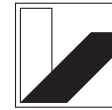


# BayCEER Kolloquium

Lectures in Ecology and  
Environmental Research

Winter 2022



UNIVERSITÄT  
BAYREUTH

Donnerstag/Thursday

**02.02.2023**

**12:15 in H6, GEO**



**Dr. Alejandro Ordonez**

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## Rising Novelty in Ecosystems and Climates

We live in a world of rising novelty. Many contemporary ecosystems already differ substantively from all historical counterparts, due to species introductions, land use, species extinctions, altered nutrient cycling, etc. Future ecosystems are expected to differ from those found today, as species differentially lag rapid climate change, novel climates emerge, and species occupy previously unavailable portions of their fundamental niches. To address this challenge, we need to answer important questions, including: (1) How do we define novelty and what criteria? ; (2) By what mechanisms do novel climates give rise to novel ecosystems, and (3) what metrics best represent the exposure of communities to climate-driven reorganization?; and do we see a match between areas experiencing environmental novelty and changes in biodiversity? Here, I will present a series of vignettes of my work that describe how much, in which direction and at what rates have(will) climatic conditions change; the extension of climate-driven metrics of change to other environmental dimensions (i.e., land use changes); and numerical and empirical efforts linking the emergence of novel environmental setups and communities, and how these changes can have a lasting impact in ecosystem services and functions.

