Message from the Director General

Welcome to the seventh offering of our monthly e-newsletter. In this month, a lot of events happen at the COSTECH. We participated at the 2012 Nanenane exhibitions an event that was held nationally at the Nzuguni Fair Grounds, in Dodoma Municipality. It was beneficial for the COSTECH to attend as the theme, “Kilimo Kwanza: Applying Science and Technology to meet the needs of a rising population” reflects on what the Commission is striving to achieve.

In another event, the Commission through the Water Efficient Maize for Africa (WEMA) project, managed to harvest, for the second time, the drought tolerant maize varieties that were planted at a confined field trial site at Makutupora, in Dodoma. The event that was also attended by the Dodoma Regional Commissioner proves not only that COSTECH is committed to the development and transfer of technology in physical things, but also in serving the Tanzania community in terms of food security.

The Commission hosted the Beijing Municipal Science and Technology Commission delegation. This was a second visit following the April meeting that laid a foundation between the COSTECH and the BMSTC on exploring and promoting scientific collaborations in areas of technology transfer, investment in biotechnology, solar energy and other areas of life sciences. In order for Tanzania to advance technologically it needs to partner with other developed countries such as China. I hope that our conversation we just initiated will lead us somewhere where each part can benefit from the other.

This month also, the Commission participated at the stakeholders’ meeting aiming at the implementation of Education and Management Information System (EMIS) and E-library systems for Higher Education and Research Institutions in Tanzania (HERIs). It is good to see that Tanzania is moving fast in this initiative. For so long, as a country, we needed to have a body that will collect and register all theses and dissertations from higher learning and research institutions. Although the COSTECH is mandated to coordinate all research activities in the country, having the EMIS will help reduce the risk of duplicating researches among the HERIs.

Finally, I would like to thank the people who have worked tirelessly in preparing this e-newsletter and would like to invite all of you to contribute to it in the future issues.

I wish you a good reading.

Dr. Hassan Mshinda.
TAAS launches its historical book

On 2nd August, 2012 the Tanzania’s Prime Minister, Hon. Mizengo Pinda joined the Tanzania Academy of Sciences (TAAS) to launch its first ever historical book. The event that took at the COSTECH Conference Hall was also attended by the Hon. Professor Makame M. Mbarawa, the Minister for Communication, Science and Technology and other dignitaries.

Delivering the introductory remarks the TAAS President, Professor Esther Mwaikambo thanked the Prime Minister for responding to the call and assured him that the event that is taking place is one of its kind in the history of Tanzania especially in the field of science.

Prof. Mwaikambo also noted that the book titled, Lighting a Fire: 31 Inspiring Stories of Eminent Tanzania Scientists, which is published by Mkuki na Nyota Publishers, is a collection of thirty one articles about roads travelled by Tanzania men and women who, largely started from poverty condition, went through a series of adversities, but have succeeded in becoming distinguished scientists in different disciplines.

Accounting for the historical background of the TAAS, Prof. Matthew Luhanga, the 1st Presidents of TAAS, said that the idea of establishing the TAAS was initiated by a few Tanzanian scientists and was established on 24th February, 2004 with the cooperation and support from the government of Tanzania and it was registered as a Non-Governmental Organization scientific body on the April 13, 2005.

Prof. Luhanga pointed out that the primary objective of TAAS is to cooperate and collaborate with the government, other scientific organizations and the general public in the promotion, advancement and scholarly application of all aspects of science and technology for the socio-economic development of Tanzania.

Summarizing up the content of the book, Professor Keto Mshigeni, the TAAS Secretary General and member of the Executive Committee pointed out that the book aims at informing the government and the general public about the pioneer national champions in science, who are indeed role models in their scientific field.

Prof. Mshigeni mentioned that the book takes the indigenous African approach to educating the youth; knowledge is encapsulated through philosophy and ethics, stories, riddles and proverbs and in so doing each will generation pass on to the next generation the collective knowledge and memory of its achievements. He added, “Young African aspiring scientists need role models and here are thirty-one of them, men and women. It’s our hope that the book will also play an important role towards inspiring our young scientists towards pursuing studies in science subjects.”

Prof. Mshigeni also mentioned that the title of the book is taken from William Yates line, “education is not the filling of a pail but the lighting of a fire” which captures exactly what the TAAS hopes the story inside will achieve.

Addressing the public, the Prime Minister, Hon. Mizengo Pinda said that he is honored to be associated with TAAS and he commended the Academy for providing merit-based practical and scientific solutions to problems hindering development in the country.

Hon. Mizengo Pinda revealed that after reading the book through, he too got inspired to write his own story. He added, “I think I am now fired up to write my own story. I am sure I have something to tell about myself. My story might not be very inspiring to all of you; especially those who have always seen me on television from time to time, but I hope the young generation will come to learn that there was once a Prime Minister named Mizengo Pinda who did the ABCs, and in so doing I’ll be helping the society.”

The PM took the opportunity to congratulate every contributor and urged those scientists who were not able to write their own stories to do so in the coming second volume.

After launching the book, the PM spent a bit of time at the COSTECH and was briefed about issues in general and COSTECH’s role in particular and later on, he visited the Dar Teknohama Business Incubator program (DTBi). DTBi an innovation corridor that nurtures the innovation spirits of young entrepreneurs, including startup ICT companies.
COSTECH participates at 2012 Nanenane exhibitions

From August 1st – 10th, 2012 the Tanzania Commission for Science and Technology (COSTECH), participated on the Nanenane 2012 Exhibitions that was held at the national level at the Nzuguni Fair Grounds, in Dodoma Municipality.

The exhibitions were opened by the Zanzibar Second Vice President, Ambassador Seif Ali Idi, and the theme for the exhibitions for this year was “Kilimo Kwanza: Applying Science and Technology to meet the needs of a rising population.”

Below are some of the snapshots taken during the event:

Fig. 2: The Zanzibar Second Vice President, Ambassador Seif Ali Idi (wearing a white cap) officially opens the 2012 Nane Nane Exhibitions at Nzuguni Fair Grounds in Dodoma.

To inspire visitors, especially Dodoma Region farmers, at the pavilion, the COSTECH staff explained and displayed various promotional materials together with the finding opportunity booklets, WEMA project catalogues, research registration, innovation, technology transfer, cluster formation, science awards and numerous banners, brochures and flyers.

People from all walks of life had an opportunity to learn about the core functions of the Commission and how they can benefit from the opportunities that are available. COSTECH received a lot of accolades from many visitors, especially farmers and agricultural extension officers for being close to supporting Agricultural development in Tanzania and also providing financial and technical supports to farmers and agricultural research institutions.

Fig. 3: Mr. Festo Maro from COSTECH explains something to the visitors who identified themselves as agricultural extension officers.

Fig. 4: Dr. Alois Kullaya (left), the WEMA project coordinator, explains the project to one of the visitors.

Fig. 5: Mr. Omary Bakary (right) from COSTECH listens to a farmer (middle) who rises his concerns about the growing of surghum.

Fig. 6: Mr. Festo Maro from COSTECH points out a list the opportunities available at COSTECH.

Fig. 7: Mr. Omary Bakary from COSTECH listens as university students ask him some questions.

Fig. 8: Mr. Festo Maro from COSTECH explains to the visitors about the opportunities available at COSTECH.

Fig. 9: Mr. Omary Bakary from COSTECH listens as a farmer explains to him about the support he needs to extend his mangoes-growing farm.

Fig. 10: The Vice President, Dr. Gharib Bilal officially closes the 2012 Nane Nane Exhibitions at Nzuguni Fair Grounds in Dodoma.
On August 23rd, 2012, the Dodoma Regional Commissioner, Dr. Rehema Nchimbi participated on the harvesting of the drought tolerant maize varieties which is under the auspices of the Water Efficient Maize for Africa (WEMA) project, on a confined field trial site at Makutupora, in Dodoma.

Briefing the Regional Commissioner about the progress of the project, Dr. Alois Kullaya, the WEMA Country Project Coordinator pointed out that in Tanzania, the WEMA project has enhanced the national maize breeding capacity and has provided the first opportunity ever; to develop and implement a confined field trial of a genetically engineered crop. It has developed not only the infrastructure required for safe implementation of confined field trials, but has also enhanced technical and human resource capacity in maize breeding and in dealing with biosafety regulatory issues.

According to Dr. Kullaya, maize is the most important food security crop in Tanzania. The annual production is estimated at 3.34 million tons produced on a total area of 2.3 million ha. The average yields are low, about 1.2 tons/ha, compared to the world average of more than 4 tons/ha. Some of the major constraints that contribute to the low yields include incidences of pests and diseases, low application of improved agro-inputs such as improved seed and fertilizer as well as incidence of abiotic stresses such as declining soil fertility and drought. Drought is one of the main constraints to production and productivity of maize, which is the most important food security crop in the country.

To address the devastating effects of drought as a result of climate change, soil fertility, pests, diseases and others, the Tanzania Commission for Science and Technology (COSTECH) and the Department of Research and Development of the Ministry of Agriculture Food Security and Cooperatives in collaboration with other partners since 2008 implemented the WEMA project that aims to develop drought tolerant maize varieties by using conventional breeding, marker assisted breeding and modern biotechnology.

He noted that the WEMA project is a private-public partnership coordinated by the African Agricultural Technology Foundation (AATF) between National Agricultural Research Institutions in Kenya, Uganda, South Africa, Mozambique and Tanzania, Monsanto and the International Wheat and Maize Improvement Centre (CIMMYT). The goal of the project is to contribute to food security in Sub-Saharan African countries by developing and deploying to small-scale farmers drought tolerant and insect protected maize varieties on a royalty-free basis.

The project started in Feb. 2008 and has been planned for two phases of five years each. Phase 1 of the project will end in December 2012. It is funded by a grant from the Bill and Melinda Gates Foundation and Howard G. Buffett Foundation through the African Agricultural Technology Foundation.

According to Dr. Kullaya, in Tanzania, the project operates at 5 sites namely, Ngaramtoni, Dakawa, Makutupora, Ilonga and Kabuku. The trials at Dakawa, Makutupora and Kabuku were harvested in August 2012 and are being analysed, while harvesting at Ngaramtoni is scheduled to take place in September 2012.

Dr. Kullaya also pointed out that the project has made a very good progress in the development and evaluation of conventional drought tolerant maize hybrids. He mentioned that five very promising drought tolerant conventional hybrids have been identified and these will be nominated for testing in national performance trials in 2013.

He however revealed that the biggest challenge facing the WEMA project in Tanzania is the delay in planting the confined field trials of transgenic drought tolerant maize varieties because of the implications of strict liability clauses contained in the National Biosafety Regulations (2009).

The WEMA partnership has advised the government to amend the Regulations from strict to fault-based liability in order to allow this and similar projects in future to proceed.

Continued on pg. 5.
Addressing the farmers and other stakeholders who participated during the harvesting exercise at Makutupora confined field trial; Dr. Nchimbi commended the WEMA experts for their efforts to bring agricultural revolution in the country. She noted that in order to curb the needs of a rising population, the techniques we use for crop production have to change. She insisted, “Our mindsets on agriculture have to change because, if we cannot change, even research findings in agriculture that will be brought to us will have no meaning. We need to use science and technology to earn more in agriculture.” The RC said that she is proud of the WEMA project researchers because they.

Contrary to other researchers, lock their research findings in the shelves, use them to raise their position at work or for international recognition, Dr. Nchimbi applauded the WEMA project researchers for exhibiting their skills and talents in solving one of the country’s problems and especially for the Dodoma maize farmers who need high quality seeds. She also appreciated the fact that researchers involved the farmers in every step they took for instance during planting, irrigating, fertilizing and harvesting. In order to help them accomplish their mission, Dr. Nchimbi promised to offer the researchers every necessary support they might need from her office.

However, Dr. Nchimbi challenged the WEMA researchers with the name they use for the project. Instead of saying, “Mbegu za mahindi zinazo stahimili ukame,” as drought tolerant maize varieties, they should call it, “Mahindi yanayotumia maji kwa ufanisi,” to match with Water Efficient Maize for Africa, so that they can get rid of the ambiguity from the farmers’ minds as they are used to knowing that the crop that is drought tolerant in Dodoma is sorghum.

Dr. Nchimbi also urged the WEMA researchers to incorporate the youth into the project as most of the farmers who received training are either adults or ageing. She noted, “We need to inculcate the culture to our youth to value the contribution of agriculture. They should not think that engaging in agriculture is the last resort but rather an activity that can make one earn the living.

Speaking on behalf of the farmers, Sheikh Hamis Gantala thanked the WEMA researchers for involving the farmers in every stage and requested them to offer seminars to many farmers as much as they can.

In the end, Dr. Kulaya told the Dodoma RC that the maize that were harvested, after being analysed some seeds will be offered to the farmers for planting purposes while the remaining will be milled and distributed to some Dodoma Municipal Secondary schools.

Below are more pictures for the event:

Fig. 12: The Dodoma Regional Commissioner, Dr. Rehema Nchimbi addresses the farmers (not pictured). Sitting on her right is Mr. Leon Mrosso, the VRTC Central Zonal Director. To her left is Dr. Alois Kullaya.

Dr. Nchimbi also advised the farmers to get rid of political propagandists who propagate the ideas that hybrid crops are harmful to human being. She assured them that there is no risk with the type of the maize planted at Makutupora and other areas, and she insisted that farmers should be taught to make a distinction between the maize grown at Makutupora with that produce in a genetically modified organisms (GMOs) way although both of them aim at increasing the farm yields.

Fig. 13: A group picture featuring the Dodoma RC, WEMA researchers together with the farmers.

Fig. 14: A group picture featuring the the Dodoma RC, WEMA researchers together with the farm attendants.
By Salvatory J.S. Mushi
Senior Research Officer
DCDTT- COSTECH.

Tanzania is endowed with diverse energy resources including hydro power of which the proven potential is 4,700 MW, natural gas $15.67 \times 10^9$ m$^3$, coal 1.9 billion tones, woody biomass (standing stock 1.8 billion m$^3$ annual yield 24.3 mil m$^3$) and biomass residues (animal waste from 11 million cattle, 11 million goats and sheep, 200,000 tones of sisal waste, 1.1 million tones/year of forest residues), solar, wind, geothermal power, much of which is untapped.

Levels of Exploitation of Energy Resources in Tanzania

The levels of exploitation of the energy resources in Tanzania include hydro power (561MW), natural gas (Songo Songo Gas Project for electricity generation), coal (less than 150,000 tones/annum (0.6% of total energy used in Tanzania), woody biomass (annual consumption 40 million m$^3$, deforestation estimated at 91,276 ha/year), biomass residues (22.75 MW for electricity generation at sugar plants and 3.525 MW of electricity from forest residues).

Tanzania Energy Balance

Biomass accounts for 90% of total energy supply with 1.2 from hydro-electricity and 8% from petroleum products. Others such solar, wind, coal et cetera accounts for 0.8.

Major Energy Consuming Sectors in Tanzania

The major energy consuming sectors include the household (cooking and lighting) accounting for 84.2%, industrial accounting for 6.7%, transport accounting for 2.7%, Agriculture accounting for 5.3% and commercial accounting for 1.1%.

The Urban Energy Challenges in Tanzania

Tanzania faces the urban energy challenges as 94% of Tanzanians use charcoal in their homes and businesses. 84.2% accounts for household (cooking and lighting). The price of charcoal is increasing. More than 200,000 hectares of natural forests are destroyed annually to make one million tons of charcoal. One million tonnes of charcoal produced and consumed in Tanzania generates nine million tonnes of CO$_2$. The charcoal production and charcoal business accounts for 11-20% deforestation.

The consequences of rapid loss of forest is the major cause for severe soil erosion, drought, destruction of water catchment areas, destruction of ecosystem, change in rainfall patterns, and desertification.

The government of Tanzania has taken national measures to mitigate the effects of deforestation including the launching of nationwide campaign for tree plantation, protection of forest reserves, promotion of improved stoves efficiencies, use of more efficient charcoal kilns and promotion of renewable energy sources.

Electricity Sub Sector

Electricity is produced from hydro 561MW, electricity from natural gas 524.5MW, electricity from diesel 194MW and electricity produced from coal 6MW. The total installed capacity is 1285.5 MW. Electricity imported through cross border connections is 13MW. The electricity peak demand is 620MW while the existing transmission voltages are 220kV, 132kV, 66kV, 33kV and 11kV transmission and the growth demand of electricity per annum is about 8% up to year 2015 as forecast by the Tanzania Power Master Plan.

Electricity Consumption

Tanzania population is above 37 mil of which ¾ live in rural areas. The grid connected consumers are slightly above ½ a mil. The Tanzania electricity consumption per capita is 90 kWh (but we would require per capita consumption of 500 kWh for quality life). The United States per capita consumption is 11,994KWh/capital/year, and Egypt is 900KWh. About 14% of the Tanzania population has access to electricity and in rural areas; about 2% of the rural population have access to electricity. The objective is to increase access to 25% by 2025...
On 13th August 2012, the COSTECH hosted the Chinese delegation from Beijing Municipal Science and Technology Commission. BMSTC is a department of Beijing Municipal Government that oversees science and technology in the city of Beijing.

This was a second visit following the April meeting that laid a foundation between the COSTECH and the BMSTC on exploring and promoting scientific collaborations in areas of technology transfer, investment in biotechnology, solar energy and other areas of life sciences.

Speaking during the introductory remarks, Dr. Hassan Mshinda the COSTECH Director General pointed out that the collaboration between the COSTECH and the BMSTC is inevitable due to the fact that in order for Tanzania to advance technologically it needs to partner with other developed countries like China.

He also pointed out that during the April visit, the BMSTC promised to partner with Tanzania government to build an Engineering School of Design whereby engineering will have an opportunity to learn the same material taught in China.

Apart from the COSTECH management team, also the National Institute for Medical Research (NIMR), the University of Dar es Salaam (UDSM), Tanzania Pharmaceutical Industries (TPI), Ifakara Health Institute (IHI), Dar es Salaam Institute of Technology (DIT), Institute of Traditional Medicine (ITM), and the Muhimbili University of Health and Allied Sciences (MUHAS) were invited to a joint meeting.

The Director General also introduced Mr. Omary from the Grand Challenge, in Canada, who was invited by the COSTECH to chair a second session on how to assist the Commission in order to establish and develop the process of the Innovation Fund on health sector.

According to the Dr. Mshinda the fund is mainly coming to help turn research findings into business opportunities in industries and therefore, one of the areas that the Commission is going to focus is on how to create partnership between the academia and the industrial sector.

Following explanation of the BMSTC functions, the discussion began by internalizing on the areas that were more or less matched with Tanzanian counterpart, and that are potential for further collaboration. Each institution had an opportunity to present what it sees fit for the collaboration.

The institute for traditional medicine sought for collaboration in areas of natural products, promoting the use of traditional medicines and methods of healing, commercial exploitation and conservation of medicinal plants whereas the DIT proposed the establishment of links with polytechnics in Beijing which offer similar or related programmes, training and capacity building for DIT staff and exchange of biomedical equipments and training volunteers as well as support to obtaining up-to date textbooks, references in Biomedical Engineering equipments such as, electronics, electrical and training kits for the purpose of facilitating learning-teaching activities and demonstration of equipment parts and operating principles.

IHI proposed of collaboration in Bio-entrepreneurship, medical and veterinary diagnostics (lateral immunoassays) and bio- (DNA and tissue) banking, laboratory animal technologies, and exploration and investigation of markets for small experimental animals whereas the TPI was interested in strengthening pharmaceutical regulatory capacity, facilitation of competitive and efficient drug production, development of appropriate skills in pharmaceutical production, mainstreaming innovation, research and development within the pharmaceutical industries and facilitation of competitive and efficient drug production.

NIMR expressed interest in collaborating with BMSTC in the areas such as business as well as research aspect.

In addition, NIMR is interested in technology transfer in the pharmaceutical industries especially in disease diagnosis, technology and innovation promotion as well as research in products that are of higher priority to Tanzania, such as natural products.

At the end of the meeting, it was agreed that this is the beginning of more discussion on potential areas for further collaboration. Moreover, the BMSTC delegation leader thanked the COSTECH for coordinating the activity and requested to be provided with a list of participants, their respective institutional profiles and specific areas for further collaboration.
COSTECH visits Loyola ICT innovators

On August 23rd, 2012 the COSTECH through its Center for Development and Transfer of Technology (DCDTT) visited Loyola High School to meet with two of their students Mr. Masasi Mgengeli and Julius Moshiro who have won a Gold Medal (First Prize) in the category of programming during the African Secondary School Students’ IT Competition named, INFOMATRIX AFRICA 2012.

The project that made them win was about a Website aimed at enabling citizens of Tanzania to contribute their opinions in the process of making the new constitution. The same project was awarded a second prize (Silver Medal during the world competition named, INFOMATRIX 2012, which was held in Bucharest – Romania on the 3rd – 5th May, 2012.

Commenting on her students’ innovative spirits, Sister Arockia, who is an ICT instructor at Loyola High School, insisted that Information, Communication and Technology subject in schools should be taught practically rather than teaching it theoretically. She noted, “It is through practical training whereby an instructor can discover his or her students’ creativity and talents. Everything is possible when we give our students the chance to try.”

Speaking on behalf of the Acting Director for the DCDTT, Dr. George Shemdoe commended Sr. Arockia for her hard word and the students for being persistent in putting to life what they learn in a classroom environment. Dr. Shemdoe promised the students that their innovations will be considered for TASTA award and also, if possible, other measures will be taken by the COSTECH to advance their talents.

Nanotech Research Tackles Disaster Prevention

Flooding in Thailand in 2011 has given the country’s nanotechnology research center an opportunity to show how nano products ranging from antimalarial bed nets to flood prevention technology could help mitigate the impact of natural disasters.

For example, the nano-sack or N-Sack, a product that resembles giant, superabsorbent diapers, could replace traditional sandbags for flood control. It uses hydrogel and a nano coating to absorb water. “It is our hope that the nano-sack development will be refined and can be used before the next rainy season,” said Sirirurg Songsivilai, executive director of the state-run National Nanotechnology Center. “The 2011 flood in Thailand was an eye-opener for both the public and the government sector. It provided our research institution with an opportunity to participate in relief efforts,” he said.

For example, the research center distributed bed nets and mosquito-repellent gel and powder, all making use of nanotechnology. The net material contains a nano-scale formulation of the chemical deltamethrin, which is absorbed by receptor cells at the tips of the legs of mosquitoes and kills them within minutes. SciDev.Net

By James Gallagher
Health and Science reporter,
BBC News
31 August 2012.

Did you ever know that the shape of your glass is probably the last thing on your mind when you are in front of a bar counter? Did you ever know that the glasses used in bars or pubs could nudge people to drink more? If never, keep reading.

The shape of your glass is probably the last thing on your mind when you are down the pub.

However, researchers at the University of Bristol believe the shape of beer glasses affects the speed people drink.

Their study, published in the journal PLoS ONE (http://www.plosone.org/article/info:doi/10.1371/journal.pone.0043007#top), suggests people drink more quickly out of curved glasses than straight ones.

They argue that the curvy glassware makes pacing yourself a much greater challenge. A group of 159 men and women were filmed drinking either soft drinks or beer as part of the study. The glasses all contained around half a pint of liquid, but some of the glasses were straight while others were very curved.

**Slower pace**

There was no difference in the drinking time for soft drinks. People drinking from both straight and curved glasses finished after around seven minutes.

However, for the beer drinkers there was a large difference between the two groups. While it took around seven minutes for people drinking from a curved glass to polish off their half pint, it took 11 minutes for those drinking from a straight glass.

The report said: "Drinking time is slowed by almost 60% when an alcoholic beverage is presented in a straight glass compared with a curved glass."

The researchers thought that curvy glasses made it harder to pace drinking because judging how much was in the glass became more difficult owing to its curved shape.

The group of drinkers was shown a variety of pictures of partially-filled beer glasses and asked to say whether they were more or less than half full.

The team said people were more likely to get the answer wrong when assessing the amount of liquid in curved glasses.

The lead researcher Dr Angela Attwood told the BBC: "They are unable to judge how quickly they are drinking so cannot pace themselves."

She suggested that people were not concerned about pacing themselves with soft drinks, which could explain why glass shape had no effect on them.

However, the study looked only at the time taken to finish one drink in a laboratory setting. So it is not certain what happens on an evening out if multiple drinks are consumed.

She said altering the glasses used in pubs could "nudge" people to drink more healthily by "giving control back."

The shape of a glass has already been shown to affect how much alcohol people pour.

A study in 2005 (http://www.bmj.com/content/331/7531/1512), showed people were more likely to pour extra alcohol into short, wide glasses than tall, narrow ones.

**SOURCE:**
http://www.bbc.co.uk/news/health-19436926
HERIs e-library services receive an attention

Creating awareness to stakeholders on the STHEP project, particularly Component 2B

By Sarah Makoi
E-Library Specialist at COSTECH

Now that we are in the science and technology era, Tanzania educationists and other sectors’ practitioners have to bear in mind that no stone is going to be left unturned. This was revealed at the stakeholders’ meeting on E-Library services that took place on August 31st, 2012 at the Regency Park Hotel, in Dar es Salaam.

During the meeting, the Economic and Social Research Foundation (ESRF) presented its Inception report on the implementation of Education and Management Information System (EMIS) and E-library systems for Higher Education and Research Institutions in Tanzania. ESRF has won a contract advertised by the COSTECH to conduct a feasibility study for the EMIS in sampled 128 higher learning and research institutions (HERIs).

Delivering the welcome remarks, on behalf of the Director General of COSTECH, Mr. Faith Shimba who is the Acting Director of Information and Documentation congratulated the ESRF team members for winning the tender and urged them to work beyond the education stakeholders’ expectations. He noted that this is just the beginning as COSTECH is committed to working with all the sectors in Tanzania to improve the quality of life.

Speaking on behalf of the Permanent Secretary of the Ministry of Education and Vocational Training, Mr. Jonathan Steven Mbwambo, the Assistant Director of ICT at MoEVT said that his ministry’s expectation is that experts can make a significant contribution towards implementing a system that responds to the nation’s demands.

ESRF’s Executive Director, Dr. H. B. Lunogelo, introduced ESRF’s team members to the stakeholders and gave an assurance that his team will deliver beyond stakeholder expectations. He requested stakeholders to be open-minded as their contributions are also important in the success of the feasibility study.

Fig. 20: A cross-section of HERIs e-library stakeholders attending the meeting.

Professor Justinian Galabawa, the team’s Education Management and planning Specialist highlighted most of the aspects of the feasibility study and noted that the success in implementing the study ought to make a significant contribution to the design and implementation of effective EMS and e-Library systems for Tanzania’s higher education and research institutions as part of the implementation of National Research and Education Network (NREN).

Dr. Oswald Mashindano, the ESRF Research Associate, noted that the study is in line with the Tanzania’s development goals and targets one of which is associated with the importation of knowledge, skills, innovation and technologies. He explained that there is a need for the implementation of a coordinated set of one or more e-Library systems and EMISs for Tanzania HERIs.

Dr. Oswald Mashindano insisted that the study will take approximately four months and thereafter the report will be submitted.

Among other objectives, the study is intending on collecting and registering all theses and dissertations from 128 sampled higher learning and research institutions so that they could be published and shared. This coordination, according to Dr. Mashindano, will reduce the risk of duplicating researches among the HERIs.

Prof. Louis Fourie, the team’s Information Systems Specialist, presented a presentation on ICT in Education, EMIS and E-library systems. He stated that technology nowadays is incorporated into education and that this is the information era, therefore people have to adapt to it.

Engineer August Kowelo, the Team’s Information Systems Specialist, made a presentation on ongoing initiatives & current ICT status. He highlighted the National ICT Policy 2003 and the government’s current ICT projects, focusing on the national ICT Backbone (NICTBB), noting that most of the HERIs are covered within NICTBB.
After being granted the permit by the COSTECH, to conduct his or her research, a researcher is supposed to provide reports on progress made after three months, submit three copies of the final report dissertation/theses derived from the research undertaken in Tanzania, and any other papers or publications based on the research done in the country.

The researcher is also supposed to send a copy of publication to the local advisors appointed to assist him or her.

Below is a summary of progress or annual report received from one of the researchers who have conducted research in Tanzania.

RESEARCH TITLE: A NEW GEOGRAPHICAL PROVINCE FOR TERRESTRIAL PERMO-TRIASSIC EXTINCTION STUDIES. Year 2007

RESEARCH ABSTRACT: According to the researchers, current understanding of Late Permian and Early-Middle Triassic (~260-242 Ma) terrestrial ecosystems draws heavily on the rich fossil record of South Africa’s Karoo Basin. In June and July, 2007, the researchers undertook a fieldwork in Tanzania to collect new paleontological, boistratigraphic, and sedimentological data in the coeval Ruhusu Basin of southwestern Tanzania. In total, they collected over 150 kilograms of fossils from 43 new localities in Ruhusu Basin, and made dozens of additional field observations on fossil occurrence, sedimentology, and taphonomy. The researchers went on to discuss some of their discoveries and in the end, they concluded their abstract by commenting on that despite their success, there are still a large amount of paleontological and geological research needed in the Ruhuhu Basin.

REPORT SUMMARY/INTRODUCTION: The researchers start their introduction by citing some important quotations from different researchers/scientists/anthropologists who worked on the same direction of their research; such as, G.M. Stockley and Oates (1931), Stockley (1932), Nowack (1937), Von Huene (1942, 1944, 1950), and Attridge et al., (1964) respectively. According to the researchers, fossils from these early collecting efforts are distributed in museums in Cambridge, Cape Town, London and Tubingen. The research team included 6 researchers.

RESEARCH OBJECTIVES AND GOALS: The objective of the research was to collect new paleontological, boistratigraphic, and sedimentological data in the coeval Ruhusu Basin of southwestern Tanzania.

RESEARCH RESULTS/FINDINGS: A 10-page research results accompanied with figures/illustrations is given with discussion based on subtopics such as, (i) geology, which is also subcategorized into two: sedimentary environment of upper Permian Usili Formation and sedimentary environment of the Middle Triassic Lifua Member (Manda beds), and (ii) vertebrate paleontology, which is also subcategorized into three: dicynodont therapsids from the Usili and Lifua, other therapsids from the Usili and Lifua, and archosaurs from the Lifua member.

RESEARCH DISCUSSIONS: The report includes the discussion on vertebrate biostratigraphy of the Usili formation and Lifua member and the implications for the biogeography of Permian and Triassic vertebrates.

RESEARCH OUTPUTS: The report gives the broader impact and the future directions to other researchers who might be interested in documenting those faunas.
Fig. 21: Dr. Hassan Mshinda (left), the COSTECH’s Director General explains to the Hon. Prime Minister, Mizengo Pinda the opportunities available at the Commission. The Prime Minister visited the COSTECH on August 2nd, 2012 when he launched the TAAS historical book.

Fig. 22: The Vice President Dr. Ghalib Bilal (right), shows off an award that was awarded to President Jakaya Kikwete by the Ministry of Agriculture, Food Security and Cooperatives, as part of his contribution in implementing and supervising the Kilimo Kwanza philosophy. Left is the Minister for Agriculture, Food and Cooperation, Eng. Christopher Chiza. The award was presented to the VP on the closing day for the 2012 Nane Nane Exhibitions, in Dodoma.

Fig. 23: Ms. Happiness Hosea (middle), the Secretary to the COSTECH’s Director General presents a gift to one of the Chinese Beijing Municipal Science and Technology Commission delegates during their visit to COSTECH on August 13th, 2012. Looking on is the COSTECH’s Director General Dr. Hassan Mshinda.

Fig. 24: Dr. Alois Kullaya (left), the WEMA Country Project Coordinator, explains something to the Dodoma Regional Commissioner Dr. Rehema Nchimbi during her visit to the Makutupora Confined Field Trial farm on August 22nd, 2012. Looking on is Mr. Leon Mrosso, the Zonal Director at VRTC Makutupora.

Fig. 25: Dr. Hassan Mshinda (far standing), the COSTECH’s Director General, stresses a point during the Scientists meeting at the COSTECH Conference Hall on August 29th, 2012.

Fig. 26: COSTECH staff Victoria Rutakara (4th from left - first row) and Rahma Bashary (5th from right) pose for a group photo during African Leadership in ICT graduation. Ms. Rutakara and Ms. Bashary were among the ALICT graduates for a professional Certificate issued jointly by GESCI and the African Union Commission (AUC), on the final workshop held in Addis Ababa, Ethiopia at the end of August this year.
Upcoming Events

UbuntuNet Connect 2012,
14th – 16th November 2012 Dar es Salaam, Tanzania at Kunduchi Beach Hotel

Hosted by TERNET, the Tanzanian Research and Education Network in partnership with UbuntuNet Alliance. The exciting news during 2012 is not about having UbuntuNet, our data network, augmented by new connections with the roll out of the AfricaConnect project: it is about the fact that the new segments will establish, for the first time, a regional network where African traffic can be exchanged within Africa and much more.

MAIN THEME

Promoting Regional Research and Education Collaboration

The conference will provide opportunities for showcasing examples of collaborative regional research and learning that not only support African development, but also enable African researcher networks to participate in global research undertakings.

For more information, please visit

http://www.ternet.or.tz/uc2012/index.htm

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