Data and knowledge management for integrated assessment: A SEAMLESS example

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SEAMLESS is...

..a computerized, integrated framework to assess, ex-ante, agricultural and environmental policy options, allowing analysis:

• at the full range of scales (field, farm to EU and global)
• of the environmental, economic and social contributions of a multifunctional agriculture towards sustainable rural development and rural viability
• of a broad range of issues, such as climate change, environmental policies, rural development options...

See: www.seamless-ip.org
This SEAMLESS database is:

- Climate and soil data
- Farmtype data
- Agricultural activities
- Policy data
- Trade data
- Regional typologies
- Indicators (model output)
This SEAMLESS database is:

- 350 + tables
- 2 000 + fields
- 400 + relations
- 10 500 000 + records
Why an integrated database?

- To ensure consistency between different domains and data sources and across spatial and temporal scales
- To facilitate easy access
- To respect the rights of the data holders
- To store model outputs together
The ontology

- An ontology is a finite list of concepts and their relations
Why an ontology?

- More words
- More flexible description of relations
- Still computable
- Can be used to generate database schema
- Can be used to generate model code
Open source

- PostgresSQL
- Geoserver & PostGis
- Hibernate
- Protegé

- ODC Public Domain Dedication and Licence?
An appetizer…

NUTS 2 level:

• Farm resources on farm types
• Agricultural management in sample regions
• Policies
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Sample regions including the variety of farm types within environmental zones
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NUTS2/environmental zones:

• Time series of climate data
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Agri-environmental zones:

• Soil information
• Farm type distribution
More information

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