



Nexus
Caatinga

A model of sustainable agriculture landscapes in drylands using nexus approach

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DRESDEN
NEXUS
CONFERENCE

Circular Economy in
a Sustainable Society





Finding a balance between ecosystem conservation and productions for society is urgent in drylands, because:

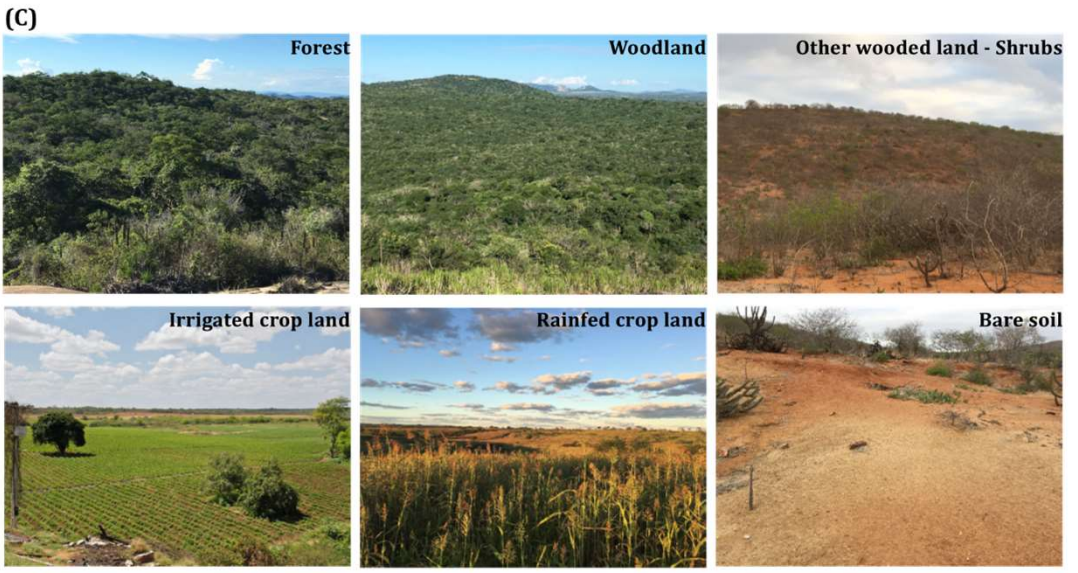
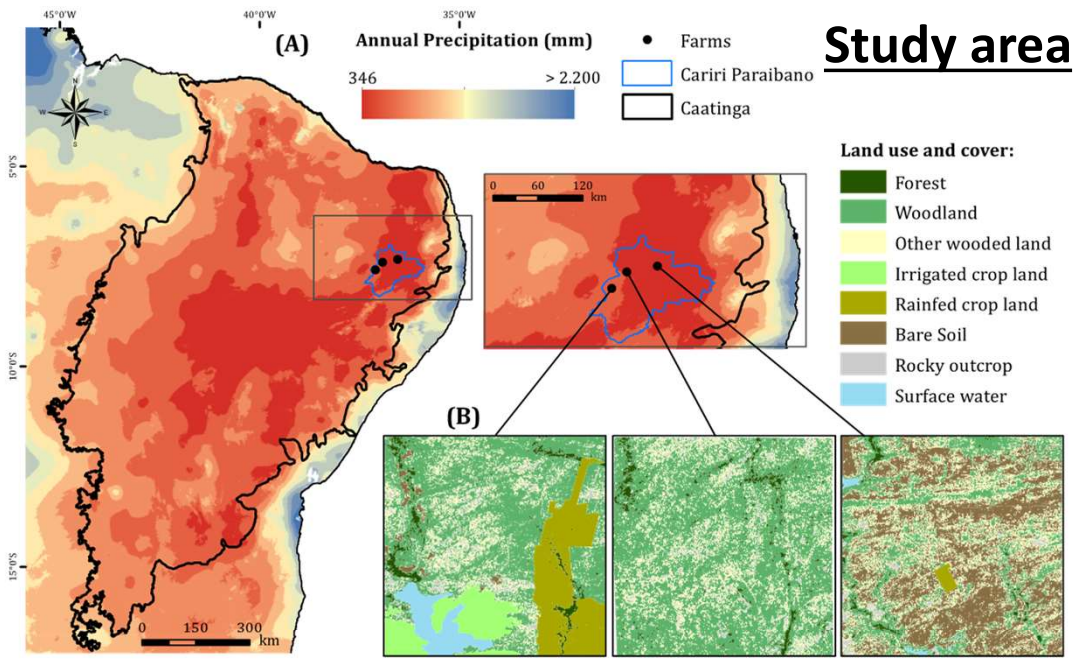
- 1) drylands are home to 2.1 billion
- 2) half of these people are poor, do not have access to technology, and depend on agriculture
- 3) natural ecosystems become degraded when used beyond their carrying capacity



One of the solutions is to implement sustainable agricultural landscapes



We investigate how agricultural landscapes produce and keep ecosystem services focused on water, energy, and food together



Outputs

Water in soil

Erosion rates → soil moisture
Index (groundwater)

Biomass for Energy

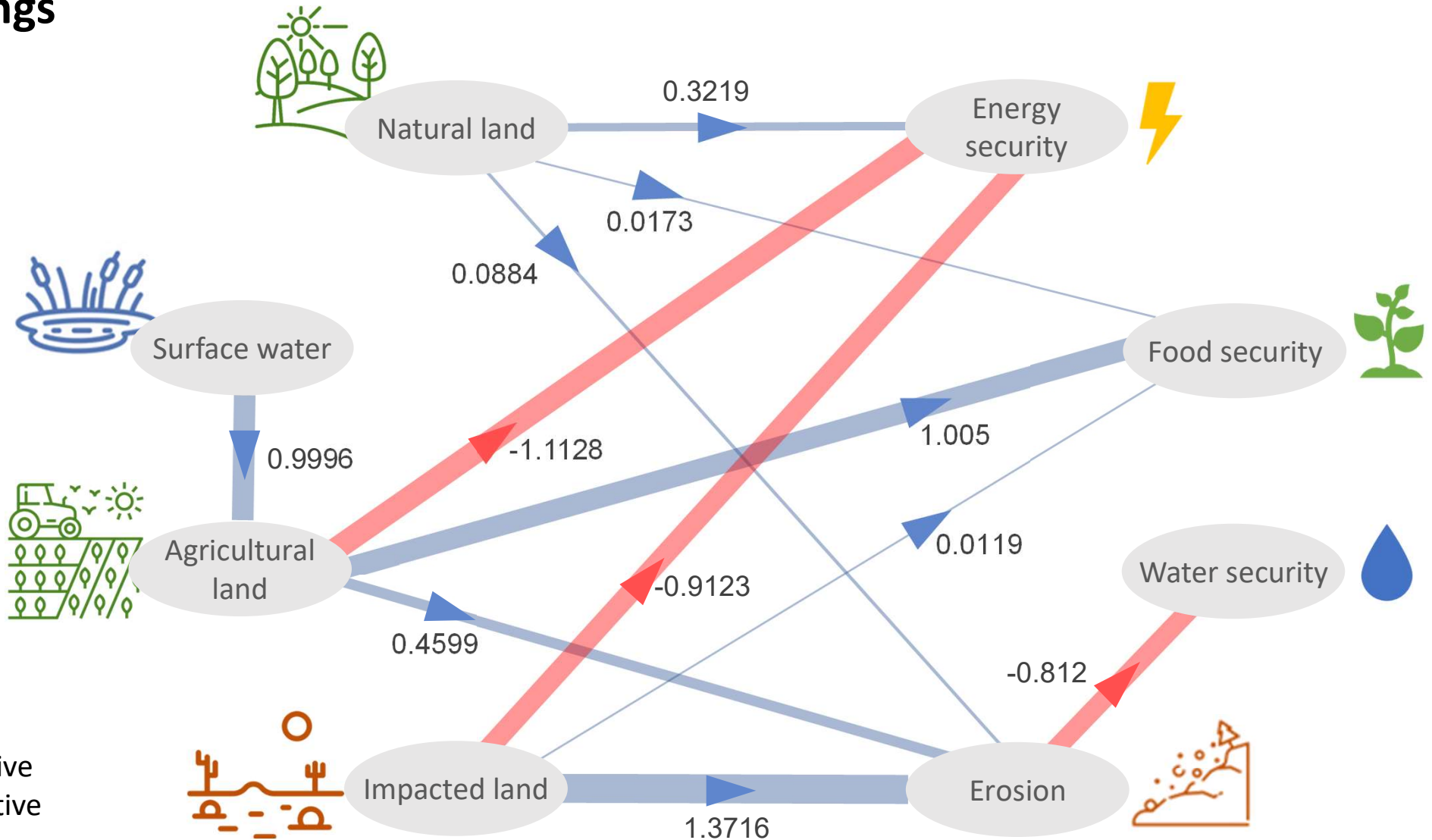
Natural and agricultural
biomass (Gcal)

Food production

Crop and animal production

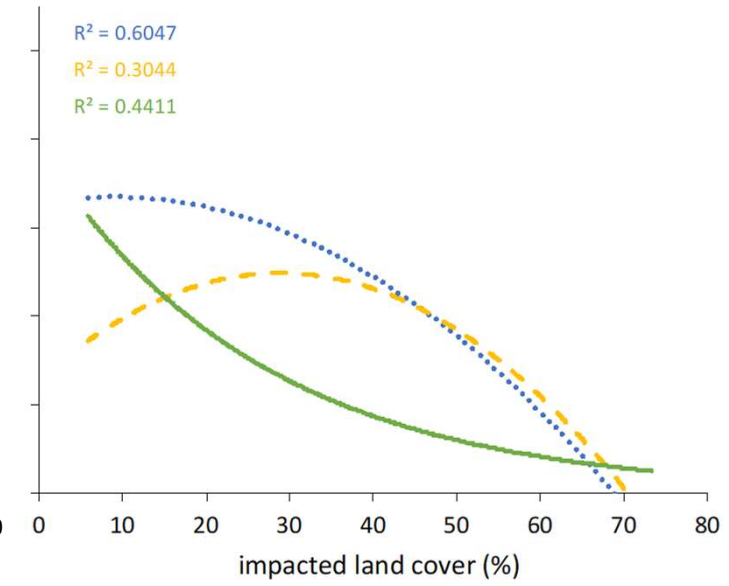
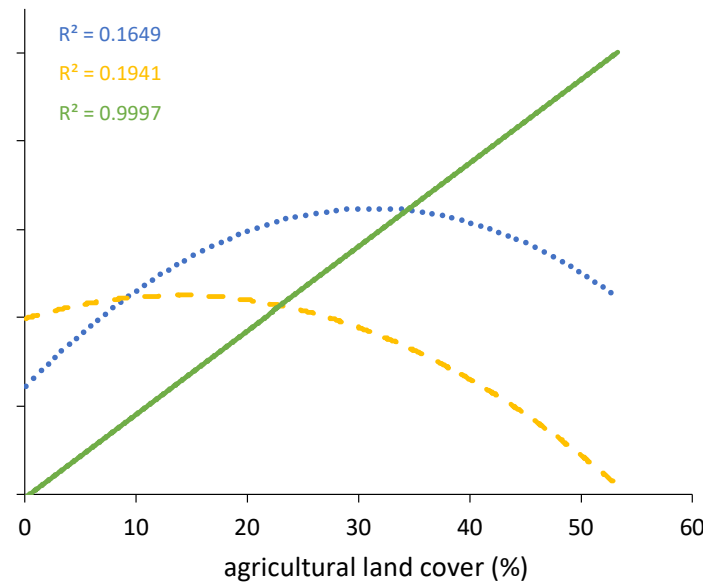
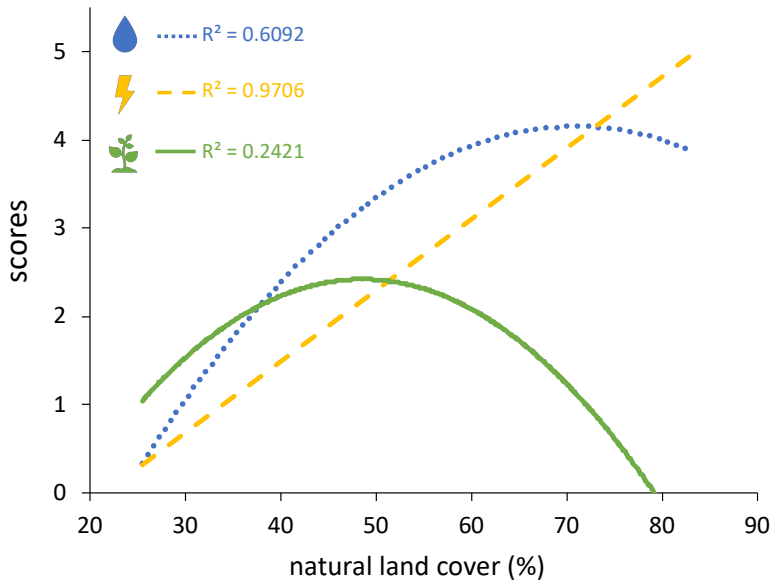


Findings



- Effects**
- positive
 - negative
 - weak
 - strong

Findings



Helder Araujo, DNC 2020, Dresden



Highlights

- 1 - Improved conservation and sustainable agriculture are required in dryland landscapes
- 2 - Impacted lands must be replaced by natural lands and suitable agricultural lands
- 3 - There is a big opportunity for high quantity and quality production in drylands when sustainable agriculture landscapes are implemented



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MINISTÉRIO DA
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