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Science, Technology, Key to Development

Prof. Mulenga - calls for amendment of the Science and Technology Acts.

Enact Science, Innovation Act, advises Prof. Mulenga

By Fulman Mukobeko and Naomi Phiri

Government says Science, technology and innovation (STI) remain fundamental for a country's growth and transition from natural resource dependency to knowledge-based economies.

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By Fulman Mukobeko and Naomi Phiri

Government says Science, Technology and Innovation (STI) remain fundamental for a country's growth and transition from natural resource dependency to knowledge-based economies.

Speaking on behalf of Technology and Science Permanent Secretary Brilliant Habeenzu, Director Jane Chinkusu said the African Science Technology and Innovation Indicators (ASTII) are increasingly becoming wealthy and competitive and focusing more on knowledge generation and application as opposed to depending on natural resources.

"... Hence, investment in research and development remain fundamental in the fight for poverty reduction, mitigation and adaptation of climate change, inclusive growth and sustainable development," he said.

Mr Habeenzu said the Government in its manifesto recognizes the catalytic nature of science and technology in driving innovation in all sectors of the economy.

" The technology driven and knowledge based economy that we aspire to have requires the harnessing of all our human capital and ingenuity. For this reason, the government has committed to ensuring that science and technology are correctly applied in the development, support and marketing of products and services by investing in research to develop new technologies relevant to our country," Mr Habeenzu said.

Ms.Jane Chinkusu

'Genetically Modified Maize Safe'

By Staff Reporter

The Zambia Biosafety Authority (NBA) has assured the nation that the mealie-meal from South Africa produced from Genetically Modified maize is safe for consumption.

NBA Scientific Advisory Committee Chairperson Sody Munsaka said the authority is working on with other Government institutions to ensure that meali-meal that may contain genetically modified organisms(GMOs) to be imported and transited through the country is from maize varieties that have been authorized by NBA.

"The Ministry working with the Ministry of Agriculture has been notifying anyone importing maize or any other products which may contain GMOs on the need to obtain notification from NBA," he said.

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EDITORIAL COMMENT

Science must be linked with policy

It is very important to link science and policy. Research tells us that scientific research and development play a critical role to solve socio-economic challenges in people's lives and also serve as a catalyst for economic growth.

The challenges that countries face range from the impact of climate change, poverty, disease, energy and water needs. Therefore, scientists have a responsibility to inform policy and ensure the value of science is understood by lay persons including policy makers in order to build a firm foundation for a sustainable future.

Recognising the importance of connecting science to society of post COVID-19, a slot of lessons have been learnt leading to scientific praise on innovation.

In Zambia for example, the Science and Technology Act of 1996 is the current Act in place. Its review and enactment of the new Policy is very long overdue.

Today, the philosophy of science anticipates definite behavior from its community members.

For example, science is flexible and open to new ideas and many laws apply to it. Science also has stringent guidelines in order to ensure that scientific work is of high quality and accomplished in ethical methods that benefits communities.

Meanwhile, law plays a crucial role in the regulation of science and technology regarding the moral values of scientific research along with modern technologies.

It is critical to manage the impacts of science and technology on society which turn around aspects on fears, benefits and ethical implications.

Therefore, we call upon policy and other key stakeholders to expedite the process to repeal and amend the laws through a wider consultative process to ensure new Science Technology and Innovation Policy is revised to accelerate research and development towards socio-economic development.

Science Technology, Key to Development

From front page

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Mr Habeenzu said the Government in its manifesto recognizes the catalytic nature of science and technology in driving innovation in all sectors of the economy.

" The technology driven and knowledge based economy that we aspire requires the harnessing of all our human capital and ingenuity. For this reason, the government has committed to ensuring that science and technology are correctly applied in the development, support and marketing of products and services by investing in research to develop new technologies relevant to our country," Mr Habeenzu said.

He said the Promotion of the digital economy, in addition to the general advancement of knowledge and skills, innovative technological solutions will be rewarded and supported by government using legislative and financial incentives.

Mr Habeenzu said the government is promoting Science, Technology, Engineering and Mathematics (STEM) in schools to ensure that students are equipped for jobs of the future, and to support the development of Technology and Science industries.

"... Government has further committed to support research and development through better management and investment in the Technology and Science institutions which will pave way for institutional collaboration with industry and the wider private sector in developing relevant innovation for our economy," he said

Mr Habeenzu further said the ASTII project will give a clear picture and understanding on the gaps that development both financially and human resources and how many researchers are in the country including their age ranges, qualifications and gender," he said.

'Genetically Modified Maize Safe'

From front page

"We have conducted risk assessments on soya beans and all maize varieties from South Africa and these have been found to be safe for humans, animals and the environment. Therefore, all products including meali-meal produced from the assessed maize varieties are safe for human and animal consumption," Dr Munsaka said.

"Among the products containing GMO maize or soya beans from South Africa that the authority has permitted into cornflakes, some soups such as bisto, premixes, spices, some biscuits, starch and dog food country," he stressed.

Risk assessments is the process through which the Scientific Advisory Committee is ascertain the safety of product before the authority grants a permit or reject an application.

Sody Munsaka

Subilo Energy Launches Electric Vehicle Charge Stations

By Joseph Chanda

SUBILO Energy, a local startup in the renewable energy sector has unveiled its long-awaited product Electric Vehicle Charge Stations.

Subilo unveiled its flagship product, lithium-ion batteries, the first of its kind in Zambia recently at their North-mead offices in Lusaka.

Subilo's Chief Executive Officer (CEO) Gregory Chama said this during the media briefing at their offices in Lusaka's North mead residential area.

The company designs and assembles lithium-ion batteries which come in three versions. Their smallest size is a 12v 100ah followed by a midsize 12v 150ah. The biggest size is a 12v 200ah.

Chama also said the batteries have a high energy density which enables them to have a longer runtime/range. They are also lightweight, weighing close to 40% less than their counterparts like gel, AGM and lead acid batteries.

"lithium-ion batteries have a wide use range. This includes their use on both on-grid/backup and off-grid solar systems. These key advantages make Subilo's lithium-ion batteries a great choice for meeting the energy storage needs of individuals, corporate, farmers, mobile network operators, mines and contractors. They can also be used on electric cars, electric bikes and electric scooters," Chama said.

He further said that the company will be installing charge stations for the public in designated places within Lusaka and across major highways in Zambia.

"Our hope is that this will help quicken the implementation of electric cars in Zambia and the charge stations will also be available for home or office use for those wanting to use them in their homes or at office blocks or government offices," Chama added.

Help Zambian girls love science and mathematics, Chola urges Siakalima

By Fulman Mukobeko

Advocacy for Child Justice (ACJ) Activist, Coreen Chola is saddened that female pupils continue to perform below par in Mathematics and Sciences subjects, which she tags as necessary for Zambia's economic development.

Ms. Chola is urging Education Minister Douglas Siakalima to introduce a deliberate school programme increasing practical interest by girls in Mathematics and Science, as excellence makes female graduates to compete favourably with males.

In a separate interview with Zambia Developmental Media Alliance (ZADEMA) Executive President Derrick Sinjela implored Technology and Science Minister, Felix Mutati to equally contribute through policing affordable, accessible and available internet beyond the line of rail, so as to entrench e-learning and commerce.

"It is imperative for Government to introduce programmes like Junior Engineers Technicians Scientists (JETS) specifically for girls if they have to compete favorably in Mathematic and Science with boys aggressively from nursery, primary, and secondary school level," saidd Ms. Chola, a Zambian Children Young People and Women in Development (ZCYPWD) member.

Ms. Chola advised schools to have role models to inspire girls take Science and Mathematics as easy subjects which need not scare pupils and students.

Acknowledging Science Technology Engineering and Mathematics (STEM) being popularised by National Science Centre (NSC) Director General Dr. Benson Banda, Ms. Chola implored female Mathematics and Science teachers to act as role models inspiring girls to be as good as boys and men.

Ms. Chola regretted that Zambia has fewer female teachers competent in Mathematics and Sciences, leading girls to fail to pursue these technical subjects.

"If you hear people saying that there are women who are Mathematicians, I am not going to get it there and then but if I see that Mathematician, I will be able to believe that I can be like that person or I need to do is to study hard to achieve my aspirations," said Ms. Chola.

Chola cited societal and cultural influences placing a girl-child behind boys as one of the reason female pupils to excel in Mathematics and Sciences.

"Society does not agree that a girl can be better than boy in Mathematics and Science. That is why a girl child finds it difficult to improve in the subjects," she said.

Ms. Chola has since urged society to start thinking positively about girls in as far as Mathematics and Science is concerned if Zambia is produce credible female engineers and scientists.

Coreen Chola - Advocacy for Child Justice (ACJ) Activist

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Zambia embarks on Research, Development Data Account

By Naomi Phiri

Zambia has embarked on the exercise to account for the statistics for Research and Development Data. The exercise that is conducted in the country, comes as a result of the African Union (directive) to its member States to allocate 1% of the Gross Domestic Product- GDP, to cover research and Development, in a bid to improve the knowledge gap in the continent.

In addition to that, the AU directive will ensure that the African Science, Technology and Innovation ASTII agenda is met.

African Union ASTII Programme Officer and Organisation's Project Phase 4 Lead Lukovi Seke noted that Zambia has no statistical database on Research and Development innovations conducted so far, besides the last data records for 2010.

Mr Seke added that the development is as a result of Zambia does not mature the data systems in order to track the data records for the country due to lack of adequate information update.

He disclosed that Zambia was among the first countries in the continent to take part in the first phase of Research and Development however, the country has lost track of data economic analysis, the development which requires revisiting.

The Data accounting exercise is being conducted ahead of the Ministerial Conference on Science and Technology and educational training for all SADC Countries which is scheduled for June this year in Democratic Republic of Congo.

Stakeholders poses for a photo with Tanzanian company, Mayzuh Company Limited (MCL) during the signing agreement with five Zambian entities in which the firm will facilitate financing of projects worth $4.229 billion through Islamic bonds in Lusaka recently.

Tanzanian firm Mayzuh sign $4.229 bn Islamic financing contracts in Zambia

By Joseph Chanda

MAYZUH Company Limited (MCL), a Tanzanian based Company with its subsidiary in Zambia, has signed consultancy agreements with four Zambian entities in which the firm will facilitate financing of projects worth $199 billion through issuance of alternative projects financing instruments called Islamic bonds.

With its headquarters in Dar es Salaam, Mayzuh Company, which deals in general merchandise business and specialised services in Islamic finance, such as trainings, advisory, Islamic banking setups, Shariah-compliance Core Information Technology systems for Islamic banks, microfinances and Islamic insurance (via its partners) as well as projects financing consultancy, signed the three contracts for soliciting financiers through Sukuk bonds for an Agribusiness project, a mining project and a renewable energy one.

Originally, a total of four contracts were signed with a total volume being 4.229 billions and only contracts to be withdrawn by one client who had two projects up for financing consultancy for its own reasons.

Prof. Ernest Bwalya (left) is among the beneficiaries for his Renewable Energy Innovation Project.

These agreements between Mayzuh Company Limited and the Zambian entities were signed in Lusaka on 15th April, 2023. A Renewable Energy Innovation Project Sukuk Bond Contract, ARMTRACK Agribusiness Project Sukuk Bond Contract and a mining gold mining company looking to start mining activities.

According to Sheikh Issa, Mohamed Hemed, the Alternative Project Financing Sukuk bond instruments has a potential to attract Shariah-compliant investors but the project owners must have feasibility studies, Business plans with formidable cash flow projections and they should be viable and bankable.

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Tanzanian firm Mayzuh sign $4.229 bn Islamic financing contracts in Zambia

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Prof. Ernest Bwalya, an innovator, is among the beneficiaries for his Renewable Energy Innovation Project which has long suffered from lack of capital to enable mass production of his ingenious impressive invention.

Mayzuh Zambia Company Limited Chief Executive Officer (CEO) Sheikh Issa, Mohammed said if it becomes successful, the Renewal Energy Innovation Project will add value to Zambian electricity at a lower cost than the current ones, putting Zambia on the technological world map from this invention.

"These projects are in need of financing using an alternative financing instrument called the Sukuk bond, which attracts foreign direct investments even from outside Africa" said Mr Issa Mohammed.

He said two other contracts worth $19.297 billion are going to be signed in the near future for Zambian projects.

"After all preparations for the issuance of these instruments have been done, the applications for licensing of each Sukuk bond by Zambia Securities Commission (SEC) will be done and since these instruments are public offer notes, they will be listed in the Stock Exchange for Zambians to have an opportunity to invest in them," said Mr Issa Mohammed.

"We'll then cross-list them outside Zambia in East, Central and Southern Africa stock markets as well as globally such as in Dubai Stock Exchange to attract investors from there as well," he added. The ARMTRACK Agriculture Project is for a plantation of palm oil trees towards making Zambia self-sufficient on cooking oil.

"Through consultancy, Mayzuh Company Limited will assist the entities to engage in the process of linking them with those having capital and looking for opportunities to finance projects so that the two sides get what they want," said Mr Issa Mohammed.

There has been a rising apatite for the Islamic financing in many countries for two decades now. Global Sukuk bonds annual growth has been running at double digit figures even during the recent COVID--19 pandemic which divested world economies bringing even big nations to their knees. In Tanzania, financing through Sukuk bond enabled corporates to raise a total of Sh64.5 billion in a span of two years.

"As we speak here today, our sister company is processing fours (4) projects with a total Sukuk bond volume of Sh126.0 billion from three companies," said Mr Issa, adding that the governments of Tanzania and that of Zanzibar are also expected to issue maiden sovereign Sukuk bonds soon. Africa, with its vast land mass, needs USD 100 billion a year to finance its road infrastructure for the coming decade. In Africa, Sudan, Nigeria, Senegal, Ivory Coast, Togo, South Africa, Togo and Egypt have been issuing Sukuk. The UK, Luxembourg, Hong Kong, Japan and even The World Bank Group, IMF and International Financial Capital (IFC) have also issued Sukuk.

Mohammed Issa-CEO Sukuk bonds

NSTC recognises women in Technology, Innovation for Gender Equality - Mugala

By Joseph Mumbi Chanda

The National Science and Technology Council, as an enabler in the Science, Technology and Innovation sector, recognises and appreciate the efforts of women in Technology and Innovation.

Speaking during International Day of Women and Girls in Science recently, NSTC acting Executive Secretary Guest Mugala said Increasing representation of women in Technology is important not only for the brilliant career opportunities it can offer to them, but also for the ability of the technology industry as a whole to innovate and rise to meet the needs of society and bring about gender equity in the sector.

Mugala said Improving female representation will not just happen, it has to be made a priority and systematically pursued because women can bring a fresh approach and offer unique perspectives to meet challenges, solve problems and attract and inspire more women and young girls in the technology sector.

He further said the NSTC endeavors to promote full and equal access to and participation in Technology and Innovation for women and girls of all ages through its various activities among them; establishment of STEM education centers of excellence, mentorship programmes and research and innovation funding mechanisms for female scientists.

The NSTC encourages institutions to apply a gender lens and integrate gender dimension in research and innovation in the country.

Meanwhile, on the International Day of Women and Girls in Science, women were honored in science for their achievements and were given special recognition on girls entering the science journey.

Early this year, National Science and Technology Council (NSTC) signs two Memoranda of Understanding.

NSTC Acting Executive Secretary Guest Mugala giving insights

The MoUs were signed with the Directorate of National Science Centre (NSC) in the Ministry of Education and the Dziwa Science & Technology Trust (DSaT).

The MoU signed with DSaT will expand and consolidate the working relationship between the two institutions and strengthen efforts for joint advocacy and promotion of Science, Technology and Innovation through public engagements, enhance the application and adoption of modern technologies and value of evidence-based science across the key sectors of the economy in the country.

And the MoU signed with the National Science Centre will enable the two institutions join efforts towards the development of innovations by learners.

The MoU will see the further development of viable projects from the Junior Engineers Technician Scientist (JETS) system to a level where they can be commercialized and utilized.

NSTC acting Executive Secretary Guest Mugala signed on behalf of NSTC, while Dr. Benson Banda signed on behalf of the National Science Centre (NSC) and Mrs. Veronica Mwaba signed on behalf of Dziwa Science and Technology Trust (DSaT).

DSaT calls for the appointment of Science and Technology Advisor to the Presidency

By Fulman Mukobeko in Lusaka

Dziwa Science and Technology Trust (DSaT) Founder Veronica Mwaba calls on the New Dawn Government to appoint a Science and Technology Policy advisor to the Presidency to effectively accelerate science, technology and innovation promotion.

Appearing on Prime TV 'Kwacha Making Programme' recently, Mrs Mwaba noted that Zambia has no Science and Technology advisor to the President. She said it is important to use the up to bottom approach, noting that if there is a Science and Technology policy advisor to the President, the Head of State could know what is happening on the ground.

And Mrs Mwaba has noted that Zambia does not have a dedicated University to Science and Technology.

Mrs Mwaba also said that the New Dawn Government should consider having a dedicated Science and Technology University to empower learners.

"...of course, I do recall that sometime last year, Technology and Science Minister Hon. Felix Mutati indicated that Evelyn Hone will be dedicated to Science and Technology University. But what are the time lines? Or how long will it take? Now there is a call from African Union requesting member states to allocate one percent of total Gross Domestic Product (GDP) towards Research and Development" she said.

Today, Zambia is stuck to the Science and Technology Act of 1996. The review and enactment of the new policy is very long overdue.

Countries in Africa have moved on. Therefore, Zambia risks lagging to equip the research community to better respond to future public health emergencies as well as build needed capacity for research community.

In agriculture, for example, 50 years of agricultural research was done by local experts. However, there is need to create a deliberate platform to highlight Zambia's agriculture with key stakeholders.

But this is on a quieter side and yet a lot of work has already been done by local experts saying there is need to start unpacking the Journals and research papers for society to know the great works that have been done by Zambians.

Mrs Mwaba further, acknowledged the fact that a number of universities are doing research but it is not known hence, a need to popularise their works.

She added that a lot of resources must be directed to research and development in an effort to solve socio-economic challenges in Zambia.

Veronica Mwaba - Dziwa Science and Technology Trust (DSaT) Founder/Executive Director

AUDA-NEPAD, BETin partner in Genome editing study tour

By Veronica Mwaba

The African Union Development Agency-NEPAD (AUDA-NEPAD) in collaboration with Bio and Emerging Technology Institute (BETin) recently organised a Study Tour in Ethiopia's research and development institutions that are actively engaged in genome editing.

The event brought together 20 representatives from participating countries where an appraisal of existing infrastructure and capacity for biotechnology and genome editing was conducted.

Participants that include Ethiopia were drawn from Burkinafaso, Zimbabwe, Ghana, Nigeria, Zambia, Zimbabwe and Malawi.

The study tour held from 13-17 Feburary, 2023 was designed to provide an opportunity for participants to learn from Ethiopia's experience in fostering an enabling environment on genome editing and regulations. The study tour created an opportunity for participants to meet researchers and visit laboratories, science museum, universities, maize fields and Technology and Innovation ministry to learn about Ethiopia's science agenda.

Ms Florence Nazare

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Kaputa pupils happy with Science, technology curriculum

By Patrick Chipampe and Raymond Chalata in Kaputa

Some pupils in Kaputa have expressed happiness with the introduction and continuous teaching of science and technology in the school curriculum.

One of the pupils talked to by ZANIS in Kaputa said the teaching of technology is an important aspect in preparing children for the future. Moses Chanda said in today's world, technology is vital for both social and economic development in what has been termed as a global village.

He said science and technology prepares children for careers in computing, medicine, engineering and more. "Most people fear sciences but they are important in many disciplines, so we just have to like them" said Chanda.

Chanda added that the fact that it has been introduced at an early age, it makes children find science and technology based career paths desirable.

Meanwhile, another pupil at Kaputa day Secondary school has encouraged fellow girls to take interest in mathematics and sciences for them to have a bright future.

Stella Chansa said most girls do not like mathematics or sciences on the pretext that these subjects are hard. She said, in today's world technology is the back bone of most industries and that is why girls need to take interest in these fields.

Chansa said its high time girls stood up to be counted and be appreciated for the positive contributions that they make to the development of Zambia.

She also called on stakeholders to increase sensitization on the possibilities that lie in the mathematics and sciences for the girl child.

"In places like Kaputa where girls don't find maths and science appealing, there is need for sensitization; maybe they should just be followed in schools, they need to know the importance of science" said Chansa.

Chansa added that more incentives are needed for girls to fully embrace mathematics and sciences starting at a tender age.

pupils in Kaputa have expressed happiness with the introduction and continuous teaching of science and technology in the school curriculum.

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economy that we aspire to have requires the harnessing of all our human capital and ingenuity. For this reason, the government has committed to ensuring that science and technology are correctly applied in the development, support and marketing of products and services by investing in research to develop new technologies relevant to our country," Mr Habeenzu said.

He said the Promotion of the digital economy, in addition to the general advancement of knowledge and skills, innovative technological solutions will be rewarded and supported by government using legislative and financial incentives.

Mr Habeenzu said government is promoting science, technology, engineering and mathematics (stem) in schools to ensure that students are equipped for jobs of the future, and to support the development of science and technology industries.

"... Government has further committed to support research and development through better management and investment in the science and technology institutions which will pave way for institutional collaboration with industry and the wider private sector in developing relevant innovation for our economy," he said.

Mr Habeenzu further said the ASTII project will give a clear picture and understanding on the gaps that exist in the Science and Technology Innovation ecosystem in terms of how much are investing in Research and Development both financially and human resources and how many researchers are in the country including their age ranges, qualifications and gender," he said.

Mr Habeenzu said Government has has allocated enough funding to STI undertaking to the survey through out the country.

He encouraged the research community that through the process, planning for research activities will be enhanced.

"I encourage you to nurture the relationships established beyond this workshop. The capacity to track STI indicators to inform level of investment in Research and Research, and competitiveness of business firms can be met by these competent institution National Science Technology Council (NSTC) ZAMstats, UNESCO and African Union Development Agency (AUDA-NEPAD," adding that the linkage will ensure datasets on STI to contribute immensely towards national development as aspired by President Hichilema."

Fight against Climate Change needs collaborative effort - Veep

By Staff Reporter

Vice President Mutale Nalumango has called for collaborative efforts in the fight against Climate Change.

Speaking on behalf of Mrs Nalumango during the official launch of the one Consultative Group on International Agricultural Research Initiatives in Zambia, Agriculture Minister Reuben Mtolo called for all stakeholders to work together for this new initiative to work well for the betterment of the Zambian people.

The Vice President said Climate change requires that farmers across the Agricultural sub sectors become knowledgeable about managing the risks from higher temperatures, shorter Growing seasons, more extreme and frequent droughts and floods.

However, smallholder farming comes with a lot of challenges among them water scarcity, climate change, low resource use efficiencies and declining soil health, and these result in negative impacts on food and nutrition security, equitable livelihoods and ecosystem health. On this account, Zambian Government together with Consultative Group on International Agricultural Research (CGIAR) has launched a Portfolio of Research Initiatives in Zambia.

Vice President Mutale Nalumango

Enact Science, Innovation Act, advises Prof. Mulenga

From front page

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Prof. Michelo calls for research laboratories in the country

Professor Charles Michelo

By Oscar Nkhuwa

Zambian Scientist Professor Charles Michelo of Nkwazi Research University in Lusaka has called for massive investments in knowledge generation through engaging talented minds.

The professor says the country has no option but invest in appropriate laboratory facilities which will help Government avert possible disease outbreaks like COVID-19 and other diseases.

Prof. Michelo said this in an exclusive interview in Lusaka recently where he added that the experience of COVID-19 should be a wakeup call for the Government of Zambia to come up with serious initiatives towards using the available qualified personnel to maximize on scientific research.

He has however, appreciated efforts made by the Zambia National Public Health Institute (ZNPHI) for facilitating surveillance systems and mechanisms to avert the spread of any disease outbreak in the country.

He says there is need to research as a country like it is done in South Africa where one percent (1%) of their Gross Domestic product (GDP) is pushed towards financing research and that professors are funded to support government.

Zambia has been experiencing disease outbreak ranging from Cholera to the disturbing COVID-19 relying mostly on international solutions to cushion some these diseases.

Delegates arrive at Addis Ababa Science and Technology University Center of Excellence, Ethiopia

AUDA-NEPAD, BETin partner in Genome editing Study Tour

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Speaking during the opening ceremony, AUDA-NEPAD Acting Director and Head of Excellence Knowledge Management and Programme Education Director Ms Florence Nazare said Africa is at crossroads and there is need to industrialise.

"Africa is calling on us for AfCTA take off. This can only happen if we push for innovation to transform lives. Science and technology should be at the fore front". says Florence Nazare.

She added that advanced economies have put efforts in biotecnology.

However, Africa has the potential and capable scientists that could be put to good use.

Meanwhile, BETin director Kasshun says "We must Africanise some of the technologies including genome editing to address some of the problems on food security".

Dr Kassahun Tesfaye, Director General (BETin) has called on Africa to put more resources in research and development.

He added "Without science, Africa will not go anywhere. African leaders should keep the promise of putting one per cent of GDP to science technology and innovation and believe in the science" Says Dr. Kassahun.

He further said that Africa has skills across the continent. Therefore, creation of collaborative environment with joint efforts is necessary.

Dziwa Science and Technology Zambia, participated in the Study Tour.

NBA Monitors for Genetically Modified Cotton in Eastern/P

By Mutibo C. Mushenywa and Twaambo Michelo

National Biosafety Authority (NBA) Cotton is one of the most widely produced natural fibers on the planet. In Zambia the crop is predominantly produced by small holder farmers as a cash crop in Central, Eastern, Southern and Muchinga provinces.

Cotton is a source of income for more than 300,000 smallholder farmers. Although Cotton represents only 5-8 percent of GDP, it accounts for 50-60 percent of export earnings and is the main source of foreign exchange.

Due to changes in environmental factors that affects agriculture and the performance of cultivated crops, some countries have made adopted biotechnology to produce genetically modified cotton. Recently, Malawi commercialized it first genetically modified cotton lines.

This has raised great concerns regarding the possible transboundary movement of the GM cotton from Malawi into Zambia via porous entry and exit point along the Zambia-Malawi border.

Therefore a study was conducted to determine the farming behavior of Zambian cotton farmers along border in Lundazi area. This survey was undertaken by officers of the National Biosafety Authority between 21 - 26 February 2022.

Information was collected through observations, interview questions and administering a questionnaire having questions on the farming practices.

A total number of 25 farmers situated along the border areas of Chasefu, Lundazi and Lumezi were interviewed. All interviews were predominantly conducted in Nyanja.

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Chakauya - there is need for more research universities countrywide

Dr. Chakauya calls for more research universities

By Staff Reporter

Dr. Ereck Chakauya of African Union Development Agency (NEPAD) has called for more research universities in Africa.

Speaking at the sideline of the African Science, Technology and Indicators (ASTII) Training Workshop held in Lusaka recently, Dr Chakauya said African Universities do not have research, development and infrastructure to convert and translate knowledge into usable products that industries can use.

"One of our challenges in the region is that universities don't have Research, Development and Experiment. They don't have the infrastructure to convert and translate knowledge into usable products that industries can use," Dr Chakauya said.

He noted that while there are teaching universities and there is no research higher learning institutions on the planet.

"...We don't even have one university that is doing research and that is a problem," he noted, "Most of the universities teach and very few can research."

Dr Chakauya said African Universities' focus on theoretical exams rather than research. "You can bet with me... When you go to universities, when exams start, nothing else happens except exams and that is a problem. But elsewhere, in Europe, they have research professors who wake up to do research," he observed.

Dr Chakauya said there is need for research and university industry collaboration that is very subtle.

"In our ASTII project, we made two principles...number one, we made sure that someone brings something to the table we call contributing benefit. The second thing is, we made sure that there is a commercialisation partner or someone who takes the product to the user as a requirement. If you don't have that, you don't get funding from us. It can be private sector, it can be Non-Governmental Organizations (NGOs), it can be small and medium enterprise but someone has to be part of the project to take the product which we are producing to the user and that is a most important part. In most of the cases, we don't find that as a requirement. So, we made it a requirement. That is why we had a little bit of success. We managed to do some miracles by converting academic into entrepreneurs because now, we started working with industries," he stated.

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Dr. Chakauya

Dr. Chakauya calls for more research universities

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Dr Chakauya said the ASTII project demanded that researchers go into industries for six months to learn how industries carryout their activities.

" ...So, it is very easy to take things from the universities into industries. In summary, we need research universities, university industry collaboration where everyone brings something on the table because the project that is subtle determines who is the best to lead it. You need someone who is coming from the user's side or someone who is in contact with the user that person can be from the NGO, Private Sector or something like that," he said.

And Dr Chakauya further explained the gap between researchers and end users. Part of it is the data that we are collecting right now through the survey is helping us to understand how many scientists we have now, which field of study and what level of qualification they have and then when you link it with other sources of data you can be able to look at what is coming out of the system.

But effective from the last study we did is, when you compare the number of scientists we have, there is no relationship. There is something wrong in the system in terms of...we have inputs, scientists and how much they are spending but when you look out for the pattern on average, we are not that efficient. So that is a problem.

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NBA Monitors for Genetically Modified cotton in Eastern/P

The survey showed that the majority of farmers in Chasefu, Lundazi and Lumezi had no knowledge about the National Biosafety Authority, its mandate and what Genetically Modified Organisms were. They were unaware of the steps taken by Malawi to commercialise GM cotton.

During the survey it was also noted that most farmers in the area were not solely dependent on cotton for their livelihoods but had diversified into the cultivation of crops such as maize, soybeans, ground nuts, sunflower and tobacco.

The other observation made was that Zambian and Malawi farmers were sparsely located in the area. Some cotton farmers along the border area had no clear distinction whether they were settled in Zambia or in Malawi. Although some fields were located approximately 100 meters from Malawi territory, the farmers in the area are separated by the Kasungu Game reserve.

The game reserve is 52 kilometers in diameter and stretches for approximately 145 kilometers along the border. (Figure 2). Therefore, this acts as a natural barrier against the accidental movement of pollen from a GM field in Malawi to Zambia

From the farmers interviewed, only 48% of them had family or contact persons living in Malawi who were also involved in farming. When asked to explain how often they interacted with these family members, 67 percent of them indicated that they had seen them once in 10 years while 17% of them indicated that have never visited them.

Therefore, it is safe to assume that the interaction between the two groups of people is minimal and did not warrant great concern. Farmers were also asked about where they got their farming inputs for cotton and 100% of them indicated it was from ginning companies.

The major ginning companies found operating in the area were Parrogate, Continental and LDC. However, it was observed that there were designated areas where Zambians and Malawian traders socially interact to trade in general goods and food crops such as tomato, cassava, meat and potatoes.

These areas, called 'Bwandila markets, could serve as potential entry points for illegal GMO seed. Though when inspected no seed was found being traded there. Even though some farmers showed no clear understanding whether they live within the boundaries of Zambia, most of farmers did not have access to the farmers in Malawi.

This is because of their farming, social behaviors and the Kasungu game reserve, which separates the Zambian farmers in Lumezi from those in Malawi.

Furthermore, common social gatherings such as the weekly Bwandila markets could serve as entry points for GM seeds into Zambia.

Therefore, it is important that sensitization is conducted in the area to inform farmers of GM cotton and how to ensure the area is not contaminated without authorization from the NBA.