

## **RISE Meeting 2011**

October 14-15, 2011

Imperial Royale Hotel

Kampala, Uganda

**Professor John Saka:** Welcome everyone to the RISE 2011 meeting.

**Professor Lillian Tibatemwa-Ekirikubinza , Deputy Vice Chancellor for Academic Affairs, Makerere University:**

Transcript of remarks at <http://sig.ias.edu/files/DVC%20MAKERERE%20UNIVERSITY.pdf>.

I commend RISE participants for excellent progress made in the last several years. Programs focusing on producing excellent university faculty and networking across institutions and departments are quite important. There is a critical need for multidisciplinary research and training, given the global nature of many challenges the world faces today. Development of regional curricula through RISE will grow capacity at RISE universities. Using science and technology as a tool for development, governments can increase country output and absorb/adapt technologies to local settings. Academic, private and public sector partnerships will all play an important role in these efforts. I appeal to the Commissioner for Higher Education and Sports, asking that the Commissioner report on the good work being done through RISE networks and consider integrating them into national S&T and development plans.

**Commissioner for Higher Education and Sports, Hon. Jane Egau Okou (on behalf of the Minister of Higher Education and Sports):**

Transcript of remarks at <http://sig.ias.edu/files/MINISTER%20OF%20EDUCATION%20SPEECH.pdf>.

DVC Tibatemwa's discussion of human resource development and capacity building aligns exactly with my thinking. Uganda is putting a great deal of emphasis on S&T at the moment, so we welcome efforts in this area. With low production levels, scarce jobs and energy demands exceeding capacity, Africa is faced with lots of important challenges. Africa needs to embrace science and technology; it cannot run away from it since it is a key tool and driver for development. I'm pleased to note that this conference is focused on networking within the sciences.

For too long, universities have been detached from the realities of communities that they serve. Though they are supposed to share transformative knowledge and skills with local communities, much of the knowledge does not leave the university. This needs to change, and it appears that this is starting to happen.

Powerful economies are driven by industrialization. Public bodies and governments must invest in basic research and higher end research. I wish to encourage you researchers to advise policy makers at all levels.

The government of Uganda has science and education policies. These regulate patents and copyrights. RISE networks should be sure that national laws recognize their discoveries; this will economically empower scientists.

Progress over the last 15 years has been significant, but there is much more to do. In Uganda, our government will continue to facilitate and coordinate S&T policies for national development. The ministry supports your efforts to implement projects that advance national development. The success of

university S&T networks lies in the ability to mobilize scientists, and the quality of this initiative will show itself through the strength of the partnerships.

You are most welcome to Uganda.

**Andrea Johnson, Carnegie Corporation:** Carnegie Corporation funds RISE as a piece of its development of the next generation of academics effort. We do not refer to our support as support for scientists but rather as support for academics—scientists as both researchers and teachers. Universities produce people who produce knowledge, so we see universities as an efficient place to invest funds.

The Corporation is interested in science as well as other academic fields. As outsiders coming in, we try to support national priorities and policies, one of which is S&T. Carnegie Corporation is happy to work with SIG to support the RISE networks. We believe that networks are powerful. There is an enormous amount of talent on the African continent, but it is critical for people to find each other and work together. It is also important to create a community that can mentor young scientists and lecturers and help to find collaborators.

**Phillip Griffiths, SIG:** When discussing the evolution of RISE, it is appropriate to begin with some observations about the Partnership for Higher Education in Africa (PHEA). As many of you know, the partnership began in 2000 with several American foundations and a \$200 million commitment. In 2005, another \$240 million was committed to the Partnership. Among the joint projects done by the PHEA were a bandwidth consortium and a systematic study of networks. The Partnership also looked in-depth at the issue of the next generation of academics (NGA). This issue was brought into focus at a meeting in Accra, when NGA was identified as a critical issue for African universities.

The Corporation has long supported science in the US; it funded a study many years ago that led to the founding of the US National Academy of Sciences. The president of Carnegie Corporation, Vartan Gregorian, is also a trustee of the Institute for Advanced Study and he has observed SIG's work over a number of years.

The RISE concept design meeting was attended by individuals in higher education, science and development. Subsequent meetings with university vice chancellors and faculty leaders helped refine the RISE concept to make it what it is today. Why is RISE about networks? All of you here are familiar with the reasons: the expertise and perspective present in a network supplements that available in a single university, sharing of instrumentation is cost-effective, and communication and cooperation between scientists and students in networks helps build scientific community both regionally and internationally.

The RISE competition was evaluated by an international committee of scientists and academics. Of 48 proposals received, 12 were selected as finalists. 5 networks were chosen to be funded. The culmination of the first three-year grant was our meeting in South Africa a year ago. I was amazed by the high attendance through the last presentation of the event; I've almost never seen this at the conferences I've attended over the years.

We are now in the renewal phase of our grant, and it is important to see what is working well and what needs to be further strengthened. What lies ahead? Sustainability and scaling up do. Over the last year, there have been systematic discussions between the World Bank and foundations about strengthening tertiary education in Africa. There will potentially be a significant amount of money available for regional tertiary education projects resulting from these discussions.

As far as Phase III of RISE, if there is a Phase III, it will involve a renewal process but it will also be competitive. There will be more said about this later in the meeting.

When looking ahead at the context in which RISE is operating, there are two general areas of partnerships that stand out as needing strengthening: partnerships between governments/universities and partnerships between the academic and private sectors. Government support for universities, scientists and science programs is critical. Secondly, applying the scientific work being done to development will ultimately require additional private funding.

Networking among universities is increasing in the US and in other places. I hope that the RISE networks can play a catalytic role in spurring collaboration and cooperation among universities in region.

**Julius Ecuru, Uganda National Council for Science and Technology (UNCST):**

PowerPoint presentation at <http://sig.ias.edu/files/UNCST%2014%20Oct%2011.pdf>.

The UNCST, established in 1990, is a government institution in the Ministry of Finance, Planning and Economic Development. Sister countries in the region have a Minister of S&T and a Council or Commission of S&T below the Minister. Uganda is unique in that the Council is placed in the Ministry of Finance.

UNCST coordinates and facilitates the development and implementation of S&T policies for development. We advise the government on S&T issues, oversee the conduct of research and development (R&D) and provide support for R&D and innovation. Uganda sees science, technology and innovation (STI) not as an end in itself, but as a means to develop new things and bring new products to market.

In the 1990s, the government of Uganda started to establish specialized R&D organizations such as the National Agricultural Research Organization (NARO) and the Uganda Industrial Research Institute (UIRI). However, if STI doesn't feature in the Ugandan Poverty Eradication Action Plan produced by the government, it does not get budgetary support.

The Millennium Science Initiative (MSI) in Uganda has been a \$33.5 million dollar initiative. Launched in 2007, it has funded 39 projects involving more than 250 scientists. Outputs include 955 BScs, 53 MScs, 30 PhDs, 68 teachers trained and 60 schools involved.

The political will for science in Africa must be translated into funding and action; many African countries are still investing less than the promised 1% of GDP on S&T. Major challenges remain, including issues about intellectual property management, procurement planning and financial management systems.

*Questions:* What do you do to encourage entrepreneurship in Uganda? What are the advantages of being housed in the Ministry of Finance?

*Answers:* UNCST organizes entrepreneurship conferences for the scientists we support and we encourage our projects to involve multidisciplinary teams. We also support business innovation. For example, we support the Business Innovation Center in the College of Agriculture at Makerere University.

It is interesting to be housed in the Ministry of Finance. People assume that you have access to money when you're located there, but this is not always the case. You have to work hard to garner funds. Implementing policies in areas such as biotechnology can take 15 years. However, with pressure from

society to give more priority to science, people in the Ministry are now beginning to pay more serious attention to it.

**AFNNET presentation by Robinson Mdegela:**

PowerPoint presentation at <http://sig.ias.edu/files/AFNNET%202011%20PRESENTATION.pdf>.

To date, AFNNET has trained 17 PhDs, 3 Postdocs and 20 MScs. There are 22 people on the mentoring team, and so far there have been 10 networking events. Additionally, 4 patents of natural product extracts have been registered, and 8 papers have been published in the last 8 months. AFNNET members are writing joint grant applications and holding stakeholder meetings in AFNNET countries. Continuing challenges include funding for instrumentation and infrastructure.

*Question:* Uganda has good policies, but sometimes implementing them is difficult. What strategy do you have to link your work to policies happening right now?

*Answer:* We are working to put in place strong links between policy and policy implementation. Each network needs to build linkages with national institutions.

*Comment:* We are looking forward to opportunities to showcase achievements by our researchers. It is good to have occasions where we can have the business community come interact with scientists and learn what has been created and done. It is good to link these S&T efforts to private funding and entrepreneurship.

**SABINA presentation by John Saka:**

PowerPoint presentation at <http://sig.ias.edu/files/SABINA%20Oct11.pdf>.

SABINA aims to have graduated 20 PhD and MSc students by the end of 2013. In addition to the parallel POL-SABINA project funded by the EU, SABINA has assembled an international advisory committee (IAC); the plan is to have them come do external examinations of the SABINA students. SABINA has been networking with AFNNET and WIORISE; through these connections, a WIORISE student lacking access to instrumentation at UDSM was able to use instrumentation at Wits under the supervision of two SABINA advisors. Going forward, one of the focal areas for improvement will be to have at least one or two PhD students supervised at UDSM so there is a more equitable distribution of students across SABINA institutions.

*Question:* How do you finance meetings of the IAC?

*Answer:* We fund them through the POL-SABINA grant and invite the IAC to participate in annual meetings.

**SSAWRN presentation by Denis Hughes:**

PowerPoint presentation available at [http://sig.ias.edu/files/SSAWRN\\_Director\\_report\\_2011.pdf](http://sig.ias.edu/files/SSAWRN_Director_report_2011.pdf).

SSAWRN is networking at major international conferences and working to balance academic research capacity and technical skill. The network expects that some students will be the “faculty of future” and that others will contribute to better water resources practices in government and the private sector. Students at Rhodes have been assisted by a “writing coach” when editing their thesis chapters, and this seems to be beneficial to both students and supervisors. SSAWRN students have gotten additional

funding from numerous organizations, including SIDA/SAREC, UNICEF, Faculty for the Future, the NRF, the SADC Ephemeral River Basins project, Gates, in-kind support from universities and others. A big focus now is on helping students graduating from RISE with their next steps. As students move on after their degrees, how will we be supporting them?

*Question:* How can other networks benefit from a writing coach?

*Answers:* The concept is useful to replicate. Students go one-on-one with the coach after they've written a chapter of their thesis. Rhodes hired a retiree who lives in town to serve as ours.

**WIORISE presentation by Musa Chacha (on behalf of Margareth Kyewelyanga):**

PowerPoint presentation available at [http://sig.ias.edu/files/WIORISE\\_Kampala\\_14-15%20October%202011.pdf](http://sig.ias.edu/files/WIORISE_Kampala_14-15%20October%202011.pdf).

WIORISE funds have had a significant impact on the campuses involved. In 2012, 5 PhD students and 3 MSc students will graduate. 4 WIORISE students will be attending the WIOMSA 2011 Conference in late October; it will be a good networking opportunity for them. Visiting researchers at places including UEM have been able to use the equipment gained through RISE. IMS is now networking with the Mauritius Research Council and will be doing a training session on seaweed farming for the council. WIORISE is excited about the newly produced TWAS booklet featuring IMS.

**AMSEN presentation by Lesley Cornish:**

PowerPoint presentation available at <http://sig.ias.edu/files/AMSEN%20Kampala%202011.pdf>.

AMSEN focuses on co-supervision within the nodes and also across nodes. Recent developments in AMSEN include student Bernard Odera joining the Materials Science International Team, an AMSEN seminar at Wits in September, and a second AMSEN workshop being planned in Nairobi for March 2012. One of the challenges AMSEN faces is that sourcing materials for research from other parts of the world is hard, as there isn't a lot of credibility given to African requests for procurement. AMSEN continues to hold specialized short courses/training/workshops open to students across the network. In September, AMSEN held a joint short course with the African University of Science and Technology in Abuja co-taught by Lesley Cornish and Wole Soboyejo from Princeton University. Several AMSEN students attended the two-week course.

**Carnegie Corporation Opportunities presentation by Andrea Johnson:**

Carnegie Corporation supports both the humanities and the sciences. However, the Corporation is not a provider of major instrumentation grants and it doesn't fund projects forever. Carnegie Corporation is happy to act as a reference for grant applications to other funders if this is helpful. The Corporation might also be able to provide small grants to current Corporation grantees to help meet a required matching amount for larger grants. To be sustainable, networks will need to proactively work towards future funding.

*Question:* How can my university (a non-RISE one) get funding from Carnegie Corporation?

*Answer:* There is only so much money to go around and there are a lot of universities on the continent. One way to tap into Carnegie Corporation funding would be to partner with universities that already work with the Corporation. Also, as more funds become available to African universities (such as potential World Bank funding) there will be more opportunities to tap into.

*Discussion:* RISE leaders talked about the difficulty of retaining academic staff at universities since the salaries are smaller than those one would earn in industry; it was noted that money is not the only retention factor. Working environments are also a critical consideration for retaining academic staff.

**TWAS (The Academy of Sciences for the Developing World) presentation by Daniel Schaffer:** TWAS is a scientific society that seeks to support and publicize the work of excellent scientists in the developing world. TWAS provides a number of grants to researchers, including \$15,000 grants to young researchers in Africa and elsewhere. Excellent collaborative research programs can apply for \$100,000 grants from TWAS to be spent over 3 years. TWAS offers more than 300 postgraduate fellowships and is currently talking about including South Africa as a host country for these fellowships. TWAS also helps fund associateships, where researchers visit other countries 3 times over 5 years to engage in collaborative work. TWAS awards a number of annual prizes. Currently, the focus is on empowering TWAS regional offices to take on more responsibility over time and to decentralize operations from Trieste. To that end, TWAS has been holding regional conferences for young scientists, and it has an affiliate program that allows up to 5 excellent young scientists from each region to be members of TWAS for a period of 5 years. TWAS also engages in public outreach activities.

Areas of potential collaboration between TWAS and RISE include further publications (TWAS has already published booklets about IMS and ORI through its “Centers of Excellence” series) and possibly TWAS-RISE fellowships, structured along the lines of ICIPE fellowships.

*Discussion:* The age problem, which had also been discussed at the 2010 RISE conference, was mentioned as a major disadvantage for RISE students. The age limit was put in place by the Council of TWAS. However, since TWAS doesn’t always fill all of the available spots, it was suggested that TWAS consider older applicants after reviewing the applications from people within the age limits; Danny Schaffer agreed to look into this. He was asked about how TWAS works to get governments in member countries to support science. TWAS tries to work with the Ministries of Science and Technology in member countries by inviting the ministries to their conferences, by preparing white papers on issues of interest, and by having high-profile TWAS members meet with and speak to government officials.

**The Council for the Advancement and Support of Education (CASE) presentation by Ben Prasadam-Halls, Director of International Operations:**

Philanthropy in Africa does occur. Despite popular misconceptions, it is not easy to collect funds for universities in the US and it is even more difficult in Africa. Institutional advancement is a labor-intensive effort that requires dedication to strengthening university relationships. CASE members include more than 3,400 higher education organizations and NGOs in 74 countries. CASE has worked in Africa since 2003 and has held an annual conference for advancement professionals and university leaders. More than 120 African universities have participated in the annual conference.

Fundraising and resource gathering is not just for fundraising professionals at universities; it requires people like the ones sitting in this room to speak passionately about what you do and how funding enables you to do your research. CASE has a new partnership with Carnegie Corporation to hold two in-person practitioner conferences and a vice chancellor conference in partnership with AAU. CASE will also produce a study of lessons learned in Africa, and it will give each university affiliated with Carnegie Corporation (including all of the RISE universities) access to four online training courses that deal with institutional advancement.

*Discussion:* CASE is not involved in quality assurance. The premium membership option that CASE offers allows access to all CASE materials; they normally encourage at least one person at a CASE member institution to sign up for premium membership.

**The Inter-University Council for East Africa presentation by Mayunga Nkunya, Executive Secretary:** IUCEA does quality assurance for eastern Africa; it was established in the wake of the breakup of the University of East Africa. Though funding was paltry at first, in the 1980s vice chancellors signed a memo of understanding and affirmed their support. IUCEA exists to provide advice on academic matters and to make sure that education standards are compatible across the region; it coordinates university cooperation.

IUCEA supports exchange programs and is working to set up a research repository for work done in eastern Africa. One of the major programs IUCEA works on is the Lake Victoria Initiative VicRes: [www.vicres.net](http://www.vicres.net).

*Discussion:* IUCEA links up with business councils by inviting them to attend IUCEA meetings. John Kabasa proposed that IUCEA chair a meeting to examine scaling up some of the initiatives that are happening through RISE; Mayunga Nkunya agreed IUCEA would do so. He noted that IUCEA is hosting a conference in 2012 focusing on value addition as it relates to universities, and he invited RISE participation in designing that conference.