



**National Commission for Science, Technology and Innovation (NACOSTI)**



## **NACOSTI Plaza**

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## EDITORIAL

### “Science and Technology for Prosperity”



Welcome to the 5<sup>th</sup> Volume of the STIR Bulletin, a publication that highlights the activities of National Commission for Science, Technology and Innovation (NACOSTI) as it pursues its mandate of regulating and assuring quality in the research, science, and technology and innovation sector and advising the Government in matters related thereto.

This 5th Volume covers the period from October 2021 to December 2021.

In the 18th Cycle of Performance Contracting (FY 2021/2022), the Government tasked NACOSTI with spearheading a new Performance Contract Indicator called Science Technology & Innovation (STI) mainstreaming. The performance indicator applies to all public institutions with a component of research, science, technology and innovation in their mandate and functions. Under this target, MDAs are required to document available Research, Technology and Innovation Human resource capacity by sub-sector, qualification, field of research/technology innovation, age, and gender. For effective implementation of this performance indicator, MDAs are required to appoint a Focal person and Champions to coordinate STI mainstreaming. As the Agency spearheading this indicator, NACOSTI has carried out three trainings for the implementing institutions two of them virtually and a physical one in December 2021 in Naivasha. Highlights of these trainings are covered in this bulletin.

The Commission continued playing its co-ordination role in the Country's STI sector and worked to create linkages both locally and internationally. As a step towards collaboration with County Governments, the Commission participated in the 7th Devolution Conference held in Makueni County from 23rd to 26th November 2021 and whose theme was Multi-Level Governance for Climate Action. The Commission was also represented in the 2021 Biological Weapons Convention (BWC) meeting of State Parties held in Geneva, Switzerland in November 2021 during which linkages for future partnerships were initiated. Additionally, the Commission hosted a team of officers from the Comprehensive Test-Ban Treaty Organization (CTBTO) led by their Executive Secretary and also held discussions with a delegation from UNESCO where possible areas of wider collaboration were explored. The Director General of NACOSTI was elected to the Governing Board of International Science Council, an International Non-Governmental Organization that works to provide a global voice for science.

To build synergies and closer working relations within its staff, the Commission closed the year 2021 with a Staff team building exercise and we are glad to share a pictorial presentation of the exercise in this Bulletin.

I wish you 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 5th Edition of the STIR Bulletin, 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  
**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.

## REMARKS TO THE 2021 BWC MEETING OF STATES PARTIES



*Figure 1: Kenya's Delegation during the Meeting of States Parties in November 2021 in Geneva, Switzerland. From Left to Right front Row: Amb Cleophus Mailu, Amb. Simon Nabukwesi, Prof. Walter Oyawa, Mr. Negel Mwaura Second Row: Dr. Roselida Owuor, Mr. Nicholas Mwikwabe, Dr. Catherine Taracha, Dr. Mary Onsarigo Third Row: Ms. Damaris Lukwo, Ms. Mellon Kabole*

### Remarks

**Ambassador Bonnie Denise Jenkins, Under Secretary For Arms Control And International Security**

**2021 Biological Weapons Convention Meeting of States Parties**

**Geneva, Switzerland**

**November 22, 2021**

(As prepared)

Mr. Chairman,

The Biological Weapons Convention is one of the key international security agreements that guard against the threat of weapons of mass destruction. It is an honor for me to join you and colleagues from other States Parties, and I assure you that the United States will do its best to support you as you guide our discussions.

For the past two decades, efforts to strengthen the Convention have been treading water. Useful discussions here have led to some small steps and actions at the national level. However, States Parties have been unable to agree to more significant action. We face a biological weapons threat that is real, serious, and, in many respects, growing. Some states continue to possess sophisticated, well-established biological weapons programs, while non-state actors have shown continuing interest in acquiring BW capabilities. Additionally, widespread availability of sophisticated scientific and technological tools and methods is gradually eroding barriers to the development of biological weapons.

While COVID-19 was not the result of a biological weapon, the pandemic is a wake-up call for all of us. The astonishing human toll of the pandemic has illustrated our shared vulnerability to novel pathogens. Unprecedented efforts are now underway to strengthen international health security, but we need to address not only the latest challenge, but those that may lie ahead,

whether natural, accidental, or deliberate in origin. To do so, we must strengthen the BWC, as National Security Adviser Jake Sullivan said in his November 19 statement. The status quo is neither acceptable nor up to the task. We must take action to ensure that the Convention can effectively address the challenges we face now and in the future. We cannot keep treading water.

The first step is to overcome the political impasse of the last twenty years. We envision a two-pronged approach. The Review Conference should take near-term, concrete action to strengthen the Convention and benefit States Parties. These actions include further operationalizing assistance under Article VII; establishing a voluntary fund for technical cooperation; creating a mechanism to review advances in science and technology; deepening collaborations on biosafety and biosecurity; staffing the Implementation Support Unit to carry out these roles; and enabling more agile decision making. The second way forward is for Review Conference to also take steps to address the harder issues. It should establish a new expert working group to examine possible measures to strengthen implementation of the Convention, increase transparency, and enhance assurance of compliance. Such an effort should consider both advancements in science and technology as well as changes in the nature of the threat. As we are all acutely aware, a great deal has happened in the last two decades. It could be useful to build on some approaches suggested in past discussions, but our efforts should not be defined by them.

Mr. Chairman, these are significant steps. The decision to propose them is not one the United States made lightly. It involved

considerable deliberation at senior levels, and we are prepared to put in the time, effort, and resources needed to support such an effort. I want to assure you and everyone present that the United States intends to play an active and constructive role to help ensure the success of the Ninth Review Conference.

To that end, I am proud to announce the State Department intends to a dedicate a senior official position to drive forward these new initiatives. The official will be focused on working with our allies, partners, and the international community to strengthen the BWC. This initiative underscores the United States' fundamental belief in the importance of solving these critical biological issues.

Mr. Chairman, the COVID-19 pandemic has galvanized international awareness of our shared vulnerability to the potentially catastrophic consequences of biological threats. It is a wake-up call. Together, we must heed that call and take real, meaningful action to revitalize the Convention. The United States is committed to working, together with all Parties, to bring the Convention fully into the 21st century.

Thank you

## BILATERAL SIDE MEETINGS WITH DELEGATIONS FROM VARIOUS STATES PARTIES TO THE BIOLOGICAL WEAPONS CONVENTION HELD AT UNITED NATIONS GENEVA SWITZERLAND, BETWEEN 22ND TO 25TH NOVEMBER 2021

### EU and the Kenyan delegates During the Bilateral held on 23rd November 2021



Figure 2: From Left to Right: Prof. Walter Oyawa, Ms. Marketa Homolkova, Amb. Simon Nabukwesi, Mr. Mauri Pasanen, Dr. Mary Onsarigo, Ms. Mallon Kabole, Mr. Igor Kucer

#### Outcome:

Kenya shall identify critical priority areas discussed within the meeting and others proposed and provide the European Union for consideration, advice and linkage with other possible supporting programs.

### Canada, UK and the Kenyan delegates During the Bilateral Meeting held on 24th November 2021 at 3.00pm



Figure 3: From Left to Right Front Row: Mr. James Harrison, Dr. Mary Onsarigo, Dr. Amber Murch, Prof. Walter Oyawa, Ms. Mellon Kabole Back Row: Dr. Catherine Taracha, Trevor Smith, Phillip Cattle, Dr. Roselida Owour, Ms. Nataly Spears, Mr Nicholas Mwikwabe

#### Outcome:

A proposal to follow up meeting between the two delegations and Africa CDC upon return to their countries was made to enhance the discussions on collaboration. Both teams confirmed their readiness and willingness to work together.

### USA and the Kenyan delegates During the Bilateral Meeting held on 24th November 2021 at 2.00pm



Figure 4: Front Row: Dr. Catherine Taracha, Ms. Amanda Ducasse, Prof. Walter Oyawa, Dr. Danielle C. Lohman. Back Row: Dr. Mary Onsarigo, Mr. Nicholas Mwikwabe, Ms. Mellon Kabole

#### Outcome:

The United States American delegation shall contact the experts in their delegation to determine the next steps in the identified areas of collaboration.

## KENYAN SCHOLAR ELECTED TO GOVERNING BOARD OF GLOBAL SCIENCE COUNCIL



Figure 5: Prof Walter O. Oyawa, Director General/CEO NACOSTI

Kenyan universities will now find it easy to forge international partnerships, secure research funding and also improve their rankings after the country joined Governing Board of International Science Council (ISC).

National Commission for Science, Technology and Innovation (NACOSTI) Chief Executive Walter Oyawa has been elected to sit on the crucial organ, opening doors for global partnerships for local institutions and experts.

ISC is an international non-governmental organisation that works to provide a global voice for science. It works at the global level

to catalyse and convene scientific expertise, advice and influence on issues of major concern to both science and society.

Prof Oyawa will now be part of the 16 board members of the ISC who will provide scientific and strategic leadership to the Council for the next three years.



Figure 6: New Governing Board elected to provide scientific and strategic leadership to the International Science Council.

Prof Oyawa challenged local universities and researchers to take advantage of the inclusion to forge international partnerships that will also improve institutions ranking.

“This is a golden chance presented to Kenya and this is the time for universities and local experts to think big and even secure crucial research funding,” said Oyawa.

He said the move comes at a time the world is fighting the Covid-19 pandemic and noted that Kenya will greatly benefit from being part of the decision-making body.

Oyawa said Kenya for the first time has a voice in the international scene, at a time effects of Covid 19 pandemic are taking toll on nations.

“We want our local universities and experts to seek global partnerships to get the latest information and these associations will also improve their world rankings,” said Oyawa.

He said other than having international faculties, international students and international students, global rankings also depend on international partnerships.

He said through the partnership, Nacosti will be able to advise presidency on a number of issues on science and research during the pandemic.

“We shall be sitting on a body that is also advisory to the United Nations and this is a major win for Kenya,” said Oyawa.

Amongst its duties, the ISC Governing Board provides strategic leadership and develops priority activity and business plans for approval by the General Assembly, as well as monitoring the implementation and performance of such plans.

Source:

<https://www.standardmedia.co.ke/education/article/2001426308/kenyan-scholar-elected-to-governing-board-of-global-science-council>

## HON. LESUUDA NAISULA PAYS COURTESY CALL ON DIRECTOR GENERAL, NACOSTI



*Figure 7: Hon. Lesuuda Nasula during a courtesy call she paid on NACOSTI Director General, Prof. Walter Oyawa on 18th October 2021*

Hon. Lesuuda Nasula during a courtesy call she paid on NACOSTI Director General, Prof. Walter Oyawa on 18th October 2021

## VISIT BY UNESCO REGIONAL DIRECTOR TO NACOSTI



Figure 8: From Left to Right Dr. David Ngigi(NACOSTI), Prof. Walter O. Oyawa(NACOSTI), Dr. Sam Partey (UNESCO) Prof. Hubert Gijzen (UNESCO) and Dr. Mary Onsarigo (NACOSTI)

'UNESCO Regional Director for Eastern Africa and Representative to Kenya Prof. Hubert Gijzen accompanied by Sam Partey a Program Specialist at UNESCO Regional office for Eastern Africa paid a courtesy call to the Director General for National Commission for Science Technology and Innovation Prof. Walter Oyawa on 13th October 2021 at the Commission's headquarters. During the meeting, there were opportune discussions on possible areas of partnership and linkages regarding Science, Technology and Innovation (STI) in Kenya towards sustainable development.

The meeting discussed how UNESCO and NACOSTI can partner and collaborate to build a stronger relationship in the field of science and contribute towards sustainable development. Prof Gijzen explained that this would be achieved through various programs identifying their relationship to education, making science more attractive as a career, changing the image of science in schools by rolling out Education for Sustainable Development (ESD).



Figure 9: Prof. Hubert Gijzen UNESCO Regional Director for Eastern Africa and Representative to Kenya paid a courtesy call to the Director General, NACOSTI Prof. Walter Oyawa at the Commission's headquarters on 13th October, 2021

ESD empowers learners with the knowledge, skills, values, and attitudes to address the interconnected global challenges

including climate change, environmental degradation, loss of biodiversity, poverty and inequality, operationalizing science activities in schools and translating them into projects. Further, ESD aims at establishing Green Schools with a major focus in biodiversity, waste recycle, school gardening and enhancing teacher training to create a better understanding and interest in Science Technology and Innovation.

Prof. Gijzen further emphasized that UNESCO's mission is focused on Climate Change and water, Environmental Science, formulating strong policies for science to bring solutions to programs. He looked forward for a stronger cooperation between NACOSTI and UNESCO focussing on STEM Education, Capacity building in STEM, Promoting Research and Development, establishing a linkage with TVETS, and possibly establish Green TVETs.

Prof. Oyawa welcomed UNESCO Regional Director for Eastern Africa and Representative to Kenya, to NACOSTI offices and recognized the cordial relationship between UNESCO and NACOSTI in the promotion of Science, Technology, and Innovation. He briefly explained that NACOSTI is the chief regulator and promoter of Science, Technology, and Innovation. In this regard, the STI Act has specified 17 key functions for NACOSTI among them, research licensing, regulation of scientific research, advising the government in matters Science and technology, and developing National research priorities.

He highlighted that currently the Commission is involved in undertaking various activities & projects in promoting STI in the

country among them STI Mainstreaming in Ministries and state departments, participating in the UNESCO's GO-SPIN program to map national science, technology, and innovation (STI) landscapes and analysing STI policies and their implementation in Kenya.

The Commission also recently organized a Multi Sectoral Conference on STI involving various stakeholders and came up with 15 conference resolutions. He noted that the Commission had signed a Letter of Intent with UNESCO last year on various areas as initial priorities to build a strong partnership.

In concluding their first meeting, Prof. Oyawa and Prof. Gijzen agreed to review the contents of the Letter of intent signed a year ago between NACOSTI and the UNESCO Regional Office for Eastern Africa to harness and build a strong partnership. It was agreed to turn the content of the Letter of Intent into a Joint Program of Action through identification of actionable activities with budget and timelines, seek partners and donors and how the joint program will impact Kenya.



Figure 10: Prof. Hubert Gijzen receiving a gift bag from his host Prof. Walter Oyawa looking on Sam Partey, Program Specialist UNESCO Regional Office for Eastern Africa

## SECOND SENSITIZATION ON STI MAINSTREAMING PC INDICATOR – FY 2021/21 TO MDAs



On the 21st and 22nd of October 2021, the National Commission for Science, Technology, and Innovation (NACOSTI) successfully conducted a two-day virtual training/sensitization on STI mainstreaming indicator training for MDAs. These included Research Institutions, Regulating Agencies, Ministries and State Departments, Universities, University Colleges and other colleges, TVETS and MDAs with distinct research and technology development centres/units/activities/budget.

The overall objective of the sensitization was to prepare MDAs to effectively implement and report on STI Mainstreaming indicator for the 2021-22 FY.

## THE UNIVERSITY OF NAIROBI WINS KENYA SPACE AGENCY RESEARCH GRANT



The Kenya Space Agency (KSA) has announced the winner of the Kenya Space Agency research grant for the FY 2021/2022. This award stems from the research chair programme. KSA set aside Ksh 10 million (USD 89,245) for the award of Research Chairs (RC) for FY 2021/2022. The RCs were for 3U Nanosatellite Model Development, Land Cover Data Collection Application Development and Small-scale Crop Mapping Application using Artificial Intelligence/Machine Learning (AI/ML). The purpose of these Research Chairs was to catalyse and promote research in Space Science and Technology in Kenyan universities.

### DEVELOPMENT OF 3U NANOSATELLITE MODEL

Pursuant to the foregoing, The KSA intended to offer support to universities as well as the private sector to consider the potential of investing in this sector. Thus, KSA pledged to offer a Research Grant to develop a 3U Nanosatellite Model, which is worth Ksh 3 million (USD 26,773) for the FY 2020/2021 from the best four teams of the RC FY 2020/2021 edition.

The KSA has subsequently selected the winners for the RC after presentations from the universities. The University of Nairobi emerged as the winner of the FY 2020/2021. In addition, Jomo Kenyatta University of Agriculture and Technology emerged as the first runner-up. There was also a tie for the second runners-up between Kenyatta University and the Technical University of Kenya.

### SMALL-SCALE CROP MAPPING USING ARTIFICIAL INTELLIGENCE/MACHINE LEARNING

The KSA also awarded a Research Grant to explore the potential of AI/ML in mapping crops under small scale farms. The proposed Research Grant award on the Small-Scale Crop Mapping using AI/ML is Ksh 2.5 million (USD 22,292) and with five beneficiary Universities each to receive Ksh 500,000 (USD 4,458). The FIVE beneficiary Universities are;

- Taita Taveta University
- Dedan Kimathi University of Technology
- University of Nairobi (Best performance)
- Jomo Kenyatta University of Agriculture and Technology (JKUAT)
- Egerton University

### LAND COVER DATA COLLECTION MOBILE APPLICATION

The KSA also launched a Research Grant for the development of a Land Cover Data Collection Mobile App, available on both Android and iPhone devices. It will provide an elaborate platform hosting customisable questionnaires to record observations in the field. Furthermore, it will also offer the functionality to store the observation in the device and remotely in a database.

The proposed RG award on Land Cover Data Collection Mobile Application will be worth Ksh 1.5 million (USD 13,375) and with three beneficiaries from Start-up companies (in the Private Sector) with less than 2 years in operation. The best three start-up companies will each receive a Research Grant of Ksh 500,000 (USD 4,458). Each Start-up Company will develop a Land Cover Data Collection Mobile app, accessible on both Android and iPhone mobile devices.

Speaking at the occasion, Dr Ibrahim Mohamed, CBS, noted that “KSA is making great strides towards space research & development. There is a need to support the knowledge of universities through space grants. Research is a vital endeavour in space development”.

Source; <https://africanews.space/>

### KENYA LAUDED OVER ROLE IN EXPLOSIVE NUCLEAR TESTS BAN



Figure 11: Group Photo

The Comprehensive Nuclear-Test-Ban Treaty Organization (CTBTO) has lauded Kenya's position on the nonproliferation of nuclear weapons and the pursuit of nuclear disarmament.

The visiting CTBTO Executive Secretary Dr. Robert Floyd noted that the East African country is playing an invaluable role in keeping the world safe from nuclear tests by hosting two International Monitoring Systems (IMS) stations, one using infrasound technology (IS32) at Karura forest and the other using seismic technology (PS24) at Kilimambogo.



Figure 12: The Executive Secretary CTBTO Dr. Robert Floyd hands over a souvenir to the PS, SDUER, Amb. Simon Nabukwesi, looking on is the Director General NACOSTI and National Focal point CTBTO Kenya, Prof. Walter Oyawa

Dr. Floyd said Kenya has specifically contributed to a better world by relaying timely data to the International Data Center (IDC) and thanked the technical Team led by Prof, Norbert Opiyo for the excellent work.

He said this when he paid a courtesy call on the Education Cabinet Secretary Prof. George Maghoha who was represented by the Principal Secretary, State Department of University Education and Research (SDUER), Amb. Simon Nabukwesi.

The PS thanked the Executive Secretary for choosing to visit Kenya as his first since appointment to office and the decision by his organization to upgrade the monitoring centers' equipment.

He assured the Executive Secretary of President Uhuru Kenyatta's administration's commitment towards the implementation of the treaty. He said out of the 53 African states, only 7 have not ratified the CTBTO, all of which Kenya has some diplomatic relations.

"Kenya is well placed in the region to take a lead in assisting the states to legislate and later ratify the treaty." Amb. Nabukwesi said



Figure 13: On behalf of the Kenyan Government, PS SDUER, Amb. Simon Nabukwesi giving a present to the visiting Executive Secretary CTBTO Dr. Robert Floyd

## CONFERENCE SHOWCASES DEVOLVED UNITS UTILIZATION OF SCIENCE, TECHNOLOGY AND INNOVATION

Speakers at the recently concluded Devolution Conference have made a call to the 47 county governments to implement legislation on the impact of climate change. The theme of the conference was - Multi-Level Governance for Climate Action.

The Seventh and Final Annual Devolution Conference was convened jointly by the Council of Governors, the Senate, the Ministry of Devolution, and the County Assemblies Forum and was held between 23rd and 26th November 2021 at Makueni Boys High School, Makueni County. The Conference officially kicked off on 24th November 2021 with a call to the 47 county governments to implement legislation on the impact of climate change. Over 3000 delegates were participating.

Speaking during the conference, the President – H.E Uhuru Kenyatta spoke on the following major issues: He noted that the country needed Sh6.8 trillion to reduce greenhouse gas emissions by 32% by 2030.

- Kenya was adversely affected by climate change despite having minimal contribution to climate change, but the country, was committed to contributing to the global climate action effort.
- He attributed the current drought affecting more than two million people to climate change, adding that the country was losing three per cent of its GDP to the effects of climate change.

- He lauded 33 county governments for enacting legislation related to climate change but said more needed to be done in terms of implementation of laws.
- He lauded the arid and semi-arid counties of Makueni, Kitui, Marsabit, Isiolo, Garissa and Wajir for establishing climate action funds whose resources go towards combating the serious effects of climate change among the rural communities.



Figure 14: NACOSTI showcasing their work during the conference

Key among the discussions held was an audit of devolution – its successes and failures. Here are some of those:

- Improved rural road network, opening of healthcare facilities and the never-ending fight over delay in disbursement of funds are some of the hits and misses of devolution.
- Some governors put the success rate of devolution at over 80 per cent but quickly pointed fingers at some senior national government officials of frustrating transfer of resources to the 47 units.

- Devolution has somehow made the cost of doing business to go up in the country due to various levies charged and application of varying legislations across counties. It emerged during the sixth conference that multiplicity and double taxation at national and county level remains a challenge especially agricultural cess, entertainment and advertisement fees.
- Both levels of government resolved to develop strategies to reduce the cost of doing business within one year.
- Devolution has opened the country through improved road networks in rural areas.
- The healthcare services and agriculture have also improved in the last nine years.
- Devolution has helped people to get government near to them, it has made decision making faster and involvement of the people through public participation.
- A multi-agency committee to develop “a policy and legal framework for harmonization of revenue collection by both levels of government.” which had been proposed during the 6th Devolution Conference, was established,

## WORLD DAY OF REMEMBRANCE OF ROAD TRAFFIC VICTIMS

NACOSTI commemorated the World Day of Remembrance of Road Traffic Victims by holding a Tree planting activity at NACOSTI Headquarters themed; “Remember. “Support. Act. ACT for LOW SPEEDS /ACT for LOW SPEED STREETS”



Figure 15: NACOSTI Road Safety Mainstreaming Committee Staff members

## NACOSTI HOLDS THE THIRD STI MAINSTREAMING TRAINING TITLED “ EVIDENCE BASED STI-MAINSTREAMING IN MDAS IN RAPIDLY CHANGING TIMES”



Figure 16: Group Photo - Training Participants

The Government through Performance Contracting Guidelines for the 18th Cycle by the Ministry of Public Service and Gender incorporated a performance indicator on STI mainstreaming. The implementation of this indicator is being coordinated by NACOSTI, and requires Government Ministries, Departments and Agencies (MDAs) to mainstream STI into their operations, programmes and projects in line with provisions and aspirations of the STI Act. In the implementation of this indicator MDAs are required to appoint an STI Focal Person and Champions to coordinate STI mainstreaming, and to document available Research, Technology, and Innovation, as well as human resource

capacity as per guidelines provided by NACOSTI. Further, MDAs are required to develop and implement an Institutional STI Strategy and submit quarterly and annual reports to NACOSTI.

As part of capacity building to strengthen the reporting by Universities, Research Institutions, Regulatory Agencies, TVETs, TTIs, Polytechnique's and MDAs, NACOSTI organized a four- day training from 14th – 17th December, 2021 at Lake Naivasha Resort. This training was preceded by two other trainings carried out virtually in the month of September and October. An evaluation of the first two virtual trainings indicated that most participants requested for in-person training. Hence NACOSTI organised a four day in-person training themed: “Evidence-Based STI Mainstreaming in MDAs in Rapidly Changing Times”. The training targeted Research Institutions, Universities, Technical Vocational Education and Training institutions, Regulatory agencies, and MDAs mandated to undertake Research, Technology, and Innovation's activities.

The highlight of the training was the speech by the Chief Guest, the Principal Secretary State Department for University Education and Research in which he confirmed that the State Department supports the promotion of STI in the country and the efforts of NACOSTI as the specialized agency spearheading the implementation of the STI Mainstreaming PC Indicator. He noted that the aim of the Training was to carry on the noble task of ensuring universal appreciation of the role of STI in enabling the realization of the aspirations of our country in National Development and building capacity of the trainees to carry out effective STI mainstreaming activities in their respective institutions in accordance with the Performance Contracting

Guidelines for FY 2021/2022 (18th PC Cycle). He acknowledged that the government recognizes the trainees as the actors in mainstreaming STI in the MDAs, and that through the training, their capacity would be built to become STI professionals that are expected to catapult and mainstream STI in the government operations and projects.

A total number of 189 participants from 96 institutions attended. The training was facilitated by nine (9) resources persons drawn from independent experts, STI institutions and NACOSTI. The institutions represented consisted of 17 Universities, 39 TVET, TTI and training colleges, 14 research institutions & regulatory Agencies and 26 MDAs. The training was interactive and involved participants in lectures, presentations, and discussions which culminated into resolutions that were adopted at the end of the training.

**NACOSTI** National Commission for Science, Technology and Innovation **MODULE 1**

**TRAINING FOR SCIENCE, TECHNOLOGY AND INNOVATION (STI) FOCAL PERSONS AND CHAMPIONS**

**THEME** "Evidence Based STI-Mainstreaming in MDAS in Rapidly Changing Times"

**Guest Speakers and Moderators**

|   |  |  |  |
|---|--|--|--|
| <br><b>Amb. Simon Nabukwesi</b><br>PS, SDUER<br>Ministry of Education   | <br><b>Prof. Mabel Imbuga</b><br>Chairperson NACADA and<br>Former VC, JKUAT                                | <br><b>Prof. Ratemo Michieka</b><br>Hon. Secretary, KNAS and Former<br>VC, JKUAT | <br><b>Mr. Hermann Alex Lampalzer</b><br>Political Affairs Officer BWC<br>Implementation Support Unit UN<br>Office for Disarmament Affairs |
| <br><b>Dr. Samuel Parley</b><br>Programme Specialist,<br>UNESCO   | <br><b>Dr. Jemimah Onsare</b><br>Chief Executive Officer,<br>NRF   | <br><b>Dr. Tonny Omwansa</b><br>Chief Executive Officer,<br>KENIA                | <br><b>Prof. Walter O. Oyawa</b><br>Director General, NACOSTI<br>and Programme Convenor  |
| <br><b>Mr. John Onyango</b><br>Managing Director,<br>KIPI   | <br><b>Mr. Kenneth Mwirigi</b><br>Director General Vision 2030<br>Delivery Secretariat                     | <br><b>Mr. Dismas Opande</b><br>Chief Finance Officer,<br>Ministry of Education  | <br><b>Dr. Kipkirui Langat</b><br>Director General/CEO,<br>TVETA   |
| <br><b>Mr. Titus Ingana</b><br>Director, Department of Research<br>Science and Technology,<br>Ministry of Education | <br><b>Mr. Bonface Wekesa</b><br>Ag. Director, Research<br>Accreditation and Quality<br>Assurance, NACOSTI | <br><b>Dr. David Njubi</b><br>Ag. Director, Scheduled<br>Sciences, NACOSTI       | <br><b>Mr. Gideon Kirui</b><br>Ag. Director Corporate Services,<br>NACOSTI   |
|   |  |  | <br><b>Dr. Mary Onsario</b><br>Senior Analyst,<br>NACOSTI  |

**"14th - 17th December 2021"** 020 4007000 @nacosti

Figure 17: Training Poster

## STI MAINSTREAMING TRAINING PICTORIALS



Chief Guest, Mr. James Kiburi Mutia giving remarks



Dr. Tonny K. Omwansa, CEO, KENIA making a presentation



Mr. Dismas Opande Chief Finance Officer, Ministry of Education making a presentation



Mr. Cyrus Kamau of NACOSTI making a presentation



Training participants listening attentively



STI Training Coordinator Mr. Boniface Wanyama of NACOSTI making a presentation



Chief Guest, Mr. James Kiburi Mutia representing PS, Ministry of Education giving his remarks



Prof. Romano Mwirichia of University of Embu, Communicating the STI Resolutions/Recommendations on behalf of the Participants



Training participants listening attentively



Dr. Dominic Bogonko Omboto of TVETA making a presentation



Prof. Walter O. Oyawa Director General, NACOSTI engaging participants



Dr. Daniel Muthegi of Kenya Vision 2030 Delivery Secretariat making presentation



Training participants listening attentively



### UNLOCKING SCIENCE



What does science look like to you? Is it a flashlight illuminating the dark? Or is it the shadows dancing on the walls, elusive and obscure?

Really, it's both. It's what we know and what we don't know. The co-existence of those truths is what makes science such an incredibly important tool to understanding our world.

And never has it been more vital to decipher science's complexities for a wider audience. We face unprecedented circumstances and intricate challenges. But science can help us navigate a path forward.

With remarkable dedication and vision, scientists around the world are laying foundations to tackle major issues like climate change while creating inclusive, flourishing societies.

In this series, the stage is set to explore their stories, happening all over the world from Antarctica to the Amazon.

### **This is science, unlocked.**

Source: <https://stories.council.science/Unlocking-Science/>

### BEES IN THE NETHERLANDS TRAINED TO DETECT COVID-19 INFECTIONS



AMSTERDAM, May 6 (Reuters)

Dutch researchers have trained bees, which have an unusually keen sense of smell, to identify samples infected with COVID-19,

a finding they said could cut waiting times for test results to just seconds.

To train the bees, scientists in the bio-veterinary research laboratory at Wageningen University gave them sugary water as a reward after showing them samples infected with COVID-19. They would get no reward after being shown a non-infected sample.

Having got used to the system, the bees were able to spontaneously extend their tongues to receive a reward when presented with an infected sample, said Wim van der Poel, a professor of virology who took part in the project.

“We collect normal honeybees from a beekeeper and we put the bees in harnesses,” he said. “Right after presenting a positive sample we also present them with sugar water. And what the bees do is they extend their proboscis to take the sugar water.”

The extending of the bees’ straw-like tongues to drink is confirmation of a positive coronavirus test result, according to the researchers.

It can take hours or days to get a COVID-19 test result, but the response from the bees is immediate. The method is also cheap, potentially making it useful for countries where tests are scarce, they said.

But Dirk de Graaf, a professor who studies bees, insects and animal immunology at Ghent University in Belgium, said he did not see the technique replacing more conventional forms of COVID-19 testing in the near future.

“It is a good idea, but I would prefer to carry out tests using the classic diagnostic tools rather than using honeybees for this. I am a huge bee lover, but I would use the bees for other purposes than detecting COVID-19,” he said.

The technique of “insect sniffing” was effectively tested by the U.S. Dept. of Defence to detect explosives and toxins in the 1990s, De Graaf said.

Moths, bees and wasps were used “for safety purposes to detect explosives as well as for medical diagnosis,” he said.

But too little is known about the Wageningen testing to determine its true effectiveness, he said, although he was open to the idea of bee testing providing an indication of illness when PCR tests were unavailable.

Source: <https://www.reuters.com/lifestyle/oddly-enough/bees-netherlands-trained-detect-covid-19-infections-2021-05-06/>

## THE FIRST BLACK WOMAN WOMAN TO TRAVEL TO SPACE



Figure 18: Jessica Watkins, Astronaut

NASA astronaut Jessica Watkins is scheduled to fly to space for the first time as part of NASA's SpaceX Crew-4 mission launching to the International Space Station.

(CNN) – NASA astronaut Jessica Watkins will become the first Black woman on the International Space Station crew. She is set to launch into space in April 2022 on the SpaceX Crew-4 mission, according to NASA. Watkins was selected as an astronaut candidate in 2017 and has been preparing for her first space mission since then.

The other three crew members on the mission include NASA astronauts Kjell Lindgren and Robert Hines, as well as the European Space Agency's Samantha Cristoforetti.

This is the fourth crew rotation flight of the Crew Dragon spacecraft to the International Space Station, the space agency said. The team will blast into space from NASA's Kennedy Space Center in Merritt Island, Florida, on a SpaceX Falcon 9 rocket. The astronauts will spend six months in the ISS microgravity laboratory conducting scientific research, NASA said. Watkins attended Stanford University in California and earned her bachelor's degree in geological and environmental sciences, then went on to earn a doctorate in geology from the University of California, Los Angeles. The astronaut has a long history with NASA, having begun her career there as an intern, and she previously held roles at NASA's Ames Research Center in Mountain View, California, and at the Jet Propulsion Laboratory in Pasadena, California.

She was a member of the science team for the Mars Science Laboratory rover, Curiosity, while working as a postdoctoral fellow at the Division of Geological and Planetary Sciences at the California Institute of Technology in Pasadena. "Geology provided a means for me to study the surface of another planet and particularly look at Mars, which was my passion," Watkins said in a NASA video. A number of her NASA colleagues congratulated Watkins on her new role and upcoming trip to space. NASA astronaut Jonny Kim said, "More Turtles in space! Congrats to my friend and teammate, Jessica Watkins. She's going to be an amazing crewmate for @SpaceX Crew-4."

## A history of trailblazers

Countless people of color paved the way over the past half a century for Watkins to achieve her extraterrestrial dreams. Dr. Bernard Harris Jr. spent decades recruiting minority and female astronauts and would later become the first Black person to walk in space in 1995.

Dr. Mae Jemison became the first Black woman in space while aboard the Space Shuttle Endeavor in 1992. Sign up for CNN's Wonder Theory science newsletter. Explore the universe with news on fascinating discoveries, scientific advancements and more. In 2013, Victor Glover Jr., a legislative fellow in the US Senate, was selected as an astronaut and became the first Black person to hold a long-duration crew assignment on the ISS. He was a crew member from November 15, 2020, to May 2, 2021.

Source: <https://edition.cnn.com/2021/11/18/world/nasa-jessica-watkins-astronaut-iss-scn/index.html>



## NACOSTI STAFF NEWS

### NACOSTI BIDS FAREWELL TO STAFF



*Mr. James Otuga  
Property Management Officer*

Mr. James Otuga Property Management Officer left the service for a different opportunity.

NACOSTI wishes him all the very best in his future endeavors and the next season of his life.

### STAFF ON NEW APPOINTMENTS

In strengthening the Human Resource capacity and better service delivery at the Commission, the following were appointed to the positions during the second quarter of the Financial Year 2021/2022;

The Management congratulates them on their appointments and welcomes them to the NACOSTI family with best wishes in their careers.



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



*Mr. Timothy Mutinda  
Internal Auditor*



*Ms. Kulah Abdikadir  
Account Assistant*

### NACOSTI STAFF TEAM BUILDING – DECEMBER 2021

Team Building exercise by NACOSTI Staff held at Lake Naivasha Resort, Naivasha on 16<sup>th</sup> December 2021.

## STAFF TEAM BUILDING PICTORIALS



*Teamwork - coming together is a beginning, keeping together is progress and working together is success – Henry Ford*

## STAFF TEAM BUILDING IN THE EVENING



## RESOLUTIONS OF THE STI MAINSTREAMING TRAINING WORKSHOP



Figure 19: Prof. Romano Mwirichia - University of Embu, Communicating the STI Resolutions/Recommendations on behalf of the Participants

1. For the Country to realize the benefits of STI, all the MDAs including NACOSTI, NRF, KENIA, KIPI need to work together in the research, technology and innovation agenda including lobbying for increased funding for Research and Development in a timely manner.
2. There needs to be deliberate efforts by Universities and TVET to initiate:
  - (a) Friendly and interactive consultations for practical experience co-sharing between staff and students in the 2 categories institutions
  - (b) collaborations and partnerships to create synergies and allow for optimal resource utilization thereby

catalyzing more Research, Technologies and innovations.

- (c) capacity building efforts in areas such as Grant proposal writing, joint research, innovation development and other forms of IP outputs.

**NACOSTI is requested to coordinate this interaction**

3. There is a need for a policy to guide the collaboration between Universities and TVET ensure a fit-for-purpose training and engagement at all levels of the education system.

✓ **NACOSTI, CUE, and TVETA are hereby requested to coordinate**

4. All institutions will need to have very clear commercialization and innovation strategies in addition to the Research, IP and other relevant policies.

✓ **KENIA, KIPI, and NACOSTI are hereby requested to coordinate**

5. There is need for a clear scheme of service for TVET trainers to accommodate PhD holders to enhance Science, Technology and Innovation in these institutions.

✓ **Director of Technical Education at the Ministry of Education is hereby requested to coordinate**

6. Annual fora like this one to re-visit the road map and also organizations such as CUE should be invited into future trainings.

✓ **NACOSTI is requested to coordinate**



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

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TEL: 020 400 7000, 0713 788787, 0735 404245: Email: [info@nacosti.go.ke](mailto:info@nacosti.go.ke) : Website: [www.nacosti.go.ke](http://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                  | Reviewed    |
|----|---|-------------|
| 1) | Kenya Citizens: Diploma/Undergraduate         | Ksh. 1,000  |
| 2) | EAC Citizens: Diploma/Undergraduate           | Ksh. 1,000  |
| 3) | Kenya Citizens: MA/MSc                        | Ksh. 5,000  |
|    | EAC Citizens: MA/MSc                          | Ksh. 5,000  |
|    | Kenya Citizens: PhD                           | Ksh. 5,000  |
|    | EAC Citizens: PhD                             | Ksh. 5,000  |
|    | Kenya Citizens: Individual/Postdoc            | Ksh. 20,000 |
|    | EAC Citizens: Individual/Postdoc              | Ksh. 20,000 |
| 4) | Public Institutions                           | Ksh. 20,000 |
| 5) | Private Institutions                          | Ksh. 20,000 |
|    | Non-Africans: Diploma/Undergraduate           | US\$ 400    |
|    | Non-Africans: MA/MSc                          | US\$ 400    |
|    | Non-Africans: PhD                             | US\$ 400    |
|    | Non-Africans: Individual/Postdoc/Non-academic | US\$ 400    |
| 6) | Non-EAC but from an African Country           | US\$ 400    |

### 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                          | 275,000   |
| 2)  | Accreditation of Research Programmes                           | 275,000   |
| 3)  | Inspection, Monitoring and Evaluation of Research Institutions | A basic fee of 275,000 be levied in addition to any costs that will 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](http://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*



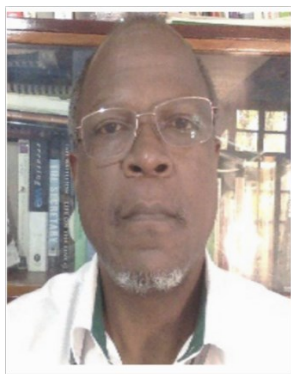
*Mr. Bonface Wekesa  
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Accreditation and Quality  
Assurance,*



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



*Mr. Gideon Kirui  
Ag. Director Corporate Services*



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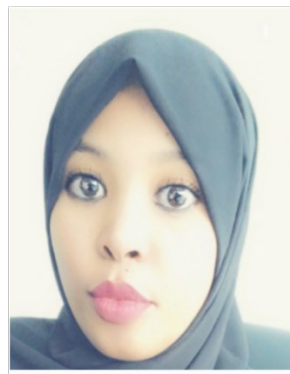
*Mr. Abdallah Bii  
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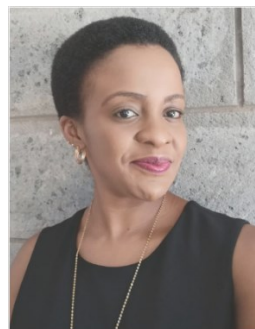
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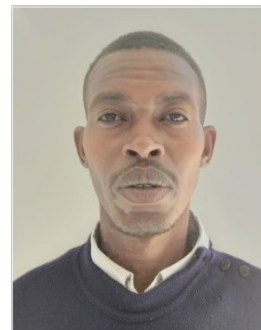
*Ms. Kulah Abdikadir  
Account Assistant*



*Mr. Paul Anuro  
Senior Driver*



*Mr. Pius Samoei  
Senior Driver*



*Mr. Abdi Ibrahim  
Senior Driver*

## KENYA'S NATIONAL ANTHEM

### Kiswahili

1

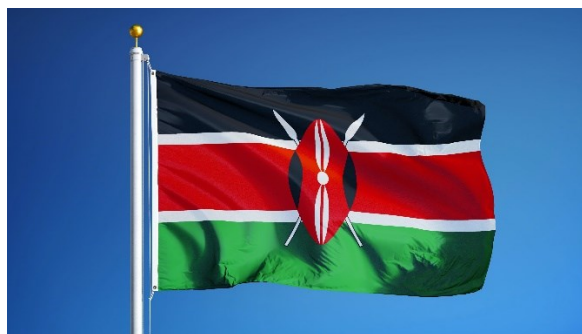
Ee Mungu nguvu yetu  
Ilete baraka kwetu  
Haki iwe ngao na mlinzi  
Natukae na undugu  
Amani na uhuru  
Raha tupate na ustawi.

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***

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