



A local systems-based approach to explore water stress under climate change

Susanne Hanger-Kopp, 6th ECCA 21 June 2023







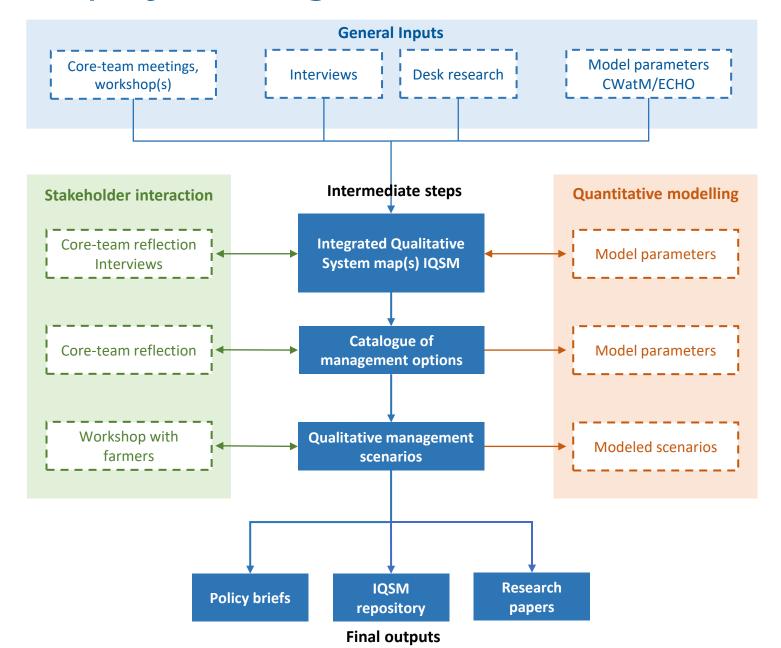






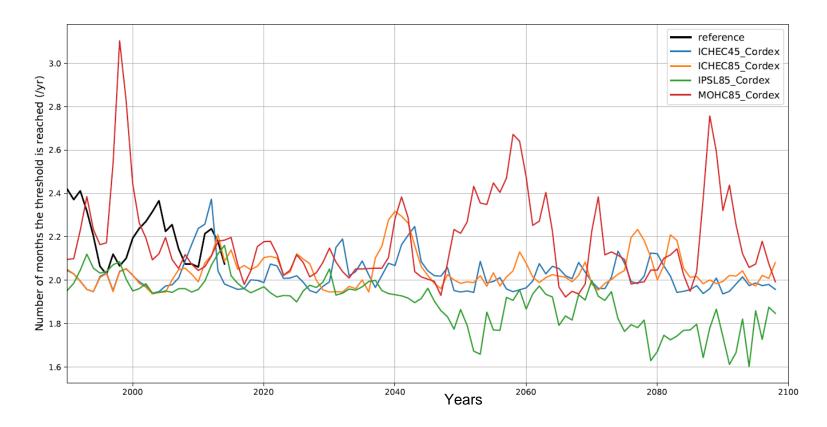
WaterStressAT project design







Modelling groundwater levels with the Community Water Model (CWatM)



Three out of four scenarios show similar means, but longer and more pronounced periods of low water levels.



Adaptation options in the agricultural sector

Transformation – building resilience

- More specific CAP interventions
- Changes in demand

- Organic, conservation, regenartive farming
- Diversification towards drougth tolerant crops



Internal incentive





- Monitoring groundwater levels / restrictions on withdrawal
- Bringing in water from Hungary

- Diversification within the existing crop spectrum
- More efficient irrigation technology



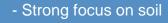


EU Common Agricultural Policy (2023-2027)



Gap between Green Deal – CAP ambition and locally specific transformation needs

- Minimum standards that target our management options





Kultur/Sortenwahl

Reducing agricultural irrigation in Seewinkel for sustainable water management



Some challenges for transformation...

- Communicating model results...
 - ... participants prefered focusing on optimistic scenarios, deflecting from more radical options.
 - ... model cannot reflect decision making realities of farmers.
- The dominant discourse preserves status-quo of agri. practice
 ... how to scale-up sustainable niche practices, requires actors
 and levels of action beyond the agri sector,
 - ... and lack of opportunities to tailor agricultural policies at the sub-national level.



Contact us!

Susanne Hanger-Kopp, Julia Beier

International Institute for Applied Systems Analysis

E-Mail: hanger@iiasa.ac.at, beier@iiasa.ac.at

www.iiasa.ac.at/waterstressat









