

NEWSLETTER



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Executive Director's Desk



Prof. Nelago Indongo

Executive Director

Dear Readers,

I am delighted to present to you, our esteemed readers, the Second Quarterly Newsletter of SASSCAL for the period April to June 2025, following my appointment as Executive Director of SASSCAL as from 1 June 2025.

This edition is rich with exciting news and impactful engagements. One of the key highlights is the start of my strategic engagements with line ministries across our member countries to present and receive feedback on SASSCAL's five-year Strategy 3.0.

On 23 June 2025, I had the honour and privilege of engaging the newly appointed Namibian Minister of Agriculture, Fisheries, Water and Land Reform, Honourable Inge Zaamwani-Kamwi, and her team. We held constructive discussions on SASSCAL's operations, governance structures, key programmes, and strategic outlook. The Minister shared valuable feedback and outlined clear expectations moving forward. Similar engagements with line ministries in Angola, Botswana, and Zambia are scheduled for the coming weeks.

During this period, SASSCAL successfully hosted three 2.0 Research Programme Thematic Workshops in Angola, Namibia, and Zambia, with the participation of more than 400 stakeholders. These events showcased the results of the 13 research projects implemented in each member country. We also celebrated the progress of our students under the SASSCAL 2.0 Research Portfolio, who presented their milestones in Master's and PhD studies. These students are on track to complete their studies next year.

Looking ahead, we are excited to announce that the SASSCAL 2.0 Research Programme Conference will be held in Angola in October 2025, marking the successful conclusion of this programme. The event will bring together the SASSCAL Council of Ministers, Governing Board Members, academic and research partners, policymakers, and over 250 participants. Our Marketing and Communications team has begun preparations to promote this major event—so stay tuned!

This edition also highlights visits to our two Green Hydrogen Pilot Projects in Namibia: the Daures Green Hydrogen Village and Cleanergy Solutions Namibia. Together with our stakeholders—including the German Federal Ministry of Research, Technology and Space (project funder), the Namibia Green Hydrogen Programme, the Ministry of Mines and Energy, the German Embassy in Namibia, the University of Namibia, and the University of Stuttgart—we reviewed implementation progress. We are pleased to report that the Daures Green Hydrogen Village is 80% complete, while Cleanergy Solutions Namibia, consisting of a Green Hydrogen Plant and Refuelling Station, has been successfully implemented.

Other highlights in this issue include:

- Updates from our Open Access Data Centre.
- A success story from our first SGSP-IWRM student, Dr. Maria Kanyama, who successfully completed her PhD. Her inspiring journey is captured in this edition, as we cheer on her fellow students set to graduate by year-end.
- A success story from our first SGSP-IWRM student, Dr. Maria Kanyama, who successfully completed her PhD. Her inspiring journey is captured in this edition, as we cheer on her fellow students set to graduate by year-end.
- National Node updates: Botswana's Hydrometeorological Training to strengthen climate resilience, Namibia's National Water Reuse Strategy engagements, and Zambia's participation at the Water Forum and Exhibition.

Finally, we are proud to officially announce the appointment of Mr. Clive Mulumba as our Director of Finance and Administration.

With all these exciting developments, this edition is a true reflection of our collective progress and commitment. So sit back, buckle up, and enjoy this journey with us!

GOVERNANCE ISSUES

SASSCAL EXECUTIVE DIRECTOR PAYS A COURTESY VISIT TO NAMIBIAN LINE MINISTER



Honourable Inge Zaamwani, Minister of Agriculture, Fisheries, Water and Land Reform, and Prof. Nelago Indongo, SASSCAL Executive Director, pictured with staff during a courtesy visit

Prof. Nelago Indongo, SASSCAL's newly appointed Executive Director, has paid a courtesy visit to the Minister of Agriculture, Fisheries, Water and Land Reform, Honourable Inge Zaamwani.

During her visit on Monday, 23 June 2025, Prof. Indongo briefed the Minister on SASSCAL's Governance structures, operations, key programmes, and strategic outlook. She also informed the Minister about the upcoming Council of Ministers meetings scheduled for September 2025 and March 2026.

The SASSCAL Council of Ministers is the highest organ of SASSCAL and is constituted by the Ministers responsible for SASSCAL in the Member States and the German Federal Minister of Technology, Research and Space as the initial funding partner. The Council guides the political orientation of the organisation.

Hon. Zaamwani is the current Vice-Chairperson of the SASSCAL Council of Ministers.

On her part, the Minister was interested in knowing the progress made on the ratification of SASSCAL, as well as the organisation's research outputs and how these can be utilised by the Ministry and the broader public. She also enquired about the Green Hydrogen

pilot projects and how SASSCAL could support the scaling up of successful projects.

The Minister also needed more information on how SASSCAL's National Node Centres of Excellence operate in ensuring that all member countries are effectively served across the various thematic areas.

Ms. Ndiyakupi Nghituwamata, the Ministry's Executive Director and Accounting Officer, Ms Alexandria Angala, SASSCAL Governing Board Interim Vice-Chairperson for Namibia and Deputy Director at the Ministry and Dr. Joseph Amunime, Chief Agro-Business Analyst, formed part of the Minister's team during the visit.

The SASSCAL team comprised Prof. Indongo, Dr. Budzanani Tacheba, Director of Research, Science and Capacity Development, Mr. Panduleni Hamukwaya, Namibia National Node Programme Coordinator, Ms. Bianca Mutale, Executive Assistant to the ED and Ms. Ester Nakanduungile, Communications and Marketing Officer.

Prof. Indongo is also due to pay courtesy visits to all SASSCAL's member countries' line ministries in the weeks to come.

STAKEHOLDER ENGAGEMENT

SASSCAL'S ANGOLA NATIONAL NODE BRIEFS STAKEHOLDERS ON 2.0 RESEARCH PORTFOLIO



Stakeholders posed for a group photo with Angola's Deputy Minister for Science, Technology and Innovation, Honourable Prof. Alice Ceita Almeida, following the official opening of the Angolan Thematic Workshop held in Luanda from 2–3 April 2025

More than 100 people met in Luanda, Angola, to acquaint themselves with the progress that SASSCAL's second research portfolio has made so far. Representatives from the Government, Development Partners, Local Authorities, State-Owned Enterprises, research partner institutions, Academic institutions, and officials of the Ministry of Science, Technology and Innovation, SASSCAL, and the Community were in attendance.

Principal Investigators from SASSCAL-funded projects, namely ANGSOILS (Sustainable Management of Soil Fertility), BEEKEEPING, PLANT PROPERTIES, ELNAC (Enhanced Livelihoods and Natural Resource Management), WIRE (Water storage in the Angolan-Namibian Iishana system), SUSTAIN (Sustainable Food Security and Woodland Utilisation for Drought-Prone Communal Areas under Climate Change in SADC Countries) and VRPE (Virtual Regional Pole of Engineering), presented their research projects during the two-day 2.0 Thematic Workshop from 2nd to 3rd April, 2025.

As a SASSCAL member state, Angola hosts SASSCAL's research Priority Area, "Agriculture, Food Security and Land Management." Further, Angola provides strategic leadership through the coordination of ANGSOILS (Sustainable management of soil fertility) and VRPE (Virtual Regional Pole of Engineering) projects.

Following the official opening ceremony, high-level dignitaries toured the exhibition stands. Among them, His Excellency, Advocate Duma Gideon Boko, President of Botswana and Minister of Minerals and Energy, Ms Bogolo Kenewendo visited the SASSCAL booth, where they were briefed on SASSCAL's initiatives in green hydrogen and renewable energy, including the H2Atlas, Green Hydrogen pilot projects and capacity building programs including the Youth for Green Hydrogen Scholarship.



Panelists at the “Green Hydrogen: Pathway to a Sustainable and Resilient Energy Future in the SADC Region” session during the SADC Sustainable Energy Week 2024

Moreover, to embrace the theme “Agriculture and Research for Food Security in a World with Climate Change”, several research contributions are expected from SASSCAL 2.0 projects’ research packages, but domiciled within Angola.

The two-day event was convened to showcase the scientific research progress of the SASSCAL 2.0 research portfolio, with a specific focus on the seven projects currently being implemented in Angola, as outlined below.

Research Area	Acronym	Focus
Food Security	SUSTAIN	Promoting food security through sustainable agricultural practices.
Food Security	BEEKEEPING	Advancing beekeeping methods and honey production.
Biodiversity and Heath Ecosystems	Property Plants	Assessing the nutritional and medicinal properties of selected plants from Angola and South Africa.
Water Security	WIRE	Enhancing water storage in the Angolan–Namibian Iishana system through resource management and climate adaptation.
Climate Change	ELNAC	Strengthening natural resource management in response to accelerated climate change.
Cross-cutting Areas (Agriculture, Water, Climate Services, Biodiversity)	VRPE	Supporting SASSCAL projects in the collection, transmission, and integration of sensor data through IoT technologies.
Food Security	ANGSOILS	Investigating the relationship between soil properties and the morphological-molecular traits of native rhizobia in Angola and Zambia.

The specific objectives of the workshop were to present SASSCAL 2.0 projects results focusing on the agriculture and Climate Change; identify existing research gaps, challenges and opportunities (explore opportunities for future utilization of research innovations) in the Climate data and Services in Angola; and to strengthen stakeholders’ relationships between researchers and end users within SASSCAL 2.0 research portfolio.



Angola's Deputy Minister for Science, Technology and Innovation, Honourable Prof. Alice Ceita Almeida, delivering the keynote address at the event

Angola's Deputy Minister for Science, Technology and Innovation, Honourable Prof. Alice Ceita Almeida officiated the event on behalf of H.E. Prof. Dr. Albano Ferreira, the Minister of Higher Education, Science, Technology and Innovation.

The deputy minister said combating hunger and significantly reducing poverty is one of the priority issues for the Angolan Government.

"We are convinced that the scientific research projects whose results will be presented during this workshop are aligned with these types of concerns, and therefore, paths related to mitigation and adaptation to climate change will certainly be presented," she added.

The deputy minister recommends that the results of the scientific research and innovation projects to be presented at the workshop be converted into applications or prototypes and services that help solve problems in society, particularly those related to climate change.

The Food and Nutrition Security Action Plan is part of the National Food Security Strategy that describes the actions and institutional framework guiding the different sectors of the Angolan Government in implementing this plan.

She encouraged researchers in Angola and the SADC region to apply for SASSCAL funding and form inter-institutional teams.



Dr. Vasco Chiteculo, SASSCAL Angola Node National Programme Coordinator, pictured presenting his remarks during the event

Also speaking at the workshop, Angolan National Node Programme Coordinator, Dr. Vasco Chiteculo said the effects of climate change on agriculture will depend on the rate and severity of change in the country and region, as well as the degree to which farmers and livestock producers can adapt.

In this context, the Workshop would share results and solutions for adaptation and mitigation in the face of the impact of climate change. He further noted that thematic workshops are conducted in alignment with the priority focus areas assigned to each SASSCAL member country: Angola leads on Agriculture, Namibia on Water, Zambia on Forests, Botswana on Biodiversity, and South Africa on Climate. Botswana and South Africa already held their thematic workshops in 2024.

"Of all the simultaneous crises we face in the world, none is more impactful, none is more forceful, than the issue of the climate crisis," Dr. Chiteculo quoted one of the speakers on Climate Change adding that this needed joint efforts.



Some of the SASSCAL Principal Investigators and Stakeholders pictured during the workshop, where they shared feedback on the progress and achievements of the SASSCAL 2.0 Research Projects

The workshop focused on deliberations around the SASSCAL 2.0 Research Framework, aligning with the mandate of the SASSCAL Angolan Node Centre of Excellence, the SASSCAL Centre for Food Security, Agriculture & Land Management and the event's overarching theme: "Agriculture and Research for Food Security in a World with Climate Change."

NAMIBIA DELIVERS ON SASSCAL 2.0 AND GREEN HYDROGEN PROJECTS



Participants join Hon. Ruth Masake, Deputy Minister of Agriculture, Fisheries, Water and Land Reform, for a group photo at the SASSCAL 2.0 Thematic Workshop

As SASSCAL member states take stock of the second research portfolio coming to an end in 2026, Namibia stands tall as having delivered on both the SASSCAL 2.0 and the Green Hydrogen projects.

The Namibia National Node has implemented eight national research projects and awarded scholarships to 34 Namibian students pursuing Honours, Master's, and PhD degrees. Across all five African Member States—Angola, Botswana, Namibia, Zambia, and South Africa—a total of 104 students have benefited from the programme since 2022.

In the renewable energy space, SASSCAL is championing Green Hydrogen development having launched Africa's first Green Hydrogen Village in Namibia's Erongo Region in 2023. Accompanying this landmark achievement, the Namibian Youth for Green Hydrogen Scholarship Programme has recorded its own successes. Since its launch two years ago, SASSCAL has awarded scholarships to 148 students to study at the International University of Management, Namibia University of Science and Technology, University of Namibia, and TVET institutions.

In addition, the Graduate Studies Programme in Integrated Water Resources Management, (SGSP-IWRM) hosted by NUST will be graduating its first cohort in October this year. NUST welcomed its first

intake of 13 PhD students in 2022, three of them being Namibians. The SGSP-IWRM is expected to become SASSCAL's Regional Centre of Excellence in water resource management for the Namibia National Node and more intakes are expected next year and in the years to come. The currently enrolled thirteen students are from Angola, Botswana, Namibia, South Africa and Zambia.

The WeMAST project which is funded by the African Union and European Union under the GMES and Africa program aims to provide critical insights into the sustainability of wetlands across Southern Africa, utilizing Earth observation technologies and data-driven approaches. By leveraging the expertise of each technical partner, the initiative is poised to enhance the region's ability to manage and protect its vital wetland ecosystems.

With the action plan now more refined and timelines aligned, the partners are ready to move forward with the project, ensuring that the next phases are executed effectively, and that all goals are met on time. The collaboration and engagement during the meeting underscored the commitment of SASSCAL and its partners to advancing sustainable environmental management practices in Southern Africa.



Hon. Ruth Masake, Deputy Minister of Agriculture, Fisheries, Water and Land Reform, delivering her keynote address during the SASSCAL 2.0 Thematic Workshop

Hon. Ruth Masake, Deputy Minister of Agriculture, Fisheries, Water and Land Reform highlighted these achievements in her keynote speech during the SASSCAL 2.0 Research Programme Thematic Workshop in Windhoek, Namibia, held from 15th to 16th April, 2024.

The workshop was held under the theme “Strengthening Climate Resilience through Food Security and Water Management”, which was deemed relevant given the climate realities facing Namibia. The Ministry is SASSCAL’s line Ministry for Namibia and it has spearheaded the ratification process for the SASSCAL treaty of which Namibia was the first country to ratify followed by Zambia, whilst Angola and Botswana are at an advanced stage. The ratification of the SASSCAL treaty will enable SASSCAL to attain the status of an international organisation thereby strengthening its governance and global standing.

The Namibian Government honours the annual financial contributions to SASSCAL through the Ministry.

“We are now progressing through SASSCAL 2.0, funded by the German Federal Ministry of Research, Technology and Space (BMFTR) with a remarkable EUR 10 million investment. Through this phase, Namibia continues to play a pivotal role in

coordinating and implementing research projects, particularly in the critical areas of water and food security, valued at EUR 2.8 million equivalent to approximately N\$59 million at the current exchange rate,” She remarked.

Under the previous SASSCAL 1.0 Research Portfolio, which ran from 2012 to 2018, Namibia successfully executed 18 national tasks with a total investment of approximately EUR 1.8 million. These projects provided tangible benefits to Namibian communities and established a solid research foundation, she added. “As the host country of the SASSCAL Regional Secretariat, Namibia remains steadfast in its commitment to supporting SASSCAL’s mission of strengthening regional capacity through the generation and application of scientific knowledge, services, and innovations. These are critical in informing evidence-based decision-making on climate change and sustainable land management practices,” the deputy minister said.

SASSCAL Namibia National Node is the Centre of Excellence for Water Resources Management. Since its inception, SASSCAL has implemented numerous projects that directly respond to climate change challenges in the fields of agriculture, forestry, biodiversity conservation, water resource management, and capacity building. The Thematic Workshop was an opportunity to take stock of the achievements and to identify ways to further enhance the impact of SASSCAL's collective efforts.



Principal Investigators of SASSCAL 2.0 Projects in Namibia, along with students supported by the programme, pictured with SASSCAL Senior Scientist Dr. Musonda Ngonga

The Namibian workshop follows successful events in Botswana and South Africa in 2024 and Angola, which took place from 2-3 April 2025.

Namibia continues to experience increasing climate variability, ranging from severe droughts to extreme rainfall, flash floods, and outbreaks of pests and diseases. In 2024, the late President, H.E Hage Geingob declared a State of Emergency due to prolonged drought, which caused widespread crop failure, water shortages, and the depletion of natural resources. This year's events haven't been pleasant either as torrential rains led to destructive flooding in various regions, while locust infestations in the Zambezi Region pose further threats to food security.

"These ongoing challenges remind us that adaptive

and science-based solutions are not just necessary, they are urgent. The establishment of SASSCAL by six committed nations in response to climate change has proven to be a timely and visionary initiative," Hon. Masake said.



SASSCAL Interim Executive Director, Dr. Budzanani Tacheba, delivering his remarks at the SASSCAL 2.0 Thematic Workshop

Also speaking at the event, SASSCAL Interim Executive Director, Dr Budzanani Tacheba reiterated the importance of water. "Water is life—yet Namibia's freshwater resources remain under severe pressure," he said. To secure the sustainability of water in the future, Dr. Tacheba proposed the expansion of Water Harvesting Techniques through rainwater harvesting and groundwater recharge projects, which can mitigate water scarcity, and investments in Desalination and Recycling, as desalination plants offer a viable solution, while wastewater recycling can support agriculture.

Meanwhile, SASSCAL mitigates the water crises in Namibia through SASSCAL Project WIRE – (Water storage in the Angolan-Namibian ishana system which focuses on resource management and adaptation to climate change.

This project aims to establish the ishana system hydrology and water retention function; assess water demand and management challenges in light of changing climate; and establish if water retention or storage potential can be further increased.



Participants engaging in a panel discussion under the FRAME Project, hosted at the Gobabeb – Namib Research Institute

Strengthening Transboundary Water Cooperation

As a way to strengthen transboundary water cooperation, the Zambezi, Okavango, and Orange River basins remain critical water sources for Namibia. Dr Tacheba noted that regional partnerships remain essential for equitable water sharing adding that the SASSCAL Wetlands Monitoring and Assessment Project for transboundary river basins (WEMAST), a project funded by the African Union Commission and European Commission partnership, provides data supporting decision-making on wetlands management. The Project dispenses near-real time satellite based data products through open-access geoportal.

Policy Directions Influence

On policy matters, the SASSCAL Interim Executive Director said the Namibian Water Sector Support Program (WSSP) was designed to cover critical, urgent water supply infrastructure development and sanitation activities prioritised from various studies by the Technical Committee of Experts (TCE) supporting the Cabinet Committee on water, established by Presidential order. Although he said this is a step in the right direction, Dr Tacheba was quick to point out that more must be done to ensure long-term water security.

“Such policy instruments need to be continuously supported by reliable and up-to-date information and data, and this is where SASSCAL comes in through Climate Change research to inform policy,” he added.



Participants engaging in a panel discussion under the FRAME Project, hosted at the Gobabeb – Namib Research Institute

In his welcoming remarks, Mr. Panduleni Hamukwaya, Programme Coordinator for Namibia National Node said Namibia is proud to be an active founding member of SASSCAL. He said over the years, the SASSCAL sub-region has witnessed remarkable progress and growing impact of this regional institution especially in supporting research activities and capacity building for evidence-based decision-making and data-driven solutions to pressing environmental challenges.

At the national level, the Namibia Node enables and supports national research and stakeholder communities to interact with SASSCAL regional and international efforts on climate change, capacity development and demand driven science service provision. Mr Hamukwaya explained that the Thematic Workshop was a manifestation of shared commitment to advancing scientific research, policy dialogue, and innovation on sustainable land

management and climate change for the benefit of the region's communities and the sustainability of its natural resources.

"Therefore, this workshop offers us a golden opportunity to delve deeper into SASSCAL 2.0 thematic areas, to harmonize our perspectives, and to strengthen the foundations for impactful collaborative research. It is an opportunity also to ensure that the direction we take under SASSCAL 2.0 is firmly aligned with our national development priorities, including Vision 2030, the National Development Plans, and the Harambee Prosperity Plans," he added.

Furthermore, the Namibian National Node Coordinator said while affirming commitments to global obligations under the United Nations Framework Convention on Climate Change, the United Nations Convention to Combat Desertification, and the Sustainable Development Goals, there was need to prioritize action that supports climate resilience, sustainable land management, food and water security, and the protection of biodiversity areas that are essential to the wellbeing of people and the stability of economies.



Students supported under the SASSCAL 2.0 Research Programme presenting their study experiences to workshop participant

The workshop brought together Principal Investigators, farmers, students, and researchers to showcase their work, exchange ideas, and explore opportunities for collaboration.

Zambia is next in line to report progress on its SASSCAL 2.0 Research Portfolio projects. The neighbouring country's Thematic Workshop is slated for 20 – 21 May 2025.

SASSCAL CONCLUDES THEMATIC WORKSHOPS IN ITS MEMBER STATES



Attendees of the Zambian Thematic Workshop gathered in Lusaka for the event

After a series of thematic workshops to showcase results of the 2.0 Research Programme in the SASSCAL member countries, the institution concluded this exercise by conducting its fifth and final thematic workshop with calls for scientific research to serve as the cornerstone for informed policy-making, practical solutions, and community resilience. The workshop was held in Lusaka, Zambia from 20 to 21 May 2025, under the theme “Strengthening Climate

Change Response Through Scientific Research On Forest Eco System, Agriculture and Water Resources”. Similar workshops have been held since 2024 in other SASSCAL member states including Angola, Botswana, Namibia and South Africa.



Dr. Brilliant Habeenzu, Permanent Secretary of the Zambian Ministry of Technology and Science, delivering his keynote address at the event

Permanent Secretary of the Zambian Ministry of Technology and Science (MoTS), Dr. Brilliant Habeenzu, who officiated the event said the world today faces considerable economic, social and environmental challenges arising from the confluence of trends in climate change, population growth, agricultural expansion, deforestation, water scarcity and loss of biodiversity.

He painted a grim picture of Zambia, where climate-induced disasters have affected over 2 million people and cost the economy billions of dollars over the past two decades.

“Droughts, floods, and irregular rainfall patterns are threatening food security and livelihoods, particularly for the 70% of the rural population dependent on

agriculture,” the Permanent Secretary said adding “These statistics are not merely numbers, they are the lived experiences of our people.” Dr Habeenzu said he is confident that scientists and researchers

can contribute to the efforts of the Zambian Government led by H.E. President Hakainde Hichilema in addressing the challenges of climate change in that country.



Mr. John Lukonde Chongo, Alternate Board Member for Zambia, pictured at the event

Meanwhile, Mr. John Lukonde Chongo, SASSCAL's Alternate Board Member for Zambia, also delivered remarks at the event. He thanked SASSCAL for hosting the 2.0 Research Programme Thematic Workshop and emphasised the importance of the workshop's theme. SASSCAL, with generous funding from the German Federal Ministry of Research, Technology and Space (BMFTR) has been implementing the SASSCAL 2.0 Research portfolio since 2021. This portfolio includes 51 sub-projects, implemented by over 24 research and academic institutions. It has also supported 104 postgraduate students across the southern African region.

Each project benefits from collaboration between at least two regional partners and one German institution. In Zambia, SASSCAL is currently supporting seven research and capacity development projects at a cost of one million, four hundred euros. These projects are already contributing to policy, innovation, and improved community practices.

The projects include Sustainable management of soil fertility (ANGSOILS); Beekeeping and honey production; Enhanced livelihood and natural resource management under accelerated climate change (ELNAC); Food Security through Climate-Resilient Crops (FOSRECS); Farmer Resilience and Melon Crop Diversity (FRAME); Tipping Points Explained by Climate Change (TIPPECC), and Virtual Regional Pole of Engineering (VRPE).



Dr. Budzanani Tacheba, SASSCAL Director of Science, Technology, and Capacity Development, also presented an overview of SASSCAL programmes implemented in Zambia and other member states

Meanwhile, SASSCAL Director of Science, Technology and Capacity Development, Dr Budzanani Tacheba, reiterated the importance of the theme and focus of the fifth Thematic Workshop. The objective of the workshops was to showcase results as well as linkages between the SASSCAL 2.0 Research Programme activities with national policy and demonstrate impact from the research conducted so far. The SASSCAL Research Programme was established to address pertinent issues related to climate change and land management in the

region.

Dr Tacheba said in order to combat the climate change challenges, Zambia must strengthen its climate response through targeted scientific research in forest ecosystems, agriculture, and water management. "By integrating research findings into policy and practice, Zambia can enhance resilience, ensure food security, and sustain livelihoods in a changing climate environment," he added.



Dr. Chomba Innocent Chomba, National Programme Coordinator of the Zambia Node, delivering his remarks during the event

National Programme Coordinator at the SASSCAL Zambia National Node Office, Dr Chomba Innocent Chomba, said there is a realisation at SASSCAL that tackling the challenges of climate change is a task that requires integrated efforts from different stakeholders, bearing in mind that climate change is a complex issue whose dynamics are not yet fully understood. "Thus, the need for continued research and capacity building in climate change adaptation, mitigation, and policy," said Dr Chomba.

The event brought together more than 70 researchers from SASSCAL projects, government departments and Agencies, NGOs, development partners, academics, SASSCAL-supported students, SASSCAL staff from the Regional Secretariat and National Nodes and other participants. The SASSCAL 2.0 Research Programme will conclude in March 2026, and all 13 Projects under the portfolio are wrapping up and writing reports of their research

findings, which will be shared at the SASSCAL 2.0 Final Research Conference to be held in Angola towards the end of this year.



The vibrant event featured a variety of performances, as illustrated here

INTERNATIONAL PARTNERSHIPS AND PROJECTS

DRIVING NAMIBIA'S GREEN HYDROGEN FUTURE: SASSCAL'S SITE VISITS TO DAURES AND CLEANERGY

The Southern African Science Service Centre for Climate Change and Adaptive Land Management (SASSCAL) took part in two impactful pilot project site visits: the Daures Green Hydrogen Village (DGHV) and Cleanergy Solutions Namibia. These visits undertaken alongside the Federal Ministry of Research, Technology and Space (BMFTR) highlighted major milestones and underscored Namibia's progress in building a climate-resilient green hydrogen economy

Progress at Daures Green Hydrogen Village

The Daures Green Hydrogen Village, the first green hydrogen village in Africa, is a pioneering initiative at the forefront of the country's green hydrogen journey. As the implementing partner, SASSCAL joined key stakeholders for a high-level meeting and technical site visit, including representatives from:

- BMFTR (project funder)
- Namibia Green Hydrogen Programme (NGHP)
- Ministry of Mines and Energy (MIME)
- German Embassy in Namibia
- University of Namibia (UNAM)
- University of Stuttgart



Representatives from SASSCAL, BMBF, MIME, NGHP, UNAM, the University of Stuttgart, and the German Embassy during a high-level site visit to the Daures Green Hydrogen Village

As of March 2025, the overall implementation progress stands at 80%. Major updates include:

- Agricultural production under greenhouse irrigation is active, with successful harvesting of cucumbers, tomatoes, and bell peppers supplied to retail outlets in nearby towns.
- A 0.74 MW solar power plant, staff housing, and access roads are all completed and awaiting commissioning.
- Borehole infrastructure is fully operational: 3 boreholes are equipped and pumping, while 5 others are on standby.
- Reverse osmosis systems for water purification and wastewater recycling systems are installed.
- The Research Lab is fully constructed and equipped with advanced training tools.
- Ongoing research is being conducted by UNAM and the University of Stuttgart, including a comparative study using commercial ammonium sulphate while awaiting green ammonia production for fertilizer trials.



Operational greenhouse at the Daures Green Hydrogen Village, showcasing sustainable vegetable production powered by renewable energy

While the hydrogen electrolyser and ammonia generation systems are not yet installed, commissioning is expected by end of June 2025.

“This collaborative effort is a testament to what can be achieved through shared vision, innovation, and international cooperation.”

Progress at Cleanergy Green Hydrogen Plant and Refuelling Station Solutions Namibia

The second visit took place at Cleanergy Green Hydrogen Plant and Refuelling Station, a flagship project showcasing Namibia’s first fully integrated green hydrogen hub. The SASSCAL and BMBF delegation toured the facility, which now includes:

- A solar plant with a capacity of 5 MW integrated with a battery energy storage system installed on site and functioning;
- A hydrogen academy supporting and building local capacity through skills development to

- local stakeholders from higher education institutions such as UNAM, NUST, NIMT, local municipalities in collaboration with international partners.
- A fully equipped workshop converting diesel trucks into dual fuel vehicles;
- Green hydrogen production infrastructure with all the components of the hydrogen production unit including the electrolyser system is all installed on site. The installation of the electrolyser system is expected to commence by beginning of May 2025. First test green hydrogen generation run to be done by end May 2025 and final pure generation to start by end June 2025.

- An operational hydrogen refuelling station, marking a significant milestone toward clean transportation.



Delegates group picture at Cleanergy Green Hydrogen Plant and Refuelling

Station Solutions Namibia site

For SASSCAL, the visit reaffirmed the importance of investing in practical, scalable models that:

- Advance green hydrogen technologies;
- Strengthen local technical capacity and education through on site local training;
- Promote green jobs and youth empowerment and
- Enhance regional climate resilience.

“Cleanergy Green Hydrogen Plant and Refuelling Station is a living example of how infrastructure, innovation, and partnership can unlock transformative change.”

The Daures and Cleanergy visits clearly illustrate how Namibia is moving from concept to implementation in its green hydrogen strategy. Both projects highlight the power of cross-sector partnerships and underscore the importance of embedding science, skills development, training and sustainability into every stage of implementation.

As the coordinating and implementing partner for multiple green hydrogen and renewable energy initiatives, SASSCAL remains deeply committed to sustaining the momentum achieved in Namibia and across the broader Southern African region. At the same time, we are delighted to contribute and support the initiatives in national policies on



A view of the core hydrogen production and storage facilities at Cleanergy Green Hydrogen Plant and Refuelling Station Solutions Namibia

sustainable development, energy security, energy access and climate change.

We are proud to contribute to efforts that translate scientific innovation into tangible, sustainable outcomes driving green jobs, energy security, and climate resilience.

Our sincere appreciation goes to BMBF and all our project partners for their continued collaboration and trust.

Together, we are transforming Namibia's green hydrogen potential into a powerful driver of sustainable development across the region.

NAMIBIA-GERMAN GREEN HYDROGEN RESEARCH AND DEVELOPMENT CONFERENCE

The Namibia-German Green Hydrogen Research and Development Conference, held from June 4-5, 2025, in Windhoek, has been hailed as a significant Milestone in advancing green hydrogen initiatives,

particularly showcasing the progress of the Daures Green Hydrogen Village Project - Africa's pioneering integrated green hydrogen village.



Group photo of participants at the Namibia-German Green Hydrogen Research Conference, 4-5 June 2025 in Windhoek

The event was jointly organized by the Namibia Green Hydrogen Research Institute (NGHRI) of the University of Namibia (UNAM), in partnership with the Southern African Science Service Centre for Climate Change and Adaptive Land Management (SASSCAL), and the Institute of Energy Economics and Rational Energy Use (IER) at the University of Stuttgart, Germany. The conference brought together approximately 123 participants, including 102 in-person attendees and 21 virtual participants, representing a diverse mix of local and international partner stakeholders. This strong turnout underscores the increasing regional and global recognition of Namibia's leadership in green hydrogen research and innovation.

As a key implementing partner, SASSCAL played a vital role, delivering insightful remarks in its experience in funding and monitoring development projects and fostering crucial knowledge exchange throughout the conference.

The conference featured a plenary session with over 15 research presentations centered on the Daures Green Hydrogen Village and related research findings. The diverse range of topics underscored the multi-faceted approach to green hydrogen development and its broader implications.

Topics included:

- Life-cycle assessments of green hydrogen production
- Water extraction and treatment from brine sources
- Green ammonia-based fertilizers and soil fertility in desert agriculture
- Techno-economic modelling and national energy system pathways
- Hydrogen infrastructure materials and corrosion-resistant coatings
- Environmental compliance, biodiversity monitoring, and conservation
- Gender inclusion and community perceptions
- Skills localisation and workforce readiness for PtX technologies

Beyond presenting current research, the conference also provided an opportunity to reflect on the significant progress achieved since the award of the Joint Communiqué of Intent (JCol). This crucial initiative is implemented by SASSCAL on behalf of the Federal Ministry of Research, Technology and Space (BMFTR) in close partnership with the Government of the Republic of Namibia, highlighting the strong bilateral commitment to sustainable development.

The insightful two-day event concluded with site visit to the Daures Green Hydrogen Village. The participants had an opportunity to a guided tour of the established facilities and infrastructures from the research and training facilities, housing infrastructures, camping site and eco lodge infrastructures, hydrogen and ammonia generation assets, solar park, battery storage, reverse osmosis system, green house and nursery and water storage tanks. At the same time, the participants also had a chance to visit the wastewater treatment system.

The project is about 80% complete. This living demonstration serves as a powerful demonstration of Namibia's unwavering commitment to climate-smart innovation and sustainable development, showcasing tangible progress in the green hydrogen sector. Moreover, Daures Green Hydrogen Village demonstrate the concept of food-water-energy nexus which is crucial for sustainable resource management and planning, particularly in the context of climate change and growing populations.



Delegates during the site visit to the Daures Green Hydrogen Village, 6 June 2025

SASSCAL extends sincere gratitude to all the dedicated researchers, engaging speakers, enthusiastic students, and invaluable partners who contributed to making this impactful event a resounding success. The collaborative spirit throughout the conference fostered meaningful dialogue and strengthened the

foundation for future scientific partnerships in green hydrogen.

Our sincere appreciation also goes to BMFTR, the Federal Republic of Germany, the Government of the Republic of Namibia, and all our project partners for their continued trust, collaboration, and contributions to the success of the conference.

RESEARCH AND CAPACITY DEVELOPMENT

OPEN ACCESS DATA CENTRE

Fire history in southern Africa from 2001 to 2024 and fire risk for the dry winter months

The summer rainfall period in southern Africa is followed by the fire season, which mainly occurs in the drier winter months from June to October every year (Figure 1). The extent and ferocity of burning is frequently linked to the available fuel load. This is particularly evident from the map depicting the extent of burning in 2024 in southern Africa (Figure 2). In particular, Botswana and Namibia had been suffering from a prolonged drought that started during the 2022/23 rainfall year. Due to the resulting poor vegetation condition, fuel loads were low and the extent of burning in Botswana and Namibia was fairly low in 2024.

However, in the first quarter of 2025, much of Botswana, Namibia, north-western and north-eastern South Africa and southern Zimbabwe received above average rainfall, resulting in abundant grazing and consequently heavy fuel loads. This does foretell a risk of higher fire risk in fire-prone areas during the coming dry winter months and leading up to the 2025/26 rainfall season. Figure 3 demonstrates that high rainfall years, such as 2010 and 2011, do tend to coincide with more burning.

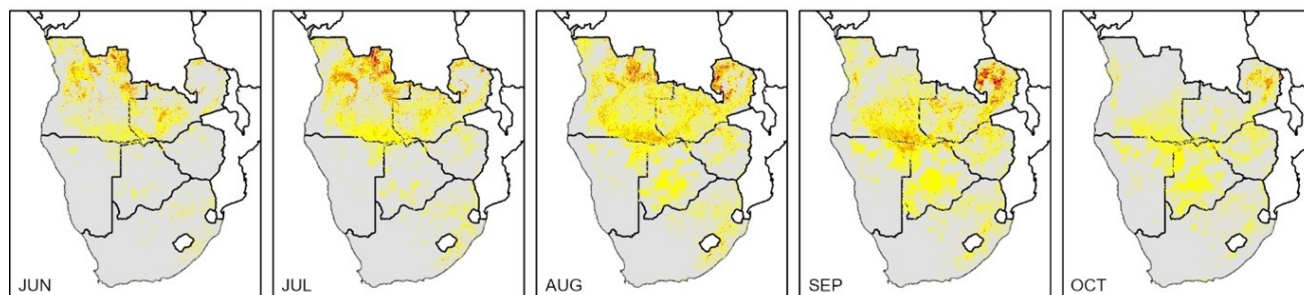


Figure 1: Extent and frequency of burning from June to October in southern Africa

Notably, the map depicting the number of years of burning from 2001 to 2024 shows areas in southern Africa, that are burned almost annually since 2001. Large expanses of land in Angola, Zambia and northern Namibia are burned annually. This burning is

mostly anthropogenic and associated to land clearing and hunting practices. Areas that are being burned annually for many consecutive years do raise concerns for the regeneration of certain tree and other plant species

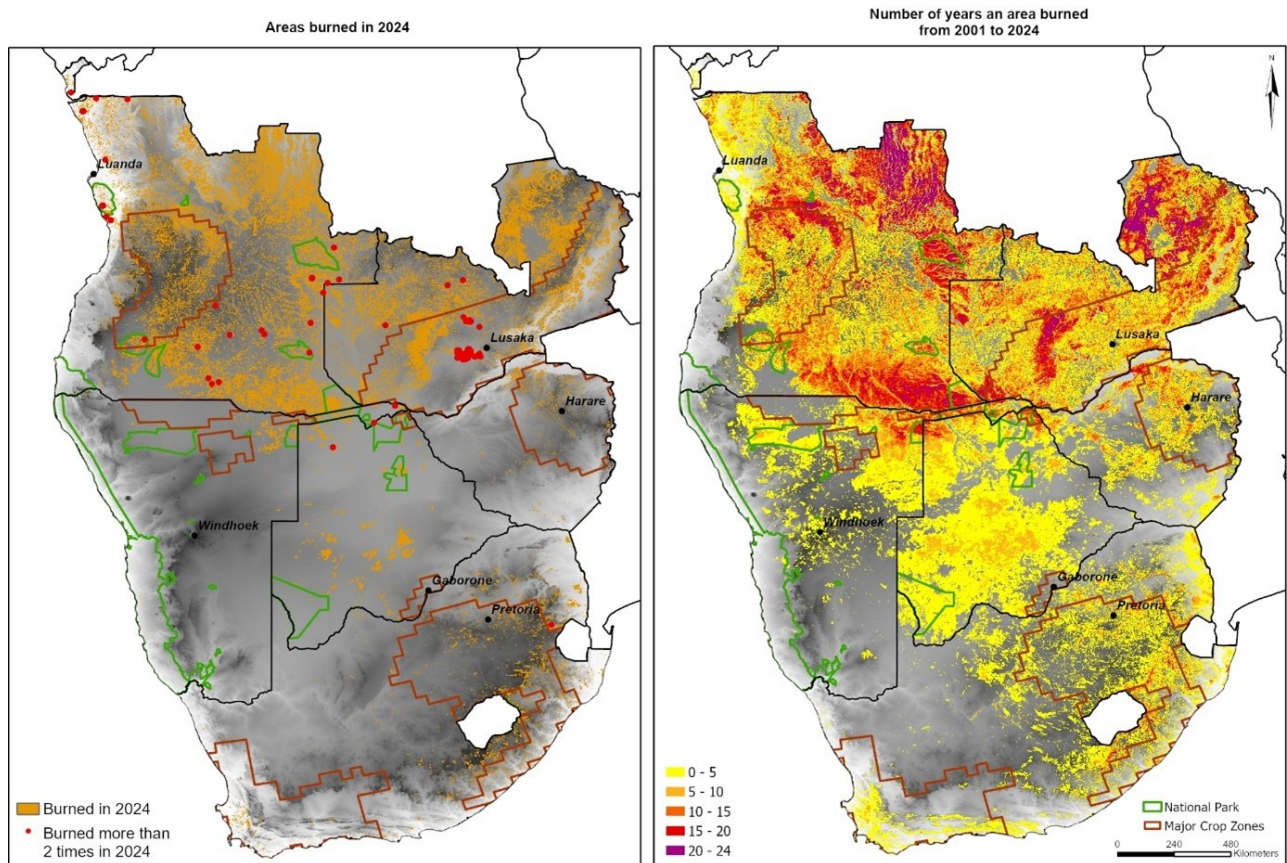


Figure 2: Map of burning for 2024 compared to the historic burning in southern Africa

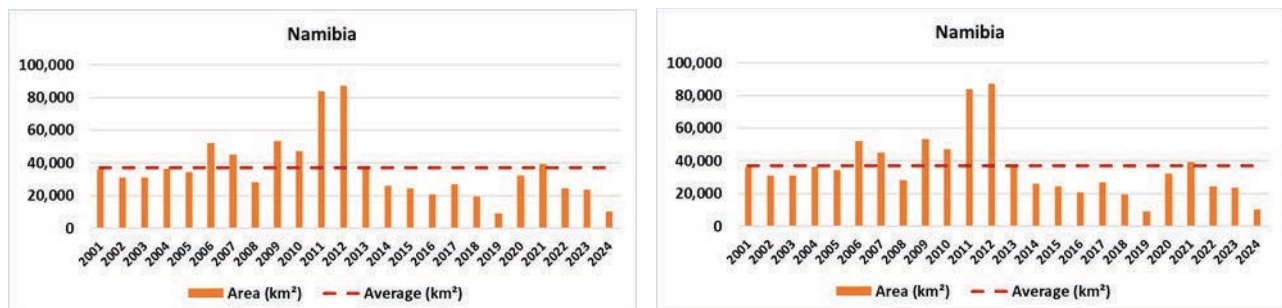


Figure 3: Annual areas burned in Botswana and Namibia

RESEARCH IS NEEDED TO LOOK INTO INNOVATIVE TECHNOLOGIES THAT COULD HELP IMPROVE WATER SECURITY



A group picture of participants at the S(SGSP-IWRM) stakeholder Promotional and visibility Event that took place on 11 – 12 June 2025 in Ongwadiva, Oshana Region of Namibia

Executive Director in the Ministry of Agriculture, Fisheries, Water & Land Reform, Mr. Teofilus Nghitila said Water security in Namibia is a critical issue due to the country's arid climate and limited water resources. Research is needed to look into innovative technologies that could help improve water security. He further said, securing water future requires a collective effort by scientists, policymakers, engineers, and communities must collaborate to advance research that will safeguard this vital resource. If we commit to innovation today, we will ensure water security for generations to come.

The Executive Director made the above remarks when he officiated the two-day event of the SASSCAL Graduate Studies Programme in Integrated Water Resource Management (SGSP-IWRM) stakeholder Promotional and visibility Event that took place on 11 – 12 June 2025 in Ongwadiva, Oshana Region of Namibia.

The event brought together over 70 participants from academic institutions, research institutions and policy makers and stakeholders from the water sector from all over the country.



The SGSP-IWRM Graduate Studies Programme Students with upcoming potential students pictured at the event

The SGSP - IWRM is a three-year PhD programme implemented by SASSCAL through a partnership with the Namibia University of Science and Technology (NUST) and with the German International Centre for water-resources (ICWRGC). The programme has currently has thirteen students out of the initial proposed fifteen from Angola, Botswana, Namibia, South Africa, and Zambia. The study Programme receives support from a SASSCAL Scientific and Advisory Committee constituted by country representatives from member states. The Programme also provides industry-oriented short courses for on-the-job training on new and

emerging trends in the water sector.

The thirteen students are currently finalising their research thesis and will be graduating this year with a PHD, with one of them having already graduated in April this year.

SASSCAL is preparing to publish a new call for a new intake after successfully implementing the current cohort. The new intake will consider a number of students from SASSCAL member countries to take up studies for the next three years starting from 2026.

Mr. Nghitila encouraged students planning to study in 2026 to look into these research topics:

- How climate change affects water availability in Namibia.
- Sustainable ways to use groundwater without depleting it.
- Creating better models to predict water resources like rainfall and groundwater.
- Finding affordable ways to get water from the sea or salty groundwater, and collecting rainwater.



Posing for a picture are workshop participants

- Improving water supply in cities, including reusing wastewater, saving water, and fixing leaks in old pipes.
- Using water wisely in farming to save water and keep growing enough food.
- Studying laws and policies to share water fairly and avoid overuse.
- Managing rivers and water sources shared with other countries, following international laws to ensure fair use.



Dr Budzanani Tacheba, Director of Science, Technology and Capacity Development, delivering a remark at the event

SASSCAL Director of Science, Technology and Capacity Development Dr Budzanani Tacheba, said there is a need to build human capacity for Sustainable Water resources Management. "Human capacity development in water resource management should be emphasised across all challenges".

Meanwhile the Programme Coordinator for the SASSCAL Namibian National Node, Mr. Panduleni Hamukwaya said, SASSCAL is no stranger to organising capacity development and outreach events. "Just last year, SASSCAL conducted a nationwide campaign across all 14 regions of Namibia to raise awareness about the Green Hydrogen Study Programme,

mobilising young Namibians to apply. I am therefore proud to inform that we now have approximately 160 students enrolled in this programme across undergraduate and postgraduate levels. Today, we are here once again with a renewed mission, this time, focusing on doctoral studies. We aim to provide comprehensive information about the SASSCAL Graduate Studies Programme in Integrated Water Resources Management (SGSP-IWRM), which aligns with SASSCAL's Namibia Centre of Excellence in Water Resource Management". This he said is a vital area of study, given the increasing importance of sustainable water resource management both locally and in the region.



Mr. Panduleni Hamukwaya, Programme Coordinator for the SASSCAL Namibian National Node, pictured while delivering his remarks



Pictured are SASSCAL officials, together with the SGSP secretariat from the Namibia University of Science and Technology at the Cuvelai Watercourse Commission in Oshakati

On the second day of the event, SASSCAL officials, together with the SGSP secretariat from the Namibia University of Science and Technology, undertook a field visit to the Cuvelai Watercourse Commission (CUVECOM) in Oshakati.

The purpose of the visit was to gain understanding of CUVECOM's current research activities and thematic priorities, while exploring potential areas of collaboration and synergy between the SGSP-IWRM programme and CUVECOM, particularly in the field of transboundary water research.

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The purpose of the visit was to gain understanding of CUVECOM's current research activities and thematic priorities, while exploring potential areas of collaboration and synergy between the SGSP-IWRM programme and CUVECOM, particularly in the field of transboundary water research.

SASSCAL will plan to undertake the same event in south Africa during the course of the year.

SGSP-IWRM CELEBRATES FIRST PHD GRADUATE: DR. MARIA KANYAMA



Dr. Maria Kanyama at the Graduation Ceremony on 8 May 2025, alongside SASSCAL Interim Executive Director Dr. Budzanani Tacheba and SASSCAL Senior Professional Officer for Human Capacity Development Mr. Kevin Stephanus

Her PhD focused on “Developing an anomaly detection model that integrates artificial intelligence and lightweight blockchain to improve the performance and transparency of smart water metering networks”.

The SGSP-IWRM is a three-year study programme hosted by the Namibia University of Science and Technology (NUST) in partnership with the German-based International Centre for

Water Resources and Global Change (ICWRG).

The programme was launched in 2021, with 13 students enrolled in 2022 from SASSCAL member states: Angola, Botswana, Namibia, Zambia, and South Africa. All students are expected to graduate in October 2025. However, Maria Kanyama has stood out as the first to complete her studies ahead of schedule.



Dr. Maria Kanyama pictured with Dr. Prof Omotayo Awofolu, Acting Director: Research & PG Development at NUST and SASSCAL Senior Professional Officer for Human Capacity Development Mr. Kevin Stephanus

The SGSP-IWRM is funded by the German Federal Ministry of Education and Research (BMBF) through SASSCAL, the implementing agency in Southern Africa. The programme is supported with 3 Million Euros, which covers full funding for the 13 students, including tuition, accommodation, scientific mobility to Germany, and living stipends for the entire duration of their studies.

In December this year, the study programme of the first cohorts will be coming to an end and SASSCAL is already in the process of finalising the call to advertise for the second cohort, which is expected to kick off the three-year studies by the year 2026.

In the same vein, SASSCAL is in the process of establishing other Graduate study programmes in the rest of the SASSCAL member countries. The Angolan Study programme is expected to start next year in 2026 with a focus on Agriculture and Food Security in line with their Centre of Excellence for Food Security, Agriculture and Land Management. The SASSCAL Graduate Studies Programme in Integrated Water Resource Management, which is hosted in Namibia, is also in line with the SASSCAL Centre for Water Resources Management assigned to Namibia.

In Conversation with Maria Kanyama's Journey through her Doctoral Study Programme:



Moments of pride: Dr. Maria Kanyama receiving her PhD during the formal graduation ceremony

Can you briefly share your academic journey leading up to your PhD?

My academic journey has been shaped by the desire for meaningful discovery, purpose, and a deep commitment to solving real-world problems. I began with a Bachelor's degree in Electronics and Telecommunications Engineering. In my final year research project, I developed a smart irrigation system, which sparked in me a significant interest in materialising the link between technology and water resource management. My research bias created more curiosity which influenced and laid the foundation for my future research direction.

Though I later completed a Master's in Electronics and Computer Engineering, and working in the aviation sector as an Air Traffic Electronic Safety Personnel, where the work was more technical and structured. As time went by, I felt that I did want something more than routine maintenance and operations. I wanted to

build, to innovate, and to create tools that could respond to the everyday challenges faced by our communities in the region. This reflection is what triggered my desire to transition into Computer Science, where I pursued a PhD focused on applying current technologies such as artificial intelligence and blockchain to improve water systems. I wanted my research to respond to the realities of data scarcity and infrastructure limitations, especially in Southern Africa. My aim was to explore how emerging technologies could be used not only to detect and prevent water loss, but also to support more transparent, secure, and inclusive water governance.

What was the focus of your PhD research, and why did you choose this particular topic? What are some key findings or outcomes from your research? How do they contribute to your field?

My PhD focused on developing an anomaly detection model that integrates artificial intelligence and lightweight blockchain to improve the performance and transparency of smart water metering networks. I chose this topic because of the persistent challenges related to water loss, data inaccuracy, and system inefficiencies in traditional water metering, particularly in regions like Southern Africa where infrastructure is limited. I wanted to explore how we can leverage current technologies not only in ideal conditions, but also in data-scarce environments and low-resource settings.

Throughout the research, I developed and evaluated an ensemble machine learning model capable of detecting abnormal consumption patterns using real monthly water meter data. I applied LSTM autoencoders for anomaly labeling, data augmentation techniques to expand limited datasets, and class imbalance handling methods to improve model performance. I further introduced IOTA Tangle to enhance data integrity and security, ensuring that the detection system could operate in a trustworthy and tamper-resistant environment.

The results demonstrated that even with minimal infrastructure, we can build intelligent systems capable of detecting anomalies with high accuracy and reducing water loss by up to 30 percent. This research contributes to the advancement of responsible AI in water governance and provides a practical framework for the integration of blockchain in water networks. It resulted in six peer-reviewed publications, including the *Physics and Chemistry of the Earth and MDPI Water*, and was presented at several international conferences. By applying emerging technologies to real-world challenges, my work bridges the gap between innovation and practical implementation in sustainable water resource management.

How did the funding from SASSCAL support your academic journey and research work?

SASSCAL's support was transformative. It allowed me to fully dedicate myself to my research without the constant weight of financial stress.



Dr. Maria Kanyama at the Graduation Ceremony on 8 May 2025, alongside SASSCAL Interim Executive Director Dr. Budzanani Tacheba

Being a full-time student, fully focused on my PhD, was a privilege that many do not get to experience, and for that I am deeply grateful. It made it possible for me to complete my PhD in just three years.

The funding covered far more than tuition and research expenses. It provided medical aid, essential tools such as a laptop, and supported my travel to conferences and stakeholder engagements. It also created an opportunity for me to travel to Germany for the first time through the scientific mobility program, which expanded my academic and cultural horizons. I managed to establish a dedicated office space where I could work consistently and in a structured way. The financial support kept me anchored, even during the most challenging phases of the journey. It was not just funding. It also instilled a sense of belief in achievement, support, and space to grow.

What were some of the challenges you faced during your PhD, and how did you overcome them?

There were several challenges along the way, both technical and personal. I worked with traditional monthly water meter data rather than real-time smart meter feeds, which meant I had to rethink creatively about how to generate meaningful insights. I explored methods like data augmentation and used LSTM autoencoders to label and reconstruct sequences. That process required patience, iteration, and a lot of trial and error.

Beyond the technical hurdles, there were moments of isolation and self-doubt. Like many PhD students, I faced mental fatigue, tight deadlines, and the weight of trying to create something original in a space that is constantly

evolving. What kept me grounded was my purpose. I knew this work mattered. I leaned on the support of my mentors, created room in my schedule for reflection and rest, and reminded myself that progress is not always loud. Sometimes it was quiet, slow, and deeply personal but I kept showing up, one step at a time, and eventually the pieces started coming together.

Now that you have completed your PhD, what are your future career plans?

At the moment, I am serving as a CDKN African Early-Career Research Fellow, where I am strengthening my skills in knowledge brokering and learning how to translate scientific research into practical tools that can inform policy and support better governance.

I am currently focused on transforming my PhD findings into policy briefs, toolkits, and applied frameworks that can help decision-makers use artificial intelligence to manage water more effectively, especially in data-scarce and resource-limited settings. I am also planning to pursue a post-doctoral fellowship to further enhance my research skills and expand my work into emerging technologies in environmental systems. In the long run, I hope to join academia where I can teach, supervise, and mentor the next generation of researchers—especially those from underrepresented backgrounds who often face systemic barriers.

In parallel, I am actively applying for grants that support interdisciplinary, impact-driven research and seeking collaboration with institutions and individuals working at the intersection of technology, climate resilience, and public policy. My long-term vision is to contribute to building ethical and inclusive AI ecosystems across Africa, and to support African-led innovation that responds to the continent's most urgent climate and development challenges.

What message would you like to share with other students who are considering pursuing a PhD? Pursue it with clarity and purpose. A PhD is not just an academic milestone. It is a journey of growth, discovery, and service. Know why you want to do it and hold onto that reason when the process becomes difficult. It will test your patience, your thinking, and your confidence, but it will also stretch you in ways that are powerful and lasting. You do not need to have it all figured out before you begin. Start where you are and trust that the process will shape you. Your voice matters. Your perspective brings value. And there is space for you in research and in the conversations that shape the future.

Any final words of appreciation or advice to SASSCAL and its stakeholders regarding the importance of investing in research and education?

I am truly grateful to SASSCAL for believing in the kind of potential that is not always obvious on paper but lives in people who carry vision, resilience, and the courage to imagine something different. This was more than just an investment in research. It was an investment in people, in purpose, and in the future of this continent.

I encourage SASSCAL and its stakeholders to continue supporting projects that are rooted in local realities and driven by bold ideas. There is immense talent across Southern Africa. What many young researchers need is the right environment to grow, the freedom to innovate, and the support to lead. When institutions like SASSCAL create that space, they do more than fund research. They shift narratives. They unlock solutions. And they help shape a generation of African scientists who are not only capable of responding to the challenges of our time but are ready to lead with clarity and conviction.

PRESS RELEASE: SASSCAL COMMEMORATES THE WORLD DAY TO COMBAT DESERTIFICATION AND DROUGHT – 17 JUNE 2025

The Southern African Science Service Centre for Climate Change and Adaptive Land Management (SASSCAL) joins the global community in commemorating the World Day to Combat Desertification and Drought, observed on 17 June 2025.

This year's theme "Restore the Land, Unlock the Opportunities", resonates profoundly with our day-to-day work in the many projects we implement in our member countries, namely Angola, Botswana, Namibia, South Africa and Zambia.

Southern Africa is affected by desertification covering over two-thirds of her land area. The degradation of arable and pastoral lands continues to accelerate, driven by prolonged droughts, unsustainable land-use practices, overgrazing, deforestation, and the impacts of climate change.

In the last 30 years, many countries in the region have experienced harsh and unforgiving climatic conditions where drought is not an occasional event, but a recurring reality. Coupled with desertification, these challenges threaten not only the health of our ecosystems, but the very foundation of our rural livelihoods, food security, and socio-economic development.

In response to these challenges and others, SASSCAL generates data; invests in people; and integrates restoration of land and unlocks opportunities for the people.

SASSCAL through GMES and Africa project, under the Sahel region, is working to combat desertification and land degradation through the

MISLAND (Monitoring, Impact, and Sustainability of Land Degradation) service alongside the UNCCD. MISLAND is being customized at the country level to integrate Land Degradation Neutrality (LDN) indicators and UNCCD reporting requirements.

Furthermore, it will aid in disseminating information simplified for decision making, and customizable to provide actionable insights and in the end guide policy design/implementation in Africa and monitoring SDGs (especially 15.3.1) for adaptive land management and restoration.

This year, SASSCAL's TIPPECC Project, in partnership with GERICS (Germany), has made significant progress in developing the Climate Services Gateway, a digital platform that delivers real-time climate insights to farmers, researchers, and policymakers across Southern Africa. This portal will empower stakeholders to detect drought conditions early and take timely action to reduce their impacts, thereby enhancing resilience to climate change in the region.

By making knowledge accessible, dynamic, and actionable, we are transforming how decisions are made from the field to the policy table.

Together, they build ecological resilience while unlocking economic opportunities for the people of Southern Africa. SASSCAL does not merely study the land but invests and restores it while coordinating science that speaks directly to the needs of our communities, ecosystems, and economies.

Let us, therefore, as a collective, continue to restore the land, not as an obligation, but as our shared opportunity.

SASSCAL TAKES PART IN THE ZAMBIA WATER FORUM AND EXHIBITION



Hon. Collins Njovu, Minister of Water and Sanitation passing through the SASSCAL stand at the Zambia Water Forum and Exhibition

The SASSCAL Zambia Node Office participated at participation in the 13th Zambia Water Forum and Exhibition (ZAWAFE), held from 10th – 12th June 2025 at the Mulungushi International Conference Centre in Lusaka – Zambia under the theme:

“Integrating Solutions for Sustainable Development: Exploring the Water-Energy-Food and Ecological Nexus.”

At the particular event, the Zambia Node Office staff exhibited various products and services.

Among the key sample products exhibited include honey, biscuits, wax soap, brochures on various SASSCAL activities and many other communication materials. Several participants visited the stand and were support with information on SASSCAL activities in the region. Furthermore, the Minister of Water Development and Sanitation, Hon. Eng. Collins Nzovu, MP, who was the Guest of Honour at this event, who visited the SASSCAL stand, received more information on the Organization’s activities in Southern Africa.



Zambia Node staff exhibiting SASSCAL Products and Services

SASSCAL TRAINS BOTSWANA EXPERTS ON CLIMATE AND WATER DATA



Participants at the Hydro-Meteorological Training at Travel Lodge, Gaborone, Botswana using R-statistics

SASSCAL hosted a five-day training workshop in Gaborone from 2–6 June 2025 to strengthen Botswana's capacity in managing climate and water data.

The workshop brought together 26 participants from key institutions such as the Department of Meteorological Services, Department of Water and Sanitation, OKACOM, and the University of Botswana. Facilitated by Mr. John Isaac Molefe, SASSCAL Botswana Node Coordinator, the training focused on practical skills in data collection, analysis, visualisation, and communication using R Statistics.

Participants praised the interactive approach, noting that it improved their ability to clean, analyse,

and interpret hydro-meteorological data for decision-making. Many highlighted increased confidence in applying R software to their daily work.

Looking ahead, participants recommended more hands-on practice and advanced training in areas such as remote sensing, real-time data processing, and climate modelling.

The workshop marks an important step in building Botswana's scientific capacity for climate resilience, ensuring that data-driven solutions support national planning and sustainable development.

SASSCAL PARTICIPATES IN WARENAM ROUND TABLE ON WATER REUSE



Participants engaging in the Round Table discussions

The Namibia National Node recently convened the Water Reuse Strategy for Namibia (WaReNam) Round Table discussion, a platform for multi-sectoral dialogue aimed at supporting the development of Namibia's National Water Reuse Strategy. SASSCAL through the Namibia Node is part of the consortium that is implementing the WaReNam Project in Namibia. The project, which seeks to support the development of a comprehensive National Water Reuse Strategy for Namibia, was launched with funding from the German Federal Ministry of Research, Technology and Space (BMFTR) and will run from July 2024 to June 2027.

The Round Table brings together different stakeholders to explore opportunities, challenges, and collaborative actions to advance water reuse in the country. The initiative seeks to address water scarcity and support the Namibian Government in creating a strategy to increase water security by effectively using municipal wastewater.

Participants included representatives from the Ministry of Agriculture, Fisheries, Water and Land Reform, Namibia Water Corporation, City of Windhoek, Namibia Emerging Commercial Farmers Union, Meatco, Daures Green Hydrogen Village, Hyphen Green Hydrogen, the Institute for Social-Ecological Research, the International University of Management, the Legal Assistance Centre, NIMT and the National Commission on Research, Science, and Technology.

SASSCAL was represented by:

- Mr. Panduleni Hamukwaya, Programme Coordinator, Namibia National Node
- Ms. Maria Sigopi, Scientific Officer
- Ms. Klaudia Amutenya, Programme Officer
- Ms. Sylvia Thompson, Spatial Analyst at the Open Access Data Centre

The discussion reflects a shared commitment to advancing water reuse in Namibia for the benefit of all citizens.

NAMIBIA NATIONAL NODE OFFICE CONDUCTS FIELD VISITS TO MONITOR PROJECT PROGRESS



Scenes from the SASSCAL field visits

The Namibia National Node recently conducted field visits to several SASSCAL 2.0 projects in northern Namibia to assess the progress of project implementation.

The visits covered the following projects:

- ForSRECS_NNFU: Teams evaluated the performance of farmers' climate-smart (CS) plots in Zambezi, Kavango East, and Kavango West. They also checked whether last year's recommendations to the Principal Investigator (PI) had been implemented, considering variations in rainfall compared to the previous year.
- ForSRECS_NUST: A research site of an

Honours student in Kavango East was visited to review project progress.

- SUSTAIN_FOR_NUST: Another research site of an Honours student in Kavango East was evaluated to monitor progress achieved.
- RIBS Project: The team visited a PhD student's research site and a community garden in Okondjatu, which was established with support from the RIBS Project.

These field visits demonstrate SASSCAL's commitment to tracking project progress, supporting researchers, and promoting sustainable development initiatives across northern Namibia.

STAFF WELLNESS UPDATES

SASSCAL APPOINTS NEW EXECUTIVE DIRECTOR



Professor Nelago Indongo, recently appointed as Executive Director of SASSCAL

The Governing Board of the Southern African Science Service Centre for Climate Change and Adaptive Land Management (SASSCAL) is pleased to announce the appointment of Professor Nelago Indongo as the new Executive Director, effective 1st June 2025.

Professor Indongo will lead the organisation from the SASSCAL Regional Secretariat in Windhoek, Namibia, overseeing the planning, implementation, and strategic direction of programmes across the five SASSCAL member countries: Angola, Botswana, Namibia, South Africa, and Zambia. She succeeds Dr Jane Olwoch, who has commendably served as Executive Director for the past seven years.

Professor Indongo is a distinguished social scientist with expertise in social statistics and sociology. She brings to SASSCAL over 13 years of senior management experience from the University of Namibia (UNAM), supported by a track record in research management, academic leadership, and institutional development. Her academic credentials include a DPhil in Sociology from the University of Pretoria, Master's and Honours degrees from the University of Southampton and a Bachelor of Science from the University of Namibia.

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Her efforts also extended to advancing international collaborations and strengthening research partnerships and Driving Climate Change and Governance Initiatives. Professor Indongo represented UNAM in the Southern African Regional Universities Association (SARUA) Climate Change Steering Committee.

Her efforts also extended to advancing international collaborations and strengthening research partnerships and Driving Climate Change and Governance Initiatives. Professor Indongo represented UNAM in the Southern African Regional Universities Association (SARUA) Climate Change Steering Committee.

In this capacity, she contributed to the development and revision of climate change curricula and supported the creation of a digital ecosystem for sustainable development.

Her leadership experience also spans governance, having served as Vice Chairperson of the Namibia Statistics Agency Board and Chairperson of its Statistics Board Committees. Looking Ahead, SASSCAL is confident that Professor Indongo's visionary leadership, regional comprehension, and strong academic and governance background will drive the organisation to new heights in addressing climate change and sustainable development challenges in Southern Africa.

Please join us in congratulating Professor Nelago Indongo on her appointment and warmly welcoming her to the SASSCAL family.

MR. CLIVE M. MULUMBA TO TAKE UP THE SASSCAL DIRECTOR OF FINANCE AND ADMINISTRATION ROLE



Mr. Clive Mulumba, the newly appointed Director of Finance and Administration

SASSCAL has appointed Mr. Clive Mulumba as Director of Finance and Administration, effective 1st June 2025. Mr Mulumba describes himself as a dynamic and results-driven finance leader with over 18 years of comprehensive experience in finance, audit, risk assessment, procurement, operations, and business management. He has committed himself to promoting sustainable development and improving livelihoods through adaptive land use and innovative financial strategies.

Mr. Clive M. Mulumba joins SASSCAL from Diligent Public Health Initiatives in Zambia, where, as Chief Financial Officer, he transformed financial operations, secured multimillion-dollar funding from various donors including the Global Fund, USAID, and government partners, and built high-performing teams to deliver on targets, compliance and efficiency. As a development finance consultant, he contributed to sustainable economic policies aligned with national growth objectives.

With over 18 years of leadership, Mr. Mulumba progressed through pivotal roles in corporate and international development sectors. At **Zambian Breweries (AB InBev)**, he established expertise in treasury, financial reporting, and fixed asset accounting.

At **USAID/Zambia**, he served as Payments Manager, and Accountant, ensuring compliance, developing systems, assuring excellence and mentoring teams. At the **US Embassy in Zambia** for the U.S. State Department, as Financial Specialist, Certifying Officer, and Deputy Head of Finance, he managed complex budgets, multiple stakeholders, and funding streams.

As Finance Director at **JSI (USAID DISCOVER-Health)** and Director of Finance and Operations at **John Snow Health**, he introduced mobile money payment systems, including in Ethiopia,

oversaw audits, capacitated teams, procurements, human resources, IT, administration and financial reporting using GAAP, IFRS, and IPSAS. His systems-driven leadership will advance SASSCAL's sustainable development mission.

He holds a Master of Commerce in Development Finance (with distinction) from the University of Cape Town, a Master of Business Administration from Edinburgh Business School, an ACCA qualification, a BSc (Hons) in Applied Accounting from Oxford Brookes University, a Certified Accounting Technician (CAT) qualification and is a fellow and mentor of the Zambia Institute of Chartered Accountants. He was also recognized as Zambia's top student for ACCA CAT Paper 5. Managing people and systems reflects his exceptional talent. SASSCAL extends its best wishes to him in his new role.



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