

# Portfolio modelling for multi-scale exploration of synergies between human and environmental health



## MEAL<sup>2</sup>4Health

Modeling Ecosystems and Economics in Agricultural Landscapes  
for Healthy People in Viable Communities



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RESEARCH  
PROGRAM ON  
Roots, Tubers  
and Bananas

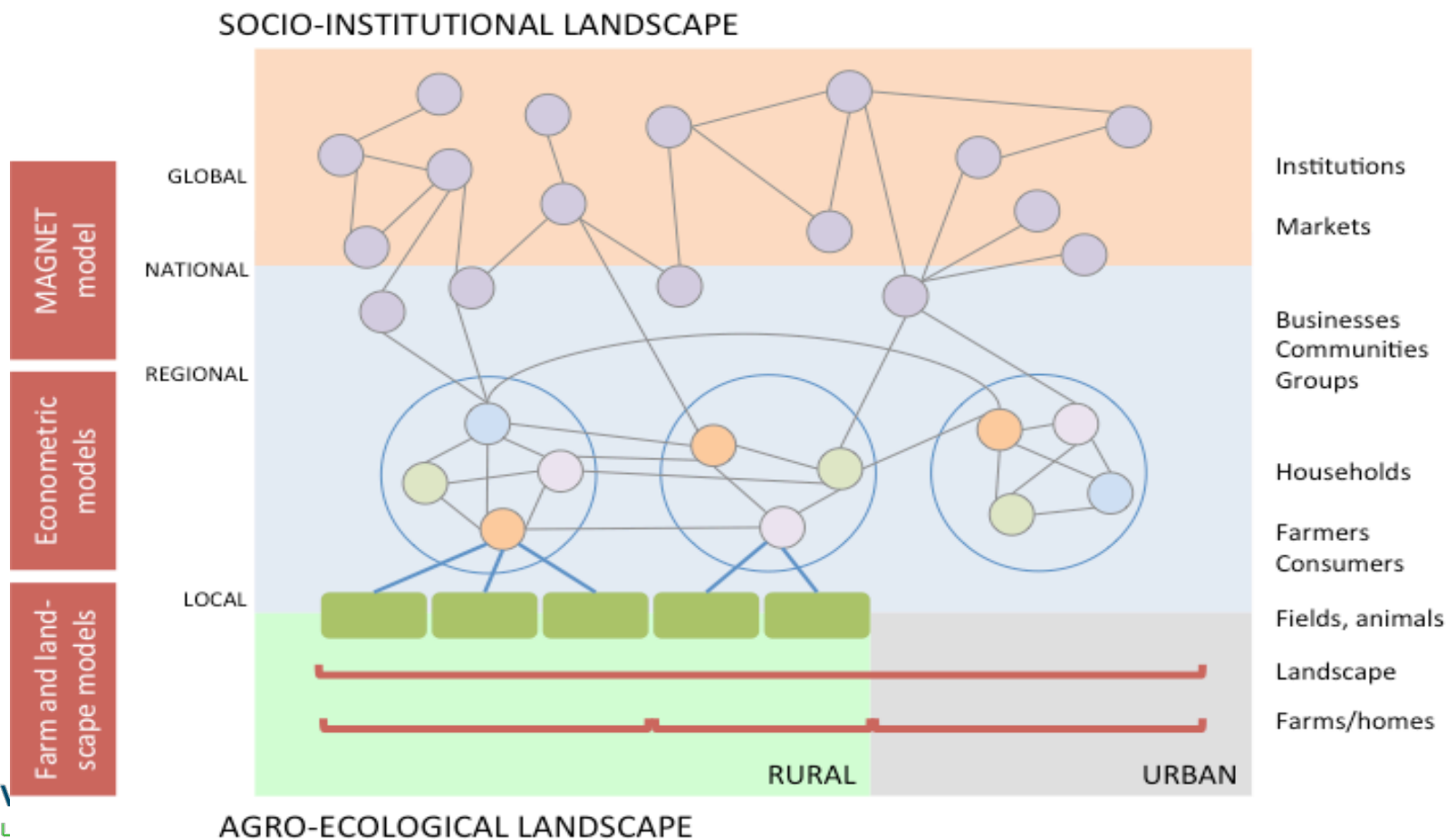


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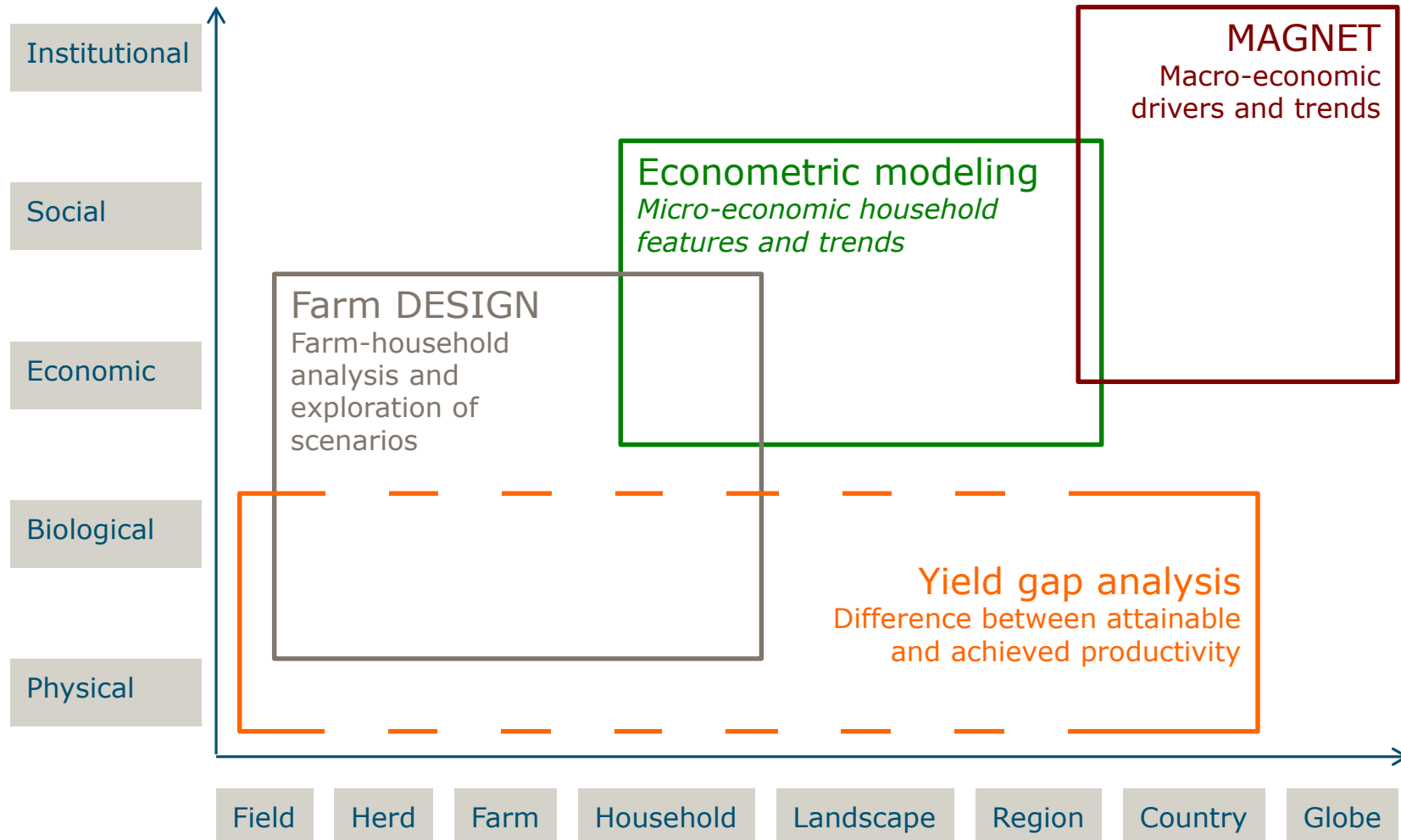


# Framework

- Analysis of biophysical, socio-economic and human health dimensions
- Multi-scale portfolio of modeling approaches indicated in red below:



# Portfolio of modelling approaches



# Case studies

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- In all case studies there are major challenges in human nutrition and health of people and the environment
- Nutrition and health indicators are related to ecosystem services
- Main case studies:
  - **Ethiopia**: gradient in forest cover and distance to markets
  - **Vietnam**: distance to urban centers and markets, agricultural production orientation
- Supporting case studies:
  - **Uganda/DRC**: banana-diseases, agricultural diversification
  - **Zambia**: land-use, agricultural production, water mgt., hygiene



Thank you



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