, Oludare Agboola, <i>Betty Nalikka</i> and Marie-Solange Tiebre
Livingstones	Managing protected areas and community forests to ensure ecosystems services for sustainable development and poverty alleviation <i>Emeline Assede</i> , Mariki S Z, Azihou A F
Multinus	Economic potentials of selected NUS in the semi arid zones of East and West Africa <i>Catherine Masao</i> , John Igoli, Esther Nakamatte and Uterdzua Okpher
Nanomed	Application of nanotechnology in the evaluation of antimycobacterial activity of natural products using <i>in vivo</i> efficacy models <i>Patrick Kobina Arthur</i> , Joan J E Munissi, Lydia Mosi and Paul E Kazyoba
Panorama	Conservation and restoration of <i>Mondia whitei</i> (Caesalpiniaceae) in Sub-Saharan Africa <i>Romarc Vihotogbé</i> , Spies P and Nambejja C
Phytodiversity	Biodiversity conservation through bioprospecting for novel antiplasmodial compounds from Africa's rich flora <i>Paulo O Ochana</i> , Lawrence S Borquaye, Olorunfemi A Eseyin, Francis O Atanu and Dickson R Opio
SSACRT	Combating food insecurity through optimal cultivation and utilization of cocoyam in Sub-Saharan Africa <i>John Bosco Muhumuza</i> , Olatunde K A and Adebayo K
Soil Biodiversity	Integrated soil biodiversity and ecosystem management for sustainable agriculture <i>Edith Ilboudo-Tapsoba</i> , Oyedele Omowumi Adedayo, Ndossi Emanuelli Mathayo
Tete	Domestication of <i>tetrapleura tetraptera</i> ( <i>aidan tree</i> ) for livelihood improvement in tropical Africa <i>P Bosu</i> , C Elusiyan, E Owusu and <i>Esther Kemigisha</i>
Ximenia	Opportunities for value-adding to Ximenia Caffra fruit and fruit processing residues <i>Aliyu Ibrahim Dabai</i> , Mary-Magdalene Pedavoah, Grace Ojale Usman, Taiwo Aderinola and Neill Goosen (no representative)

## Grantees' discussion about the research projects

**On collaboration:** It is quite refreshing to see this networking across Africa. It is not a seniority-based research collaboration and the dialogue among the team members is on an equal basis and this is a good sign for having an easier collaboration. The age of the team members is impressive. Many African researchers are old but seeing these early-career scientists is encouraging.

**On differences between collaborative and individual research:** When you do collaborative research you tend to achieve more with less. Each person is focusing on particular aspects and putting it together. At the end of the day the results are greater than with a single project. Working together is more exciting as you learn other things from team members. There is the possibility to have more publications (in 2-3 years; working alone it is not possible to have 2-3 publications). There is a wider impact in terms of discipline and geography. A major challenge is that when communication is poor, decision making is slow and this affects the outcomes of the research.

**On crossing boundaries:** The teams are composed of Francophone and Anglophone members and this cross-linguistic collaboration has advantages and disadvantages. Is there a policy on balance in the nationalities? Most of what we saw was collaboration in terms of disciplines, but not much intra-collaboration. Natural science collaboration with social science is also missing in the projects. This is high quality research being done by the teams, however improvement is needed. Multi-disciplinarity has not been addressed clearly by the teams. They have to conceptualise together the multi-disciplinarity of their outcomes.

**On sharing:** What about sharing equipment across the continent? Sharing of research infrastructure should be emphasized. How do we embed research expertise and infrastructure in a collaboration? How can we help the group to move into a bigger network? How are funds shared among the collaborators?

**On mentorship and risk management:** From the beginning there should be strong mentorship embedded in the process. Look at risk management in the partnership. There should be a plan B as a fall-back mechanism. Are there opportunities for learning across the different teams? How often are these teams brought together?

**On relevance:** Are the selected research topics relevant to what is needed in Africa? Are they demand driven? How applicable are they to solve the problems in Africa? How is the science responding to sustainability and social, economic and environmental issues? We cannot avoid talking about the economy. If I want to support this, can you convince me of the economic benefit?

**On dissemination:** The teams should already be thinking about how to disseminate their research results through publication, and reaching communities and societies. How will the messages be presented? Scientists are not typically good communicators. You have to think about how to communicate with those who are not scientists, such as policy advisors.

**On success:** What are the indicators of a successful collaboration? Is it the papers that define progress? It would be good to have indicators of how the team is growing together.

**On sustainability:** Start thinking already now about what the teams are going to do after the project is completed. Try to upscale the initiative.

## **Stock-taking of other organizations and collaborative research**

Participants from other organizations spoke about their programs and involvement in collaborative research.

### **African Development Bank (AfDB)**

The African Development Bank is currently working with most African countries under its Agricultural Transformation Agenda on a program called ENABLE Youth (Empowering Novel AgriBusiness-Led Employment for Youth) in African Agriculture. The program will upscale tested development models of youth employment in agriculture and agribusiness models experimented and funded by IITA, AGRA and FARA UniBRAIN (among others) and in conjunction with IFAD, the Bill and Melinda Gates Foundation and others. The program is in its preparation stage. It is designed to reinforce the roles of disenfranchised young African adults through a comprehensive outreach effort by providing information, life-skills education (rather than job training), commercializing proven technologies and providing opportunities to 800,000 youth in 20 regional member countries. Program opportunities include 20,000 internships, 10,000 agribusiness start-ups and 30,000 new jobs in rural and urban areas, leading to incomes of USD 450 per month. In addition the Bank's OSAN Department (under its Agricultural Transformation Agenda), is closely associating with CGIAR and FARA on a collaborator for Technologies for African Agricultural Transformation (TAAT) which is in its initial stage.

### **The African Institute for Mathematical Sciences (AIMS)**

AIMS is a pan-African network of centers of excellence enabling Africa's talented students to become innovators driving the continent's scientific, educational and economic self-sufficiency. AIMS offers a one-year structured Master's Degree in Mathematical Sciences to students recruited across the African continent. A cooperative version of the master's program provides students with a combination of academic training at AIMS and "hands-on" work experience in a professional work environment, enabling them to develop valuable work skills and successfully transition from school to progressive careers.

The AIMS Research Chairs Program is a strategic research initiative geared at attracting talented research leaders in various mathematical science disciplines to AIMS Research Centres. The Chair positions are held for periods of at least three years with the possibility of being extended depending on outputs and available funding. The Chairs are provided funds to attract, develop and retain younger researchers, attend and host scientific events and organize research exchange visits.

AIMS periodically makes available small research grants for projects that can be carried out in a period of less than 24 months. These projects may include specific research within the mathematical sciences and its applications, industry-related activities including internships and exchange visits.

AIMS centres also offer other programs in partnership with local institutions. For example, AIMS South Africa offers a BSc (Honours) in Mathematics with a focus in Biomathematics, in conjunction with Stellenbosch University.

### **Alliance of a Green Revolution in Africa (AGRA)**

AGRA is an African-led alliance focused on putting farmers at the center of Africa's growing economy. AGRA advances uniquely African solutions to sustainably raise farmers'

productivity and connect them to a growing market. Together with its partners, including researchers, donors, African governments, the private sector and civil society, AGRA seeks to create an environment where Africa feeds itself. It works across 18 countries in Sub-Saharan Africa and maintains a head office in Nairobi and country offices in Ghana, Mali, Mozambique and Tanzania. AGRA programs include Africa seed systems, soil health, market access, policy and advocacy, farmer organization and support centre, innovative financing, gender and agriculture. AGRA's special initiatives include Coalition for Africa Rice Development, Strengthening Agricultural Input and Output, Markets in Africa, Scaling Seeds and Other Technologies, and Africa Enterprise Challenge Program.

### **BecA-ILRI Hub**

The Biosciences eastern and central Africa – International Livestock Research Institute (BecA-ILRI) Hub is a shared research and capacity building biosciences facility located at and managed by ILRI. The BecA-ILRI Hub consists of a state-of-the-art suite of shared biosciences platforms established to support the work of African and international agricultural scientists through research and capacity building, and by providing research related services. The BecA-ILRI Hub provides opportunities to increase the capacity of individuals and institutions in Africa to conduct biosciences related research, and develop and deliver new technologies in the field of food and nutritional safety.

The Africa Bioscience Challenge Fund (ABCF) program is an essential driver of the Hub. It is an innovative approach to building Africa's biosciences capacity and leadership while at the same time tackling priority agricultural constraints through:

- research fellowships that enable African scientists to spend up to 12 months addressing key agricultural constraints through research using high-end research facilities
- hands-on training workshops to strengthen and refine relevant research skills
- national agricultural research system (NARS) institutional capacity building through support and mentoring of African scientists and improvement of laboratory facilities
- brokering and catalyzing connectivity between scientists within Africa and beyond

The ABCF program is implemented through partnerships and linkages with national programs, sub-regional organizations, and the private sector. We can host 60 fellows from different countries. We can think of facilitating collaboration for the future. We can develop a collaborative program at the end of their research period so that they can continue to work together from different countries. We do not have funding for them. Through a collaborative program we can anchor their bigger project, thus creating communities of practice. This will create sustainability of their program and create multiplier effects.

### **Council for the Development of Social Science Research in Africa (CODESRIA)**

CODESRIA is an independent pan-African research organization with a primary focus on the social sciences, broadly defined. It is recognised not only as the pioneer African social research organization but also as the apex non-governmental centre of social knowledge production on the continent. The Council mobilises support for research in the conviction that the primacy of knowledge, and the freedom to pursue and transmit it, are indispensable to progress and advancement of any society.

The program of Small Grants encourages the continued development of Social Science Research in Africa and tries to meet the basic needs of African researchers to enable them



to perform their fieldwork, but also provides winners with bibliographies, textbooks and journals. The Council also provides support in research methods.

The CODESRIA Advanced Research Fellowship Program is designed to contribute to the reinforcement and promotion of a culture of concentrated and extended reflection among African scholars. It is particularly targeted at a younger generation of post-doctoral African scholars interested in carrying out advanced research on any aspect of the African social reality, historical or contemporary. The Prize for Doctoral Theses program aims to encourage research at postgraduate level in Africa. It offers three annual prizes for the best theses produced on the continent.

South-South Exchange Programme for Research on the History of Development of CODESRIA encourages researchers located in the South to establish links with their colleagues in other parts of the South. This growing South-South network is concerned with research on the history of development. Prime objectives of the program are supporting dialogues between researchers from the South with their various visions of development and history, encouraging comparative research, and strengthening southern-based research capacity.

Collaborative initiatives are undertaken with many regional organizations with the aim to promote innovative and cross-disciplinary work, cross-science collaborations in the natural and human sciences, and engagement with donors and decision-makers in the science community worldwide. We have had collaboration with IFS for many years but the collaboration decreased in the last few years. We would like to renew and boost our collaboration again and try to work with IFS to mainstream social sciences in all its initiatives.

### **Climate Research for Development in Africa (CR4D)**

CR4D in Africa initiative was launched to strengthen links between climate science research and climate information needs in support to development planning in Africa. CR4D is an African-led initiative supported by partnership among the African Climate Policy Centre (ACPC) of the UN Economic Commission for Africa (UNECA), African Ministerial Conference on Meteorology (AMCOMET), World Meteorological Organization (WMO) and Global Framework for Climate Services (GFCS). The primary goal of the program is to create multi-institutional and multi-stakeholder collaborative platforms that mobilize expertise and resources to facilitate use-inspired climate science research that informs climate change policy and sustainable development planning in Africa. CR4D will create regional Climate Research Partnerships that involve diverse expertise from natural, biophysical and social sciences to design research that translates into appropriate and actionable information for policy and sustainable development planning. In order to advance new frontiers of African climate research, the program focuses on four priority areas:

- Creation of co-designed multidisciplinary research to improve forecast skills and reliability
- Filling gaps in multi-sectoral and multi-disciplinary data sets for sector-specific vulnerability and impact assessments
- Enhancing Africa's scientific and institutional capacities and networks to undertake cutting edge user-driven climate research
- Fostering effective collaboration and interaction among climate science, services, policy and practice communities in order to improve mainstreaming of climate services in decision making.

## **International Centre of Insect Physiology and Ecology (*icipe*)**

*icipe* seeks to accomplish its goals through:

- The 4 Healths paradigm, a holistic and integrated approach that encompasses human, animal, plant and environmental health
- A multiple-discipline approach which brings together entomologists and acarologists, behavioural biologists, molecular biologists and biochemists, population and ecosystem ecologists, biomathematics and bioinformatics specialists, entomopathologists, biosystematics experts, and social scientists and trainers
- Collaborations: *icipe's* research is undertaken through close and effective partnerships with national, regional and international organisations. Through these partnerships and collaborations, *icipe's* ultimate goal is to strengthen the Centre's own capacity and that of its partners towards improving the livelihoods of millions of people in Africa towards enabling smallholder farmers, on whom most agricultural activity in Africa depends, to access the appropriate technologies and strategies to address existing and emerging constraints. It is the home base for researchers and scientists from Europe, Africa and Latin America; it creates a globalised "research family".

We do not give degrees, but we partner with 30-35 African universities that award degrees. Eighty percent of post-graduate students are working in higher education. We want to bring those alumni into functioning groups of experts to deal with institutional capacity-building and tap into that fantastic resource. We get a lot of requests for institutional capacity-building. We do not have the capacity and we want to tap into our network. I would like to share ideas about post-graduate programs and institutional capacity-building.

## **Next Einstein Forum (NEF)**

NEF is a platform that brings together leading thinkers in science, policy, industry and civil society in Africa to leverage science to solve global challenges. NEF is youth driven: at least 50 percent of participants are aged 42 or younger. NEF will also showcase the contributions of Africa's brilliant youth to Africa's scientific emergence through its class of NEF Fellows who are Africa's top scientists and technologists; all are under the age of 42. NEF highlights innovation and scientific advancement that has often been overlooked by the media and global scientific community. It builds an African scientific identity. By bringing together key stakeholders, NEF hopes to drive the discussion from policy to implementation by leveraging buy-in and best practice results from Africa and the world. NEF has two programs that work together hand-in-hand:

- NEF Global Gatherings: A biennial convening which brings together an elite group of scientists, policymakers, industry leaders, civil-society representatives and entrepreneurs to share ideas and go beyond discussion to action. The first NEF Global Gathering was in Senegal on 8-10 March 2016.
- NEF Platform: An online hub for the best information on science, innovation and policy. NEF Platform will share information with scientific leaders and young innovators about the transformative potential of science, the advances being made in Africa and opportunities to get involved.

## **Regional Initiative in Science and Education (RISE)**

RISE is made up of five networks involving 17 institutions in ten countries in Sub-Saharan Africa. It is nurturing a new generation of scientists in Sub-Saharan Africa through the RISE

networks. Students can access resources in their home continent that enable them to develop the skills needed to tackle Africa's most pressing challenges. RISE fosters communication among different African countries, with scientists sharing experiences with each other. Science is not a "one-man game". You have to work together. You have to share ideas. The way you make great breakthroughs is teamwork; it is not a solo effort.

### **Western Indian Ocean Marine Science Association (WIOMSA)**

WIOMSA is dedicated to promoting the educational, scientific and technological development of all aspects of marine sciences throughout the Western Indian Ocean region [consisting of Somalia, Kenya, Tanzania, Mozambique, South Africa, Comoros, Madagascar, Seychelles, Mauritius, Réunion (France)], with a view toward sustaining the use and conservation of its marine resources. WIOMSA has a particular interest in linking the knowledge that emerges from research to the management and governance issues that affect marine and coastal ecosystems in the region. WIOMSA coordinates research grant programs, develops regional research agendas, organizes capacity and professional development initiatives, and links science to management, environmental advocacy, networking and dissemination of technical information. The Association works effectively at local to global levels. We are moving to a larger multidisciplinary program involving all countries in Africa. We are looking for collaboration for multidisciplinary research, including mathematical modelling, music and poetry. We want to bring our marine science to the land and collaborate.

### **Presentations by research team members**

The research team representatives self-selected into five groups to discuss and present on their experiences with forming groups, conceptualizing research topics, meeting face to face, carrying out the research, and taking what they learned into their workplaces, careers and countries. Comments from other conference participants follow the groups' main presentation points.

#### **Forming groups**

Barnabas, Edith, Emeline, John Bosco and Romaric

The first strategy in forming a group is starting from the research idea, or "team model 2", which is to propose a research idea and get others to be interested. Four-fifths of the groups used this model with only one out of five being successful. The advantages were that it seemed to be easy, was suitable at eco-region level, for groups of researchers with past collaboration, or who had long projected an idea. The weaknesses were that material was limited in terms of geographical distribution, with a limited geographical coverage of the project and team, and there was limited knowledge of the materials by others and difficulties to capture the available research in a short time. As a consequence, this slowed down the proposal writing.

The second strategy is starting from team building or "team model 3", according to common material to work on, or mutual interest, where the diversity of research questions defines competence complementarity, and project structure is defined based on the situation of the material in each country and relationship between competencies involved. Four-fifths of the groups experienced 100% success with this strategy. The advantages are better understanding of research questions and available data, and rapidly getting on the route of proposal writing. A weakness is difficulty to choose among a variety of interesting ideas. Consequences are that each member is indispensable and feels more useful and the group is quickly validated.

The first difficulty in forming groups was fulfilling the condition of at least one member from East Africa in the group, as there were few registered on Podio. Also, during group forming, some members were registered in two or more groups. So it was difficult to have a stable group. It was also difficult to convince and finally choose the topic of the team.

Some solutions include:

- Once enrolled in a team, it should not be possible to change.
- Each member should be registered on Podio with a research topic and objectives. So the groups should be formed according to the similarity between research topics.
- Researchers should be tasked to give a standardized personal profile during signing up so that other researchers can easily identify matching collaborators.
- A team could be constituted only with West Africans, East Africans or both.
- It would be interesting to form the team before submitting to IFS.

Aspects of the experience that were conducive to successful collaboration were:

- The team must have a coordinator. This facilitates the exchanges and practical decisions inside the team. It helped to consolidate the group during forming.
- To support gender equality, preference will be given to mixed gender teams. This helped women to be easily enrolled in a team.
- Filling out the Expression of Interest form helped to identify people quickly with the same research areas and interests.
- The private workspace for each group was important to finalize the group forming with private discussions among group members.

These aspects still need to be refined:

- Teams may have 3, 4 or 5 collaborators. Most of the teams forming from 5 or 4 collaborators were not successful. There are so many ideas, discussions and difficulties to decide on practical issues. Finally the group was consolidated and started really working after reducing to three collaborators.
- Each team must have at least one collaborator from West Africa and East Africa or Southern Africa. Research can be focalized only in West Africa or East Africa. The most important would be to have a diversity of competencies inside the group.
- Podio workspace requires a good internet connection to be used. In Africa, it is difficult to find this connection. So, the communication among group members using Podio was difficult and negatively impacted on the group forming.

Comments from the participants included:

- Groups are formed in different ways.
- It is a great opportunity to collaborate with West Africa and it is positive.
- When we look to collaborate, the interest in the research area is more important than the qualification of a person.
- It is difficult to get involved in the areas that we are not aware of.
- It is important to go deep in one discipline before collaborating with other disciplines that will allow new analysis.
- Each of you should document what you have done in the process and analyse it so that somebody who wants to go through this process can easily learn from you.

- This is a great initiative and enables young researchers to learn how to do collaborative research (individuals are making decisions about what they want to do).
- The Avian Gen group with the birds migrating between West Africa and East Africa and studying them from West, East and Southern Africa is a fantastic experience.

### **Conceptualizing research topics**

Isabela, Martin, Paulo and Renan

Group members agreed on a single broad idea to come up with a research topic. Everyone had different ideas, discussed them and chose one for working with or re-formulating. One group member had shared an idea on a research topic and then invited other members to chip in and continue with that.

Using the Podio platform with member profiles helped with conceptualizing the topic, and using the Podio chat app helped with discussions and agreeing on the research topic.

Challenges included:

- Coming up with a consensus about the research topic from many people was difficult.
- Drop-out of some members from the groups during the conceptualizing process.
- Time difference in some countries delayed or made meeting online difficult.
- Internet connection failure sometimes was difficult in arranging the discussion meetings.

For improvement, it is suggested that there be a mentoring process from IFS staff that should continue even after proposal submission.

Comments from the participants included:

- Podio was used for people to write their profile, chat with other members and create a research application. It was indispensable at that time even though we were having problems of connectivity.
- Even though there was mentoring, that was not enough. More is needed.
- Quarterly meetings with the teams should be enforced by IFS.
- Money went to the institution and grantees had and still have problems to access the funds. Even if this happens to one team member the effect will be on the whole project. It is preparing the young researchers for the big picture.
- This is an excellent and rich learning process for young researchers.
- It will prepare them for bigger projects.
- A mentor needs to check the team, a person neutral to the members.
- The possibility of attaching the teams to research advisors was good. This should be followed by a mentor on multidisciplinary research.

### **Meeting face to face**

Catherine, Patrick and Robert

During the first encounter, excitement characterized the day. We connected easily and valued the qualities of each team member. We reconfigured our perceptions of each other and improved connectivity and communication among members.

It was a challenge when one of the visit hosts abandoned their guests, and a disappointment. There were too high expectations of the host, expecting accommodation and meals to be covered by them.

What can be improved:

- Develop guidelines for face-to-face meetings (at IFS level)
- IFS should request the teams to customize the guidelines to see the team's needs before the final award, to suit the team dynamics (and avoid what happened with high expectations or colleagues abandoning others)
- IFS must hold general inception, review and closing meetings to be sure of the progress and performance of various teams

### **Carrying out the research**

Betty, George and Leonce

Success on carrying out the research included:

- Opportunity to explore new fields (multi-disciplinary)
- Enabled effective teamwork (decisions were made by the team and we had pre-planning before starting the research)
- Agreed objectives and outputs were shared and documented
- Provided clear direction and responsive leadership (team coordinator)
- Had an opportunity to train other people (capacity building with enumerators and field officers)

Drawbacks were:

- The research required attention and time. Delay of one member of the group to submit or communicate the results affected the whole team.
- Fluctuation of local currency against US dollar
- Delays in releasing funds by institutions which affects the execution of the research

Suggestions for improvements:

- There should be a platform (social media such as Twitter or Facebook) for sharing data
- Team should periodically discuss about the progress of the research
- We should consider unexpected events and then reallocate funds

Comments from participants included:

- The capacity building of each other and cross fertilisation of the skills is a big part. Did you discuss the authorship, writing and publishing?
- We need mentorship of people who really know the interdisciplinary way of working.
- There is a need for IFS to demand progress at certain intervals and not wait until the end of the project period.
- Some institutions have not released the funds for some team members. IFS needs to contact institutions to fulfill their obligations.
- Visa problems sometimes come from political problems. IFS and AAS need to work at a continental level to influence proper policies on these issues, i.e., implementing some of the suggestions on Agenda 2063.

- Some institutions facilitate collaborations and others do not.

## **Taking what we learned into our workplaces, careers and countries**

Esther and Moses

To the workplace:

- Awareness of valuable, less known resources such as aidan tree and bambara nuts; institutions commit to research in this field
- Inspiration of how to apply for and win research funds, and sharing proposal writing skills, data and materials
- Collaboration is not a common approach, and team work is not developed; most researchers are used to the old system of one's own project

To the career:

- Managing a project as a national representative: planning logistics and field activities, team coordination, recruitment of field staff (i.e. multi-tasking)
- Travelling between countries, networking, job opportunities, a view of Africa's challenges
- Publications
- Further research on gaps identified, linking NUS with global issues

To the country:

- Dissemination at local level, with implementing institutions and with policy makers
- Strategies of integrating NUS research into the mainstream national agricultural research system requires advocacy and policy briefs

Lessons learned:

- Social media can be effective to conceptualize ideas, and for proposal development and research implementation
- Collaborative research gives more output with minimal time and resources
- Communication and teamwork are key to collaborative research

What can be improved:

- In the process of team formation into thematic areas, the members should meet before the evaluation
- Strategies for project continuity and sustainability
- Awarding certificate of performance
- Widen the scope to include non-research organizations as collaborators, for ease of dissemination and up-take

Comments from participants included:

- At AAS, we are close to the political systems on the continent. We are aware and we will follow closely to see what policy changes can be influenced.
- How do you manage the authorship process?

- This will help you further in your career by already establishing networks and contacting people who know and trust you.
- Start thinking about how we can work together. We have alumni. There is a big resource out there.
- How do you pass your skills and advice to your institutions to build sustainability?
- We cannot run away from indigenous knowledge and “citizen science”.
- How can this project be scaled up?

## **Presentation on the IFS-SEARCA collaborative research grants pilot in Southeast Asia**

**Dr Bessie M Burgos, Program Head, Research and Development Department, SEARCA**

The Southeast Asian Regional Center for Graduate Study and Research in Agriculture (SEARCA) is the oldest among 21 regional centers of excellence of the Southeast Asian Ministers of Education Organization (SEAMEO), a treaty organization that promotes regional cooperation in education, science and culture. Its mandate is to build capacities for agricultural and rural development, with a current focus on Inclusive and Sustainable Agricultural and Rural Development (ISARD).

The eligible countries for the collaborative research grants are Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Thailand, Timor-Leste and Vietnam. The project duration will be 1 August 2015 to 31 December 2019. The role of SEARCA in the Collaborative Research Grants Pilot will be to contribute funds to the Collaborative Team Grants; lead in organizing the Los Baños Workshop-Training with the teams passing pre-screening as participants; and fund local costs and raise additional funds to support travel costs of participants of the Los Baños Workshop-Training.

The research theme of the IFS-SEARCA Collaborative Research Grants for 2016 will be Climate Change Adaption and Mitigation. The rationale is that Southeast Asia is highly vulnerable to climate change. Its large population is concentrated along coastlines, and livelihoods rely heavily on agriculture, natural resources and forestry. Southeast Asia is annually affected by climate extremes (floods, droughts and tropical cyclones) that threaten the livelihoods in rural areas with limited adaptive capacity (IFAD, 2009). The largest economic impact of climate change is upon agriculture because of the size and sensitivity of this sector (Mendelsohn, 2008).

There is a need for research collaboration because climate change is an overriding development concern in Southeast Asia. Given the complexity of climate change, there is a need to bring in various disciplines and different sets of skills to find practical solutions to common problems. The synergy created through collaborative research is expected to produce added value in terms of new knowledge, technologies, capacities, processes and inputs to policies at all levels.

## **Immediate actions and future involvement**

Toward the conclusion of the conference, each person was asked to talk about immediate actions they would take to follow up the conference and also how they would like to be involved in collaborative research in the future.



#### Arlen

- Explore overlapping interests of IFS research teams and RISE graduates; make introductions (for information sharing and possible future collaboration)
- Look at IFS website for inspiration about other ways RISE and IFS might collaborate
- Invite meeting participants to join RISE Facebook group
- Link in with *icipe*
- Bring IFS into ongoing discussions with AAS and other partners about the future of RISE (as a network program) and of RISE graduates (as resources for and potential beneficiaries of IFS programs)
- Incorporate input from side conversations into plans for the next phase of RISE

#### Barnabas

- Make a report on what I learn for my team mates and other persons who can build a group with me on my research topic
- Contribute to more discussion online with my team mates so that we can update our timeline
- Visit the websites that I got during this conference
- Include IFS approach in my future research projects
- Broaden my collaboration with social researchers
- Involve climate aspects in my future projects
- Pursue projects and prepare myself for the next call
- Engage myself to improve my skills and English

#### Berhanu

- Attempt to introduce the concept of the IFS collaborative research methodology and experience to the CIRCLE visiting fellows
- Understand the various areas of collaboration by going over the abstracts
- Engage with Nighisty on how to work more closely
- See what can be done to improve mobility of African researchers across borders
- Engage AAS to focus on collaborative research and see how an IFS-AAS formulated approach can be developed
- Engage AU in facilitating mobility of African researchers across borders
- Approach funders to support such activities

#### Betty

- Ensure that the project gets finished within the agreed timeline
- Discuss the issues received from the conference with other team members so as to take care of them, like how the findings will be disseminated
- Think of ways as a team to package our research and the findings
- Contact with different people
- Identify mentors both individually and as a team
- Find ways of disseminating the research findings to local communities and other stakeholders in ways that are usable to them
- Continue with the collaborations even after the IFS grant with the different people I have met
- Expand the project from its current stage to levels such as finding solutions to the problem

#### Bill

- Send PowerPoint files to Andrea
- Send invitation to team representatives to Dropbox for poster
- Write up proceedings
- Draft briefs about collaborative research and technical/conceptual matters

- Produce film and clip
- Work with IFS and AAS to widely disseminate the conference outputs
- Continue to be engaged with colleagues from this meeting and with organizations who convene gatherings in need of a facilitator

#### Catherine

- Request for soft copies of the posters presented by all participants
- Communicate with team MULTINUS regarding the main bullets of the conference
- Encourage my team to finalize all our unfinished responsibilities and the need for improved communication
- Request IFS to contact [team member] as he has remained too silent thus to know what has happened with him, especially that he had issues with his institution providing for his project funds on time
- Communicate with professor to initiate a Tanzania alumni association
- Attend the work as kindly offered by one of the conference participants
- I wish IFS could give another call for new collaborative research; this time only for experienced teams currently involved and which have already completed their projects
- Try to communicate with IFS alumni in Tanzania so we can see how we could collaborate further on bigger projects
- Fetch for calls that require collaborative research
- Participate in collaborative research suggested by others

#### Doris

- Share what I have learned with my institution and research group and IFS-AAK
- Follow up on Podio platform for colleagues with similar research interests in IFS-AAK for collaboration
- Visit other posters in the display room
- Find out more information on organizations who have attended this conference
- Develop concept on a water resource management topic and seek interdisciplinary research collaborators
- Establish links with IFS grantees in EAC to form regional alumni association with the possibility of collaborative research
- Wish to do peer review of some papers in the area of interest, e.g., for Team AMKID
- Share the conference proceedings with my networks

#### Edith

- Report of the conference action to my team and in my laboratory
- Explain the IFS opportunity for collaborative research
- Strengthen communication around me on collaborative research
- Create a group of African entomologists on Podio
- Conduct other collaborative research with other researchers in Africa

#### Emeline

- Reorganize my planning and the planning of my team to achieve the aim of our project
- Have online team meeting to explain to my mates what we did during this conference
- Start collaboration with Chemdev.Africa
- Register with Benin IFS alumni association to take part in their activities
- Start writing the first manuscript of my project
- Explain to the students of my university how IFS works because it is a new university and the students do not know IFS
- Develop the record of the team project according to the results we have for now
- Do post-doctoral study in South Africa, a project to understand and compare vegetation of Sudanian zone and Zambesian zone

#### Esther

- Engage my institution into a discussion on how my IFS project can be carried out and expanded on
- Advise team leader to start a system of progress reports
- Ask team on strategies of improving communication
- Request implementing stakeholders of the possibility of helping to disseminate research results
- Involve other funding agencies about the possibility of scaling up this project
- Involve sectors on global issues such as climate change in this project

#### Francisco Matsinhe

- Brief my colleagues at CODESRIA about the outcomes of this conference.
- Think seriously about the best ways of helping disseminate the outcomes of this conference with a view to secure the support of policy makers at regional and continental levels.
- Consolidate the ideas from the discussions on possible cooperation and synergies creation.
- Keep in touch with all the teams so that they keep me posted on the stage of their projects.
- Keep the discussion with IFS on how we can work together to ensure that Social Sciences are part and parcel of future collaborative research initiatives.
- Use my networks to inform young scholars from African countries about IFS collaborative research initiatives.
- Continue the discussion with the IFS about future collaborative research possibilities, with special reference to the management of collaborative research and funding.

#### George

- Share experiences from the conference with my fellow team members
- Send some of the links which can benefit our project
- Start preparing a manuscript for publication of our project
- Share the manuscript to potential and experienced experts identified from this conference
- Participate in workshops and meetings to disseminate our work
- Expand collaboration to other countries
- Look for funds and come up with large proposals in collaboration with others to address the identified constraints
- Scale up the potential results to our beneficiaries

#### Isabela

- Collect contacts from participants for future connections
- Bring back and inform my collaborative group members about the conference
- Start to think of and formulate other research topics for collaborative research
- Bring back skills on collaborative research to my work place
- Connect with participants for future possible collaborative research
- Formulate new ideas on collaborative research, this time with more multi-disciplinary groups, inviting social scientists
- Continue with ongoing research with other group members

#### Jacqueline

- Follow up with AAS on collaboration
- Follow up with IFS on strengthening the past collaborations and initiatives with new initiative approaches that appeal to the younger generation

- Follow up with Kenya Water Institute for collaboration or access to water expertise in engineering for community initiatives
- Link with ongoing climate change initiatives
- Focus on dissemination by implementing the communication strategy of WIOMSA
- Report to WIOMSA secretariat on the discussions held and possibilities for future collaborations
- Carnegie Corporation: explore areas of common interest
- RISE network: transition process and using the available networks and platforms to enhance the east-west linkages

#### John Bosco

- Give feedback to my SSACRT team members about the conference as well as to my work mates
- Make a plan for dissemination of our findings to our stakeholders (arrange a field visit)
- Compile a technical progress report of our project
- Follow up on opportunities available in organizations represented, especially in capacity building, and develop concept notes for PhD training
- Source more grants to carry out collaborative research, especially on cocoyam
- Long term engagement with researchers in other institutions and countries represented
- Publication of our research findings
- Using the skills gained for long-term career development

#### Leonce

- Draw a mind map of what we have learned from this conference
- Align objectives to be followed
- Set up a compass
- Send a report to my colleagues and team mates
- Contact the Benin IFS alumni association
- More involvement in collaborative projects
- Transfer of competence and knowledge acquired

#### Martin

- Finalize lab work
- Motivate team to finish activities
- Implement some of the team management strategies I have learned from my colleagues to enhance my own team's success
- Communicate with team, DAAD, and institute
- Subscribe to *icipe* and RISE networks
- Explore opportunities for collaboration with some of the proven scientists I have met through IFS
- Further training on collaborative research in order to remain relevant
- Include banana research in collaborative research and climate change research

#### Moses

- Communicate to project partners about proceedings of the conference
- Continue to finalize project activities
- Resource mobilization for addressing emerging research gaps and dissemination and up-scaling of project products and activities
- Proposal writing with team members for alternative funding to continue with project activities
- Face to face meeting with project partners
- Look for project partners to conceptualize and implement collaborative research

- Resource mobilization to support and implement collaborative research
- Lobby my organization to fund research on Bambara nut on core basis (have encoded small budget in 2016-17 annual workplan)
- Bring together Ugandan IFS alumni as a think tank for collaborative research

#### Nighisty

- Finalize the notes of the meeting
- Follow up with the grantees' requests on some of the challenges they are facing and request IFS to act on that (non-performing team members, problem with some institutions releasing funds, status report of all the teams)
- Continue discussions with the organizations that attended the meeting and showed interest to work with IFS on collaborative research
- Look for further funding to support the pilots
- AAS-IFS work on policy aspects
- Approach more funders

#### Ochanga

- Contact different people I met in this conference to discuss how we can collaborate in research, writing and networking
- Continue with IFS project and incorporate some of the comments from the viewers into our group project
- Share with the staff members and students on the benefits of collaborative research
- Discuss with team members about the conference and its benefit to our projects
- Involve my team members, staff and students on collaborative research perspectives and knowledge I gained here
- Network with different stakeholders I met in this conference
- Intensive engagement in collaboration in research writings

#### Patrick

- Expand research team into a consortium
- Mentor other young scientists to take up collaborative research (PhD fellowships)
- Expand my project beyond the scope of the IFS grant (senior fellowships)
- Apply for other grants with the team
- Develop institutional links with the team
- Replicate the efforts of IFS at the national level

#### Renan

- Share experiences of the conference with all other members of my team
- Improve communication between members of the team
- Work to respect the planning of activities already adopted at the inception meeting
- Apply recommendations of the conference
- Try to contact other people of my institution who already benefit from funds of IFS to share experiences
- Involve my institution more in my research
- Contact other researchers to develop collaborative research
- Attend other meetings to share my research results and to learn more English
- Publish

#### Rob

- Email all participants about new *icipe* website to see what we do and for opportunities to collaborate; PhD scholarship announcement; get linked in with *icipe* for useful information regarding grants, scholarships, training opportunities (including IFS)

- Engage with IFS to build on our MOU; *icipe* involvement in collaborative projects; concept note on soft skills training; learn more about managing collaborative research projects; get more information on online platforms; discuss alumni groups
- Engage with AAS to discuss funding and other ideas for *icipe* alumni group for institutional capacity-building in Africa and mentorships
- Trip report to *icipe* to inform on IFS collaborative research program and potential collaborations
- Follow up on immediate actions

#### Robert

- Update team members on what transpired
- Call for Skype meeting through team leader to discuss the outcome of the conference and way forward for the team
- Make a follow up on opportunities for collaboration and fellowships that came up from the conference
- Update information in Podio page and get back to Podio
- Write a back to office report for the institute and the team
- Respond to comments during the poster session
- Get back to work (institute mandate)
- Get into a consortium for broader collaboration at institute level

#### Romario

- Define a priority during our collaboration and speed up our research
- Report to various organizations I am involved with on this conference
- Contact participants from this conference
- Develop all and any possible strategies for my social interactions
- Collaborate with others
- Inform my students to develop the will for collaboration
- Create online discussion groups for lectures and exercises

## Communications activities

The table on the next page indicates the communications activities that were planned for the conference. In the event, there was no media coverage and a limited amount of posting on social media. Both IFS and AAS are new to using social media. Several people posted about the conference on Twitter and Facebook.

A local professional film production company was contracted to produce a documentary on the conference and the collaborative research project. The documentary will contain scripted narration and footage of the conference presentations, research project posters and discussions, along with interviews with conference participants and organizers. The content of the documentary will focus on:

- Background of the collaborative research pilots and their digital technologies
- Researchers' projects and their poster presentations, especially the results of the collaborative research
- Benefits/costs of this mode of research in comparison to individual research
- Value of investing in collaborative research
- Roles of institutions such as IFS, AAS and funding agencies such as the Carnegie Corporation and other interested parties

The documentary will have wide distribution to IFS, AAS and Carnegie Corporation stakeholders, and others in positions to make or influence funding decisions on collaborative research at institutional, national, regional and international levels. In addition, a YouTube channel on Collaborative Research will be created to post the documentary and it will be posted on social media, with links from IFS, AAS and Carnegie Corporation websites.

The contracted company will film, edit and produce the documentary, working with the facilitator on the concept and script development and with IFS and AAS colleagues on revisions and final production.

Activity	Intended Audience	Comments
1. Local, regional and international media coverage of the conference	Local, regional and international readership and viewers	Inform and invite print and visual media outlets; stories can be of results and benefits of intra-Africa collaborative research, and the necessity of access to scientific equipment and support
2. Post on real-time social media	Facebook and Twitter (and other platforms?) followers of IFS, AAS and Carnegie Corporation	IFS and Carnegie Corporation's communication officers discussed supporting the posting of information on social media; IFS and AAS will join in this effort
3. Publish the conference proceedings	Participants and their organizations; invited non-participating organizations; other interested parties	Facilitator to lead drafting team to create and populate template for proceedings with all presentations, discussions and "think pieces" captured, drafted, edited and published in hard copy and online at IFS website; measure downloads through website analytics
4. Publish an IFS-AAS Policy Brief	Wide distribution to IFS, AAS and Carnegie Corporation stakeholders, and others in positions to make or influence policy on collaborative research at institutional, national, regional and international levels	A two-page document following the format of previous IFS-AAS Policy Briefs, including sections on: summary, background, messages, and links or references to other documents, information sources and details on this topic
5. Film and produce a ten-minute documentary, and a two-minute clip, on the conference and the collaborative research project, using scripted narration and footage of the presentations, posters and interviews; Focuses will include results of collaborative research and the benefits/costs of this mode in comparison to individual research, the value of investing in collaborative research, and the role of institutions such as IFS and AAS	Wide distribution to IFS, AAS and Carnegie Corporation stakeholders, and others in positions to make or influence funding decisions on collaborative research at institutional, national, regional and international levels	AAS communications unit and a local media company to film, edit and produce the documentary, working with the facilitator on the concept and script development; Create a YouTube channel on Collaborative Research to post the documentary and post the clip on social media, with links from IFS, AAS and Carnegie Corporation websites

## **Closing remarks**

### **Nighisty**

You are the resources of Africa. Look inside for all the energy and potential you have to be unleashed. Look beyond IFS to yourselves. Talk to your alumni associations and institutions and governments. The challenges are there and can be overcome. You are the driver of your own life and destiny. Ask: what is the role of young researchers in Africa? IFS looks forward to working with AAS on our several initiatives. Thank you to all partners.

### **Berhanu**

What was striking about this group: calm, confident, content-rich, serious, forward-looking, articulate, with infectious enthusiasm. It is a pleasure to work with IFS; it's an innate relationship and there's no need to make promises. Let's just do the work together.

## **Evaluation**

Participants were asked to consider these six evaluation questions:

1. In terms of the conference sessions and methods, what worked well?
2. What could have been done differently or improved?
3. What is one significant thing you learned over the three days?
4. How do you feel about your own participation in and contributions to the conference?
5. What comments do you have about any aspect of the conference logistics and planning?
6. Is there anything else?

Their full responses can be found in Appendix 3. In general, participants expressed positive views on the conference atmosphere, time-keeping, participation and interaction, presentations and facilitation. The most comments about what could have been done differently concerned the poster session, that not enough time had been allocated to it, and that team representatives should have had an opportunity to speak briefly about their projects. Also, there was a recognition that the range of participants could have been broader, especially from other funding organizations. People felt like they learned a lot about many dimensions of collaborative research. They were grateful for the opportunity to network and to represent their teams. For the most part, participants were appreciative of the conference logistics, organization and communications, though there were some issues with flight bookings and information about immigration requirements.



Schedule

<b>Day One ~ Wednesday, 17 February</b>		
0900-0930	Welcome remarks	<ul style="list-style-type: none"> <li>• Nighisty Ghezae, IFS Director</li> <li>• Berhanu Abegaz, AAS Director</li> </ul>
0930-1015	Presentation on the donor-funded pilots, including the efforts to start the initiative, with discussion	<ul style="list-style-type: none"> <li>• Nighisty Ghezae and Annika Eriksson, IFS</li> </ul>
1015	Break, with time for researchers to display their posters and others to get acquainted	
1100-1230	Poster session	<ul style="list-style-type: none"> <li>• Showcasing the collaborative research projects of the 19 teams, with a “viewing tool” provided for participants to note questions and comments for the researchers</li> </ul>
1230-1400	Lunch	
1400-1500	Facilitated whole-group discussion about the research projects	<ul style="list-style-type: none"> <li>• Everyone, with a focus on the question: What are differences between collaborative and individual research, especially in terms of outcomes?</li> </ul>
1500	Break	
1530-1630	Roundtable “stock-taking” of participating organizations’ collaborative research efforts and interests	<ul style="list-style-type: none"> <li>• Everyone</li> </ul>
1630-1700	Summary of day one and looking ahead to day two	<ul style="list-style-type: none"> <li>• Bill Savage, facilitator, with participants</li> </ul>
<b>Day Two ~ Thursday, 18 February</b>		
0900-0930	Preview of day two	<ul style="list-style-type: none"> <li>• Bill Savage</li> </ul>
0930-1100	Presentations by research team members	<ul style="list-style-type: none"> <li>• On forming teams, conceptualizing research topics, meeting face to face, carrying out the research, and taking what they learned into their workplaces, careers and countries</li> </ul>
1100	Break	
1130-1215	Presentation on the technologies used	<ul style="list-style-type: none"> <li>• Nighisty Ghezae, Annika Eriksson and researchers</li> </ul>
1215-1300	Plenary discussion on all presentations	<ul style="list-style-type: none"> <li>• Everyone</li> </ul>
1300-1430	Lunch	
1430-1500	Presentation on the IFS-SEARCA Collaborative Research Grant Initiative in Southeast Asia	<ul style="list-style-type: none"> <li>• Bessie M Burgos, Program Head for Research and Development, Southeast Asian Regional Center for Graduate Study and Research in Agriculture (SEARCA) [by Skype]</li> </ul>
1500-1600	Roundtable “stock-taking” of participating organizations’ interest in funding or supporting collaborative research	<ul style="list-style-type: none"> <li>• Everyone, with an intention to set up side meetings for Friday morning</li> </ul>
1600	Break	
1630-1700	Summary of day two and looking ahead to day three	<ul style="list-style-type: none"> <li>• Bill Savage with participants</li> </ul>
<b>Day Three ~ Friday 19 February</b>		
0900-0930	Preview of day three	<ul style="list-style-type: none"> <li>• Bill Savage</li> </ul>
0930-1030	Side meetings	<ul style="list-style-type: none"> <li>• Everyone, in groups constituted the afternoon before</li> </ul>
1030	Break	
1100-1145	Follow-up actions to promote collaborative research across Africa and elsewhere	<ul style="list-style-type: none"> <li>• Everyone</li> </ul>
1145-1230	Closing remarks Conference evaluation	<ul style="list-style-type: none"> <li>• Bill Savage, Nighisty Ghezae and Berhanu Abegaz</li> <li>• Everyone</li> </ul>
1230	Farewell lunch	

### Participants

**ABEGAZ Berhanu, Dr**  
African Academy of Sciences, Kenya

**AMAYO Robert, Mr**  
Team Diamond, Uganda

**ANYAH Richard, Dr**  
African Climate Policy Center (ACPC), Ethiopia

**ARTHUR Patrick Kobina, Dr**  
Team Nanomed, Ghana

**ASSEDE Emeline, Ms**  
Team Livingstones, Benin

**CHIAWO David, Dr**  
Strathmore University, IFS Alumni, Kenya

**EKAYA Wellington, Dr**  
BecA, Kenya

**ERIKSSON Annika, Ms**  
IFS, Sweden

**GHEZAE Nighisty, Dr**  
IFS, Sweden

**HARAWA Rebbie, Dr**  
AGRA, Kenya

**HASTINGS Arlen K, Ms**  
RISE, US

**ILBOUDO-TAPSOBA Edith, Dr**  
Team Soil Biodiversity, Burkina Faso

**JAMA Bashir, Dr**  
AGRA, Kenya

**JOHNSON Andrea, Ms**  
Carnegie Corporation of New York, US

**KARWANI George, Mr**  
Team Bambaranut, Tanzania

**KEMIGISHA Esther, Ms**  
Team Tete, Uganda

**KIRYOWA Moses, Mr**  
Team Campnut, Uganda

**KITUYI Evans, Dr**  
IDRC, Kenya

**KOUAKANOU Léonce, Mr**  
Team AVI-WEST, Benin

**MASAO Catherine, Dr**  
Team Multinus, Tanzania

**MATSINHE Sozinho Fransisco, Prof**  
CODESRIA, Senegal

**MKUDE Isabela Thomas, Ms**  
Team AMKID, Tanzania

**MUHUMUZA JohnBosco, Mr**  
Team SSACRT, Uganda

**MUTAMBUKA Martin, Dr**  
Team Amaranths, Uganda

**NALIKKA Betty, Ms**  
Team InvAfrica, Uganda

**NEGATU Gabriel, Mr**  
African Development Bank, Kenya

**NGIMWA Pauline, Dr**  
Partnership for African Social and Governance  
Research, Kenya

**OSATI Paulo Okumu Ochanga, Mr**  
Team Phytodiversity, Tanzania

**SAVAGE William, Mr**  
IFS (independent), US

**SITUMA Doris, Dr**  
Kenya Water Institute, IFS Alumni, Kenya

**SKILTON Robert, Dr**  
*icipe*, Kenya

**TRAORE Renan Ernest, Dr**  
Team African Researchers, Burkina Faso

**UKU Jacqueline, Dr**  
WIOMSA, Kenya

**VIHOTOGBE Romaric, Dr**  
Team Panorama, Benin

**ZOGO Barnabas, Mr**  
Team Arthropod Diversity, Benin

### Evaluation Responses

*[note: responses with the same number come from the same person]*

#### ***In terms of the conference sessions and methods, what worked well?***

1. Terms and methods of the conference worked well. This conference is an opportunity for the grantees to give their opinions on some aspects like forming groups and conceptualizing of topics.
2. Good atmosphere, time respect, good participation of people
3. I appreciated how the talks and presentations have been done. The organizers were really available to answer the concerns and questions.
4. The presentations of defined topics by research team members worked well.
5. Presentations by research team members, and the discussions that followed.
6. Logistics and organization; quality of the participants
7. Time keeping was observed; this kept people interested. The facilitator was lively and with vigour encouraged participation.
8. Involvement of participants in the sessions; facilitation approach of the whole process kept all participants alert.
9. Broad participation by everyone; plenty of time for informal interaction
10. Open discussions; all able to speak on various topics
11. Time was well managed, almost to the second; the conference had a relaxed mood and quite interactive; the facilitator was cordial and engaging.
12. By and large everything worked well. However, the time for posters was too short.
13. The open discussions worked well; everyone had a chance to share their views and opinions.
14. Sincerely, everything worked well.
15. Each session worked well; the poster session was really nice.
16. Sessions were quite interactive and not a lot of PowerPoints. This allowed good question and answer interaction.
17. Time management
18. Professional facilitation; lots of time for discussion and informal networking
19. Time and schedule management; facilities prepared in and outside the conference hall; interactive mode of conference
20. Methods were well designed but I would like that participants in next time use PowerPoint rather than poster presentations.
21. All parts of the conference went well.
22. "Five-minute" presentations of experience by groups of team representatives
23. The session on grantee reflections worked well; time for poster presentation was not enough.
24. The arrangement of the program was well thought of as it has been relaxed which allowed for more individual interactions.

#### ***What could have been done differently or improved?***

1. Nothing!
2. Nothing
3. It would be good to have more time during the poster session. The comments of donors or other team members were important to improve the ongoing projects.
4. It could be nice and helpful to dedicate more time for the poster session. Also we received the stick at the beginning of the conference. It will be worth to get it at the end such that we can have all the handouts.
5. More time for poster viewing with research team members
6. I think that everything is well but will be more interesting if we have more video presentation.
7. Posters should have been better presented if more time was allocated. A flash presentation of about 3-5 minutes gives a better picture.
8. A maximum mix of participants with different ranks; participants should have been involved to review the processes, content and facilitation approach of each day.
9. Participants list circulated in advance
10. Involve local (Kenyan) participation in collaborative initiative; invite some government agency such as NACOSTI
11. The posters were not well attended in terms of getting the grantees to pass on information about their research. Therefore, a 10-minutes presentation for each team would have helped.
12. More time could have been allocated to the posters.

13. –
14. –
15. Have all the group leaders here and provide a 3-minute presentation for the groups.
16. Such a conference should involve participants from policy as well.
17. None
18. A few more external participants with roles assigned to them in advance
19. More time for experts to go around posters or could be PowerPoint presentations so that experts could see all work from grantees
20. The way of the presentation should be in PowerPoint rather than poster so that all participants can have a chance to hear each project and give contribution. With posters some participants were not able to see others' work.
21. The posters could not receive enough attention. I suggest a presentation of 5-10 minutes in the future so that the project progress can be heard by everyone.
22. More time for the poster session, as few people got to know about all the posters.
23. The range of external organizations invited could have been wider.
24. Probably invite more stakeholders across the region; publicizing the conference could have encouraged other stakeholders who would have wanted to participate to come on board.

***What is one significant thing you learned over the three days?***

1. I will benefit from the experiences and the comments of other participants. I appreciated the management of the timing.
2. The deep importance of collaborative research in the development of Africa.
3. The existence of other institutions or organizations which work in research like IFS.
4. Collaboration aspects; communication skills
5. That it is possible to form effective research teams from geographically diverse locations, whose members may have diverse interests, with relatively small grants.
6. We need every competence to set up a research project. Then the collaborative research needs to be broader.
7. When you make a work plan, ensure that you have a realistic strategy of implementation. Don't wait to be pushed.
8. Self-assessment in what we do to better understand the progress and impact of our work is important.
9. Learned teams can work well together even if there are language barriers.
10. Collaboration between natural and biophysical sciences with the social sciences is important to translate science into usable form by a majority.
11. I have learned that we are a resource and Africa is looking at us. We need to change our mindset and look inside instead of out, to solve Africa problems.
12. The power of collaboration; given a chance, our youth can excel.
13. Networking and building collaborations is essential for success in the world we are working in; use of digital platforms is effective in connecting scientists.
14. Great number of agencies supporting young researchers in Africa.
15. The valuable nature of collaborative research.
16. The enormous potential of research advances in Africa by involving early-career scientists.
17. Participants were active and were ready to collaborate. There is much to learn in the world but the limitation is exposure.
18. That collaborative research, with researchers from different disciplines, really does seem to provide a richer set of findings.
19. What other organizations do and can do for my career and research perspective.
20. Benefits of collaborative research; making a team work.
21. All collaborative research has challenges and good sides; I am a potential resource; there is other collaborative research potential out there.
22. Collaboration is a learning process and it becomes sweeter with "age."
23. Collaborative research is the way to go and multiple organizations are looking into fostering these kinds of grants.
24. As we conduct the research, it is important to think of ways of translating the findings to the local communities so that they are usable.

***How do you feel about your own participation in and contributions to the conference?***

1. I have participated more in the exchanges of the groups before plenary discussions in all sessions. And I have shared experiences of my team research with others.
2. I'm glad to have participated in this conference, to have met other researchers and promoters of research in Africa with whom I can work.

3. I am happy to be part of this conference. I will contribute more if I receive the output from the projects of my team mates.
4. The conference helped me a lot on my way to establish my own network, which is important for my future career. During this conference, I got to know kind and interesting people, and this is definitely inspiring for me.
5. Happy to have been part of the conference, to ask questions about how teams are put together and managed. The one-on-one discussions with team members were particularly interesting, finding out how groups actually worked, and I gave individuals my perspective on team management.
6. I need to improve my learning in English to participate more and contribute to the conference.
7. I had a chance to make my suggestions.
8. I freely expressed what I had and I networked with other participants freely.
9. Probably learned more than I contributed, but was glad to be involved.
10. I was able to learn more from other people's experiences.
11. I felt honored to have been selected to represent my team in this conference and that our feedback and contribution through the poster and presentation during the 5-topic session was well received and elicited discussion.
12. I have learned a lot.
13. I was able to share my views and thoughts, as there was a comfortable environment for doing so.
14. In terms of interest, I was surely interested and did my best to well present my part of the job (poster and group work); I also have a lot of interactions with some great participants.
15. Exciting and really positive.
16. Remaining fully engaged with IFS through their web-based information portals.
17. Good and of significance.
18. I learned a lot, mostly from listening intently, so a success from my perspective.
19. Well done and actively involved.
20. I feel good and honored to participate in this conference.
21. I did justice to my team and speaking of all I could to help organizers receive the message they wished to get from us and also allow colleagues to learn from me/us.
22. I got an opportunity to express myself and to connect; a good and satisfying experience.
23. The environment was relaxed and largely informal which enhanced my own desire to participate. I feel that I was able to fully express myself on the issues that affect me.
24. It has been an opportunity to put across the challenges encountered in the collaborative research process and I have got an assurance that solutions will be found.

***What comments do you have about any aspect of the conference logistics and planning?***

1. The conference logistics were good because it is possible for us to get here.
2. The conference had good logistics and good planning.
3. –
4. They were well planned, showing the experience of the organizers in such meetings.
5. It all seemed to go smoothly.
6. Everything is perfect.
7. Perfect communication and the logistics were great.
8. Excellent.
9. Logistics were perfect; great thanks to Janet and Annika.
10. It was well done; communication was prompt.
11. All was well; no complaints.
12. None.
13. Everything worked well, and the meals were excellent.
14. Thanks to Annika, Bill, IFS and AAS directors; everything was nice.
15. It was all perfect. I came in at the last minute but got everything working just fine.
16. Ensure all participants receive immigration information in time.
17. If the logistics allows, every young researcher granted with IFS funds should be involved in conferences based on themes.
18. Smooth logistics – thanks!
19. Logistics were well planned. Thanks to Annika and Janet!
20. Logistics were excellent; food was nice; conference was well planned and arranged; everything was in place.
21. Logistics were perfect. A bit of rise on the living allowance would make us more comfortable, especially given the cost of meals in the hotel.
22. In spite of the ill-update of change in flight schedule, I gladly appreciate the courtesy given and the ambience of the hotel.

23. The organizers have been on top of all logistical requirements in an efficient manner. I have no reservations whatsoever.
24. It was well planned and no complaint about the logistics.

***Is there anything else?***

1. Nothing.
2. Nothing.
3. I would like to thank IFS to trust in the capacity of African researchers.
4. Africa has a future; the future is in Africa.
5. Please share all media outputs from the conference. I will share on my social media.
6. I encourage this initiative of IFS and look forward to participate in other ones as I enhance my skills.
7. Some organization representatives attended the conference partially and one could get a chance to interact with them; it would have been better if their program was known in advance.
8. I should be invited to participate in the upcoming Southeast Asian IFS workshop.
9. –
10. Thank you for the opportunity to participate.
11. Thanks to IFS, AAS, Carnegie Corporation, Bill and colleagues.
12. –
13. Hopefully we can move the discussions we had forward to develop significant outputs and outcomes.
14. –
15. –
16. –
17. IFS should communicate any relevant call to the team that will allow to secure projects in the future.
18. –
19. Yes, congratulations for a well arranged conference.
20. Let IFS plan for the next meeting for progress report presentations.
21. Thank you for the opportunity to represent my team.
22. Well done on time management
23. The concept of collaborative research ought to be encouraged among local research organizations.
24. Thanks for this opportunity and hope that many more such interfaces will take place.

# Appendix 4.

# The Belgian Science Policy Office

## Opportunities for cooperation

Contact person: Marie-Carmen BEX ([bexm@belspo.be](mailto:bexm@belspo.be))



# STRUCTURE of the PRESENTATION

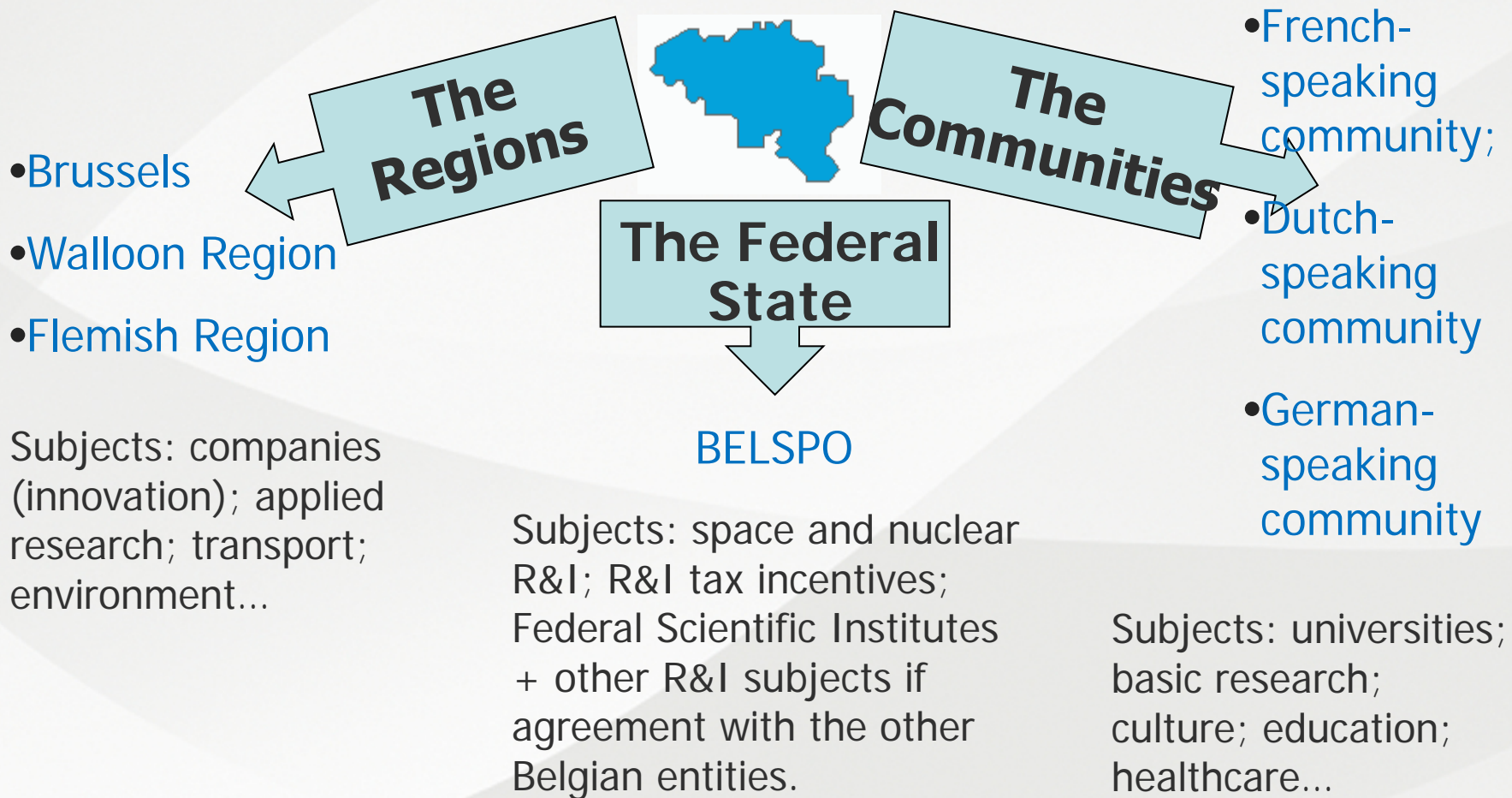
I. Introduction: the Belgian R&I system

II. The Belgian Science Policy Office:

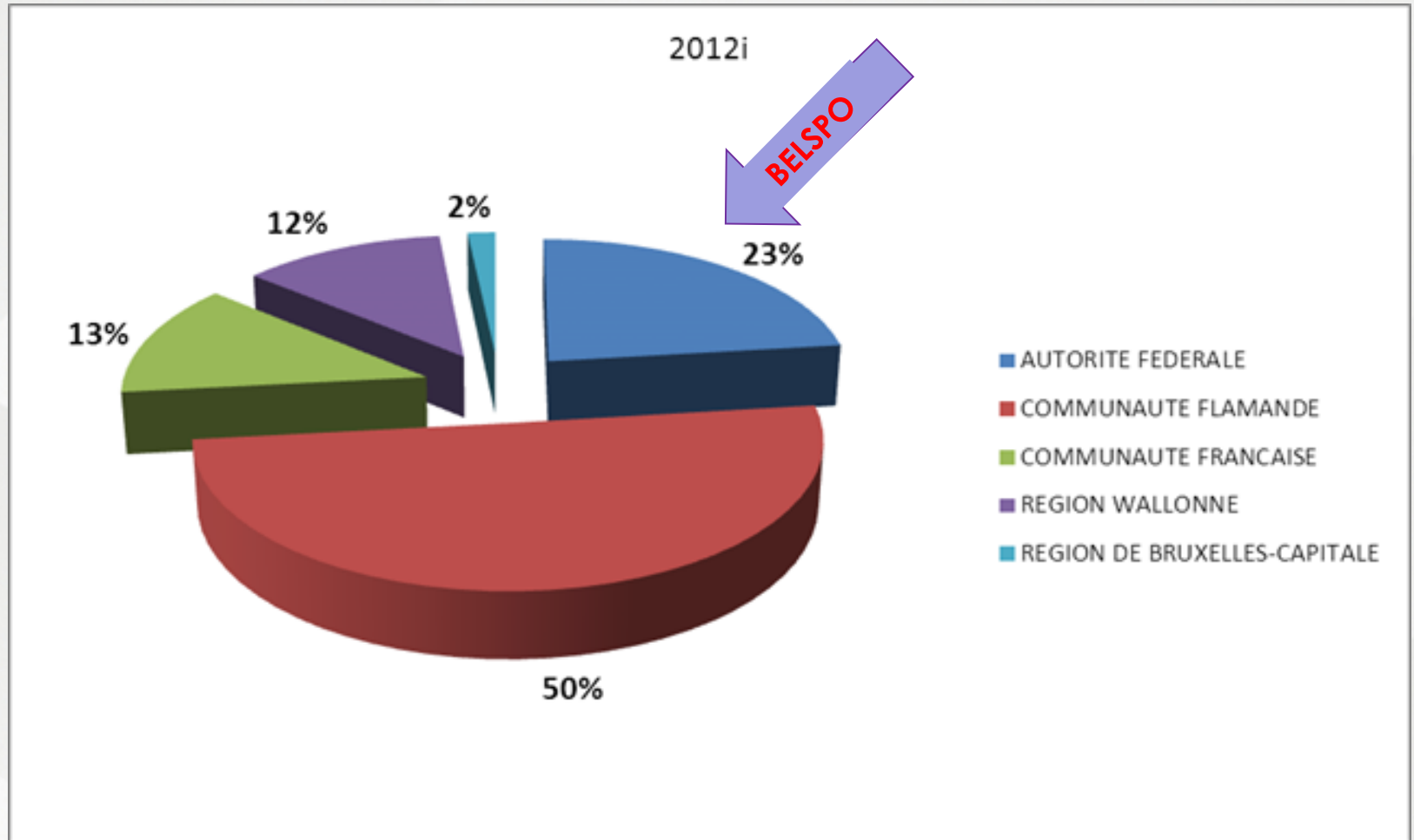
- a) activities;
- b) instruments for international co-operation

III. Collaboration with IFS

# I. R&I COMPETENCIES in BELGIUM



# I. Public R&I budgets in Belgium



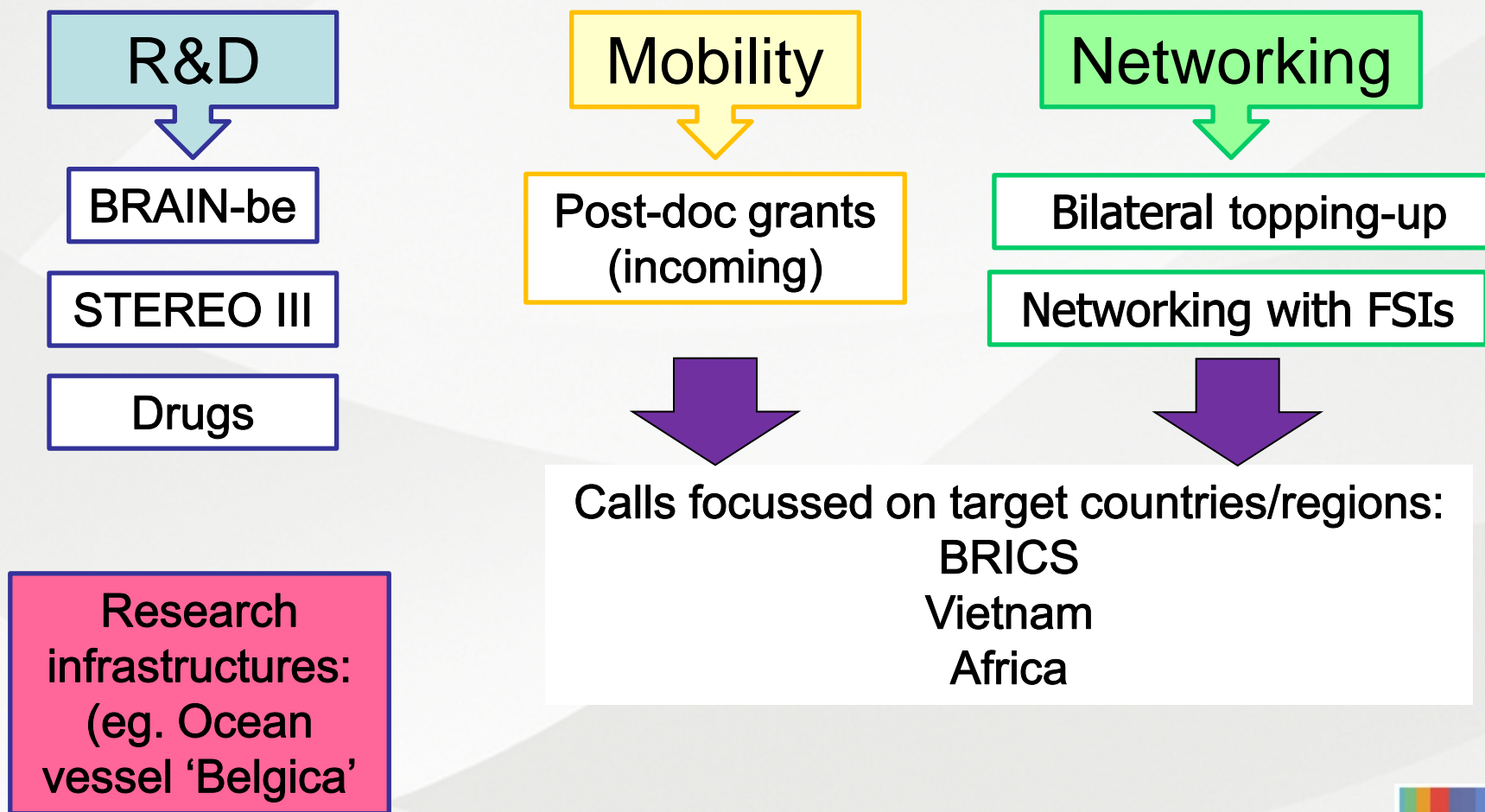
Ref.: GBAORD, Government Budget Appropriations or Outlays on R&D

## **II The BELGIAN SCIENCE POLICY OFFICE (BELSPO)**

## II. a) BELSPO's activities

- Multiple activities:
  - Funding & support of 10 Federal Scientific Institutions (FSI's)
  - Management of Belgian participation in space research programmes
  - Management of national research programmes
  - Coordination (national & international)
- Annual Budget:      Approx 500 M€
- Staff:                      Approx 2700 (incl. FSI's)

## II. b) Instruments for international co-operation (1/5)



## II. b) Instruments for international co-operation (2/5)

### Programme BRAIN-be (<http://www.belspo.be/brain-be/>)

- Network with min. 2 Belgian partners;
- Duration: in principle 4 years, possibility of 2 years
- Total budget: 116,63 M€/6 years
- **Foreign partners:** co-funding (50/50)
- Budget: ~ 19 Million € / year (total ~ 116 M€)
- 6 research axis grouped in 3 themes: earth sciences; federal collections and federal competences

## II. b) Instruments for international co-operation (3/5)

### Postdocs grants

- 6-18 months in a Belgian research centre
- Link requested to on-going BELSPO- funded project or activity of a Federal Scientific Institution (FSI)
- Only for researchers from eligible countries :BRICS (Brazil, Russia, India, China, South-Africa), all African countries and Vietnam



## II. b) Instruments for international co-operation (4/5)

### Support to networks with FSI's

- Proposals from Belgian FSI's receive funding to carry out **networking activities** with institutions from eligible countries



*not research!*



BRICS, African countries and Vietnam

- Projects up to 3 years
- Idea is to move from short-term activities to long-term institutional cooperation between the institutions of the networks

# *List of the Federal Scientific Institutions*

- National Archives and State Archives in the Provinces (ARA-AGR), including the Centre for Historical Research and Documentation on War and Contemporary Society
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- Scientific Institute of Public Health (IPH)
- Veterinary and Agrochemical Research Centre (VAR)
- National Institute of Criminalistics and Criminology (NCIC)
- Royal Museum of the Armed Forces and Military History (MRA)

## II. b) Instruments for international co-operation (5/5)

### Current & upcoming BELSPO's calls for PROPOSALS



Relevant weblinks:

- **Post-Doctoral Fellowship Programme** *deadline 30.4.2016*  
[http://www.belspo./belspo/organisation/call\\_en.stm](http://www.belspo./belspo/organisation/call_en.stm)
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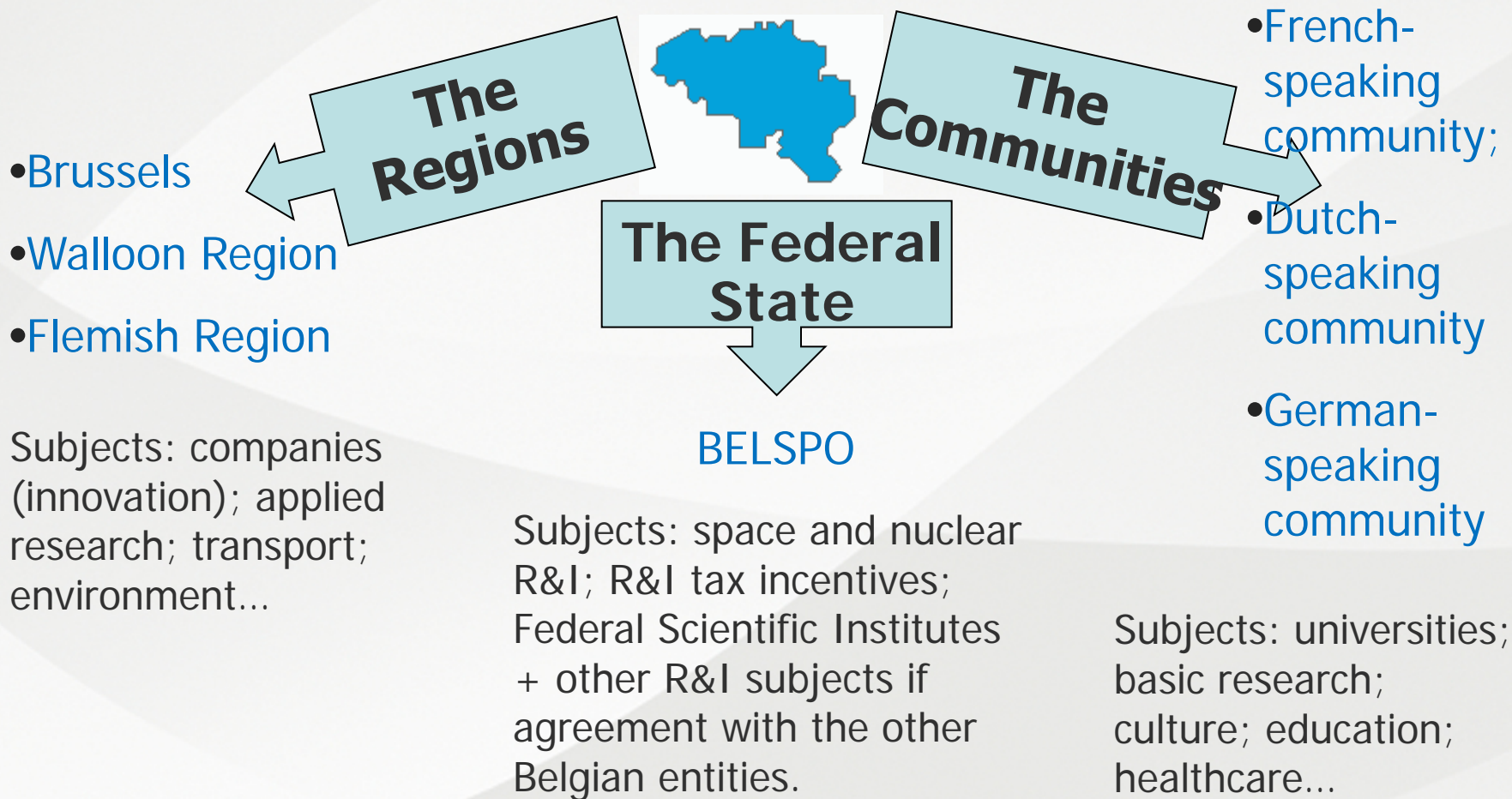
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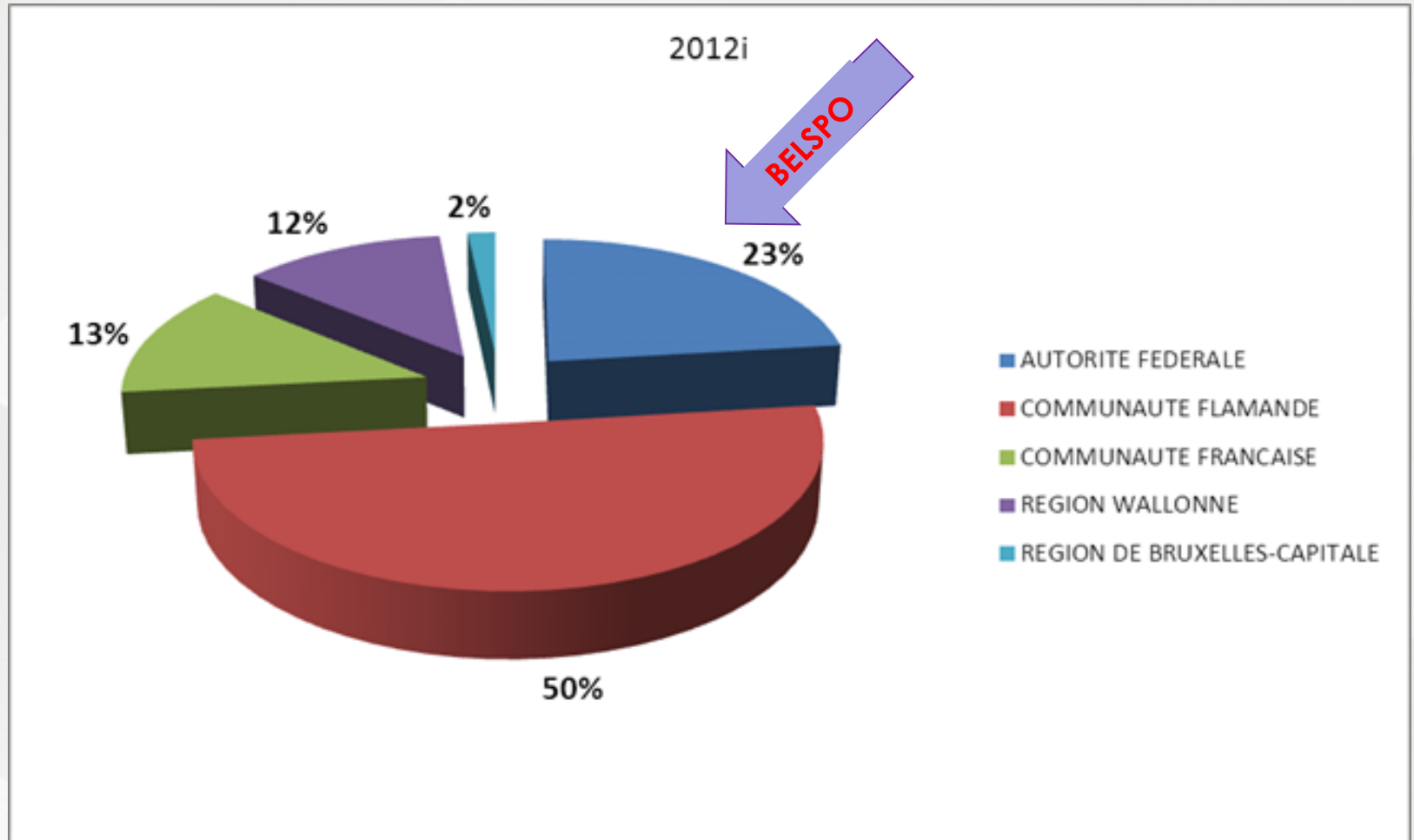
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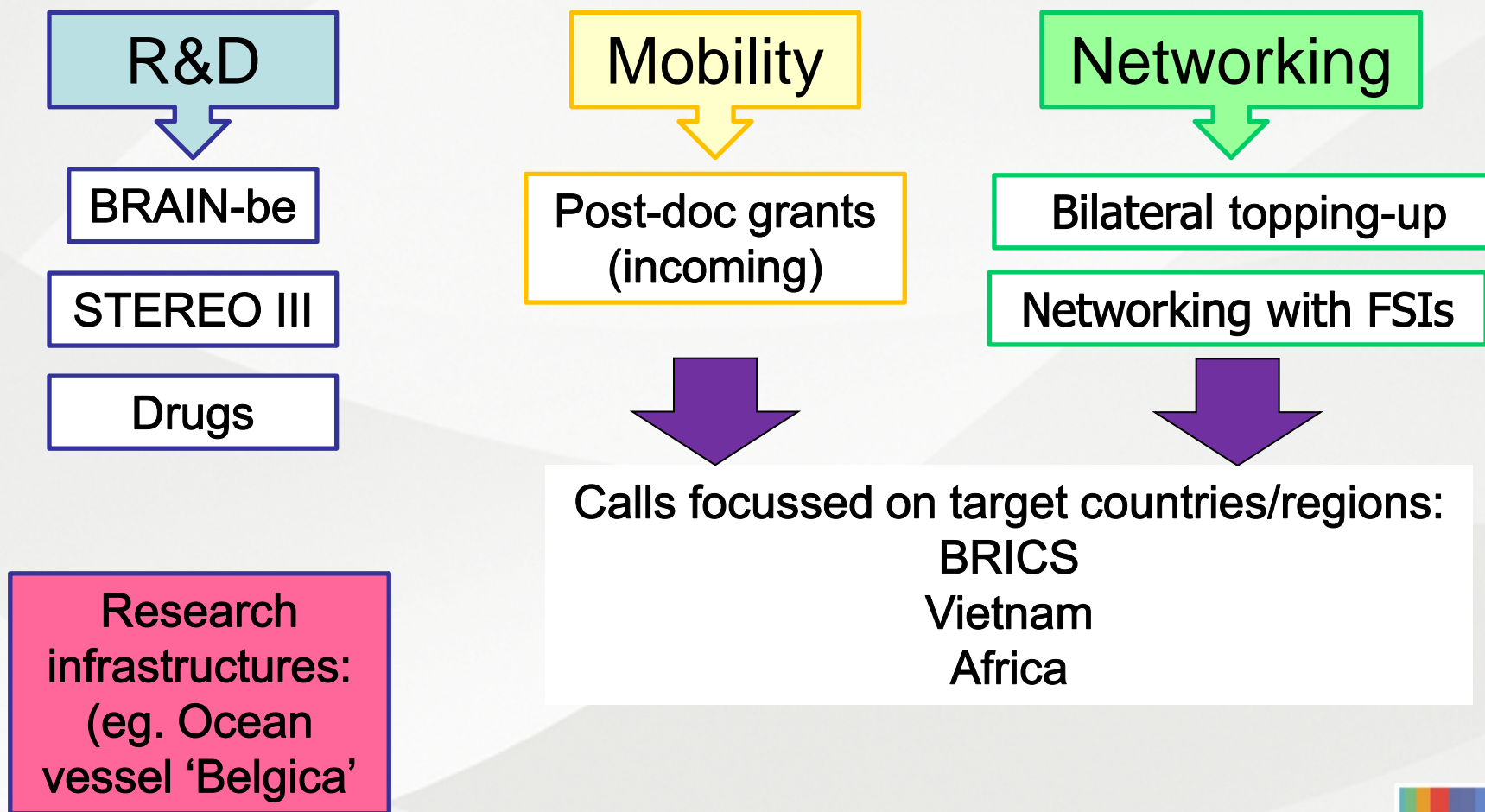
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