

Co-evaluating and -designing a Sustainable Agriculture Matrix for Austria in an international context

Christian Folberth¹, Franz Sinabell², Thomas Schinko³, Susanne Hanger-Kopp³

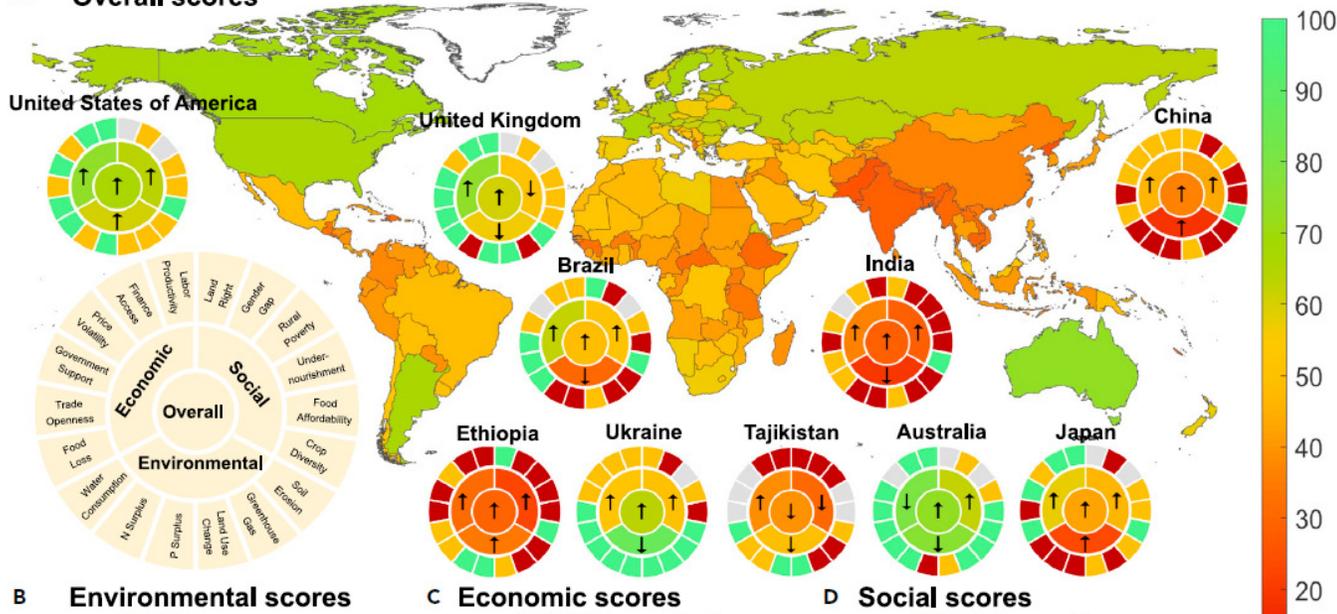
¹Biodiversity and Natural Resources Program, International Institute for Applied Systems Analysis (IIASA), Laxenburg, Austria

²Austrian Institute for Economic Research (WIFO), Vienna, Austria

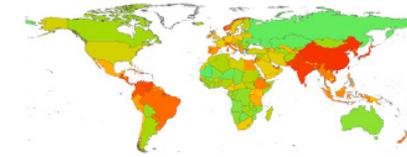
³Population and Just Societies Program, International Institute for Applied Systems Analysis (IIASA), Laxenburg, Austria

Background

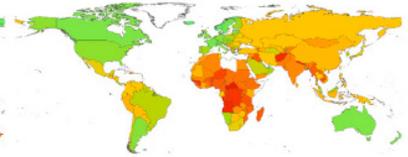
A Overall scores



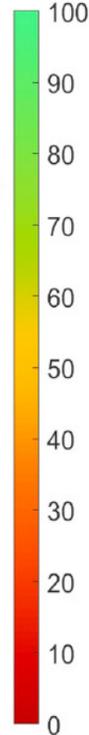
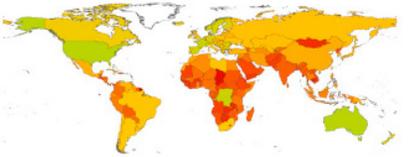
B Environmental scores



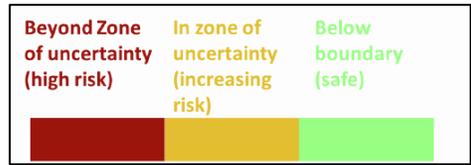
C Economic scores



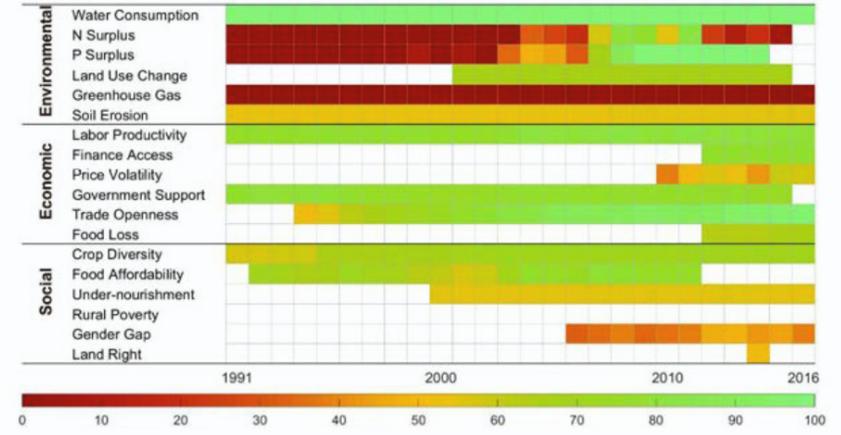
D Social scores



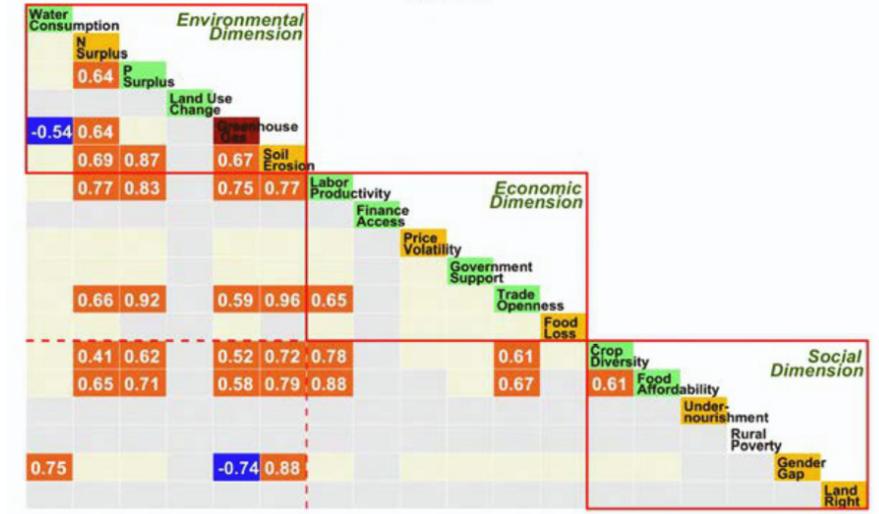
Zhang et al., 2021. *One Earth*



Austria

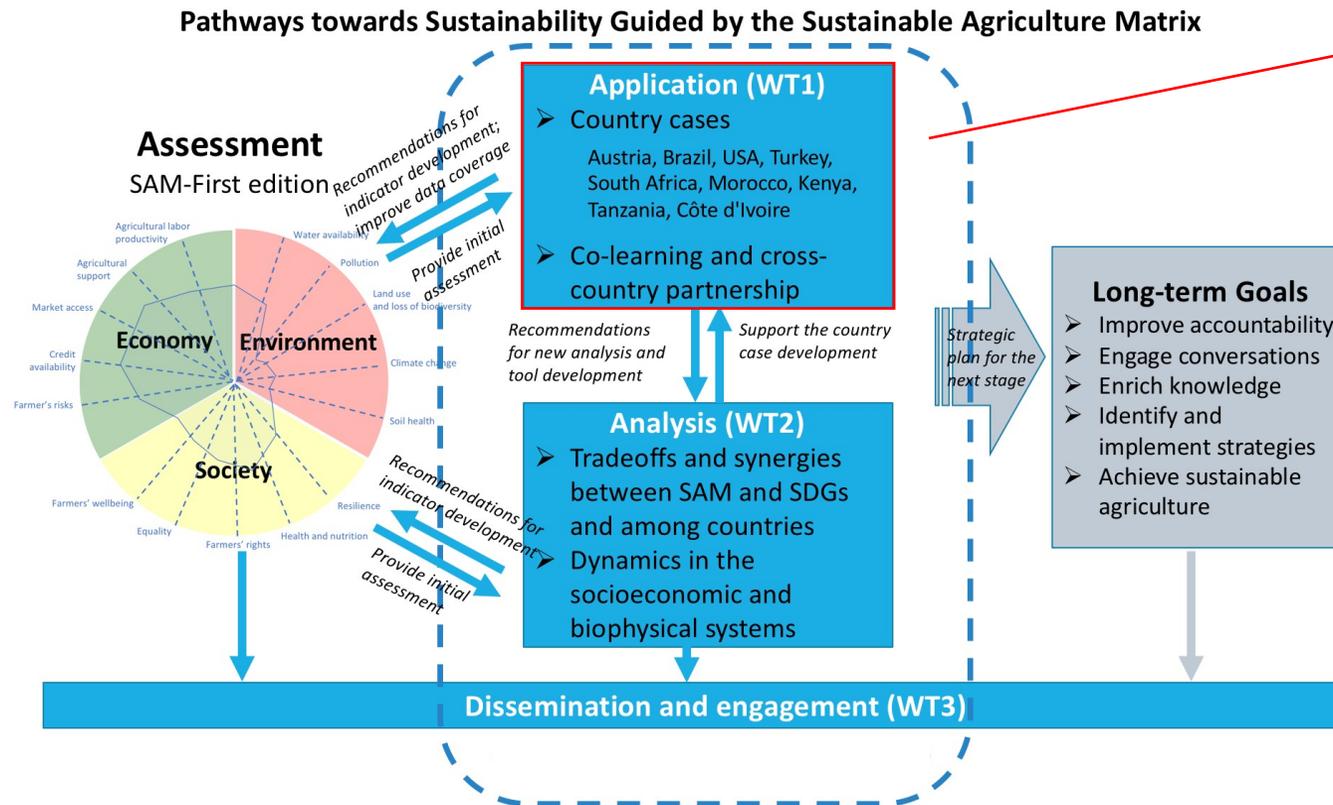


Austria



Project scope

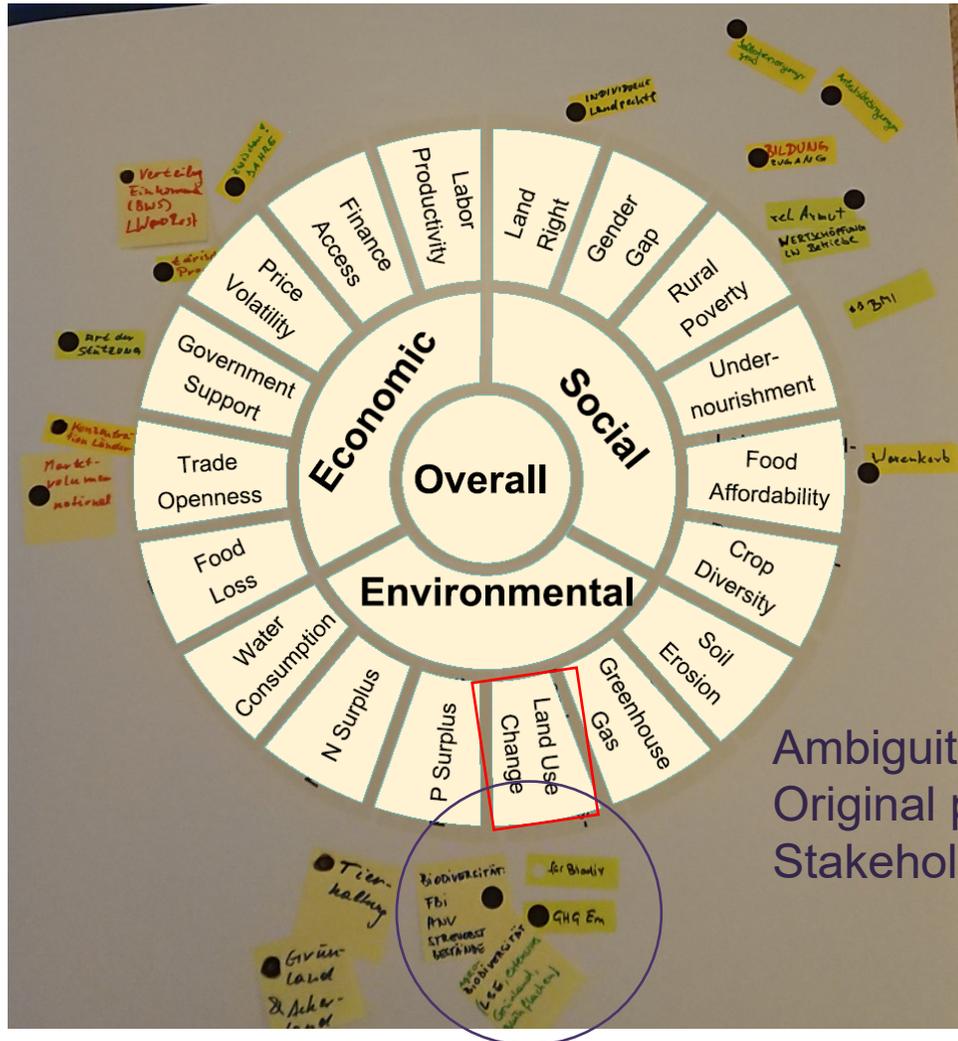
- Stakeholder engagement to
- co-evaluate indicators
 - co-design analyses and improvements
 - co-develop narratives of sustainable ag



Stakeholder engagement – Austrian case

- One-day in-person workshop
- Detailed information on existing indicators upfront
- Highly interactive exercises to elicit
 - definitions and perceptions of agricultural sustainability
 - relevance and soundness of existing indicators
 - suggestions for improvements and additions
 - feasibility of interpretations

Evaluation of indicators and further suggestions



Ambiguity

Original purpose

Stakeholder

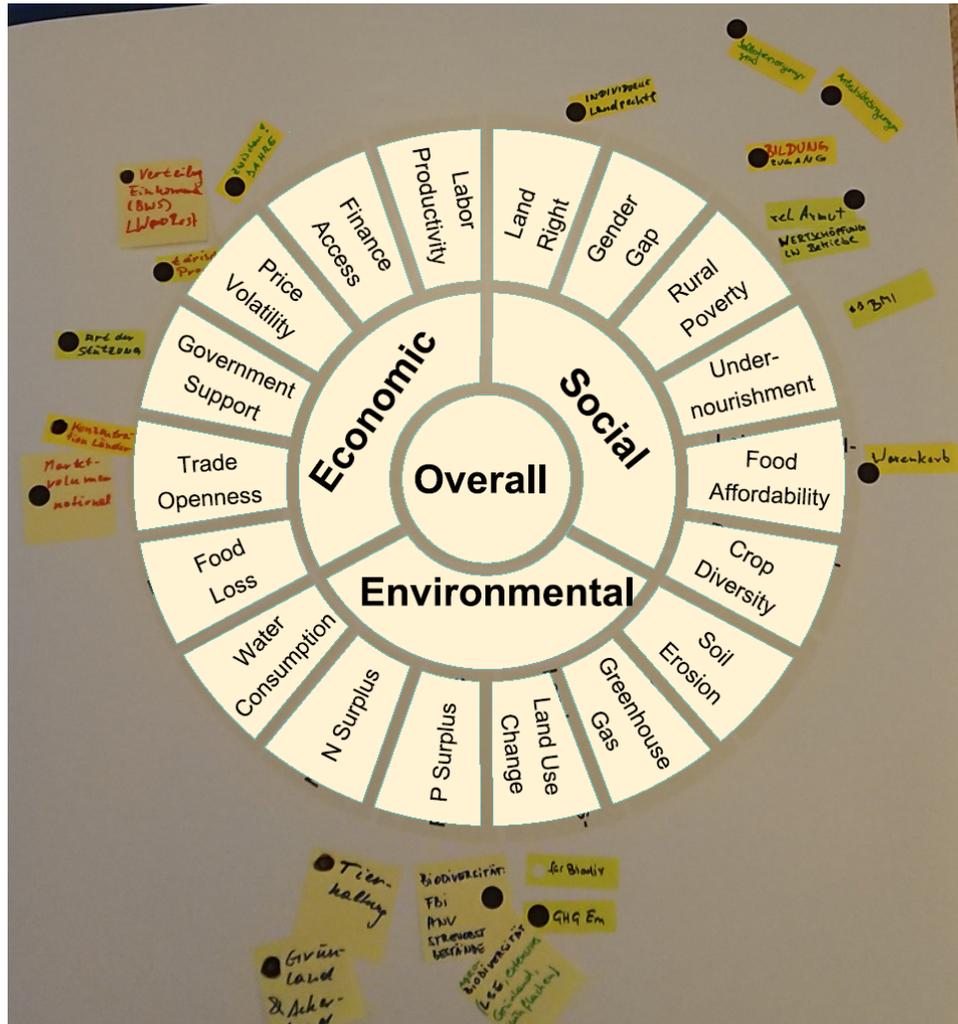
→ loss of biodiversity

→ carbon balance

in-situ

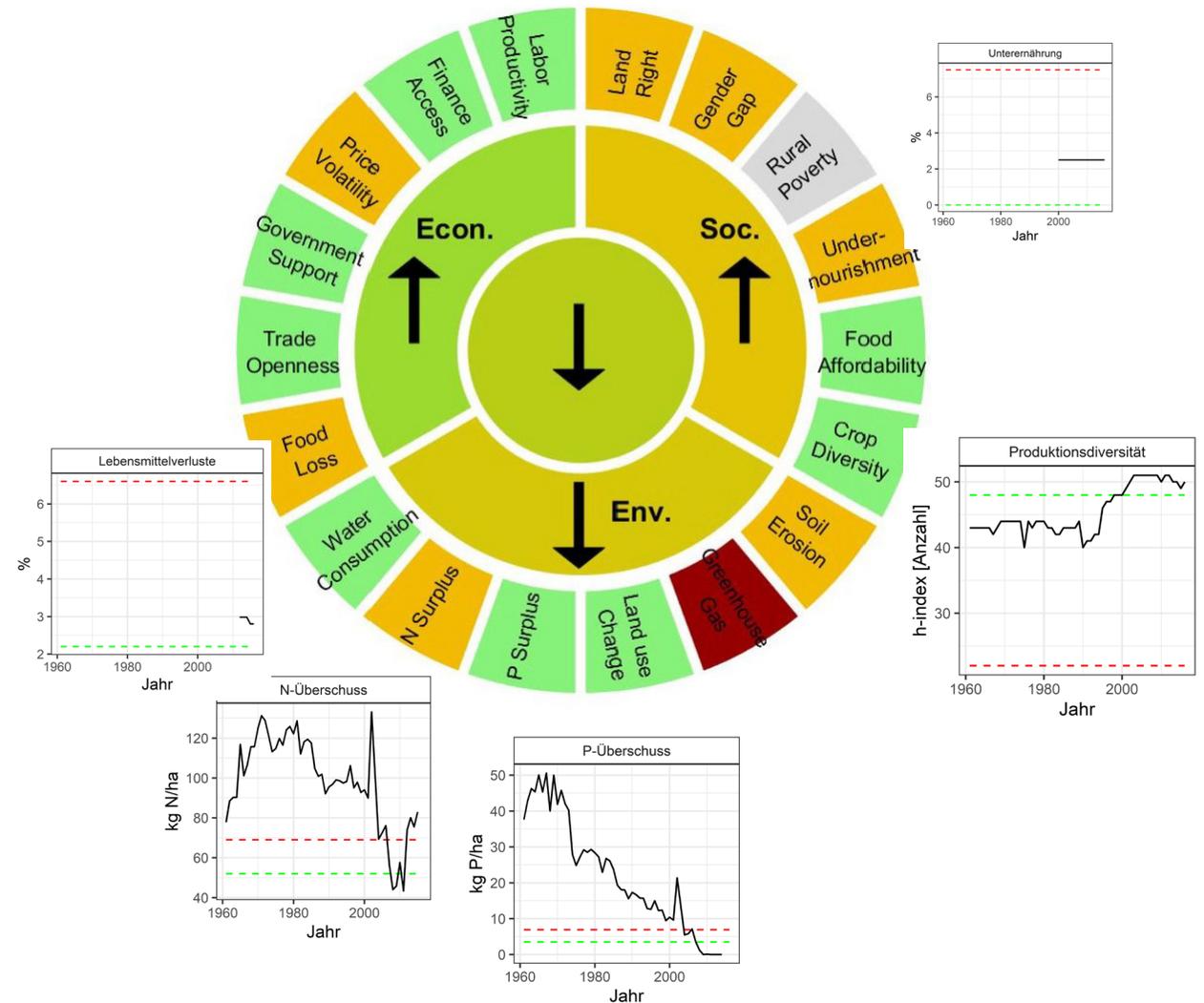
Farmland bird index, extensive grassland, ...

Evaluation of indicators and further suggestions

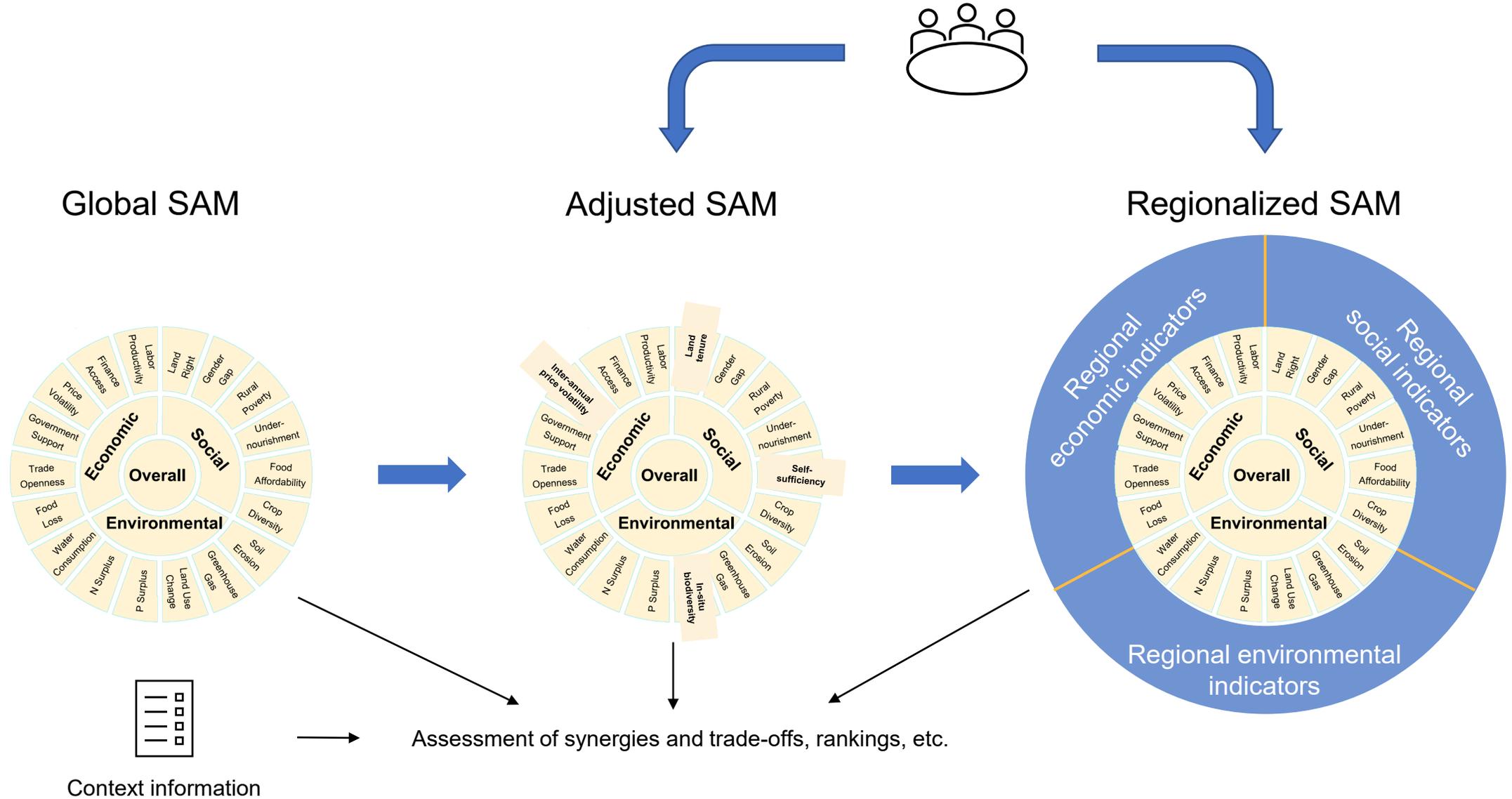


- Stability (production, income, governance, trade, value chain)
- In-situ biodiversity indicators, e.g.
 - High nature value farmland
 - Farmland bird index
 - Extensive grassland
- Soil fertility/organic matter
- Cropland abandonment
- Trade resilience (e.g. number of trade partners)
- Climate resilience (e.g. yield variability, resilience to shocks)
- (Crop) productivity
- Side-income dependence of farmers
- Feed conversion ratio (and resource use efficiency in general)
- Education (e.g. state, access) and innovation
- Rural livelihoods
- Labour rights
- Self-sufficiency
- Animal well-being
- Role of women in farming
- Governance (targeted payments, regulations, fairness)

Evaluation of indicator performance for Austria



Next steps



Thank you!

Christian Folberth
Biodiversity and Natural Resources Program
folberth@iiasa.ac.at
<https://iiasa.ac.at/staff/christian-folberth>