



science & innovation

Department:
Science and Innovation
REPUBLIC OF SOUTH AFRICA

Quarterly Report 2022/23

PROGRAMME: African Astronomical Society (AfAS)

**Annual Report
(1 April 2022-31st March 2023)**



AFRICAN
PLANETARIUM
ASSOCIATION

Table of Contents

1. Rationale/background of the Programme	3
2. Summary of performance for the current year	3
3. Key Performance Indicators/Outputs	20
4. Financial Performance	21
5. Approval	23

1. Rationale/background of the Programme

Over the past three decades, professional astronomy activities on the African continent have increased and this has led to the onset of some growth in capacity. However, this growth has mainly been derived from collaborations with partners from outside the continent through various initiatives. The High Energy Stereoscopic System (H.E.S.S.), the Southern African Large Telescope (SALT), the Square Kilometer Array (SKA), and the African Very Long Baseline Interferometry (VLBI) Network, are examples of massive international ventures in which African countries and scientists are playing a leading role. These ventures are complemented by the efforts to build capacity, through initiatives like the Development in Africa with Radio Astronomy (DARA), the National Astrophysics and Space Programme (NASSP) and the Newton Fund Programme, to train young Africans in astronomy, engineering, technology, and related fields. The purpose of these projects is to develop skills through using astronomy, in a number of targeted African countries at this stage. The DARA project is targeted at countries that will acquire radio telescopes through the African VLBI Network (AVN) as part of their participation in the South African Square Kilometer Array project. The countries involved in the AVN are Botswana, Ghana, Kenya, Madagascar, Mauritius, Mozambique, Namibia, Zambia, and South Africa. In 2017, the 32m radio telescope observatory in Ghana was completed and inaugurated, this was the first AVN telescope completed and one of two operating radio telescopes in Africa, the other being the HartRAO telescope in South Africa.

In addition to the progress mentioned above, African countries are rapidly developing their own astronomy training programmes, instruments, and infrastructure. Examples of these developments include the Entoto Observatory and Research Centre in Ethiopia, the refurbished Kottamia Astronomical Observatory in Egypt, Oukaimeden Observatory in Morocco, a 1m optical telescope in Burkina Faso, a Master's Programme in Astronomy in Uganda and Algeria, and several astronomy initiatives in Nigeria. Discussions around the possibility of setting up an Astronomical Observatory and related facilities for education and outreach in Kenya are ongoing to realize this project. Running in parallel to the above-mentioned initiatives are several data processing and analysis infrastructure projects as well as, off late, Astronomy Schools which were hosted by Zambia and Uganda with one planned for Botswana in June 2023.

It is therefore crucial that African nations collaborate amongst themselves to develop continental-wide skills through targeted interventions. Thus, the African Astronomical Society (AfAS) has been re-positioned to perform the pivotal role of fostering the growth of astronomy in Africa by coordinating the network of astronomers, promoting the study and applications of astronomy, promoting astronomy research collaborations, and advising the government stakeholders on Astronomy related policy. The organization will therefore ensure that Africa eventually develops and maintains a stable astronomical environment that can sustain knowledge-based economies through various activities. AfAS was relaunched at the Astronomy in Africa Business Meeting, which was held in Cape Town at the South African Astronomical Observatory from 25-26 March 2019. The meeting was attended by some 80 participants from 20 nations and included astronomers, public stakeholders, and research organizations. The meeting focused on field-related issues of strategy, policy, and governance and the planning of the future of astronomy development in Africa. The AfAS Executive Committee elected at this meeting was mandated by the African Astronomy Community to help achieve the mission and vision of the Society through the achievement of the objectives as set out in the AfAS Constitution. At this meeting, the South African Government, through the Department of Science and Innovation (DSI), offered to host and fund a relatively small staffed AfAS Secretariat for three years, from April 2019 to March 2022, funding has subsequently been extended to March 2024 but remains insufficient to meet all the objectives of AfAS now that international restrictions have been lifted and travel is once again possible.

In addition, there are some major projects which the DSI transferred to AfAS to manage, these are:

- i. **The African European Radio Astronomy Partnership (AERAP)** for the development of astronomy knowledge and skills in Africa through funding and partnerships with European partners. AERAP is the existing Africa-Europe astronomy platform previously managed and funded by the DSI of South Africa. Initially established as a lobbying platform for South Africa to promote the Square Kilometer Array (SKA) African bid in Europe to host the SKA telescope in Africa, the platform is designed to support astronomy and related sciences collaborations between Africa and the European Union as well as provide access to major funding mechanisms in Europe. It will continue to support astronomy sciences, and additional application areas will be explored to ensure that it continues to support AfAS in the implementation of key Africa and European Union policy objectives in the field of astronomy research and development, including the digital economy.
- ii. **African Science Stars Publications (ASSAP)** – The Science Stars magazine has over the past 11 years profiled the work of several science awareness and communication activities within the South African National System of Innovation (NSI). However, the concept of an African Science Stars magazine has now emerged to expand the current initiative to an Africa-wide magazine which will build on the work of the Science Stars project in South Africa and expand it on a continental scale in Africa using astronomy as a tool for science awareness.
- iii. **African Planetarium Association-** The African Planetarium Association (**APA**) has been created to become a network of planetaria and facilitate their development across Africa. APA is an affiliate of the International Planetarium Society (IPS) and has representation on the IPS board. APA would therefore become the link between the planetaria in Africa and those in the rest of the world. APA was launched at the Iziko Museum and Digital Dome in Cape Town in March 2019, alongside the re-launch of the African Astronomical Society.

The APA due to its limited resources, is currently being managed, on a temporary basis, as a committee of AfAS with Secretariat support provided by the AfAS Secretariat and management oversight by the AfAS Executive Committee.

COVID-19 Response

Covid-19 has had a significant impact on health systems, the world economy, food security, education, mobility, and communities. The situation over the past three years required responses through various interventions and in recognition of this, in 2020, the International Astronomical Union's Office of Astronomy for Development (IAU-OAD) released an extraordinary, fast-tracked call for proposals for projects (or partnerships) that in some way use astronomy, in any of its aspects (including skills, methodologies, tools, infrastructure, inspiration or even just networks of astronomers/enthusiasts themselves) to help reduce some of the negative effects of the pandemic. The IAU-OAD, AfAS, and APA collaborated to fund small projects to enable communities to overcome some of the adverse effects of COVID-19. The AfAS Executive Committee approved the funding for projects in line with the vision of AfAS to be the voice of astronomy in Africa while contributing to addressing the challenges faced by Africa through the promotion and advancement of astronomy through the AfAS Community Projects Fund. The projects funded through AfAS and the APA included those using astronomy in remote teaching and learning programs to continue engaging students during school closures, new planetarium shows in the era of Coronavirus, providing follow-up capacity building for teachers involved in Refugee camps, engaging elementary and high school children through Art, providing the families of students with hygienic supplies, while also including educational, astronomy-based material for the children and their families to enjoy while at home, and acquisition of recyclable personal protection equipment and handwash for laboratory activities and awareness sessions. The funded projects are based in Tanzania, Algeria, Nigeria, Burkina Faso, Kenya, South Africa, Ghana, and Uganda. AERAP also focused on identifying Covid-19 research activities in Europe with potential relevance to African partners. ASSAP released a Covid-19 focus edition of its publication and AERAP webinars included Covid-19 on the agenda and dedicated several sessions to Covid-19 with the objective of information sharing and partnership development.

The COVID-19 pandemic, which has had a significant impact on the entire world, undoubtedly had an adverse impact on AfAS' activities during the past 3 years and 2022 now sees a return to some form of normality. The Society will continue using hybrid platforms where practical to meet its operational goals.

2. Summary of performance for the current year

2.1 Key Operational Objectives for 2022/23

2.1.1 AfAS Core Activities

- Cultivating collaboration among countries and astronomers in Africa, as well as collaborations between Africa and the rest of the world
- Encouraging an appreciation of the significance of astronomy for society by countries in Africa, as well as the African Union (AU)
- Increasing science and astronomy awareness across Africa and enhancing the presence of astronomy in the public domain.
- Strengthening networks of astronomy outreach practitioners across Africa and establishing additional collaborations as needed.
- Creating and curating reliable and accessible resource material on astronomy for the general public, learners, and teachers.
- Serving as the interface between the AU and astronomy-related activities
- Encouraging governmental and intergovernmental (AU) investment in astronomy-related programmes
- Encouraging the use of astronomy for socio-economic development
- Strengthening the teaching of science, technology, engineering, and mathematics in schools and the public through the use of astronomy and related fields
- Using astronomy to attract African youth and women into science, technology, engineering, and mathematics careers
- Providing mentorship, leadership, and guidance to early-career astronomers
- Increasing the number of African astronomers as well as the number of astronomers working in Africa
- Organising meetings and events pertaining to astronomy and related fields
- Highlighting and disseminating the scholarship of African astronomers in the public domain, and career opportunities for emerging astronomers
- Publish articles to promote research in astronomy and astrophysics
- Facilitating the use of existing international astronomical facilities and, where necessary, the development of new astronomical facilities in Africa
- Safeguarding astronomical sites in Africa
- Identifying and preserving indigenous astronomical knowledge
- Implementing a Branding Strategy to enhance the awareness of AfAS internationally
- Effectively communicating the activities and achievements of AfAS

2.1.2 AERAP

- Raising the number and range of partners from Africa engaged to participate in Horizon Europe submissions in the context of the forthcoming Horizon Europe work programme for 2023, first calls for proposals are expected to be published on 1 April 2023.
- Developing a strong awareness of the important contribution of science to the strategic objectives of the European Union's (EU's) Neighbourhood, Development, and International Cooperation Instrument (NDICI), also known as Global Europe. Current priorities include education and training, agriculture, and health. This will be achieved by gaining the European Parliament's policy and political level support and direct engagement with the European Commission.

- Maintaining and increasing significant contributions from African Scientific Leadership to the broader Sustainable Development Goals (SDG) policies espoused by the European Union and other partners and connecting this reality to the ongoing establishment of policy and political priorities to support post-pandemic engagement with Africa.
 - Ensuring science policymakers are kept abreast of key scientific developments emanating from Africa
 - Use the opportunity of the 10th anniversary of AERAP to build additional support for science engagement with Africa amongst European policy leaders.
 - Foster collaborations wherever they bring value, both within the context of European Union funding mechanisms but also within the context of EU member state activities where they are concerned with collaboration with Africa and the SDGs
 - Support scientific dissemination and awareness of research activity emanating from African research partner.
- Take necessary actions to achieve a stronger profile for Africa-based researchers in key European initiatives. These include the EU Missions covering soil, oceans, cities, cancer, and climate. Other focus areas will include the European Union research infrastructures.

2.1.3 ASSAP

- Advancing public awareness, appreciation and engagement of astronomy and space science.
- Providing wide, regular coverage of astronomy and space science activities on the continent in outreach and career guidance, astro-tourism and related socio-economic developments, preservation of dark skies, policy developments, conferences, etc.
- Creating partnerships with key stakeholders in the astronomy and space science sector, such as national and regional facilities, astronomy clubs, public organizations, and private companies.

2.1.4 APA

- Coordinate the network of planetaria across Africa and serve as a reference point for the International Planetarium Society (IPS) members outside Africa.
- Participate in conferences and events to market and grow the APA community and its expertise. These events will include National and International Science events and planetarium events, e.g., World Space Week, Global Astronomy Month, International Planetarium Day, National Science Week, International Day of the Girl Child etc.
- Create awareness of available planetarium resources within the APA community and develop resources of special relevance to the African contexts.
- Organize regional conferences and promote regional workshops and training on planetarium technology and software, communication skills and voice training for presenters, and production of planetarium content.
- Promote student training programmes to enable them to contribute to planetaria as presenters and operators through technical support and participation in outreach activities.
- Promote exchange programs for African planetaria to access training in the IPS communities.
- Foster the collaboration with African based science centres to enrich science communication and education using astronomy as a key medium of communication.
- Promote Astro and eco-tourism.
- Share information on planetarium software and hardware, full-dome videos and films, and educational resources with APA members, emphasizing resources that are freely available.
- Promote the creation of local African planetarium contents to be showcased both in Africa and internationally.
- Promote fundraising activities to support APA and planetaria, focusing on local government and non-government Institutions.
- Negotiate with IPS discounts and/or grants for African members to attend global meetings, conferences, and workshops.
- Negotiate with planetarium service providers to provide discounted rates for their products.

2.2 Performance Highlights for the year

2.2.1 AfAS

Secretariat/General

The beginning of the financial year saw the newly elected Executive Committee assume responsibility for the management of AfAS and one of its first tasks was meeting with all the Committees of AfAS and Managers of the projects as part of the induction process. It was agreed that all the committees will be retained but strengthened with members from the Executive, as well as from a call for new members. Current members were given the opportunity of continuing, but the emphasis was on having members who are willing to actively contribute to the mandate of AfAS. The current Chairs of both the Science and Outreach Committees decided step down from their roles but remain as ordinary members. The process of recruiting new members was concluded at the end of November 2022 with the Terms of Reference for all Committees redrafted, the committees were fully capacitated prior early March 2023.

AfAS ended the year with funds of some R1,2m (R0,26m to be paid in April for Conference/Hackathon costs incurred in March 2023) and the unspent funds will be fully utilised during the coming year as the annual grant increase for 2023/24 is a mere 4,4%. Salary increases for 2023/24 will be at least 6% and it is expected that international travel costs will increase by a minimum of 10% with local inflation at 6%. The budget for the coming 3 years reflects that AfAS requires an increase in its funding of at least R1,5m annually from 2024/25 if the Society is to achieve its mandate of developing Astronomy and its related fields across the African continent.

The annual grant for the current financial year was received in full in May from the DSI, and the annual funds due to both AERAP and ASSAP were immediately disbursed to allow them to secure the requisite resources for the year and implement their planned activities. The key challenge was for the re-constituted Committees of AfAS, using the AOP as point of reference, to formulate the key areas of focus for the coming 3 years as well as action plans for such initiatives including fund-raising. The latter is essential given the limited funds available for committee activities within AfAS as the Society's role is mainly one of a facilitator rather than implementer. With travel restrictions now no longer an issue internationally, the majority of international conferences will revert to "in-person" events with limited offering of virtual participation given the high costs of staging hybrid events.

The annual external audit of AfAS was completed at the end of June and the Society again received a clean audit for the 2021/22 financial year, the final audit report was tabled at the Executive Committee's July meeting.

The APA Administrative Officer (Intern) resigned at the end of January 2023, and the contract of the AfAS Administrative Officer (Intern) ended on 31 March 2023. Both positions have not been filled and a new personnel structure for the Secretariat to meet both its short and medium requirements is under consideration. The post for an Accounting and Administrative Officer, which was advertised last year, will therefore not be filled and, to assist the Head of Secretariat, Takalani Nemaungani has facilitated the secondment of Mr. Thuto Ndlovu from the DSI to AfAS. Thuto Ndlovu is studying for his Master's Degree in Astronomy and will be based in Pretoria. The secondment is at no cost to AfAS except for local travel costs to Cape Town as he is part of the Young Professionals Programme managed and funded by the South African Radio Astronomy Observatory (SARAO). The DSI is also exploring the possibility of 2 further secondments to AfAS during the second half of the financial year.

The AfAS and BRICS websites have been moved to the new server, and the website downtimes have been resolved. The Science portal domain and WordPress platform have been developed and are working. The goal is to go public in 2023/24.

The Secretariat has initiated discussions with the local SKAO office in South Africa to progress collaborations in outreach and communications. They have expressed interest in formalizing an agreement. The initial discussion led to the presence of SKAO at AfAS-2023 Annual Conference through the exhibition stand and an invited talk by the SKAO Director on the next phase.

The Executive Committee has approved funding (R100K) for the Botswana International University for Science & Technology (BIUST)/Max Planck Institute for Astronomy (mpg), African Astronomy School (BMAAS). A MoA has been agreed by both parties, the funds will be transferred once both parties have signed the agreement. AfAS also contributed some R120K to the PASEA School and long-term partnerships are envisaged with both schools.

The AfAS Annual Conference was held from the 13-17th March 2023, whilst there were some 360 registrations, between 150-200 actually attended with around 70 attending in person. The conference was a hybrid event hosted by the University of the Witwatersrand (WITS) Centre for Astrophysics. Other participants joined online through the Zoom and Sched platforms. A total of 87 talks were given, 60 in Science and 27 in Education, Development, and Outreach. An additional 25 abstracts were accepted for posters. The AfAS-2023 conference, for the first time, had exhibitors and sponsors. There were 8 exhibitors and 5 sponsors.

This year's meeting had a total of eight special sessions and a workshop, these were:

1. IAU General Assembly 2024 in Cape Town: Gearing up for the GA in 2024.
2. Breakthrough Listen: Opportunities for commensal SETI with radio telescope arrays.
3. African Dark Sky and Astro-Tourism (ADSAT) strategy
4. AfAS membership updates – Admission of members, Membership fees, benefits, and Conference fees
5. African Strategy on Fundamental and Applied Physics (ASFAP) Astrophysics and Cosmology Working Group: current status and the way towards the White Papers
6. Education, Development, and Outreach (EDO)
7. Astronomers 4 Planet Earth
8. African Women in Astronomy: updates from AfNWA
9. African Planetarium Association (APA) Workshop

The conference's final day (18 March 2022) was dedicated to the Business Meeting where the following key initiatives were discussed:

- a) Mirjana Pović presented the initial findings from the "Survey on Astronomy in Africa" which was issued by the AfAS Science Committee. Some recommendations were presented for AfAS to consider and action through the relevant AfAS committees. It was suggested that the recommendations be incorporated and responded to in the relevant AfAS committee's Annual Operating Plan (AOP). It was also recommended that the AfAS Science Committee encourage more members of the African astronomy community to complete the survey.
- b) The discussion on impact factor peer-reviewed journals focused on various options that AfAS can propose to support astronomers on the continent following the MNRAS announcement to introduce a high publication fee which will make it more difficult for the community to publish due to affordability. The following suggestions were made:
 - To look at two parallel processes, which include (1) African subscriptions to the journals and negotiating discounts and waivers through support from IAU, EAS, and AAS and (2) starting an AfAS/African astronomy journal.
 - AfAS to assess the African community's interest in establishing an African/AfAS journal. This will include the appointment of an editorial board and the willingness of astronomers to review papers for the

Journal. The AfAS Science Committee Chair indicated that preparing the technical aspect can be done through the committee and past experiences similar to the NAOJ. Also, the approach of starting a journal could create a platform to support students and early career researchers.

- AfAS establish a working group to:
 - explore the feasibility and appetite of starting a journal amongst the community and look at the cost implications of advancing the idea, and
 - look into negotiating with existing high-impact journals.
- c) The Fundraising/AERAP presentation suggested creating more synergies between the AfAS committees to support the fundraising focus and identify measures to increase active collaboration, in preparation for funding applications, between AfAS members and current and potential EU/International partners. It was also recommended that the Secretariat share the AfAS funding strategy submitted to the DSI, with the community.
- d) In line with the recommendation from the AfAS-2022 General Assembly, the AfAS Executive Committee has started the process of constituting a working group to review the AfAS constitution. The working group will have five members (3:2, gender balance, regional balance, and odd number for voting purposes). The Secretariat has developed the Terms of Reference for the working group, and nominations for the members of the working group are being progressed by the Executive Committee. The working group will have a maximum of three months to conclude their work.
- e) It was announced that Morocco will host the AfAS-2024 conference; the handover messages were given by Roger Deane, host of the AfAS-2023 meeting at the University of the Witwatersrand in South Africa and Zouhair Benkhaldoun of Morocco.

European Astronomical Society (EAS) Annual Conference

Participation in the EAS Conference in Valencia, Spain from the 27th June to 1st July, where a strong AfAS/OAD presence was evident, being one of the highlights of the year. The AfAS Head of Secretariat and a few members of the Executive Committee attended and participated in a special session titled 'Africa-Europe collaborations: current status and the road to 2024'. This event was co-ordinated by AfAS, the International Astronomical Union's (IAU) Office of Astronomy for Development (OAD), the Africa Europe Radio Astronomy Platform (AERAP), members of the Astronomy community in Africa, European collaborators as well as strong support from the IAU 2024 South African NOC. Members of Executive Committee who did not attend physically were given access to attend virtually through a fee-waivered registration organised by the session Scientific Organizing Committee (SOC). The Presidents of the African and European Astronomical Society, Thebe Medupe (AfAS) and Roger Davies (EAS), delivered opening addresses and called for an increase in co-operation and collaborations between African and European astronomers. Due to visa issues, and despite the intervention of the DSI who requested that the Spanish Embassy in South Africa expedite the visa application, Thebe Medupe could not attend in-person and therefore delivered his address virtually.

The special Africa session was split into 3 thematic areas:

1. Large initiatives and research collaborations
2. Infrastructure development and site testing
3. Education Outreach and public awareness

A lunch session was also organised, and discussions centred on the IAU General Assembly, GA2024, in South Africa. The session also presented an overview of the status, plans and benefits of projects leading up to the IAU GA2024. The presentation from AfAS focused on the role of AfAS in the GA2024. It highlighted Africa-Europe collaborations, including the AfAS and the EAS collaboration at a session during the European Union-African Union Summit, Science and Innovation side events which was held on 15 February 2022, as well as the outcomes of this session.

AfAS also participated in the Astronomy for Development and Diversity and Inclusion sessions that are relevant to the African community where several invited and contributed talks were focused on Africa. The African Network of Women in Astronomy (AfNWA) presented the committee's work, achievements, and future plans. To showcase the work of AfAS, APA, and ASSAP, a joint exhibition ran for the entire duration of the conference. The AfAS exhibition provided attendees an opportunity to obtain a better understanding of the Society.

The Head of Secretariat initiated discussions with colleagues of the European Southern Observatory (ESO) to potentially secure decommissioned telescopes for the African community to develop capacity and perform research (e.g., instruments at La Silla). This will be progressed with the Science Committee to determine how best to proceed with the project.

Through the efforts of Michael Backus, Vanessa McBride and Charles Takalana, a series of articles are planned to be published in the Nature journal, these articles will focus on initiatives within all focus areas of AfAS and projects around the continent.

Jamal Mimouni and Charles Takalana met with Miriam Atienza, the Director for Content (Directora de Contenidos) at the Valencia Arts & Science Museum (Ciudad de las Artes y las Ciencias) prior to the EAS Conference. Discussions focused on opportunities for collaboration with the science centre, in outreach activities. This also included possibilities for some exhibitions of the Museum to be loaned to science and outreach centres in Africa with only the cost of transport and adaptation to be borne by the receiving institution. This will be progressed by AfAS in terms of developing a list of exhibits that could be made available by Valencia Museum.

(A comprehensive report of the EAS Conference is available on the AfAS website).

The IAU GA2022

There was also a strong AfAS and OAD presence at the IAU's General Assembly in Busan, South Korea from the 2-11th August 2022. C Takalana, Y Manjoo, A Mamo and T Medupe attended together with members of the GA2024 NOC, Takalani Nemaungani from the DSI, and C Nxomani from the NRF of South Africa, the official host of the GA2024. The NOC provided travel grants to cover the hotel and flight costs of Y Manjoo and the majority of A Mamos' costs. The exhibition stand of South Africa included not only a section to promote GA2024 but also AfAS, AfNWA, BRICS, SALT and SAAO. The exhibition stand attracted several participants that wished to establish links with Africa and AfAS and also gave astronomers from Africa based in other parts of the world, an opportunity to engage with the Society. There was good interest in African research infrastructure. The exhibition stand was also a space that brought together the African community attending the GA2022, displaying a truly united Africa. In particular, the map of Africa facilitated the meeting of both the African and global communities and made it easier to communicate the continent's activities, location, and geographic advantage. AfAS and APA also developed a brochure that summarized astronomy activities in Africa. The exhibition encouraged the use of African-based instruments in the global community and showcased the capability of the instruments. Furthermore, collaborations with African astronomers were encouraged as a point of access to instruments in Africa. The use of existing data archives was also promoted; these are available for instruments at SARAO and SAAO. The brochure is a living document that will be updated regularly with all activities in the field of astronomy on the continent—link to the latest edition of the Astronomy in Africa brochure: <https://bit.ly/3bWA6MG>.

There were several other engagements during the GA2022, these included:

- The Head of Secretariat, the AfAS Project Manager, and the AfAS President engaged with Michele Gerbaldi, the AstroLAB – organizer. AstroLAB has been supported by the OAD and DSI and runs a tutorial based on telescopic observations at previously disadvantaged institutions in South Africa (UniZulu 2017, UniVen 2019). In 2022 the project was to be hosted by Sol Plaatjies University in Kimberley, South Africa but due to funding difficulties, the workshop has been deferred. AfAS and AstroLAB are to resume discussions in 2023 on running this workshop across the African continent in the coming years.
- The Head of Secretariat met with the Director of the IAU Office of Astronomy for Outreach (OAO) to discuss how AfAS can work with the OAO and partner with National Outreach Coordinators (NOCs) in Africa. The OAO has helped source funding for activities in Africa, including the French-speaking Science Communicators workshop led by Salma Sylla and Zara Randriamanakoto. AfAS was approached to co-fund this project, but the current funding commitments did not allow the Society to contribute. The OAO encouraged AfAS to support similar community-driven efforts in the future. The OAO is willing to assist with project management, seeking funds, and partners to work with AfAS in future activities and wishes to engage with the AfAS Outreach Committee to discuss the possibility of joint initiatives. The OAO will also forward Calls to AfAS to disseminate to its members and others across Africa. The Secretariat will arrange a meeting between the Outreach Committee and OAO soonest.
- Numerous contacts made at IAUGA 2022 have shown an interest in collaborating with AfAS and partner projects to grow astronomy infrastructure, education, research, outreach, and use astronomy as a driver for development in Africa. The AfAS Head of Secretariat and BRICS Project Coordinator met with the American Astronomical Society (AAS) and Sustainability Committee Chair (Dr Michael Rutkowski) to discuss possible collaborations at the UNGA77 sessions at the end of September and organized by AERAP. However, due to time constraints, this initiative was not progressed.
- The Head of Secretariat also initiated discussions with the President of the IAU (Prof. Debra Elmegreen) on strengthening relationships with other continental astronomical societies and the IAU to foster collaboration and cooperation on a wider basis.
- The Head of Secretariat, the AfAS Project Manager, and the AfAS President engaged with Prof Roger Davies (President of EAS) on developing a formal partnership between the two organizations. It was recognized that the Africa-Europe session organized bi-annually during the EAS conference is crucial to Africa-Europe collaborations and partnerships as well as assist in implementing the resolutions from the February 2022 African Union and European Union summit which were subsequently developed by the community. It was further agreed that the 2024 Africa-Europe session will now be proposed for 2023 given that South Africa is hosting the GA in 2024. A major focus of the session will be on growing African participation at GA2024.

J Chibeuze, a member of the AfAS Science Committee, presented a talk which was well received by the audience. The GA2022 provided some ideas on how best AfAS, in collaboration with the NOC, can assist in ensuring greater African participation as well as creating an "African Legacy" as a result of the GA being held on the African continent for the very first time.

(Reports by both C Takalana and Y Manjoo are available on the AfAS website)

The Sub-Saharan Africa Astronomy Summer School (SSAASS)

T Medupe was invited by the organisers of the Sub Saharan Africa Astronomy Summer School (SSAASS) to deliver an opening address as President of AfAS, he also presented a lecture. This was the first school hosted by SSAASS and was held in Uganda from 19-30 September with undergraduates, Masters and Doctoral students attending together with early career researchers. The Summer School was organised by the Mbarara University of Science and Technology (MUST) in collaboration with Max-Planck Institute for Astrophysics (MPA), Thuringer Landessternwarte Tautenburg (TLS) and Instituto de Astrofísica e Ciências do Espaço (IA). The funding for the School was mainly provided by MPA. M Povic also attended the event and presented on the AfNWA. The organisers of the school provided funding to T Medupe to cover his hotel and other local expenses in Uganda.

Other speakers who delivered opening remarks included Prof. Simon Anguma (Vice Chancellor of MUNI University and one of the pioneers of Astronomy in Uganda) and Prof. Edward Jurua (from MUST), both expressed their appreciation of the support from AfAS and reiterated the need to expand research collaborations across Africa. The AfAS, Presidential Address included a short presentation on the aims and objectives of the Society, its structure, as well as the Astronomy projects and initiatives that are supported by AfAS. The different categories of memberships

were outlined and the attendees were encouraged to apply for membership. A number of MSc and PhD students expressed interest in becoming members. There were several high profile representatives from countries such as France, Portugal, Germany, and Ethiopia at the opening session.

On the 20 September, T Medupe presented a lecture at a 1,5 hours session, on the Mahikeng Astronomical Observatory (MAO). The lecture included the history, the description of telescopes and instruments as well as a detailed demonstration of the data obtained with one of the telescopes from MAO and how to reduce the data using freely available software called AstrolmageJ. This lecture was well received and provided an example of what Ugandan universities can do to build cost effective local infrastructure for astronomy training.

Contacts were made with SSAASS organisers and discussions were held on future support for the school by AfAS, as well as collaborations, especially between Ugandan and South African Astronomers.

The CAP2022 Conference

J Mimouni attended the Communicating Astronomy with the Public 2022 (CAP 2022) conference, in Sydney, Australia from 10-19 September. His trip was jointly funded by the OAD and AfAS. CAP2022 is the world's largest conference on astronomy communications and has been held since 2003 through the International Astronomical Union's (IAU) Commission 2- "Communicating Astronomy with the Public". It aims at strengthening the local community of professionals by connecting them to the global network. It was thus important for AfAS to have a presence at this event. In addition to representing AfAS at various functions and manning the AfAS stand during the conference, J Mimouni presented a talk introducing AfAS and "The AfAS outreach mission to the Sahelian Region". Another objective was to enhance media awareness of AfAS/GA2024 by distributing promotional material for GA2024, the AfAS newsletter and flyers and copies of the African Stars magazine.

World Science Forum

The AfAS Secretariat, in collaboration with the IAU-OAD, organised a side event at the 2022 World Science Forum (WSF) titled "Advancing Africa's Astronomy Agenda". The WSF was held at the CTICC in Cape Town from the 5-8th December and attracted some 1500 delegates in person. The AfAS session was in a hybrid format with about 60 in-person and 55 online participants. AfAS and the OAD also had an exhibition stand which attracted numerous participants of the WSF including the President of South Africa, Mr. Cyril Ramaphosa, the Minister of High Education, Science and Innovation, Dr Blade Nzimande, and the media. The Chair of the AfAS Communications Committee also had various media interviews on behalf of AfAS.

USA-Africa Summit

During the USA-Africa Summit, which was held in Washington in mid-December 2022, the AfAS Secretariat organized a two-hour virtual side event focused on the GA2024. The session was titled "Africa-US astronomy collaboration towards IAU-GA2024 and building a legacy" and brought together some major players in Astronomy from both the African continent and the United States of America (US). It offered an opportunity for interactions between existing and potential Africa-US collaborators

Following the presentations, deliberations, and discussions, the participants adopted the following resolutions:

1. African and US astronomy communities should be encouraged to participate in the IAU-GA in 2024 and to use this event to drive long term collaboration in line with the vision for 2024 (<https://astronomy2024.org/vision-2024/>). Examples include the proposed focus meetings on "Harnessing ground-based optical telescopes: an opportunity for emerging astronomy in Africa" and "Follow-up observations of small bodies in the Solar System in the era of large discovery surveys".
2. There is a need for a coordinated capacity building programme in science and technology based on, for example, the bi-directional exchange of personnel between Africa and the US, scholarship opportunities and potential co-supervision arrangements.
3. The African Astronomical Society (AfAS) and the American Astronomical Society (AAS) should lead efforts to promote participation in capacity-building programmes, with the support of policymakers across Africa and the US.
4. There is potential for collaborations and synergies for the mutual benefit of both the African continent and USA, in infrastructure projects, hosting instruments on telescope sites, through the amateur astronomy communities, and through access to telescopes and/or data. These and other collaborations should be encouraged.
5. Coordinated programmes should be developed to share opportunities, e.g., calls for proposals, funding possibilities, student exchanges, hosting of astronomy schools, etc.
6. There are clear areas for collaboration and mutual knowledge and resource sharing in outreach and school level education, including teacher engagements.
7. Astronomy can be used as a tool for development, to deliver socio-economic benefits and achieve Sustainable Development Goals (SDGs). The Office of Astronomy for Development and its regional offices (such as the North American Regional Office of Astronomy for Development and the Southern African Regional Office of Astronomy for Development) could be used to stimulate such activities.
8. Special sessions, which are dedicated to Africa-USA collaborations, should be encouraged during international/regional astronomy community meetings.
9. As far as practically possible, joint astronomy initiatives between the US and the African continent should be seen as equal partnerships, with joint leadership of such initiatives encouraged from both regions.
10. These resolutions should be presented to the leadership structures of the respective astronomical societies (AAS and AfAS) for formal acceptance by both organizations.

American Astronomical Society (AAS) Meeting

The African Astronomical Society participated at the American Astronomical Society (AAS) winter meeting (AAS241) in Seattle, Washington, from 8 to 12 January 2023, partnering with the GA2024 NOC and the Office of Astronomy for Development (OAD). AfAS was represented by the Head of Secretariat (Charles Takalana) who also attended as co-chair of the GA2024 NOC. Vanessa McBride (Co-chair GA2024 NOC and Deputy Director of the IAU-OAD) and Kevin Govender (Director of the IAU-OAD and Advisor to AfAS-ExCO) and Charles Takalana presented to the AAS Strategic Assembly (***The Strategic Assembly is responsible for the AAS's long-term strategic direction and consists of the Board of Trustees, the Chairs of Divisions, and the Chairs of Committees***). The presentations were on AfAS and the work towards growing the astronomy community in Africa, the GA2024 and how the NOC is collaborating with AfAS towards Vision2024 and the legacy of the GA and astronomy for development and how the GA2024, AfAS and the OAD are collaborating on the continent. There were also posters displayed on the conference platforms based on these presentations. The resolutions from the US-Africa Leaders' Summit organized by AfAS and AERAP were shared with the Strategic Assembly, and these will be considered when formulating future collaborations. The AAS offered space in their exhibition area for AfAS, GA2024, and OAD to display material and share information with meeting delegates.

The AAS meeting also presented an opportunity to engage with colleagues in the USA and discuss potential collaborations. There was a meeting organized by Dr Kartik Sheth with the Director for Astrophysics at NASA to discuss how NASA can get involved in astronomy in Africa, including support and access to resources. The discussions also looked at having NASA involved in the GA2024 and establishing contact with relevant stakeholders. It was agreed at the meeting that Dr Kartik Sheth would be the contact person from NASA and there will be follow-up discussions.

The National Society for Black Physicists also expressed interest in working/collaborating with AfAS, and a follow-up engagement by AfAS is required to maintain this interest. The AfAS Head of Secretariat also engaged the Operations Project Scientist at the James Webb Space Telescope from NASA to give an invited talk during the AfAS-2023 conference. The Head of Secretariat was invited to attend the Breakthrough Listen Techno-signatures session at AAS241 and met with Steve Croft and discussed details for a Breakthrough Listen exhibition at AfAS-2023. The Head of Secretariat was also requested to work with the relevant AfAS structures to identify a student for the Breakthrough Listen Summer internship. This request has been forwarded to the Science Committee.

There was good interest in African research infrastructure and a media interview with the VoA publication. The AfAS Head of Secretariat was given the opportunity to speak to the AAS members during the closing of the AAS meeting inviting them to Africa for the GA2024 and to discuss synergies/collaborations.

Other Activities

The DSI facilitated a meeting between the AfAS Secretariat, the President of AfAS and the Southern African Development Community (SADC) Directorate of Industrial Development and Trade (IDT) on cooperation with AfAS at the regional level. SADC is currently working on a regional space strategy that is aligned with the AU strategy inclusive of Astronomy and AfAS will be consulted in this process. Also discussed, was the importance of AfAS gaining recognition from the AU through being invited to continental meetings as well the possibility of a MoU between AfAS and the AU. A proposed initiative is an AfAS, ASSAf (Academy of Science of South Africa), DSI, SADC, and OAD activity for the International Year for Basic Science.

AfAS attended an ASFAP (African Strategy for Fundamental and Applied Physics) meeting for presentations of the Astronomy and Cosmology Working Group Letters of Interest (LoI) and was encouraged to take part in ASFAP processes and to make a submission to contribute to the strategy through a LoI describing its vision, projects, initiatives, etc. regarding astronomy and physics developments in Africa. As a follow-up, the Secretariat met with Patrice Okouma of Rhodes University to discuss the Transient Area Radio Telescope (TART) project which will be progressed further by the Science Committee.

The AfAS Secretariat participated at the SAIP 2022 conference to update the physics and astronomy communities on activities at AfAS. The meeting was also a good platform to communicate to early career and established astronomers who made up a significant part of the audience. The talk generated interest and received a good response from the participants and will be included in the conference proceedings.

AfAS and ASSAP have been meeting with AfrikaDesk to discuss the implementation of the agreement between the parties which includes stakeholder relations and fundraising. AfrikaDesk will also provide input to the AfAS Value Proposition document. The letter to the AU was routed through AfrikaDesk as the DSI had advised that AfAS communicates directly with the AU Commissioner, a response is awaited. There has also been a discussion for AfAS to be the astronomy contact for CNBC Africa. AfAS will engage with the DSI and the GA2024 NOC co-chairs on inviting the AU Commissioner to the next Africa Forum to introduce him to Astronomy Activities in Africa, the GA2024, and flagship projects.

The Secretariat met with representatives from the Academy of Science of South Africa (ASSAf) on the 31st August to discuss the register of African Scientists and other possible areas of collaboration between the two organisations. ASSAf, which is also funded by South Africa's DSI, has been mandated to develop a comprehensive register of scientists across the African continent and requested that AfAS issue a call to African astronomers to register on its platform. Subsequent to the meeting, a call was issued through the Africa list. It was also agreed that

the current data that AfAS has will be shared with ASSAf and that AfAS will be an official partner for projects aligned to the “Year of Basic Science”, which ends in June 2023.

The Secretariat forwarded the mid-year SALT Call for the submission of observing time proposals to the African community following discussions with SAAO and DSI on encouraging African astronomers to seek time on SALT. Principal Investigators (PIs) across the continent were requested to submit proposals in collaboration with a South African co-investigator to request time under the South African time allocation. They could contact colleagues in South Africa should they wished to submit a joint proposal or if there are no collaborations in place, new investigators could contact the SALT team at SAAO to be assisted in finding a potential co-Investigator. The call yielded no response from African astronomers outside of South Africa, AfAS and SAAO encouraged African astronomers to attend the hybrid SALT Science Workshop which was held in November where a session was planned for African astronomers to gain knowledge on how to use SALT and the proposal submission systems. Due to the poor response, the session was cancelled. In addition to this, a list of NASSP alumni on the continent is to be compiled to assist in identifying potential collaborators in the community. SAAO is also organising the International School for Young Astronomers (ISYA2023) and AfAS has been added as a partner and some of the initiatives towards building a SALT community on the continent will be progressed at the school.

AfAS is now a member of the Hack4Dev partnership, which is a collaboration between the Inter-university Institute for Data Intensive Astronomy (IDIA), Ilifu, Development in Africa with Radio Astronomy (DARA) Big Data, the Office of Astronomy for Development (OAD), and the BRICS Intelligent Telescope and Data Network (BITDN). The project uses hackathons for data science outreach and development skills, coupled with a strong academic science background and an objective to impact development positively. Hack4Dev is also developing a range of resources to help the communities of the involved partners to run their own hackathons. See., <https://hack4dev.org/>
A Steering Committee has been established to oversee the Hackathons and look at the sustainability of the Hack4Dev partnership. The agreed goals and objectives of hack4dev are:

- Social benefit
- Science development
- Collaboration with African countries, and BRICS organizations
- Building a network
- Sustainability and Evaluating impact.

The AfAS-DARA Big Data Hackathon took place after the AfAS-2023 conference from 18 to 20 March 2023 at the WITS Tshimologong Precinct, which provides a digital innovation ecosystem. DARA Big Data covered the full costs of the Hackathon, including flights, accommodation, venue, catering, and Prizes for participants from across the continent. The event cost some R500K and was fully funded by DARA Big Data. The Hack4Dev team together with the Secretariat organized the logistics for the event. Over 150 applications were received for the 30 available spaces. The selected participants were from eight African countries (Botswana, Cameroon, Egypt, Ethiopia, Kenya, Madagascar, Namibia, South Africa, and Zambia), and were postgraduate students and young professionals from all STEM fields who have a keen interest in data science. The event consisted of half a day of presentations given by invited guest speakers from both academia and industry, in-depth tutorials related to a specific project, and the hackathon task where participants competed in teams. The Hackathon projects were selected from the existing Hack4Dev repository related to astronomy or development. Participants received guidance from trained tutors for the duration of the event. The Hack4dev team is analyzing the pre- and post- hackathon surveys given to the participants to establish the impact of the event and how to enhance future events.

The Head of Secretariat was invited to submit a letter of collaboration/support on behalf of AfAS for the Astronomy Culture, Communication, Education and Learning (ASTRO ACCEL) proposal by Dr Tim Spuck (Director NA-ROAD, and Education and Public Engagement at Associated Universities Inc.), who is the PI for the proposed project. The Head of Secretariat also met with the PI of the Project during the AAS241 meeting. The ASTRO ACCEL proposal was considered by the U.S. National Science Foundation and will likely be recommended for funding. AfAS has responded to some additional questions from the proposal review team and NSF program officers, as per guidance from the PI. A number of other key global organizations, including the IAU-OAD, IAU-OAO, IPS, LCO, NOIRLAB, are included in the proposal. The proposed project will connect researchers and practitioners across the globe to accelerate research and research to practice in astronomy education, Diversity, equity, inclusion, human health and well-being, accessibility, and astronomy for economic and social development.

The Secretariat met with **Breakthrough Listen**, an American based project to search for intelligent extra-terrestrial communications in the Universe, and discussed the following:

- Areas of collaboration, particularly around technical skills initiatives, including schools and workshops.
- The use of skills initiatives to identify recipients for Breakthrough Listen fellowships and travel sponsorships.
- Breakthrough Listen presenting talk at the AfAS Annual Conference, providing for an information stand/exhibition and sponsoring an evening reception.
- The involvement of Breakthrough Listen in the AfAS Hackathon immediately after the annual conference.

AfNWA (African Network for Women in Astronomy)

The AfNWA and all astronomy community suffered a great recent loss of a dear colleague and friend Carolina Ödman. Carolina was a founding member of AfNWA and a member of the AfNWA Executive since its establishment. Her contribution to AfNWA was immense, and she will be deeply missed. Several activities were carried out in her tribute including:

- A tribute during the AfAS Annual Conference 2023 (March 16), before announcing the 2022 AfNWA-ISP awardee and renaming of the EC award to “Professor Carolina Ödman. Early Career Award”

- Two articles have been submitted to AfAS for the next Newsletter, and to Science Stars for the next issue of their magazine.

By invitation, an article on AfNWA was prepared and published recently in the newsletter of the Spanish Astronomical Society (SEA). It summarises the main objectives of AfNWA, activities carried out, main outcomes, and AfNWA recommendations regarding the gender gap in science. The article has been published in Spanish and can be viewed at: <https://www.sea-astronomia.es/boletin/la-red-africana-de-mujeres-en-astronomia>
An article on the AfNWA objectives and activities carried out in the last 6 months has been published in the October edition of the AfAS Newsletter.

AfNWA was included in two invited talks during the annual meeting of the European Astronomical Society (EAS) that was held in Valencia (Spain) from 27 June to 1 July. The first presentation titled “African Network for Women in Astronomy (AfNWA-AfAS): current status and future plans” was given during the special session SS38 on Africa-Europe collaborations, while the second presentation titled “Road to SDG5: Role of Women in Astronomy for African Growth” was given during the special session 37 on Astronomy for Development.

In collaboration with the OISA astronomy school in Morocco (2 - 8 July) outreach activities were organized with the secondary school girls. Two talks were given by Katrien Kolenberg and Mirjana Pović: promoting astronomy, women in astronomy, and inspiring girls in science. In addition, AfNWA Committee member Salma Sylla, actively participated in the event organisation, collaboration with colleagues and the main organisers from Morocco, Abdelmajid Benhida and Zouhair Benkhaldoun.

An AfNWA brochure was developed and printed for promoting the Network during the EAS 2022 annual meeting in Spain. Support for the design was provided by AfAS and Science Stars.

The website has been updated with a member’s section that lists the names and affiliations of all members of the network. A training session, led by the late Carolina Odman, was held with the Committee to formulate further development plans for the website.

During the current financial year, the AfNWA e-mail communications network targeted early career researchers to advise them on several opportunities related to training, workshops, scholarships, and job opportunities.

The 3rd virtual training workshop of AfNWA was held on 30 November. It was targeted at Masters students and the theme was : **‘Landing the right PhD position’**. The workshop was given by **Dr. Retha Pretorius** from the SAAO, South Africa, and had 23 participants, with more than 50% being females.

AfNWA has once again secured funding from the International Science Programme (ISP) based at Uppsala University in Sweden. The 1500 EUROS was used for this year’s AfNWA-ISP awards. This year, the Award was given in only the Early-Career Researchers category which includes MSc and PhD students and post-Docs with a maximum of 5 years post qualification experience. All candidates had to have an affiliation with one of the institutions in Africa. The Review Committee deliberated on the applications during the first quarter of 2023 and decided on awarding the prize to Dr. Al-Shaimaa Hassanin of Egypt.

An invited talk on AfNWA was given virtually on 17 November at the UCT Transformation and Inclusion Journal Club. The talk was titled **‘Contribution of astronomy to UN SDG5 (gender equality)’** and it was attended by some 20 participants.

An “Introduction on AfNWA” was given during the **Sub-Saharan Africa Advanced Astronomy School in Uganda** in October.

The Call for seed grants for conducting outreach activities focused on empowering girls in science through astronomy is being drafted and will be issued during the first half of 2023.

The Committee is also involved in other activities which are currently in progress:

- Outreach videos where material has now been received for 2 to 3 videos of 10 minutes, a preliminary version of the first video was played at the annual conference special session and the feedback received from the attendees will be used to enhance the quality of the final version.
- The AfNWA Women in Astronomy Africa book.

Communications

Only a handful of committee members remain active and participate in the committees’ activities. Changing the meeting time to the weekend is being considered to accommodate the workload of the members.

The 1st edition of the AfAS Newsletter for the current financial year was eventually published at the beginning of October, the Newsletter is consistently delayed due to articles not being submitted timeously on due date as well as a lack of initial response to the call for contributions. The Committee has therefore decided that in future, guidelines/themes for articles that are to be included in the Newsletter, will be issued. In the near term, it is essential to feature most of the projects leading up to the GA 2024 as well as having a column dedicated to astronomy highlights. These highlights could either illuminate challenges in some regions or share success stories that could be useful, especially in parts of Africa that are still struggling with establishing astronomy or astronomy related activities.

Together with the AfAS Secretariat, the Communications Committee met with Declan Kirane of AERAP in September to seek advice on how to engage the other committees to seek their inputs on the Communications Strategy. Some of the advice given will now be incorporated in the planned engagements with the other Committees of AfAS.

To enhance awareness on social media and to highlight the contribution of women as well as their presence within AfAS, the Committee partnered with AfNWA in August (which is South Africa’s women’s month). ASSAP assisted with the design of the profiles which could be used on all social platforms and members of AfNWA provided tremendous support for this initiative. Some of the participants were members of the AfAS Executive Committee. The social media stats indicated an increase in visits to all the AfAS platforms during this campaign.

Together with ASSAP, all AfAS promotional and branding material are being reviewed. The AfAS logo is also being redesigned and there are currently two new versions of the logo, the designer has been requested to outline the meaning of the preferred one to allow AfAS to communicate to the broader community the details of the new logo to ensure that everyone lives and embraces the brand. The objective is to launch the new logo at the annual conference.

During the World Science Forum (WSF) the Department of Science and Innovation (DSI) provided AfAS with some media opportunities to talk about its work on the continent and how it is linked to the theme “Science for Social Justice.” The media opportunities included radio stations, Umhlobo Wenene which has a nationwide listenership, Korara, a Northern Cape-based local station, and Radio Zibonele a Cape Town community radio station. All the interviews were done during peak hours to cater to a greater audience. The WSF exhibition space also provided the opportunity to engage with the SciDev (<https://www.scidev.net/global/>) personnel who are heavily involved in science communication, and additional contacts for the AfAS Africa media list were obtained. The discussions highlighted the fact that they are interested in astronomy and space news but had no access to contacts in these fields, the planned collaborations between the two organizations should therefore allow AfAS to reach more people and also enhance the visibility of SciDev.

The table below provides the AfAS website visits statistics for the current financial year in comparison to previous

Website Visitors Stats compared

Months and Years													
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
2017					394	88	39	102	32	83	65	18	
2018	67	53	99	49	80	63	44	56	83	163	233	153	1,118
2019	212	235	735	289	1,056	757	652	870	1,045	1,466	999	1,342	9,913
2020	2,435	1,184	949	350	627	5,040	774	936	1,075	1,705	1,059	3,157	19,968
2021	2,477	1,501	3,416	1,133	1,265	1,580	886	822	715	429	3	774	15,981
2022	3,047	1,866	8,418	1,952	2,360	1,213	1,133	1,301	1,214	2,694	2,550	1,323	29,744

Average per Day													
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Overall
2017					39	3	1	3	1	3	2	1	
2018	2	2	3	2	3	2	1	2	3	5	8	5	3
2019	7	8	24	10	34	25	21	28	35	47	33	43	25
2020	79	41	31	12	20	168	25	30	36	55	35	102	53
2021	80	54	110	38	41	53	29	27	24	14	0	25	53
2022	98	67	272	65	76	40	37	42	40	87	85	63	63

years:

Outreach & Education

The incoming Executive Committee has decided to retain the Education Committee within the Outreach Committee until such time there are sufficient active members within this committee to operate as a stand-alone unit.

The AfAS Outreach & Education Committee (OEC) aims to leverage the IAU GA2024 to make a big impact on astronomy outreach, development, and education (ODE) throughout the continent. One of the primary goals is to build a strong ODE network that can be used to develop and expand sustainable outreach projects that will have lasting impact.

An information campaign was launched on the Total Lunar Eclipse that occurred on 16 May 2022 and was visible from large parts of Africa. An information poster was made that was circulated widely to teachers and students across the continent which advised them when and where to observe the eclipse.

Some Outreach Committee members participated in the evaluation of the proposals submitted in response to the IAU GA NOC Call under its Vision 2024 initiative. A 2-min IAU GA2024 promotional video has been played on a variety of different platforms and at many different events since it premiered at the GA2022 conference in August 2022.

A Public Webinar, in collaboration with the DSI, was organized on 3 June 2022 on the first image of the black hole at the center of our Galaxy as announced by the Event Horizon Telescope (EHT). The webinar was given by 5 astronomers who explained the significance of the results and talked about the upcoming telescope in Namibia that will be a part of the EHT. They also discussed opportunities for students in Africa in this project. This webinar was attended by around 300 from across Africa and the main impacts were (1) being exposed to the science behind this image that made the front page of all papers, and (2) understanding the African connection with the project and future developments.

During the third quarter, the AfAS Outreach Committee underwent major changes, the key one being the merger with the IAU GA2024 Outreach, Education and Communications Committee. Two new co-chairs were selected, namely Sally Macfarlane and Duduzile Kubheka. The Co-chairs have met with various groups and individuals in order to create more effective networking channels, these include representatives from:

- the Department of Science and Innovation
- the Western Cape Department of Education
- the IAU Office of Astronomy for Education (OAE), including Dr Tshiamiso Makwela who will be representing the OAE on the outreach committee.
- the IAU Office for Astronomy Outreach
- the IAU Office of Astronomy for Development
- SAASTEC
- ASSA
- the African Planetarium Association (APA)
- Astronomical research facilities across Southern Africa, including the South African Astronomical Society (SAAO), the Southern African Radio Astronomical Observatory (SARAO) and the High Energy Stereoscopic System (HESS).

The new AfAS Outreach and Education Committee has been constituted and the members are:

Duduzile Kubheka.	Sally Macfarlane
Sarah Abotsi-Masters.	Mike Simmons
Olayinka Fagbemi.	Musa Mishamo Musa
Benhida Abdelmajid.	Kingsley Ahenkora-Duodu
Micheal Nnaemeka Ihenacho	Jamal Mimouni
Sinenhlanhla Sikhosana.	Alemiye Mamo
Kevin Govender.	Tshiamiso Makwela
Niruj Mohan Ramanujam.	Sivuyile Manxoyi
Anton Binneman.	Daniel Cunnama
Simphiwe Madlanga.	Finbarr C. Ood

On 24 February 2023, the new OEC held their first meeting. Various African ODE projects were presented, and committee members were invited to join the task teams responsible for leading the OEC contribution to each project. The OEC projects are:

- (Flagship Project and GA2024 project) African Astronomy Ambassador Program
- Global Outreach Programme (GO)
- Radio Astronomy Outreach Projects (with SKAO and SARAO)
- Radio Astronomy Workshops (with SKAO and SARAO)
- Teacher Training (with OAE)
- GA2024: IAU SHAW Regional Workshop (Southern Africa, with OAE)
- Mental Health Planetarium Film (with OAD and APA)
- Online Astronomy Competitions: Expansion across Africa
- Astrocode: Expansion across Africa
- Hackathons (with Hack4Dev and BRICS): Expansion across Africa
- Astronomy Olympiads (with the Africa Committee, SAASTA): Expansion across Africa
- Africa Astronomy Map Update
- Annual Astronomy Event Calendar
- Outreach & education projects for girls in rural communities Project (with AfNWA)
- GA2024 project: AstroFringe Festival
- GA2024 project: School Visits
- GA2024 project: Arts/Astrophotography Competition
- GA2024 project: #AfricaLookUp Campaign

- School/Community astronomy outreach

AfAS and African Astronomy has been actively promoted at various international meetings/conferences/workshops over the past year These include:

- 2 - 11 Aug: IAU GA 2022 held in Busan (South Korea),
- 12 - 16 Sep: Communicating Astronomy to the Public (CAP) Conference
- 15 Oct: Astronomical Society of Southern Africa (ASSA) Centenary Symposium
- 25 Oct: Astronomy in Africa Forum
- 14 - 19 Nov: Southern African Association of Science and Technology Centers (SAASTEC) conference
- 6 - 9 Dec: World Science Form Africa, held in Cape Town (South Africa),
- 13 - 16 Feb: Sixth Middle East and Africa Regional IAU Meeting (MEARIM) conference, held in Cairo (Egypt)
- 13 - 17 Mar: AfAS Annual Conference, held at the WITS University Origin Centre, Johannesburg (South Africa)

During the AfAS Annual Conference in March 2023, the OEC held a special session with ODE specialists. Key points from the session included:

- The ODE flagship project (African Astronomy Ambassadors) was presented along with a brief introduction to several other projects the committee will work on in the lead up to, during, and after the IAU GA2024. A call for Ambassadors for the Flagship project will be released shortly.
- A panel discussion was held with African ODE experts to discuss some of the main challenges currently facing ODE efforts in Africa. It was emphasized that the momentum of the upcoming IAU GA2024 should be used to address these challenges and therefore time is very limited: more action, less talking.
- Participants and ODE practitioners that are interested in getting involved or have suggestions for the ODE committee were encouraged to fill in an online form (released during the session and soon to be sent out again).

Both David Buckley from the Science Committee and the AfAS President, Thebe Medupe also attended the MEARIM conference in Egypt, the former presented a talk on the proposed African Optical Telescope Network and the latter provided a general overview of AfAS.

Membership

The initial Call to recruit additional members to the Committee did not yield the diversity by region or gender and thus it was decided to seek additional applications through the general AfAS Call for additional committee members. Six new members have been added to the Membership Committee, they all confirmed their willingness to join just before the AfAS conference. However, in a bid to add more gender diversity, AfNWA has also been approached for suggestions for additional female members.

The Membership Committee reviewed application for membership at its meetings which were held in September 2022 and February 2023, the approved members were endorsed by the Executive Committee at its meetings following the membership Committee meetings. The design of membership certificate, the accompanying letter as well as a membership numbering system have all been finalized and these will be issued to all current members during the 2023. The new, online membership application process has now gone "live", in future, no applications will be accepted without the requisite documentation.

There was a special session at the AfAS Annual Conference, hosted by the Chair of the Membership Committee, Sarah Abotsi-Masters, on membership fees structure and benefits. An open discussion was held, during which participants gave their views and made suggestions concerning the fees and benefits. All inputs will be collated into a document and sent out to the community for further feedback.

Science

Dr James Chibueze has agreed to chair the AfAS Science Committee. The Committee has agreed to progress the following three infrastructure projects:

- AIOS: networking existing/future optical observatories on the continent
- ARAN: supporting capacity development in radio astronomy, including access to data and participation in the NWU interferometer for research and teaching
- ROTSE: look into feasibility of utilizing the de-commissioned ROTSE telescope in Namibia by AfAS. Discussions were held between the owner of ROTSE at the HESS site in Namibia, Jochen Cranz, and Clyde Foster (SA amateur astronomer), C McGruder & D Buckley. An MoU is to be drafted for use of ROTSE for professional observations with AfAS to seek funding (e.g., from SAAO) for refurbishment and any operational costs. The owner of the telescope is willing to let AfAS use the telescope without any financial implications. HESS is willing to provide internet and power to the ROTSE telescope at no cost. SAAO is willing to provide a CCD camera and some technical support for the refurbishment of the telescope. An email is to be issued to the AfAS community informing them of ROTSE and including the science case for further input/comments.

The Africa Survey issued by the Science Committee some 18 months ago, has now yielded 50 responses, the initial analysis of the data was presented at the AfAS Annual Conference by Mirjana Povic.

The awardees of the 2022 AfAS Seed Research grants as well as the MSc and PhD prizes were finalized by the Science Committee and all grants have been paid.

C Takalana/ J Chibueze and V McBride reviewed the Astronomy in Africa Scholarships that are being offered by the GA2024 NOC. The Scholarships were awarded to one student from Nigeria and the other from Madagascar. The call for applications for the early researcher seed grants has been issued.

AfAS supported a delegate from Zambia (R30K), who is an early career astronomer, to attend the Magnetism and Accretion conference in memory of SAAO astronomer Darragh O'Donoghue. The conference was held in January 2023 and hosted by SAAO.

The AfAS Astronomy Schools Strategic Framework was approved by the Executive Committee at its December meeting, this will now be a key project of the Science Committee in terms of implementation. The Fund-Raising Committee has been tasked to seek funds for the schools.

Fund-Raising

The initial draft of the AfAS "Value Proposition" document, which will be used to encourage stakeholders/potential funders to provide sponsorship for AfAS projects, was issued to the Executive Committee and members of the Fund-Raising Committee.

A key member of Afrikadesk has joined the committee to assist in fund raising initiatives. The Committee will engage with D Kirane, a current member and Head of AERAP, on funding streams available to AfAS through European Calls, and how best to apply and/or access such funds. D Kirane met with the Executive Committee at its September meeting to seek AfAS representation on a lobby group formed by AERAP to influence the thematic areas that will be supported by the Horizon Europe Calls which commence in April 2023. The Executive Committee referred this request to the Fund-Raising Committee.

It has been decided to merge the AERAP Steering Committee and the Fund-Raising Committee given that AERAP is a key facilitator for seeking funds for AfAS. The first meeting of the newly constituted Committee was held on the 21st November with the key discussion points being:

- Future funding requirements for AfAS which highlighted that there is a need for an additional R5m annually if AfAS is to fully achieve its mandate.
- Membership fees and registration fees for the annual conference will not generate a large amount of income for AfAS at this point because of the lack of appetite to pay for membership fees across the continent and that the community still require grants to attend meetings.
- AfAS is to look at three potential sources for funding opportunities, which are Horizon Europe, Neighbourhood, Development, and International Cooperation Instrument (NDICI) Programme, and Private Philanthropic funding opportunities.
- Africa Desk is to assist AfAS in leveraging funding opportunities from South African and African stakeholders who are aligned to AfAS' mandate. Some of these organisations include-The African Union Foundation, Nelson Mandela Foundation and Kgalema Motlanthe Foundation.

BRICS

An initial draft of the Constitution to establish a virtual network for the BRICS Astronomy Association has been completed by Y Manjoo and submitted to Takalani Nemaungani who manages the BRICS Secretariat. This will be progressed during 2023.

The BRICS magazine was published in June 2022 and there have been positive responses to date, hard copies were printed for distribution internationally.

Initial discussions have been held between C Takalana and the web designer for the update of the BRICS website, this will be progressed during 2023 together with the re-development of the AfAS website. All proposed changes will be communicated to the BRICS Steering Committee.

2.2.2 APA

The proposal by APA to be governed as a committee of AfAS was approved by the AfAS Executive Committee at its meeting in June 2022. There will be engagement with the re-constituted Outreach Committee to share resources and activities as well as new ideas. The AfAS Secretariat has drafted a revised Terms of Reference for APA for approval by the Executive Committee. Susan Murabana has continued as Chair of APA in the interim. The previous APA Executive Team had struggled over the past two years to effectively initiate any major activity notwithstanding the adverse impact of COVID-19 on general business/operational activities. The majority have intense, full-time jobs and it was difficult to include APA responsibilities on their schedule. The work groups incorporating members from the rest of Africa, which were established last year, remain but are currently inactive.

The Secretariat assisted the Chair in arranging a general workshop at the end of August involving African planetaria, to discuss and agree on the key issues impacting on planetaria across the continent and how best to address these through the APA. There were some 30 attendees, and a list of key challenges/issues was compiled and issued to all present together with a summary of other discussions held at the meeting. A Call for members to join the newly established APA Committee was also issued and there has been a positive response, at end September, the closing date, some 23 nominations were received. A Review Panel agreed on the committee members and the first meeting of the new

committee was held on 22nd November where Susan Murabana was elected Chair and Sally Mcfarlane, the deputy Chair, other members of the committee are:

1. Sqalli Nasser (Atlas Dark Sky Foundation, Morocco)
2. Mathipa Sebetsiwa (IZIKO Planetarium, South Africa)
3. Sally Mcfarlane (SAAO, South Africa)
4. Emmanuel Yaw Frimpong (Newmont Ghana Gold-AHAFO)
5. Assefa Bethelhem Girma (ESSTI, Ethiopia)
6. Constant Volkschenk (WITS Planetarium, South Africa)
7. Naoufel Ben Maaouia (Cite des Sciences, Tunisia)

The Committee has decided to retain the current Work Groups concept and members were assigned to these work groups. The draft APA Terms of Reference has been issued to Committee members for their inputs and this will be finalized once members have provided feedback.

S Murabana's proposal for regional workshops was accepted by the Committee subject to the contents being finalized. The workshop will be held in regions that host at least a functional planetarium and can accommodate at least 50 participants. The workshop should be a full one-day event with the possibility of presenters from within the continent and some from the International Planetarium community. The participants should attend the workshop physically, however some of the presenters will have the choice of doing so virtually.

The objectives of the regional planetarium workshops are:

- Build a planetarium community within Africa
- Identify members who can join the APA committee
- Support new and potential planetariums
- Networking

The suggested dates are:

1st Workshop March 2023 - Southern Africa at Wits planetarium University after/during AfAS annual meeting

2nd workshop hosted in June 2023 - East Africa, The Nairobi Planetarium

3rd workshop hosted in September 2023 - West Africa

4th workshop hosted in December 2023 - North Africa

The first Southern Region workshop was held on 17 March 2023 during the Annual AfAS conference (held in Johannesburg, South Africa from 14 - 17 March). About 100 participants attended the training either in person or online. A mobile planetarium was setup at the venue and delegates were invited for free shows, a few schools also enjoyed a session in the planetarium. This hybrid workshop focused on key areas of training including:

- ❖ Content creation and planetarium software training which including an introduction to basic astronomy and how to access planetarium full-dome movies. The expert panelists included film makers and content creators from South Africa, Germany, and the USA
- ❖ How to build and run a sustainable planetarium: The expert panelists shared best practices including accessible materials like bamboo, encouraging the use of renewable energy, and sustainable business models
- ❖ Mobile Planetaria: Why, how, and where the reach is and how to keep the projects sustainable. A discussion on how APA can be of support to new planetaria and play a role in connecting the different players was also discussed.

APA is currently in discussions to support the refurbishment and eventual shipment of a planetarium that was donated through the network of the IPS. This planetarium will be donated to a deserving society after a general call is issued during 2023. APA will offer training workshop(s) for the recipient of the planetarium and for other, existing planetarians who are in need. The training will be conducted mostly on-line and with an on-site support component where possible.

APA has negotiated with IPS discounts for African members to attend global meetings, conferences and workshops.

Susan Murabana attended the EAS meeting in Spain and gave a presentation. She also met with representatives of Europlanet who fund planetarium projects and discussed the possibility of funding African planetarium projects.

Discussions were initiated with Ulwezo & Kenya Space Agency to strengthen planetaria in Kenya; Ulwezo is keen to have similar discussions with other African countries and APA will play a role in connecting the planetarium communities in these countries, government agencies and Ulwezo.

Challenges

The Russia and Ukraine conflict has led to the cancellation of the International Planetarium Bi-annual Conference which was scheduled to take place in St. Petersburg, Russia in June 2022. This affected the APA plans to actively promote APA and network with other planetarium representatives from the African continent and the rest of the world.

2.2.3 AERAP

Reasonable progress was made in engagement with the European Commission on the inclusion of African stakeholders in the development of European research programs with the primary focus being on Horizon Europe. Monthly meetings took place to sensitize stakeholders in Africa to the suggested content of the work programmes and to provide input. This has been ongoing, which has resulted in the European Union's body responsible for research infrastructures, ESFRI, supporting a new chapter in the Horizon Europe work programmes dealing with research infrastructures. Similar work, where AERAP has led inputs, has been done in other areas within Horizon Europe including climate, biodiversity, space, health research and others. As many of the programmes will launch calls on 1st

April 2023. The other main program focus area is the NDICI, AERAP has engaged directly with the policy leadership in this program which provides €100 billion in development assistance. The problem priorities are health, education and skills and agricultural research. The programming mechanism is very different to Horizon Europe and is a non-competitive process. This represents enormous potential in terms of support for education and skills. This message has been conveyed at both the operational and leadership levels across Africa. In 2023, a meeting will take place with the chef de Cabinet of the Commission responsible for international cooperation and development, Mrs. Urpilainen. This discussion represents a new chapter and prioritizes science collaboration within the broader development context. In this discussion, skills will be the main focus.

In addition to the specific programmes, AERAP has been directly engaging with the European Commission in the broad policy highlights: these are the digital transformation agenda and the Green Deal. All European programmes supporting activities in Africa will focus on one or another of these themes. In general, these priorities are becoming much more receptive to the role and contribution of science. AERAP has looking at how best to leverage these and to provide a stronger narrative for innovation in Africa, under the leadership of South Africa and with specific reference to the historical role of research infrastructures in general and in particular, the SKA project. There have been five meetings with DG Environment and DG Climate in November and December.

AERAP continues to also build relationships with member states, recognizing that many member states have substantial international science activities. Meetings were held with stakeholders in Ireland, Italy, Spain, Portugal, Germany, Bulgaria, and Greece. These relationships are maturing and will provide a focus for collaboration in 2023. They also have the added value relative to Horizon Europe and NDICI initiatives.

There have been active interactions with the European Parliament and the Council of Ministers. At the level of the Council, contact with member states representatives in Brussels is maintained as these officials sit in the various committees and are a very important source of intelligence and guidance. AERAP has been very active in building contacts and sensitizing policymakers in the council to the work of AERAP, its origins and why it's important as a policy forum for defining priorities in the area of science collaboration with Africa.

AERAP has also facilitated meetings with the United Nations; this included the Science Summit at the United Nations General Assembly in September, and a similar series of engagements are planned for September 2023. In a similar vein, a virtual meeting was organized at the USA-Africa Leaders' Summit, which took place in Washington in December 2022. This resulted in a heightened visibility of science within the USA-Africa agenda and within the global agenda. An example of the increasing global alignment in this area is the recent agreement signed between the USA development programme, USAID, and its European counterpart. This will likely result in greater coordination and alignment between the USA and European development programmes regarding Africa.

The 2nd AERAP Africa-Europe Science and Innovation Forum took place from 7-10 March 2023. The Forum was hybrid, with meetings taking place in Brussels. The Forum was designed to inform and engage with policymakers to ensure that the role and contribution of science is prioritized in European Union and its Member States' policies for Africa: target areas included biodiversity, Digital Transition, Green Agenda, genomics, astronomy, research infrastructures, amongst others. The Forum aimed to increase the level of participation by African partners in both science collaboration and science policymaking with European Partners. Key speakers included:

- Daan du Toit, Deputy Director-General: International Cooperation and Resources, Department of Science, and Innovation
- Maria Cristina Russo, Director for Global Approach & International Partnerships, Directorate-General for Research and Innovation, European Commission
- Bienvenu Agbokponto Soglo, Director, Government Affairs Africa & EMEA, Intel
- Rose Mosero, Office of the Data Protection Commissioner, Kenya
- George Essegby, Chief Scientist, Council for Scientific and Industrial Research, Ghana
- Solomon Benor, Ministry of Education and Science, Ethiopia
- Karina Angelieva, European Strategy Forum on Research Infrastructures, Bulgaria
- Takalani Nemaungani, Chief Director, Department of Science and Innovation, South Africa
- Her Excellency Ms. Tokozile Xasa South Africa Ambassador, Embassy of South Africa Belgium
- Mario Cervantes, Senior Economist, Science and Technology Policy Division, OECD
- Nair-Bedouelle, Shamila, Assistant Director-General for Natural Sciences, UNESCO. France
- Mohamed Abdallahi Ould Babah, Director General of the Sahel Institute, Mali
- Zatloukal, Kurt, Diagnostic and Research Center for Molecular Biomedicine, Director of BBMRI.at, Medical University of Graz, Austria
- Dr Shetonde Mihigo, Ministry of Science and Education, DR Congo
- Julie Makani, Sickle In Africa consortium, Tanzania
- Abdoulaye Mohamadou, Permanent Interstate Committee for Drought Control in the Sahel (CILSS), Burkina Faso

The Forum drew on a range of processes, including AGENDA 2063, Africa's blueprint and master plan for transforming Africa into the global powerhouse; the AU Science, Technology, and Innovation Strategy for Africa 2024 (STISA-2024); the European Commission's Communication Towards a Comprehensive Strategy with Africa which foresees future cooperation built on five partnerships: green transition, digital transformation, growth and jobs, peace and governance and migration and mobility.

The Forum also considered how emerging regulations covering data protection, the European Health Data Space, medical devices, in-vitro diagnostics, and other areas impact science in Africa and science and innovation cooperation between Africa and the European Union.

Key recommendations arising from the Forum included:

1. Make application procedures simpler for African partners.
2. Enable consortia leadership by African partners.
3. Enable synergies between different funding instruments.
4. Recognize existing science and innovation leadership in Africa
5. Create a strong chapter for Africa in the 10th framework programme for research and technological development and demonstration beginning in 2027;
6. Ensure that the European regulatory environment, particularly pertaining to data protection and the European health data space, don't act as a barrier to research collaboration in Africa and between Africa and the European Union
7. Include more women in science policy decision-making in the EU and in Africa
8. Adopt living labs as a very strong enabling environment for research collaboration.

2.2.4 ASSAP

The third edition of the African Science Stars magazine was published in the first quarter, the AfAS Annual Conference and the election of the new Executive Committee was covered in the magazine. A representative of the African Science Stars team attended the EAS annual meeting in Valencia, Spain and the AfAS conference contribution will be covered in the forthcoming edition of the magazine. The magazine was successfully uploaded to the EduHub platform, there have already been some 20 000 students' hits, the number of students registered on the hub is 30000. EduHub is an android based hub targeting high school learners in South Africa.

The Editor of African Science Stars magazine, Unathi Kondile, and other members of ASSAP held a citizen journalism workshop for students at the Botswana International University of Science and Technology (BIUST). This was done as a community upliftment exercise and to encourage students to write about astronomy and space science in their region.

The ASSAP team designed branding materials for AfAS and APA for use at the EAS and other conferences.

ASSAP secured the distribution of the magazine to various provincial and municipal libraries within South Africa:

- Provincial libraries:*
 - o Eastern Cape (257)
 - o Free State
 - o North West (135)
 - o Northern Cape (225)
 - o KwaZulu Natal
 - o Western Cape (374)
- Metro libraries:*
 - o Buffalo City (21)
 - o Johannesburg (89)
 - o Cape Town (105)

ASSAP visited several institutions and presented and distributed the magazine, this included the Limpopo Science Centre, Noordwyk High School Careers Exhibition, and several Mpumalanga Secondary Schools etc. These road shows are used to promote Astronomy and Space Science in historically disadvantaged schools. ASSAP has recently partnered with the Astronomy without Borders (AWB) in Nigeria.

The production of the fourth edition (5th magazine) of African Science Stars magazine was completed in October 2023. This publication is a special issue focusing on '*Women in Astronomy and Space Science*'. The fifth issue (sixth edition) is currently in production and will be published in April with the theme being "Astro-tourism".

The African Science Stars Editor, Unathi Kondile, presented virtually at the Communicating Astronomy with the Public Conference (CAP2022) which was held in Sydney, Australia, in September.

The Outreach Team attended the opening ceremony of the South African National Science Week in KwaZulu Natal. There were some 400 in attendance and these included school learners, teachers, and other stakeholders. Magazines were distributed at the event.

Preparations are ongoing for an East African tour, this will include roadshows, workshops, and distribution of the magazine to stakeholders. The tour is now scheduled to commence in April and the team will also be hosting a citizen journalism workshop in Tanzania, Kenya, and Ethiopia.

The team attended the South African National Space Agency opening of the new Space Weather Centre in Hermanus which was officially opened by Minister Blade Nzimande.

ASSAP attended the SALT workshop, and an article will be included in a future publication of the magazine.

The Outreach Team of ASSAP attended the World Science Forum where copies of the latest edition, as well as previous editions of the magazine, were distributed and on display. The Minister and Deputy Minister of the Department of Science and Innovation were handed a copy and the magazine received great reviews.

ASSAP members attended the visit of the Deputy Minister of Tourism to SARA and SAAO in February 2023 where discussions were held on the DSI Astro-tourism strategy. They also attended the visit of the Deputy Minister of DSI to the new Space Weather Center at SANSA, Hermanus and engaged with students from the local primary school. An article about the visit will be included in the forthcoming Science Stars magazine.

ASSAP will include a two-page article on the AfAS Annual Conference in its next edition of the magazine.

The inaugural BRICS Astronomy Magazine was published at the beginning of the second quarter and initially distributed to key stakeholders. The BRICS Project Co-Ordinator who is based at SAAO, assisted ASSAP with the magazine's distribution within all 5 BRICS countries as well as to other countries and science events such as the National Science Week and the SciFest in Makhanda (Grahamstown). The publication was also distributed at the GA 2022 held in Busan, South Korea. The digital version is also proving to be popular.

Challenges

As the physical distribution of the magazine is becoming costly, an in-house distribution unit has been established to co-ordinate this and minimize costs.

The content of the magazine is a major challenge in terms of communicating with the general public as well as to the younger audience. There is a need to ensure that the content is diverse and understandable whilst scientists must be trained to understand magazine/news production processes.

3. Key Performance Indicators/Outputs

AfAS-KPIs	TARGET	ACHIEVEMENT
Fund Raising Workshop for potential Funders/Sponsors	July 2022	Will now be arranged at a later date once project funding needs determined and key stakeholders identified.
Annual Conference & Business Meeting	March 2023	Event to be held at WITS and was a success. Exhibition stands offered for the first time and there was a good uptake with revenue of some R100K
Database Portal	March 2023	Server delivered beginning of October and commissioned by SAAO IT. Migrated websites to the server and will go live during 2023.
Annual Scholarship Awards (including AfNWA)	March 2023	Awards for Early Career scientists completed. Masters & Doctoral prizes concluded in December. Early Career Call for 2023 issued.
Science Framework	March 2023	Science Committee to prioritize this and review current draft.
Starter Kit for Amateur Astronomers	March 2023	Concept yet to be developed by Outreach Committee
Regional Outreach/Education Trip to promote astronomy	March 2023	J Mimouni trip to DR Congo approved for April 2023.
Awards for Outreach Workshops/Activities	March 2023	Deferred until new committee has reviewed activities and priorities.
Astronomy Quiz (2-3 events)	March 2023	Yet to be developed
Design of prototype amateur Radio Telescope	March 2023	Concept design yet to be initiated
Communications Strategy	December 2022	Committees engaged and no further inputs forthcoming. Will be presented to EXCO for comment and approval in 2023.

Branding Strategy	March 2023	In early stages of development.
Newsletter	July/December 2022	2 nd Issue for the year published in October.
Complete & implement new website	March 2023	New web designer to be appointed during 2023
Implement new membership application process	September 2022	New on-line membership application process implemented from beginning October.
Develop proposal for membership fees and associated benefits	December 2022	Draft presented at the Annual Conference-2023. Requested feedback from AfAS members.
Establish criteria for institutional and honorary membership	March 2023	Still to be discussed by Membership Committee
Run 3 Training courses for women in astronomy	May/September/November	Only one workshop held in November
Events for Women in Astronomy Day	February/March 2023	AfAS did not play an active role although AfNWA participated
Publication of African Women in Astronomy book	December 2023	In progress
Virtual Community Meetings	Every 2 nd month	No meetings this year due to workload of committee members.

AERAP-KPIs	2022/2023	
Engagement with EU officials	300	300
Number of Covid 19 activities identified for African researchers	40	40
Number of EU Proposal submitted	20	20
Number of AERAP partners engaged	500	500
Number of press releases published	15	15
The key strategic events	5	5
Key policy proposal submitted to the European Union	4	4
Number of presentations to financial investors	1	1
Number of Horizon 2020 programme inputs	10	10

ASSAP-KPIs	TARGET	ACHIEVEMENT
Workshops in Selected Regions	As per activity schedule above	Visited Botswana, next workshop planned for November in East Africa delayed due to unavailability of partners . To be held in April 2023
Four publications of African Science Stars Magazines	June/September December/March 2023	2 nd publication out in October. Next edition due in April 2023.
BRICS Bi-annual magazine	July/February 2023	First publication issued in June

APA-KPIs	TARGET	ACHIEVEMENT
Implement new Governance Structure	July 2022	Agreed by EXCO in June, membership drive completed, and new committee established
Regional Workshops	March 2023	Southern Region Workshop held during AfAS Annual Conference in March 2023
Relief Funding Awards	December 2022	Cancelled due to re-prioritization of funds by DSI.
Award of Donated mobile planetarium	July 2022 (including shipping)	Repairs to be completed and award will be done during 2023 after a general Call issued.
Recommendations on cost effective mobile planetaria	March 2023	Study deferred to later in 2023.

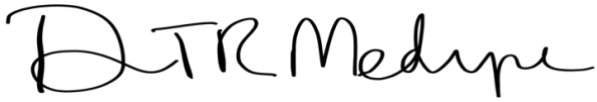
4. Financial Performance (Cash Basis)

ITEM	ANNUAL BUDGET (R000's)	YTD BUDGET (R000's)	YTD ACTUALS (R000's)	COMMENTS ON VARIANCES
------	------------------------	---------------------	----------------------	-----------------------

Income	7566	7566	8752	Includes funds from DARA Big Data for Hackathons (R607K) and WITS contribution for Annual Conference (R200K).
Salaries & Consultancy	(1685)	(1685)	(1623)	
Running Expenses	(2270)	(2270)	(2355)	Includes Hackathon Costs of R310K
Capital Expenditure	(200)	(200)	(137)	Server delivered beginning of October
Grants & Bursaries Paid	(3763)	(3783)	(4453)	Includes payment to ASSAP for BRICS of R600K
Total Expenditure	(7918)	(7918)	(8568)	
Net funding- Current year	(352)	(352)	184	
Previous year carry forward	1001	1001	1001	
NET FUNDING	649	649	1185	Outstanding Conference Costs of R256K to be paid in April

PROGRAMME/PROJECT (ACCOUNTING BASIS)	ANNUAL BUDGET (R000's)	YTD BUDGET (R000's)	YTD ACTUALS (R000's)	COMMENTS ON VARIANCES
AfAS (Core)	(2136)	(2136)	(3059)	Higher Travel Costs(R236K) and Annual Conference Costs (R476K). Also includes PASEA School; Grant of R117K. Conference registration fees R70K
AfAS (Committees)	(1020)	(1020)	(303)	Acquisition of Server (R137K) as well as Early Career Awards and Masters and Doctoral prizes. No other costs incurred.
AERAP	(1655)	(1655)	(1655)	
ASSAP-AfAS ASSAP-BRICS	(2180) (600)	(2180) (600)	(2180) (600)	
APA	(1191)	(1191)	(798)	Regional workshops deferred until new financial year - new committee to finalize content and implementation plan. R500K paid to SAAO for IAU Young Astronomers Conference in 2023.
BRICS	(168)	(168)	(139)	Website to be re-designed together with AfAS website during 2023
HACKATHONS	0	0	(578)	
TOTAL COSTS	(8950)	(8950)	(9312)	

5. Approval

Submitted by Signature	
Name	Professor Thebe Medupe
Date	13^h April 2023
Designation	President, AfAS