

agrar aktuell

Newsletter der Fakultät für Agrarwissenschaften



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Nachrichten

Großes Interesse bei der
5. Nacht des Wissens

Forschung

Unbezahl(t)bar: Frauen
in der Landwirtschaft

Fakultät

Scientists meet stakeholders
to discuss climate-related
challenges in South Africa

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The South African Limpopo Landscapes Network (SALLnet) final project meeting was held in Tzaneen (Limpopo Province, South Africa) on 20-21 June 2022. The overarching research question of SALLnet's interdisciplinary research project is: "How can the resilience of the multi-functional landscapes in southern Africa be enhanced under the conditions of climate change and increased resource limitations?". Six German and four South African partner institutions have been cooperating in SALLnet since 2018, under the BMBF-funded SPACES II program. The network has been coordinated by the University of Göttingen – Division of Tropical Plant Production and Agricultural Systems Modelling, and involved researchers from a wide range of disciplines as well as stakeholders at different decision levels. Focusing on the Limpopo region – selected because of its diverse land-use, biodiversity and high spatiotemporal climatic variability – we have been developing and testing new approaches and methods and carried out dedicated experiments and surveys for developing more sustainable land-use options at landscape level. Focus was on the interactions between the connected land-use types: arable lands, rangelands and tree orchards. Among our main objectives, one is to develop and apply integrative tools and modelling platforms to explore and discuss alternative land-use scenarios and associated management options in view of

rural development goals and their trade-offs jointly with local stakeholders. This would, in turn, inform the discussion and debate on how to best enhance the resilience of the multi-functional landscapes to climate variability and change in the region.

Main focus of the meeting was on confirming and extending preliminary research findings. To this end, scientific project highlights were presented and promising management recommendations from distinct land-use case studies were discussed. Main objectives of the meetings were to exchange with research colleagues from different disciplines and synthesize the results on topics of high societal relevance. Additional objectives were to plan further collaborative activities for achieving the project goals and to identify future research needs.

Key to transformation pathways is technological change – with associated management and policy changes – and analysis of goal achievements and trade-offs with stakeholders for alternative future "pathways" (i.e. environmental and socio-economic). Therefore, we organized a Stakeholder Day to present our work to key stakeholders, engage them and ask for their feedback in terms of the applicability of the projects' results and their relevance for developing meaningful management and recommendations in support of policy design. This was done in a "hybrid" format: most of the invited stakeholders (about 35

people) joined physically in Tzaneen, while some more participated in virtual form – allowing the participation of a heterogeneous group of stakeholders, ranging from the political sphere to academics and researchers, members of national and international organizations, extension officers and farmers. Four main discussion topics were identified for the exchange with stakeholders: (1) effects of mixed crop-livestock management in smallholder farming systems, (2) interactions between smallholder livestock keeping and rangeland management, (3) sustainable management of macadamia orchards, and (4) effects of technology change on farm household income and policy implications.

Some key messages that emerged from the discussions with the stakeholders were:

- Improved technologies and management options for mixed crop-livestock farming include a later return of livestock to rangeland and the storage of crop residues to enhance rangeland growth and reduce feed gaps.
- In terms of rangeland management under drought, the duration of the latter is responsible for strongly decreases in rangeland productivity and the loss of perennial grass species. Small grazing exclosures dispersed over the rangeland may ensure seed production of palatable grass species.



SALLnet project members and stakeholders during the SALLnet Final Meeting in Tzaneen (Limpopo Province, South Africa) on 20-21 June 2022

liveSciences³ Summer Campus: Shaping Future Landscapes – Perspectives for Trees, Cows & Snails



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- For a more sustainable management of macadamia orchards, water use efficiency needs to be increased by better targeting the tree water requirements and avoiding over-irrigation. Furthermore, keeping semi-natural habitats around macadamia orchards is important for pollination and pest control by bats and birds.
- Finally, the adoption of improved and innovative technologies, particularly irrigation, is economically viable for all small-scale farm types in Limpopo. Information about these technologies through extension services and access to credit to fund these technologies are the most important enablers. Yet, this information needs to be complemented by robust quantitative estimates and projections of future availability of water resources in the region.

Overall, the meeting was considered successful by all participants. The exchange between researchers and stakeholders proved to be stimulating and enriching for both sides. What emerged from the discussions is that further research on identified topics is needed and that findings need to be communicated in more targeted formats to the relevant stakeholder groups and policy makers (e.g. through policy briefs and lists of management recommendations).



Vom 15.–26. August 2022 fanden sich in Göttingen 30 Studierende der lebenswissenschaftlichen Fakultäten aus sieben verschiedenen Ländern zusammen, um sich im Rahmen des *liveSciences³ Summer Campus* für zwei Wochen über das Management von Kulturlandschaften auszutauschen.

In Keynotes und Diskussionen boten passionierte Wissenschaftler*innen der Universität Göttingen und der *liveSciences³ Partneruniversitäten* Einblicke auf den Wandel von Landschaften, von Moorlandschaften in Norddeutschland über Agroforstsysteme in Costa Rica bis hin zu den letzten Urwäldern Europas in Bosnien-Herzegowina. In interaktiven Diskussionen zu aktuellen Landnutzungskonflikten lernten die Studierenden in internationalen Teams Gruppendynamiken zu reflektieren. Während Tages-Exkursionen in das Umland von Göttingen und der Arbeit an einem selbst ausgewählten Projekt, waren die Teilnehmenden eingeladen, gemeinsam mit Studierenden anderer Fachrichtungen (Agrar, Biologie und Forst), über die verschiedenen Aspekte und Bestandteile von Kultur- und Naturlandschaften zu diskutieren. Der Perspektivenwechsel und das interdisziplinäre forschungsorientierte Arbeiten in internationalen Teams war ein besonderes Anliegen der fakultätsübergreifenden Veranstaltung; ebenso wie die Verknüpfung von wissenschaftlichen Arbeiten mit der Stärkung von digitalen Kompetenzen. Durch das gemeinsame Engagement von Wissenschaftler*innen und Projektmitarbeiter*innen konnten während des *Summer Campus* zudem zahlreiche Ideen für (Forschungs-)Projekte entwickelt und das Netzwerk nachhaltig belebt und gestärkt werden.

Methodisch begleitet wurde der *Summer Campus* von Expert*innen der Universität Göttingen, die Workshops zum Thema Vi-

deoproduktion gaben. Am Ende der zwei Wochen konnten die Studierenden tolle Videos präsentieren, die ihren Lernprozess und die Erfahrungen in den jeweiligen Projekten dokumentieren.

Neugierig geworden? Unter diesem Link finden Sie die finalen Resultate der Videoprojekte:
www.uni-goettingen.de/liveSciences3+SummerCampus2022

The *liveSciences³ Summer Campus* from a student perspective

In the mid of August an adventure of young people sharing same interests from seven countries was taking place in University Göttingen. As a group of biology, forestry and agricultural students, how do we shape future landscape in a more sustainable way? How can we work together to seek local solutions for global challenges? We brought our ideas to university's new facility in SUB – Digital Creative Space, there we were able to confidently present our perspectives into the group with digital support. Starting casually with a cup of coffee and snacks, the first week was all about learning with fun! Not only did we have the opportunities to have international communications and exchange ideas freely with experts in their field, but also went outside to explore humanmade forest in southern Solling with professional assistance. After the week of lectures and theories, we have widened our sights. As for the cow group, we were eager to know what is the current ecological farming system in Germany. We concentrated our concerns in three main areas — profitability of farm-