



SEOSAW Quarterly Newsletter: July 2023

What is SEOSAW?

[SEOSAW](#) is a network of scientists and plots unified by a shared interest in understanding the changing ecology of African woodlands and savannas.

For more information, see 'What is SEOSAW?' , 'Who owns the data?' , and 'Request our Data' at the bottom of the newsletter.

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New SEOSAW Publication!



Research article | Open Access |

Precipitation gradients drive high tree species turnover in the woodlands of eastern and southern Africa

Robert W. Davies , Casey M. Ryan, Rhett D. Harrison, Kyle G. Dexter, Antje Ahrends, Mariska te Beest, Lorena Benitez, Thom K. Brade, Joao M. B. Carreiras, Dave J. Druce, Adeline Fayolle ... [See all authors](#) ▾

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Congratulations to Rob Davies and many SEOSAW co-authors for the acceptance of their publication, "[Precipitation gradients drive high tree species turnover in the woodlands of eastern and southern Africa](#)", in *Ecography*.

Updates from the Field





1 - Field assistant Happy Mangena tagging a tree at Satara.

PSPs in Kruger resampled!

SEOSAW co-chair Prof. Sally Archibald and Researcher Tatenda Gotore embarked on a data collection campaign at Kruger National Park from May 9-26, 2023. Prof Archibald and her team established and have been monitoring permanent sample plots in Kruger National Park covering about 20 ha i.e., 3 x 5 ha plots at Satara and 1 x 4 ha plot at Skukuza. The objectives of this data collection campaign were to:

- Re-census and tag trees
- Collect grass biomass samples
- Collect soil samples

The collected data will contribute to the long-term research objectives of understanding vegetation dynamics in response to climate change, herbivory, and fire including the overall carbon dynamics in these systems. This work is being done as a collaboration between SEOSAW, SECO, Miombo Network, FEFA, SANParks, and CSIR and will contribute the data to various projects at local, regional, and global scale providing evidence to support policy development and decision making for the management of savannas.





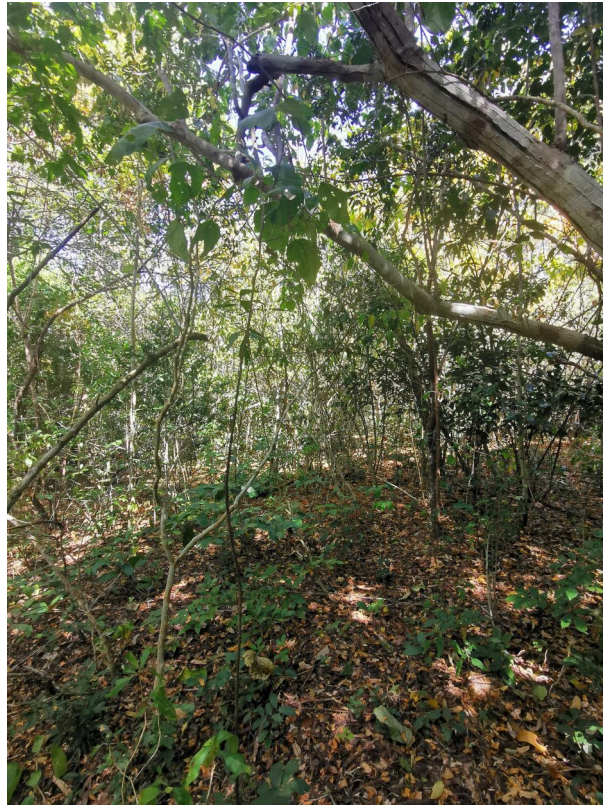


New plots in Southeast Angola!

During the months of April, June, and July, Luisa Escobar Alvarado and her team established 26 50x50 m vegetation plots in the highlands of southeast Angola, in the province of Moxico. They explored the different vegetation types that local inhabitants recognise on a landscape with rivers, savannas, open and dense woodlands. They worked with local communities to learn vernacular names of tree species as well as uses and importance of different species for local livelihoods. They found many species common of miombo ecosystems but also an unexpected high frequency of *Cryptosepalum spp*!







Phenocams set at Kilwa PSPs!

In July, Matúš Seči and Casey Ryan of the University of Edinburgh conducted fieldwork in Kilwa, Tanzania to set up 12 camera traps in the PSPs. The fieldwork was conducted in collaboration with a local partner organisation, Mpingo Conservation and Development Initiative (MCDI). Cameras were set in savanna, miombo woodland and coastal dry forest PSPs to capture the variability of leaf phenology between these ecosystems but also between canopy and understory vegetation within the ecosystems. This work is part of the PhenoChange project which aims to establish a global network of vegetation-monitoring cameras to improve understanding of leaf phenology across dry tropics.

Note from the Field: Tag Issues









After a recent visit to the Kilwa (Tanzania) plots run by MCDI and U. Edinburgh, Casey thought he'd share these pictures about the effects of tagging trees. The trees in the east African coastal forest seem to particularly dislike the nails – we see much more of these swellings and growths in the forest plots and less in the woodlands. Hopefully these serve as a good illustration of why the protocol suggests:

- Don't put the tag at the same height as the point of measurement (POM). If you tag at the same height as the POM, you will measure lots of artificially high growth, due to the swelling. We put the tags 20 cm above the POM.
- Use long nails with lots of room for the tag to move with growth (preferably aluminium, which RAINFOR colleagues say causes less problems).
- Only nail a short way into the wood – as little as possible to make the nail secure.

And, in Kilwa at least, the elephants seem to *hate* shiny tags and bend them off the tree. We spray them green or black to try and minimise this, but I think we should use a less reflective material in future.

Staff Changes

A note from Lorena:

In September, Penny will be taking over the role of SEOSAW Project Officer from me. I am sad to be leaving a job that I have enjoyed so much over the last two years, but it is time for me to focus on my PhD. I am not disappearing completely, as you will likely still see me at Science Meetings, but I will not longer be handling the day-to-day admin of the network. Thanks to everyone who has made this job such a joy!

SEOSAW will be at FLARE, Nairobi 12 -16 October



SEOSAW staff (Penny & Lorena) will be attending FLARE. Come and say hello if you're there!

Science Meeting- May 16

The topic was **Science for Policy** and was a joint meeting with the Miombo Network. It was equal parts presentations and discussions on the topics of biodiversity, carbon, climate, and how our research influences policy.

If you missed it, you can watch the recording [here](#)!

Selected updates on Steering Committee member activities

- **Natasha Ribeiro** is organising a joint seminar between Chiquitano (South American) and miombo forests.
- **Wilson Mugasha** is working with Tanzania Forestry Conservation Group (TFCG) establishing 155 PSPs in charcoal harvesting areas.
- **Vera de Cauwer, Kyle Dexter & John Godlee** established 6 new PSPs in Namibia (Kanollei, Hamoye, Zambezi) that overlap with the GEDI space lidar footprint location.
- **Mũsingo T. E. Mbuvi** wrote 3 funding proposals and mentoring early career staff: technical staff (6), social scientists (2) and ecologist (2) to gain exposure in the field and be able to develop a niche of their study areas.
- **Elisha Njoghomi & John Godlee** are involved in the ATFS (Alliance for Tropical Forest Science) MWG (Mortality Working Group) where they are contributing data and expertise to a paper on spatial patterns of tree mortality.
- **Nicola Stevens** set up 18 new PSPs across a herbivory gradient in Laikipia, Kenya.
- **Geoff Wells** is testing out a "Rapid Land Systems Assessment" that focuses on dimensions of resource use and intensity, tenure, governance and socio-economic context that are not already available through existing geospatial datasets, and can be completed through a desk review and/or expert opinion. Geoff is testing this in some SEOSAW-related areas (e.g. Wedza, Gaza, Kilwa) as part of his fellowship looking at human-induced 'bright spots' of tree biomass resilience to human pressure. If useful, SEOSAW could use the questionnaire a resource going forward.
- **Muri Soares** completed biomass mapping with a commercial partner, using novel multi-scale lidar measurements. Airborne laser scanning (ALS), unoccupied aerial vehicle laser scanning (UAV-LS) and terrestrial laser scanning (TLS) data were acquired across a 5,000 area in Maputo National Park.
 - Installation and quality assurance reports of the Mozambican PSP network are available in the [MRV Unit website](#). The location of the PSPs can be seen on this [webmap](#).

PhD Opportunity!

Apply for this PhD position with Adeline Fayolle at U. Liege!

Topic: The diversification of a specific clade, *Berlinia*, endemic to Africa, hyperdiverse, with several biome shifts reported, and specifically about the drought tolerance strategies of tropical trees within this clade.

Information here : https://www.canopi.uliege.be/cms/c_11409126/fr/offre-de-doctorat-projet-berlinia

A specific info for the SEOSAW network: We will seek for a site/region where to install a tree ecophysiology lab in the savanna/woodland area, so if colleagues are interested, they can contact us

Data cleaning job

SEOSAW has a lot of new data coming in, and we need some help to get it formatted and cleaned for the database...

If you are interested in learning more about SEOSAW data and our methods, please email Penny (penny.mograbi@ed.ac.uk) to express your interest. Some experience with R is necessary. Masters and early PhD students are preferred. Payment will be on a per dataset basis.

What is SEOSAW?



SEOSAW comprises a network of scientists and also a network of vegetation survey plots across southern and eastern Africa. Members of SEOSAW conduct diverse research and come from a variety of institutions (academic, government, private, etc.), but are unified by a shared interest in the changing socio-ecology of woodlands and savannas.

The long-term goal of SEOSAW is to understand the response of African woodlands to global change.

SEOSAW is managed communally, and the scope of SEOSAW's activities is open to change as the network and its members' research interests develop. SEOSAW's main purpose is to connect researchers and their data, and to facilitate collaborative research via standardized methods and a curated, accessible database. Anybody is welcome to become part of SEOSAW, by contributing data or expertise, or by using the SEOSAW dataset for their research.

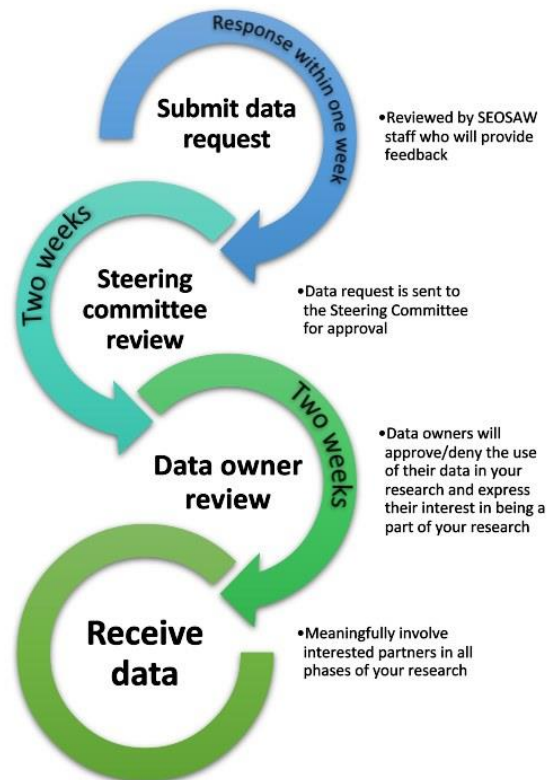
Who owns the data?



SEOSAW data belong to the people who collected it. SEOSAW oils the wheels by standardising the data and storing it in a common database, but the intellectual property belongs to whoever puts the data in, and the data can only be used by others with the owner's permission, and for specific purposes.

Anyone can request to use some or all of the SEOSAW data (see [here](#)). However, we put most of our energy into supporting SEOSAW network members and researchers in the region to make full use of the opportunities the SEOSAW offers. Typically this allows us to scale up our research from site-specific analyses to regional analyses that use data from across all of the woodlands. Or it allows us to use multiple data sets that are hard for one person or group to be expert in (e.g. soils, grass and tree data).

Request the SEOSAW data!



We want the SEOSAW database to be as open and used as possible! If you have science questions, we have data and people willing to help you draft a data request!

To access the SEOSAW data, we require you to draft a data request which is reviewed by the SEOSAW steering committee first and then the data owners. This process takes about a month. The SEOSAW office is here to make this process as easy as possible for you, and will assist you in formulating the perfect data request.

If you are interested, please answer the questions in this [document](#) and get in touch via the [contact form](#) if you would like to use the SEOSAW dataset. A sample of the dataset is freely available [here](#) to help you in formulating your data request.