



National Commission for Science, Technology and Innovation (NACOSTI)



NACOSTI Plaza

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Prof. Walter O. Oyawa, Director General, NACOSTI

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All correspondence should be sent to:

The Editor, STIR Bulletin

Directorate of Corporate Services,

National Commission for Science Technology and Innovation

off Waiyaki Way, Upper Kabete,

P. O. Box 30623, 00100

Nairobi, KENYA

Land line: 020 4007000, 020 2241349, 020 3310571, 020 8001077

Mobile: 0713 788 787 / 0735 404 245

E-mail: customercare@nacosti.go.ke / info@nacosti.go.ke

Website: <http://www.nacosti.go.ke>

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EDITORIAL

“Science and Technology for Prosperity”



The quarter covering the period January to March 2023 began with the resumption of our programs and activities after the Christmas and New Year festivities and marks the beginning of the second half of the Financial Year.

Towards the end of 2022 and early in 2023, the debate on Genetically Modified Organisms (GMO) especially as relates to food crops was a major item of discussion in the country. NACOSTI as in executing its advisory mandate on matters pertaining to Science, Technology and Innovation actively participated in bringing the scientific perspective to these discussions. NACOSTI was amongst the Government entities who engaged with the Parliamentary Committee on Agriculture and Livestock in discussions on the role of GMO in food security. Highlights of this meeting are shared in this bulletin.

During the quarter, NACOSTI's management and Board had an opportunity to visit, interact and explore areas of collaboration with the National Defence University, which has a unique space as a special degree awarding university. We have the pleasure of sharing some of the discussions and photos of the visit.

The place of ICT in the global social, business and academic interactions has grown tremendously over the last couple of years. The gains in utilization of ICT in these interactions cannot

be overemphasized. Unfortunately, with the gains also come the risks and hence we are faced with increasingly complex matters of cybersecurity and cyberhygiene. To build capacity in tackling these emerging challenges, NACOSTI through collaboration with some of its partners trained some members of staff cybersecurity and cyberhygiene and through this Bulletin we share the need for increased vigilance against threats related to utilization of ICT.

In recognition of its efforts equity and inclusion, NACOSTI was awarded as the Best Statutory Commission on Diversity, Equity, Inclusion and Belonging (DEIB) by The National Diversity and Inclusion Awards & Recognition (DIAR Awards). On the same vein we share in this Bulletin outstanding achievements of scientists who have won recognition and award of financial grants from global organizations for research.

I wish you a happy reading as you interact with this issue of the NACOSTI STIR Bulletin.

Mr. Gideon Kirui
Bulletin Committee Chairman

REMARKS FROM THE DIRECTOR GENERAL/CEO

“Science and Technology for Prosperity”



I take this opportunity to welcome you to read the 1st Edition of the STIR Bulletin of 2023, a publication of the National Commission for Science, Technology and Innovation (NACOSTI). STIR Bulletin captures the latest news and featured articles from the Science, Technology and Innovation (STI) sector, and is therefore the voice of stakeholders in the STI

Ecosystem as communicated by the STI Regulator, NACOSTI. It serves as part of the avenues through which we endeavor to reach a wider network of our stakeholders. In the recent past, we have interacted with stakeholder in the STI ecosystem through hosting and participating in conference, seminars and meetings both physically and virtually. This has enabled NACOSTI to share ideas with local and international experts and stakeholders cutting across various science fields and as a result enriched our capacity to execute our mandate.

NACOSTI is established under the Science, Technology and Innovation Act, 2013 (Rev. 2014) with a unique mandate of regulating and assuring quality in the research, science, technology and innovation sector, and advising the Government in matters related thereto. In so doing, the Commission shall Regulate, Coordinate, Advise and Promote Science, Technology, Innovation and Research activities in the country.

Among others, the functions of NACOSTI include; developing priorities in scientific, technological and innovation activities in Kenya, Registering and Accrediting Research Institutions, Licensing of Research and assuring relevance and quality of research programmes in research institutions, coordinating and evaluating activities relating to scientific research and technology development, annually reviewing the progress in scientific systems, and promoting the adoption and application of scientific and technological knowledge in attaining national development.

Further, the Science, Technology and Innovation (STI), Legal Notice No. 108 (Research Licensing) Regulations, 2014 obligates all persons intending to undertake scientific research in Kenya to obtain a license in accordance with the Act. In this regard, we have made this process easy and convenient for you all by making it available online.

I trust that you will enjoy interacting with the information presented herein. Feel free to contact us through our telephone numbers, email and all our social media platforms. Prof. Walter O. Oyawa, PhD

Prof. Walter O. Oyawa, PhD
National Commission for Science, Technology and Innovation (NACOSTI)

NACOSTI MANDATE, VISION, MISSION, CORE VALUES, & FUNCTIONS

Mandate

The objective of the Commission shall be to regulate and assure quality in the science, technology and innovation sector and advise the Government in matters related thereto.

Vision

Accelerate the Transformation of Kenya as a knowledge-based economy.

Mission

To facilitate quality in the research, science, technology and innovation sector through regulation, promotion and provision of advisory services.

Core Values

The Commission upholds Integrity, Customer Focus, Professionalism, Teamwork and Leadership in the discharge of its mandate.

Functions

- a) Develop, in consultation with stakeholders, the priorities in scientific, technological and innovation activities in Kenya in relation to the economic and social policies of the Government, and the country's international commitments.
- b) Lead inter-agency efforts to implement sound policies and budgets, working in collaboration with the county governments, and organizations involved in science and technology and innovation within Kenya and outside Kenya.
- c) Advise the national and county governments on the science, technology and innovation policy, including general planning and assessment of the necessary financial resources.
- d) Liaise with the National Innovation Agency and the National Research Fund to ensure funding and implementation of prioritized research programmes.
- e) Ensure co-ordination and co-operation between the various agencies involved in science, technology and innovation.
- f) Accredite research institutes and approve all Scientific research in Kenya.
- g) Assure relevance and quality of science, technology and innovation programmers in research institutes.
- h) Advise on science education and innovation at both basic and advanced levels.
- i) In consultation with the National Research Fund Trustees, sponsor national scientific and academic conferences it considers appropriate.
- j) Advise the Government on policies and any issue relating to scientific research systems.
- k) Promote increased awareness, knowledge and information of research system.
- l) Co-ordinate, monitor and evaluate, as appropriate, activities relating to scientific research and technology development.
- m) Promote and encourage private sector involvement in scientific research and innovation and development.
- n) Annually, review the progress in scientific research systems and submit a report of its findings and recommendations to the Cabinet Secretary.
- o) Promote the adoption and application of scientific and technological knowledge and information necessary in
- p) Develop and enforce codes, guidelines, and regulations in accordance with the policy determined under this Act for the governance, management and maintenance of standards and quality in research systems.
- q) Undertake, or cause to be undertaken, regular inspections, monitoring and evaluation of research institutions to ensure compliance with set standards and guidelines.

MEETING WITH THE AGRICULTURAL AND LIVESTOCK PARLIAMENTARY COMMITTEE ON GMOs



Figure 1: Prof. Walter O. Oyawa DG-NACOSTI giving his submissions on GMOs in Kenya to The Departmental Committee on Agriculture and Livestock of the Kenyan National Assembly

The Departmental Committee on Agriculture and Livestock of the Kenyan National Assembly organized a forum to converse about genetically modified organisms in Kenya from January 17 through January 21, 2023. The meetings with various institutions (both government and non-government) were to determine whether: GM foods are safe for human consumptions; GM crops have negative

effects on the environment; GM foods will boost food security in the country; and the laws in the country will adequately govern issues of. GMO in the country. The National Commission for Science and Technology Innovation (NACOSTI) was among the institutions invited to take part in the discussion

NACOSTI team had an enriching engagement with the Parliamentary Committee on Agriculture and Livestock as pertains to GMOs. The Commission put up a strong case for investments in RSTI to meet the 2% of GDP target as specified in the STI Act taking cognizance of emerging technologies. The Commission also recommended that GMO approval protocols be strictly implemented by a multi-agency team, and that the government develop a framework to incentivize and promote private sector support and involvement in R&D, technology adoption/adaptation, and innovation diffusion.



Figure 2: Hon. (Dr.) John Mutunga Kanyuithia, MP, Chairperson, Agriculture and Livestock, Chairing the Session

Pictorial



Figure 3:Hearing proceedings on GMOs

NACOSTI ENGAGES SPECIAL DEGREE AWARDING NATIONAL DEFENCE UNIVERSITY



Figure 4: Group photo during the NDU visit.

Director Rachel led the NACOSTI team and had a very fruitful engagement with the top leadership of the National Defence University led by their Vice Chancellor Lieutenant General Jonah M I. Mwangi. National Defence University is the first Special Degree awarding University in Kenya.

The NACOSTI team comprised Director Rachel Shibalira, Director General Prof. Walter Oyawa, Dr. David Njubi, Mr. Godfrey Kalerwa.

Ms. Teresia Nyawira, Mr. Rollex Opondo, Mr. Javan Mwiti-Resource Person and Mr. Kioko Mwanja representing National Research Fund (NRF).

While the NDU comprised Vice Chancellor Lt. General Jonah Mwangi, Deputy Vice Chancellor, Finance and Administration Major (Rtd) P. Amagola, Deputy Vice-Chancellor, Academic Affairs and Research, Prof. Ann Muigai, University Registrar, Dr. Stephen Mailu, Director of Academics, Brigadier Benedict Mwololo, Director of Applied Research and Security Studies, Brigadier David Obonyo, Head of Teaching and Curriculum, Col. Dr. C. Imbiakha, Head of Research Centre for Security Studies and Strategy Col. Dr. J. Kimuyu, Head of Strategy Col. R. Makori and Head of Programs Defence, Dr. Luvanda



Figure 5: FROM left to Right- Ms. Rachel Shibalira NACOSTI Board Member, Lt. General Jonah Mwangi, Vice Chancellor, Prof Walter Oyawa, DG-NACOSTI and Prof. Ann Muigai, NDU Registrar



Figure 6: Pictorial

Following presentations by either party, several issues came to light, Viz.

- (a) NACOSTI as the regulating agency of the STI Sector and special agency coordinating STI Mainstreaming PC Target is requested to train STI Focal Point and STI Champions at NDU. A tailored program may be developed for this purpose.
- (b) NDU needs to lead the security sector in collaboration with NACOSTI, in promoting STI for National Security and Public Safety, including the development of STI Strategy for National Security.
- (c) NDU to consider instituting special programs for the development of the next generation STI/STEM Workforce.
- (d) NDU to invest in RSTI activities to enhance Kenya's Global competitiveness.
- (e) NACOSTI to fast-track accreditation of NDU ISERC.
- (f) NACOSTI to involve NDU staff in peer reviewer mechanisms.
- (g) Both parties to jointly or otherwise organize relevant conferences, workshops, symposiums, etc.
- (h) NDU to consider funding Research and Technology Chairs in memory of Eminent persons who have made a significant contribution to the deployment/training of STI in National Security Enterprise.

Way forward:

1. Form a Joint Management Committee to spearhead the collaboration

2. Work towards signing an MoU after necessary approvals including the AG.
3. Implement MoU
4. Joint Management Committee to deal with emerging issues

UNIVERSITIES URGED TO COLLABORATE TO ADDRESS EMERGING CHALLENGES NACOSTI



Figure 7: Group Photo

Mount Kenya University hosted an international conference that looked into ways of knowledge and innovation transfer to enable economies to grow sustainably.

The conference, held at the Mwai Kibaki Conference Centre at MKU's main campus in Thika, attracted scholars from around the world as they deliberated on different issues centred on the theme of 'participatory leadership, innovation and knowledge transfer for sustainable economies.

At the conference, technology and innovation emerged as key drivers for economic and social development and would hold a central place going forward considering the current developments around the world.

Prof Walter Oyawa director general at the National Commission for Science, Technology, and Innovation (NACOSTI) noted that developments such as the Covid-19 pandemic have affirmed science has a key role to play in socio-economic development.

"Humanity is living through unprecedented times simultaneously defined by; Rapid changes in technology, new conflicts or wars, violent and hateful ideologies, risks of global pandemics and disease, climate change and loss of biodiversity, scientific advance and ethical dilemma, social change, economic growth and widening economic gap," he said, adding that global challenges are becoming increasingly complex, interconnected and interdependent.

"Science, technology and innovation (STI) are key drivers of economic and social development and are hence a critical means of implementation for National Agenda. The covid-19 pandemic has reaffirmed the vital role of Research, Science, Technology and Innovation (Research Systems) as a Global Public Good, for

strengthened National Security, enhanced Public Safety/Health, and Inclusive Sustainable Development."

"There is a need for a framework to evaluate knowledge transfer practices, improve knowledge transfer metrics and evaluation frameworks, and offer policy lessons. Effective public-private knowledge transfer is more crucial to innovation than ever in the aftermath of the Covid-19 crisis."



Figure 8: FROM LEFT: Jesse Ndegwa , MKU Deputy Director Admissions, Prof Walter Oyawa director general at the National Commission for Science, Technology, and Innovation (NACOSTI), MKU Vice-chancellor prof. Deogratius Jaganyi, MKU Co-Founder Dr Jane Nyutu, MKU c

The three-day event was the eighth conference organized by the international, interdisciplinary and inter-universities consortium.

Different institutions that are members of the Inter-Disciplinary and Inter-universities Consortium have annually hosted the conference on a rotational basis over the last eight years.

“Universities have a triple mandate of teaching, research and community engagement. The Interdisciplinary and Inter-universities Consortium as here represented by its members, is a useful strategy for assisting universities in attaining their mission and varied visions,” said Prof Deogratius Jaganyi Vice Chancellor MKU during the opening of the conference on Wednesday.

He added that the consortium should now look to growing interactions among members through activities such as student and staff exchanges as well as joint research projects.

“As we move into the second decade of our existence as a Consortium, maybe, more interactions through staff and students exchange could be explored. Additionally, the status of all our joint activities could be made more viable if more universities join the consortium,” said Prof Jaganyi.

Dr Jane Nyutu co-founder of MKU noted that the multi-disciplinary approach that the university has taken has seen get global accolades, including being selected to become the hub for reducing inequalities by a United Nations agency.

“The same multi-disciplinary endeavour at MKU through teaching, research and community engagement has led to MKU’s award to serve for three years as the United Nations Academic Impact for SDG No. 10 on Reduced Inequalities,” she said.

“This allows the university to partner with many universities, with the industry, and with practitioners in all areas that are of positive impact on human life; namely, medicine, animal health and production, education, social and physical sciences, and so on. Thus, in a collaborative effort, the communities across the world will very well benefit from the joint activities of our deliberations during this conference.”

Dr Vincent Gaitho Pro-Chancellor, of Mount Kenya University, lauded the conference organisers for the selection of the theme on participatory leadership and knowledge transfer.

“Participatory leadership is very critical in the successful management of institutions and organizations – when we add innovation to our leadership engagements and when we do this well enough, we are sure we would never go wrong,” he said.

Source: <https://www.the-star.co.ke/news/2023-03-31-universities-urged-to-collaborate-to-address-emerging-challenges/>

NACOSTI STAFF SELECTED BY US STATE DEPARTMENT TO UNDERGO STATE-OF-THE-ART TRAINING IN SOUTH AFRICA ON CYBERSECURITY AND CYBERHYGIENE



Figure 9:L Banner Flyer

The U.S. Department of State, in cooperation with CRDF Global, has organized a training on Protecting Information Technology Systems Containing Genomic Data at Biological Laboratories in Sub-Saharan Africa which will be hosted on March 1-2, 2023, at the Marriott Crystal Towers in Cape Town, South Africa. Dr. Mary Onsarigo, Mr. Denis Yegon, and Mr. Phelix Awuor from NACOSTI are among the selected participants for the training.

This two-day workshop will bring together academics, biological industry representatives, policymakers, and regulators to discuss the risks and vulnerabilities of genomic technology; the role of cyberbiosecurity in mitigating proliferation risk; and the steps

necessary to develop a risk mitigation framework, including best practices to protect stored genomic data.

This workshop will raise awareness on the benefits of cybersecurity and cyberhygiene; host sessions on the risks to biotechnology-related labs, including the risk of cyber-attack on institutions that store genomic data; and provide measures to prevent the illicit procurement of dual-use biotechnology, bioweapon precursors, and related production equipment. Participants will receive the technical knowledge needed to begin exploring the implementation of cybersecurity and cyberhygiene measures, as well as knowledge on how to implement Know-Your-Customer (KYC) and due-diligence measures at their own institutions.

NACOSTI DG TO LEAD NATIONAL RESEARCH, TECHNOLOGY, AND INNOVATION CONSORTIUM/COMMITTEE (NARTIC)



Figure 10: Banner Flyer

Kenya through the Ministry of Education seeks to enhance its participation in the Horizon Europe Programme and other similar Programmes through a well-coordinated awareness, empowerment and reporting framework as a means of escalating Kenya's investments in R&D and fostering STI Mainstreaming in MDAs.

As part of progressing the EU-Kenya RSTI initiative and other similar grant seeking opportunities to achieve fruitful and measurable outcomes for the country, Hon. Ezekiel Machogu, Cabinet Secretary, Ministry of Education appointed the National Research, Technology and Innovation Consortium/Committee (NARTIC). The Committee is chaired by the Director General, National Commission for Science, Technology and Innovation (NACOSTI) Prof. Walter Oyawa and Co-Chaired by our Secretary

for Administration Mr. Fredrick Ndambuki. Members of the Consortium/Committee comprise the Chief Executive Officers of the Commission for University Education (CUE), the National Research Fund (NRF), the Technical and Vocational Education and Training Authority (TVETA), Vice Chancellor -DeKUT, Director University Education, Director-DRST, and other senior officers including the private sector. Owing to the importance of this undertaking, the Consortium/Committee will be supported by members of the High- Level Advisory Panel on Science, Technology and Innovation established by the Director General- NACOSTI.

The CS, Ministry of Education also thanked the participants who participated in the well-attended Webinar on Horizon Europe Africa Initiative II – Focus on Kenya, organized by the Ministry of

Education through our Coordinating Committee, and EU Horizon Europe Team, and held on the 24th January 2023. An impressive turnout of over seven hundred (700) researchers, scholars, inventors and innovators participated in the Webinar, thus intensifying our engagement with the European Union as pertains to collaborations in Research, Science, Technology and Innovation (RSTI). Additionally he strongly encouraged focused participation of Kenyan institutions, scientists, researchers, innovators, inventors, and scholars in the upcoming “call for Proposals” by Horizon Europe Programme, and other funding agencies as may be guided by the Consortium/Committee.

The Chief objective of the National Research, Technology and Innovation Consortium/Committee (NARTIC) is to directly (or through sub-consortia) prepare, coordinate preparation of, and submit proposals to the Horizon Europe “call for Proposals”, and to any other partner/donor funding agencies. Proposals falling within the national Research, Science, Technology and Innovation (RSTI) Priorities as determined by NACOSTI and recommended or endorsed by the Chair NARTIC will receive enhanced backing by my Ministry. The Consortium/Committee will also engage with Horizon Europe Team and various partners/funding agencies to boost the chances of success for grant applications. The Committee is expected to coordinate/guide successful proposals as per provisions of the Science, Technology and Innovation (STI) Act 2013 (Rev. 2014), and in tune with the requirements of the STI Mainstreaming Performance Contract Target in MDAs which is aimed at entrenching science, technology and innovation into the national production system and for connected purposes.

NACOSTI AWARDED AS THE BEST STATUTORY COMMISSION ON DIVERSITY, EQUITY, INCLUSION, AND BELONGING (DEIB)



Figure 11: NACOSTI receives the award

The National Commission for Science, Technology and Innovation (NACOSTI) has been invited to receive a Diversity, Equity,

Inclusion and Belonging (DEIB) award and recognition (Award Category: Best Statutory Commission on DIEB) on Friday, March 3, 2023 during DIAR 5th Edition Gala Dinner and Awards Ceremony to be held at Arabuko Hall, the Sarit Expo Centre, Westlands, Nairobi in a ceremony that will take place from 05:00 P.M to 10:00 P.M guided by the theme “Belonging – I belong, You Belong, We Belong”.

What IS DEIB?

The term ‘DEIB’ is an abbreviation for Diversity, Equity, Inclusion, and Belonging. It is the practice of honoring the multiplicity of existing social identities at any given place and time.

DEIB Index measures how diverse, equitable and inclusive an organization is, based on their feedback or the feedback of a key stakeholder. The index focuses on aspects such as demographics/numbers in representations, gender and disability mainstreaming, rates of retention, turnover, pay equity, employee Net Promoter Score (NPS), employee satisfaction and level of belonging, among others. NACOSTI has employees from across the whole Country (Diversity), each and every one feels fairly treated, respected and valued (Equity); each and every one fully participates in their diversity, and have equal access to opportunities and resources (Inclusion); and the employees have/experience a great sense of community (Belonging).

The DIAR Awards criteria will therefore measure how well an individual or organization, has consistently exemplified diversity,

equity, inclusion, and belonging in their day-to-day implementation of organizational goals, programs, and activities.

DIAR Awards recognition has been a catalyst for the improvement of services, setting of standards, sustenance of positive change, and multiplication of change agents. The awards celebrate, recognize and award champions of Diversity, Equity, Inclusion and Belonging in Kenya, based on the DEIB Survey, self and public nominations, self-submissions and internal and external research targeting MDAs and SAGAs and other organizations and ethnic minorities, marginalized and vulnerable populations. Also, contribution towards peace, cohesion, and climate action.

The DIAR awards follows last year’s award to NACOSTI as the best government institution in advancing gender equity, where NACOSTI scored 98 per cent in an evaluation done by the State Department of Gender and the National Gender and Equality Commission (NGEC).



Figure 12: NACOSTI Team pose for a picture after receiving the award.



EGERTON SCHOLAR WINS SH128 MILLION GRANT



“ Prof. Josiah O. Omolo is also the PI of upcoming ICGEB Regional Research Centre at Egerton, courtesy NACOSTI. An ICGEB RRC is a National Research Centre, or a part thereof, with independent governance by the ICGEB Member State and to which ICGEB provides scientific support and advice. The RRC contributes to strengthen research skills, knowledge and capacities of the local scientific community while pursuing specific objectives for research, training and technology transfer to industry, to benefit both the hosting country and the region where the RRC is located.

As Kenya works towards withdrawing synthetic insecticides from its market, a team of researchers at Egerton University is developing organic products as alternatives.

The project by Associate Professor of Organic Chemistry Josiah Omollo comes after he won a Sh128 million Icipe Bioinnovate

Africa grant to develop and commercialise environmentally friendly insecticides.

Prof Omollo underscores the need for bio-friendly products to fight insect pests due to the toxic residual effect of synthetic chemicals.

“We want to be at a place where synthetic pesticides shall only apply when the bio-products have failed. We are confident of developing effective bio-friendly pesticides,” said Omollo.

The National Assembly was petitioned in 2019 by various organisations, seeking a review of the safety of synthetic pesticides in the Kenyan market after farmers raised health concerns.

The petitioners were the Biodiversity and Biosafety Association of Kenya (BIBA-K), Kenya Organic Agriculture Network (KOAN), Resources Oriented Development Initiatives (RODI) and Route to Food Initiative (RTFI).

The petition came when the European Union and other international markets for Kenyan agro-products banned the importation of products with certain levels of toxins from farm chemicals.

“Pesticides are not only a threat to safe food for us but also to the environment we live in. Toxins in synthetic chemicals remain in the environment for years after use,” said Omollo.

In the multi-million shilling project, Omollo will collaborate with scholars from the International Centre of Insect Physiology and Ecology (Icipe), Tanzania, Rwanda and the US.

“We shall examine ways of promoting the use of bio-products to protect consumers from excess chemical residues from the harmful pesticides blamed for some diseases,” he said.

A 2019 report by American Heart Association established that persons exposed to high levels of pesticides in their occupation were at a 45 per cent higher risk of suffering heart disease or stroke.

A similar research by Kenyan scholars in 2021 among horticultural farmers in Meru County indicated that 26 per cent of farmers experienced health effects after using synthetic pesticides.

Apart from the production of safer food and better health, Omollo has cited biodegradable pesticides as a great stride towards improving profit margins for farmers and food sufficiency.

“Synthetic chemicals are highly-priced. This has continued to demotivate many farmers leading to reduced food production. This contributes to the high cost of food due to low supply,” said Omollo.

Last year, Omollo was also a beneficiary of Alliance for African Partnership Transforming Institutions Strategic Funding.

Under the programme, the don received Sh256,000 to aid in the operationalisation of the International Centre for Genetic Engineering and Biotechnology Regional Research Centre at Egerton.

“The research centre has come at the right time. Biotechnology development is key to enhancing food security and coming up with more efficient and cleaner industrial manufacturing processes,” he said.

He described biotechnology as a major solution to the food situation in the country by developing ways of dealing with climate change and productive utilisation of Kenya’s vast and underutilized lands.

“With biotechnology, we can incorporate the systems with mobile technology to help farmers respond to challenges appropriately and conveniently, such as diagnosing various diseases,” he said. Egerton University Director of Research Nancy Mungai lauded the don, noting that the grants will create a positive impact in the agricultural sector and its benefit felt beyond Kenya’s borders. “Research has proven to be a key cog in bringing positive change to how we live today. Products from this project will bring great change to agriculture, health, and the economy,” said Prof Mungai.

Source:

<https://www.standardmedia.co.ke/education/article/2001469755/scholar-wins-sh128-million-grant>

EMBU UNIVERSITY LECTURER BAGS SH106 MILLION RESEARCH GRANT



Figure 13: A University of Embu senior lecturer has won a Sh106 million research grant from the German Research Foundation.

Dr Mark Otieno, an agroecology lecturer in the department of Water and Agricultural Resource Management (Warma) has placed the university on the world map after winning the award to do investigative research on functional complementarity between nocturnal and diurnal pollinators along a land use gradient in Taita Hills biodiversity hotspots in Kenya.

The research will align with the United Nations Sustainable Development Goals (SDGs) and the Kenya Vision 2030, which both aim to promote sustainable development and protect biodiversity.

The study will focus on the impact of human activity on pollinators and plant reproduction, which will inform sustainable agricultural practices that support biodiversity and promote food security.

The three-year research will run from May 2023.

It will contribute to achieving one of the goals of the Kenya Vision 2030 to promote environmentally sustainable development.

The research will jointly be implemented by a panel of researchers from the University of Embu represented by Dr Otieno and the University of Wuerzburg in Germany represented by Prof Dr Ingolf Steffan Dewenter, a professor of spatial ecology, plant pollinator interactions, tropical agroecosystems and crop pollination.

Expert in montane biodiversity

Dr Marcell Peters, an expert in montane biodiversity and ecology, organismic traits and ecosystem functions and land use change will also be part of the researchers.

It is not the first time Dr Otieno is bagging such an award.

In 2022, he was named the University of Embu researcher of the year.

After receiving the grant, Dr Otieno expressed his gratitude to the foundation's selection panel for the award, saying the study will have a significant impact on food security in Africa by increasing the number of pollinators, which is crucial for the reproduction of plant species.

University Vice Chancellor Daniel Mugendi applauded Dr Otieno for winning the grant, saying it will be a major boost in achieving the Kenya Vision 2030 and sustainable development goals.

Prof Mugendi said the research has a potential to inform policy and agricultural practices that promote sustainable development and protect biodiversity in the entire world.

Dr Otieno holds a PhD in Agroecology from the University of Reading (UK), a Master of Science in Animal Ecology and a Bachelor of Education (Science) degree in Biology from Kenyatta University.

Source: <https://nation.africa/kenya/counties/embu/embu-university-lecturer-bags-sh106-million-research-grant-4170982>

MESSAGE OF THE DIRECTOR GENERAL, NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION ON THE OCCASION OF THE 8TH INTERNATIONAL DAY OF WOMEN AND GIRLS IN SCIENCE



The National Commission for Science, Technology and Innovation (NACOSTI) is established under the Science, Technology and Innovation Act, 2013 (Rev. 2014) with a unique mandate of regulating and assuring quality in the research, science, technology and innovation (STI) sector, and advising the Government in matters related thereto. In so doing, the Commission Regulates, Coordinates, Advises and Promotes Research, Science, Technology and Innovation activities in the country.

NACOSTI's mandate places the institution at the core of ensuring that all sector players contribute towards a knowledge driven economy for the realization of the country's national long term development blueprint, the Vision 2030. The Vision 2030 recognizes STI as one of the critical foundations for catalyzing productivity and efficiency across all sectors of the economy. Realization of the Vision is, therefore, hinged on development and application of STI given the transformative effect of technological tools and innovations in providing solutions to address poverty and improve people's wellbeing.

Acknowledging the persistent gender inequalities in STI, particularly in Science, Technology, Engineering and Mathematics (STEM) education and careers, NACOSTI has been instrumental in championing women to take up active roles in the STI sector in the quest to achieve gender equality. As we celebrate the 8th International Day of Women and Girls in Science this year, we wish to highlight some of the programmes that have provided great avenues for women's participation and contribution in STI.

In line with Section 6 of the STI Act, NACOSTI has since 2014 to 2020, coordinated a holistic STEM Mentorship Programme bringing together public and private sector players to enhance the participation and performance of girls in STEM subjects. The programme provides a unique model for scientific camps of excellence to unlock the potential of girls to embrace STEM education and careers. Using role models to demonstrate the importance of STEM education in creating successful career pathways for female scientists in the public and private sector,

the programme has contributed to a reduction in negative perceptions and beliefs which hinder effective participation of girls in STEM education.

As a focal point to international conventions and programmes such as the International Centre for Genetic Engineering and Biotechnology (ICGEB), the International Atomic Energy Agency (IAEA) and the Biological Weapons Convention (BWC), NACOSTI has availed opportunities to female scientists in various fields of scientific research and other careers. Under BWC, female scientists have been actively engaged in preparation and submission of Confidence building Measures, preparation of Country statements and Intervention statements during the meetings of Experts, States Parties and Review Conferences of the Convention.

In 2022, IAEA, provided training opportunities for female scientists to equip them with knowledge and skills needed to improve their contribution in science education and research. One such training opportunity was awarded to two female teachers from two secondary schools to participate in a two weeks training of trainers on Nuclear Instrumentation Educational Kit. The training was held in Seibersdorf, Austria on 4th-15th July 2022.

The opportunities provided through ICGEB have contributed to the promotion, development, production, and wide application of biotechnology in key socioeconomic sectors such as agriculture and health. This has resulted into innovations which have

catalyzed agricultural productivity, improved incomes and efficiency with notable impact on poverty reduction initiatives. Further, research outputs from ICGEB female-led programmes have contributed to the growing scientific body through publications in peer reviewed journals, knowledge transfer and acquisition of state-of-the-art equipment and laboratories. Some of the ongoing female-led programmes are focusing on research on cancer genomics and on generation of cyanogen free Cassava with reduced post-harvest physiological deterioration through gene specific genome editing. NACOSTI commits to continue empowering and championing women to take up more active roles in STI, in a quest to achieve gender equality.

CELEBRATING THE LIFE AND CONTRIBUTION OF PROFESSOR GEORGE ALBERT MAGOHA



Figure 14: The Late Prof. George Albert Omoro Magoha (2 July 1952 – 24 January 2023)

The African Academy of Sciences (AAS) is deeply saddened to have heard of the death of Professor George Albert Magoha, an AAS Fellow and former education Cabinet Secretary of Kenya. He passed away on 24 January 2023 in Nairobi, Kenya.

Professor Magoha studied at College of Medicine of the University of Lagos and received a Bachelor of Medicine degree in 1978. He furthered his studies in Surgery and Urology at Lagos University Teaching Hospital, where he graduated in 1985. He graduated from Royal College of Surgeons in 1980 and Royal Postgraduate Medical School at Hammersmith Hospital in 1983. He trained in

executive management at the Stanford University, Graduate School of Business, and received many international professional honours and awards.

He dedicated his latter years working in education, policymaking and leadership. He was Kenya's cabinet secretary for education from 2019 to 2022. He also served as the chairman of the Kenya National Examinations Council from 2016 to 2019. His impact is unmistakable in higher education, basic education, and in national examinations in Kenya.

Professor Magoha was elected as a Fellow of the African Academy of Sciences (FAAS) in 2006. The AAS remembers him for his contribution to the growth of the Academy. May he rest in peace.

Condolence messages from AAS Fellows

"This is a huge loss for the Academy and the continent. Professor Magoha was committed to reforming the education sector in Kenya. May his soul rest in eternal peace." Dr Peggy Oti-Boateng, Executive Director, the African Academy of Sciences

"Prof Magoha was a man who liked to see things done well, effectively and in a timely manner. He was fair and stickler for discipline which came through to make him one of our great practitioners as a surgeon, a health academician, and a leader in the management of academic institutions. May his soul rest in peace." Professor Daniel Olago, Governing Council Member, the African Academy of Sciences

"Prof Magoha was a force of nature. A dedicated academician who was determined to move any field he was involved in forward. Yet he had a great sense of humor that belied his strict administrative 'nothing is impossible' approach to work. He has left a legacy of excellence at all he undertook that will endure. RIP." Professor Elizabeth Anne Bukusi, Fellow, the African Academy of Sciences (FAAS)

"Let us all cherish the time we had with Prof Magoha and ensure his legacy lives on in us. Accept our sincere condolences and prayers." Professor Mary Abukutsa-Onyango, Governing Council Member, the African Academy of Sciences

"I got the opportunity on a few occasions to interact with Prof. Magoha during his tenure at the helm of the medical regulatory body and as an ardent academician. I was elated to learn that he was to join Maseno University to provide mentorship to upcoming medical scientists. Prof. Magoha was as an astute academician who left giant footprints wherever he had the opportunity to serve at different levels. Indeed, an iroko tree has fallen and we are all wandering in the academic world! We pray that God will grant the statesman an eternal rest and also the family and all those his academic 'dependents' fortitude to bear the loss." Professor Collins Ouma, Fellow, the African Academy of Sciences (FAAS)

Source: <https://www.aasciences.africa/news/celebrating-life-and-contribution-professor-george-albert-magoha>

RESEARCH NEWS FROM THE WORLD

MEET THE FIRST FEMALE RADIOPHARMACEUTICAL SCIENTIST IN KENYA



When you come across Dr. Elizabeth Wangari Itotia, don't let her down to earth demeanour fool you. She is the first female radio pharmacist in the country. Radiopharmacy also referred to as Nuclear Pharmacy is a pharmacy profession speciality focused on the appropriate use of radiopharmaceutical drugs.

The goal is to improve patient care by ensuring quality and safety in preparing and dispensing radiopharmaceuticals for therapy

and diagnosis. She has a few more accolades on her shoulders. She is the valedictorian of the University of Nairobi class of 2017 and currently works as a pharmacist in the Kenyatta University Teaching, Referral and Research Hospital (KUTRRH).

Dr. Itotia was ecstatic when she received a call from KUTRRH that detailed she had been hired for the pharmacist position. Little did she know that a few days later, she would get an offer for a fully sponsored masters scholarship from International Atomic Energy Agency.

Torn between a great fulfilling job, and an opportunity to advance her education, Dr. Itotia opted to take the job for the time being in a premier healthcare facility in KUTRRH. Her dream to pursue the Masters in nuclear pharmacy was however rekindled during induction at KUTRRH. The management emphasized The Hospital's mission for clinical excellence, medical training and research, particularly in the area of early cancer diagnosis.

Armed with this knowledge, Dr. Itotia approached the administration, with a proposal to pursue the Master's degree in nuclear pharmacy at Sefako Makgatho Health Sciences University in South Africa. After careful deliberation, the Hospital Board approved her proposal.

She could not get used to Pretoria's hot climate. Being far away from home was another challenge that plagued her during her stay in South Africa. However, the challenges didn't deter her from pursuing her education goals. Moreover, she was witnessing first-hand the positive impact of public comprehensive cancer care on patient outcomes in South Africa.

Having completed her classwork, Dr. Itotia has resumed working in KUTRRH. She is eager to apply the sea of knowledge and skills she's learned working and studying at the Nuclear Medicine Centre. Her skills will come in handy in the running of the upcoming Integrated Molecular Imaging Centre (IMIC) to promote quality patient centred cancer care, particularly in regards to early diagnosis.

Dr. Itotia is deeply thankful to the Chairperson of the Board, Prof. Olive Mugenda, the Hospital Board, Management, and the Directorate of Training & Capacity Building for the opportunity to serve at KUTRRH and to train as a pioneer radio pharmacist in the country.

Source: <https://www.kutrrh.go.ke/meet-the-first-female-radiopharmaceutical-scientist-in-kenya/>

CONCERN FOR SCIENCE AND RESEARCH IN AFGHANISTAN AS AUTHORITIES BAR WOMEN FROM HIGHER EDUCATION



On the UN International Day of Education, ISC Governing Board Members, ISC Members and Fellows call attention to suspension of women's education in Afghanistan

The ISC's Committee for Freedom and Responsibility in Science (CFRS) is actively monitoring the state of science and research in Afghanistan.

In December 2022, the Afghanistan authorities decreed that higher education for women in Afghanistan would be suspended until further notice. As highlighted in the ISC's recent Statement urging a reversal of the ban, education is a human right and a

fundamental prerequisite for peace and sustainable development. The Council notes with deep concern that this recent escalation in the Afghanistan's approach to education effectively prevents half the country's population from learning and participating in science. This represents a severe violation of the ISC's Principle of Freedom and Responsibility in Science and presents an existential threat to the integrity of Afghanistan's science systems and culture. Unable to conduct their research in the face of such overwhelmingly regressive and misogynistic restrictions, and for fear of persecution, many academics and scientists are forced to flee resulting in a loss of research and education. The global scientific community must act to preserve the talent and expertise held by displaced Afghan researchers.

Source: <https://council.science/current/news/concern-science-research-afghanistan/>

PASET MEMBERS RECONFIRM COMMITMENT TO UPLIFT SCIENCE SOLUTIONS FOR AFRICA'S INDUSTRIALIZATION



Figure 15: Group Photo



Figure 16: Hon. Ezekiel Machogu, CBS, Cabinet Secretary, Ministry of Education and Head of Kenya Delegation

The Partnership in Applied Sciences Engineering and Technology (PASET) Governance Meetings hosted by Rwanda, through the

Ministry of Education were held in Kigali on February 1st and 2nd 2023 respectively. This first in-person meeting since the COVID-19 pandemic was attended by High-level government officials from the sub-Saharan African member governments including Ministers of Education/Higher Education/TVET, senior Government representatives, high level representatives from the World Bank, Korea and Scientists, Academics and Private Sector Representatives who are members of the Consultative Advisory Group. The meeting reviewed PASET achievements to date and strategy into the next decade.



Figure 17: Dr Valentine Uwamariya, Rwanda Minister of Education and PASET Governing Council Chair

Dr Valentine Uwamariya, Minister of Education Rwanda and current Chair of the Governing Council of PASET said: *“We are delighted with the progress made especially through the Regional*

Scholarship and Innovation Fund, Rsif. I note with great satisfaction that 37% of these PhD scholars are women. This is significantly above the global average of 28% of women in Applied Science, Engineering and Technology (ASET) areas. PASET is led by African Governments, focused on ensuring a critical mass of well-trained scientists, engineers, technologists, and innovators to drive the development of business and industries that can add value to Africa’s rich array of natural resources and people”.

PASET was launched in 2013, with the support from the World Bank to strengthen Applied Science, Engineering and Technology contribution to socio-economic transformation in Sub-Saharan Africa. The founding members; Governments of Rwanda, Ethiopia and Senegal established PASET to address systemic gaps in skills and knowledge in Sub-Saharan Africa’s priority ASET fields, and to build the capacity of African education and training institutions to train high quality technicians, engineers and scientists to meet the demands of the economy. The shared aspiration is to build a skilled labour force by focusing on the continuum of skills from foundational skills to upper secondary/technical/vocational training as well as higher education, scientific research and innovation. Since its creation, eight additional governments have joined the initiative, namely: Benin, Burkina Faso, Côte d’Ivoire, Ghana, Kenya, Mozambique, Nigeria, and Tanzania, bringing current PASET membership to 11 African governments with more in process of joining.

PASET’s flagship program is the Regional Scholarship and Innovation Fund (Rsif) which is also the first Pan-African Science

fund to “pool” regional investments to support PhD students, post-doctoral scientists, and African universities to establish high-quality training, research, and innovation environments and to develop university institutional capacity for the benefit of the whole Africa region. Managed by *icipe* as its Regional Coordination Unit (RCU) since 2018, Rsif aims to:

1. Create a stock of highly skilled scientists, professionals, and innovators in ASET areas
2. Identify and nurture young talented Africans who wish to further their studies in ASET fields where expertise is needed most
3. Address imbalances in the number of women and disadvantaged groups in ASET fields in Africa
4. Build African university capacity to provide relevant ASET training and to ensure continued investment in scaling up the ASET education and workforce.

With excellence at its core, Rsif enables the delivery of knowledge and science solutions for priority challenges facing the continent and the world. It prioritizes five strategic sectors for Africa’s industrialization and socio-economic transformation:

- Food security and agribusiness
- Climate change
- ICT including data science and artificial intelligence.
- Energy including renewables
- Minerals, mining, and materials engineering.

Rsif strengthens innovation ecosystems in targeted regional centres of excellence, strengthening university linkages with

private and public sector. The unique PASET-Rsif network benefits from the leadership of African Ministers in charge of Higher Education, Science and Innovation backed by Heads of State.

Some of Rsif’s achievements to date include 291 PhD scholarships awarded to talented and motivated young Africans from 24 African nationalities; 116 scientific papers published by our scholars in quality outlets; and over 50 research and innovation grants awarded to African research institutions.



Figure 18: Dr Moses Osiru, Rsif RCU Manager, *icipe*

The members of PASET leadership appreciated the successful meeting hosted in Rwanda reaffirming the unique role of PASET

in providing a comprehensive regional approach to developing the necessary skills in STEM areas at the higher education and TVET level. Members held fruitful deliberations, including on the PASET evaluation, PASET 2024-2034 strategy, transition of the PASET secretariat to the African continent, and the 6th PASET forum and related events to be hosted in Dakar Senegal by President Macky Sall in November 2023.

In her closing remarks, Minister Uwamariya, the PASET GC Chair thanked the World Bank, emphasizing that their support has been essential in the establishment of PASET and in achieving the results to date. She thanked the Government of Korea for its financial support and for hosting the RSIF scholars sandwich program. She looked forward to the continued support of the World Bank and the Government of Korea and to welcoming new partners who will strengthen PASET's objectives to leverage knowledge related to international best practices and experiences as well as to take advantage of global networks.

The Chair also acknowledged the strong leadership of *icipe* in Rsif, and thanked all the member countries for their confidence in PASET's vision and objectives as PASET continues to grow towards achieving the goals that were set in the Dakar communique that established PASET.

Source: https://www.rsif-paset.org/paset-governance-meetings-held-in-kigali-rwanda/?mc_cid=b0848bbe5d&mc_eid=1d3136ccc7&mc_cid=c980206db3&mc_eid=1d3136ccc7

NACOSTI STAFF NEWS

NACOSTI BIDS FAREWELL TO STAFF



Figure 19: Ms. Jane Omari

Ms. Jane Omari, Principal Analyst, Agriculture and Natural Resources Sciences retired from service.

NACOSTI wishes her all the best in her next phase of life.



**NATIONAL COMMISSION FOR SCIENCE,
TECHNOLOGY AND INNOVATION (NACOSTI)**

Upper Kabete, Off Waiyaki Way, P.O. Box 30623 – 00100, Nairobi, Kenya
TEL: 020 400 7000, 0713 788787, 0735 404245; Email: info@nacosti.go.ke ; Website: www.nacosti.go.ke

PUBLIC NOTICE

Licensing of Research in Kenya

The National Commission for Science, Technology and Innovation is established by the Science, Technology and Innovation (STI) Act, No. 28 of 2013, Revised in 2014 (the Act) as a State Corporation. The Commission **regulates and assures quality in Science, Technology and Innovation Sector and advises the Government in matters related thereto**. In this regard, the Act stipulates seventeen (17) functions of the Commission. Among the functions of the Commission, Section 6(1)(f) of the STI Act 2014 [2013] specifies that the **Commission shall accredit research institutes and approve all Scientific research in Kenya**.

Consequently, Section 12(3) of the Act requires that **any person undertaking or intending to undertake research in science and technology in the country, or who accesses, handles, or transfers any material or technology or moves it within, from or into the country, shall apply to the Commission for the grant of a licence in accordance with the Act**.

Section 12(5) of the Act further **directs that no licence shall be granted** by the Commission for any research involving activities which;

- (a) may **adversely affect the culture of any community** in Kenya;
- (b) may **adversely affect the environment**;
- (c) may **result in the exploitation of intellectual property rights of communities** to their traditional knowledge.

- (d) may, in the view of the Commission, **adversely affect the lives of Kenyans**.

Section 13(1) of the Act reinforces Section 12(5) by directing that the Commission shall, upon receipt of an application under section 12, evaluate the application, and if **satisfied that the conduct of the research is beneficial to the country, and that the research shall not adversely affect any aspect of the nature, environment or the security of the country**, issue to the applicant a licence in the prescribed form.

Pursuant thereto, members of the public are hereby notified that according to the Science, Technology and Innovation Act 2014 [2013], Scientific Research in Kenya must be approved and licensed by the Commission.

As stipulated in Section 15 of the Act, any person who accesses, handles, transacts, transfers or moves any specified technology or any material necessary for scientific research within, into or from Kenya without a licence issued under this Act; or contravenes the provisions of Section 12 of the Act, **commits an offence** and shall, in addition to any other penalty which may be provided for in this Act or any other written law, be liable on conviction to a fine not exceeding five million shillings or to imprisonment for a term not exceeding four years, or both.

For further clarification kindly contact the Commission, or visit online services at <https://research-portal.nacosti.go.ke/>

PROF. WALTER O. OYAWA, PhD
DIRECTOR GENERAL

NACOSTI is ISO 9001:2015 Certified

SERVICE CHARGES

Fees/Charges for Research Licensing

Table 1: Current fees/charges for Research Licensing

No	Category of Research License	Fees/charges
1)	Kenya Citizens: Diploma / Undergraduate	Ksh. 100
	Kenya Citizens: MA/MSc	Ksh. 1,000
	Kenya Citizens: PhD	Ksh. 2,000
	Kenya Citizens: Individual / Post Doctoral	Ksh. 5,000
	Public Institutions	Ksh. 10,000
	Private Institutions	Ksh. 20,000
2)	EAC Citizens: Diploma / Undergraduate	Ksh. 100
	EAC Citizens: MA/MSc	Ksh. 1,000
	EAC Citizens: PhD	Ksh. 2,000
	EAC Citizens: Individual / Post Doctoral	Ksh. 5,000
3)	Rest of Africa: Diploma / Undergraduate	Ksh. 200
	Rest of Africa: MA/MSc	Ksh. 2,000
	Rest of Africa: PhD	Ksh. 4,000
	Rest of Africa: Individual / Post Doctoral / Non-academic Doctoral	Ksh. 10,000
4)	Non-Africans: Diploma / Undergraduate	US\$ 150
	Non-Africans: MA/MSc	US\$ 350
	Non-Africans: PhD	US\$ 400
	Non-Africans: Individual / Post Doctoral / Non-academic	US\$ 500

Notes:

1. Non-Kenyans in local institutions with work permits and/or Permanent Resident Permits to pay same as Kenya citizens.
2. Students in local institutions of higher learning pay same as citizens.
3. The Supervisor may apply on behalf of a class undertaking Diploma or Degree course, however the service cost will be dependent on the number of students

Fees/Charges pertaining to Research Institutions

Table 2: Current fees/charges for Registration of Research Institutions, Accreditation of Research Programmes, and Monitoring and Evaluation of Research Institutions

No.	Services	Current fee in KES
1)	Registration of Research Institutions	250,000
2)	Accreditation of Research Programmes	250,000
3)	Inspection, Monitoring and Evaluation of Research Institutions	A basic fee of 275,000 will be levied per inspection in addition to any other additional costs that will be related to the inspection

DRAFT GUIDELINES FOR STAKEHOLDER INPUT, COMMENTS, AND RECOMMENDATIONS

The National Commission for Science, Technology and Innovation (NACOSTI) is established by STI Act 2013(Rev. 2014) with the objective of regulating and assuring quality in the science, technology and innovation sector and advise the Government in matters related thereto. Further, Section 6(1)(p) of the STI Act mandates the Commission to develop and enforce codes, guidelines and regulations in accordance with the policy determined under this Act for the governance, management and maintenance of standards and quality in research systems. In this regard, the Commission has developed draft guidelines as listed below, and hereby invites stakeholders for their written input, comments, suggestions and recommendations by September 2021. In this regard, the Commission has developed draft STI Priorities, and Guidelines as listed below, and has circulated the same to stakeholders for their input, comments, suggestions, and recommendations. The Commission therefore reminds stakeholders who have not yet submitted their written input, suggestions and recommendations to the Commission for consideration to do so by latest 30th November, 2021. The documents may be downloaded at NACOSTI Website www.nacosti.go.ke

- **DRAFT “PRIORITIES IN SCIENTIFIC, TECHNOLOGICAL AND INNOVATION ACTIVITIES”**

The Priorities in Scientific, Technological and innovation activities in Kenya are in line with Section 6(1)(a) of the STI Act which stipulates that “the Commission shall develop, in consultation with stakeholders, the priorities in scientific, technological and innovation activities in Kenya in relation to the economic and social policies of the Government, and the country’s international commitments”

- **DRAFT “NATIONAL GUIDELINES FOR REGISTRATION, LICENSING, AND REGULATION OF RESEARCHERS IN KENYA”.**

The Guideline is in line with Section 15 of the Legal Notice 106 of 2014, of the STI Act 2013, titled “STI (Registration and Accreditation of Research Institutions) Regulations, 2014”, which mandates the Commission to register, license and regulate researchers in the Scheduled Science areas.

- **DRAFT “NATIONAL GUIDELINES FOR ACCREDITATION OF ACADEMIC JOURNALS IN KENYA”.**

The Guideline is in line with Section 26 of the STI Act which specifies that “Research findings and information regarding research systems shall be stored or disseminated, utilized or applied in such a manner as may be prescribed by the Commission from time to time”.

CURRENT NACOSTI STAFF



*Prof. Walter O. Oyawa, PhD
Director General/CEO*



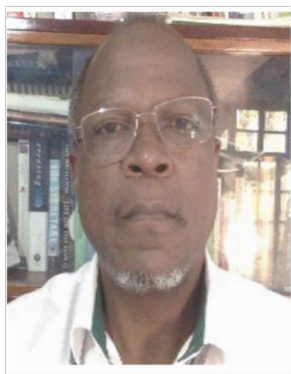
*Mr. Godfrey Kalerwa
Ag. Director, Research
Accreditation and Quality
Assurance,*



*Dr. David Njubi
Ag. Director, Scheduled
Sciences*



*Mr. Gideon Kirui
Ag. Director Corporate Services*



*Dr. David Otwoma
Chief Analyst,
Physical & Industrial Sciences*



*Ms. Jennifer Murgor
Deputy Director,
Human Resource*



*Dr. Benson Kinyagia
Ag. Chief Analyst,
Biological and Health Sciences*



*Ms. Margaret Muthee
Chief Analyst, Humanities and
Social Sciences*



*Mr. Abdallah Bii
Deputy Director,
Legal Services*



*Mr. Cyrus Kamau
Chief Analyst, Infrastructure
Communication, and
Information Sciences*



*Ms. Yasmin Hussein
Deputy Director,
Supply Chain Management*



*Dr. David Ngigi
Principal Research, Quality
Assurance Officer*



*Ms. Evelyn Mbaabu
Principal Analyst, Humanities &
Social Sciences*



*Mr. Amon Komen
Senior Analyst,
Physical & Industrial Sciences*



*Mr. Julius Mwangi
Senior Analyst,
Earth and Space Sciences*



*Ms. Charity Muchoki
Senior Analyst,
Agriculture and Natural
Resources Sciences*



*Ms. Teresia Nyawira
Senior Analyst,
Biological and Health Sciences*



*Dr. Mary Onsarigo
Senior Analyst,
Biological and Health Sciences*



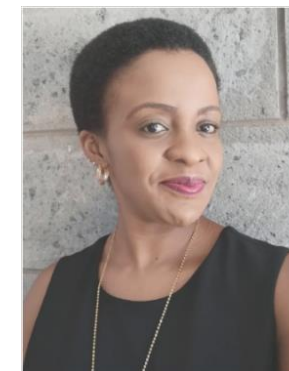
*Mr. Stephen Situma
Senior Analyst,
Physical & Industrial Sciences*



*Mr. Muhanji Ambani
Senior Administration Officer*



*Ms. Eunita Ogindo
Senior Accountant*



*Ms. Mildred Mugambi
Senior Corporate
Communications Officer*



*Ms. Ruth Were
Senior Supply Chain
Management Officer*



*Mr. Denis Yegon
Senior ICT Officer*



*Ms. Lilian Awala
Licencing, Monitoring &
Evaluation Officer*



*Mr. David Amiani
Licencing, Monitoring &
Evaluation Officer*



*Ms. Joan Chepleting
Research Quality Assurance
Officer*



*Mr. Steven Indimuli
Research Quality Assurance
Officer*



*Ms. Rael Adhiambo
Analyst,
Earth and Space Sciences*



*Ms. Pauline Kuyan
Accountant*



*Mr. Ezekiah Gatheru
Analyst,
Infrastructure, Information &
Communication Sciences*



*Mr. Rollex Opondo
Records Management Officer*



*Mr. Phelix Awuor
Records Management Officer*



*Mr. Timothy Mutanda
Internal Auditor*



*Mr. Cyprian Karithi
Records Management Officer*



*Ms. Alice Otwor
Senior Office Administrator*



*Ms. Wairimu Ikua
Senior Officer Administrator*



*Ms. Christine Kayesi
Senior Officer Administrator*



*Ms. Millicent Okuku
Officer Administrator*



*Ms. Nahida Annar
Officer Administrator*



*Ms. Ruth Asati
Senior Customer Care
Assistant*



*Ms. Lourine Auma
Accounts Assistant*



*Ms. Kulah Abdikadir
Account Assistant*



*Mr. Paul Anuro
Senior Driver*



*Mr. Pius Samoei
Senior Driver*



*Mr. Abdi Ibrahim
Senior Driver*

KENYA'S NATIONAL ANTHEM

Kiswahili

1

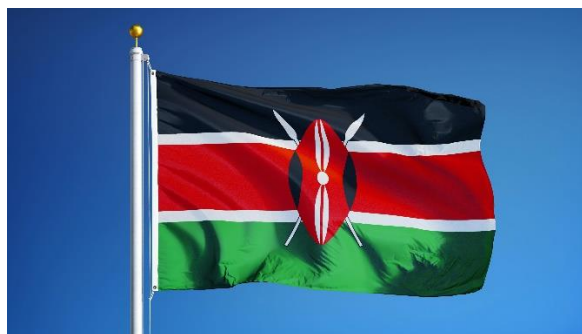
Ee Mungu nguvu yetu
Ilete baraka kwetu
Haki iwe ngao na mlinzi
Natukae na undugu
Amani na uhuru
Raha tupate na ustawi.

2

Amkeni ndugu zetu
Tufanye sote bidi
Nasi tujitoe kwa nguvu
Nchi yetu ya Kenya
Tunayoipenda
Tuwe tayari kuilinda

3

Natujenge taifa letu
Ee, ndio wajibu wetu
Kenya istahili heshima
Tuungane mikono
Pamoja kazini
Kila siku tuwe na shukrani



English

1

O God of all creation
Bless this our land and nation
Justice be our shield and defender
May we dwell in unity
Peace and liberty
Plenty be found within our borders.

2

Let one and all arise
With hearts both strong and true
Service be our earnest endeavour
And our homeland of Kenya
Heritage of splendour
Firm may we stand to defend

3

Let all with one accord
In common bond united
Build this our nation together
And the glory of Kenya
The fruit of our labour
Fill every heart with

THE EAST AFRICA COMMUNITY ANTHEM



1. Ee Mungu twaomba ulinde
Jumuiya Afrika Mashariki
Tuwezeshe kuishi kwa amani
Tutimize na malengo yetu.

Chorus

*Jumuiya Yetu sote tuilinde
Tuwajibike tuimarike
Umoja wetu ni nguzo yetu
Idumu Jumuiya yetu.*

2. Uzalendo pia mshikamano
Viwe msingi wa Umoja wetu
Natulinde Uhuru na Amani
Mila zetu na desturi zetu.

3. Viwandani na hata mashambani
Tufanye kazi sote kwa makini
Tujitoe kwa hali na mali
Tuijenge Jumuiya bora.



NACOSTI HOTEL AND CONFERENCE

National Commission for Science, Technology and Innovation (NACOSTI),
Upper Kabete, Off Waiyaki Way
P.O. Box 30623 – 00100, Nairobi, Kenya
TEL: 020 400 7000, 0713 788787, 0735 404245
Email: info@nacosti.go.ke
Website: www.nacosti.go.ke

National Commission for Science, Technology and Innovation (NACOSTI)