

EO 4 Ecosystem Accounting 2022

Evaluating Agroecosystem Services with the DAKIS Decision- Support Framework

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Marvin Meltzer, Christopher Marples, Linn Schaan
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The DAKIS Decision-Support Framework

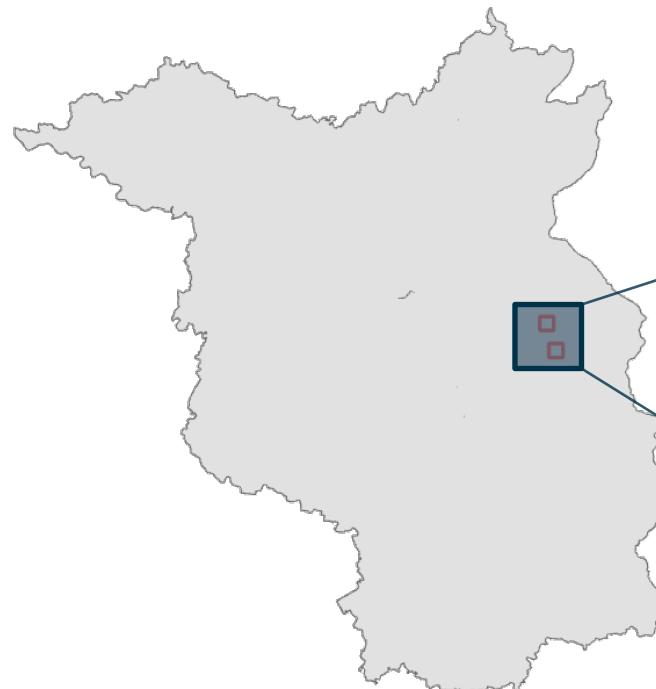
Agriculture faces major challenges.



The DAKIS vision: agricultural landscapes of the future



Testing DAKIS via use cases + landscape windows



Brandenburg 5km x 5km landscape windows



Use Cases



Vegetation Strips



Hedgerows

EO-derived land-use & ESS provision assessment



Marvin Melzer, Marco Donat, Linn
Schaan, Christopher Marples,
ZALF

- NDVI
- CORINE / Invekos
- DEM
- CORINE / Invekos

Yield / biomass potentials

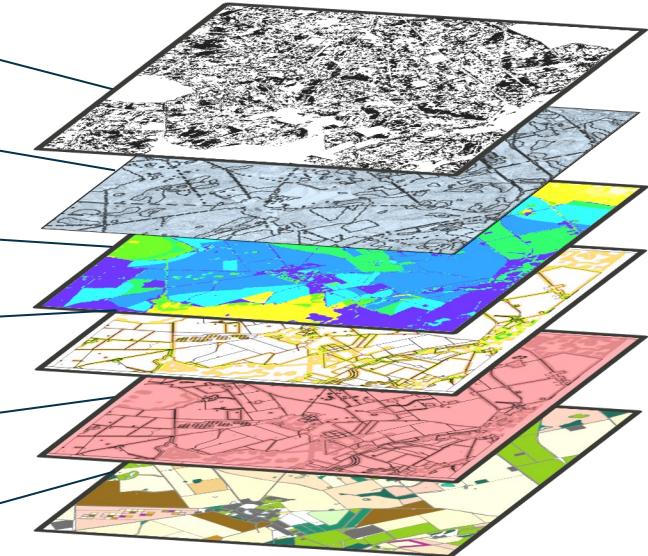
Water erosion risk

Pollination potential

Habitat heterogeneity

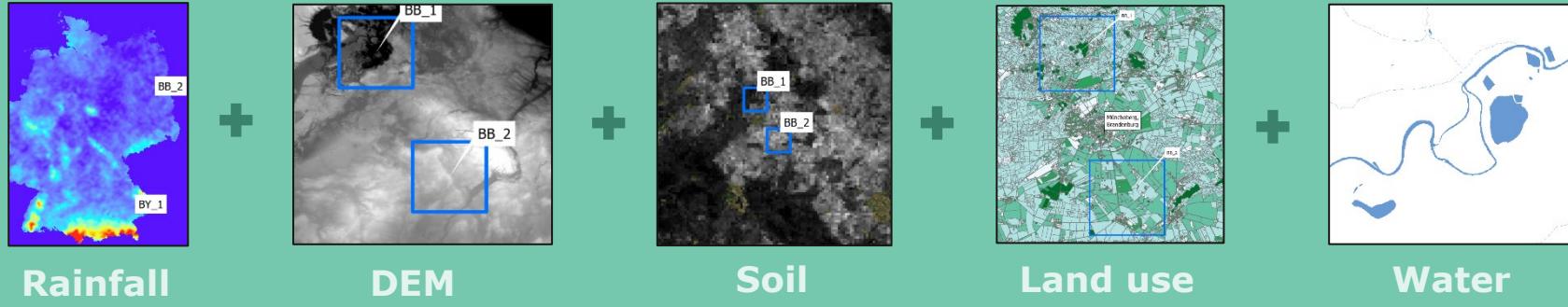
ABG carbon sequestration potential

Crop-specific land-cover



Integration of
relevant ESS indicators

EO-derived land-use & ESS provision assessment



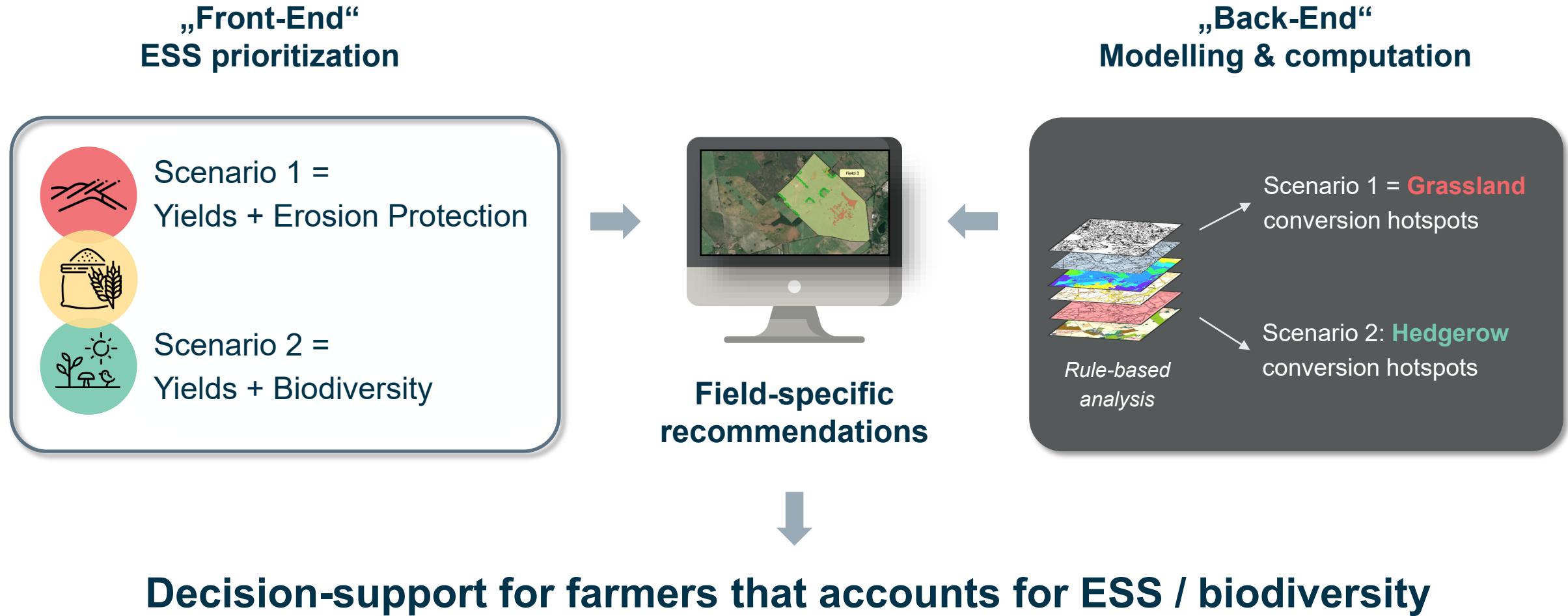
Example:

Modelling water erosion risk
using the InVEST SDR model,
integrating EO-inputs and
public data



Melzer & Bellingrath-Kimura, 2021

Trade-off analysis and decision-support



EO challenges, opportunities & recommendations



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Agrarsysteme
der Zukunft

DAKIS
Digital Agricultural Knowledge and Information System

<https://adz-dakis.com/en/>



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