



Anaïs is currently a Ph.D. Candidate at The Department of the Environment and Geography at The University of Texas at Austin, Austin, Texas, United States. She studies how physical, ecological, and social processes interact to drive ecosystem changes in new alpine proglacial landscapes and how these inform the best adaptation strategies. She combines plot surveys with macro-scale UAV (unmanned aerial vehicle) remote sensing methods.

Email: anaïs.zimmer@utexas.edu

Personal website: <https://zimmeranaïs.wixsite.com/home>

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Salle 201, Bâtiment PS2, CIRAD-UMR AMAP,
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Zoom : <https://umontpellier-fr.zoom.us/j/92774540947>

Emerging Novel Ecosystems and Human Interactions from Melting Mountain Glaciers

presented by

Anaïs Zimmer

UMRAMAP – INRA, Montpellier, France

ABSTRACT

Alpine glaciers worldwide will lose most of their volume by the end of the 21st century, placing alpine ecosystems and human populations at risk. The emerging ice-free lands, however, provide an opportunity for novel alpine ecosystems to develop. Previous studies have usually focused on wider areas through satellite imagery or on smaller areas using in situ floristic evaluations. Extending these studies, I couple field data collection and aerial photogrammetry to study the distribution and composition of pioneer alpine communities in glacier forelands. For a total of nine proglacial landscapes distributed between the Alps and the Peruvian Tropical Andes, I combine satellite imagery and multispectral UAVs models with in-situ floristic and geomorphologic surveys. In addition, I study how proglacial land management can enhance the ecological transition from recently deglaciated land to productive ecosystems—i.e., providing ecosystem services for mountain communities. To this end, I use an experimental approach to test if Andean camelids (llamas) can act as seed dispersers, soil fertilizers, and zoogeomorphologic agents, and favor the upslope shift of Andean grasslands, shrublands, and wetlands at a pace relevant to climate change.

KEY WORDS: Glacier retreat, Geo-ecological succession, European Alps, Tropical Andes, Experimental Approach

Invited and animated by:

Dr. Fabien Anthelme (UMR AMAP)

Type:

Research results

Oral language:

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Language of PPT:

english

