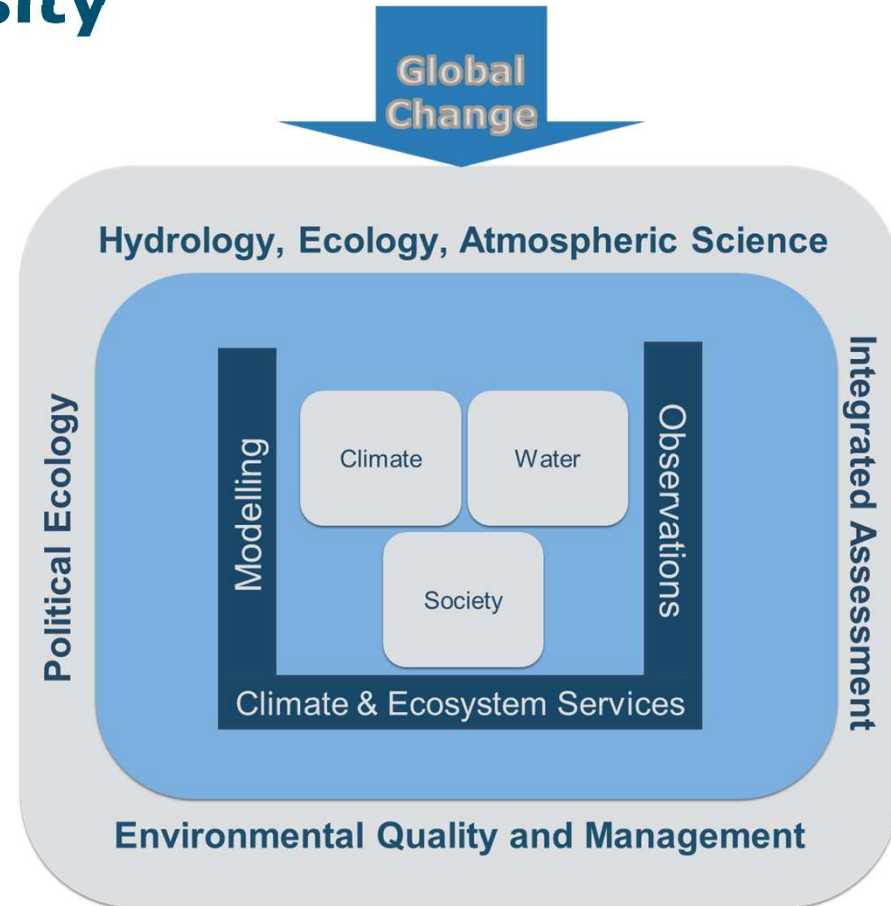


Wageningen University

Climate, Water and Society

Systems approach

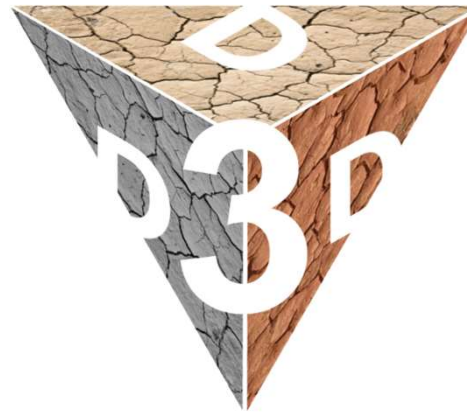
- Understand sociohydrological systems
- Provide knowledge, information services



Project

Diagnosing drought for dealing with drought in 3D: Dimensions, Dynamics, Dialogue

2019-2023



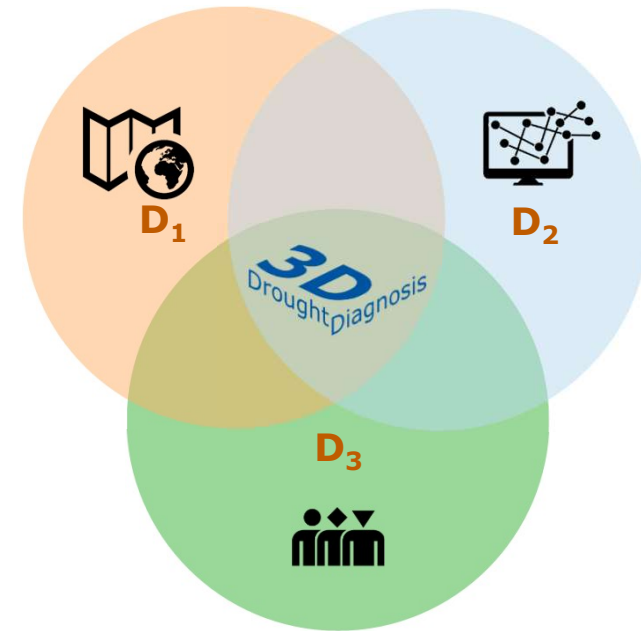
3ddd-project.org



FUNDAÇÃO CEARENSE DE METEOROLOGIA
E RECURSOS HÍDRICOS
Governo do Estado do Ceará



IDMP

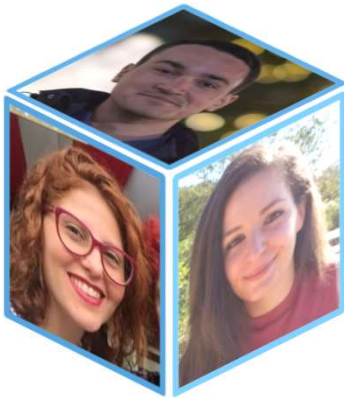


D₁ Water-related human **dimensions**

D₂ Socio-hydrological **dynamics**

D₃ Structured **dialogues**

Ongoing work



17 Jun 2021

A review of drought indices: predominance of drivers over impacts and the importance of local context

Sarra Kchouk, Lieke A. Melsen, David W. Walker, and Pieter R. van Oel

Nat. Hazards Earth Syst. Sci. Discuss., <https://doi.org/10.5194/nhess-2021-152>, 2021

Preprint under review for NHESS (discussion: final response, 8 comments)

manuscript submitted to Water Resources Research

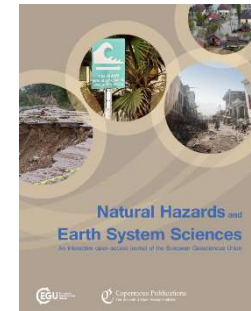
1 **Drought Cycle Analysis to evaluate the influence of small reservoirs on**
2 **drought evolution**

3 **G. G. Ribeiro Neto¹, L. A. Melsen¹, E. S. P. R. Martins^{3,4}, D. W. Walker², and P. R.**
4 **van Oel²**

EGU21-13225 | vPICO presentations | HS5.1.2 

A multiple streams analysis of drought policies in Ceará state, Brazil

Louise Cavalcante, Germano Ribeiro Neto, Art Dewulf, Pieter van Oel, and Francisco Souza Filho



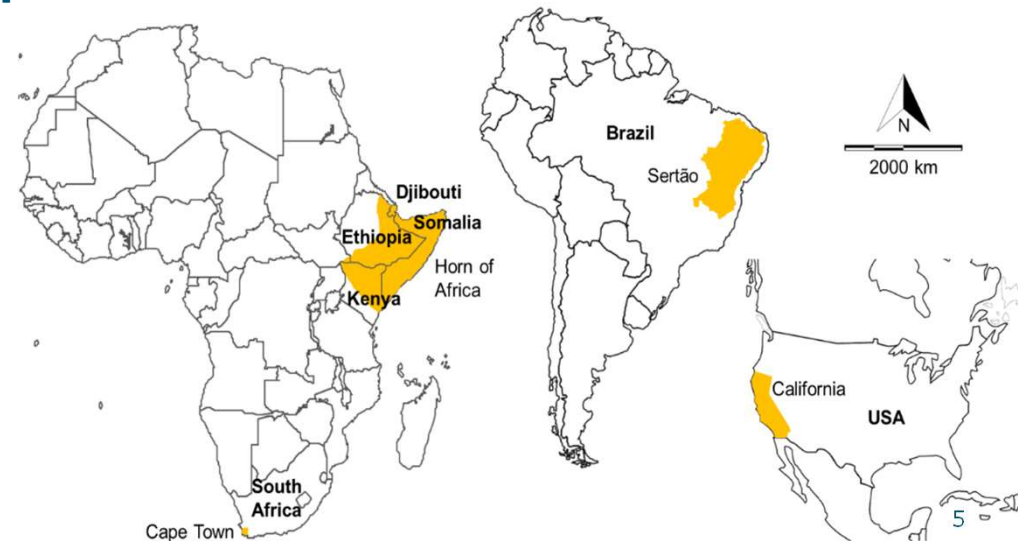
AGU

Water Resources
Research®



Learning from medical sciences

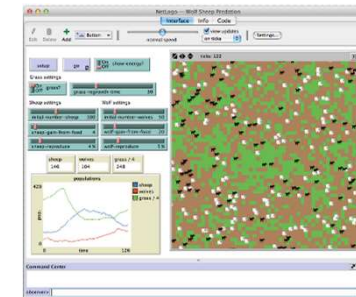
- **Solutions**-oriented (treatment)
- Start from symptoms
Drought **impacts** → water problem + societal problem
- Medical experts use **systematic procedure**



3D Drought Diagnosis

3-step participatory process

1. Map (3D model)
2. Model (computer simulation)
3. Game (social simulation)





3ddd-project.org



Thank you!