

NEWSLETTER



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THE EXECUTIVE DIRECTOR'S DESK



Dr Jane Olwoch

SASSCAL Executive Director

The Year 2022 continues to be a year of ecstasy for SASSCAL as we continue to celebrate the organization's 10th Anniversary. It is a huge milestone that is worthy of celebrating and reflecting on.

The past 10 years of SASSCAL's journey is marked by a non-erasable footprint of successes and achievements in the quest to strengthen the Southern African region's capacity to generate and utilize the scientific knowledge useful for mitigating climate change and implementation of adaptive land management.

Through the scientific products and services developed and delivered by SASSCAL, in collaboration and partnership with its wider base of stakeholders and partners, our goal has been to drive and deliver positive impact, while acknowledging that our ultimate goal is a green planet, imbued with a sustainable green economy and a healthy society free from poverty, climate change and land misuse disasters.

What began 10 years ago is what sets the tone for the future, the organization's mandate, vision, and mission remains unchanged, what keeps changing is the way we deliver our services driven by innovative scientific thinking and adaptation to our operating environment landscape

The tree planting exercise that was executed by the SASSCAL branches in all our member states became a ceremonial commemoration of our anniversary. As the trees grow it is a reminder that SASSCAL must grow in

maturity and in furthering its impact globally.

SASSCAL owes a huge gratitude to the Germany's Federal Ministry of Education and Research (BMBF) to be the organization's major funder since inception. As the organization we are also indebted to acknowledge the efforts that have been put together by the SASSCAL Member States, without these the institution could not have reached the current level of international status as well as level of institutional development.

As we sail in the middle of this year 2022 we are excited with upcoming developments set to see SASSCAL furthering its impact in the region. These include the commencement of the SASSCAL 2.0 Research Programme which constitutes 13 research programmes to be implemented. Thanks to BMBF's funding support that is onboard to ensure a successful implementation of the selected researches.

The partnership between Namibia and the German Government towards establishment of green hydrogen projects is one of the flagship projects SASSCAL has set eyes on as a key stakeholder to the project.

The WeMAST project is one of the projects we take pride in. As we are migrating to the phase two stage of implementation, the support that has been offered by the GMES and Africa, from the African Union is put in the spotlight as their funding support is what has helped SASSCAL build the voluminous infrastructure and knowledge base in the Earth Observation technologies.

The Graduate Studies Programme in Integrated Water Resource Management (SGSP-IWRM) launched at the NUST is a pioneering programme of our centers of excellence we look forward to establish in all our member states. SASSCAL ensures the success of the programme by availing bursary funding to support students from all our member states to study the programme.

It is exciting to note the organization's resilience amid the pandemic's drawbacks, we are adamant that the future is in our hands to transform it into a sunshine for our society through scientific research and capacity development. However, we will not be at our best to achieve this without the support of all our stakeholders, our strategic partners and members globally.

GOVERNANCE ISSUES

THE CHAIR OF THE COUNCIL OF SASSCAL MINISTERS, HONOURABLE MARIA DO ROSÁRIO BRAGANÇA SAMBO HAILS SASSCAL'S SUCCESSES AND ENVISIONS A BRIGHT OUTLOOK AS THE ORGANISATION CELEBRATES ITS 10TH ANNIVERSARY



SASSCAL Chairperson of the Council of Ministers, Hon. Maria do Rosário Bragança Sambo delivering her remarks during SASSCAL's 10th- anniversary official event

The SASSCAL 10th Anniversary was not just an event, but an untold story filled with celebratory mood, a look back into the past, remembering and revelling the journey of SASSCAL from its infancy to where it is today, an organisation vested with international status.

It was a moment which brought together the past and the present leadership of SASSCAL, the staff, the stakeholders and the partners who have resoundingly contributed to what SASSCAL is today. Above all the SASSCAL's 10th Anniversary has been enshrined with a collection of successes in the organisation's mandate to lead the climate change and land management in Southern Africa.

SASSCAL celebrated its 10th anniversary on 12 April 2022. The commemorative event was held in

Windhoek - Namibia, preceded by the launch of the SASSCAL Graduate Study Programme in Integrated Water Resource Management (SGSP – IWRM) at the Namibia University of Science and Technology, and a tree planting and clean up awareness campaign across four SASSCAL member states last week.

In the past 10 years, SASSCAL, a joint initiative of five southern African countries namely Namibia, South Africa, Zambia, Angola and Botswana and their main sponsor Germany, has implemented almost 90 research projects in collaboration with 80 partner institutions, trained about 200 young scientists, established a network of 156 weather stations and 54 biodiversity observatories, as well as an operational central data and service center at the Regional Secretariat in Windhoek.

Speaking at the event, the Minister of Higher Education,

Science, Technology and Innovation in Angola, Honourable Maria Do Rosário Bragança Sambo, who is also the Chair of the Council of SASSCAL Ministers, hailed SASSCAL's successes in the organisation's past 10 years of existence, accomplishment in climate change and land management projects. Hon Sambo packaged the organisation's performance status with a promising and brighter future ahead.

Hon Sambo, was joined by the German Ambassador to Namibia and his officials, senior officials from the German Federal Ministry of Education and Research (BMBF), SASSCAL Board Members, SASSCAL Executive Director, representatives of SASSCAL's western counterparts, WASCAL, partner institutions, former and current SASSCAL employees to celebrate the anniversary.

Hon. Sambo said that SASSCAL has all the reasons to celebrate and be proud of its achievements because, since its inception, the organisation has been committed to ensuring that there is no stagnation. In addition, she said that SASSCAL has been and continues to set a good example of a multilateral, cross-border, inter and transdisciplinary, north-south,

and south-south cooperation organisation. "SASSCAL, which is a transnational organization and, despite being still very young in terms of tenure of years, it has been considered as one of the largest scientific research networks in the SADC region, counting on the critical cooperation from Germany," said Hon Sambo.

She further stated that steps towards realizing the transformation of SASSCAL into an international organization had to be done speedily given the regional and global challenges faced to mitigate climate change, within the framework of the SDG 13 of the 2030 agenda, with a particular focus on Agriculture, Biodiversity, Climate, Forestry and Water.

German Ambassador to Namibia, His Excellency Herbert Beck said the German Government, through the Federal Ministry of Education and Research (BMBF), has supported SASSCAL since its inception in 2012, both in institution building and in specific research projects. The support includes strengthening ties between German universities and research institutions and their counterparts in southern Africa to effectively respond to global, multinational, and cross-cutting climate change challenges.



Picture: His Excellency Herbert Beck, German Ambassador to Namibia delivered his remarks at the official 10th-anniversary celebrations

Speakers took turns to congratulate SASSCAL's political, governance, management, and operational structures, which have contributed to tremendous growth in the institution. SASSCAL is governed by a Ministerial Council and a Governing Board. An Executive Director heads the institution, which has nodes in the different member states.

According to Board Chairperson, Ms Jane Chinkusu, "Ten years ago, SASSCAL took a step to ensure that the organisation goes into the future by providing solutions that will help the region mitigate the impact of climate change. "

Dr. Karsten Hess from the German Federal Ministry of Education and Research (BMBF) hailed the organization as a "unique product of Germany's long-term partnership with countries in southern Africa". Germany has consistently been the main funding partner for SASSCAL. "We jointly invested much time and energy in preparing its establishment and went through a period of creating and a period of consolidating SASSCAL. What we achieved is a new and ambitious institution designed - and all set to play an important role for the people of southern Africa to face the challenges posed by climate change as a region," said Dr Hess.

SASSCAL was set up with the awareness that all the countries of the region alike are affected and none can confront these challenges alone.

The Executive Director, Dr Jane Olwoch expressed gratitude to the German Ministry of Research and Education, emphasizing that the partnership between the two parties is the reason behind the organization's institutional development over the past 10 years. SASSCAL's success would not be possible and relevant without the commitment from Member States for its existence and funding its operations.

The ED also welcomed and thanked the new funders the African Union Commission and the Division of renewable energy and Green Hydrogen technologies of the BMBF. The latter is now responsible for providing the biggest financial support to SASSCAL.

Dr Olwoch also pointed out that one of the most important tenets of science diplomacy is to improve international relations and cooperation through science because not only is it universal, but it engages countries and institutions to enhance relationships in order to solve global challenges.



Picture: SASSCAL Governing Board Vice-Chairperson Prof. Gabriel Luis Miguel, SASSCAL Board Member for Namibia, Ms Sofia Kasheeta, SASSCAL Executive Director, Dr Jane Olwoch, Namibian Government High- Level officials, SASSCAL programme coordinators and representatives of partner institutions.

For more information on some of the strategic programmes and projects undertaken by SASSCAL in the past 10 years, click on the link below.

<https://www.sasscal.org/sasscal-to-celebrate-10-years-of-excellence-in-climate-change-research/>

STAKEHOLDER ENGAGEMENT OUTLOOK

SASSCAL EXECUTIVE DIRECTOR VISITS BOTSWANA NODE



Dr. Jane Olwoch with Botswana's Ministry of Environment, Natural Resources and Tourism Permanent Secretary and SASSCAL Board Member, Dr. Oduetse Oldman Koboto

SASSCAL Executive Director, Dr. Jane Olwoch visited the SASSCAL Botswana Node. During the visit which took place from 10 – 13 January 2022, Dr. Olwoch met Botswana's Ministry of Environment, Natural Resources and Tourism Permanent Secretary and SASSCAL Board Member, Dr. Oduetse Oldman Koboto, SASSCAL Alternate Board member and Botswana Node staff members.

The four-day visit was aimed at charting the way forward for SASSCAL Node in Botswana and update SASSCAL Line Ministry on SASSCAL's progress and outlook. Dr. Olwoch highlighted SASSCAL achievements during the year 2021, which include establishment of the SASSCAL Graduate Studies in Integrated Water Resources Management (SGSP-IWRM) and signing of a grant agreement with Germany's Federal Ministry of Education and Research (BMBF).

The BMBF grant amounting to approximately 7 Million euros will be directed to the financing of SASSCAL 2.0 Research Programme which constitutes a collection of 13 Research projects to be implemented in the SADC Region where Botswana will be benefiting to the value of 34, Million Pula. Commencement of the construction of SASSCAL office in Botswana was also discussed.

Dr Olwoch also updated the Permanent Secretary on the future outlook of SASSCAL and highlighted that the following projects would commence in 2022: SASSCAL 2.0 Research Programme, various Green Hydrogen projects in SADC, and GMES and AfricaWeMAST project Phase 2: in addition to continuation of the development of services and products. Dr. Koboto, thanked Dr Olwoch for visiting Botswana and updating him on achievements of SASSCAL in 2021 and future projects, reiterating Botswana's commitment and support to SASSCAL. The Permanent Secretary said he looked forward to the commencement of the construction of SASSCAL Offices in Botswana. His Ministry would support this project in addition to offering land on which the offices will be built. The Federal Ministry for Education and Research of the Federal Republic of Germany (BMBF), sponsor will fund the construction costs.

In attendance were SASSCAL Alternate Board Member, Mr. Balisi Gopolang, the Ministry of Environment's acting Deputy Permanent Secretary for Environmental Affairs, Mrs. Kelebaone Maselesele, Deputy Permanent Secretary for Corporate Services, Mr. Jacob Momini, and Botswana Node's Finance and Administration Officer, Ms. Tshepang Twala.

SASSCAL UNDERTAKES A TREE PLANTING AND CLEANUP AWARENESS CAMPAIGN



SASSCAL staff was joined by the Cimbebasia Primary School principal, teachers, and members of the school's Environment Club during the tree planting and clean-up campaign

As part of its 10th anniversary commemoration SASSCAL undertook a tree planting and clean-up campaign across its member states on 6 April, 2022.

The exercise was amongst a number of events lined up to celebrate 10 years of various programmes and projects aimed at combating climate change. Namibia's tree planting and clean up exercise took place at

Cimbebasia Primary School in Windhoek, Namibia, where SASSCAL staff were joined by learners from the school's Environment Club.

Speaking during the event, SASSCAL Executive Director, Dr Jane Olwoch said trees are lungs of the earth and their absence means no lungs for biodiversity, which is the basis for human well-being.



Picture: Dr Jane Olwoch and Namibian Node Coordinator Mr Panduleni Hamukwaya and learners from Cimbebasia Primary School taking part in the tree planting exercise

The organization decided to commemorate its 10th anniversary with various schools across four of its member states because SASSCAL respects the aspirations of young people and that the future depends on what they are doing. The easiest way to reduce carbon emissions, which is responsible for climate change, is by planting more trees.

Dr Olwoch encouraged the learners to make it a habit to continuously plant as many trees as possible. She promised to make the primary school a partner

through SASSCAL's newly established corporate social responsibility programme, a move that will provide an opportunity to steer pupils towards engaging in continuous environmentally sustainable projects.

The Executive Director also provided an overview of SASSCAL and one of its strategic programmes namely the Green Hydrogen, saying that the whole world is moving towards renewable energy to curb carbon emissions and as a response to climate change.



Dr Jane Olwoch and learners from Cimbebasia Primary School taking part in the tree planting exercise

Like Zambia and Angolan Nodes, SASSCAL Botswana Node executed a tree planting and clean-up campaign at Batlokwa National School, on the outskirts of Gaborone. Indigenous and fruit trees, which are suited to the local climate, soil, bird, and insect life were planted. SASSCAL staff, high level Government officials,

staff members of schools and students, attended the Botswana event. The SASSCAL Angolan node planted a total of 270 trees being 85 at the secondary schools Comandante Vilinga and 185 at the Polytechnic Institute Professor Estevao Nhime in Huambo.



Picture: The SASSCAL Angolan Node at their tree planting and cleaning up campaign at the Secondary School Comandante Vilinga in Huambo



The SASSCAL Angolan Node at their tree planting and cleaning up campaign at the Polytechnic Institute Professor Estevao Nhime in Huambo

Picture: The Director of Forestry Natural Resources, Conservation and Tourism Ms. Baitshapi Hill watering the plant during SASSCAL Botswana Node tree planting and clean-up campaign exercise at Batlokwa National School



Picture: Group photo of participants for Zambia Node Tree Planting and Clean up Campaign exercise

INTERNATIONAL COLLABORATION & PARTNERSHIPS

IMPLEMENTATION OF THE JOINT COMMUNIQUE OF INTENT (JCOI) – NAMIBIA / GERMANY GREEN HYDROGEN PROJECTS LAUNCH

The Green Hydrogen Innovation Commissioner at the German Federal Ministry of Education and Research (BMBF), Dr. Stefan Kaufmann visited Namibia from 24 – 26 February 2022. The purpose of the visit was to advance the implementation of the Joint Communiqué of Intent (JCOI) signed between Namibia and Germany on cooperation in the field of energy and green hydrogen resources. During his visit Dr Kaufmann held meetings with the German Ambassador and South Africa High Commissioner, among other high-level stakeholders.

As the focus, Dr Kaufmann had extensive discussions with the Namibia Green Hydrogen Council, and

other representatives involved in energy and green hydrogen resources on the next step to bring the JCOI to life. Dr Kaufmann was accompanied by Dr. Kerstin Zimmermann (head of International relations, BMBF) & Ms. Kerstin Annassi (Head of Basic Research Energy Systems of Projektträger Jülich).

“We are witnessing a major change: fossil sources such as oil and gas are being replaced by renewable energies. Green hydrogen has the chance to become the oil and gas of the future. It is a game-changer,” said Dr Kaufman.

At the launch of Namibia / Germany Green Hydrogen Projects funded by the BMBF under the JCOI, a press



Pictured during the press conference at the state house: Director General Obeth Kandjoze, Dr Stefan Kaufmann, Dr Itah Kandjii-Murangi, Mr James Mnyupe, Dr Jane Olwoch and Dr. Kerstin Zimmermann

conference was held on Friday, 25 February 2022 at the state house. The main aim of the press conference was to launch the programmes under the implementation of the JCOI, i.e., The Scholarship programme (Youth for Green Hydrogen-Namibia (Y4H2)), Pilot projects and the Green Hydrogen Strategy.

The panel for the press conference was constituted by the Namibian Green Hydrogen Council Chairperson, Director General Obeth Kandjoze, the German Green Hydrogen Innovation commissioner, Dr

Stefan Kaufmann, the Minister of Higher Education, Training and Innovation, Dr Itah Kandjii-Murangi, The Presidential Economic Advisor and Green Hydrogen commissioner, James Mnyupe, the Executive Director of the Southern African Science Centre for Climate Change and Adaptive Land Management (SASSCAL), Dr Jane Olwoch and Dr Kerstin Zimmermann.

During his speech, Dr Kaufmann reiterated that there are many opportunities for cooperation and shared future between Namibia and Germany in the green hydrogen

economy. As a first step in advancing green hydrogen development in Southern Africa, Dr Kaufmann visited Namibia and South Africa in November 2020 and is now finalizing the action of the Renewable Energy and Green Hydrogen project in Namibia. The purpose of his visit was to identify key stakeholders in Namibia that are strategically positioned to deliver the renewable energy and green hydrogen project in SADC.

“The world market for green hydrogen and its derivatives such as ammonia and methanol will emerge, and all this may happen much faster than many people expect. Green hydrogen will then be able to be produced at the same cost as fossil or blue hydrogen. This could be achieved already within the next two or three years,” Dr Kaufmann stated.

Furthermore, higher education minister Itah Kandjii-Murangi said the scholarships will advance Namibian skills for a range of different interests to support the green hydrogen and renewable industries.

“Scholarships will be open to everyone, even those currently employed, I urge all to partake this opportunity,” Dr Itah Kandjii-Murangi

Dr Kaufmann also made reference to the H2 Atlas Africa. He mentioned that the H2Atlas is a data-based assessment of the potential of green hydrogen production in sub-Saharan Africa using renewable energy resources in the region. It has assessed the availability and suitability of land and water resources while taking into account other aspects like land and water uses.

The project will also evaluate the potential of green hydrogen utilization in these African region as well as the possibility of its export. “The preliminary results for Namibia are quite promising with its gigantic potential for wind and solar energy. Namibia is an excellent starting position; the country can become a global player for green hydrogen production,” he added.

Dr Kauffman also engaged the members of the Strategy and Technical Working Groups and held key discussions around the calls for the different programmes. The Technical Working group is a forum for matters of common interest in relation to the programmes and projects arising from JCol. During the

meeting Dr Kauffman highlighted the importance of a green economy, and establishing a whole value chain on Green hydrogen.

German and Namibia enjoy close ties, with shared history but also look towards shared future. Dr Kaufmann emphasised on shaping this future together, and jointly advancing the establishment of a green hydrogen economy.

Dr Kaufmann further iterated that he is glad and very proud that BMBF was the first to formally establish a cooperation with Namibia in August 2020, and signed JCol on energy and green hydrogen. It was an important step towards climate neutrality not only for the two countries but also in a global context. Dr Kaufmann acknowledged SASSCAL’s commitment towards the coordination of all activities related to the implementation of the agreement.

Dr Kaufmann also participated in a live TV interview with the Namibia Broadcasting Corporation and stated that “Our aim is to build a green hydrogen partnership between Germany & Namibia on knowledge sharing, focusing on Green hydrogen feasibility study, pilot project & scholarship programme for young Namibians”.

“The achievements realised so far in this agreement are the financial commitment of 40 million Euros to fund projects, develop technical and scientific work groups to work on the process of projects delivery, and to develop specific calls to implement the strategy. A project with this caliber is expected to realise benefits such as sustainable energy future for Namibia, new job creation for the youth, an economy based on new technologies and also benefits of transfer of knowledge between Germany and Namibia,” Dr Kaufmann remarked.

As the implementer of the JCol between Namibia and Germany, SASSCAL has been accorded the privilege by BMBF to coordinate all renewable energy and green hydrogen projects in SADC and is in the process of concluding the Atlas of Green Hydrogen Generation Potential (<https://www.h2atlas.de/en/>) in SADC. The launch of the H2 Atlas is anticipated to be early in the year 2022. As the second phase unfolds, different projects will be implemented in selected SADC countries.

GMES AND AFRICA AWARDS GRANT CERTIFICATES TO THE 8 CONSORTIA PARTICIPATING IN THE GMES & AFRICA PHASE 2 AT THE AWARD AND KICK-OFF CEREMONY IN COTONOU, BENIN FROM 14 -18 MARCH 2022



Picture: The SASSCAL Executive Director Dr Jane Olwoch receiving the GMES and AFRICA 2nd phase grant certificate during the Award ceremony

The Global Monitoring for Environment and Security & Africa (GMES and Africa) is an initiative between the Africa Union and the European Union in the area of space science & technology and a key priority under the EU-Africa partnership. GMES & Africa aims to promote development of local capacities, institutional, human and technical resources for access to and exploitation of Earth Observation (EO) based services on an operational basis for sustainable development in Africa.

On the 14th of March 2022, the GMES & Africa support programme, awarded 8 consortia across the 5 regions of the African continent with grants, making GMES a truly Pan African initiative. It aims to cover the entire supply chain for services on Water & Natural Resources and Marine & Coastal areas from access to information generation and provision of services, and engagement and capacity of users to ensure utilization of these services. GMES and Africa Phase 2 started in January 2022 and will end in December 2025.

A consortium led by SASSCAL was amongst the recipients. The SASSCAL Executive Director Dr Jane Olwoch received the grant certificate on behalf of the SASSCAL-led consortium during the Award ceremony in Cotonou, Benin on 14 March 2022.

WeMAST Phase II intends to ensure the automation and widespread uptake of the already developed Geoportal services to target groups and end users, including river basin commissions and national water/environmental

institutions. The consortium's EO-based services will be in sync with other related EO based projects and programmes in a way that enhances their incorporation to the decision-making processes in the SADC region and African continent at large.

To ensure skills and technology transfer, SASSCAL partnered with like-minded institutions and the private sector during Phase I in the development of the Wetland Monitoring Geoportal. Phase I of the WeMAST project developed and implemented an EO-based platform that supports Sustainable Wetland Assessment and Monitoring Services to promote policy and management practices in the SADC region and beyond, utilize open-source Satellite-based EO data and existing free software that will continue to be explored in Phase II.

WeMAST Phase II Project aims to upscale and operationalize the developed EO-based platform that supports Sustainable Wetland Assessment, monitoring services, promote policy, and management practices in the SADC region and beyond.

SASSCAL LAUNCHES ITS THREE-YEAR GRADUATE STUDIES PROGRAMME



Picture: SASSCAL BOARD members Ms Sofia Kasheeta and Dr Svenja Kruse, SASSCAL Executive Director Dr Jane Olwoch and ASAC members joined by NUST Chairperson of Council Ms Florette Nakusera , NUST Vice-Chancellor Dr Eroid Naomab, Management staff, NUST Academic fraternity and the SGSP-IWRM study programme students

SASSCAL launched its Graduate Studies Programme in Integrated Water Resource Management (SGSP-IWRM). During the launch of the three-year programme, which will be undertaken at

Namibia's University of Science and Technology (NUST) from 2022 to 2024, 15 students from four of SASSCAL member states received their scholarships.



Pictures: Some of the 15 students from four SASSCAL member states receiving their official scholarship award letter

The programme aims to establish an innovative and excellent regional collaborative doctoral programme in IWRM; develop tailor-made short courses for decision-makers and industry; develop a new curriculum for a new regional PhD qualification in IWRM; and develop a blueprint document for the transformation of the SGSP-IWRM into a SASSCAL Centre/Institute of Excellence in IWRM at NUST.

While handing over the scholarships to the students, Dr Svenja Kruse from the German Federal Ministry of Education and Research (BMBF) quoted saying that “the knowledge in integrated water resource management is one of the most essential fields of study, furthermore the first cohort will become experts in the future”.



Picture: Dr Svenja Kruse from German Federal Ministry of Education and Research (BMBF) and SASSCAL alternate Board Member delivering the keynote remarks

The programme's German partner, International Centre of Water Resources and Global Change (ICWRGC) at the Federal Institute of Hydrology in Koblenz strengthens the research programme development, teaching, student supervision and facilitates compulsory student mobility to Germany.

During the event, the Minister of Higher Education, Technology and Innovation (MHETI) in Namibia Dr Itah Kandji-Murangiri said "I would like to express my gratitude to SASSCAL through the German Federal Ministry of Education and Research (BMBF) for injecting N\$40 million into the SGSP-IWRM programme. I would also like to commend the longstanding relations between the Namibian and German Government, which continue to grow from strength to strength".

SASSCAL Board Chairperson, Ms Jane Chinkusu added in her speech by saying that "the establishment of the SGSP – IWRM will enable SASSCAL member states and SADC in general to achieve five Sustainable Development Goals (SDGs) namely SDG 6 – Clean Water and Sanitation, SDG 9 – Industry, Innovation and Infrastructure, SDG 11 – Sustainable Cities and Communities, SDG 12 – Responsible Consumption and Production and SDG 13 – Climate Action, while improving the water research and innovation profile of the Southern African Region".

Ms Chinkusu further stated that the SADC Water Development Framework and its supporting strategies, plans together with the IWRM concept offers solutions to deal with interlinked socio-economic, institutional,



Picture: Namibian SASSCAL Board Member, Ms. Sofia Kasheeta delivering her remarks

and ethical challenges by assessing and managing water resources through an interdisciplinary and multi-sectoral approach. “The importance of a holistic approach to sustainable water resources management and water security for sustainable socio-economic development in SADC, must not be underestimated” Ms Chinkusu emphasised.

The sentiments of the SASSCAL Board Chairperson were echoed by Namibian SASSCAL Board Member, Ms. Sofia Kasheeta who stated “the IWRM in Namibia has been identified as essential for managing its water sector. Due to the country’s dry climate and unpredictable rainfall, water resource challenges can only be addressed through a high degree of efficient water resources management”.

“To address these issues, the Ministry of Agriculture, Water and Land Reform developed the Namibian IWRM Plan in August 2010 with an overall long-term goal of achieving a sustainable water resources management regime, which will ultimately lead to social equity, economic efficiency and environmental sustainability”, continued Ms. Kasheeta.

A water sector needs Assessment Analysis conducted by SASSCAL in 2016/17, identified and recognised the lack of trained human resources in water management and sciences in the SASSCAL member states and generally in the Southern Africa Development Community (SADC). In addition, the SADC Water Development Framework shows that there is a high and growing demand for experts to be trained on the concepts of IWRM.

“The experts need to be equipped with both technical and managerial knowledge”. In her closing remarks Ms Kasheeta expressed that Namibia was pleased to witness the opening of SGSP – IWRM at NUST through the partnership with BMBF.

Meanwhile, SASSCAL Executive Director, Dr Jane Olwoch said the study programme will use research, science and technological innovation to transform the available water resources into clean and safe water to use, “ this is the challenge I put in the hands of the recipients of the SGSP – IWRM Scholarships”.



Picture: SASSCAL Executive Director Dr Jane Olwoch delivering her remarks at the SGSP – IWRM Launch

“Africa and the SASSCAL region are preparing themselves to embrace the new emission free fuel – Green Hydrogen”. In this regard, Dr Olwoch added that water is again at the centre stage of this endeavour. “In our region, desalination of water is the best option for Green Hydrogen production. This partnership through the SGSP – IWRM provides another advantage to

support other related programmes such as the Green Hydrogen in Namibia and in other SADC member states” says Dr Olwoch.

According to UN Water, Water Security is the capacity of a population to safeguard sustainable access to adequate quantities of acceptable quality water for

sustaining livelihoods, human well-being, and socio-economic development, and ensuring protection against water-borne pollution and water-related disasters, and preserving ecosystems in a climate of peace and political stability. "My hope is that the SGSP would also contribute to this global action and the realization of several SDGs but in particular SDGs 6," added the Executive Director.

NUST's High Tech Transfer Plaza Select (HTPS) will house the three-year programme. NUST Vice

Chancellor, Dr Eroid Naomab said the financial support such as has been availed by SASSCAL, will go a long way in not only capacitating the water sector, but also in eliminating barriers to postgraduate study at NUST. "The partnership with SASSCAL is set to make a noteworthy contribution to capacitate professionals in the Water Sector as students wished to pursue their studies at Doctoral level," said the Vice-Chancellor.



Picture: NUST Vice-Chancellor Dr Eroid Naomab delivered his remarks at the event



WEMAST PHASE 2 IMPLEMENTATION KICKS-OFF WITH A THREE-DAYS WORKSHOP IN WINDHOEK, NAMIBIA



Picture: GMES and Africa Coordinator, Dr. Tidiane Ouattara and SASSCAL Executive Director Dr. Jane Olwoch with SASSCAL employees and a delegation from the AUC at the Kick-off Workshop in Windhoek

SASSCAL and the Global Monitoring for Environment and Security & Africa (GMES and Africa) team from the African Union Commission held a 3-days inception workshop for the phase 2 Wetland Assessment and Monitoring Platform for Transboundary River Basins in Southern Africa (WeMast) Project from 20th to 22nd of April 2022 in Windhoek Namibia.

GMES and Africa Coordinator Dr. Tidiane Ouattara congratulated SASSCAL for being selected for the phase 2 implementation for the WeMast Project and hailed SASSCAL as the only GMES and Africa supported consortium being led by a woman and performing exceptionally well. The other consortium members such as PUMA, EMESD and MESA have been taking part in preceding programmes where SASSCAL joined later. SASSCAL therefore needed to undergo a lot of planning, strategic alignment as well as acquaintance with AUC processes, policies and procedures.

The GMES and Africa has expanded its overarching goals from four pillars to six pillars during the implementation of the phase 2 programme. The newly added goals include Policy and Institutional Framework as well as Knowledge Management.

The newly added overarching goals are meant to respond to policy-related issues and promote sharing of knowledge and information between GMES and Africa supported consortiums. The new goals have been created to address various institutional challenges faced during the implementation of the GMES and Africa Phase 1 programme.

Meanwhile SASSCAL Executive Director who was also present at the kick-off workshop accompanied by SASSCAL staff said they are grateful for being awarded the phase 2 funding and stressed that since SASSCAL is a multi-facet institution, SASSCAL is happy to be part of the GMES and Africa not only because of the funding that comes with the award of the projects but most importantly because of its strategic position since four of its member states are also part of the African Union. Dr. Olwoch also expressed that she, and SASSCAL are honored to have added the African Union as a new funding stream in 2017 outside of the German Federal Ministry of Education and Research (BMBF) that has funded SASSCAL's core programmes since 2012. Dr. Olwoch informed the delegates in the meeting that SASSCAL takes the partnership with GMES and Africa seriously, as she promised to continue improving implementation of the programme every year.

WeMAST aims to design and develop an integrated platform for the assessment and monitoring of wetlands to support sustainable water and natural resources management of selected transboundary river basins, namely, the Cuvelai, Okavango River, the Limpopo River and the Zambezi River Basins. The WeMAST Portal was developed in the first phase and the main output of Phase 2 is to operationalize the portal and deliver products and services that are of high quality, times and relevant.

GMES and Africa is an initiative between the Africa Union and the European Union in the area of space science & technology and a key priority under the EU-Africa partnership. GMES & Africa aims to promote the development of local capacities, and institutional, human and technical resources for access to and exploitation of Earth Observation (EO) based services on an operational basis for sustainable development in Africa.

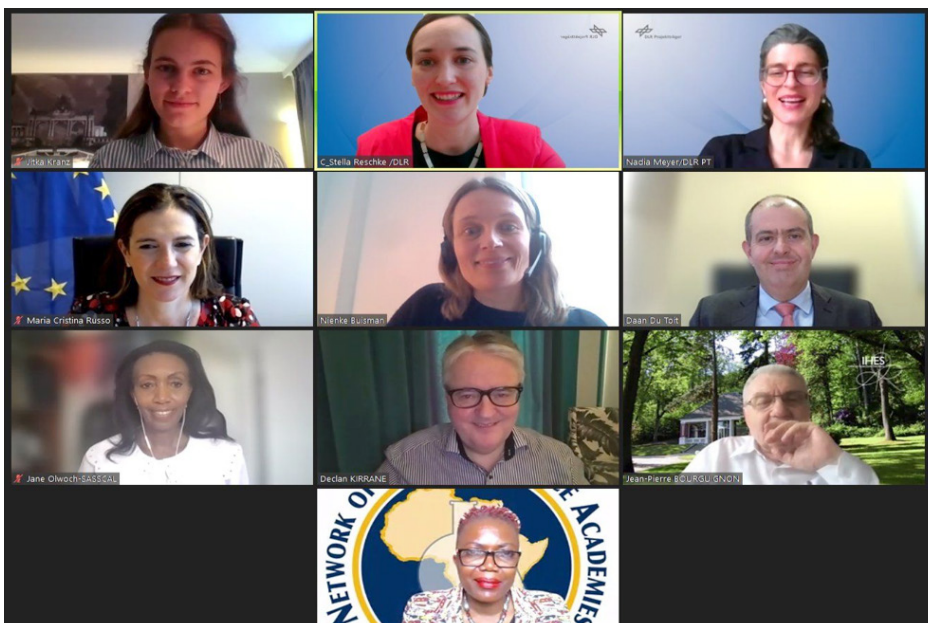
COPERNICUS-GMES & AFRICA PARTNERSHIP HELD A ROUNDTABLE DISCUSSION ON SPACE FOR SUSTAINABLE DEVELOPMENT

On the 15th of February 2022, Copernicus-GMES & Africa Partnership held a virtual roundtable discussion titled “Space for Sustainable Development”. The objective of this event was to unveil the past to present progress and future opportunities of partnership between Africa and EU on Earth Observation (EO) development with an orientation towards enhancing policy dialogue, business, gender and young entrepreneurship.

Constituting the panel of experts in the roundtable was SASSCAL’s Executive Director, Dr. Jane Olwoch and 13 experts from various international organisations

including the European Union, African Union and space institutions.

The panel of experts provided a concise overview of the Euro-Africa Partnership on Space Science and development which includes the Copernicus and GMES & Africa Partnership. They further discussed insights on opportunities EO can provide for the region. Informative data and facts were displayed to reveal how space data can drive robust green environment oriented sustainable development in Africa coupled with adoption of digitally innovative technologies.



Picture: SASSCAL Executive Director Dr Jane Olwoch and other speakers participating at the EU/AU online side event Summit

For the past 20 years the collaboration between Africa and the European Union on space matters has been very successful particularly on Earth Observation. The GMES & Africa initiative was established in 2007 as a firm commitment to cooperative action between Europe and Africa towards the development and implementation of Earth Observation applications tailored to African requirements.

A specific roadmap was developed which applied the programmatic approach of the EU's Copernicus programme (known as GMES at the time) to the African continent. The GMES & Africa initiative takes place in the wider context of the Africa-EU partnership, aimed at the sustainable development of the African regions and scientific cooperation between Europe and Africa.

COOPERATION BETWEEN SASSCAL, US FOREST SERVICES AND INCATEMA

SASSCAL through its Angolan Node has been exploring potential opportunities to establishing partnerships with the US Forest Services and INCATEMA. With regards to US Forest Services, the partnership consists of developing a MoU and eventually work collaboratively on a forest inventory project, where SASSCAL will lead a work

package (WP) as well as on community forest project financed by the partner.

Likewise, SASSCAL will sign a MoU with INACTEMA and will be responsible for designing the National Strategy for the Coal Production Chain specifically, the WP on Current context of the charcoal market in Angola.



RESEARCH AND CAPACITY DEVELOPMENT NEWS

CLIMATE AND ENVIRONMENTAL BRIEFS

[SASSCAL's Data and Information Portal \(http://data.sasscal.org/\)](http://data.sasscal.org/) is an open and online database, making available data and information from SASSCAL's initiatives and SASSCAL's partners from around the world, for southern Africa.

The Data and Information Portal not only hosts, but also safeguards data and information resources, making these freely available. The integrity and ownership of the contributing parties is ensured.

The Portal is continually updated with new resources. SASSCAL ensures that datasets assimilated for SASSCAL initiatives and projects, are also made available on the Portal for download. In this line, a number of data sets have been sourced and assimilated for the H²Atlas Africa project. These are made available for southern Africa and include, but are not limited to:

- [Gazetteer of southern Africa](#)
- [Africa Electricity Transmission and Distribution Grid Map](#)
- [Protected Areas of southern Africa](#)
- [Average annual, 40-year average & annual precipitation totals SADC countries from 1981 to 2020](#)

- [Wind Speed and Power Density GIS Data for southern Africa](#)
- [Africa small or mini hydro power potential](#)
- [Global Shipping Density \(Routes\)](#)

SASSCAL endeavors to source, assimilate and make available various datasets to support decision-making chains in the adaptation of climate change and sustainable land management. Datasets are updated as the source data becomes available:

- Precipitation data are assimilated from satellite-based [CHIRPS 2.0](#) precipitation data (CHC) into average annual precipitation, long term averages, Standardised Precipitation Index (SPI) and deviations from the average. These include:
 - [Standardised Precipitation Index \(SPI\) of SADC \(mainland\) for 2020/21 hydrological year](#)
 - Annual total precipitation by country from 1981/82 to 2020/21 hydrological year ([Angola](#), [Botswana](#), [Namibia](#), [South Africa](#), [Zambia](#) and [Zimbabwe](#))
 - [2020/21 Percentage \(%\) of the average precipitation for southern Africa \(mainland SADC\)](#)

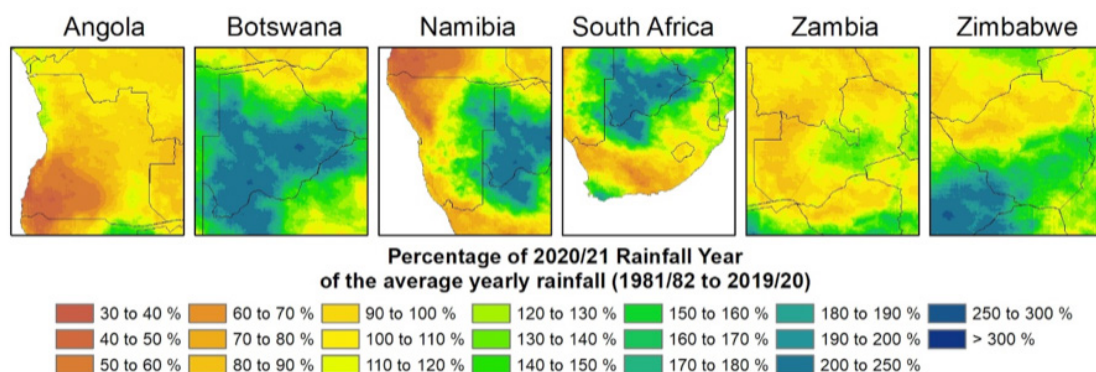


Figure 1: 2020/21 average yearly rainfall, as derived from the long-term yearly rainfall from 1981/82 to 2019/20

- Land Surface Temperature (LST) is derived from MODIS MOD11C3 Monthly Daytime Land Surface Temperature data. Derived datasets include:
 - [Average annual daytime land surface temperature \(LST\) \(degrees Celsius\) \(2001 to 2021\)](#)
 - [Average historic annual daytime land surface temperature \(LST\) \(degrees Celsius\) from 2001 to 2020](#)
 - [20-year Average historic annual daytime land surface temperature \(LST\) \(degrees Celsius\)](#)
- Two fire products have been explored by SASS-CAL and products have been derived from both:
 - [MODIS FIRMS Active Fire Collection 6 data products](#)

- [MCD64A1 Version 6 Burned Area data products](#)
- Notably, the burned area data is generated using surface reflectance data and the FIRMS active fire data. Thereby creating an improved burned area detection by reducing omission errors. ([Giglio et al 2020](#))
- The burned area datasets are made available as an annual total area burned ([Angola](#), [Botswana](#), [Namibia](#), [South Africa](#), [Zambia](#) and [Zimbabwe](#)) and a monthly total area burned ([Angola](#), [Botswana](#), [Namibia](#), [South Africa](#), [Zambia](#) and [Zimbabwe](#)) product from 2001 to 2021.

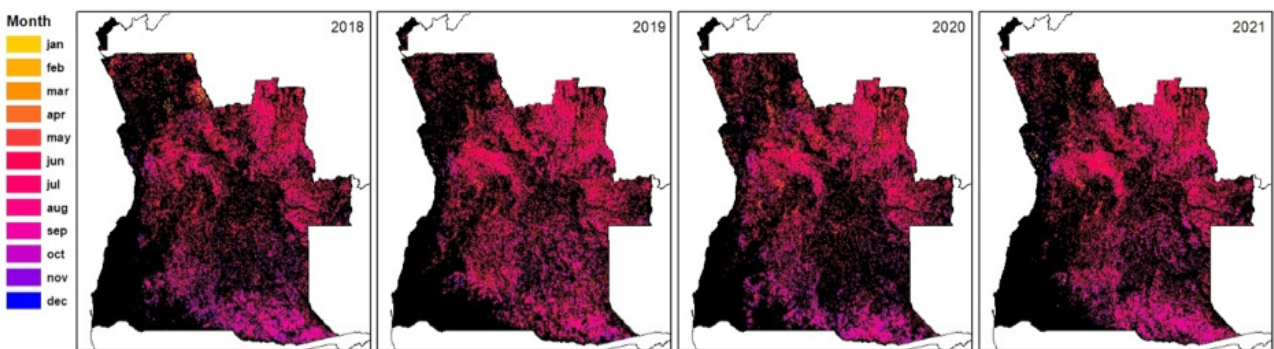


Figure 2: Monthly total area burnt for Angola (2018 to 2021) suggesting that burning generally occurs during the drier winter months.

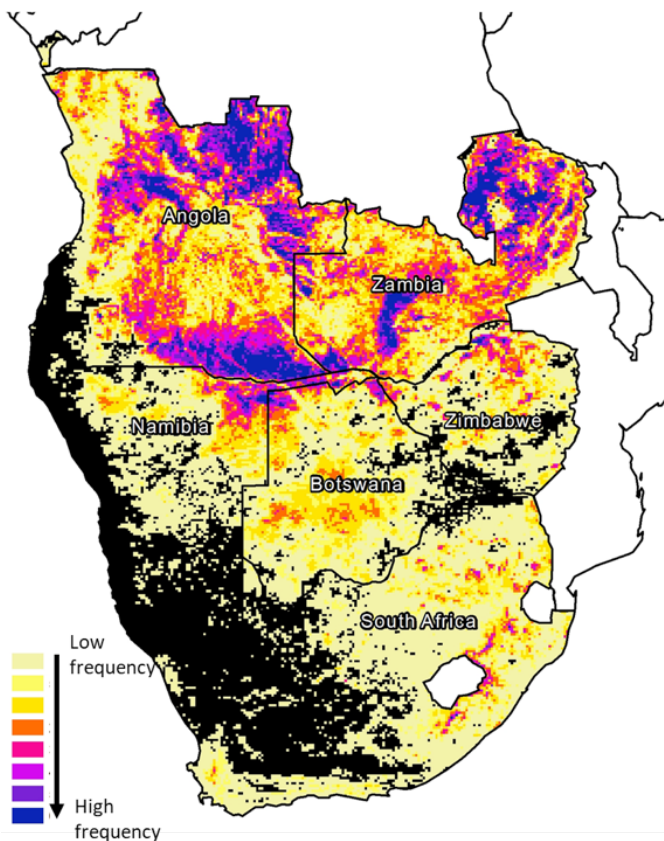


Figure 3: Fire frequency derived from the MCD64A1 burned area data from 2001 to 2020 per 10 km by 10 km area

SASSCAL moreover endeavors to ensure the availability of any datasets derived for the production of its products and services. In this line, many other datasets can be sourced from the Data Portal and the latest uploads include, but are not limited to:

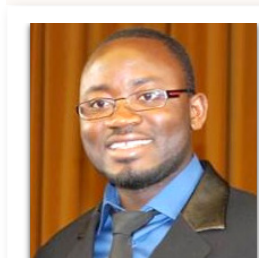
- [Copernicus Global Land Cover](#) ([Angola](#), [Botswana](#), [Namibia](#), [South Africa](#), [Zambia](#) and [Zimbabwe](#)) for 2015, 2016, 2017, 2018, 2019.
- WorldPop Population density ([Angola](#), [Botswana](#), [Namibia](#), [South Africa](#), [Zambia](#) and [Zimbabwe](#)) for 2015.

STAFF WELLNESS UPDATES

SASSCAL WELCOMES NEW STAFF

SASSCAL is pleased to announce four staff members that joined its fold recently. The four experts in research, science and climate related matters include Dr Vasco Chiteculo, Ms. Maria Sigopi, Mr. Anacleto Diogo, and Mr. John Isaac Molefe.

Dr Vasco Chiteculo



Dr Vasco Chiteculo who worked for both his home country, Angola and the Czech Republic brings to SASSCAL a wealth of experience in research, forest development and management, as well as remote sensing. He joins SASSCAL as Programme Coordinator at the Angolan Node.

Dr. Chiteculo holds a doctorate degree in Forest Management specializing in Forest Management Planning, sustainable development and technologies, a Masters in Economics of Sustainable Rural Development, another Masters in Forestry, Water and Landscape Management, and a bachelors degree in Agriculture of tropics and subtropic countries. His doctoral thesis focused on forest management and planning in miombo forest in the Huambo province.

His experience spans across organizations in scientific research and development at EGOE KOVO in Czech Republic, where he occupied a position of Foreign Cooperation and Business Development Manager. He lectured at the Czech University of Life Sciences, Prague, in the Faculty of Forestry and Wood Sciences, where he devoted his time sharing knowledge in forest production and forest management to Master students. Dr Chiteculo also led the Czech-Angolan Chamber of Industry and Agriculture. He lead research and development projects in conjunction with Mendel Universities in Brno, Czech Republic and private companies in development and assessment of ecological technology for wood modification and converting the research results into products for the market.

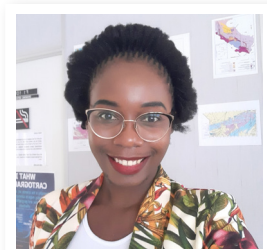
His research focused on development of forest management zones in Miombo, food security, timber

trade, product value a chain, remote sensing and decision supporting methods. Amongst his many achievements, Dr. Chiteculo has published many articles in peer review journals, one of them being widely cited in the field of remote sensing (Determining tree height and crown diameter from high-resolution UAV imagery).

He has developed tree growth models of the representative tree species of miombo in Angola and created forest management zones for miombo.

Ms. Maria Sigopi

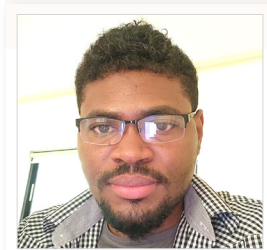
Maria Sigopi joins SASSCAL Namibia Node as Scientific officer. She holds an Honours degree in Geo Information Technology and an MSc degree in GIS



and Earth Observation from the Namibia University of Science and Technology. Her Masters degree was fully funded by SASSCAL. Ms. Sigopi held different positions before joining SASSCAL. She was a

Cartographer in the Regional Science Division at the Ministry of Mines and Energy, an external examiner for research and a Part-time Lecturer for GIS and Remote Sensing at the University of Namibia. She has research interests in developing and mapping applications of GIS and Remote Sensing focusing on Climate Change, environmental monitoring and water resource management.

Mr. Anacleto Diogo



Anacleto Diogo is the Scientific Officer of SASSCAL at the Angolan Node. His experience spans across earth sciences, computational systems,

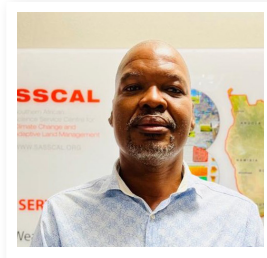
and research amongst many other fields. He is currently pursuing a PhD in Analysis and Modeling of Environmental Systems at the Federal University of Minas Gerais and a Masters in Remote Sensing and Geoprocessing at the Federal University of Rio Grande do Sul in Brazil. Mr Diogo graduated in Meteorology at the Federal University of Alagoas and in Systems Analysis and Development from Alagoas College of Technologies in Brazil.

He brings to SASSCAL practical knowledge in Earth Sciences, with emphasis on Orbital Remote Sensing and Meteorology, working mainly on earth surface processes, climate, vegetation, droughts and applied geotechnologies. He has technical expertise in management, analysis, interpretation, manipulation and treatment of various data formats, applying the appropriate techniques programming languages software. Mr Diogo worked in the area of Evolutionary Maintenance of Computational Systems at the Information Technology Division of the Federal Regional Court of the 4th Region (TRF4), in Porto Alegre, Rio Grande do Sul, Brazil and in research related to vegetation, drought and climate studies, in the semi-arid region of northeastern Brazil, Caatinga biome, as well as in different parts of Angola. His scientific research for Angola, his home country especially during his Masters in Remote Sensing resulted in scientific articles published in different journals.

Also of note is that Mr. Diogo is currently part of the Federal University of Minas Gerais team of Scientists/ Researchers to analyze and spatialize the Covid-19 outbreak in the State of Minas Gerais considering health, environmental and social aspects.

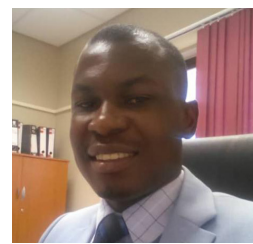
Mr. John Isaac Molefe

Mr. John Molefe was appointed to the position of Scientific Officer at SASSCAL Botswana Node in January. Mr Molefe holds a Master of Science (Environmental science) from the University of Botswana, a Post Graduate Diploma In Education (PGDE) as well as a Bachelor Degree in Environmental Science and History. Prior to joining the regional science service center, Mr Molefe



held various positions. He worked as an independent consultant, GIS and Environmental Analyst at Aqualogic, lecturer at the University of Botswana, and Botswana University of Agriculture and Natural Resources, as well as Earth Observation and Thematic Expert at the Monitoring for Environment and Security in Africa. He is currently pursuing an MPhil/PhD in Environmental Science at the University of Botswana with a focus on the reconstruction of long term fire regimes and land use land cover changes in northern Botswana.

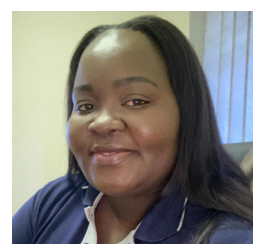
Staff Promotions



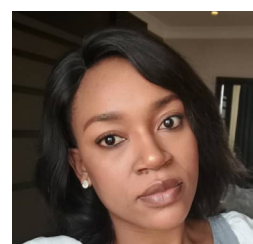
Mr Mattie Otto was recently promoted to Human Resource Manager effective 1st February 2022.



Ms Chenai Marangwanda was promoted to Grants Administration Manager effective 1st February 2022.



Ms Johanna Mumangeni was promoted to Senior Administrative Board Secretary effective 1st February 2022



Ms Tshepang Twala was promoted to Finance and Administration Officer effective 1st January 2022.



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Thank you to our enthusiastic editorial team for ensuring that our newsletter meets its objectives and at the same time addresses our varied target audience effectively. Our Editorial Team:

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The newsletter was compiled by SASSCAL Communications and Marketing.

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