African urged to accelerate implementation of continental Science strategy

African countries have been challenged to take more deliberate steps in implementing the Science, Technology & Innovation Strategy for Africa 2014-2024 (STISA), for accelerated transition of African countries in to innovation-led and knowledge-based economies. South Africa minister for Higher Education and Training, Hon. Naledi Pandor said that with STISA being at the heart of the attainment of the continent’s development blueprint Agenda 2063, governments needed to play their role in facilitating growth of Science Technology and Innovation (STI), in their countries. She told the official opening session of RUFORUM Biennial Conference in Nairobi that among other things, universities and researchers must be assured of, are academic freedom, and freedom of expression in doing their work. She said this would allow them the independence to write independent reports for implementation by policymakers, even when such reports were unpalatable. On the other hand, governments must continue to strengthen National Science Councils whose work is to ensure that science is mainstreamed in government development plans, Hon. Pandor said. They must promote interdisciplinary, collaborative and research initiatives, driven by a concrete national science and innovation agenda, the minister observed. This however, Hon Pandor noted can only be achieved when governments increased funding the for the sector, to boost Africa’s innovation capacity. On her part, Uganda’s first lady and minister of Education and Sports, Janet Kataaha Museveni told the gathering that African universities needed to be supported to continue producing high quality human capital, much needed for development. She also said that her country had continued to make strides in youth training, increasing the numbers enrolling in universities, including bridging gender parity in enrolment in higher education institutions. While calling for intensified scientific research in agriculture, the Uganda first lady asked African governments to support RUFORUM financially to enable the continental body meet its noble mandate, and pledged that Uganda will do continue to play its role in supporting the body. During the official opening ceremony a total of seven eminent persons were recognised for their contribution in growth of higher education and science on the continent. They included Cote D’Ivoire minister for Solidarity, Family, Women and Children Prof Bakayoko-Ly Ramata formerly minister for Higher Education, and immediate former African Union commissioner for Human Resources, Science and Technology Dr Martial De-Paul Ikounga.

Adopt ICT in Higher Education to improve access

Universities in Africa must adopt use of Information and Communication Technology (ICT) to among others be able to cope with rising demand for higher education. The use of ICT will also ensure that as many of Africa’s young people access education, something they would not do with continued overreliance on the traditional classroom, Carnegie event for postdoctoral students at the day 1 of RUFORUM Biennial conference in Nairobi heard. While the demand for education was growing across continent, there was no matching growth in terms learning infrastructure, calling for a paradigm shift in the way learning is delivered by moving away from traditional models, to use of ICT-supported models of delivery. Prof. Jude Lubega of Uganda Technology and Management University (UTAMU) said. Over the last ten years, he said there has been a growing disconnect between learners and the teaching staff, with lecturers lagging behind their students in adoption and use of technology, a situation that left students with a higher access of information than their teachers, he observed. While this was a generational problem where the current crop of lecturers grew up and went to school before the coming of ICT age, they had no choice but to change and start using technology in teaching and research. “In the current ICT age a young university graduate accesses more information in one year that all the information his grandfather absorbed all his lifetime,” Prof Lubega quipped. E-platforms to aid in teaching did not have to be complicated or high tech, and could start with use of older tools such as the radio and television, and modern tools for detecting plagiarism. Social media platforms such as Facebook, WhatsApp and GoogleTalk were tools the UTAMU Deputy Vice Chancellor said he was using with his students, in discussing various topics and in sharing ideas. Universities he implored must now accept e-learning as a legitimate model of learning now that the world had moved from “industrial age to digital age”. “Ultimately we must accept that going forward research will equally depend more on digitally generated data,” he concluded.

Prof. Mbiti Peter, Vice Chancellor University of Nairobi, makes remarks during the ministerial round table Meeting
Africa needs to have a stronger Science, Technology and Innovation (STI) to tackle the challenge of food security, according to the Ministers from across the continent who attended the Ministerial Roundtable meeting at the ongoing RUFURUM conference in Nairobi. However this can only be possible if the higher education system provide the relevant human resources, research culture and knowledge based on innovation. The ministers unanimously agreed that access to the higher education system in Africa is still challenged by increased demand from the expanded primary and secondary education.

“Research in our universities is still low as compared to the global output. Universities have to work together with the private sectors to boost research in their institutions,” said Amina Mohammed, Kenya’s Cabinet Secretary for Education. The ministers also agreed that there is an increase in unemployment of the graduates because the formal sector is not at par with the increased number of graduates from the universities every year. Therefore it is important that graduates look for other self-employment opportunities like entrepreneurship opportunities. But the universities have to equip them with the relevant skills and knowledge to enable them do so. It was noted that the less number of qualified staff with PhD are constraining the teaching, research that can support STIs in the universities.

The concerns by the ministers are indicated in the communique that will be agreed upon after consultations are done by the ministers with their governments after the conference. The roundtable meeting provided a platform for countries to dialogue on the transformation of higher education system in Africa, higher education partnerships in line with the continent’s development agenda with the support of STIs.

Korea Land Reforms

African countries through their higher education can learn lessons from the experience and expertise of Korea for its ongoing transformation, according to experts at the high level policy dialogue on sharing the higher education best practices from the Republic of Korea. Prof Tai Cheol, of Chungnam National university, Korea and former Vice President of International Commission of Irrigation and Drainage, said lessons from industrialized countries show that higher education play a key role in agricultural transformation leading to economic growth of a country. It took Korea just 19 years to industrialize growing from a Gross Domestic Product of USD 79 in 1960 to over USD 30,000 in 2017. “African countries will do well to learn from specifically the successful land reforms Korea undertook in order to boost industrialization, entrepreneurship and empowerment of the farmers.” said Prof Tai. “This was only possible because the country implemented the reforms in an honest, meritocratic way with focus on industrializing the country.”

The Korean land reform, he said was also aimed at breaking ancient feudal social, income and power inequalities, between landowners, feudal lords and traditional authorities, and ordinary rural dwellers. “The main objective was turning former owners into entrepreneurs who would create businesses in the manufacturing sectors the government had identified for development,” added Prof. Yun Seon from Handong Global University in Korea. “The government at the same time guaranteed low-interest loans for them getting into business.”

The land he said was redistributed to recipients under strict conditions. Would-be beneficiaries were assessed based on a scorecard. Prof. Fanuel Tagwira, Zimbabwe’s permanent secretary, ministry of higher education, said universities need to take a lead role in the transforming the agricultural sector on the continent through private-public university partnerships to improve the production, support agricultural research and help in the marketing of the farmer’s produce.
Africa continues to face monumental challenges of improving the social welfare of Africans including poverty, climate change, food insecurity, water scarcity, and diseases, according to experts at the RUFORUM plenary session on Unraveling University, Community and Private Sector Engagement for Agriculture transformation in Africa. They agreed that education reforms, skills development and scientific research for innovation, employability and economic transformation; nutrition-brain power are key to the African transformational Agenda. Hendrina Chalwe, Manager, Education and Skills Division African Development Bank said there can only be growth in the agricultural sector if universities consider inclusive and Green Growth-Power and light up Africa, Feed Africa, Industrialize Africa, Integrate Africa, Improve the quality of life for the people of Africa. “There is need to have transdisciplinary approach oriented to functional, structural and institutional innovations that include improving research quality and output, emphasis on policy-oriented, problem solving research, establishment of new programmes, education systems, resource mobilization, and human and institutional capacity, pursuit of creative partnerships and market oriented collaboration with industry,” said Dr Chalwe. It also emerged that African Universities’ role is supporting the implementation of every SDG, through learning and teaching, research, organizational governance, culture and operations and external leadership. In this regard, emphasis should be placed on partnerships at all levels. SDG4 which emphasizes on achieving inclusive and equitable quality education and promotion of lifelong learning opportunities. Universities therefore need to focus at substantially increasing the number of youth and adults who have relevant skills, for employment, decent jobs and entrepreneurship. On Human Capital Youth and Skills Development, graduates need to incubate new larger scale agri-business and access financing for growing these businesses, catalyze and sustain high level political will and leadership on nutrition in Africa. According to the experts, stimulating technical advance in industry is a necessity to promote agricultural transformation. Policy makers across the continent therefore need to stimulate universities to become more entrepreneurial, engaging more productively with the private sector.

African women scholars are being urged to aggressively go for international opportunities, and shun perceived cautious approach in competing for competitive openings available to them. They should not fear competing with men for international scholarships, fellowships, grants, leadership positions and other opportunities for career advancement they are suited for, says Carnegie Corporation of New York programme officer Andrea Johnson.

“In the past a trend has been observed where women took a very conservative approach in applying for international opportunities unless they felt they were confident of winning such positions,” Johnson told a session on Women in Science on the third day of Africa Higher Education and RUFORUM Biennial Conference in Nairobi, Kenya. This she observed was in contrast to men who aggressively pursued opportunities whenever and wherever they found them, sometimes even when they did not qualify or stand a chance of winning. Female scholars also tended to go for opportunities that were closer to home perhaps informed by the need to be closer to their families, often putting them at a disadvantage in taking up lucrative international opportunities, Ms Johnson observed.

The remedy to the problem she suggested was the academic community working to build the confidence of female academicians at an early age, and where possible foregoing considerations that often unnecessarily disadvantaged them.

“Would it not be good for funding institutions just asking for PhD qualifications as opposed to postdoctoral qualifications so as to accommodate more women, when there is no much difference between the two?” she posed.

Such action would not amount affirmative action or amount to compromising qualifications, the officer said.
There is an imbalance between the agricultural offer from universities and Technical and Vocational Education and Training (TVETs) in Africa because of too many universities without practical, skills-oriented training, according to experts at a plenary session on Skilling Africa's Youth: the role of TVETS. Governments have focussed too much on developing universities as the main focus of higher education, to the detriment of skills and TVET development. Too many TVETS/colleges have become universities: ATVETs should not aspire to be universities, the types of education delivered by each should be recognised as different, for different purposes, and incentivised accordingly.

"ATVET programmes in the future will be based on Competency-based Education and Training (CBET), not on academic education," said lead speaker Richard Hawkins of International Centre for development oriented Research in Agriculture (ICRA).

"The linkages between the TVET sector (under Ministries of Education) and Agricultural sector are weak – often each sector is not aware of the other's needs, capabilities and resources."

It was agreed that the linkages between education and industry (private sector) is one of the most limiting factors in effective education, labour force, skills and entrepreneurial development. ATVET farms need to be run on a commercial basis. Even so, it is not easily for ATVETs farms to replicate the modern production practices of specialised agriculture and value chain (due to resources needed).

The private sector can provide internships (currently underutilized), as well as teaching input, production & processing facilities for skills development, etc. However, they will only do this if there are financial incentives, or if there is tangible improvement in the alignment of their needs with TVET programmes.

African universities need to audit the extent and manner in which they have implemented mainstreamed gender issues in their ranks. Years after the coming of tens of international conventions, national laws, rules and guidelines, it was unacceptable that women were still struggling to make a remarkable presence in science and academic leadership in Africa.

According to Vice Chancellor of Uganda’s Muni University Prof. Christine Drazoa, it was improper that even with all the progressive documents in place, Africa for example had around only 40 women Vice Chancellors from the nearly 1500 universities on the continent. Universities and higher education in general needed urgent reforms to overcome institutional weaknesses that could be contributing to low number of women scientists in Africa, she told a session on Increasing the Pool of Women Scientists in Africa, on Thursday.

The views were shared by Wanjiru Kamau-Rutemberg head of African Women in Agriculture Research and Development (AWARD), who said there was need for institutional reforms in universities, to make them better support and mould women scientists.

"The time has now come to transform universities and research institutions to enable them do more to support and nurture women scientist," she told the event.

According to University of Eldoret’s Elizabeth Njenga universities, charities, donors and governments need to review the conditions they set when offering scholarships, fellowships and other opportunities in order to attract female applicants.

"Many of the opportunities offer have low and unrealistic age limit which locks out a lot of women who would otherwise go for such openings," the professor noted.

A lot of women she said delayed before attaining high qualifications such doctorate and post-doctorates owing to family responsibilities, acquiring such credentials later in life, thus the need to up the age limit to embrace more women.

It was therefore time Njenga said for them to change the way they designed the opportunities to equally accommodate both genders.
African universities must be strengthened if they are to effectively serve as knowledge bases for agriculture and boost the continent’s bid to attain food and nutritional security. They should be adequately resourced for them to act as important backup in attaining a “science propelled” food security continent, with a thriving agriculture sector.

According to Yemi Akinbamijo, Executive Secretary of Forum for Agriculture Research in African (FARA), it was not possible to divorce science from food and nutritional security, thus the need for increased funding not just for the institutions, but also for the wider Research and Development (R&D) sector as well. “We should not expect improvement in Africa food security situation when investment in R&D remains low, and when universities as knowledge hubs remain under-resourced,” Akinbamijo told a session during the final day of the Sixth Africa Higher Education Week and RUFORUM Biennial Conference in Nairobi.

“Agriculture is biology and without science there is no food security,” the main speaker during the session on Strengthening Sustainable Food and Nutritional Security in Africa declared. Universities Akinbamijo said should be empowered to produce fit-for-purpose agriculture graduates, noting that levels of agriculture production will always be proportionate to the quality of students produced. There was therefore a strong case for curriculum reform in universities so that well-rounded graduates, competent not only in agriculture science but also in policies and “poli­cies of agriculture” were produced.

Africa’s investment on R&D in agriculture was too low at 0.4 percent of Gross Domestic Product (GDP) to allow for any revolution in agriculture, when compared to 2.6 percent in North America, calling for a need to raise investment in the sector. The food and nutrition security situation in Africa remained precarious, according to Ibrahim El Dukheri, Director General of the Arab Organisation for Agriculture Development (AOAD), with the continent continually relying on food imports to feed her people.

All the four pillar of food and nutritional including security availability, accessibility, sustainability and utilisation so far remained a mirage, ensuring imbalances well captured malnutrition and urban over-nutrition and obesity.
Benin to Host 2021 RUFORUM Conference

The Republic of Benin is the next host of the Seventh Africa Higher Education Week and the RUFORUM “Triennial” conference which will take place in 2021. The decision to pick the West African country was announced by RUFORUM Executive Secretary Adipala Ekwamu, who also announced that the event will henceforth be taking place triennially, away from established tradition of two years biennial cycle. The director told the closing ceremony of the sixth Africa Higher Education Week and RUFORUM Biennial Conference that interest and support for the agriculture and higher education body continued to grow across Africa and beyond, thus the decision to pick a west African, French-speaking country as the next host. This Prof Ekwamu said was exemplified by application and admission to membership of 22 universities bringing to 105, the total number of RUFORUM member universities drawn from 37 countries.

Earlier Benin minister for Higher Education and Scientific Research Marie Odile Attanasso in her address had made a strong for her country offer to host the 2021 event, saying that her government would mobilise resources and manpower to ensure a successful event. “The time has come for West African region to play more visible role in RUFORUM, and it is for this reason that we feel that beginning with my country would like to host next conference, and move RUFORUM activities from East and Southern Africa” she told the closing plenary.

During the event 23 young innovators, including several women from across the continent were feted and issued with certificates in recognition of their unique innovations. They were selected from more than an overwhelming 1200 applications sent in by youth from all over the continent.

Majority of the innovations were in solutions for challenges facing smallholder farmers, and are based on mobile phone platform, a gadget widely used in Africa that serves more purposes than just communications. Prof Adipala disclosed that the innovators will each receive US$2000 seed-money from RUFORUM to help them scale and commercialise prototypes.
Conference theme: “Aligning African Universities to accelerate attainment of Africa’s Agenda 2063”.
Biennial 2018 Digest
17-26 October

Sixth African Higher Education Week and RUFORUN Biennial Conference, Nairobi, Kenya

Conference theme: “Aligning African Universities to accelerate attainment of Africa’s Agenda 2063”.

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