Comparative ecological change and restoration in dryland woodlands: identifying common problems and novel solutions in the Southern Cone of South America and the Sahel of Africa.

22 September, 2021, University of Chicago Center in Paris, France hybrid remote/ in person event.
Times CET.

Description: Drylands, semi-arid woodlands and seasonally dry forests are increasingly important areas of global change dynamics (Maestre et al. 2016). Their soil and woody biomass are important for storing carbon despite the slow growth of trees in such areas. They are also increasingly subject to droughts and degradation pressures from poor management, including management that increases the intensity of wildfires, increases sedentary exploitation, and so on (UNCCD 2017). Restoration to prevent or reverse their degradation is an important issue (Newton et al. 2012). However, it is difficult to design good restoration and management programmes for dryland woodlands when we know relatively little about their natural dynamics, which are often too slow to understand from short research projects which may be conditioned in unknown ways by local historical and social factors. Much knowledge of forest dynamics and anthropogenic effects on trees and woodlands is also based on temperate and tropical forests, which are much more studied (e.g. Rackham 2006). Consequently, comparison between dryland woodlands and forests is valuable to aid interpretation. Furthermore, comparative perspectives across the global South are rare. My experience with comparative research on livestock systems and shrub habitats/woodland in Lesotho and central Chile suggests that researchers specializing in different regions have very different ideas about the natural dynamics, management and restoration of their dryland systems. The comparative perspective brings numerous frameworks to light and places results in new perspectives, which can be used to develop new approaches both to understanding ecological dynamics under perturbations from climate and anthropogenic use, and approaches to restoration. The workshop will identify open questions that may be addressed from a comparative perspective, and issues where comparison across the southern cone of South America and the Sahel may lead to novel research questions, experiments, and future research and research-action collaborations.
14:30- 14:45 Opening remarks Meredith Root-Bernstein (CNRS/Muséum)

14:45- 15:35 Round table one: Perspectives on Dryland Woodland Degradation and Restoration in the Sahel Region
Contributors:
Honam Atsri (Université de Lomé-Togo) : Forests of Togo
Shalom Addo-Danso (CSIR-Forestry Research Institute of Ghana (FORIG): Forests of Ghana
Samadori Honoré Biaou (Université de Parakou, Bénin): Prospects and challenges of woodland restoration in West Africa with insights from permanent plot observations in Benin.
Ahmed Mahmoud (University of Nottingham) : Desertification processes in Sudan with a focus on sand dune movements
Aziz Balouche (University of Angers) : Long-term perspective of environmental changes in the Sahel.

15:35- 16:15 Discussion.
Discussant : Juan Armesto (Institute of Ecology and Biodiversity, Chile)

16:15-16:55 Round table two: Perspectives on Dryland Woodland Degradation and Restoration in Semi-Arid Forests of South America
Contributors:
Meredith Root-Bernstein (CNRS/Muséum) : Rewilding and succession of silvopastoral and sclerophyllous forests of central Chile
Andrés Tálamo (CONICET) : Degradation and restoration in the Argentinian Chaco
Joseph Veldman (Texas A&M) Cerrado savanna and woodlands & fire
Rachel Cypher (University of California Santa Cruz) : Discourses of degradation in Argentinian rangelands

16:55- 17:35 Discussion.
Discussant: Tristan Charles-Dominique (Sorbonne)

15 minute break
17:50- 18:20 Global and comparative views on dryland and semi-arid woodland degradation and restoration
Contributors:
**Milena Holmgren** (Wageningen University) : Climate variability and the resilience of tropical drylands
**Brandon Bestelmeyer** (USDA) : Conceptual models of dryland degradation and restoration: processes and potentials
**Adrian Newton** (Bournemouth University) : Ecosystem collapse in dry forests

18:20-19:00 Discussion.
Discussant: **Colin Hoag** (Smith College)

19:00-19:15 Final remarks, Meredith Root-Bernstein