

October, 2023

# Science and You

## NCST Newsletter

The latest science, technology and innovation news, views and announcements from the National Commission for Science and Technology



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**“Science and technology are propelling us into the future at an accelerated pace”**

**- NEIL DE GRESSE TYSON -**

## MESSAGE FROM THE DIRECTOR GENERAL

It is my pleasure to welcome our readers to the October edition of the NCST Newsletter which brings you the highlights and milestones accomplished by the NCST in the previous months. I feel greatly honored to speak to you from the office of the Director General of the National Commission for Science and Technology, which I assumed on the 18<sup>th</sup> of September, 2023. It is a privilege for me to make my contribution of service to NCST and mother Malawi, in this capacity and I am humbled to have been trusted with the responsibility to steer the NCST mandate at this particular time.

The Grand Challenges initiative which we launched on the 30<sup>th</sup> of August is one of the greatest enterprises to have come out of the NCST as it fulfils its mandate. The main objective of this initiative is to boost domestic investments in research and innovations, with the most significant impact, as it promotes collaboration among researchers and innovators. Grand Challenges is a funding mechanism that awards seed and scale up grants to bring impressive solutions to Malawi's and Africa's challenges. It is exciting to see that the Grand Challenges Malawi initiative will push NCST towards actualizing its aspiration to establish itself as an internationally competitive leader in Science, Technology and Innovation through, among other things, connecting research and innovation investments. We are optimistic to reach our goal as we will ensure that social economic concerns will be responded to by advancing knowledge and technological improvements, which are a catalyst for economic growth and will ultimately usher Malawians into a high standard of living.

It is also interesting to note that the Grand Challenges initiative is in conformity with the National Research Agenda which we launched in March this year and articulates the research priorities for Malawi.



Our objective also aligns with the Malawi Implementation Plan 2021-2030 (MIP-1) which articulates that “Malawians aspire to have a vibrant knowledge-based economy with a strong and competitive manufacturing industry driven by productive and commercially vibrant agriculture and mining sectors”

I am excited to be part of the efforts of developing Malawi, through the deliberate undertakings for more research funding and ensuring that issues of Science, Technology and Innovation take center stage as we strive to develop our nation. The NCST mandate, which is to advise the Government and other stakeholders on all science, technology and innovation matters in order to achieve a science and technology led development, continues to guide us as we embark on new projects and programs towards achieving the vision Malawi 2063.

I encourage our readers to always come to our website [www.ncst.mw](http://www.ncst.mw) to be up to date with all our announcements for grants that we put up from time to time. Malawians are also encouraged to contact the NCST for any science, technology and innovation related matters and will receive the most appropriate attention.

I wish you a pleasant reading experience!

Gift A. Kadzamira

Director General

# NCST HAS A NEW DIRECTOR GENERAL



The National Commission for Science and Technology (NCST) Board of Governors recently announced the appointment of its new Director General in the name of Ms. Gift Kadzamira, effective 18<sup>th</sup> September 2023.

A statement that was signed by the Chairperson of the board, Prof Emmanuel Kaunda, explained that Ms. Kadzamira is well experienced in research and innovation management; resource mobilization and strengthening of the National Innovation System having been in the sector for over 10 years. Prior to her appointment Ms Kadzamira has been Director of Documentation and Information Services from 2010 and from 2022 ,to the day of her appointment, she acted in the position of NCST Director General.

The Director General holds an MSc in Electronic Information Management from the Robert Gordon University; Scotland; a Bachelor of Science degree in Biology from the University of Malawi- Chancellor College. She also holds a Post Graduate Diploma in African Leadership in ICT (ALICT) and a Diploma in Innovation, Transformation, and Resilience for Sustainable Development from Lund University in Sweden. She also possesses additional professional qualifications in Technology, Innovation and Entrepreneurship in Africa (Harvard Kennedy School); Research Management; Intellectual Property; Technology Transfer and Commercialization; Gender in STI and Science Diplomacy from the Southern African Research & Innovation Management Association (SARIMA).

Recently she championed the launch of the National Research Agenda, the launch of the Grand Challenges Malawi, Open Forum for Biotechnology (Malawi Chapter) among other several initiatives.

“On behalf of the National Commission for Science and Technology, I would like to ask all the stakeholders to join me in congratulating Ms. Kadzamira on her appointment and in wishing her success as she takes on this new challenge”, read the statement.

NCST staff welcome Ms. Kadzamira’s appointment and promise to give her all the support she needs to take on this challenging task.



# GRAND CHALLENGES MALAWI LAUNCH



Grand Challenges launch participants

In a significant step towards accelerating innovation and fostering sustainable solutions for Malawi's development, the National Commission for Science and Technology (NCST) in collaboration with the African Union Development Agency (AUDA-NEPAD) and Science for Africa Foundation (SFA Foundation) proudly announced the launch of Grand Challenges Malawi on August 30, 2023, at BICC in Lilongwe, Malawi.

Grand Challenges is a visionary funding mechanism that recognizes and supports ingenious solutions with the potential to drive meaningful change. Grand Challenges initiatives foster innovation, directing research to areas with the most significant impact and promote collaborations amongst researchers and innovators from diverse organizations, such as for-profit institutions, non-governmental organizations, academic and research institutions, foundations, and civil society groups. Originating in Africa with the establishment of Grand Challenges Africa, this initiative has already made a significant impact in countries like Botswana, Ethiopia, Senegal, South Africa, and Rwanda. Now, Malawi joins this innovative family as the sixth member.

The major objectives of Grand Challenges Malawi are to strengthen the national innovation ecosystem and build the capacity and capability of local researchers/innovators and research and development infrastructure, to leverage resources and expertise from public, private and development partners for effective and efficient execution of priority areas of research and innovation.

## Why Grand Challenges Malawi Matters?

Director General for NCST Gift Kadzamira, shared, "The Grand Challenges initiative arrives at a pivotal moment for Malawi. It aligns perfectly with our homegrown solutions outlined in the Malawi Roadmap for Development (Mw2063). By leveraging international investments, we aim to pioneer collaborative research and finance innovations that will address the challenges faced not only by our nation but also our continent and the world."

To ensure the success of Grand Challenges Malawi, collaboration and knowledge sharing among NCST Malawi, AUDA-NEPAD, SFA Foundation, and other partners are pivotal. A collaborative planning meeting held in July fostered cross-learning and identified critical support areas to

accelerate investments in Science, Technology, and Innovation (STI). This launch event was the culmination of these collective efforts.



Minister of Education Hon Madalitso Kambauwa Wirima, MP gives her remarks

Minister of Education Hon Madalitso Kambauwa Wirima, MP described the launch of the Grand Challenges Malawi as the genesis of a journey that the country has embarked on towards building its capacity to solve its own challenges and find solutions through its association with the Global Grand Challenge family. The Minister added that Grand Challenges Malawi will not only help in improving the current state of investments in research and innovation, but also will help in building a new legacy for great discoveries, research and innovations that will help Malawi's transition into a middle-income economy.

Prof. Aggrey Ambali, Senior Advisor for the Office of Science, Technology, and Innovation at AUDA-NEPAD, emphasized,

**"Grand Challenges is a powerful catalyst, creating an enabling environment for innovative financing mechanisms that promise enduring support for science, technology, and innovation in Africa. It holds the transformative capacity to amplify the quantity, quality, and productivity of science, paving the way toward a brighter future for the continent."**

Grand Challenges Malawi represents a significant milestone in our journey toward a brighter future. It provides a platform for partnerships, discussions, and the exchange of insights. By nurturing innovation in Malawi, we aim to leave a lasting legacy that inspires future generations.

Prof. Tom Kariuki, CEO of SFA Foundation, added, "Our innovators hold the power to transform lives, uplift communities, and leave an indelible mark on the legacy of African innovation. Grand Challenges Malawi beckons us to embrace the audacious and dream beyond boundaries."

We invite individuals, organizations, and partners to join us in this collaborative endeavor. Together, we can create a ripple effect of transformative solutions that will propel Malawi forward.



The Minister views one of the exhibitions at the launch



NCST Director General presents the Grand Challenges Strategy to the Minister



NCST Director General gives her remarks during the launch



#### About NCST Malawi

The National Commission for Science and Technology (NCST) Malawi was established to advance Science and Technology in Malawi. Its mandate is to advise the government and stakeholders on all Science and Technology matters for science-led development.



#### About the SFA Foundation

The SFA Foundation is a Pan-African, non-profit, and public charity organization that champions science and innovation in Africa. It supports groundbreaking research, fosters interdisciplinary collaborations, and creates environments conducive to scientific excellence. SFA Foundation is proud to partner with NCST Malawi and AUDA-NEPAD to support the launch of Grand Challenges Malawi.

#### About Grand Challenges Africa

As a flagship program of SFA Foundation, Grand Challenges Africa supports impactful, innovative ideas with the potential for scale and sustainability. It awards grants to bold projects that provide impressive solutions to Africa's challenges.



#### Grand Challenges Malawi.

Unlocking Strategic Investments Through Collaborative Research

#### About Grand Challenges Malawi

The Grand Challenges Malawi expects to achieve sustainable growth in the medium and long term through various strategies. These include government ownership, collaboration with local communities and the private sector, diversification of funding sources, fostering mutually beneficial local, continental and global partnerships, and capacity building within the organization. By implementing these measures, GC Malawi aims to ensure that it can continue making a positive impact on the lives of vulnerable populations in Malawi for years to come.



# GRAND CHALLENGES LAUNCH IN PICTURES



One of the Exhibitors : Lilongwe University of Agriculture and Natural Resources (LUANAR)



Women in Science at the launch



NCST Director General, Gift Kadzamira and Dr. Moses Aloba, Science For Africa foundation, sign a Memorandum of Understanding



The GCM Launch organizing team



Catherine Chaweza directed the ceremony



# GRAND CHALLENGES LAUNCH IN PICTURES



Panelists; Prospects for research and innovation eco-systems development in Malawi



Panelists: Prospects for research and innovation development in Africa and lessons learnt from the Grand Challenges National Programs from Ethiopia, Rwanda and South Africa



Kondwani Gondwe, Ag Director of Planning - NCST and Simon Ndoria, Program Officer- SFA Foundation



The Daughters Band Played the theme song

## THEME

***Unlocking Strategic Investments Through Collaborative Research***

## PANEL DISCUSSION 1

Prospects for research and innovation development in Africa and lessons learnt from the Grand Challenges National Programs from Ethiopia, Rwanda and South Africa.



**Simon Ndoria**

*Program Officer - Innovation and Entrepreneurship  
SFA Foundation*

**Moderator**



**Dr Shallo Daba**

*Grand Challenges  
National Health  
Innovation Program  
Coordinator - Ethiopia*

**Panel Member**



**Dr. Louis Siboma**

*NCST  
Coordinator - Grand  
Challenges Rwanda*

**Panel Member**



**Ms. Zoleka Ngcete**

*SAMRC  
Program Manager  
Grand Challenges  
South Africa*

**Panel Member**



## THEME

**Unlocking Strategic Investments Through Collaborative Research**

## PANEL DISCUSSION 2

**Prospects for research and innovation eco-systems development in Malawi.**



**Dr. Kenneth Maleta**  
*Commissioner NCST*

**Panel Member**



**Josephy Nagoli**  
*Director of Knowledge and Learning at the National Planning Commission of Malawi*

**Moderator**



**Fr Dr. Wilfred Sumani**  
*Vice Chancellor Catholic University - Malawi*

**Panel Member**



**Ms Loveness Gondwe**  
*Former Deputy Speaker of Parliament*

**Panel Member**



**Dr. Napoleon Dzombe**  
*Entrepreneur*

**Panel Member**



**Pro. Samson Sajidu**  
*Vice Chancellor University of Malawi*

**Panel Member**



**Dr. Tasokwa Kakota Chibowa**  
*Chief of Party - USAID*

**Panel Member**



# NCST MALAWI AND RWANDA COLLABORATE

The Science and Technology Act 2003 is the instrument that established the National Commission for Science and Technology. The Commission was given the general mandate to advise Government and other stakeholders on all science and technology matters in order to achieve a science and technology-led development.



Gift Kadzamira, Director General-NCST Malawi

Section 18 and subsection 2 of the Act outlines the Commission's specific functions, one of which stipulates that the Commission *shall promote and maintain cooperation in Science and Technology with similar bodies in other countries and with international bodies connected with science and technology;*

To fulfil this function, NCST recently signed a letter of intent to collaborate with the National Council of Science and Technology, Rwanda, on programs that promote the advancement, dissemination and application of research and development as well as STI for a better life of the citizens of Malawi and Rwanda. A detailed Memorandum of Understanding will be signed in the, not so distant, future and the MOU has been submitted to relevant institutions in the respective countries for consultation and advice. The intent to collaborate is very relevant and timely as both institutions converge at the central role they hold in their

countries to drive development through research, science, technology and innovation. Their mandates are similar and it, therefore, is befitting of them to cooperate for the benefit of their respective countries. The National Commission for Science and Technology (NCST) of Malawi is a public institution established under the Science and Technology Act No. 16 of 2003 with the mandate to advise the Government and all stakeholders on all science and technology matters in order to achieve a science and technology-led development. Its mission is to promote, support, coordinate and regulate the development and application of research, science, technology and innovation in order to create wealth and improve the quality of life. Similarly, the National Council for Science and Technology (NCST), Rwanda is a public government institution governed by law number 40/2017 of 16/08/2017 giving the institution the mandate to advise the government on setting up of national priorities and on policies, legislation and regulation in the field of science, technology, research and innovation and to monitor the implementation of the policies and legislation.



Dr Eugene Mutimura, Executive Secretary- NCST Rwanda

The letter of intent was signed by the Director General of NCST Malawi, Gift Kadzamira and Executive Secretary for Rwanda NCST, Dr Eugene Mutimura, on 29<sup>th</sup> September, 2023.

# Views on science from Malawi University of Science and Technology (MUST)

*A chat with students at the Malawi University of Science and Technology (MUST) on how they view their courses' contribution to the socioeconomic development of the country reveals that they are satisfied with what they are studying and are excited to be a part of the critical mass that will help Malawi attain Malawi 2063. Asked how they feel about the relevance of their courses and how science will influence Malawi's development, this is what the three enthusiastic students had to say;*

Mtendere says the first thing he can talk about is how it is evident that now science is being respected and appreciated as a catalyst for development. He feels that Malawi is on the right track compared to the past because Science, Research and Innovation are at the center of the development plans. Additionally, people are aware of how technology influences their daily lives. There is also a general acknowledgement that all the countries that have developed put issues of science and research at the fore. He was quick to caution that before the Malawi 2063 vision, Malawi had Vision 2020 which was a comprehensive strategy but the country did not achieve much with it. He emphasized that for Vision 2063 to materialize, funding of research activities should be prioritized. He says there are a lot of Malawians with great ideas but the problem is that they lack funding and they become less motivated. He gives an example of the course that he is doing and says "Medical Microbiology Engineering is a game changing field of study which would change the way we address the medical challenges we have now and what we will have in future".

He however laments that the problem is that most students do such courses to get a degree and look for a paid job, instead of being creative with the knowledge and skills they have acquired. He was quick to point out that there are a lot of innovators in the country but they lack support. "The young man who created the free Wi-Fi, for instance, he needs support. If he could get

resources he would do more and go far". He concludes that there are lots of people who can do many things but do not have funding. He however feels that the issue of funding and support is better now than before, citing the various granting schemes at NCST and also the different types of scholarships offered at MUST for new and budding innovators.



***Mtendere Pensulo: Medical Microbiology Engineering***

Felix says that in the manufacturing industry the focus is on adding value. He says his studies at MUST are offering him the requisite skills he requires for the industry. He asserts that Malawi needs to move from consuming to manufacturing and that such courses are critical for such a time as this. He gives examples of the deliberate steps that MUST is taking by building an industrial park so that the University should manufacture products. He says the Academic Departments involved at MUST are Disaster Risk Management, Chemical Engineering and Manufacturing Engineering so that they should collaborate and produce things together. He also divulged that there are plans of a MUST partnership with the Government of Japan to assemble cars. He feels that the strides that MUST is taking will yield results in the near future and Malawi will move from a majorly importing to a manufacturing country.

He believes that in 10 to 15 years Malawi will have developed, but he also says that there is a problem that people start projects and leave them midway and there is no up taking. During COVID-19 the University(MUST) created automatic water dispensers and they did the same during the cholera outbreak. They also had a project to purify water at household level as a way of dealing with the cholera outbreak. and getting the products commercialized. He concludes by saying that for most young innovators the problem is the lack of funding.



***Felix Nakwenje :Bachelor of Science Manufacturing engineering***

He feels, however that as long as one has a solid idea they should pursue it and not give up as there are institutions such as National Commission for Science and Technology that offer grants to young innovators and MUST which is giving scholarships to young innovators.



To develop economically, Malawi needs to be industrialized; this is what Kelvin Mphande believes. Kelvin gave an example of Japan that got destroyed by two atomic bombs in 1945 but it still sent its students to study in the west and they came back and industrialized their country and changed it.

The same is for China, which has developed because of the deliberate steps that they took to learn the ways of other countries and delved into the development of research and science and that is why they are now one of the fastest developing countries and a growing economy. Malawi lacks that element and he advised that for Malawi to develop, it should be intentional about its development and learn from the countries that are doing better. He cited one of the problems is that students go to University just to learn theory and get a job, yet they can do more with the knowledge they acquire. The issue of funding for research and innovations is very important and he says this makes people to realize their dreams and the need for it cannot be overemphasized. He gave an example of fertilizer which is a very important commodity for Malawi, being Agrarian, but still depends on imported fertilizer instead of supporting initiatives that

could manufacture fertilizer or alternatives using local resources. Lack of funding remains one of the biggest challenges to advance these ideas. He said that even he has ideas but has no funding to help its implementation. He gives an example of the course he is doing at MUST and says in



*Kelvin Mphande :Chemical engineering-*

Engineering they dedicate a whole semester learning about how to initiate and sustain projects but that it ends there instead of incubating the ideas and multiplying the products and upscaling them.

**“THE ADVANCE OF TECHNOLOGY IS BASED ON MAKING IT FIT IN SO THAT YOU DON'T REALLY EVEN NOTICE IT, SO IT'S PART OF EVERYDAY LIFE.”**

*- Bill Gates -*

# OFAB Day 2023 Celebrations in Malawi: Advancing Agricultural Innovation



Participants to the Science March pose for a photograph

On 28<sup>th</sup> September, 2023 at the Bingu International Conference Centre (BICC), the Open Forum for Agriculture Biotechnology (OFAB), through the National Commission for Science and Technology (NCST) celebrated OFAB Day, 2023 under the theme

## *“Harnessing Agriculture Biotechnology Innovations for Sustainable Transformation in Africa.”*

OFAB is a project of the African Agricultural Technology Foundation (AATF), which facilitates constructive conversations among key stakeholders and decision makers on agricultural biotechnology. In Malawi, the OFAB project is managed by the National Commission for Science and Technology and it fosters innovation and collaboration in the fields of agriculture, biotechnology, and sustainable development. The project is being implemented in a number of countries, which include Kenya, Uganda, Tanzania, Nigeria, Ghana, Burkina Faso, Ethiopia, Mozambique, Malawi and Rwanda, and these are called OFAB Chapters.

The general objective of the OFAB day is to bring OFAB stakeholders together, to celebrate Science and its role in the development of Africa. In particular, the event celebrates the achievements AATF and OFAB have made in advancing agricultural biotechnology in Africa since the initiative was launched in 2005. Additionally, it is a tradition for OFAB to dedicate a day in the year to celebrate its activities, where all the OFAB Chapters convene and this year it was decided that the celebration will take place in Malawi. Additionally, OFAB Day celebrates Champions of biotechnology from all the OFAB Chapters. Director General of the National Commission for Science and Technology Malawi (NCST), Madam Gift Kadzamira, emphasized the importance of biotechnology in enhancing agricultural production in Malawi. She highlighted the government's support for research that addresses crop production challenges. Notably, Malawi's first genetically modified crop, BT Cotton, has boosted yields for local farmers. Kadzamira also mentioned that Malawi conducted the first GM food crop trials for BT cow-pea and plans to support research in BT Maize, which could further transform the agricultural landscape.

Dr. Abel Sefasi, a Senior Lecturer in Biotechnology at LUANAR, mentioned the significance of technology in solving agricultural problems. He explained that, genetically modified crops can yield more and withstand challenges like drought, pests, and diseases. He highlighted existing policies and regulations for the safe use of biotechnology in the country and the commitment to raise awareness among stakeholders, including policymakers and the media. He clarified that in order to enhance Malawi's capacity, LUANAR is training more students in Biotechnology to raise awareness of these issues and to efficiently solve problems, especially in agriculture.

In his keynote address, Senior Biotechnology Lecturer at LUANAR, Dr. Kingdom Kwapata, echoed the need for Malawi to invest in biotechnology to foster economic growth and sustainable development and reiterated the need for awareness of Biotechnology at all levels of society in Malawi. He made a call to everyone present to play their respective roles to ensure biotechnology research is given the support and prominence that it deserves.



Hon. Bertha Ndebele, MP presents the OFAB Champion Award to Dr. Abel Sefasi

During the event OFAB celebrated the Biotechnology heroes and heroines from all the OFAB chapters. Presenting trophies to those exceptional individuals who have made significant contributions to the field of biotechnology. Dr. Abel Sefasi was awarded the title of Biotechnology Hero of Malawi, a well-deserved recognition for his outstanding contributions to advancing biotechnology in the country. The event served as a fitting tribute to these dedicated individuals who continue to make a positive impact in the world of biotechnology.



The Science March



# OFAB DAY CELEBRATION IN PICTURES

The celebration event, which started with a science march from Capital Hill to the BICC, was a memorable occasion. The march was led by a brass band and included notable personalities such as the Chairperson of the Education Committee of Parliament, Hon Blaise Kaise (MP) and Hon Ndebele of the same committee of Parliament. Students from Lilongwe University of Agriculture and Natural Resources (LUANAR) sang and danced throughout the route, basing all the celebration on the importance of science and innovation in Malawi's agricultural future.

The 2023 OFAB Day in Malawi showcased the nation's dedication to adopt biotechnology for a more sustainable and productive agricultural sector. As biotechnology continues to make strides, Malawi is set for positive transformation in agriculture, contributing to the broader development goals of OFAB.



The Director General makes her remarks



Recipients of the OFAB Champion Awards from various African countries



LUANAR students were part of the celebration





## NCST

The National Commission for Science and Technology (NCST) was established in 2008, to provide Science and Technology advice to the Government and other stakeholders on all matters related to science and technology in order to achieve a science and technology led development in Malawi.

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