

## Commonwealth science conference



The Ghana Academy of Arts and Sciences organized a three day commonwealth science conference in Accra, Ghana on 14-16 March 2022. The meeting was funded by Royal Society and it brought together some very talented early career research scientists from Africa and the UK to share their perspectives and experiences as well as find ways of working together on the research challenges affecting the region.

The objective of the meeting was to provide participants with the tools and experience to propel their research findings in policy making. Present at the opening ceremony were Emerita Prof. Isabella A. Quakyi (Acting President of Ghana Academy of Arts and sciences), Prof. Robin Grimes (Foreign Secretary of the Royal Society, UK), H.E Ms. Harriet Thompson (High Commissioner of UK to Ghana) and Dr. Eric Nkansah (Director, Tertiary Education, Ministry of Education) who represented the ministry of Education. Professor Sir Chris Whitty, Chief Medical Officer (CMO) for England, the UK government's Chief Medical Adviser and head of the public health profession, kick started the discussions after brief opening ceremony.

The meeting was divided into three sessions: Energy, Biodiversity and Equitable access to health. Each session had a programme of live talks followed by discussion sessions with speakers. There were also opportunities for plenary talks, panel discussions, poster sessions and informal networking opportunities.

Some of the exciting presentations delivered included:

- Future Technologies for Energy Transition
- Conservation, Restoration and Adaptation
- Equitable Access to Health: A systems – based Approach- Challenges and How to Leverage Access
- Prioritizing Sustainability in Transition
- Climate Change and Land use Impacts on Biodiversity: The Future Climate change on Future pandemics
- The impact of Climate Change on Health

There were also very informative presentations on various aspects of communications such as:

- Communicating science advise to Governments by Sir Robin Grimes, Foreign Secretary, Royal Society, UK
- Effective science communication by Dr. Modestus Fosu, senior lecturer in Language and communication studies, Ghana Institute of Journalism, Accra.

## From the President



The Commonwealth Science conference held in Accra, Ghana brought together outstanding early career researchers and leading scientists from across the Commonwealth. It

facilitated joint work on addressing global development challenges that encouraged scientific capacity strengthening in Commonwealth countries and influenced the Commonwealth policy agenda.

The InterAcademy Partnership (IAP) released a report on “Combatting Predatory Academic Journals and Conferences” on 16 March 2022. The report focuses on predatory publishing (journals) and predatory conferences. Both are motivated by profit rather than scholarship, soliciting articles and abstracts from researchers through actions that exploit the pressure on researchers to publish and present their work. Features of these practices include, but are not limited to, rapid pay-to-publish or pay-to-present models without rigorous (or even any) peer review, fake editorial boards falsely listing respected scientists, fraudulent impact factors or metrics, journal and conference titles that are deceptively similar to those of legitimate ones, paid review articles that promote fake science, and aggressive spam invitations to solicit articles and abstracts.

“Combatting predatory academic journals and conferences” is a two-year study led by the InterAcademy Partnership (IAP), a key constituency of the global research community. The

study has sought to improve the understanding of predatory journals and conferences, their prevalence and impact, the drivers fuelling them, and effective ways to combat them. The study complements other work on this important issue by taking a truly global perspective, exploring drivers or root causes, and being process rather than product oriented, following a systemic approach with integrative recommendations for all key stakeholders. It has deployed a range of methodologies, including a unique survey of researchers around the world and in-depth stakeholder focus groups with key sectors and regional webinars. This wide and diverse engagement has helped raise awareness of predatory journals and conferences amongst key stakeholder communities, whilst drawing on their input on practicable ways of combatting them.

NASAC in partnership with Africa Harvest has organized a series of regional webinars on “Gene Editing Technology Initiative”. These webinars aim to advocate for an enabling regulatory environment on gene editing technology towards the development and commercialization of gene editing technology products.

These webinars will be targeting four different audiences namely: Public, Policymakers, Regulators and Researchers.

NASAC joined other academies globally, to express extreme concern at the war in Ukraine and the humanitarian crisis that has resulted.

We call for an immediate ceasefire, and for rational dialogue and negotiation leading to peace in the region.

Yours Faithfully,

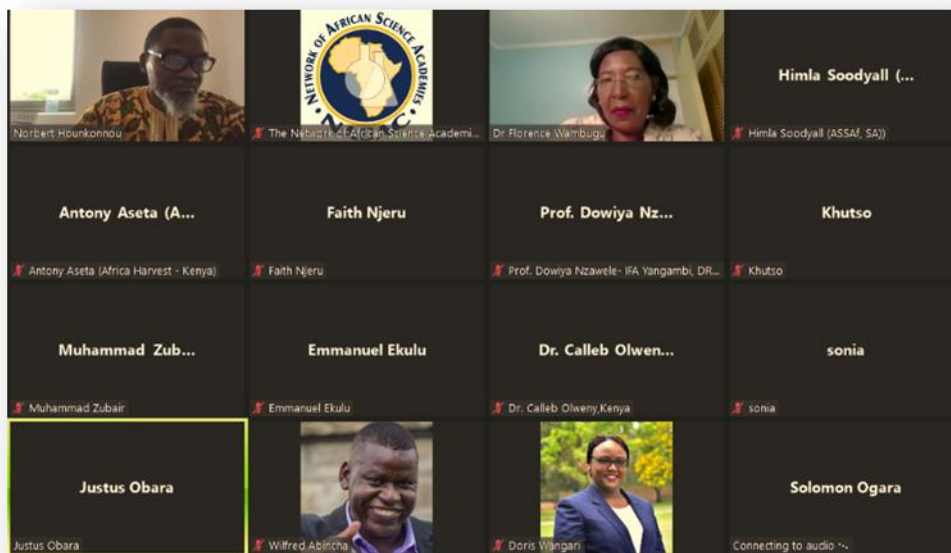
  
 PROF. MAHOUTON NORBERT HONKONNOU  
 NASAC PRESIDENT

## Activities and Events

### Regional Webinars on Gene Editing Technology Initiative

Africa Harvest ([www.africaharvest.org](http://www.africaharvest.org)) and the Network of African Science Academies (NASAC) is organizing a series of webinars on Gene Editing Technology Initiative (GETI). These webinars aim to advocate for an enabling regulatory environment on gene editing technology towards the development and commercialization of gene editing technology products.

The first region to hold its webinar was East Africa which was held on 15<sup>th</sup>, 17<sup>th</sup>, 22<sup>nd</sup> and 24<sup>th</sup> February 2022. The East Africa Region Webinar targeted four audiences namely: Public, Policymakers, Regulators and Researchers.



Participants at the first GETI East Africa Region Webinar

### Nigerian Academy of Science Webinar Series – Predatory Academic Practices in Nigeria: Combatting the scourge

The Nigerian Academy of Science (NAS) - with support from the InterAcademy Partnership (IAP) - organized a webinar themed: “*Predatory Academic Practices in Nigeria: Combatting the Scourge*”. The aim of the webinar was to raise awareness on predatory academic practices and their detrimental effects on Nigerian researchers and the scientific community, as well as providing knowledge, tools, and resources for identifying and avoiding predatory journals and conferences. The event was held via zoom on 9 March 2022.

### Research in Public Health Emergencies: A Stakeholders’ Forum

The Nigerian Academy of Science with support from the Resolve to Save Lives (RTSL) convened a Stakeholders’ Forum on “*Operational Research in Public Health Emergencies*”.

This event was held on 22 March 2022

The objectives of the event were to analyze health research methodology in Nigeria, identify areas of strengths and weakness in existing health research frameworks/protocols using the response to COVID-19 as a case study, and make recommendations for strengthening Nigeria’s capacity to conduct operational research in the context of public health emergencies.

### Workshop for training of science school teachers

The Sudanese National Academy of Sciences (SNAS) is dedicated to promote Science excellence in Sudan for the benefit of Sudanese society. One of the specific strategic objectives of SNAS is to improve quality education and increase public awareness on the importance of Science. SNAS, in collaboration with the Regional Office of UNESCO in Cairo, organized a workshop for training of science school teachers from the different States of Sudan on Inquiry-Based Science Education (IBSE).

The IBSE is an innovative teaching pedagogy that calls for the active participation of pupils in the learning process through maximizing children's natural curiosity, identification of problems, possible explanations or solutions, hypothesis to be tested, design of protocols to be tested involving several choices, the actual investigation, confirmation of the assumption, structure of knowledge in response to the questions raised and comparison with established facts.

A major outcome of this project is dissemination of IBSE pedagogical approach in institutions of the STEM teachers training.

The workshop was held on 21-23 March 2022.

## UNAS Webinar on “Women and SDGs: An African Response

The Uganda National Academy of Science (UNAS) organized a webinar on “Women and SDG: An African Response” on 23 March 2022. The aim of the webinar was to provide a neutral platform for participants to discuss ways to ensure gender equity for African women and girls across the 17 SDGs.



Sciences For Prosperity

### UGANDA NATIONAL ACADEMY OF SCIENCES

#### INVITATION

*You are cordially invited to a Virtual Webinar on*  
**Women and SDGs: An African Response**

**Please meet the panelists**



**Maggie Kigozi**

SDG 5 Ambassador  
 UN Women  
 Kampala - Uganda



**Jackie Kado**

Executive Director,  
 Network of African Science Academies  
 (NASAC),  
 Nairobi - Kenya



**Dorothy Ngila**

Director,  
 National Research Foundation  
 (NRF)  
 Pretoria - South Africa

# Announcements and Appointments

## NASAC statement on the war in the Ukraine

The Network of African Science Academies (NASAC), joined other academies globally, to express extreme concern at the war in Ukraine and the humanitarian crisis that has resulted.

We call for an immediate ceasefire, and for rational dialogue and negotiation leading to peace in the region. Please click [here](#) to download both the English and French version of the statement.



## African Scientists Directory

The [Academy of Science of South Africa \(ASSAf\)](#), supported by the [Dept. of Science and Innovation \(DSI\)](#), manages the [African Scientists Directory](#).

This directory was virtually launched on Africa Day (25 May 2020) as part of the [DSI Africa Day event](#), and aims to bring together African scientists, connecting all, enhancing collaboration, increasing visibility, and many more. It further aims at communicating calls and event announcements to the science community, following a targeted approach. Please visit the website for more information: <https://africanscientists.africa/> To search for scientists on the continent specialising in specific research disciplines, please do a basic/advanced search at <https://africanscientists.africa/business-directory/>

We cannot accomplish building this directory on our own and would appreciate your help in especially sharing it across your networks. If you or someone in your network holds a **Doctoral degree** (or **Master's degree in engineering/health science**) please encourage them to share their professional details in the [African Scientists Directory](#). This can be done in 3 steps:

1. [Register](#) & confirm email (also check Junk/Spam folder) –
2. [Login](#) –
3. [Create a Listing](#)

## **Board renewal of the Academie des Sciences et Techniques du Senegal (ANSTS)**

Following its Extraordinary General Assembly held on 12 February 2022, the National Academy of Sciences and Techniques of Senegal (ANSTS) proceeded to the renewal of its Board now composed as follows:

- President : Dr Moctar TOURE, Agronomic Sciences-Pedology, Agricultural Sciences Section (SSAgr)
- Immediate Past President : Prof Doudou BA, Pharmacy-Chemistry, Health Sciences Section (SSS)
- Vice Presidents: Prof Mamadou NDOYE, Child Surgery, Chairperson Health Sciences Section (SSS)  
 Dr Rokhaya SENE, Geography-Public Administration, Chairperson Social Sciences and Humanities Section (SSSH)  
 Dr. Ousmane KANE, Food Science and Technology, Chairman of the Agricultural Sciences (SSAgr)  
 Prof. Cheikh Bécaye GAYE, Water Science Engineering, Chair of the Basic, Applied and Innovation (SSFAI)
- Permanent Secretary: Prof Oumar SOCK, Electrochemistry- Analytical Chemistry (SSFAI)
- Assistant Secretary Prof Bhen S. TOG1JEBAYE, Animal Biology (SSFAI)
- General Treasurer Dr. Dogo SECK, Agronomic Sciences-Agroecology (SSAgr)
- Assistant Treasurer Prof Papa Ibra SAMB, Plant Biology (SSPAI)
- Commission Presidents Prof Papa Salif SOW, Medicine, Infectious Diseases, President of the Scientific, Strategic and Prospective Commission (SSS)  
 Prof Mouhamadou Guelaye SALL, Medicine-Pediatrics, President of the Commission in charge of relations with partners (SSS)  
 Dr Taib DIOUF, Director of Research, Natural Sciences-Oceanography, President of the Communication, Media and Publications Commission (SSAgr)  
 Dr. Ababacar Sadikh NDOYE, Food Science, Chairman of the Finance Committee (SSAgr)  
 Prof. Mamadou SANGHARE, Mathematics, President of the Science Education and Relations with Young Scientists (SSFAI)
- Departmental Representatives : Prof. Aloyse Raymond NDIAYE, Philosophy (SSSH)  
 Prof. Aynina CISSE, Pharmacy-Biochemistry (SSS)  
 Prof. Cheikh LY, Veterinary Sciences, Zootechnics-Agricultural Economics (SSAgr)  
 Prof Ahmadou WAGUE, Physics (SSFAI)

The ANSTS Board will take office on 25 February 2022 for a term of three years in accordance with the Statutory provisions.

## Uganda National Academy of Sciences (UNAS) Appointments



**Prof. Samuel K. Sejjaaka**, Fellow of the Uganda National Academy of Sciences and Principal/ Country Team Leader, MAT ABACUS Business School, was appointed as the new Board Chairman of the Monitor Publications Limited.



**Prof. Grace K. Bantebya**, Fellow of the Uganda National Academy of Sciences has been appointed by the Vice Chancellor Makerere University as the new Head of Grants Administration and Management Unit of Makerere University for five (5) years with immediate effect. The Uganda National Academy of Sciences congratulates her on this new appointment as the new Head of Grants Administration and Management Unit of Makerere University.

## Ugandan Women of Courage 2022

Two distinguished Fellows of the Uganda National Academy of Sciences (UNAS) were recognized by U.S. Ambassador Natalie E. Brown on 12 March 2022 as Ugandan Women of Courage. Modeled on the Department of State's International Women of Courage (IWOC) Awards, U.S. Mission in Uganda staff nominated these women to demonstrate the depth of the United States' support for women's empowerment in Uganda. They are:



**Prof. Rhoda K. Wanyenze**, Fellow of the Uganda National Academy of Sciences, Professor and Dean, [Makerere University School of Public Health](#)



**Prof. Grace K. Bantebya**, Fellow of the Uganda National Academy of Sciences (UNAS), and Professor of Women's Studies at [Makerere University](#)

## The Nigerian Academy of Science (NAS) Appointments

The Nigerian Academy of Science constituted her 46<sup>th</sup> Council. The members are:

|                             |  |
|-----------------------------|--|
| Professor Ekanem Braide     | President                              |
| Professor Abubakar Sambo    | Vice President                         |
| Professor Oluwole Familoni  | Treasurer                              |
| Professor Alex Acholonu     | Foreign Secretary                      |
| Professor Olanike Adeyemo   | Chair, Publications Committee          |
| Professor Chidi Akujor      | Academic Secretary Physical Sciences   |
| Professor Olatunde Farombi  | Academic Secretary Biological Sciences |
| Professor Musbau Akanji     | Public Affairs Secretary               |
| Professor Adenike Oladiji   | Representative Biological Sciences     |
| Professor Suleiman Bogoro   | Representative Biological Sciences     |
| Professor Jacob Kwaga       | Representative Biological Sciences     |
| Professor Joseph Ahaneku    | Representative Biological Sciences     |
| Professor Jonathan Babalola | Representative Physical Sciences       |
| Professor Kayode Adebowale  | Representative Physical Sciences       |
| Professor Babajide Alo      | Representative Physical Sciences       |
| Professor Micah Osilike     | Representative Physical Sciences       |
| Professor Mosto Onuoha      | Past President                         |

## Election of New Fellows

The Nigerian Academy of Science elected ten scientists. The elected scientists were:-

1. Professor Olubukola Oluranti Babalola
2. Professor Esther Titilayo Akinlabi
3. Professor Stella Ifeanyi Smith
4. Professor Anthony Ifeanyi Okoh
5. Professor Ganiyu Oboh
6. Professor Abdulrazaq Garba Habib
7. Professor Bamidele Olu-Owolabi
8. Professor Folahan Amoo Adekola
9. Professor Anthony Amaechi Attama
10. Professor Simeon Idowu Cadmus

# On the Spotlight

## Growth and Prevalence of Predatory Journals and Conferences

Predatory publishers and predatory conference organizers are broadly understood as those motivated by profit rather than scholarship, who exploit the pressure on researchers to publish papers and participate in international conferences, respectively. Traits common to both so-called predatory journals and conferences include deceitful practice; little, poor or no peer-review and/or editorial control; and the fraudulent use of the names of established journals, institutions or researchers.

Predatory journals and conferences are on the rise. The latest estimate of predatory journals is over 15,500 and some estimate, albeit anecdotally, that predatory conferences now outweigh genuine ones. There is growing evidence of the widening demographic of predatory practices and behaviors, in terms of geography, career stage and discipline, as well as their permeation into leading indexes, but their nature, prevalence and impact are not wholly understood.

Responding to this pervasive growth and an increasing disquiet amongst academics, the InterAcademy Partnership (IAP) study on this issue shows concerns that these predatory practices threaten to compromise the integrity of research if left unchallenged.

The digitization of scholarly communication has undoubtedly revolutionized many aspects of the scientific endeavor by opening up avenues for more scientists to participate in the creation, access and dissemination of knowledge. However, this innovation has also helped to create an enabling environment for unethical research practices that undermine academic standards and research integrity. Shifting paradigms of research assessment/evaluation, institutional rankings, metrics and publishing business models have inadvertently allowed unacceptable academic and publishing practices to take root: these include so-called predatory journals and conferences.

In its 2016 report, *“Doing Global Science: a guide to responsible conduct in the global research enterprise”*, the *InterAcademy Partnership (IAP)* referred to the emergence of predatory open-access journals and advised researchers to be wary of publishing in them, warning of their potential to *“seriously damage the research enterprise”*. A year later, predatory journals were identified as one of the *“new forms of detrimental research practices”* threatening research integrity (NASEM, 2017). Five years on, the emergence of predatory journals would appear to be firmly rooted with over 15,500 worldwide, according to the latest numbers published in *Cabells’ Predatory Reports* (January 2022). Whilst in use for some years now, the notion of “predatory journals” for the first time features in the UNESCO World Science Report 2021 (Schneegans *et al*, 2021): *“Predatory journals significantly undermine the quality of published articles. There is a need for great transparency of the peer-review and journal publication processes to combat such predatory practices”*.

Yet the prevalence and impact of these journals worldwide are unclear and some studies reach contradictory findings. Touching almost every facet of scholarly communication, studies of, and opinions on, predatory publishing are variable and expanding (Xia, 2021). The past two years have seen a steady growth in publications and commentaries on predatory publishing, as well as an increasing number of watch lists and safe lists prepared by professional associations, higher education institutions and government agencies, in addition to the established journal safe lists provided by, for example, the Directory of Open Access Journals (DOAJ) and *Cabells*. In contrast, there is relatively little literature or guidance on predatory conferences with most of it in the form of editorials, commentaries and opinions rather than scientific studies (Nisha *et al*, 2020), despite reports that predatory conferences may now outnumber real or genuine ones (Grove *et al*, 2017; McCrostie, 2018).

In addition to predatory journals and conferences, other academic practices that could be conceived as “predatory” include falsification of experimental evidence (Fanelli, 2009), paper-mills churning out fake papers on demand (Krämer, 2021), fake or embellished qualifications, such as “predatory PhDs” (Darbyshire *et al*, 2020) certificates, awards and medals (van de Vosse, 2021). Predatory pre-print servers are also springing up rapidly (Moore, 2020). These practices are all profit-motivated and operate largely without restraint; thriving in increasingly commercial academic cultures all over the world.

# Member Academy Feature

## Botswana Academy of Science

### Advancing Women Participation in Science Communication

Science communication is critical for the growth of science within the society. It should not be limited to the scientific community, at its best it also bridges the gap between the scientists and the public and thus spreads the reach of scientific work and promote the public's understanding of science (Treise & Weigold, 2002). The public's understanding of science is critical given that it is the public who fund research through their taxes and participate in research as subjects as well as the ultimate consumers of research discoveries (Karikari, Yawson, & Quansan, 2016). Increased science communication also leads to attraction of funding from the government and investors at large and also has the potential to influence government regulatory decisions and policy formulation, thus how a scientist communicates is absolutely vital (Yeo, 2013).

The need for the acquisition, verification and dissemination of reliable information is especially critical during a pandemic, on both scientific activities and scientific findings. The disseminating of such information through reliable individuals and institutions allows for proper vetting of information as opposed to sensationalized and unverified sources which mostly incite fear and confusion. With the current covid-19 pandemic public interest in science and science information has been increasing at an exponential rate and it has thus become critical for scientists to communicate science through various platforms not only for purposes of authenticity and quality but also to achieve radical shift in science perceptions. The participation of women in such platforms has been seen to be lacking in Botswana with men predominantly leading COVID-19 discussions in both the traditional media and digital platforms, this therefore requires the application of a gender lens.

Perhaps this correlates to the fact that all around African, women's participation in Science, Technology, Engineering and Mathematics (STEM) is reported to be lagging behind compared to the participation of men. Women are especially underrepresented in higher education and positions in STEM (Mukhwana, Abuya, Matanda, Omumbo, & Mabuka, 2020). The 2015 United Nations Educational, Scientific and Cultural Organization (UNESCO) science report reveals that women are not well represented in fields such as engineering, transportation, energy, information technology and computing, women are not well represented (UNESCO, 2015). In 2016 a study on engineering education for women in Botswana, which noted that women are a minority in the university engineering courses (Baryeh, Squire, & Mogomotsi, 2016) and the authors concluded that women's under-representation is due to "lack of counselling and information on engineering, difficulties in understanding scientific and mathematical concepts, absence of women role models and discouragement from people, among others" (Baryeh, Squire, & Mogomotsi, 2016). For more Botswana women to gain interest in STEM there has to be effective science communication by women in the STEM community, trailblazing women in STEM should act as role models and be invited to schools, workshops and seminars in order to impart the relevance of science in women's lives (Baryeh, Squire, & Mogomotsi, 2016). To this effect BAS in partnership with several stakeholders, conducted an online survey on advancing women participation in science communication in order to investigate this lack of participation and workshop women in overcoming whatever barriers that hinder them from active scientific communication.

The lack of women participation is of concern in that in failing to communicate science women miss out on opportunities of broadening their network and becoming visible to girl children who need role models and mentors in science. The country misses out on the diversity women could bring to the conversation. Here we report on the involvement of Botswana women in science communication, the challenges they face and possible means of enabling an environment for participation of women in science.

**About NASAC**

The Network of African Science Academies (NASAC) was established on 13 December 2001 in Nairobi, Kenya and is currently the affiliate Network for InterAcademy Partnership (IAP) in Africa.

NASAC is a consortium of merit-based science academies in Africa that aspires to make the “voice of science” heard by policy and decision makers within and outside the continent. NASAC is dedicated to enhancing the capacity of existing national science academies and champions in the cause for creation of new academies where none exist

As at November 2019, NASAC comprised of the following twenty-eight members:

1. **African** Academy of Sciences (AAS)
2. **Algerian** Academy of Science and Technology (AAST)
3. Académie Nationale des Sciences, Arts et Lettres du **Bénin** (ANSALB)
4. **Botswana** Academy of Sciences (BAS)
5. Académie Nationale des Sciences du **Burkina** (ANSB)
6. **Burundi** Academy of Sciences and Technology (BAST)
7. **Cameroon** Academy of Sciences (CAS)
8. Académie Nationale des Sciences et Technologies du **Congo** (ANSTC)
9. Académie des sciences, des arts, des cultures d'Afrique et des diasporas africaines, **Cote d'Ivoire** (ASCAD)
10. Academy of Scientific Research and Technology, **Egypt** (ASRT) – *Provisional Member*
11. **Ethiopian** Academy of Science (EAS)
12. **Ghana** Academy of Arts and Sciences (GAAS)
13. **Kenya** National Academy of Sciences (KNAS)
14. **Madagascar's** National Academy of Arts Letters and Sciences
15. **Mauritius** Academy of Science and Technology (MAST)
16. Hassan II Academy of Science and Technology in **Morocco**
17. Academy of Sciences of **Mozambique** (ASM)
18. **Nigerian** Academy of Science (NAS)
19. **Rwanda** Academy of Sciences (RAS)
20. Académie des Sciences et Techniques du **Sénégal** (ANSTS)
21. Academy of **Science of South** Africa (ASSAf)
22. **Sudanese** National Academy of Science (SNAS)
23. **Tanzania** Academy of Sciences (TAS)
24. Académie Nationale Des Sciences, Arts Et Lettres Du **Togo** (ANSALT)
25. **Tunisia** Academy of Sciences Arts and Letters
26. **Uganda** National Academy of Sciences (UNAS)
27. **Zambia** Academy of Sciences (ZaAS)
28. **Zimbabwe** Academy of Sciences (ZAS)

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