

BayCEER Kolloquium

Lectures in Ecology and
Environmental Research

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12:00 in H6, GEO

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The ecology and conservation of a seasonally dry tropical forest in South America

The Caatinga dry forest in Northeast Brazil represents one of the largest and species-rich pieces of seasonally dry tropical forest globally. Moreover, species endemism ranges from 6% (mammals) to 59% (fishes) and this biota is an evolutionary center for complex plant-animal interactions such as myrmecochory and saurochory. Caatinga is also the home of a singular human culture that has evolved since the Europeans arrived in the region in the 16th century and mixed with indigenous people and African descendants; i.e. the Sertanejo culture. Similar to other dry forests, most of the Caatinga forest has been converted into human-modified landscapes, in which small farming prevails.

I refer to a socioecological system highly dependent of forest products such as firewood, timber, fodder and nutrients to support slash-and-burn agriculture. Such a combination of both acute and chronicle disturbances has already reorganized the Caatinga biota from population to ecosystem level. Caatinga appears to be exposed to a feedback looping connecting human poverty to environmental degradation, now threatening over 1/3 of the region with desertification. Increasing aridity, as predicted by climatic models, is expected to speed up degradation processes, particularly in the lack of appropriate socioeconomic and green infrastructure. The path toward sustainability and resilience in the Caatinga requires a major shift from the current ways in which local populations use and interact with natural ecosystems. Such a complex scenario, while reinforcing dry forests as a global heritage, describes the immense challenges to their future persistence. In this perspective, the "Caatinga lessons" are highly welcome.