AFRICAN ASTRONOMICAL SOCIETY (AfAS)

ANNUAL OPERATING PLAN 2021/22

This AfAS Annual Operating Plan (AOP) outlines the planned activities that AfAS aims to undertake this year in support of the annual 2021/22 Budget. The purpose of this AOP is to guide the Executive and the various Committees and Projects in the planning, execution, and review of activities during the year, and to ensure that the AfAS stakeholders and broader African Community become fully aware of the organization's priorities and how it intends to utilize its resources to achieve them. This AOP was created in the context of AfAS's Vision, Mission, Goals, and Strategy – described in the Constitution and Business Plans. The execution of the Annual Plan is the responsibility of the Executive Committee through its various Committees, and the Project Leaders/Executive Team of the various Projects/Business Units within AfAS. Any deviation and reallocation of the approved budget will need to be reviewed and approved by the Executive Committee.

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1. Executive Summary

Over the past two centuries, professional astronomy activities on the African continent have increased and this has led to some growth in capacity. Collaborations with partners from outside the continent through various initiatives have been a major contributor to the growth that has been seen. 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) Newton Fund programme, to train young Africans in astronomy, engineering, technology, and related fields. The National Astrophysics and Space Science Programme (NASSP) is a multi-institutional postgraduate programme training graduates in astronomy, astrophysics, and space science, which has alumni from across the African continent. The purpose of these projects is to develop skills using astronomy in several African countries. The DARA project is targeted at countries acquiring radio telescopes through the African VLBI Network (AVN) as part of their participation in the South African Square Kilometre 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 apart from 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 Masters programme in Astronomy in Uganda, and several astronomy initiatives in Nigeria. Recently, discussions around the possibility of setting up an Astronomical Observatory and related facilities for education and outreach in Kenya began, and planning for the Africa Millimetre Telescope (AMT) is already underway with the purpose is to provide an essential link to the network of telescopes around the globe known as the Event Horizon Telescope (EHT) which has recently produced the first-ever picture of a black hole. The AMT will be the only radio telescope in the mm-wavelength regime in Africa, and as such provides unique science opportunities for the continent. Running in parallel to the abovementioned initiatives are several data processing and analysis infrastructure projects.

It is therefore crucial that African nations collaborate amongst themselves to develop continental-wide skills through targeted projects. Thus, AfAS aims to perform the pivotal role of coordinating the network of astronomers, promoting the study and applications of astronomy, promoting astronomy research collaborations, advising the government stakeholders on Astronomy related policy, and fostering the growth of astronomy in Africa. The organization will therefore ensure that Africa maintains a stable astronomical environment that can sustain knowledge-based economies through various activities. The African Astronomical Society (AfAS) was relaunch at the Astronomy in Africa business meeting, which was held in Cape Town at the South African Astronomical Observatory on 25-26 March 2019. The meeting

EXECUTIVE SUMMARY

was attended by around 80 participants from 20 nations including astronomers, public stakeholders, and research organisations. 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 the meeting was mandated by the African astronomy community to help realise 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 staffed AfAS Secretariat for three years, commencing from April 2019 to March 2022, funding has subsequently been extended to March 2024.

2. Updated Situational Analysis

2.1 AfAS OPERATIONS

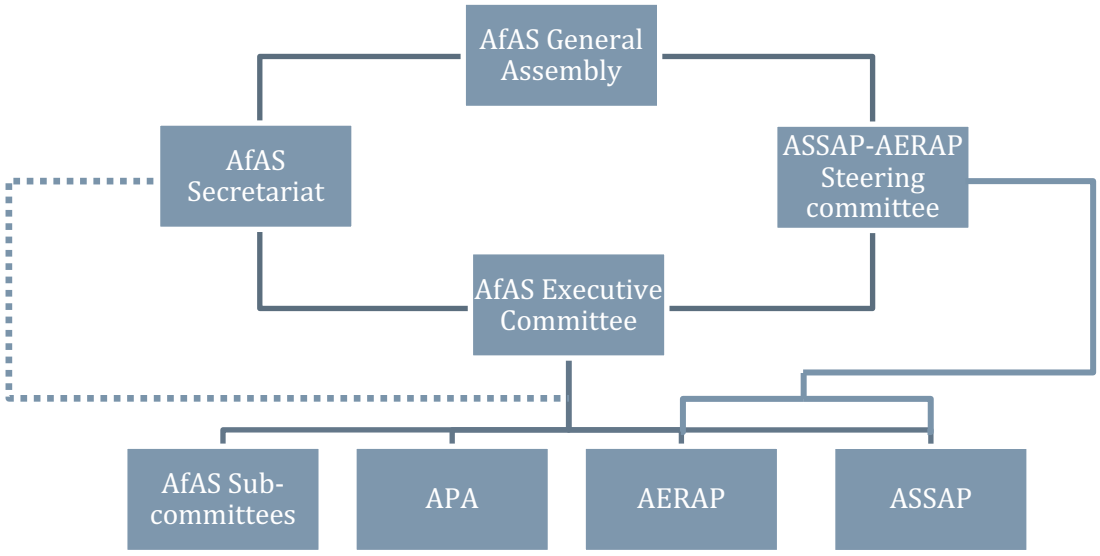

Figure 1: AfAS organisational structure

The AfAS Secretariat is currently headed by the Head of Secretariat with support from the AfAS Project Manager, who was initially appointed in April 2020 as a consultant to set up the Governance and Company structures and manage the company's operations and administration until the appointment of the Head of Secretariat from 1st April 2021. The Project Manager will continue to support the Secretariat for the coming two years but at a reduced involvement in daily operations. The Secretariat has also employed two Administration Officers (AfAS and APA) on a contract basis for the next 2 years, to assist with the operations and general office administration. AfAS and the DSI have entered into a funding agreement from 2021/22 to 2023/24 to support the secretariat function in South Africa, operations, and the implementation of the astronomy support activities. As the current level of funding support will not be maintained in the future, a long-term funding strategy has been developed to inform future budget allocations and ensure future operational sustainability beyond the current three-year funding cycle.

Following the relaunch of AfAS, the Executive committee established sub-committees, that are mandated with implementing the objectives of AfAS as outlined in the Constitution of the Society. While the Executive Committee continues to ensure good governance and adhere to values of best practice, the established sub-committees take a more hands-on approach and oversee specific projects and areas of development for the Society. Since AfAS began full operations as an independent, non-profit organization on 1 April 2020, a Business Plan and an annual Operations Plan aligned to the Society's objectives as defined in the Constitution have been developed in collaboration with the AfAS sub-committees and partner projects

and has been approved by the Executive Committee. The African Network of Women in Astronomy (AfNWA) is an initiative that aims to connect women working in astronomy and related fields in Africa. It was established as one of the committees under AfAS and primarily focuses on improving the status of women in science in Africa, using astronomy to inspire more girls to do STEM, and improving future participation of girls and women at all levels in astronomy and science developments in Africa.

In addition to the AfAS sub-committees, AfAS serves as an umbrella organisation for other Pan-African astronomy initiatives funded by the South African Government through the DSI, including the African Planetarium Association (APA), the African-European Radio Astronomy Programme (AERAP), and African Science Stars Publication (ASSAP). AfAS provides oversight for these projects as well as appropriate inputs to ensure that their objectives are met. The partner projects under the AfAS umbrella are listed below:

I. AERAP – The African European Radio Astronomy Partnership for the development of astronomy knowledge and skills in Africa through funding and partnerships with European partners. AERAP is the Africa-Europe radio astronomy platform previously managed and funded by the DSI of South Africa. Initially established as a lobbying platform for South Africa to promote the SKA African bid in Europe to host the SKA telescope in Africa, the platform is designed to support radio astronomy and related sciences collaboration between Africa and the European Union. It continues to support radio astronomy sciences and has recently begun exploring multidisciplinary application areas to the implementation of key Africa and European Union policy objectives in the field of radio astronomy research and development, including the digital economy. The AERAP platform currently contributes inputs to key policy areas, including geoscience, ICT, Women in Science, agri-food, life sciences, biodiversity, energy climate amongst others, and drives regular online meetings to help to establish a very strong narrative and input for policymakers.

II. ASSAP – The Science Stars magazine has over the past 12 years profiled the work of several science awareness and communication activities within the South African National System of Innovation (NSI). The African Science Stars magazine's concept however aims to expand existing initiatives into an African-wide mage which builds on and expands on the work of the Science Stars project in South Africa, using astronomy as a tool to raise the awareness of science. The first issue of the publication was released in 2020 and distributed as both electronic and print media.

III. APA – The APA was founded at the same time as the re-launch of the African Astronomical Society, with the goal of developing a network of planetaria across Africa. The APA is a member of the International Planetarium Society (IPS) and has representation on the IPS board. APA has begun efforts to position itself as the link between African planetaria and those in the rest of the world. The APA is also involved in development of planetaria films for the benefit of the African community.

The inaugural AfAS Annual Conference took place in a fully virtual format from 8-12 March 2021. Some 300 astronomers and representatives from African and other countries attended the conference. A total

of 90 abstracts were accepted for talks: 50 Science and 40 Education, Development, and Outreach. There were also 4 special sessions dedicated to:

I. General discussion on the IAU General Assembly 2024 in Cape Town
II. Science communication workshop
III. African Network of Women in Astronomy (AfNWA): current status and way forward
IV. Amateur Astronomy Associations in Africa

The AfAS General Business meeting during the conference shared the status and vision of AfAS, through the various sub-committees called for input from the community.

2.2 COVID-19 RESPONSE

Covid-19 has had a significant impact on health systems, the world economy, food security, education, mobility, and communities. The situation requires response through various interventions and in recognition of this, the 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 funded projects through AfAS and the APA include 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, those 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, will undoubtedly continue to have a negative impact on AfAS's activities during 2021/22. However, the Society will make every effort to meet its operational goals by making extensive use of digital platforms. Workshops, exchange programs, telescope access, the annual conference, and outreach will be closely reviewed and updated to account for pandemic-related restrictions, and alternative plans will be developed where possible.

SUMMARY OF KEY OPERATIONAL OBJECTIVES FOR THE CURRENT YEAR

3. Summary of Key Operational Objectives for the current year

3.1 AFAS CORE/PROJECTS

- Cultivating collaboration among countries in Africa as well as collaborations between Africa and the rest of the world
- Supporting collaborative international astronomical activities and projects in Africa
- Encouraging involvement in, and collaboration with, relevant organisations both within Africa and internationally
- Encouraging an appreciation of the significance of astronomy for society by countries in Africa, as well as the African Union (AU)
- Serving as the interface between the AU and astronomy-related activities
- Encouraging governmental and intergovernmental (AU) investment in astronomy-related activities
- 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 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
- Oversee all astronomical activities within the ambit of the Society
- Inspire and retain underrepresented groups to study astronomy

3.2 AERAP

- Consolidate AERAP members, including the objective of increasing the level of research partners on the level of policymaker partners
- Increase the number of potential partners, including increasing the number of partnering profiles of African research actors on the European commission's CORDIS website,

where they can be easily accessed by EU actors looking for Africa partners. This will be particularly important in 2021 given the publication of the horizon Europe calls for proposals in late May 2021. A number, of course, will have dedicated Africa components; but all calls are open potentially to African partners and the objective will be to maximise this level of participation.

- Raise awareness amongst policymakers and European commission European Council and European Parliament
- Raise awareness on the level of Africa partnerships
- Contribute inputs to crucial policy areas, including the following:
    - Geoscience
    - ICT
    - Women in science
    - Agri-food
    - Life sciences
    - Biodiversity
    - Energy, climate, and related themes.

In addition to programme focused activities, AERAP will complement practical partnership actions with policymaker engagement. This will focus on increasing the potential for African partners to be included in references contained in Horizon Europe work programmes, both in 2021 and in 2023. Participation and access to funding are greatly enhanced if specific ideas are seeded in the work programmes.

Another area focus for Eric will be the enabling regulatory environment. Proposed regulations in the area of data protection, medical devices, clinical trials, and in vitro diagnostics mean that African researchers need to be very cognizant of the data protection regulation and the European Union and how to comply with it. AERAP will use its activities to raise awareness of these issues and to explore practical measures in order to ensure that data related to research can be exchanged between and amongst partners and the European and Africa. Currently, the data protection regulation has extraterritorial applications in Africa. This has come about with virtually no consultation with African nations. It is important that European policymakers understand potential applications and unintended and unforeseen consequences of the GDPR regulation and other regulations and their impact on research collaborations

3.3 ASSAP

- Advancing public awareness, appreciation, and engagement of astronomy.
- Providing a wide regular coverage of astronomy activities in the region from professional astronomy, 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 sector such as national and regional facilities, astronomy clubs, public organisations and private companies

SUMMARY OF KEY OPERATIONAL OBJECTIVES FOR THE CURRENT YEAR

3.4 APA

- Promote communication between members of the planetarium profession both within Africa and internationally.
- Improve the quality of planetarium programming and African content by providing educational opportunities to the Members.
- Promote a public awareness of the value of planetariums as educational institutions.
- Provide publications, activities, services, and training of benefit to the Members.
- Solicit and receive grants, contributions, and other property; to enter into contracts; to engage necessary personnel and services; and to transfer, hold, and invest such property as necessary for the furtherance of the purposes and activities of the Association.

4. Major activities for the year

4.1 AfAS

ACTIVITY	TIMELINE
Annual Conference and General Assembly in Cape Town	**March 2022**
Fund-raising 1. *Implementation of Fund-Raising Strategy* • Develop a membership fee structure in consultation with the Membership Committee • Develop a membership benefits plan together with a member's recruitment plan in collaboration with the Membership Committee • Identify potential sources of funding from both the public and private sectors across the international domain as outlined in the Funding Strategy • Lobby and to engage funders on the value proposition of AfAS as per the Funding Strategy • Develop strategic funding partnerships with relevant funding institutions, donors, philanthropists, etc.	December 2021 December 2021 On-going On-going On-going
Science 1. *Science Meetings/Seminars etc.* Organization of meetings, including annual, regional, and thematic, and supporting regular on-line seminars and colloquia. Due to the COVID-19 situation, these will be virtual meetings, e.g., on-line webinars. 2. *Science Strategy* A survey to be conducted amongst the AfAS membership and interested parties to facilitate in identifying science focus areas of research groups leading to Science Strategy. 3. *Collaborations* Develop and strengthen international and national collaborations by creation of science working groups in Africa and establishing contacts with international organizations, including utilizing existing and future facilities, in Africa and internationally. 4. *Data Base Portal* Develop a science data base portal which would assist in: • Driving joint projects • Providing a library and space for journal sharing • Providing a platform for sharing science and astronomy strategies, develop collaborations and share research results • Listing of opportunities with respect to grants, collaborations, access to telescopes, etc. • Establishing a repository for teaching resources, including lectures, tutorial resources and on-lime courses *5.* *Annual Awards* Support students and early career researchers through small research grants and special awards 6. Archaeo-astronomy Help foster archaeo-astronomy research throughout the continent through developing cross-disciplinary connections	On-going March 2022 On-going March 2022 March 2022 On-going
Outreach 1. *Affordable Mobile Planetaria*	Feasibility Study and prototype design completed by March 2022.

MAJOR ACTIVITIES FOR THE YEAR

Develop, test and authenticate various prototypes on a minimum cost basis. Identify and work with potential manufacturers. Popularize and facilitate their procurement and usage across Africa. Collaborate with APA and Science Centre's to encourage their procurement and usage.	Production to commence during 2022 with general availability from mid-2023.
2. *Amateur Radio Telescope* Develop a suite of telescope designs appropriate for amateur astronomers and universities for production across Africa. Develop, test, prototype a few of designs. In collaboration with SARAO, SKA and DARA run training workshops for selected groups to build these telescopes. Assist with funding proposals to finance the telescopes and develop astronomy and radio science experiments to be performed.	Prototype and design to be completed in 2021 Construction to commence in 2022 First operational telescope beginning of 2023.
3. *Design, production, and translation of Resource Material* Continue to create quality online resource material on basic astronomy in the African context for use in Africa and globally, with all material open-source and free for download. Curate a collection of available material for use by teachers across Africa. Identify key events and phenomena which would benefit from new material set in the African context. Promote translation into major African languages.	On-going with majority of materials produced and available from 2023.
4. Pan-African Campaigns Promote awareness and involvement in celestial events and astronomy themes days across Africa through resource material and information on events and in different languages. Encourage outreach activity in countries with less public astronomy. Develop, strengthen, and network the outreach communities in Africa. Formulate specific pan-African event-based programs in consultation with the community and facilitate participation from outreach practitioners across Africa.	On-going
5. Amateur Astronomy Associations Enable creation of amateur astronomy associations across Africa and facilitate a pan-African network of such associations. Collaborate with the network on public events. Encourage the development of a template of kits and activities for new associations.	On-going
6. African Solar System project A to-scale Solar System model to be built across Africa, with at least one station in each country, as an African flagship program for the IAU GA 2024. This has been endorsed by AfAS and the NOC of the GA2024. Secure funding and provide the pan-African network to successfully realize the project.	Project to commence early in 2021 and completion date aligned to GA2024 which will be held in South Africa in August 2024.
7. *OAD Galileoscopes* 200 Galileoscopes have been made available by the OAD for distribution. Recipients to be identified and tripods are required for each unit as the telescope is more stable with a tripod. Costs of distribution and for the tripods to be determined and funds to be secured if AfAS cannot finance this initiative in total. Develop a system to monitor on-going usage.	Funding requirements to be determined by December 2021 and all units distributed by March 2023.
8. Competitions Organise regular competitions for school students and general public to stimulate interest in astronomy. Identify the competitions and their parameters, keeping in mind disparities of online access. Promote the competitions, and arrange for judging, award prize money for the winners and publicise the winners.	Competitions to commence during 2021 and on-going thereafter
9. Hands-on experiments Promote participation from school students in low-cost hands-on astronomy experiments. Collect and curate a list of experiments and	Experiments to be available from 2022 and a full suite to be available by mid-2023.

MAJOR ACTIVITIES FOR THE YEAR

prepare a handbook for these activities, aimed at teachers. Publicise these through the established networks.	
Communications 1. *Upgrades to the website, including the science portal* Complete enhancements to the website including the appearance and navigation. Work with the Science Committee on the development of the Science Portal within the website.	March 2022
2. *Development of an AfAS communications strategy* Develop a Communications Strategy that shows how effective communications can: - help AfAS achieve its organizational objectives and promote effective engagements with stakeholders - demonstrate the success of work done by AfAS and ensure the community and general public understand the role of AfAS and its activities.	March 2022
3. *Community mobilization* - Sending out a regular communique to the community - Effectively using the available social media platforms - Develop community discussion guides. - Advocating for support from leading astronomers on the continent	On-going
4. *Print and visual communication* Produce print materials to promote the brand of AfAS and activities and projects of AfAS sub-committees and working groups.	March 2022
5. *Social networking and electronic discussion groups* Social media presence through accounts that support all activities of the society and ensure broad coverage.	On-going
Membership *1. Finalise the criteria for the Individual Membership categories* Membership Categories and Criteria rationalised in collaboration with Science and Outreach committees	May 2021
2. Process the outstanding membership applications All current outstanding membership applications processed, using the finalised criteria	July 2021
3. *Development of an enhanced, on-line membership application and review process on the website* Improved application form and access to applications for review as well as storage of documentation supplied by prospective members. Development of automated workflow for application review and approval.	September 2021
4. Online payment of membership fees Setup of payment system on website for online payment of membership fees	March 2022
5. Determining membership fees and associated benefits Liaison with other AfAS committees, research on other astronomical societies to establish a membership fees structure and a suite of member benefits.	Completed for presentation to GA at 2022 Annual meeting in March 2022
6. Membership recruitment Formulation of membership recruitment strategy and implementation plan	December 2021
7. Country and Institutional Membership Developing membership criteria for Country and Institutional membership categories	March 2022

MAJOR ACTIVITIES FOR THE YEAR

Education	
1. *To create an online platform which facilitates access to educational resources.* Develop a portal on the website which allows access to astronomy programmes being offered at institutions in African countries.	March 2022
2. *Develop educational content* Create resources which can be used to encourage astronomy education	On-going
3. *Career and Scholarship information online platform* Develop a database of all astronomy related scholarships for all regions and disseminate information to African astronomers including career opportunities for emerging astronomers	March 2022
African Network for Women in Astronomy (AfNWA)	
1. *AfNWA database/network* - Development of Membership forms. - Maintenance of AfNWA email list. - Communicating with astronomy community and inviting people to join the network.	December 2021
2. *Training* Strengthening research, writing, and leadership capacities of women to enhance scientific careers. Survey is currently in progress to determine the key needs of female astronomers. The first workshop is planned for May, and second for October, virtual sessions will be held for both.	May 2021 & October 2021
3. *Day of recognition of women in Astronomy in Africa.* Organisation of different outreach and public awareness activities for giving more visibility to women in Astronomy and related fields	8th March 2022
4. *Periodic newsletter and monthly news.* Highlight different female astronomers in Africa, their research, and some motivational stories. Digital form of newsletter, to be published on-line every four months. Summary of relevant monthly news to be compiled and distributed through email-list every month.	Monthly news to commence July 2021 and digital newsletter 3 times a year from 2021.
5. *Outreach activities in schools and survey in understanding the lack of women in Astronomy and science in general.* Develop the questionnaire to help in understanding the main factors responsible for the lack of girls in science in different African countries. Develop a plan for outreach activities in consultation with the Outreach Committee.	Survey with results to be concluded by March 2022. Outreach activities to commence in 2021
6. *Publish a Book on African Women in Astronomy* Collect short biographies of as many women as possible who work in the Astronomy environment in Africa and publish a book.	December 2022
7. *Create links with other societies/organisations of Women in Science* Contact different organisations, informing them about AfNWA, and encouraging possible collaborations.	On-going
8. *Annual Awards* Two awards to be given; one for early career and the other to a senior researcher. Prepare the open calls, set up selection criteria, set up an evaluation team, evaluate nominations, announce the winners during AfAS annual conference	March 2022
9. *Evaluation of the status of women in astronomy and related fields* One day meeting (virtual) to discuss the status of women in astronomy and policy recommendations for each African region in line with the UNESCO	Initial annual meeting, September 2021 Survey completion-March 2024

recommendations. Long-term goal: Conduct a survey and recommendations from it. 10. *Virtual community meetings* Monthly community meetings within the network for discussing different topics in relation to the status of women and girls in science and astronomy. At least every 2 months	Commence September 2021.

4.2 AERAP

ACTIVITY	TIMELINE
1. Continue to advance the approach established in the November 2020 meeting, which brought together representatives from many different commission Director-Generals, this increases the awareness in a range of different scientific areas including the environment, climate, health, medicine, biodiversity, amongst others	On-going
2. Continue to develop the AERAP subgroups approach which is focusing on 6 or 7 themes. This will translate into focus activities in Horizon Europe	On-going
3. Position stakeholders to engage on Horizon Europe, in particular through information and awareness and ensuring access to information and data on African partners	On-going
4. Create opportunities for partnerships and collaborations, including collecting and sharing data on potential African partners with potential European partners	On-going
5. Facilitate the intent of the SFIC and its working group on Africa which is to leverage synergies between NDICI and Horizon Europe. This should be a key item of the June high-level meetings	June 2021
6. Horizontal issues such as regulation on data protection are essential; however, it is still challenging to present practical guidance, particularly on the GDPR. The lack of practical advice applies to EU member states as well as to African countries.	On-going
7. Write to all the national contact points for Horizon Europe to introduce AERAP and preview possible collaboration opportunities with African partners.	July 2021
8. Use the Africa-Europe Research and Innovation Summit on 15 June 2021 to advance research cooperation collaboration between Europe and African partners, and position African partners for participation in consortium building activities by European research leaders	

4.3 ASSAP

ACTIVITY	TIMELINE
1. Establishing the African Science Stars Awareness Publication (ASSAP) for the SADC Region, workshop to be held in the following countries to promote the magazine: - Namibia - Botswana - Lesotho - South Africa - Swaziland	20-23 April 2021 26-28 April 2021 10-12 May 2021 22-24 June 2021 28-30 June 2021
2. Women's day Virtual workshop	9 August 2021
3. Four editions of the African Science Stars will be published in 2021. The magazine will be in print format and digital format. The editions will include the following:	June 2021 August 2021 October 2021

• Profiling selected astronomers and space science professionals from the SADC region from both a work and social perspective • Profiling astronomical sites, telescopes, and facilities in the region. • Profiling universities astronomy and space science programmes. • Profiling astronomy and space policy developments at a country level. • Profiling astro-tourism and astro-tourist sites in the SADC region and activities such as star gazing, astrophotography, telescope making, etc. • Educating the public about the importance of preserving dark skies in the region. • Communicating the benefits of astronomy to society, technology, and socio-economic development. • Promoting the preservation of indigenous astronomical knowledge. • Profiling space science initiatives that have direct links and relevance to astronomy. • Sharing information on career guidance, bursaries, and career opportunities in the region. • Sharing information on astronomy and space funding opportunities, projects, competitions (Astro-Quiz), etc. in the region. The above will also create a network for the Astronomy and Space Science Community in the SADC region.	March 2022

4.4 APA

ACTIVITY	TIMELINE
Maintaining an active website containing the following: • General information, contact details and history of the APA. • Database of African Planetaria, linking the individual Planetarium websites to the APA website to create a centralised website for all the planetaria in Africa. • Ideas on how to start up a Planetarium with a collection of stories and advice from African Planetaria. • Online hub to share media content, free videos/software as well as locally produced content. • Astro Tourism resources section.	On-going
Maintain active Facebook, Twitter, Instagram, YouTube, and other social media accounts for the purpose of promoting APA and its member Planetaria.	On-going
Support the shipment of planetaria which are donated through the network of the IPS. APA will then organize training workshop(s) for the recipient of the donated planetarium and for existing planetarians who are in need. The training will be conducted mostly on-line and with an on-site support component where possible. The workshop will include training on the following aspects related to planetaria: • Training on free planetaria software • Sustainability • Astronomy Basics • Technical Maintenance of the planetarium	On-going and adherence to agreed timelines for each initiative.
Production of a Planetarium film to highlight African culture in collaboration with SAAO and UCT. APA will be responsible for the distribution of the film across the continent.	Production of film to be completed by end May 2021 and distribution to commence from 1st August 2021.

5. Key Performance Indicators/Outputs

AfAS-KPIS	2021/2022
Science Strategy	**March 2022**
Annual Conference & general Assembly	**March 2022**
Database Portal	**March 2022**
Annual Scholarship Awards (including AfNWA)	**March 2022**
Affordable Mobile Planetarium	**Feasibility study and Prototype design-March 2022**
Amateur Radio Telescope	**Dec. 2021-Prototype Design**
OAD Galileoscopes	**Funding & Distribution Plan-December 2021**
Astronomy Competitions & Experiments for schools/public	**Competitions to be introduced during 2021 and experiments to be ready for implementation from March 2022**
Completion of new website	**March 2022**
Communications Strategy	**March 2022**
Finalization of current membership applications	**July 2021**
New membership application and review process	**September 2021**
Membership Recruitment Strategy & Implementation Plan	**December 2021**
Membership Fees structure & Benefits (Including country and institutional membership)	**December 2021 for review by EXCO and GA presentation in March 2022**
Online platform to access astronomy courses offered by institutions in Africa	**March 2022**
Database for Scholarships & Career Opportunities	**March 2022**
Training courses offered by AfNWA	**May & October 2021**
AfNWA Newsletter & Monthly News	**From July 2021**
Survey on low representation of women in astronomy & science	**March 2022**
Status of Women if astronomy & related fields-Evaluation	**September 2021**
Virtual Community meetings	**From September 2021**

AERAP-KPIS	2021/2022
Engagement with EU officials	**Ongoing**
Number of Covid 19 activities identified for African researchers	**Ongoing**
Number of EU Proposal submitted	**At December 2021**
Number of AERAP partners engaged	**December 2021**
Website updates	**Ongoing**
Number of ARAP subgroups established and operational	**March 2022**
Number of members of the European Parliament briefed	**December 2021**
Number of profiles completed for African partners on EU information service CORDIS	**March 2021**
Press releases	**Ongoing**
Number of Commissioners briefed	**As per activity schedule as per activity schedule**
Number of Horizon Europe programme inputs	

KEY PERFORMANCE INDICATORS/OUTPUTS

ASSAP-KPIS	2021/2022
Workshops in SADC Region	**Dates as per activity schedule above**
Four publications in 2021 with 10000 hard copies per publication	**Dates as per activity schedule above**
Women's Day Virtual Workshop	**9th August 2021**

APA-KPIS	2021/2022
Website maintenance	**On-going**
Social media campaigns	**On-going**
Planetarium Film	**May 2021 production, August 2021-distribution**

6. Annual Budget

AFAS BUDGET ANALYSIS/COMMITTEE (2021/22) R'000s	Budget 2021/22	Budget 2022/23	Budget 2023/24
Science	(390)	(310)	(240)
Outreach	(300)	(200)	(150)
Communications	(65)	(75)	(75)
Education	(89)	(101)	(75)
Membership	(2)	(3)	(5)
African Network for Women in Astronomy	(90)	(75)	(75)
Sub-Total	*(936)*	*(764)*	*(620)*
HR Costs	(1092)	(1033)	(1200)
IT Running Expenses/Website Maintenance	(100)	(100)	(100)
Database Portal	(200)	0	0
AfAS Server	(200)	0	0
Travel	(200)	(250)	(300)
General Office Administration Costs	(125)	(100)	(100)
Annual Conference	(350)	(350)	(300)
Sub-Total	*(2267)*	*(1833)*	*(2000)*
ASSAP	(2120)	(2200)	(2250)
AERAP	(1575)	(1655)	(1737)
APA	(925)	(715)	(750)
Sub-Total	*(4620)*	*(4570)*	*(4737)*
Total Budget	(7823)	(7167)	(7357)
Annual Grant from DSI	6530	6735	7042
Previous Year Carry Forward	2054	761	329
Net Unspent	761	329	14

7. Approval

Compiled by: **Signature**	 **Project Manager - AfAS**  **Head of Secretariat - AfAS**
Name	Y Manjoo/C Takalana
Date	3rd May 2021
Approved by **Signature**	
Name	J Mimouni
Date	3rd May 2021
Designation	**President-AfAS**

8. Information on AfAS and partners

African Astronomical Society (AfAS)
1 observatory road, observatory, cape town, 7925
email admin@afasociety.org
www.africanastronomicalsociety.org

African Planetarium Association (APA)
1 Observatory Rd, Observatory, Cape Town, 7925
email info@africanplanetarium.org
www.africanplanetarium.org

African Science Stars Publication (ASSAP)
1 Bridgeway, Bridgeways Precinct, Cape Town, 7441
email info@assap.co.za
www.assap.co.za

African-European Radio Astronomy Platform (AERAP)
Rue de la Science, 14b ,1040 – Brussels
email info@aerap.org
http://www.aerap.org

Department of Science and Innovation (DSI)
DSI Building 53, Meiring Naudé Road, Brummeria
www.dst.gov.za