

Introduction

The projects of FOR5903 are linked in multiple ways, comprising structural, conceptual, and operational aspects. This ensures close collaboration across disciplines and engages the entire international partnership network.

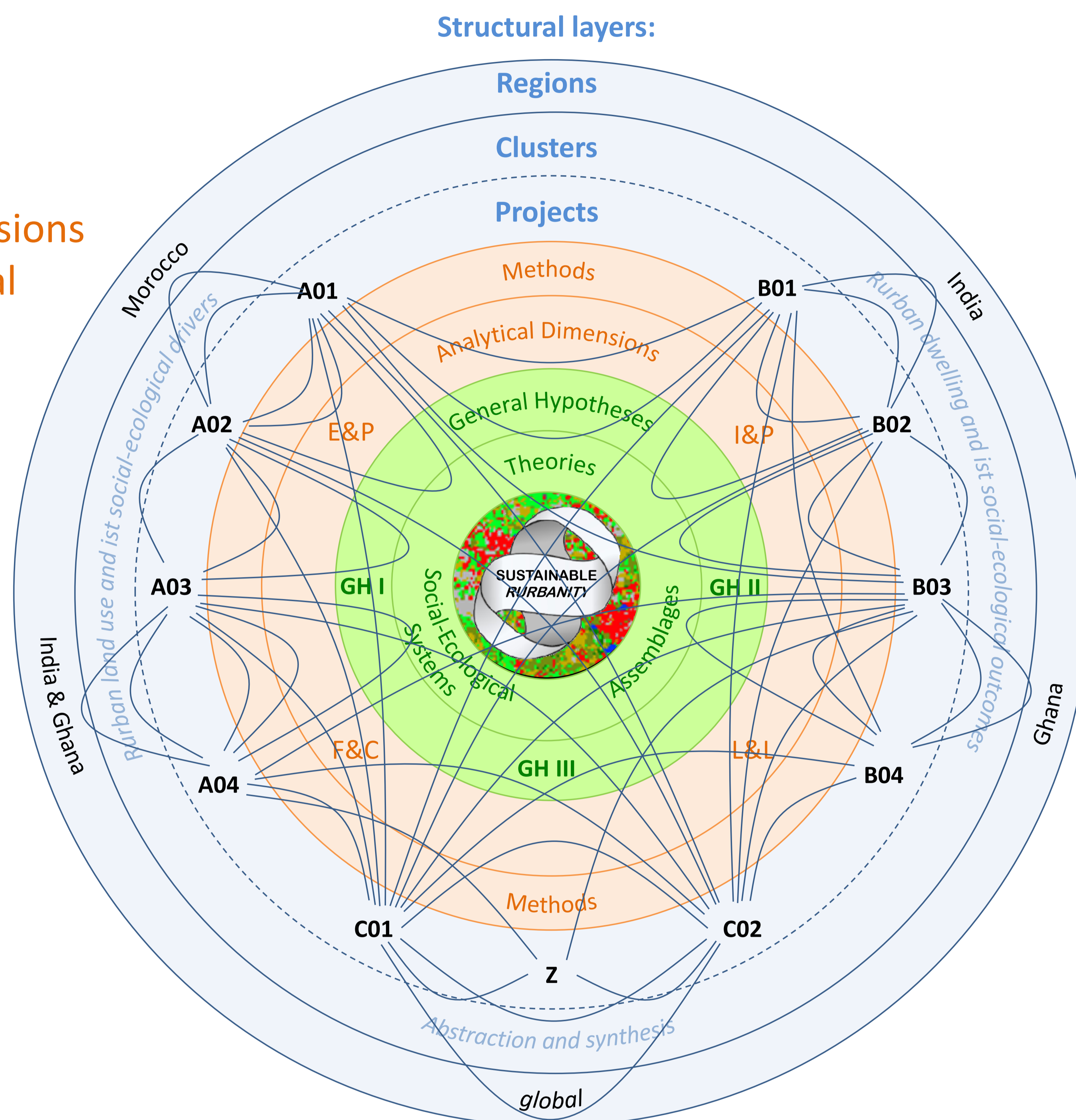
Unified nomenclature

- Land cover classes
- Land use archetypes
- *Rurbanity* indicators

Multi-layered matrix of collaboration

Operational layers:

- Harmonised, grid-based sampling strategies
- Shared analytical dimensions
- Joint use of experimental infrastructures
- Direct data flows
- Coordinated modelling approaches



Arcs symbolise project interactions in different layers; those, however, are too complex to show a full account of all possible linkages. Explicit plots can be drawn for specific research issues or methods, such as:

Conceptual layers:

- Shared theoretical foundations
- General hypotheses
- Consistent terminology
- Reflexivity

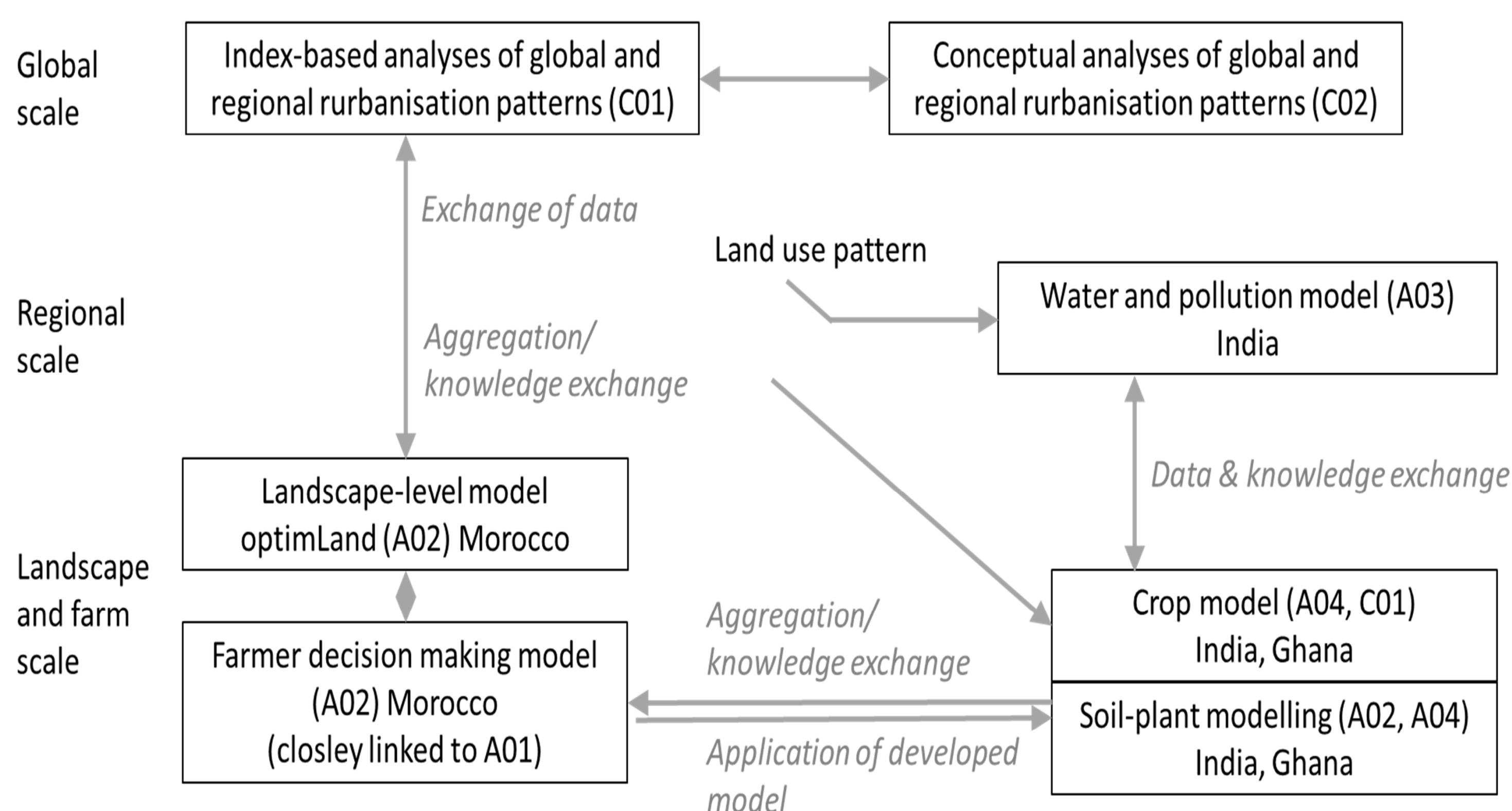
Within the projects:

- Tandems or teams of PIs
- International partner PIs
- Early career Co-PIs

Within the regions:

- Designated regional coordinators

Modelling at different scales



Data science with „experts in the loop“

- Geo-referenced data and GIS-based mapping of patterns and processes
- Semantic modelling and explainability: Cooperation group (pilot projects) and workshops
- Geographical-conceptual modelling of spaces for integrating different types of project data
- Modelling non-atomic objects and their logical dependencies, analysing dynamics of concept lattices
- Algorithms for exploring and interpreting textual sources

Data management and information infrastructure

- Research Data Unit (RDU) Kassel & eResearch Alliance (eRA) Göttingen
- **Data Lake** as central storage facility
- **Data Towers** for federated data management in the research regions
- Training courses for project members and technical support