



Letter from the Chair of the Sponsoring Group of *icipe* (SGI)

Dear colleagues and friends of *icipe*,

The first three months of 2014 got underway with new energy and enthusiasm as the Director General, Dr. Segenet Kelemu, began to guide *icipe* as an organization with a fresh vision and her hands-on approach. She travelled to meet with core stakeholders in Sweden in February, and in March she won international recognition in Paris when she was presented with the L'Oréal-UNESCO "For Women in Science" award. Dr. Kelemu was honoured for her years of work and determination as an exceptional woman working in a male-dominated field, with her ultimate goal of improving food security and health for the most vulnerable. Her ground-breaking research, in particular on improving African forage grasses for livestock, is providing ecological solutions for small-scale farmers struggling to cope with climate change. Dr. Kelemu's notoriety is also bringing greater visibility to *icipe* as an institution.

In this issue, we also introduce you to Prof. Dr. Bill S. Hansson, who became Chair of the Governing Council in November. Hansson assumed the position from the former Chair, Professor John A. Pickett CBE, DSc, FRS, whom we thank most sincerely for his years of service and dedication to *icipe* in that same role.

icipe welcomed visitors from the European Union to the Kasarani campus, where the Head of EU Development Cooperation in Kenya, Dr. Erik Habers, was able to have his first in-depth view of *icipe*'s programmes, including a visit to the EU-funded Bee Health Reference Laboratory, due to be inaugurated by July. Habers also had his first taste of stingless bee honey while touring *icipe*'s facilities.

icipe research continues to be published in the top publications in the field. *icipe* features two such articles from the Push-Pull team. Lastly, and as a sign of things to come at *icipe*, more than half a dozen new staff joined the Centre in the last three months. Included in this article are short profiles of the newest staff, whom I hope you will come to know as they become a part of a growing and impressive team at *icipe* in Kenya.

Dr. Gity Behravan, Chair, SGI

IN THIS ISSUE

- Profile of Prof. Dr. Bill S. Hansson *icipe*'s Governing Council Chair as of November
- *icipe* Director General Segenet Kelemu wins L'Oréal-UNESCO For Women in Science award
- *icipe* Director General meets key stakeholders in Sweden
- EU Delegation Tours Bee Health Reference Lab
- *icipe* hosts official launch of the International Foundation for Science (IFS) Alumni Association in Kenya
- Continued success using 'mosquito nets for livestock' in Kisii and Bungoma counties, Kenya
- *icipe* Push-Pull research published in high-impact journal
- Study by *icipe* and partners presents potential for malaria and mosquito control
- New staff at *icipe*

PROFILE

Profile of Prof. Dr. Bill S. Hansson *icipe*'s Governing Council Chair as of November



Bill S. Hansson

Prof. Dr. Bill S. Hansson was born in 1959 in Jonstorp, Sweden. His basic biology training with an emphasis on zoology and ecology took place at Lund University, Sweden from 1979–1982.

In 1983, he began his Doctorate studies. In 1988, he defended his PhD thesis "Reproductive isolation by sex pheromones in some moth species – an electrophysiological approach". During 1989/90 he was based in the United States, where he worked as a post-Doctoral fellow at Arizona Research Laboratories of the University of Arizona in Tucson, in the Neurobiology division. In 1990, he returned to Lund University as an Assistant Professor.

In 1992, Hansson became Associate Professor in the Department of Ecology, Lund University, and he gained tenure in 1995. In 2000, Hansson earned a full professorship in the Division of Chemical Ecology.

In 2001, Hansson moved to the Swedish University of Agricultural Sciences in Alnarp, where he assumed the position of Head of the Division of Chemical Ecology. From 2003 until 2005, he also took on the added role of Associate Dean and shaped the new Faculty of Landscape Planning, Horticulture and Agricultural Science at the university.

Contd. next page>>





<< From previous page

Profile of Bill Hansson, *icipe's* Governing Council Chair as of November

In 2006, Hansson became Director at the Max Planck Institute for Chemical Ecology in Jena, Germany, where he built the Department of Evolutionary Neuroethology.

Hansson then became the Managing Director of the Max Planck Institute for Chemical Ecology in 2011, the position he continues to hold today. Hansson's research focuses on the neuroethological aspects of insect-insect and insect-plant interactions. He focuses mainly on insect olfaction, exploring principle questions such as: How

is semiochemical information (odour) detected by the antennae and processed in the insect brain, how did these detection and processing systems evolve, and how does olfaction guide insect behaviour? He also compares these systems to other land-living arthropods, such as the giant robber crab on Christmas Island.

The Chairman of the Governing Council is elected by other members of the Council, for a maximum of four years, or two consecutive terms of two years.

NEWS

icipe Director General Segenet Kelemu wins L'Oréal-UNESCO For Women in Science award

icipe Director General Segenet Kelemu was among five outstanding women scientists recognized during a formal ceremony on 19 March in Paris, where she received the L'Oréal-UNESCO For Women in Science award.

The L'Oréal-UNESCO For Women in Science awards are presented each year to women scientists who represent unique career paths combining exceptional talent, a deep commitment to their profession and remarkable courage in a field still largely dominated by men.

Kelemu, the laureate for Africa and the Arab States, was honoured for her research on how microorganisms living in symbiosis with forage grasses can improve their capacity to resist disease and adapt to environmental and climate change. Her work is providing new solutions for ecologically responsible food crop production, especially for local, small-scale farmers.



Dr. Kelemu with her fellow laureates at the awards ceremony in Paris

icipe Director General meets key stakeholders in Sweden

The Director General of *icipe*, Segenet Kelemu, visited Sweden from 17-20 February to participate in the Swedish Association of Members of Parliament and Scientists (RIFO) seminar, *Africa's technology leap – are we part of the development?*, during which she gave a presentation

entitled, "Bioscience developments in Sub-Saharan Africa," at the Swedish Parliament in Stockholm. She was invited to participate by Dr. Carl-Gustaf Thornström, Associate Professor at the Swedish University of Agricultural Sciences (SLU), a main organiser of the seminar.

The seminar discussed the region's rapid economic growth, most notably in South Africa, Kenya, Nigeria and Angola, where these swiftly developing nations are taking the best of technology and putting that directly to use, skipping the process of creating the technologies and experiencing the set-backs developed countries had to face over several decades in fine-tuning them. The seminar also posed the question of whether Sweden could be leap-frogged by this phenomenon, and whether the country is playing a strong enough part in the development process.

Kelemu also took the opportunity to meet with a number of key *icipe* stakeholders while she was in Sweden, to showcase *icipe's* Research and Development work for Swedish International Development Cooperation Agency (Sida), for one.

In addition to visiting Sida, the DG visited the Swedish University of Agricultural Sciences (SLU), the Stockholm Environment Institute (SEI), and the Ministry of Foreign Affairs.



Dr. Kelemu with Prof. Lisa Sennerby Forsse, Vice-Chancellor of the Swedish University of Agricultural Sciences





NEWS

EU Delegation Tours Bee Health Reference Lab

On 28 March, a delegation from the European Union's representation in Kenya paid a visit to the *icipe* Kasarani campus, for an in-depth tour of the Bee Health programme, including a first-hand look at the Bee Health Reference Laboratory that is now in the last stages of construction. The Bee Health Reference laboratory is due to be inaugurated by July, and will eventually house facilities that will have the most advanced technologies for diagnostic analysis of samples from bees and bee products for pests and diseases as well as for detecting pesticide residues in honey and bee products for commercial sale.

Eric Habers, Head of Development Cooperation for the EU in Kenya, paid his first visit to the Bee Health Reference Laboratory and the commercial insects programme. Dominique Davoux, Head of the Rural Development, Agriculture and Food Security Section, and Steve Wathome, Programme Manager in the same section, were also in attendance as return guests.

The EU is funding the Bee Health Reference Laboratory and the

refurbishment of four satellite laboratories in Burkina Faso, Cameroon, Ethiopia and Liberia, under a four-year programme worth 13.1 million Euro.

Partly prompted by colony collapse disorder (CCD), a bee disease that has decimated domestic honey bees in Europe and North America in recent years, the programme aims to take stock of the epidemiology of honey bees in Africa, where the health status of honey bees remains largely unknown. In addition to helping to prevent CCD in Africa, the programme could potentially tap into the genetic resources of African honey bees for breeding purposes, to strengthen European and American honey bee cousins, for example.

CCD would be disastrous for the livelihoods of beekeepers and for food security in Africa, since upwards of 70 percent of what humans eat every day is pollinated by honeybees. Nuts, fruits and vegetables, which provide essential vitamins, minerals, fats and micro-nutrients, are particularly dependent on honey bee pollination.



Dominique Davoux with icipe-designed ecological hives for stingless bees



Erik Habers has his first taste of stingless bee honey



Training veterinarians and beekeepers on bee health in Karura Forest





NEWS

icipe hosts official launch of the International Foundation for Science (IFS) Alumni Association in Kenya



First meeting of IFS alumni

At a meeting of IFS grantees, former grantees and advisers held at the *icipe* Duduville campus in Nairobi on 13-14 February, the IFS Alumni Association of Kenya (IFSAAK) was officially launched, bringing the number of active IFS Alumni Associations to six.

The meeting was chaired by Ratemo Michieka of the Kenya National Academy of Sciences (KNAS). It was attended by 25 IFS grantees and former grantees, chosen representatively from all the universities and

regions in Kenya. All 221 grantees and former grantees have been invited to become members of the Association. Also in attendance were a number of IFS advisers, including Dan Masiga, Head of *icipe*'s Molecular Biology and Bioinformatics Unit, and a member of the IFS Team of Scientific Advisors in Animal Health since 2004.

Among its planned activities, the Alumni Association envisions: mentoring of upcoming scientists, including workshops on proposal writing; collaborative research among members; fundraising; training courses; organising conferences; support for publishing; and outreach and spreading awareness of IFS among Kenyan institutions.

Since its formation in 1970, *icipe* has upheld its ambition to develop a scientific community of excellence in Africa and to also link African scientists and researchers with the international scientific community. *icipe* and IFS have common goals to support excellent individuals at early stages of their careers.

icipe has had PhD students partially supported by grants from IFS and some of the Centre's scientists review proposals for IFS as advisors. At any given time, *icipe* hosts more than 50 postgraduate students from many countries, as part of its core commitment to capacity building on the African continent.

Continued success using 'mosquito nets for livestock' in Kisii and Bungoma counties in Kenya

The innovative use of Livestock Protective Net Fencing (LPNF) (insecticide treated netting) around zero-grazing units and associated waste pits in Kisii and Bungoma (western Kenya) continues to generate media attention, raising awareness among the general public about the success of the pilot project, supported by the International Fund for Agricultural Development (IFAD) and the Food and Agriculture Organization (FAO) of the United Nations. The article appeared in a February article in the *Daily Nation*.

By encircling smallholder dairy animals in zero-grazing units with the insecticide nets, farmers are reporting that their milk output has doubled and even tripled, as the animals are healthier, less restless since insects don't disturb them and thus they better convert energy from feed into milk. Farmers' incomes have also been considerably increased, with the higher milk sales and the reduction in treatment costs for mastitis infections giving families resources to send children to school, invest in better breeds, run also electricity into their homes and even to install solar panels in one case. Due to the success of the project, several NGOs would like to be involved in up-scaling the LPNFs to cover the majority of smallholder dairy farming regions in Kenya.

Rajinder Saini, the lead *icipe* scientist on the project, while explaining the effectiveness of the nets for control of vectors – mainly biting flies but also mosquitoes and other blood-sucking insects – mentioned that for up-scaling, finding local suppliers of LPNFs at a reasonable price could be an impediment, at which point suppliers like ZeroFly Livestock would be key, among others.



Black insecticide netting seen around a local farmer's zero-grazing unit in Kisii

icipe will be presenting the full results of the project to the Kenya Government and other stakeholders, including the press, in a stakeholders' meeting scheduled for the first week in June.

For more on the project, please also visit full coverage on the FAO website:

<http://www.fao.org/news/story/en/item/173224/icode/>

And don't miss the YouTube video:

http://www.youtube.com/watch?v=eD6Ve_SjW08





RECENTLY PUBLISHED

icipe Push-Pull research published in high-impact journal

Two papers by the *icipe* Push-Pull team in collaboration with Rothamsted Research were published in the most recent issue of the high-impact journal *Philosophical Transactions of the Royal Society B*.

Each issue is devoted to a specific area of the biological sciences, with the aim of defining a research frontier that is advancing rapidly, often bridging traditional disciplines. All contributions are invited and the Journal does not accept unsolicited papers.

The issue in which the *icipe* articles were published focuses on achieving food and environmental security, and the new approaches that can be utilised to close the existing gap. Both papers were among 16 invited papers to a Discussion Meeting Issue entitled "[Achieving food and environmental security: new approaches to close the gap](#)".

The first of the *icipe* papers discusses the contribution of the Push-Pull innovation towards attaining food security for one million poor people in sub-Saharan Africa by 2020.

The second paper outlines the way through which sustainable crop protection can be reached through seeds, by exploiting natural constitutive and inducible defence pathways.

(<http://rstb.royalsocietypublishing.org/content/369/1639.cover-expansion>)



Napier grass is often used in push-pull around the perimeter of crop fields

Study by *icipe* and partners presents potential for malaria and mosquito control



Mosquito foraging for nectar

A study by researchers from *icipe* in collaboration with colleagues from Germany and the United States has determined that mosquitoes that are infected with the malaria parasite develop an increased desire for sugar.

In a paper published in *Current Biology* (available at <http://www.cell.com/current-biology/abstract/S0960-9822%2813%2901581-9>), the scientists observe that malaria-infected mosquitoes develop an enhanced attraction to plant odours, as well as intensified probing of nectar sources. In turn, this broadens the geographic range for mosquitoes that are altered by *Plasmodium falciparum*, the main parasite behind malaria in Africa, as they expand their search due to this craving for sugar.

"We suggest that the parasite may be altering the physiology or manipulating the behaviour of mosquitoes to compensate for the energy deficit caused in them by carrying an infection, and thus extend both the vector's and the parasite's own survival", said *icipe* scientist Baldwin Torto, Head of the Behavioural and Chemical Ecology Department.

Torto added that this could have significant implications for mosquito and malaria control, with the potential to use plant-based odours for surveillance and control of malaria vectors.





NEW STAFF

New staff at icipe



Beatrice Muriithi
Postdoctoral Fellow in the
Social Sciences Unit

Beatrice Muriithi joined *icipe* as a Postdoctoral Fellow in the Social Sciences Unit in February.

Muriithi, a Kenyan national, has over seven years of professional research experience, having worked in agriculture-related research activities at various levels in reputable research institutions. She spent the last three years at the Center for Development Research (ZEF) in Bonn, Germany, as a junior researcher/doctoral student.

Prior to joining ZEF, Muriithi worked as a Research Assistant at the International Livestock Research Institute (ILRI) in

Nairobi, where she was involved in livelihoods-related research. Muriithi also worked at the Agricultural Sector Coordination Unit (ASCU), a government inter-ministerial Unit that coordinates the policy reform process within Agricultural Sector ministries. She holds a Doctorate (PhD) degree in Agricultural Economics from the University of Bonn and an MSc from Egerton University and the University of Pretoria, South Africa.

As a Postdoctoral Fellow in Social Sciences, Muriithi will be working on the socio-economic impact of Integrated Pest Management (IPM) of mango fruit fly.



Fredrick Mureithi Maina
Artisan (Carpenter) in Physical
Plants and Units

Fredrick Mureithi Maina joined *icipe* as an Artisan (Carpenter) in *icipe's* Physical Plants and Units. He holds a National Trade Test Grade Certificate in Carpentry from Don Bosco Embu Technical School.

As an Artisan (Carpenter), Maina will be involved in all wood fittings as part of the existing team on Duduville campus.



Lisa Njoki Wainaina
Workshop Assistant in Physical
Plants and Unit

Lisa Njoki Wainaina joined *icipe* as a Workshop Assistant in the Physical Plants and Units. She holds a Diploma in Management of Information Systems (IMIS).

Before joining *icipe*, Wainaina worked with Universal Digital Systems as a Marketing and Management Executive.

As Workshop Assistant, Wainaina will provide administrative support to the Physical Plants and Units at the *icipe* Duduville campus.



Gracious Diiro
Postdoctoral Fellow in the Social
Sciences Unit

Gracious Diiro joined *icipe* as a Postdoctoral Fellow in the Social Sciences Unit and holds a B.Sc. from Makerere University, an M.Sc. in Environmental Economics and Policy from University of Pretoria, and a PhD in Agricultural, Environmental and Development Economics from Ohio University where he conducted his post-doctoral research work on Technology Adoption and Child Development.

Before joining *icipe*, Diiro worked at Ohio University for one year, as he researched on Agricultural, Environmental and Development

Economics. Previously, he was employed by the International Maize and Wheat Improvement Center (CIMMYT) for three years, where he was responsible for the Impact Assessment study of the Sasakawa Global 2000.

Diiro's responsibilities at *icipe* in the Social Sciences Unit include:

- Design and implementation of ex-ante, mid-term and ex-post evaluations of projects
- Use of excellent qualitative or quantitative skills to design data collection and its analysis
- Coordination with different projects to share knowledge and best practice for impact evaluation
- Research publication and other communications
- Participation in designing and conducting social, economic, and gender related studies with the project team as required
- supervision of students



Musdalafa Okello Lyaga
TOF Radio Assistant in the
Biovision Programme

Musdalafa Okello joined *icipe* as a TOF Radio Assistant in the Biovision Programme in February. He holds a B.A. degree in Media Journalism and Creative Writing from Namasagali University in Uganda.

Prior to joining *icipe* Okello had worked with various FM Radio Stations in Kenya and Uganda such as Radio Waumini, Kenya Broadcasting Corporation and Mbale 90.1 FM Station.

Okello's responsibilities at *icipe* include research of content, finding original stories and contributors, conducting interviews with farmers and resource persons, script writing and archiving programme material, among others.





NEW STAFF



Nancy McNally
Head, Public Relations and Communications

In mid-March, Nancy McNally joined *icipe* as Head of the Public Relations and Communications Unit in the Director General's office.

McNally, a national of the United States, spent the last 14 years in Rome, where she worked initially as a financial news correspondent for International Herald Tribune Television, before moving into Media Relations and Public Affairs for Rome-based organizations such as Caritas, the development arm of the Catholic Church, and the Food and Agriculture Organization (FAO) of the United Nations. McNally also worked

for more than two years as the Deputy in Public Affairs at the U.S. Embassy to the Vatican, during which time she managed the global media coverage of President Barack Obama's first official visit to the Vatican in 2009.

At FAO, McNally had a focus on Animal Health, which also introduced her to the work of *icipe* for the first time. She visited *icipe* in December 2012 as Head of a multimedia team to capture the success of the FAO/IFAD-supported project in Kisii using insecticide-treated nets around zero-grazing dairy systems to ward off biting flies and insects, thus improving animal health, incomes from milk and, as a direct knock-on benefit of eliminating disease vectors, human health.

McNally was also the director/producer of the 2013 video for World Food Day, FAO's flagship event every year. She has a Master's degree in journalism from New York University and an undergraduate degree in Foreign Languages from Georgetown University in Washington, D.C.



Richard Kyalo
Programmer in the Adaptation to Climate Change and Ecosystems Services Cluster

Richard Kyalo joined *icipe* as a Programmer in the Adaptation to Climate Change and Ecosystems Services (ACCES) Cluster.

Kyalo holds a B.Sc. in Mathematics and Computer Science from Jomo Kenyatta University of Agriculture and Technology.

Prior to joining *icipe*, Kyalo was a Data Manager and System Developer at Dots and Graphic Limited. He was charged with designing and developing mobile applications and web-based applications.

As a Programmer, Kyalo will be assisting in the development of a multipurpose classifier modelling tool for successful intervention of *icipe's* Research and Development activities.



Robert Nyikuli
Senior Accountant in the Biovision Programme

Robertson Nyikuli joined *icipe* as a Senior Accountant in the Biovision Programme. He holds a B.Com in Finance from Kenya College of Accountancy University.

Prior to joining *icipe* Nyikuli worked for Cimbria Group of Companies as an Assistant Finance and Administration Manager. He was in charge of financial reporting, project budgeting and accounting, grant funding and accounting and inter-unit accounting. He was also the lead person in the systems implementation of a new management information system.

As a Senior Accountant, Nyikuli will be involved in ensuring the financial controllership and integrity of all the Biovision FCP and BvAT development partner supported projects. He will also provide consolidated financial plans and reports for the projects.



Rosalynn Murithi
Office and Programme Manager, Director General's Office

Rosalynn Murithi joined *icipe* as an Office and Programme Manager in the Director General's office in February. She holds a B.A. (Hons) degree in Sociology from Egerton University, Kenya and a Master's in Rural Sociology and Community Development from the University of Nairobi. Recently she became a certified Project Management Professional (PMP), a global credential from the US-based Project Management Institute.

Before joining *icipe*, Murithi worked at the International Livestock Research Institute (ILRI) Biotechnology Theme and later the Animal Bioscience Program. For ten years, she was instrumental in establishing a Project Management Office that offered invaluable project information and feedback to a team of international scientists, research technicians and students. Murithi supervised administrative staff within the Program, and was responsible for overall administrative, financial, human resource and grants/program management within the Program. She has a good track record on managing multi-partnership research projects. Previously, the World Agroforestry Centre (ICRAF) employed her for close to three years as a Project Assistant on a UK Department for International Development (DFID)-sponsored study on the *Livestock Information Research Exchange*.

Murithi's responsibilities at *icipe* in the Director General's office will include providing executive administrative services to the Director General as well as providing support in resource mobilization and financial and technical reporting from lead scientists to partners.





NEW STAFF



Solveig Haukeland
Nematologist

Solveig Haukeland joined *icipe* in early February as a Centrum für Internationale Migration und Entwicklung (CIM) Integrated expert, on secondment. She is working in the Integrated Pest Management Cluster in the Plant Health Division.

Haukeland is Norwegian, with a background from Tanzania in her early years. Over the last 19 years, she has worked as a research scientist in Norway at the Norwegian Institute for Agricultural and Environmental Research (Bioforsk). Haukeland holds a PhD from the University of Reading in the United

Kingdom with a specialization in the field of nematology.

At Bioforsk her main responsibility was to obtain project funding to conduct applied research on integrated pest management with emphasis on biological control. Over the last ten years she has spent most of her time building expertise on nematodes as biocontrol agents of invertebrates (insects and slugs). More recently, she was actively involved in the supervision of MSc Students from Sokoine University of Agriculture in Morogoro, Tanzania.

Haukeland is here to contribute to increasing expertise in nematology at *icipe* and to expand collaboration within this field with national and international partners.



Venancia Ndo Wambua
Project Manager in the Biovision Programme

Venancia Wambua joined *icipe* as a Project Manager in the Biovision Programme on in March. She holds an MSc in Range Management from University of Nairobi and a BSc. in Range Management from the same University.

Prior to joining *icipe*, Wambua worked as a Project Manager at Birdlife International.

At Birdlife, Wambua was involved in conservation of the birds and biodiversity of the Lake Victoria Basin through community-led action and sustainable development.

As a Project Manager, Wambua will be managing and monitoring project activities and implementation of the Ecological Organic Agriculture (EOA) Initiative projects in Kenya and five other African countries.