

## CLE Department Retreat

On April 3 and 4, 2023, we had an intense and exciting department retreat in the hotel "Henne" located at the Saale river in Naumburg. One important part of the event has been the "open space sessions", where topics about the social and scientific life in the department were discussed in groups. During the retreat, we also decided to reorganize the colloquium into a more open format "Open CLE Forum" that takes place fortnightly. This new event allows the department staff to present and discuss nearly every topic from ideas, methods, and projects to papers, etc., and is very well received by colleagues. Other fun exercises have been the production of a CLE newscast video under "time pressure". It was the first retreat since 2019 due to the pandemic. We think we successfully fulfilled the target of the event, which was to get to know each other better and to facilitate a direct exchange.



## New Department staff

Dr. Julia Palliwoda has already finished her PhD in our Department in the project [UrbanGaia](#) about Ecosystem Services in Urban Green Infrastructure. She continued working as a researcher in the project [Bioshare](#) but then left us for two years to go on parental leave and to work in the field of geomatics in an engineering agency. She is specialized in urban ecosystems and interdisciplinary research. We are very happy welcoming her back in January 2023 as a post-doc in the project [SolaRegio](#).



Irina Heiß finished her M.Sc. in Environmental Sciences: Atmosphere, Biogeochemistry and Climate at Stockholm University, Sweden. Her thesis topic was the "Inventory of the soil resources at the farm Tellow, Northern Germany: Current soil condition and future perspectives". Starting as PhD in January 2023, she works in the junior research group [AgriScape](#) which studies the trade-offs that arise in the context of the agricultural transformation towards more sustainability and multifunctionality. Her key task is to set up a biophysical model for the study region.

## Press / Media

**Nov 9, 2023:** Podcast on detektor.fm  
Forschungsquartett | Landwirtschaft: "Wie wird unsere Landwirtschaft vielfältiger?"  
[→ Interview with Dr. Andrea KaimNov \(in German\)](#)

**Nov 2, 2023:** Laborjournal  
"Verschiedene Forscher werten dieselben Daten aus und kommen zu anderen Ergebnissen. Das wirft einen neuen Blick auf die Frage: was ist „wahr“?"  
[→ Article with quotations of Dr. Elina Takola \(in German\)](#)

**Mar 7, 2023:** Which measures lead to a more efficient retention of water and nutrient fluxes in agricultural landscapes? The video provides a short overview on the [Horizon2020 project OPTAIN](#) that investigates this question.  
[→ Link to Video](#)

## Imprint

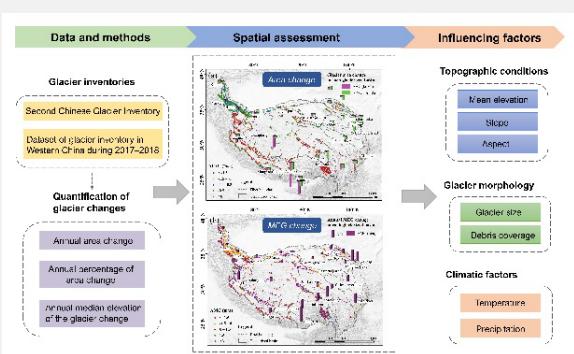
### Editorial:

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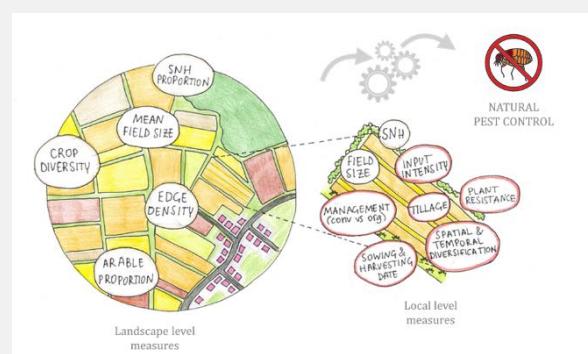
Date of release: Dec 7, 2023

## Some Highlight Publications from 2023



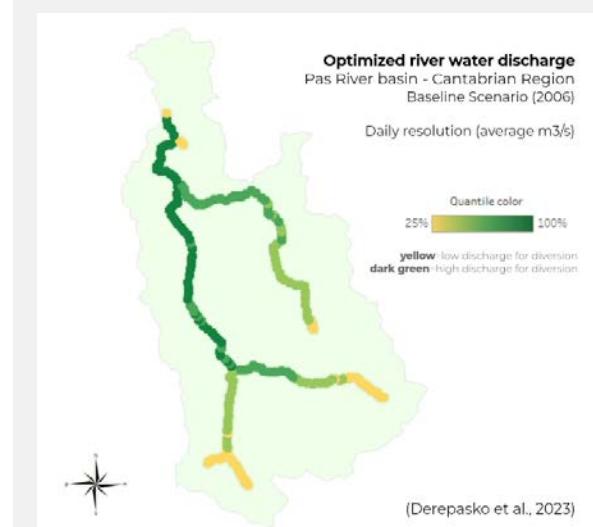
**Zhang, C., Ran, W., Fang, S., Hu, S., Beckmann, M., Volk, M.** (2023): Divergent glacier area and elevation changes across the Tibetan Plateau in the early 21st century. *Anthropocene* 44, 100419. [10.1016/j.ancene.2023.100419](https://doi.org/10.1016/j.ancene.2023.100419)

Assessing glacier change and analyzing its influencing factors are essential for developing climate change mitigation and adaptation measures for a given region. Here, we provide a spatially explicit assessment and quantification of glacier changes in the early 21st century on the Tibetan Plateau at individual glacier and basin scales. In addition, this study quantitatively assesses the influencing factors of glacier area changes concerning topographic conditions, glacier morphology and climatic factors, which substantially improves the understanding of glacier response patterns in the context of climate warming in the 21<sup>st</sup> century.



**Bonato, M., Martin, E.A., Cord, A.F., Seppelt, R., Beckmann, M., Strauch, M.** (2023): Applying generic landscape-scale models of natural pest control to real data: Associations between crops, pests and biocontrol agents make the difference. *Agric. Ecosyst. Environ.* 342 , art. 108215. [10.1016/j.agee.2022.108215](https://doi.org/10.1016/j.agee.2022.108215)

Having reliable models representing the relationship between landscape structure, field management and natural pest control can help in deciding which management practices should be used and where, and consequently can help reduce pesticide use. Here, we compared the resulting values of an existing generic model with available field measurements of natural pest control. The results highlighted the importance of tailoring models towards specific associations between crops, pests and biocontrol agents and of including local level factors.



**Derepasko, D., Witing, F., Peñas, F.J., Barquín, J., Volk, M.** (2023): Towards adaptive water management - Optimizing river water diversion at the basin scale under future environmental conditions. *Water* 15 (18), art. 3289. [10.3390/w15183289](https://doi.org/10.3390/w15183289)

Our study exemplifies the application of the optimization modelling for water diversion management at the basin scale. It hence provides new insights on the implications of the spatio-temporal dimensions relevant for implementing adaptive water management at such spatial scales.