Dear SASSCAL colleagues,

no doubt that your 2016 has been just as eventful and exciting as the year has been for SASSCAL.

We are thrilled to report that our previous SASSCAL Newsletter had been clicked some 10,600 times! A lot of you have provided very useful feedback and we strive towards meeting all your needs and addressing all your requirements. In that line, we now also provide the newsletter in a lighter and simpler version.

Before you embark on a well-deserved holiday, we present our last SASSCAL Newsletter for 2016.

We wish you a good and safe holiday season and look forward to a fruitful collaboration for the year 2017.

The SASSCAL Editorial Team

A welcome sight in the early summer months of the Southern African region, the bright yellow flowers of a number of Acacia trees, here the Acacia nebrownii. (Photo courtesy Leonard Andreas)

A sign that the year is coming to an end, their aroma reminiscent of the festive season and the hope of rains.

In this Issue:

BMBF visit to Namibia Page 5
SASSCAL Angola Highlights 2016 Page 8
Timber Trade Page 10
Angola Conservation Action Plan Workshop Page

Collaborative Masters of Science in GIS, Remote Sensing and Earth Observation Page 12
First Zambia Science Conference Page 19
Weather Data Digitisation Page 20
Photo Focus Page 26

and many more...

To subscribe to and contribute or comment on the SASSCAL NEWS, please email: communications@sasscal.org
End-of-Year Messages from SASSCAL

Season’s greetings from SASSCAL Regional Secretariat

As we approach the end of 2016, it is with a sense of satisfaction that we can look back on a year that has in many respects been challenging, yet positive.

The success of SASSCAL is built on the efforts of all employees and stakeholders, both internal as well as external. In this past year, we have enjoyed many successes that have outweighed challenges. We have been able to implement the much needed remedial action to our portfolio. This past year has seen us build on the achievement of the first phase. The compilation of a first draft of the SASSCAL 2.0 strategy has been one of the achievements so far done. Secondly, it should not be forgotten that in this year, as an organization, we achieved the hosting of the regional workshop which saw an enormous response from stakeholders who have helped in shaping the SASSCAL phase 2.0 strategy. Subsequent workshops on capacity development and services brokerage were held to move the strategy forward. The country’s stakeholder meetings sought the involvement of users in the development of SASSCAL products.

Further, as the institution is only one step from becoming an international organisation as foreseen after the Ministerial conference in March, 2017, it is reassuring to know that we can count on all of you regardless of challenges that were encountered. On behalf of the Governing Board and the SASSCAL management, please allow me to extend my personal and genuine appreciation to each and every one of you for your valuable contributions to this vibrant organisation. Working with you this past year has been a pleasure and we’re proud to have you all with us.

We look forward to an even more stable and productive 2017. Our sincere gratitude also goes to all our partners who have stood by us this year.

May you and your families have a joyous and restful festive season and a prosperous new year.

Sincerely,

Dr. Yonah Seleti

“That which causes us trials shall yield us triumph: and that which make our hearts ache shall fill us with gladness. The only true happiness is to learn, to advance and to improve: which could not happen unless we had commenced with error, ignorance and imperfection. We must pass through the darkness, to reach the light.” Albert Pike

Season’s greetings from SASSCAL Angola

It is that time of the year again, where the festive season is upon us and the close of business is pending. 2016 has been a year full of events for SASSCAL. Amongst others, this year saw the development of the SASSCAL strategy 2.0, an important instrument that will shape SASSCAL phase 2.0. Further, SASSCAL has supported three PhD students and eight MSc students. For more highlights on 2016, please refer to the Institutional News section of this newsletter, for the article “SASSCAL Angola: Highlights of 2016”, where we will give you more information on executive visits to SASSCAL Angola in 2016 and also on the GBIF project for Strengthening the institutional network in Angola to mobilize biodiversity data.

We look forward to a prosperous and successful new year in 2017. The most heartfelt gratitude should be expressed to the entire SASSCAL team at home and abroad for their undying support, determined efforts, high levels of professionalism, diligence and friendship that make all the work successful, enjoyable and fulfilling.

Feliz Natal

Chipilica Barbosa
National Director: SASSCAL Angola
Season’s greetings from SASSCAL UHH team

Towards the end of the year 2016, the UHH team looks back on a year of good collaboration within SASSCAL.

The preparation of the quarterly reports for the Project Managing Agency (PT-DLR) and the German Federal Ministry of Education and Research (BMBF), which are compiled in close synchronisation with the National Directors, have been proven to be a well-established and smoothly running process. These reports clearly show a very good progress and performance of the scientists within the first SASSCAL research portfolio.

This year, the number of African and German students who finalised their theses within SASSCAL increased again, and the number of SASSCAL publications produced as well. Many of them reflect the very fruitful African-German scientific cooperation that results in joint conference presentations and peer reviewed articles.

Based on these positive experiences, the UHH team is looking forward to the year 2017 with even more joint research activities, scientific outputs and graduating students. This may also create a strong foundation for potential future African-German cooperation in research and implementation for the upcoming SASSCAL 2.0 activities.

University of Hamburg Team

Season’s greetings from SASSCAL IT-UHH team

2016 was a busy year, yet it led to major achievements such as the extension of the SASSCAL WeatherNet ([http://www.sasscalweathernet.org/](http://www.sasscalweathernet.org/)) by 20 new Automatic Weather Stations (AWS) to a total number of 144 AWS.

With this development, that was supported by the SASSCAL community, data gaps in the coverage of the region were closed. The SASSCAL IT-UHH team ensured that the data collected is available online, for the benefit of users from the public and the science sectors. In response, we received positive reactions from users “...This is fantastic! I enjoy your professional services immensely...” The SASSCAL IT-UHH team would like to forward this compliment to all participants of the SASSCAL community.

In 2017, we would like to continue in this spirit and tackle the upcoming issues together with our African partners. We are confident to carry on with the successful “story” of the SASSCAL WeatherNet and further data products and services.

University of Hamburg IT Team

Season’s greetings from SASSCAL Botswana

The year 2016 marked the beginning of meaningful progress for SASSCAL Botswana and according to the 2016 progress reports, all research projects made significant progress with an average of 70% towards completion.

A highlight of 2016 was a series of thematic workshops, during which each project defined the potentials research impact and the pathways to impact therein. Within the context of these workshops, which involved a diverse stakeholder base, we defined research impact as the demonstrable contribution of research to changes that bring benefits to the economy, society, culture, public policy, health, the environment and quality of life beyond academic impact. We defined pathways to impact as the route from research-specific activities, through to uptake and adoption of research outputs, and the realisation of subsequent future intended impact(s). During the workshops, we guided the researcher and potential research user through a process that developed for each research task, a plan which identifies causal links by which research achieves or will achieve its impact. For each project the research path ways to impact plan was developed by answering the following questions:

- Who will benefit from the research and what do they need?
- How will they benefit (Potential services and Products?)
- What will be done to make sure they benefit and by who?

Towards a Successful 2017

The year 2017 will see the end of the implementation of the SASSCAL 1.0 research portfolio. Since Botswana SASSCAL node places strong emphasis on research impact and the research-policy interface, the research path ways to impact for all the projects will be reviewed and refined to clearly define meaningful and actionable research impact. In particular, the contribution of SASSCAL supported research projects to relevant policies and their strategies will be clearly defined. In this regard, the SASSCAL Botswana node sees itself as a linkage agent between the researchers and the research users, that will facilitate the transfer of knowledge between researchers and research users (see figure below).

A series of breakfast seminars targeting key policy drivers will be organised during the first and second quarter of 2017. We are looking forward to a very successful 2017.

Mphapi Casper Bonyongo
National Director: SASSCAL Botswana
Season's greetings from SASSCAL Zambia

The year 2016 has been an eventful year for the Zambia National Node and has been filled with lots of activities and achievements. The year saw the settling in of the five additional staff, recruited late in 2015 for the positions of Programme Scientific Officer, Open Access Data Centre (OADC) Specialist, Finance and Administration Officer, IT Technician and Driver.

SASSCAL Zambia also witnessed the end and report-back of two out of the 14 research and capacity-building activities in Zambia, namely Task 221 (An aspacity development tasks in Zambia) and the Colophospermum (Mopane) ecoregion) and Task 300 (Capacity building in developing climate change related courses). This brought a lot of pride and joy to the node, as its work has not been in vain.

Furthermore, 2016 also saw the launch of the long anticipated Digitization of Weather Data, which will be of great benefit to the country, in terms of easily accessible historical weather data, and the development of future weather patterns. This event enjoyed not only audio-visual publicity, but in the print media too.

In 2017, it is anticipated that the remaining 12 tasks will successfully come to an end under SASSCAL I and contribute to the development of science in Zambia and the region. The National Node shall provide the necessary support to ensure this is achieved.

My node shall also work towards a smooth transition from SASSCAL Phase I to Phase II, carrying along best practices as well as lessons learnt.

With Zambia having signed the Paris Agreement on climate change, 2017 shall be a good time to draw in more stakeholders that will work together with SASSCAL to push the agenda forward. We wish our readers a fruitful festive season and a happy 2017!

Indie Dinala
National Director: SASSCAL Zambia

Season’s greetings from SASSCAL Namibia

2016 has been a busy year for the National Node. Rikoo started work with us in January as Finance and Admin Officer, this enabled us to take over gradually our financial administration from the Namibian Agromonic Board. The colleagues at NAB had done an excellent job over the years, managing our finances for us – a big thank you for this!

The two interns Michael and José continued working in the OADC, together with Sylvia and Erik, developing services and products, providing training and taking the lead in having the SASSCAL webpage updated. In addition, plans were made to host the data generated by the research tasks. As the tasks from the first portfolio come to an end in late 2017, receiving the data and developing exciting and useful services together with the researchers, will become an important activity for the OADC.

The task principal investigators (PIs) cooperated well during the year, and we were able to submit all the required reports on time for the 18 Namibian tasks – thank you to the PIs and their research teams.

2016 was also a year of transition for SASSCAL, with an acting Executive Director taking over from Henry in June, a new strategy being developed for SASSCAL 2.0 and a new Executive Director being appointed towards the end of 2016.

We wish all our colleagues, friends and partners a peaceful festive season, a happy Xmas and that it will rain. We look forward to working with you all during 2017, may our partnerships grow in 2017, so that we can do lots of interesting work together in the New Year!

Peter Erb

Season’s greetings from SASSCAL South Africa

I wish to thank all Principal Investigators, institutions, my seniors both from NRF and SASSCAL together with the SASSCAL Regional Secretariat and NRF support staff for their excellent work throughout the year. This year has been a very busy one and we can all be proud of our achievements. The South African node received unqualified results from the Ernst & Young Audit Company. There have been many highlights, including the recruitment of a National Director and the successful hosting of regional workshops on Capacity development and Services.

The semi-automated processing platform has been built to facilitate i) updating the data analysis/mapping automatically when new LiDAR data become available ii) updating the maps with various dates (post 2010) and iii) integration of additional remote sensing or ancillary datasets.

Monitoring of water quality is being undertaken at 13 sampling points on the Nuevejaars River and its tributaries, Heuningnes River and Soetendalsvlei.

Peter Shisani
National Director: SASSCAL South Africa
BMBF Field Visit to Namibia

Mr. Wilfried Kraus from the BMBF (Bundesministerium für Bildung und Forschung – Federal Ministry of Education and Research) and Mr. Gabin Ananou from the PT/DLR Project Management Agency, conducted a field visit to Namibia from 15 to 17 November 2018.

by Dr. Jörg Helmschrot
SASSCAL Director of Science and Technology

and

Peter Erb
SASSCAL National Director Namibia

Typical cattle used as livestock in Cuvelai of Namibia

The BMBF provides the seed funding for the establishment of SASSCAL and funds SASSCAL’s research portfolio. The PT/DLR is the coordinator of both Climate Competence Centres in Africa, SASSCAL and WASCAL (West African Science Service Centre on Climate Change and Adapted Land Use).

During their field visit, the Executive Director of SASSCAL, Dr. Yonah Seleti, the Director of Science and Technology, Dr. Jörg Helmschrot, and the National Director of Namibia, Mr. Peter Erb accompanied the delegates.

The aim of the three-day trip was to get an impression of the state of the research of the SASSCAL research portfolio in Namibia, and the progress achieved in the projects visited. In addition, delegates aimed to discuss the results and challenges with researchers, stakeholders, farmers, representatives of the Regional Secretariat and the National SASSCAL Office.

The first destination of the team was the Waterberg Plateau Park on 15 November, to discuss tasks on biodiversity in protected areas, as well as to explore challenges of bush encroachment, the effects of land and fire management, and water scarcity resulting from the El Nino.

In conversation with the colleagues of the park administration, Chief Warden Bethold Kaiporo Kandjii and Warden David Mason, it became clear that research work by SASSCAL contributes to a better understanding of the functionality of savannah systems and thus their sustainable management.

continued on next page...

However, they also raised the need
The Automatic Weather Station (AWS) on the Waterberg Plateau

for a close interaction between researchers and management for an efficient implementation of research results for managing conservation efforts. The visit to Waterberg continued with a stop at a SASSCAL AWS (automatic weather station) on the Waterberg, one of the more than 140 AWS forming the SASSCAL WeatherNet, from which the climate data are made freely available in real-time via a web-based information system (www.sasscalweathernet.org).

On the morning of 16 November, the delegation visited a rural area around the town of Omuthiya. This visit focused on the challenges of supplying the rural population with drinking water. Conversations with local farmers established that access to drinking water is largely made possible by the Department of Rural Water Supply, while the cattle are supplied with groundwater, which is increasingly contaminated (brackish). The great reliance on groundwater resources, especially in the past two-year drought, has led to a drop in the groundwater levels and aggravated contamination. If the water supply fails, the rural population needs to rely solely on groundwater resources. With three related SASSCAL tasks in the research portfolio, SASSCAL contributes to a better understanding of the dynamics of groundwater aquifers, as well as the use of water and the effects of limited water availability. In this way, SASSCAL contributes to improving the living standard of families vulnerable to and dependant on an adequate supply of drinking water.

On the afternoon of 16 November, the delegation visited the Etosha National Park, where, in addition to the landscape and park history, the successful measures of the park management regarding protection measures, management and biodiversity as well as their conservation were discussed. It was concluded that the park is an excellent example of the successful combination of landscape protection and local economic development, regarding tourism potential. On the other hand, challenges are posed by climate change in park management, regarding the water provision for animals, fire management and alien vegetation.

On 17 November, the delegation met with Dr. Ben Strohbach (NUST) and four students at the Observatory of the farm “Erchsfelde”. Here the colleagues of NUST demonstrated how SASSCAL financed biodiversity monitoring using modern technologies, such as regular drone monitoring, helps to quickly and efficiently identify and locate individuals of specific species, but also to analyse and assess the dynamics of vegetation, depending on variable environmental factors such as climate and management. The advantages and challenges of the corresponding data capture were shown by the example of a flight. In addition to data collection, the effects of climate extremes on the biodiversity and the challenges of providing infrastructure to secure the large amounts of data, as well as the need for capacity building, were discussed. Ms Nuule, a SASSCAL student, presented her research in the field of soil respiration and carbon sequestration of soils, and discussed first results regarding the different process dynamics as a function of soil moisture. In addition to the scientific contribution to biodiversity research and a better understanding of ecosystem dynamics, such studies are particularly useful for the development of management recommendations for both subsistence and commercial farmers. Against this background, the SASSCAL colleagues provide the cooperating farmers with all the data and inform them regularly about the latest findings, demonstrating how science and end-user work closely together.

Dr. Ben Strohbach and student preparing the Drone for a survey of an observatory
The SASSCAL Namibia National Node

Namibia may be the driest partner country of SASSCAL, but it makes up for it in spirit, drive and enthusiasm.

by the SASSCAL Namibia National Node

In this line, the National Director of the Namibian SASSCAL Node, Peter Erb, has been synonymous with and an active driving force of SASSCAL in Namibia, since its early beginnings in 2010.

Before SASSCAL, Peter worked for the Namibian Ministry of Environment and Tourism as researcher and professional manager for some 22 years, where amongst many others, he was attached to the Office of the Permanent Secretary.

As the National Director of the Namibian Node, Peter has coordinated and managed the Namibian SASSCAL Research Portfolio, which includes 18 tasks. The tasks cover all SASSCAL’s thematic areas: Agriculture, Biodiversity, Climate, Forestry, Water and Capacity Development.

In 2014, Peter took the first steps in establishing the Open Access Data Centre/Knowledge Exchange (OADC/KE) within the Namibian National Node, that up to that point had only been a vague concept. He is a key driver of the OADC/KE and the members of that group have quickly learned to appreciate Peter’s constant and active support, who is always pushing the team to explore new boundaries, by fostering a progressive, innovative and can-do approach.

The first team members of the OADC/KE where Sylvia Thompson and Erik Vogenes. Jointly, their first responsibilities included conceptualising the OADC/KE, putting in place an IT infrastructure to cater for the needs of the SASSCAL research portfolio and to explore services and products to be developed by the OADC/KE. As the core team, they have also provided support to the OADC/KE colleagues that joined the SASSCAL family in 2015.

Sylvia has a Geo-Information background and counts as her former employers the WWF, the European Commission, the Satellite Application Division in Leuven and Namibia’s Water Affairs.

Feeling quite at home in various application arenas, since joining SASSCAL, she has provided products and services for various conservation groups, the Namibian Government and the water sector in Namibia. She has coordinated the creation of a geographical information tool to support decision making processes (Geo-information tool) and has offered specialised thematic GIS training to various groups. She voluntarily also remains involved with the GIT degree of NUST.

More recently, she is living out her creative streak, by coordinating the SASSCAL Newsletter.

Erik is a Computer Scientist with some 15 years experience in both academia and the industry. Amongst others, he has owned a business, that based on neural networks and sophisticated statistical techniques, developed a recognition engine that identifies known chart patterns on time series data of stock prices. Erik was involved in the development of software, designing of systems infrastructure and general operations.

Since joining SASSCAL, Erik has designed and implemented the IT and data warehousing, as well as hosting infrastructure of the SASSCAL National Node.

He has developed various prototypes, including a Rain App, to capture daily rainfall data, co-designed the Geo-information tool and has been instrumental in creating the SASSCAL Dashboard, that will, initially, make available up-to-date information for the agricultural and environmental sector. Erik has also coordinated the creation of the new SASSCAL website.

No organisation will run smoothly if the administration and financial house is not in order. Rikondjerua Mutambao, or Rikoo, as her colleagues fondly call her, has been the most recent addition to the team. She eloquently controls the National Nodes’ administrative, financial and other logistical tasks. Rikoo has a diverse background from programme planning and implementation to project accountancy. Amongst others, she has added her spark to Ombetja yehinga Organisation (OYO), the Integrated Rural Development and Nature Conservation (IRDNC) and the African Capacity building foundation (ACBF).

In the context of capacity development, the OADC/KE has been very lucky to discover two talented students, that have been employed in the team as interns.

Michael Chamunorwa will commence his Master in Computer Science at NUST in 2017. Michael has strong programming skills and has been supporting Erik with his activities. For his studies, Michael has been part of a group of developers who create tools for capturing indigenous knowledge in the North-West of Namibia. The project has enjoyed international success and has been presented, amongst others, at the Biennial Design Conference in Denmark.

José Junior is enrolled in a Master programme for Geo Information Technology at NUST. His Honours Degree was based on the creation of the Geo-information tool, for which he earned a Cum Laude. José has also created a geographically based WhoDoesWhat tool for SASSCAL and has played a substantial supporting role with his programming skills.

Very often out and about, conducting field work and supporting the field activities of the University of Hamburg team, is Vilho Muteleni, or Snake, as his colleagues refer to him. Snake, a nickname that could quite easily refer to his fluent language skills, was a part of the Biota project, that preceded and prompted SASSCAL and is well known and regarded by researchers and scientists across all SASSCAL countries.

Left to Right: Rikondjerua Mutambao, Michael Chamunorwa, Sylvia Thompson, Erik Vogenes and Peter Erb (National Director of SASSCAL Namibia)
Looking back on the year 2016, SASSCAL Angola reports on the main accomplishments:

**SASSCAL strategy 2.0**

This year saw the development of the SASSCAL strategy 2.0, an important instrument that will shape SASSCAL’s phase 2.0. In fact, it should be remembered as the year in which a team comprising all SASSCAL’s Directors, was engaged to brainstorm and develop the strategy. The point of convergence for the strategy development team was mainly the inviting and hospitable city of Windhoek in Namibia, where a lot of brilliant ideas were generated.

**Funds for support**

Research is a major part of the SASSCAL portfolio. This year, the disbursement of the funds, to support ongoing research activities, has been successful but not without its challenges. Challenges notwithstanding, field visits and reports of most of the tasks indicate that field activities have been carried out smoothly. It is expected that if the status quo is maintained, then all milestones will have been achieved by the end of 2017.

**Executive visit for SASSCAL Angola (11 to 15 October 2016)**

This year, SASSCAL Angola had the privilege of hosting the Interim Executive Director, accompanied by the Board Member Dr. Gabriel Miguel, Mr. Justin Mwanakatwe and the Director of Administration & Finance, Mrs. Priscilla Mudzingwa. This visit provided an opportunity for the visiting team to get acquainted with the staff members at the National Node. In addition, the visit was an opportunity occasion to meet senior officers at the Ministry of Science and Technology, and Principal Investigator’s in Luanda and Huambo.

During these meetings, Dr. Seleti eloquently presented the SASSCAL Strategy 2.0. The visiting team also held a meeting with the National Executing Agency (NEA) to discuss the role of the NEA and the acquisition of a plot of land for the future SASSCAL centre. The team also had the opportunity to visit the sites where the future SASSCAL Angola building will be constructed.

**Executive visit for SASSCAL Angola (25 to 27 November 2016)**

SASSCAL Angola was also honoured by the visit of her Excellency, the Minister of Science Technology, Maria Cândida Pereira Teixeira, accompanied by Dr. Silva Vence, Dr. Antonio Alcochete, Dr. Armando Valente and Mr. Carlos Costa, who visited the National Node on Friday 25 November 2016. During her visit, a meeting was held with the Governor and Vice-Governor of Huambo, who were informed of the presence of SASSCAL and its major activities. During the meeting, we also discussed the issue concerning the land where the SASSCAL centre would be constructed.

The Governor made a ground breaking assurance to provide support to SASSCAL in securing the land. He said that the plot of land of 2.0 hectares would be leased to the Ministry of Science and Technology who in turn would provide the usufructs rights to SASSCAL for 50 years.

It is worth reporting that on the 18th November, the ND attended a workshop on World day of Science for Peace and Development entitled **Technological Parks and the Economic Development of Angola** organized by the Ministry of Science Technology.

continued on next page...
The expected outcome of the workshop is as follows:

- exchange of experience and good practices over the contributions of technological parks in the economy
- presentation and collection of information on the technological park projects to be implemented in the country
- sensitization of potential partners

Grant contract

SASSCAL Angola and GBIF entered into a contract on a project entitled Strengthening the institutional network in Angola to mobilize biodiversity data. The signing of the contract was in June 2016 for a two-year project worth 60,000.00 euros. This project will build the capacity of a national data holder network in Angola to digitize and manage biodiversity data. In keeping with its mission, the Angolan node of SASSCAL is developing a national network of data providers, holding institutions and data users, in keeping with its mission. Funding from the BID programme will go towards training members of the network in digitizing and publishing data.

The project will develop a national biodiversity data portal and publish more than 100,000 specimen and sampling-event data records. Published records will contribute to mapping species distributions and priority conservation areas.

Achievements and Publications

The latest publications from SASSCAL are definitely something to write about; in 2016 four articles and a book were published. A book on Spatial Dynamic and Quantification of Deforestation and Degradation in Miombo Forest of Huambo province under task 137 was published at the University of Cordoba. The other publications are as listed below:


With regard to achievements, the project has so far invested in 3 PhD, 8 MSc of which two have successfully completed their master programs. Three PhD students are expected to complete in 2017 while the rest will complete in 2018.

by Chipilica Barbosa
National Director: SASSCAL Angola
Timber being traded from Namibia or through Namibia?

The global trade of timber continues to raise questions of sustainability as forests worldwide are increasingly under pressure to meet the demands of a growing market. Southern Africa is no exception.

The Directorates of Forestry in Angola, Namibia and Zambia are collaborating on forest management where one of the envisaged outcomes is improving the sustainability of the regional timber trade.

This study (Task 035) is funded through SASSCAL with implementation by TRAFFIC,IRDNC and the Namibian Directorate of Forestry (DoF).

While travelling on Namibia’s long and straight roads, have you ever passed a big truck loaded with timber and wondered where the timber has come from and where it is going to? We have been asking the same questions and now have many of the answers.

The study focussed on the three main timber species – *Pterocarpus angolensis*, *Baikiaea plurijuga* and *Guibourtia coleosperma*. By gathering data from all the permits issued by the Directorate of Forestry during a five year period we found that most of the timber is being extracted in Angola and Zambia and transported through Namibia to South Africa and China. The study highlighted the extent of the cross-border trade and the urgent need for regional collaboration. Information extracted from the transport permits issued in Namibia indicate that 15 229 m$^3$ of Zambian timber and 15 547 m$^3$ of Angolan timber was exported via Namibia between 2010 and 2014.

We have engaged with many different groups of people who are involved directly or indirectly with the management and control of the timber trade. We have also travelled and worked with many of the stakeholder groups.

continued on next page...

Information and experiences were shared and exchanged

Activities targeted at reducing the unsustainable and illegal trade of timber in the region were planned

A Tripartite MoU was drafted
Implementation of the action plan has involved Forestry officials, Customs officials, the Namibian police and Special Forces, Veterinary officials and border officials.

In August 2016 representatives from Angola, Namibia and Zambia, including the Directors of Forestry from the three countries, gathered to share challenges and collectively cultivate practical solutions.

by Karen Nott IRDNC

From theory to practice!

These timber identification wheels were shared with the border officials at the workshops held in Katima Mulilo and Rundu. A few months later, one of the timber wheels was spotted at the Murarani checkpoint along with piles of confiscated timber from Zambia.
Development of Collaborative Masters of Science in GIS, Remote Sensing and Earth Observation

The Master of Science in GIS, Remote Sensing and Earth Observation programme has been developed in the context of a SASSCAL project, SASSCAL Task 303. It is funded by the “German Federal Ministry of Education and Research” (BMBF) and was developed in cooperation with Botswana, Namibia, South Africa and Zambia.

by Frikkie Louw

Namibia University of Science and Technology (NUST)

Postgraduate programmes, specifically in Geoinformation Science are presented at very few tertiary institutions in the SADC region, and where it is presented it is often integrated as a module in a degree programme of a related discipline such as Environmental Science or Geography. The collaborative Master programme in GIS, Remote Sensing and Earth Observation will be the first of its kind to be implemented at the involved tertiary institutions of higher learning and will address the national and regional need for capacity building in the management and analysis of the region’s environment and natural resources.

The programme started under the Department of Land Management, at the Polytechnic of Namibia, now Namibia University of Science and Technology (NUST). Visits to the partner universities, namely Cape Peninsula University of Technology (CPUT), University of Botswana (UB) and University of Zambia (UNZA) were undertaken in November 2013.

The meetings/visits took place to establish relationships, to understand technical and human resource capacities and needs, get an overview on related postgraduate programmes at partner universities, to see and understand the programme development processes and structures (institutional and national requirements, credit arrangements and transfer), and to get an overview of the areas of specialisation and research.

The first Curriculum Development Workshop was held at NUST in Windhoek, Namibia from 24 February to 01 March 2014. The discussions included the needs and programme alignment; curriculum development and implementation plan; programme structure (core courses / electives / credits) & contents (specialisations); networking and partnerships / multi-party MoU and capacity building needs.

The second Curriculum Development Workshop was held at CPUT in Cape Town, South Africa from 6 to 9 July 2014. The draft curriculums and draft syllabi from each University, namely NUST, UB and UNZA were discussed. Discussions and approval of the multi-party MoU also took place.

A GIS Capacity Development Workshop was held at Chaminuka Lodge outside Lusaka, Zambia from 22 to 25 September 2014. The workshop covered the following topics:

- The use of Free and Open Source (FOSS) GIS, Remote Sensing software and multimedia tools;
- The enhanced flexibility in compilation and delivery of teaching and learning materials for core and joint elective courses;
- Use of free multimedia production tools for development of online learning materials;
- Intro to e-learning strategies and platforms through instructional designers from the Centre for Open and Lifelong Learning (COLL) from NUST.

continued on next page...
On 26 May 2015 the Signing of the Collaborative Agreement took place at NUST in Windhoek, Namibia. Representatives from the SASSCAL office in Windhoek and representatives of all partner universities were present.

The programme for NUST was approved by Senate in August 2015, for implementation in January 2016. The implementation date was later adjusted to July 2016, in order to streamline with the UB and UNZA academic years that usually start in July/August. This was done so ensure that students could follow elective courses at any partner university.

Fourteen students were awarded scholarships at the official launch of the programme, that took place at NUST on 1 November 2016. The first three courses were taught by Dr. Jackson Phiri from UNZA, Dr. Lisho Mundia from NUST and Dr. Ingrid Stengel from NUST respectively. The next three courses will be taught from February to May 2017, where after the students will then conduct their research.

At UNZA, the programme has been approved and is ready for implementation. The programme will be advertised from December 2016 to January 2017, when the selection will happen. The teaching of the courses will start in February 2017, with the launch planned for end of February 2017 or beginning of March 2017.

At UB, the programme still needs the final approval, envisaged by middle December 2016, for implementation in February 2017. The programme will be advertised in January 2017, with the selection planned by end of January 2017. The teaching of the courses will start in February 2017, with the launch planned for end of March 2017.

From Top to Bottom: Curriculum Development Workshop participants at CPUT July 2014; GIS Capacity Development Workshop participants at Chumukunda Lodge (Lusaka) September 2014; Signing of Collaborative Agreement at NUST in Windhoek on 26th May 2015; Official Launch and Scholarship hand over at NUST in Windhoek on 1st November 2016
The Growing SASSCAL WeatherNet

No doubt, a SASSCAL service flagship, the SASSCAL WeatherNet already boasts a network of 144 Automatic Weather Stations (AWS) in the region.

The data of the WeatherNet stations is being made available in near-real-time on the SASSCAL WeatherNet site [www.sasscalweathernet.org](http://www.sasscalweathernet.org) and is also available for download.

by the SASSCAL IT—University of Hamburg Team

The AWS of the SASSCAL WeatherNet conform to WMO standards.

A wide range of weather parameters are being recorded by the AWS: air temperature, precipitation, wind speed, wind direction, humidity, soil temperature, barometric pressure and solar irradiance.

The SASSCAL WeatherNet site makes available data in hourly, daily and monthly figures and data can be downloaded for historic data in Microsoft Excel format.

<table>
<thead>
<tr>
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<tr>
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<td><strong>Zambia Total</strong></td>
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<td><strong>Grand Total</strong></td>
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Workshop for National Conservation Action Plan for Cheetah and African Wild Dogs in Angola

The Ministry of Environment (MINAMB) of Angola, supported by the Range Wide Conservation Program for Cheetah and African Wild Dogs (RWCP), and funded by the WWF in Namibia, organised a workshop for a National Conservation Action Plan for Cheetah and African Wild Dogs in Angola, which took place in Quicama National Park from 18 to 21 October 2016.

by David Elizalde
SASSCAL OADC Angola

SASSCAL Angola, represented by the OADC, supported the participatory range mapping process for cheetah and wild dogs in Angola. The workshop resulted in the creation of a National Conservation Action Plan for Cheetah and Wild Dogs in Angola, a key document that will guide the future work towards the conservation of these two wide-ranging species, and will consequently have bearing on their habitats and the ecosystems upon which their survival depends.

The workshop covered a broad range of issues; the main ones are as follows:

1. Capacity development needs
2. Knowledge and information to be generated
3. Species coexistence with the human population
4. Land use and the policy and legislation update and enforcement.

Generally, there is limited information on the distribution of cheetah and African Wild Dog in Angola. However, the workshop created an encouragingly positive start to filling the knowledge gap in the regional landscape occupied by these species. Prior to this workshop, the known Wild Dog resident range was confined to the southern part of the Luengue-Luiana National Park in Cuando Cubango Province and to the Bicuar National Park in Huila. Cheetah was only known be resident in the Iona National Park and its surroundings, in Namibe Province.

After the different specialist groups working in Angola met in Quicama (October 2016) the known range for the African Wild Dog was expanded to cover previously excluded geographical areas.

Figure 1: Cheetah and African Wild Dog known range in Angola as concluded from the workshop discussions, RWCP.
These include the Luando Reserve in Malanje province, the Mupa N.P., a wider area of private farms around Bicuar N.P and almost the whole Luengue-Luiana N.P. in the Cuando Cubango Province. In addition, new areas were defined as resident and possibly resident ranges both for Cheetah and Wild Dog, further north in the Okavango basin catchment areas in between Mexico and Bié provinces. For Cheetah, half of Luengue-Luiana N.P. was also included as resident range. (See Figure 1).

These updates to the distributions of the cheetah and African wild dog were possible due to the INBAC staff, the Park Administrators, RWCP, Panthera, the Okavango Wilderness Project and other local and foreign researchers that shared their results in the surveys carried out in Angola in the recent years. These probably represent the first surveys of their kind since the civil war started more than 40 years ago, and the findings are just unraveling the incredible wildlife hiding in this vast and diverse country, and the actions needed to protect it.

Top: Collaborative Mapping process during the workshop.

Middle & Bottom: Camera Trap picture of Cheetah at Luengue-Luiana National Park; and African Wild Dog at Bicuar National Park.
(Both Panthera/INBAC)
More than 50 representatives of National Meteorological and Hydrological Services (NMHSs) of all SADC members as well as from WMO, UNECA, UNDP, local and regional climate services users from selected priority areas as well as experts from academia and further relevant stakeholders discussed in four thematic sessions, the status, relevance and the impact of climate science for southern Africa, with a particular focus on the implementation status of the Global Framework for Climate Services (GFCS) in the Southern African Development Community (SADC) and the fundamental role of high-quality observations for climate services. With a presentation on its SASSCAL WeatherNet (www.sasscalweathernet.org) as well as activities in the domain of rescuing and archiving regional climate data which is undertaken by the Deutscher Wetterdienst (DWD, Meteorological Service Germany) in collaboration with the national weather authorities in Angola (INAMET), Botswana (BMBS) and Zambia (ZMD), SASSCAL introduced its activities for providing reliable data on climate and its accessibility at regional scale. Together with Filipe Lúcio (GFCS Office, WMO), Dr. Helmschrot chaired a session on Observation Data Capacities for Climate Services in the SADC region.

The workshop was jointly organized by the Swiss Federal Office of Meteorology and Climatology MeteoSwiss, the GFCS Office at WMO, the Meteorological Services Department (MSD) of Zimbabwe and the Deutscher Wetterdienst (DWD).

by Dr. Jörg Helmschrot
SASSCAL Director of Science & Technology
South-South Cooperation
EbA Training provides useful learning
Experiences for SASSCAL

The advanced international training in Ecosystem-based Adaptation (EbA) in arid areas for the South-South Cooperation in arid areas, part of the Chinese Ecological Forum, was organised by the Institute of Geographic and Natural Resources Research, Chinese Academy of Sciences. The training, which took place from 10 to 21 October in Beijing China, was sponsored by the Chinese National Development and Reform Commission. SASSCAL Zambia’s Programme Scientific Officer Mutukwa Musole participated in the training.

The objective of the workshop was to provide advanced training to researchers, managers and staff working in climate change, in developing countries, as part of the efforts to strengthen South-to-South cooperation. In total, 26 professionals in fields related to ecosystem based adaptation from Asia-Pacific and African countries, including Afghanistan, Benin, Cameroon, Egypt, India, Kenya, Mongolia, Pakistan, Russia, Senegal, Seychelles, Vietnam and Zambia. Through this dynamic workshop, with multi training forms including lectures, field trips, group discussion and reporting visits, the trainees were familiarised with the approaches and practices of the practitioners and by sharing experiences from each country.

The training included lectures and presentations from senior researchers from the Chinese Academy of Sciences (CAS) and associated institutions. In addition to the lectures, the participants had an opportunity to visit different research institutes and facilities. The training mainly focused on EbA approaches in arid areas in the face of global change. The presented approaches extend beyond arid areas and can be applied in different ecosystems and to different environmental challenges.

The training provided many learning experiences relevant to SASSCAL, in particular to data management, service provision from research and opportunities for collaboration. The EbA provided numerous insights, learning experiences and fruitful interaction with other participants. Most relevant and valuable to SASSCAL is the model of data management and service provision that are being conducted by the different institutes that are part of the Chinese Academy of Sciences (CAS) consortium. Some aspects of the model can be adopted in the implementation of the Open Access Data Centre / Competence Centre model. There are many common focus areas that SASSCAL shares with the different institutes and centres of excellence, which provides many opportunities for collaboration.

by Indie Dinala
National Director
SASSCAL Zambia
SASSCAL Zambia participates in the first Zambia Science Conference

The Zambia National Science and Technology Council (NSTC), with the support of the National Research Foundation (NRF) of South Africa, and the German Research Foundation (DFG) organised the first Zambia Science Conference, which took place from 19 to 21 October 2016 at the Radisson Blu Hotel in Lusaka.

The focus of the conference was agriculture, animal and veterinary sciences, with some sessions on ICT and space science, mineral resources and indigenous knowledge systems. The Conference was officially opened by the Minister of Higher Education (MoHE), Professor Nkandu Luo, MP, who was the Guest of Honor. In a speech read on her behalf by MoHE Director of Human Resources Ms. Peggy Chirwa, the Minister commended SASSCAL for its support and input towards the conference and its commitment to the development of science in the country.

SASSCAL Zambia was invited to participate and support the conference and actively participated in the proceedings throughout the conference. They did so by chairing sessions, in addition to presenting promotional materials and exhibitions.

One notable event was a two-day research proposal writing workshop that was presented by scientists with experience in the drafting of proposals for either institutional grants or postgraduate scholarships. The workshop was conducted by proWiss, a research consulting firm from Germany. Participants attended from various science institutions across the country. SASSCAL Zambia OADC Specialist Chishala Siane facilitated the workshop on behalf of the National Director. The workshop invited SASSCAL Task 191 PI, Professor Imasiku Nyambe who made a presentation on experiences and best practices for attracting research grants. Professor Imasiku highlighted the process that was undertaken to receive the funding for his task and the benefits that have come with the funding thus far.

The conference also saw the launch of Zambia Women in Agricultural Research and Development (ZaWARD), which is part of African Women in Agricultural Research and Development (AWARD). ZaWARD provides support to women in agricultural sciences to increase their visibility by strengthening their science and leadership skills through mentorship and leadership programs.

During the policy session, government renewed its commitment to the development of science in Zambia, having acknowledged that a lot still needs to be done in the field of science. Though noting that great strides are made in terms of policy formulation and implementation.

SASSCAL appreciates the platform presented to it at the conference and that its efforts towards the development of science are being recognized in the country, and envisages to play an even more active role in the conference in 2017.

by Indie Dinuka
National Director
SASSCAL Zambia

OADC Specialist Chishala Siane with trainers of the research proposal writing

SASSCAL Zambia NEA Acting Director Samuel Maango with OADC Specialist Chishala Siane at the exhibition stand
Zambia Meteorological Department launches Weather Data Digitisation

On 31 October 2016, the Zambia Meteorological Department (ZMD) launched the Digitisation of Weather Records initiative. The event was held at the Longacres Lodge in Lusaka and SASSCAL National Director, Ms. Indie Dinila was invited to provide some introductory remarks on behalf of SASSCAL.

The event was attended by representatives from different organisations and the media. The Acting Director of ZMD read a speech on behalf of the Ministry of Communications and Transport Permanent Secretary, where he thanked the German Government for providing funds through SASSCAL, to expand, improve and modernize the weather network and forecasting system in Zambia. 19 automatic weather stations (AWS) are operational and their weather data is available in near real-time on the SASSCAL WeatherNet (http://www.sasscalweathernet.org/).

Participants at the launch were treated to a tour of the data management and archiving facilities and other Departments at the ZMD offices. During the tour, the Department presented their past and current data management challenges, which include the delay in transfer of records from different provincial and district stations. Despite the archiving facility being in existence, the records were not being systematically archived. The aim of the data digitization activity, just launched, will be to systematically organise the records according to dates and location, and label them.

Therefore, as opposed to the current status quo, where records are still in paper format and often still being kept in provincial or district offices, it is expected that the digitization process will make weather data more accessible to various stakeholders. Through these efforts, Zambia will be able to contribute to the global weather data archives. Converting the paper records to digital data will also help the department determine the status of their weather records and to establish which records are missing. Upon completion of the upgrade of the climate data management system to CLIMSOFT, in collaboration with Deutscher Wetterdienst (DWD), it will be much easier to include parameters that are currently not provided for in the existing database.

by Indie Dinila
National Director
SASSCAL Zambia

(Top to bottom): The Head of the Weather Data Section Mr. Peter Shishau (left) explaining their data management process while SASSCAL Zambia National Director (right) looks on; Part of the data archive room containing records to be digitised; Mr. Bupe, the Senior Meteorologist explaining the weather forecasting process; Weather forecasting process being explained as SASSCAL Zambia Programme Scientific Officer (far right) Mutukwa Musole looks on; Group photo of participants
10 Years KAZA: State of KAZA Symposium

The KAZA Memorandum of Understanding (MoU) was signed 10 years ago by the five partner countries, Angola, Botswana, Namibia, Zambia and Zimbabwe, on 07 December 2006 at Victoria Falls. The KAZA TFCA (Kavango Zambezi Transfrontier Conservation Area) is Africa’s largest conservation landscape and the world’s largest TFCA.

From 31 October to 02 November 2016, relevant delegates and conservationists converged at Victoria Falls at the State of KAZA Symposium, to reflect on the progress made since the MoU had been signed in 2011, to identify success stories and challenges alike and to map the road for the future of KAZA. The motto of the symposium was “Where have we come from, where are we now, and where are we going?”

Amongst others, KAZA aims “To sustainably manage the Kavango Zambezi ecosystem, its heritage and cultural resources based on best conservation and tourism models for the socio-economic wellbeing of the communities and other stakeholders in and around the eco-region through harmonization of policies, strategies and practices.”

The KAZA TFCA is not only home to a rich diversity of wildlife and flora, and unique landscape features such as the Victoria Falls and the Okavango Delta (a UNESCO World Heritage Site), but it is also hosts a population of around 2.5 million people. Therefore KAZA not only offers a unique experience with regard to its abundant wildlife, but also offers an insight into diverse cultures.

In turn, tourism, through for instance joint venture partnerships with communal conservancies and the private sector, has the potential to alleviate poverty in a drought stricken region, where agriculture, the basis of the main population’s livelihood, is influenced by poor soils and human-wildlife conflict.

A highlight of the symposium was the signing of a hosting agreement between the government of Botswana, through its Ministry of Environment, Natural Resources, Conservation and Tourism, and the KAZA Secretariat, which will allow the Secretariat to operate as a legal entity in Botswana, based in Kasane, and which will strengthen KAZA’s authority.

Sources:
www.kavangozambezi.org
www.namibian.com.na
www.nacso.org.na

The 520 000 km² area of KAZA is the largest conservation landscape in Africa.
Future Climate for Africa report
Africa’s Climate: Helping decision-makers make sense of climate information

“African decision-makers need reliable, accessible, and trustworthy information about the continent’s climate, and how this climate might change in future, if they are to plan appropriately to meet the region’s development challenges.

The Future Climate for Africa report, Africa’s climate: Helping decision-makers make sense of climate information, is designed as a guide for scientists, policy-makers, and practitioners on the continent.”

Source: //2016report.futureclimateafrica.org/

- Burning Questions by All of Africa, Central and Southern Africa, East Africa and Southern Africa, and
- Country Factsheets for Malawi, Rwanda, Senegal, Tanzania, Uganda and Zambia.

According to the project website, key findings resulting from the Africa’s Climate report are:

- Climate modelling indicates that east Africa is expected to warm in the next five to 40 years, although changes in rainfall are much less certain.
- Extreme events (floods, droughts, heatwaves, and so on) are expected to change and in most cases increase into the future.
- The region is severely understudied, because of a lack of scientific observation data, such as that from weather stations.
- Southern African economies are exposed to weather and climate vulnerabilities, particularly through sectors such as agriculture, energy, and water management. It follows that the supply of essential resources are all extremely at risk as the climate becomes more changeable and extreme.
- Most government departments are planning according to a three- to five-year time horizon, while the climate projections are based on decades-longer timeframes, such as looking to 2050 and beyond.
- Applying past data to the future, which is also used by other ministries, is potentially problematic as it assumes that the future climate will mirror the past, which may not be the case for projected climate change.
- Although there is uncertainty associated with the future climate projections, climate change will have significant economic impacts across Africa.
- Future climate change is likely to lead to new risks: the negative impacts seen from today’s climate variability are likely to become worse.
- While there is often uncertainty in climate projections, this should not be a reason for inaction.

The project team welcomes feedback on the report: info@futureclimateafrica.org
Citizen Science Projects in the Region

The term “citizen science” entered the Oxford English Dictionary in June 2014 (Wikipedia). Yet, many years before that, scientists and researchers have already recognised and proven the considerable value of engaging citizens, in particular, non-scientists, with crowd sourcing projects.

The accessibility to mobile devices and internet services has made it possible for scientists and researchers to engage an even wider public and our strong affiliation with mobile technologies has turned the participation in these citizen science projects into enjoyable and addictive recreational activities.

In this issue, we want to draw your attention to a couple of citizen science initiatives in the Southern African region. Please do support these initiatives where possible. In particular, we list some Open Data initiatives.

by Sylvia Thompson
SASSCAL OADC in Namibia

SASSCAL Rain App

The SASSCAL Rain App is actually no App at all, but rather a data entry web-based device independent platform, that the volunteer user can access and use, without having to install anything.

The App aims at drawing on Southern African people’s enthusiasm in recording rainfall data, and thereby filling huge data gaps in the region and further aims at complementing the rainfall data collected by the SASSCAL Weathernet (www.sasscalweathernet.org/).

RAIN.SASSCAL.ORG

Atlassing in Namibia

One may take it for granted, that in a digital age, animal and plant distributions are well established and well documented. In the wake of human impact and changing climates, both are quite dynamic and the added impact of often inaccessible environments, makes this a challenging task in this region.


THE-EIS.COM/ATLAS

Homerange Mapping Tool

Due to decades of civil war, Angola is a country with very little digital information available. Products and services such as those offered by Bing open up endless potential for capturing physical and visually identifiable features from aerial photography and satellite imagery.

The Homerange Mapping Tool has the potential to meet data capture needs of various thematic areas and features.

DSAA.TK
On 18 November 2016, the Executive Director Dr. Yonah Seleti and Mr. Wilfried Kraus from the BMBF jointly launched SASSCAL’s new-look website.

The new website does not only feature a whole new look and feel, but for the revision of the old website architecture and design, current state-of-the-art trends in web design were implemented, such as a minimalistic and responsive design, the use of vibrant colours, the use of subtle animations, the implementation of long scrolling to cater for mobile users and micro-interactions, to mention a few. The website platform also enables users from all over SASSCAL to update the website, with only a minimal amount of training required.

It is however crucial to note, that any website success is directly dependant on how alive and up-to-date the website is. Therefore, the SASSCAL OADC team from Namibia calls upon all SASSCAL colleagues, researchers, scientists, partners and stakeholders to inform us if any information requires updating or if we should report on interesting events and news.

To that end, please contact communications@sasscal.org

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**SASSCAL Publications and Academic Achievements**

**Publications**


Do you know SASSCAL?

To make sure that our minds don’t calcify during the holidays, Indrie Dinala, the National Director of SASSCAL Zambia, designed this puzzle to test our knowledge of SASSCAL. Let us know if you were able to solve this puzzle:

ACROSS
1. This organization abbr (7)
5. SASSCAL’s policy-making body (5)
8. Namibian AWS location (6)
9. Slightly wet (6)
10. SASSCAL CEO abbr (2)
11. Genus with over 500 species of flowering succulent plants (6)
12. Principal Investigator abbr (2)
13. Transboundary Aquifers abbr (2)
17. Openings serving as an outlet for air, fumes etc (4)
18. Measures of water (7)
19. Conservation Zoologist abbr (2)
21. Sheet of water, often inverted or distorted, caused by atmospheric refraction by hot air (6)
22. Commercial satellite Internet service provider (6)
25. A grass grown extensively as a grain (3)

DOWN
2. SASSCAL partner country (6)
3. Small carnivorous plant (6)
4. Stone fruits with a creamy texture that grow in warm climates (8)
5. SASSCAL Thematic area (12)
6. Open access peer-reviewed scientific journal (8)
27. Namibian SASSCAL line Ministry abbr (4)

6. Branch of philosophy of nature of art, beauty and taste (10)
7. Barren land with little precipitation (6)
14. First name of SASSCAL Board Vice Chairperson (4)
15. ... Change (7)
16. Of uterus (7)
20. SASSCAL Partner country hosting source of Zambezi River (6)
23. SASSCAL Germany Donor Ministry abbr (4)
24. Geographic Information System abbr (3)
25. Regional Secretariat abbr (2)

Websites or Data Portals: Seasonal Outlook

In a time where all eyes in Southern Africa are pointed at the skies, waiting for those elusive clouds, that are expected to bring long awaited relief to a drought stricken region, it is encouraging, that the majority of seasonal outlooks predict a normal to above normal rainy season for 2016/17. A number of seasonal outlooks are made available on the web, and this is a small selection of some of the services with more regular updates.

If there are any websites or data portals that might be useful to other SASSCAL colleagues, please provide these to communications@sasscal.org.

www.sadc.int/index.php/news-events/newsletters/
SADC: Southern Africa Region Climate Outlook Forum
SADC provides a statement of the Twentieth Annual Southern Africa Regional Climate Outlook Forum (SARCOF-20) for the 2016/2017 rainfall season.

http://www.ecmwf.int/en/forecasts/
European Centre for Medium-Range Weather Forecasts (ECMWF)
The ECMWF seasonal rainfall forecast provides a probability summary for the upcoming tercile.

www.gfcsa.net
Global Forecasting Centre for Southern Africa
The GFCSA forecasts are made using the United Kingdom Meteorological Office Atmospheric General Circulation Model (AGCM) HadAMSP. Monthly and seasonal forecasts are made available.

www.jamstec.go.jp/frcgc/research/d1/iod/e/seasonal/outlook.html
Japan Agency for Marine-Earth Science and Technology (JAMSTEC)
The JAMSTEC seasonal forecasts are provided monthly as precipitation anomalies and for the season ahead, but as terciles.
We are excited to feature a selection of photos provided through the courtesy of David Parduhn, from the University of Hamburg, Institute of Ethnology. He took these photos conducting fieldwork on ‘contemporary practices and drivers of deforestation and conservation in a high rainfall area’ in 2015, in a rural settlement in Serenje District, Central Province, about 40 kilometres east of the Congo Pedicle.

Biscuits: My research area is located within Zambia’s high rainfall area: Up to 1,300mm fall within five months only. During that time, delivering biscuits and soft drinks to some parts of the settlement was a challenge to traders: Bridges are underwater and sections of the village were almost cut off.

Beer & Miombo: Whereas the rainy season is characterised by laborious days on the field, the dry season is less busy and days slowly pass by at the ‘hard men’s clinic’ - the local village pub. During that season, the streams dry up, bush fires increase, and if not taken in early enough, the harvest might be burnt in the end.

Budget: According to Zambia’s National Budget for the year 2015, its Forestry Department received 0.00 USD funding, apart from the staff’s monthly salaries. Law enforcement and forest protection was hence not (easily) possible.

Tobacco: Apart from maize, a lot of forest is removed to give way to agricultural fields for tobacco. On top of this, even more firewood is needed for curing tobacco, which is mainly exported to the U.S.

Payday & Maize: Weeks after the maize harvest, farmers are waiting to be paid out by the Zambian government. The government is the most reliable buyer, acquiring hundreds of thousands of tons of maize every year, arguably because it means an increase in the ruling party’s power base. Thanks to this stable market, farmers are very well advised to grow as much maize as possible, striving for more and more land.

Please contribute to this segment by sending us your photos and including a short caption: communications@sasscal.org
Upcoming Events

Announcement for a SASSCAL short course on “Regional Climate Change Assessment and Impact Analysis”
There will be a training course on “Regional climate change assessment and impact analysis” in Stellenbosch, South Africa from 20 to 24 February 2017. The course will be conducted jointly by the Climate Service Center Germany (GERICS) (SASSCAL task 006), the Council of Scientific & Industrial Research (CSIR) and the Climate System Analysis Group (CSAG) at UCT (both SASSCAL task 203).

The focus of this climate course will be on regional climate change assessment and impact analysis with emphasis on practical exercises. The workshop is primarily addressing students and researchers within SASSCAL which are working with climate data, but in case places are left, interested people from universities and other research organizations, governmental and public authorities are also welcome. Please note that the number of participants is limited to 20.

More detailed information on the program and logistics will be distributed via Email to the SASSCAL PIs and published on the SASSCAL website at the beginning of 2017.

Pre-registration can be arranged by contacting Dr. Torsten Weber (torsten.weber@hzg.de) who will be the main organizer of the workshop.

Biodiversity and Health in the Face of Climate Change—Challenges, opportunities and evidence gaps
27-29 June 2017, Bonn/Germany

European Conference hosted by the German Federal Agency for Nature Conservation (BfN) and the European Network of Heads of Nature Conservation Agencies (ENCA) in co-operation with the Helmholtz-Centre for Environmental Research (UFZ) / German Centre for Integrative Biodiversity Research (iDiv)

Climate change poses significant challenges to biodiversity and human well-being in Europe. As the majority of Europeans live in urban areas and cities are often subject to exacerbated heat island effects, consequences of climate change may be experienced first in urban settings. Biodiversity, in turn, can provide health and climate change mitigation and adaptation benefits that can be actively fostered by nature-based solutions.

This joint European conference in Bonn will bring together experts from science, policy and practice to highlight and discuss the importance of biodiversity’s contribution to human health in the face of climate change. In this context health is considered in its physical, psychological and social dimension, including socio-environmental equity. The aim of the conference is to increase knowledge, share experiences and foster nature-based solutions to meet the challenges of climate change and health issues.

Latest scientific findings on the impacts of climate change on European biodiversity and links to human health will be discussed. Furthermore, the implementation of nature-based solutions towards health and climate goals within cities and their surrounding areas will be outlined. Interactive sessions will focus on case studies of successful demonstration projects and lessons learned. Resulting discussions will lead to recommendations for creating synergies between ongoing policy processes, scientific programmes and practical implementation.

Programme and registration details follow soon. For further information please contact jutta.stadler@bfn.de

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<tr>
<th>WHEN</th>
<th>WHAT</th>
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<td>20 to 24 February 2017</td>
<td>Training course on region-</td>
<td>Stellenbosch, South Africa</td>
<td><a href="mailto:torsten.weber@hzg.de">torsten.weber@hzg.de</a></td>
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<td>28 February to 02 March 2017</td>
<td>ICCS 5 (Fifth International Conference on Climate Services)</td>
<td>Cape Town, South Africa</td>
<td><a href="http://www.climate-services.org/iccs/iccs5">www.climate-services.org/iccs/iccs5</a></td>
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<td>08 to 12 May 2017</td>
<td>37th International Sympo-</td>
<td>Tshwane (Pretoria), South Africa</td>
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<td>of Environment (ISRSE)</td>
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<td>27 to 29 June 2017</td>
<td>Biodiversity and Health in the Face of Climate Change - Challenges,</td>
<td>Bonn, Germany</td>
<td><a href="mailto:jutta.stadler@bfn.de">jutta.stadler@bfn.de</a></td>
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Dr. Kristin Krawenka
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The newsletter is compiled by Sylvia Thompson, from the OADC of SASSCAL.

To subscribe, contribute or comment to the SASSCAL NEWS, please email:
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