



REPORT ON NATIONAL CONSULTATIONS ON THE ESTABLISHMENT OF A MALAWI ACADEMY OF SCIENCES (MAS)

Date: 5th September, 2019

Venue: University of Malawi, Chancellor College, Mwambo Lecture theatre 2

Time: 9:00 AM

Sponsored by: the National Commission for Science and Technology

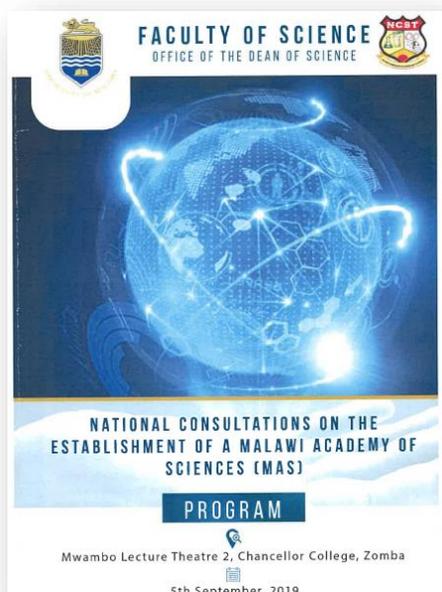
Authors	Position	Institution
Chomora Mikeka	Dean of Science and Consultation Organizer	University of Malawi
Glory Kambwiri	Rapporteur	Ministry of Health and Population, Knowledge Translation Platform Malawi, Nurse
Donnex Beyamu	Rapporteur	University of Malawi, Fresh Graduate (Mathematics and Statistics)

EXECUTIVE SUMMARY

The meeting was attended by 34 participants as listed in **(Annex 1)** of this report. From the host's speech to the guest of honour, keynote speakers and all other presenters as per the programme attached in **(Annex 2)** of this report, the key

question was whether or not to accept the proposal to establish the Malawi Academy of Sciences, and if so, what could be the issues to discuss and pay attention to? The good news is that the proposal was accepted, following a discussion in **(Appendix F)**, and survey results in **(Appendix E)**. The participants further elected a Task Team **(Appendix D)** to ensure the momentum to establish the Malawi Academy of Sciences is sustained.

I hope you will enjoy reading the full meeting report below.
– **Associate Prof. Chomora Mikeka** called the meeting to order at 9:00 AM.



INTRODUCTION

Associate Prof. Chomora Mikeka, Dean of Sciences chaired the meeting, he welcomed the Vice Principal and host, Prof. Samson Sajidu; guest of honour, Associate Prof. Samson MacJessie Mbewe; representative of the Permanent Secretary Ministry of Health and Population, Dr. Dzinkambani Kambalame; Chief Human Resources Officer in the Ministry of Lands, Mr. Joseph Dzongololo; Heads of Departments, representatives from Lilongwe University of Agriculture and Natural Resources (LUANAR), Mzuzu University (MZUNI), Malawi University of Science and Technology (MUST), Daughters of Mary Immaculate St. John the Baptist University (DMI), Members of the press (CHANCO Radio/TV, ICT Department) and all other members present to the meeting.).

Objectives of the Meeting

1. Discuss the importance and need of creating a national academy of sciences given the role of science in providing solutions to national challenges and in informing policy to meet the national, regional and global sustainable development agendas.
2. Discuss the guidelines and strategies in creating new academies (Source: NASAC);
3. Review different Archetypes of academies and select one Archetype for Malawi.
4. Discuss general organizational features of an academy of sciences namely: membership, academy organs, finances and independence.

WELCOMING REMARKS (9:15AM)

Prof Samson Sajidu, recognized the guest of honor and all invited guests to the meeting and defined MAS as an assembly of intellectuals or scientists dedicated to the advancement of scientific knowledge within the society. He further stated that the common feature of all the world's science academies is to seek national-wide economic and social advancements through wise applications of science and technology.

Prof Sajidu stated the aim of the meeting was to introduce the proposal for the establishment of MAS and consequently if accepted, work with relevant stakeholders on how the proposed academy could better be established and be functionalized to the benefit of Malawians. He emphasized that the present meeting therefore, has been organized locally to mobilize and sensitize scientists, government officials, politburo members, industrialists, businesspeople and media on the need to establish a Malawi national academy of sciences. This is because the

value of creating academies in countries like Malawi where none exist cannot be over-emphasized and must be supported **(Appendix A)**.

GUEST OF HONOUR SPEECH (9:43 AM)

Associate Professor Samson MacJessie Mbewe, Director for Higher Education welcomed and acknowledged the presence of everyone to the national consultation on the establishment of MAS that had been organized by the University of Malawi's Faculty of Science. The guest of honour made remarks on the importance of having a MAS, highlighted that basic sciences are a key component in stimulating a culture of sciences and technical excellence in Africa and that the value of creating MAS is of great importance to the nation. He further explained that a national science academy will bring great value and recognition of the country once it is established. He concluded that the proposed MAS needs to be supported by all public and private sectors and should comprise scientists from all universities, national stakeholders and beneficiaries.

Associate Professor MacJessie Mbewe further stated that the Government of Malawi supports the establishment of MAS which he hopes will act to generate high quality knowledge that is evidence-based and relevant to the socio-economic development of the country and for the government to be able to make informed policy decisions **(Appendix B)**.

A SHORT MESSAGE FROM THE DIRECTOR GENERAL ANTHONY MUYEPA (9:43 AM)

Firstly, the Director General Anthony Muyepa through an email correspondence apologized for not attending the meeting due to other official commitments. His full message is included under Appendix C where he pledged that the Commission will continue supporting the efforts of establishing MAS and once established the Commission will endeavor to support its operations in program areas that the academy will have established **(Appendix C)**.

KEYNOTE 1: Case for the Academy of Sciences in Malawi by Prof Adamson Muula, ACEPHEM Coordinator, Kamuzu University of Health Sciences (9:48 AM)

Prof Adamson Muula emphasized that science starts from primary school to secondary school up to universities and that the academy is important for social economic development of the country. In his presentation, he urged that Malawi should use the resources that it has to develop various technologies through the proposed MAS in order to progress. He further stated that Malawi needs to create its own academy of science that will act as a voice in

terms of science and its focus being on local science, challenges to solve many problems for the many generations to come.

KEYNOTE 2: Industry expectations from scientists and engineers by Associate Professor David Mkwambisi, Malawi University of Science and Technology (MUST) (10:17 AM)

Prof David Mkwambisi stressed on development gaps between industries and universities in that most African universities are not engaged in collaboration with the private sector. He observed that there is no long term shared research, teaching vision and that many partnerships fail or produce disappointing results and that many industries are interested in new products and patents. The industry expects to provide innovative services, effective marketing system and contribute to great thinkers, innovative research and transformative outreach interventions to mention but a few. Prof Mkwambisi further explained that MUST is playing a big role in providing innovative programs to interface with the industry and the idea of an academy is one such in their portfolio of programmes. Therefore, a proposal to establish a national academy of sciences is in line with their aspirations as an institution and would be glad to support the establishment.

KEYNOTE 3: Points to consider for engineers to benefit from an academy of sciences by Engineer Steven Kayira (Senior Manager Projects and Contracts, EGENCO)

Engineer Kayira stated that EGENCO's mandate is to generate and sell power to the Single Buyer (Electricity Supply Corporation of Malawi (ESCOM)). With respect to the proposal to establish the Malawi Academy of Sciences, he said that, "currently there are many challenges with current power situation and science has been a key enabler for technological innovations for example on solar technology." He further added that, "there is a need for collaborative research with other universities and research institutes in low cost materials for solar panels or energy generation" and observed that it would further lower the cost of solar power. In conclusion, he expressed the need to conduct research on materials that could lower the cost of battery and all other technologies and hopes that engineers will benefit when MAS is established. In conclusion, he hoped that the proposed Malawi Academy of Sciences would be able to bridge the gap between industry and universities for the benefit of the nation.

PRESENTATIONS

The presentations ranged from level of awareness regarding academy of sciences and an exposition of the science departments in the University of Malawi. The heads of science departments in the Faculty of Science took an opportunity to present what they have on offer and how they would support MAS. Dr. Arts George Luwanda moderated a panel discussion on the unique contributions that the proposed MAS could benefit from the departments of science. Dr. Levis Eneya (former Dean of Science) moderated a panel discussion during the meeting to tease out poignant issues and also make immediate resolutions or recommendations towards the possibility of establishing the Malawi Academy of Sciences.

Members nominated stakeholders from different institutions to be in the task team (**Appendix D**) to work towards the establishment of MAS.

The meeting used a survey tool to review different Archetypes of academies and select one Archetype for MAS. Participants were asked to give feedback through the 3 line survey tool (**Appendix G**) with questions like: Do you agree to establish MAS? What archetype? Any specific advice? The results were analyzed statistically and are presented in (**Appendix E**).

NATIONAL STAKEHOLDER CONSULTATION IN PICTURES



Group Photo



Associate Prof C. Mikeka Welcomes guests



Rep for PS Health Talks on Essence of MAS



Dr. Liz Bandason talks on Women in Science



Universities' Heads, Deans & Directors in Panel Discussion, (Appendix F)



Guest of Honour, Associate Professor Samson MacJessie Mbewe Makes Remarks (Appendix B).

Technical Presentation 1: Guidelines for the establishment of the Malawi Academy of Sciences by Associate Professor Chomora Mikeka

Prof Mikeka's discussions focused on guidelines and strategies to create a functional academy of sciences. Strategies proposed were: including scientists from neighboring countries, developing an innovative multidisciplinary science curriculum and the possible establishment of seed-funding by the Network of African Science Academies (NASAC). Furthermore, he introduced different archetypes that can be used by an academy namely, learned society, advisor to society or manager of research. A survey tool was used to ask participants to choose one archetype or a combination of archetypes **(see Appendix G)**.

Lastly, Prof. Mikeka stressed the importance of science and scientists, in the achievement of a higher degree of influence throughout the nation and worldwide. The proposed MAS would act as an instrument to support science in the country and to build a better Malawi.

Technical Presentation 2: Legal and constitutional alternatives on how the academy of sciences could be established in Malawi by Patrick Chinguwo (11:46 AM)

Attorney at Law, Counsel Patrick Chinguwo stated that long-term sustainable success requires proper legal & constitutional foundations and that there are two main alternatives under Malawian law to establish an academy. First is statutory body whereby the academy is established and regulated by an Act of Parliament and secondly, is the Trust whereby members give power to a certain body to trust; either public trust or private trust (depending on purpose) and the advantage is that the decisions are mainly made within the organisation rather than statutory route in which decisions are made by the government. The task force shall explore and decide on a route, after wider consultations and with support of the legal counsel.

P1: Women in science: how national academies present opportunities for their growth by Dr. Elizabeth Bandason (13:14 PM)

Dr. Bandason gave a brief overview of The World Academy of Sciences (TWAS) on how it engages women in scientific careers. She presented that in 2012, UNESCO carried out a study to find out how many women scientists in the world are actively involved in science, and the study established that very few women are actively engaged in science and which is also the case in Malawi. Therefore there is a need to undertake initiatives that promote increased participation of women in sciences. She continued to explain that, in an effort to retain women in natural sciences, TWAS, which is hosted by the International Centre for Theoretical Physics (ICTP) hosts the Organisation for Women in Science for the Developing World (OWSD) which has

different categories for supporting women in science. Dr. Bandason stated that she has benefited from the OWSD. She thus, hope to introduce a women in science arm within the proposed Malawi Academy of Sciences.

P2 (A): Biological sciences by Mr. Wilbert Chitaukali (12:38 PM)

Mr. Chitaukali said that, "the main goal of the department is to enhance capacity in biological sciences and research execution in Malawi and aims at equipping students with a deep understanding of biological sciences and their application in medicine, agriculture, forestry, fisheries, wildlife and the environment". Moreover, the department promotes development of research skills relevant for cultivating a research culture in these fields, and capable of feeding into policy and the national development agenda.

P3: Computer sciences by Martin Thodi (12:48 PM)

Department of Computer Science was represented by Martin Thodi and he argued that computer science is not a study of computers but rather they study problem solving; for example, answering the question, "how efficiently can you solve problem x or y?" The Department of Computer Science offers different courses to undergraduate, master and PhD students. After the establishment of MAS, as a department they are looking forward to have Tech Futures Lab, space for scientific study, tech innovation & people issues and joint science and technology spaces with government and industry.

P4: Human ecology by Dr. Khama Chibwana (13:01 PM)

Dr. Chibwana stated that, "Human ecology is a multidisciplinary subject which focuses on health promotion (critical role of food and nutrition), promoting positive growth and development of individuals by strengthening the foundation of early childhood development and promoting wealth creation (entrepreneurship in food processing, fashion designing industry, and human services industry)." He supported the creation of the Malawi Academy of Sciences and hoped to contribute to the necessary dimension of science to the academy.

Technical Presentation 3: Academy of sciences organizational features (membership, governance and financing) by Dr. Levis Eneya (13:15 PM)

Dr. Levis Eneya presented on membership, governance and financing. He emphasized that membership requires eminence in one's area of science and varies from academy to academy; while governance of the academy has governing body and academy bureau. On financing, he said that, "most academies are independent and non-profit organizations: but could get funds from government, donations from private enterprises and fees from academy members or any services that the academy may render."

LUNCH (13:38 PM)

PRESENTATIONS CONTINUED

P5: Knowledge translation by Dr. Dzinkambani Kambalame (2:45 PM)

Medical Doctor Dzinkambani Kambalame who was representing the Principal Secretary in the Ministry of Health and Population and heading the Knowledge Translation Platform in Malawi stated that, “the Knowledge translation platform in Malawi was established in 2012.” In his statement, he said that, “the ministry made the decision to encourage the use of evidence-based decision making and policy formulation.” Ideally, he proceeded to explain, that the knowledge translation mandate is to address the gap between researchers and policy makers by providing evidence-based information and use evidence to inform policy. He therefore, was excited at the idea of the establishment of a national academy of sciences, which could be the umbrella even of the Knowledge Translation Platform in Malawi.

P 6: Geography and earth sciences by Dr. Charles Kankuzi (3:07 PM)

Dr. Kankuzi stated that the flagship role of the department is to produce geoscientists who can work anywhere in the world. He then introduced the nature of programmes in geography and earth sciences. Dr. Kankuzi advised that the proposed MAS would play a vital role in social and environmental issues in systematic and effective ways, that promote research and technology.

He further stated that the department will offer scientific advice and expertise to MAS in order to solve societal problems. Since a lot is happening within the geosciences (e.g. informal mining and discovery of rare earth metals and challenges of mining in the presence of radioactive sources), there is need to have “one voice” in terms of scientific research, awareness, sensitization and mobilization, hence the need for the establishment of the Malawi National Academy of Sciences.

PANEL DISCUSSION (3:20 PM)

The panel discussion was led by Dr. Levis Eneya and was composed of 8 institutional experts, heads, directors and deans. The discussion focussed on several questions and thorny issues surrounding the establishment of an academy of sciences. The summary of the 11 key comments from this panel discussion are presented in **(Appendix F)**.

CLOSING REMARKS (4:32 PM):

Stephen Chalimba, Engineer at the Malawi Bureau of Standards who represented the Director for Testing and Measurement (Mr. Steven Kuyeli), said that, the meeting reinforced the need for collaborative efforts that require all institutions to come together, do and

promote research that will benefit the country. In conclusion, he said that, the meeting adopted the idea of moving forward with the establishment of MAS. Lastly, he thanked the organizers and participants for the useful engagements.

CLOSING PRAYER:

Stephen Chalimba closed the meeting with a prayer.

SITE VISIT TO FACULTY OF SCIENCES LABS AND LECTURE ROOMS (4:40PM)

Participants were taken on a guided tour of laboratory infrastructure within the Faculty of Science.

Appendix A: Host, VP Speech



PRINCIPAL CHANCELLOR COLLEGE

Prof. Richard Tambulasi, B.A (Pub Admin), BPA (Hons), MPA, Ph.D

P.O. Box 280, Zomba, Malawi

Telephone: (265) 524 222

Fax: (265) 524 046

E-mail: principal@cc.ac.mw

Our ref: CC/FoS/AC

Your ref:

5thSeptember, 2019

MAS National Consultations: Vice Principal's Speech

Salutations (list to be updated based on confirmations)

- DIRECTOR FOR HIGHER EDUCATION, MoEST; ASSOCIATE PROFESSOR SAMSON MACJESSIE MBEWE
- DEANS OF FACULTIES AND DIRECTORS OF CENTERS
- SENIOR MANAGER (PROJECTS AND CONTRACTS) EGENCO; ENGINEER STEVEN KAYIRA
- DIRECTOR OF TESTING AND MEASUREMENTS, MBS; MR. STEVEN KUYELI
- CHIEF HRM OFFICER, MINISTRY OF LANDS HOUSING AND URBAN DEVELOPMENT, MR. JOSEPH DZONGOLOLO
- QUALITY ASSURANCE SPECIALIST, NATIONAL COUNCIL FOR HIGHER EDUCATION (NCHE), MR. ELIAS SELENGO
- HEAD, CENTRE FOR INNOVATION AND INDUSTRIAL RESEARCH, (MUST); ASSOCIATE PROF DAVID MKWAMBISI
- SERVICE CENTRE MANAGER, ZOMBA NATIONAL BANK; MRS MAUREEN MATTIYA GWEMBERE
- HEADS OF DEPARTMENTS;
- REPRESENTATIVES FROM LUANAR, MZUNI MUST, DMI
- MEMBERS OF THE PRESS (Chanco Radio/TV, ICT Department)
- ALL MEMBERS PRESENT, LADIES AND GENTLEMEN

It gives me great pleasure to welcome you to **Chancellor College, Mwambo Lecture Theatre 2** where the College has organized this first of its kind **National Consultations on the Establishment of a Malawi Academy of Sciences (MAS)**. My role this morning is to welcome you to our village, and to request the Guest of Honor, my namesake, the Director for Higher Education, Associate Professor Samson MacJessie Mbewe to address you. Before I do that, allow me to say a few remarks:

Ladies and Gentlemen, we are here and might be wondering and asking, “What is an Academy of Sciences?” Definitions vary widely. In the modern sense of the term it refers to an assembly of intellectuals or fellowship of scientists dedicated to the advancement of scientific knowledge within their societies and on a global scale. Indeed, no single definition fits the description of science academies around the world since each academy has its own peculiar features. In spite of the many peculiarities related to organizational structure, budget, membership and the range of disciplines, a common feature of all the world’s science academies is to seek nationwide economic and social advancements through wise applications of science and technology.

I am sure that we can now all relate to it and of course it goes without saying, that merit-based science academies are key components in stimulating a culture of scientific and technological excellence in Africa. For this reason, the value of creating science academies in countries like Malawi where none exist, cannot be over-emphasized and must be supported.

Ladies and Gentlemen, to realize the UN’s Agenda 2030 - the global blueprint for the future well-being of the planet and its people - requires transformative and urgent change in the world’s currently unsustainable practices. The greatest minds, resources, business models and innovations from all sectors and disciplines and across generations must be mobilized to effect this transformation together. A new report from the InterAcademy Partnership (IAP) - the global network of over 140 science, engineering and medical academies – is designed to mobilize its members and the growing number of young academies around the world to engage with the SDGs more effectively. Representing some of the best scientific minds in their countries, national merit-based academies are an important source of knowledge and have an opportunity to effect positive change.

Ladies and Gentlemen, you may wish to know that the College (to be the University of Malawi), with scientific expertise from the Faculty of Science does partner and collaborate with many institutions locally and globally and generates useful outputs which in our opinion would benefit the proposed Malawi Academy of Sciences to advise the Government and the general public better using the iconic phrase of **“science for policy and policy for science”** to achieve the SGDs. The present meeting therefore has been organized locally to

mobilize, sensitize scientists, politburo members, business tycoons and media on the need to decide to establish a Malawi national academy of sciences.

So, welcome to Chancellor College, Ladies and Gentlemen. I believe that you will not only find this meeting an eye opener, but also a platform to learn, exchange ideas, and develop linkages for further collaboration after the national consultations.

This meeting could not be possible without the financial support from National Commission for Science and Technology (NCST) equivalent to ONE MILLION FIVE HUNDRED THOUSAND KWACHA **(MK1,500,000.00)** to meet the costs.

With these few remarks, I request the Guest of Honor to officially open this meeting. Mr. Director for Higher Education, Sir.

Appendix B: Guest of Honour Speech



PRINCIPAL CHANCELLOR COLLEGE

Prof. Richard Tambulasi, B.A (Pub Admin), BPA (Hons), MPA, Ph.D

P.O. Box 280, Zomba, Malawi

Telephone: (265) 524 222

Fax: (265) 524 046

E-mail: principal@cc.ac.mw

Our ref: CC/FoS/AC

Your ref:

05thSeptember, 2019

Guest of Honor Speech: Associate Professor Samson MacJessie Mbewe

Salutations (list to be updated based on confirmations)

- VICE PRINCIPAL CHANCELLOR COLLEGE; PROF SAMSON SAJIDU
- DEANS OF FACULTIES AND DIRECTORS OF CENTERS
- SENIOR MANAGER (PROJECTS AND CONTRACTS) EGENCO; ENGINEER STEVEN KAYIRA
- DIRECTOR OF TESTING AND MEASUREMENTS, MBS; MR. STEVEN KUYELI
- CHIEF HRM OFFICER, MINISTRY OF LANDS HOUSING AND URBAN DEVELOPMENT, MR. JOSEPH DZONGOLOLO
- QUALITY ASSURANCE SPECIALIST, NATIONAL COUNCIL FOR HIGHER EDUCATION (NCHE), MR. ELIAS SELENGO
- HEAD, CENTRE FOR INNOVATION AND INDUSTRIAL RESEARCH, (MUST); ASSOCIATE PROF DAVID MKWAMBISI
- SERVICE CENTRE MANAGER, ZOMBA NATIONAL BANK; MRS MAUREEN MATTIYA GWEMBERE
- HEADS OF DEPARTMENTS;
- REPRESENTATIVES FROM LUANAR, MZUNI MUST, DMI
- MEMBERS OF THE PRESS (Chanco Radio/TV, ICT Department)
- ALL MEMBERS PRESENT, LADIES AND GENTLEMEN

RE: National Consultations on the Establishment of a Malawi Academy of Sciences (MAS)

I am pleased to welcome you all to the University of Malawi, and in particular to this important academy of sciences national consultations that UNIMA has organized. In a special way, allow me to welcome Associate Professor David Mkwambisi (the Head of the Center for Innovation and Industrial Research, MUST) and Engineer Steven Kayira, Senior Manager

(Projects and Contracts, EGENCO) who are our Keynote Speakers this morning who have made themselves present. In the afternoon, our invited guest Steven Kuyeli, Director of Testing and Measurement from the Malawi Bureau of Standards (MBS) will make closing remarks; **stating the Resolution and Action Plan** from this national consultations on the Establishment of a Malawi Academy of Sciences.

I do recognize, the extraordinary effort of Professor Adamson Muula (Team leader for the Africa Center of Excellence in Public Health and Herbal Medicine (ACEPHEM)) who could not make it today due to an adhoc invitation to attend to Government assignments. In lieu of his absence, he prepared a pre-recorded Keynote address which we will be privileged to watch and listen to.

Apologies have been received from Dr. Steven Sharra of AFIDEP.

As you might be aware that it is a proven fact that merit-based science academies are key components in stimulating a culture of scientific and technological excellence in Africa. For this reason, the value of creating science academies in countries like Malawi where none exist, cannot be over-emphasized and must be supported.

To this end, ladies and gentlemen,

UNIMA, through the Faculty of Science at Chancellor College has organized this meeting under the theme, **“National Consultations on the Establishment of a Malawi Academy of Sciences.”** The speakers, Panelists, Moderators and Rapporteurs gathered here span all sectors of Government MDAs, Public and Private Universities, Standards and Accreditation Bodies, Private Sector (Industry) and more as to users and beneficiaries of science and technology like the **Ministry of Lands Housing and Urban Development represented by the Chief of HRM, Mr. Joseph Dzungololo**. The areas of consultations range from level of awareness regarding academy of sciences, case studies and benefits of academy of sciences, guidelines to establish an academy of sciences, legal instruments, women in science, and lastly but not least, an exposition of the Departments of Science in the University of Malawi: what they have on offer and how they would support such an Academy of Sciences. All the presentations will be punctuated with moderated panel discussions in order

to tease out poignant issues and also make immediate resolutions or recommendations towards the possibility of establishing a Malawi Academy of Sciences.

The national consultations were planned against the backdrop of the realization that stakeholder participation and commitment at all stages is critical for the actualization of an establishment of this nature and is in line with UNIMA's core values, in particular, relevance. As such I wish to thank all academia, research institutions, public and private sector corporate institutions, and specifically National Bank of Malawi, Electricity Generation Company of Malawi (EGENCO) and Malawi Bureau of Standards (MBS) for your participation during this meeting.

What is an Academy of Sciences? Definitions vary widely. In the modern sense of the term it refers to an assembly of intellectuals or fellowship of scientists dedicated to the advancement of scientific knowledge within their societies and on a global scale. Indeed, no single definition fits the description of science academies around the world since each academy has its own peculiar features. In spite of the many peculiarities related to organizational structure, budget, membership and the range of disciplines, a common feature of all the world's science academies is to seek nationwide economic and social advancements through wise applications of science and technology.

The objectives of the consultation are to:

1. Discuss the importance and need of creating a National Academy of Science given the role of science in providing solutions to national challenges and in informing policy making to meet the national, regional and global sustainable development agendas.
2. Discuss the Guidelines and Strategies to Help in Creating New Academies (Source: NASAC).
3. Review different Archetypes of Academies and select one Archetype for Malawi.
4. Discuss general organizational features of an Academy of Sciences namely: Membership, Academy Organs, Finance and Independence.

Finally, may I take this opportunity to thank National Commission for Science and Technology (NCST) for supporting the national consultations with ONE MILLION FIVE HUNDRED THOUSAND KWACHA **(MK1,500,000.00)** to meet the costs.

I have no doubt that you will find this national consultations useful as a sensitization but also opportunity to make deliberate decision to endorse the Establishment of a **Malawi Academy of Sciences** abbreviated **MAS**!

I therefore declare this meeting officially opened!

Wishing you a successful Meeting!

Appendix C: Message from NCST Director General, Anthony Muyepa

<directorgeneral@ncst.mw> Wed, Sep 4, 2019 at 3:09 PM

To: Chomora Mikeka <chomora@gmail.com>

Sir,

Below is a short message from NCST to be considered to be read at the meeting opening.

"I regret to have missed this important meeting as I am out of the country. Most of my colleagues who could have been sent to participate have prior engagements happening over the same dates of 5 to 6 September. I will personally avail myself in the subsequent meetings. The National Commission for Science and Technology is, however, pleased with the initiative for the establishment of the Malawi National Academy of Science. The Commission associates itself with the cause and philosophy for establishment of this type of Academy. Where such academies are already operational, their work complements that of national bodies responsible for research, science and technology promotion and coordination. Such a body in Malawi is the National Commission for Science and Technology, as delegates are already aware.

In fulfilling the mandate of the Commission, I, therefore, pledge that the Commission will continue supporting the efforts of establishing this Academy. When it is established, the Commission will endeavor to support its operations in programme areas that the Academy will have established that would range from think-tank activities to awards in recognizing excellence. I, therefore, wish participants fruitful discussions. I look forward to be shared with a report of the meeting.

ANTHONY MUYEPA

DIRECTOR GENERAL

National Commission for Science and Technology (NCST) | Lingadzi House

| P/Bag B303 | Lilongwe 3 | Cell: +265888538596 | Tel: 01771550 | 01770562 | Fax: 01772431

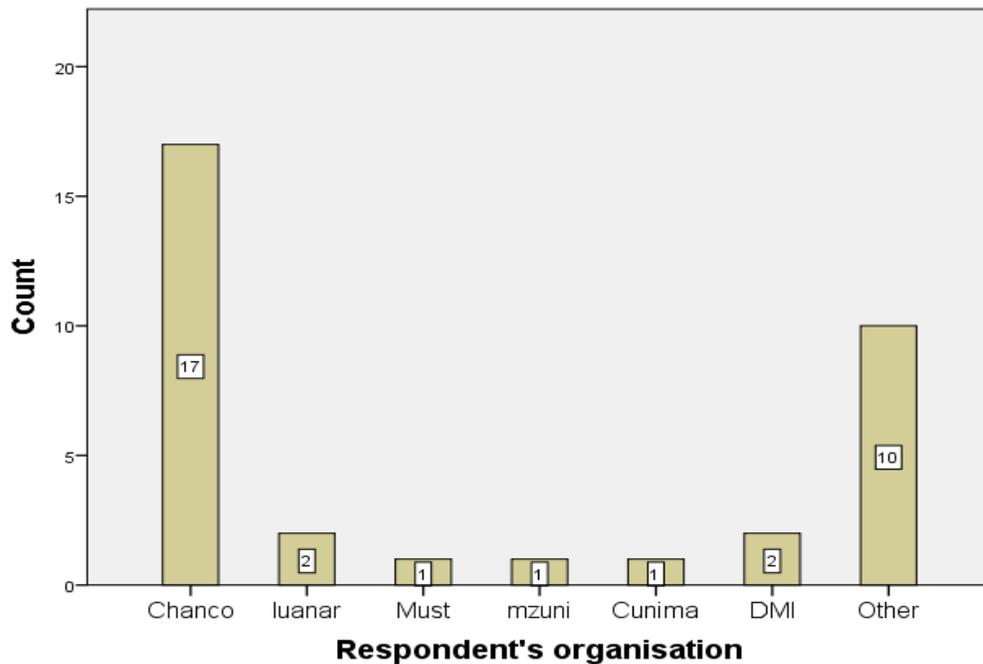
Appendix D: Task Team Mandated to Embark on the Effective Process of Establishing the Malawi Academy of Sciences

S/N	Name	Institution
1	Associate Prof. Chomora Mikeka	University of Malawi, Dean of Science, Physics Department
2	Dr. Levis Eneya	University of Malawi, Mathematical Sciences Department
3	Dr. Elizabeth Bandason	Lilongwe University of Agriculture and Natural Sciences, Horticulture Department, Entomologist
4	Associate Professor David Mkwambisi	Malawi University of Science and Technology, Head: Centre for Innovation and Industrial Research
5	Dr. Narayani Mony	Director of Research, DMI, Biotechnologist
6	Ms. Mary Chitete	CUNIMA, Mathematics Department
7	Eng. Steven Kayira or another appointee by EGENCO CEO	Senior Manager (Projects and Contracts, EGENCO)
8	Dr. George Luwanda	Mzuzu University, Deputy Dean of Innovation, Science and Technology
9	Prof. Adamson Muula	Kamuzu University of Health Sciences, ACEPHEM Coordinator, MD
10	Dr. Dzinkambani Kambalame	Ministry of Health and Population, MD

Appendix E: Statistically Analyzed Results Indicating a High Acceptance Ratio to Establish the Malawi Academy of Sciences

SURVEY TOOL FOR ESTABLISHMENT OF MALAWI ACADEMY OF SCIENCES ANALYSIS: RESULTS AND DISCUSSIONS

34 people who attended the consultation meeting with the following distributions;



The majority came from Chancellor College contributing half of the attendees (17), 10 came from other organizations including industry while LUANAR and DMI had two attendees each. MUST, CUNIMA and MZUNI were represented by one each.

1. SHOULD MAS BE ESTABLISHED?

Out of the 34 people who attended the consultation meeting only 21 participated in the survey. All survey participants agreed with the establishment of the proposed MAS representing 100% agreement with the idea.

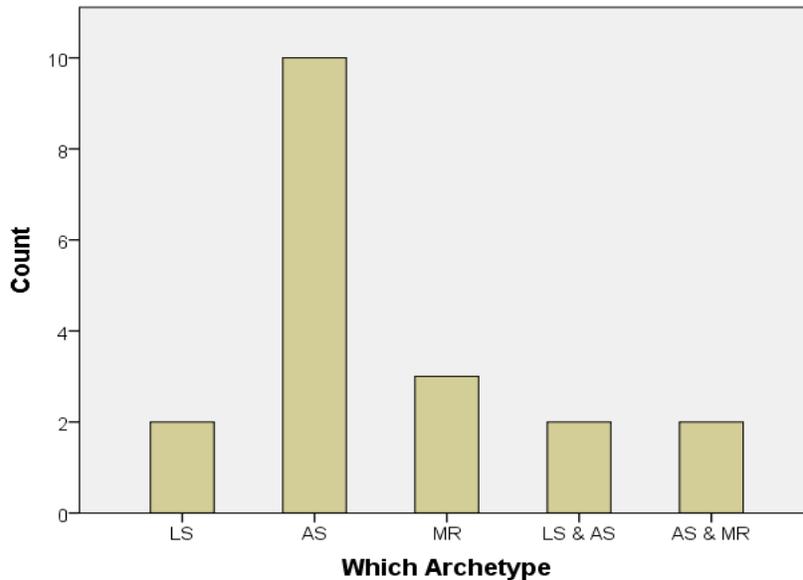
		Frequency	Percentage
Valid	Yes	21	100.0

Question: Is 21 big enough to be representative? For now, "Yes," however, there is need for more funding to execute wider and extensive consultations.

2. WHICH ARCHETYPE?

There were three different archetypes to choose from, these are Learned Society (LS), Advisor to Society (AS) and Manager of Research (MR). Of the three archetypes below is a graph showing the choices respondents made in response to the question.

Out of the 21 participants, 2 did not indicate which archetype they would propose. Thus, as seen above out of the 19 who indicated, 10 people proposed the Advisor to Society (AS) representing 52.63%. 3 proposed the Manager of Research (MR) representing 15.79%.



Out of the remaining, 2 proposed the Learned Society representing 10.53%. As seen on the graph, 2 proposed the combination of Learned society and Advisor to Society while the remaining other 2 proposed the combination of Advisor to Society and Manager of Research. Out of the survey participants, 18 indicated whether one comes from an institution or industry. Under this, anyone who did not come from an institution was recorded as coming from an industry. Below is the table showing the frequencies;

		Frequency	Percent
	Institution	12	63.2
	Industry	7	36.8
	Total	19	100.0
Missing	System	2	
	Total	21	

12 people came from institutions with a good number of them coming from Chancellor College (6), 2 from LUANAR, one each from MUST, MZUNI, CUNIMA and DMI. The remaining came from the industry.

SPECIFIC ADVICE FROM PARTICIPANTS

Almost all the participants had the same kind of advice which was to undertake more consultations and to engage as many stakeholders as possible. Broad awareness needs to be done to solidify the basis for the establishment of the academy. This next stage requires injection of funds to facilitate participation. The task force shall need to plan a calendar of activities, budget for each activity and source funds.

RESULTS DISCUSSION AND CONCLUSION

Despite having the results supporting the establishment of the proposed Malawi Academy of Sciences (MAS), from a statistical point of view 21 is a small number to represent the population. Again, most of the people came from institutions with a good number from CHANCO for an obvious reason (convenience). Engagement of more people needs to be done and financial support is requested from potential funders.

Appendix F: Key Comments Emanating from the Panel Discussion

1. Efforts in science are disjointed and the MAS would help in coordinating that.
2. There is need for industry to participate and industries should support research. Universities must look at the problems that industries have, and they should be able to improve products from the industry;
3. Need to decide whether the MAS will be a statutory entity, or incorporated as Public or Private Trust;
4. It was stated that an example of a well-functioning Trust in Malawi is the Agriculture Research and Education Trust (ARET). In case a decision is made to make it a Trust, lessons could be drawn from ARET. However, a warning was made that, "when the statutory pathway is chosen, it is important to be careful of making biases on scientific evidence that may not favour government's position."
5. Include the private universities/institutions in the MAS and ensure their active participation. At the national consultations, only two private universities were represented namely, CUNIMA and DMI-SJBU.
6. Need to engage the national planning commission (NPC) in the next meetings. Include other stakeholders and do a thorough stakeholder analysis.
7. There is need to consider whether the members of the MAS governing body will be full time or part time.
8. The MAS should consider protecting intellectual property. It should fill the gap on missing data as well as encourage protection of technologies that are developed by Malawians for Malawi.
9. Need to tread carefully on the naming of the academy as this directly relates to branding. Some disciplines may come up with their academies as well and this may cause confusion in the future.
10. As the academy is being established, sustainability should also be thought of as well. It was emphasized that MAS needs to have strong passionate leadership that is ready to break barriers to make it happen.
11. The academy should encourage girls and women to actively participate in science.

Appendix G: Survey Tool

FACULTY OF SCIENCE
SURVEY TOOL FOR
ESTABLISHMENT OF MALAWI ACADEMY OF SCIENCES

NAME (OPTIONAL):			
INSTITUTION:			
QUESTION 1	SHOULD MALAWI ACADEMY OF SCIENCES BE ESTABLISHED?	Y	N
QUESTION 2	IF (Y) WHICH ARCHETYPE?	LS	AS MR
QUESTION 3	ANY SPECIFIC ADVICE?		

END OF SURVEY

Annex 1: Attendance List of Participants

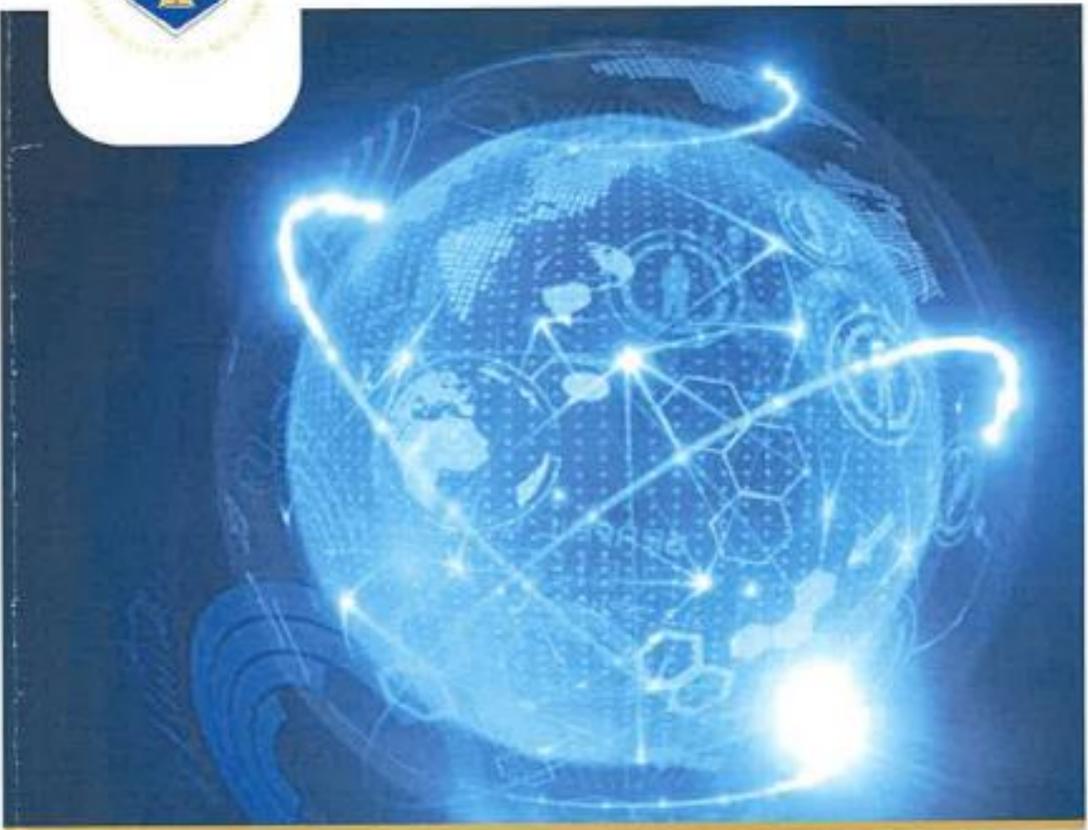
	NAME	ORGANIZATION	EMAIL	PHONE NO	PROFESSION
1	Moses Limuwa	LUANAR	mlimuwa@luanar.ac.mw	0997813107	Researcher
2	Mary Chitete	CUNIMA	Mchitete@cunim.ac.mw	0884431391	Lecturer
3	Steven Kayira	EGENCO	skayira@egenco.mw	0881209860	Engineer
4	Levis Eneya	CHANCO	leneya@cc.ac.mw	0993881933	Scientist
5	Elizabeth Bandason	LUANAR/COM	elizabethbandason@gmail.com	0999520639	Scientist
6	Elias Selengo	NCHE	eselengo@nche.ac.mw	0884081775	QA specialist
7	M. Narayani	DMISJBU	siburesearch@gmail.com	0992891495	Researcher
8	Y. Jasmala Joy	DMISJBU	jasmalajoy@gmail.com	0992743779	Lecturer
9	Empraim Vunain	CHANCO	evunain@cc.ac.mw	0994329968	Lecturer
10	Joseph Dzongololo	MINISTRY OF LANDS	dzongololo@gmail.com	0888391467	Chief HR
11	Samson Sajidu	CHANCO	ssajidu@cc.ac.mw	0888891714	Vice Principal
12	Mwawi Nyirenda	CHANCO	mkayuni@cc.ac.mw	0996825515	HOD Maths
13	A.G Luwanda	MZUNI	Luwanda.g@mzuni.ac.mw	0999208705	DD FOSTI
14	K. Chibwana	CHANCO	khamachibwana@gmail.com	0888684790	Lecturer
15	C F Kamkuzi	CHANCO	ckankuzi@cc.ac.mw	0888857994	HOD GES
16	D Mkwambisi	MUST	dmkwambisi@must.ac.mw	099552400	
17	D Kapesa	NB	dkapesa@natbankmw.com	0888569881	Banker
18	J Ngwenya	CHANCO	jngwenya@cc.ac.mw	0999440702	D.Clerk
19	D Kambalame	MOH	dzinkambani@yahoo.com	0992133306	MD
20	Glory Kambwiri	MOH	kambwiriglory1@gmail.com	0994843908	NO
21	Martin Thodi	CHANCO	martinthodi@cc.ac.mw	0883816293	Lecturer
22	Victoria Ndolo	CHANCO	vndolo@cc.ac.mw	0995042760	Lecturer
23	Patrick Chinguwo	CHANCO	pchinguwo@cc.ac.mw	0996956612	Laywer
24	Fiskani Chirwa	CHANCO	Fchirwa@cc.ac.mw	0888333390	Lecturer

25	Stephen Chalimba	MBS	stephencahlimba@mbsm w.org	0880716329	Engineer
26	Donnex Beyamu	CHANCO	djbeyamu@gmail.com	0996218491	Mathematician
27	Dalitso Kafumbata	CHANCO	dkafumbata@cc.ac.mw	0888503948	Lecturer
28	Tia Mao Njanji	CHANCO FM	tianjanji@gmail.com	0884423353	Journalist
29	Dylo Pemba	CHANCO	pembadyl@cc.ac.mw	0888314283	Lecturer
30	Wilbert Chitaukali	CHANCO	wchitaukali@cc.ac.mw	0888516767	Lecturer
31	Alfonso Luwizi	MOH		0999350738	Driver
32	Steven Sambani	NCHE		0999912735	Driver
33	Precious Msowoya	Ministry of Lands		0999233974	Driver
34	P. Kapulula	CHANCO	pkapulula@cc.ac.mw	0993757550	Dean SS

Annex 2: The Programme for the National Consultations on the Establishment of the MAS



FACULTY OF SCIENCE
OFFICE OF THE DEAN OF SCIENCE



**NATIONAL CONSULTATIONS ON THE
ESTABLISHMENT OF A MALAWI ACADEMY OF
SCIENCES (MAS)**

PROGRAM


Mwambo Lecture Theatre 2, Chancellor College, Zomba


5th September, 2019

TIME(HRS)	ACTIVITY	LEAD	TIME(HRS)	ACTIVITY	LEAD
08:00 – 08:30	Registration	Secretariat (Dean of Science)	11:55 – 12:15	P3: Computer Science	Head, Dr. Tiwonge Manda
08:30 – 10:00	Introductions and agenda	Associate Professor Chomora Mikeka, Dean of Science	12:15 – 12:35	P4: Human Ecology	Head, Dr. Khama Chibwana
	Welcome Remarks	Professor Richard Tambulasi, Principal, Chancellor College	12:35 – 13:00	Panel Discussion: What unique contributions would the proposed National Academy of Sciences Benefit from these Departments of Science?	Moderator: Dr. Artz George Luwanda, Deputy Dean of Science, Technology and Innovations, MZUNI
	Remarks by the Senior Knowledge Translation Scientist	Dr. Steve Sharra, African Institute for Development Policy (AFIDEP)		Panelists:	1 Dean, Head or their Rep: LUANAR, MUST, MZUNI, COM, KCN, POLY, DMI, Elias F. Selengo, QA Specialist (NCHE)
	Guest of Honour Speech	Associate Professor Samson MacJesse Mbewe, Director of Higher Education	13:00 – 14:00	LUNCH	Head, Dr. Mwawi Nyirenda
	Keynote 1: The Case for the Academy of Sciences in Malawi	Professor Adamson Muula, ACEPHEM Coordinator, College of Medicine	14:00 – 14:20	P5: Mathematical Sciences	Head, Dr. Charles Kankuzi
	Keynote 2: Industry Expectations from Scientists and Engineers	Associate Professor David Mkwambisi, Head Centre for Innovation and Industrial Research, MUST	14:20 – 14:40	P6: Geography and Earth Sciences	Head, Dr. Stanley Mlatho
	Keynote 3: Points to Consider for Engineers to Benefit from an Academy of Sciences	Engineer Steven Kayira, Senior Manager (Projects and Contracts), EGENCO	14:40 – 15:00	P7: Physics	Moderator: Dr. Levis Eneya, Dean Emeritus, Faculty of Science, Chancellor College
10:00 – 10:15	HEALTH BREAK AND GROUP PHOTOGRAPH		15:00 – 15:30	Panel Discussion: Do we have a basis to make a resolution to embark on the process of establishing a National Academy of Sciences?	1 Dean, Head or their Rep: LUANAR, MUST, MZUNI, COM, KCN, POLY, DMI, Dr. Ephraim Yunain, Maureen Mattiya Gwembere, Manager (NBM)
10:15 – 10:35	Guidelines for Establishing an Academy of Sciences	Associate Professor Chomora Mikeka, Dean of Science		Panelists:	Steven Kuyeli, Director of Testing and Measurements Malawi Bureau of Standards (MBS)
10:35 – 10:55	Legal Instruments to Establish an Academy of Sciences in Malawi	Dr. Lewis Chezan Bande, Faculty of Law, Foundational Law Department, Chancellor College	15:30 – 16:00	Closing Remarks: Resolution and Action Plan	Heads BIO, CHE, COM, HEC, GES, MAT and PHY in conveyor belt fashion or grouped based on interest
10:55 – 11:15	P1: Women in Science, How National Academies Present Opportunities for their Growth	Dr. Elizabeth Bاندason, LUANAR, Faculty of Agriculture, Horticulture Department	16:00 – 17:00	Site visit to Faculty of Science old and new Labs and Lecture Rooms (all participants)	
10:15 – 11:35	P2(A): Biological Sciences	Head, Mr. Wilbert Chitaukali			
11:35 – 11:55	P2(B): Chemistry	Head, Associate Professor Maurice Monjerezi			