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Lecture Series Environment & Biodiversity

What happens after a glacier retreats?

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Friday, January 9, 2026, 2:00 PM

NLW Faculty, Seminar Room HS 435, 3rd Floor

Research focus:

Glacier forefields, Climate change impacts,
Long-term vegetation dynamics



Abstract

As glaciers retreat, newly exposed terrain is progressively colonized by plants. Although these environments have been largely studied from a successional perspective, the influence of climate change on their long-term ecological trajectories remains poorly understood. Here, we combine eight decades of vegetation surveys on the margins of the Great Aletsch Glacier (Switzerland) with microenvironmental measurements and historical to modern aerial imagery to provide a multi-scale perspective on the vegetation dynamics in this context. I will review the main findings of our study, which reveal complex interactions between climate change, grazing, and local environmental heterogeneity. With Swiss glaciers projected to lose over 75% of their volume by 2100 and environmental changes expected to accelerate, our results provide critical insights into the future of these rapidly changing alpine ecosystems.

