

The International Soil Modelling Consortium, ISMC

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Motivation

The field of soil process modelling is fragmented and dispersed. There is a lack of coordination and exchange between the different soil disciplines. An improved “position” and visibility of soil research and modelling in the Earth Sciences Community is needed. It is also necessary to reach out to other modelling communities in the field of terrestrial systems, climate systems, ecology, engineering, etc. The scientific community lacks easy-to-access and available standardized and high quality data and protocols for the development, calibration and validation of models.

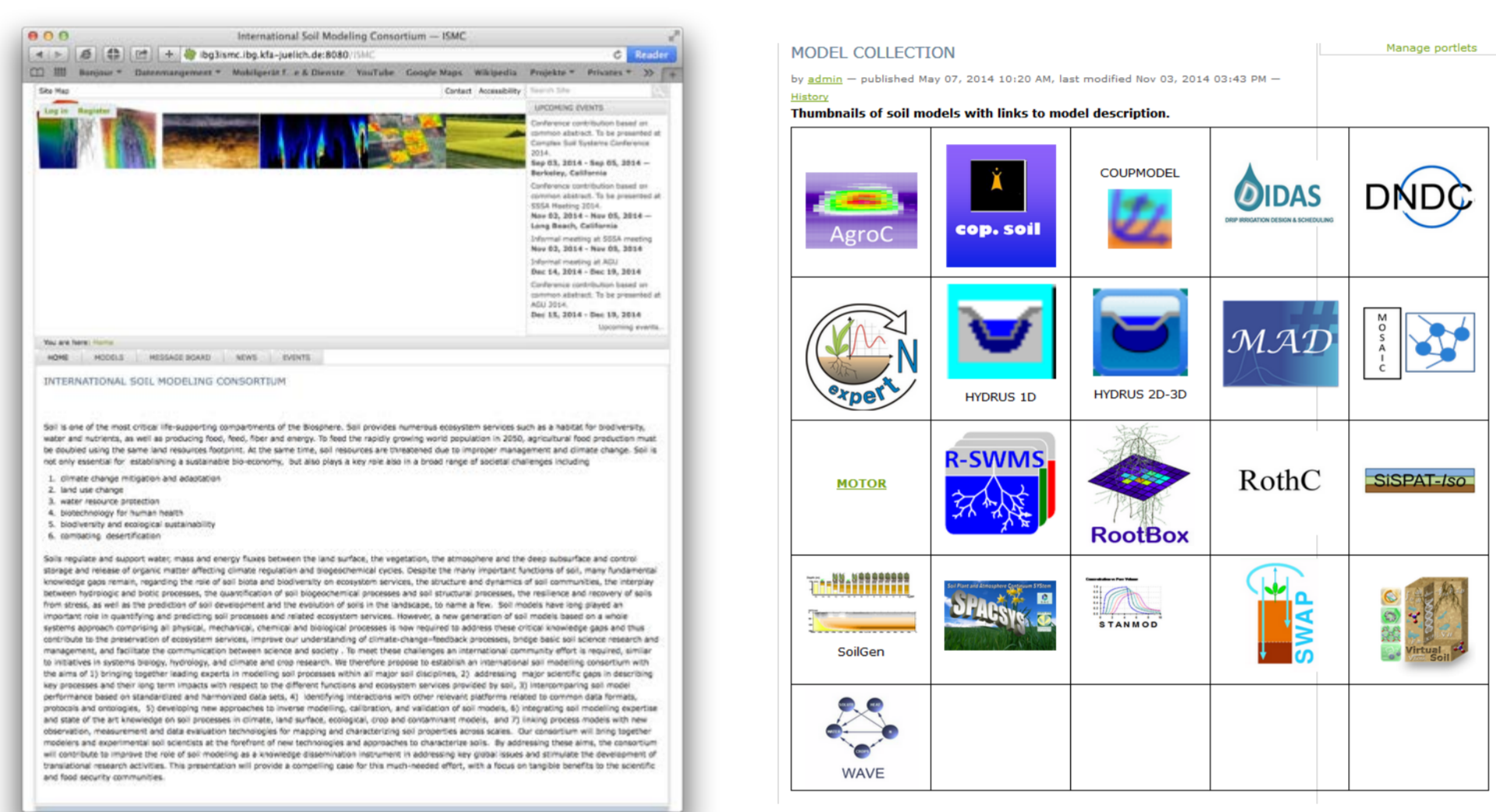
Objectives and ongoing activities

The main objective of the consortium is to bring together soil modelers, to promote and advance soil modelling, to improve interactions with modelling activities in other geoscience disciplines and to establish a modelling and data platform.

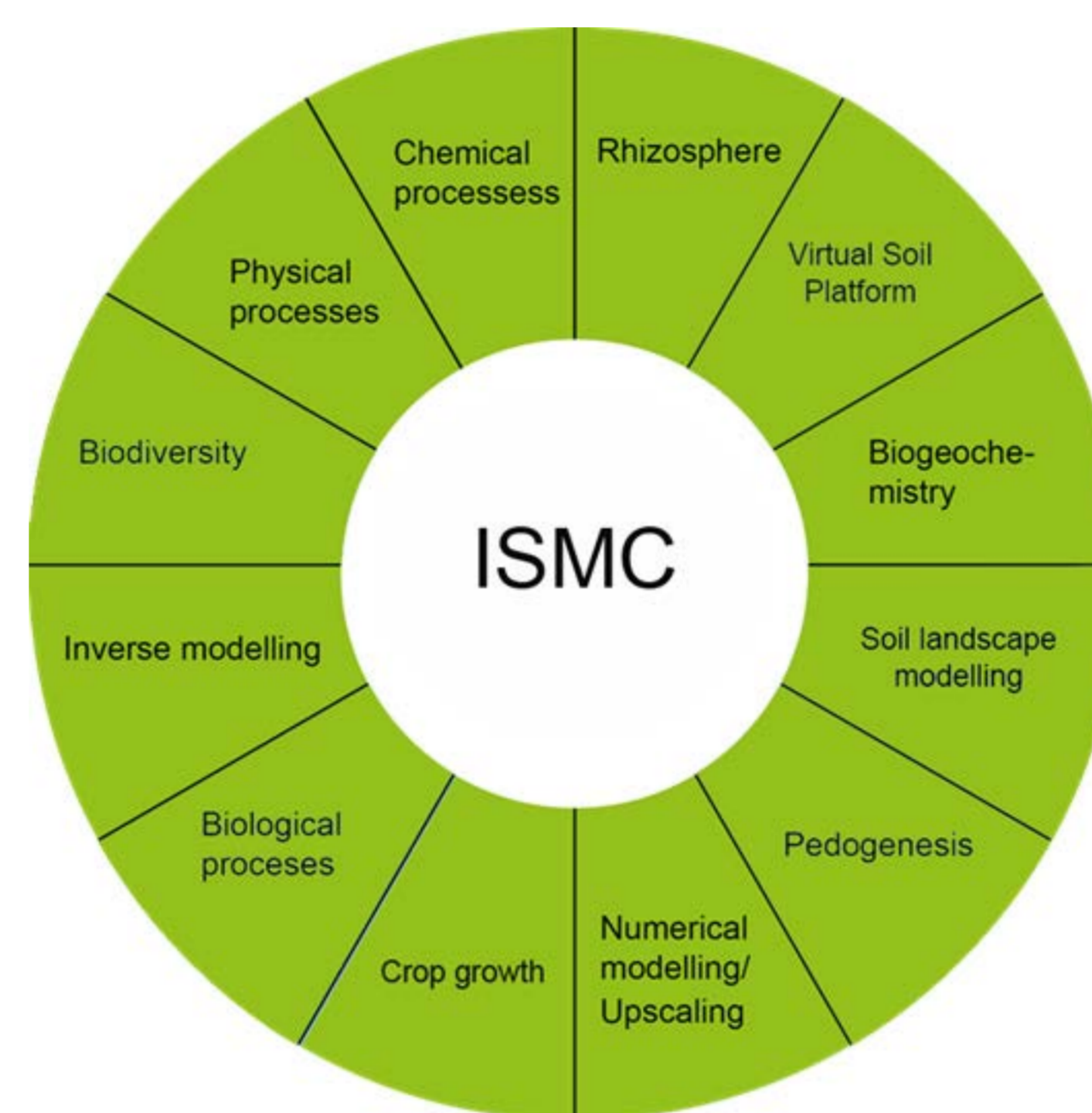
1. ISMC-Website

<https://soil-modeling.org/>

- Model collection
- Database
- Message board and forum



2. Bringing together different soil disciplines and experts



Disciplines in the ISMC

3. Addressing major scientific gaps: open questionnaire on the ISMC website

- Which processes should deserve more attention or be better described in soil models?
- How to better integrate soil modelling expertise and knowledge within different soil disciplines?
- What are promising new measurement techniques that may contribute to improve modelling of soil processes?
- How can the establishment of an international soil modelling consortium support in solving these questions?
- What are the challenges and needs in upscaling soil processes?

4. White paper on the challenges and perspectives in soil modelling

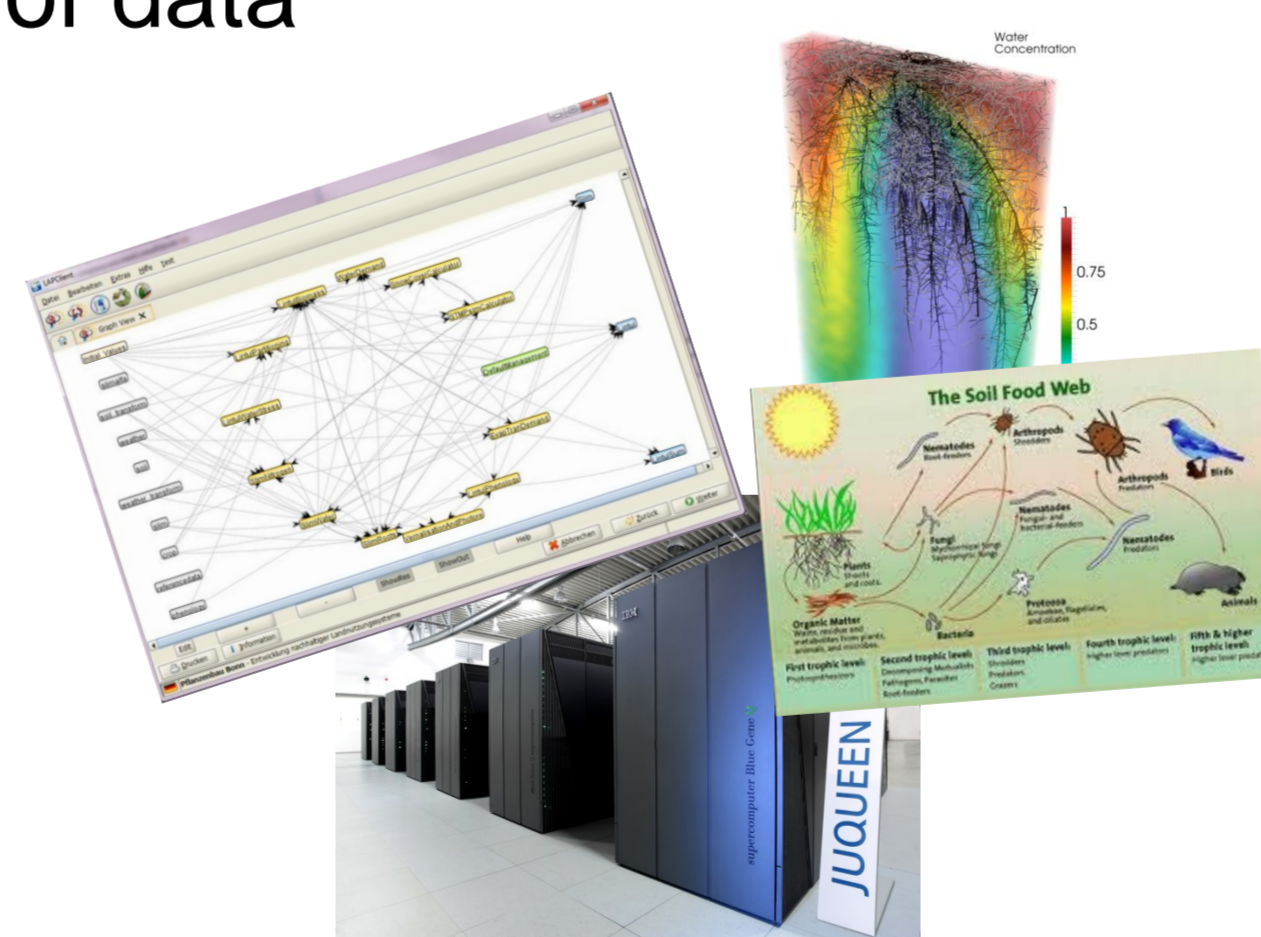
Under revision in Vadose Zone Journal



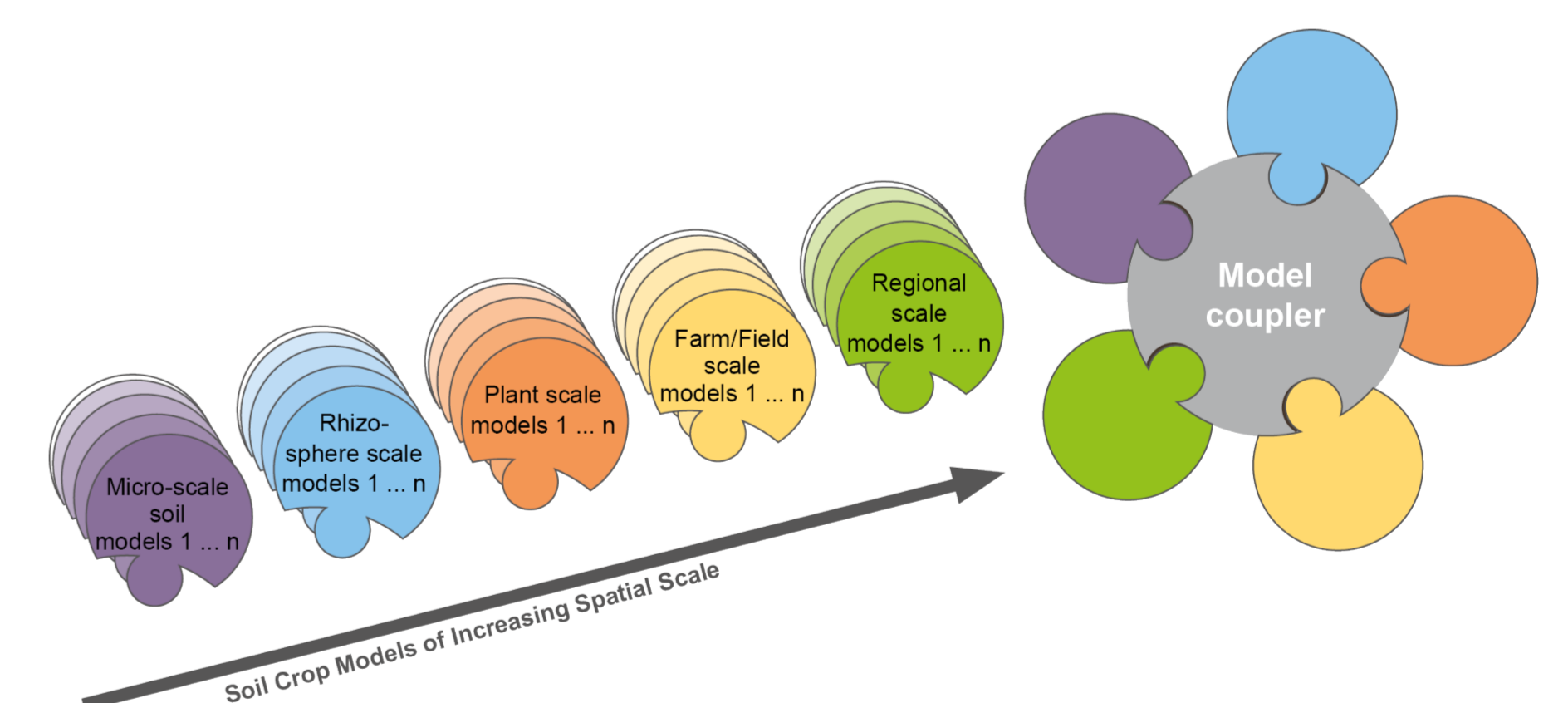
First Meeting at EGU 2014

5. Development of a model and data platform

- Model intercomparison
- Establishing benchmark datasets
- Standardization and harmonization of data



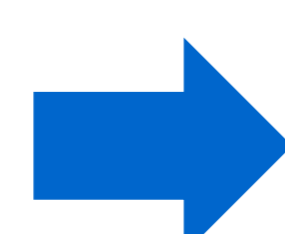
6. Connection of knowledge across the scales



Model components are coupled via an external coupler to form a model solution for a specific problem

Further steps

- Develop a governance structure
- Connect to other organisations (IUSS, WCRP, GEWEX, FAO, AgMIP, ...)
- Establish a model and data sharing platform



Join the Austin International Conference on Soil Modeling (<https://soil-modeling.org/austin-workshop>)

- Opportunity for scientific exchange about soil modelling in different disciplines
- Involve in scientific discussions in world-café style
- Participate in the foundation of the International Soil Modelling Consortium
- Become a member!

