



I N T E G R A T E D   S I N K   E N H A N C E M E N T   A S S E S S M E N T



I N S E A  
P A R T N E R S

**Data base strategy to  
operate and to improve  
the input for agro-  
economical simulation  
models**

# Main Focus

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- Test area selection tool
- Spatially explicit mapping of agricultural statistical data - crop rotations
- Climate data processing

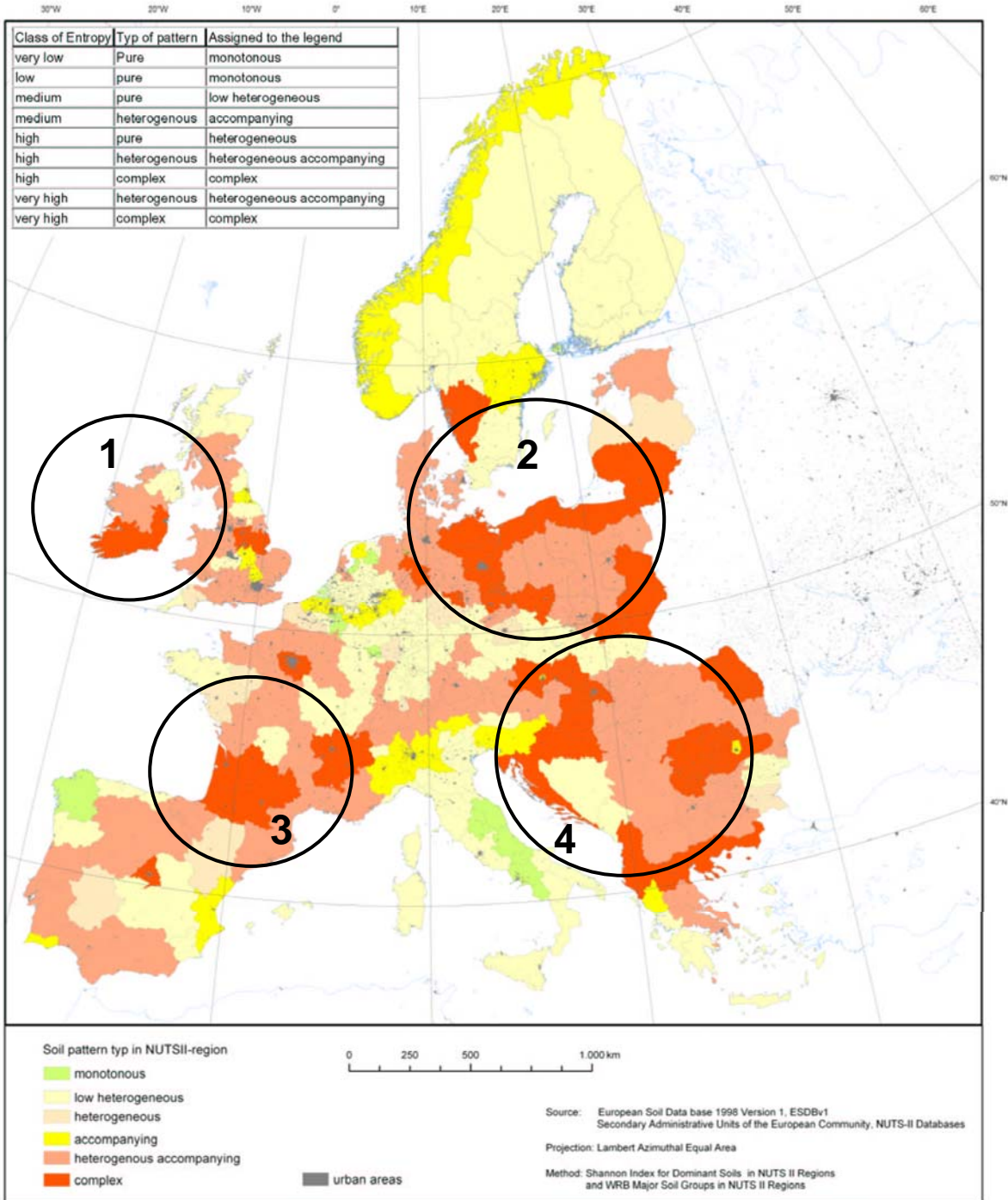
Are the available data sufficient?

Are the choices of tools and software solutions sufficient?

# ➤ Test area selection tool

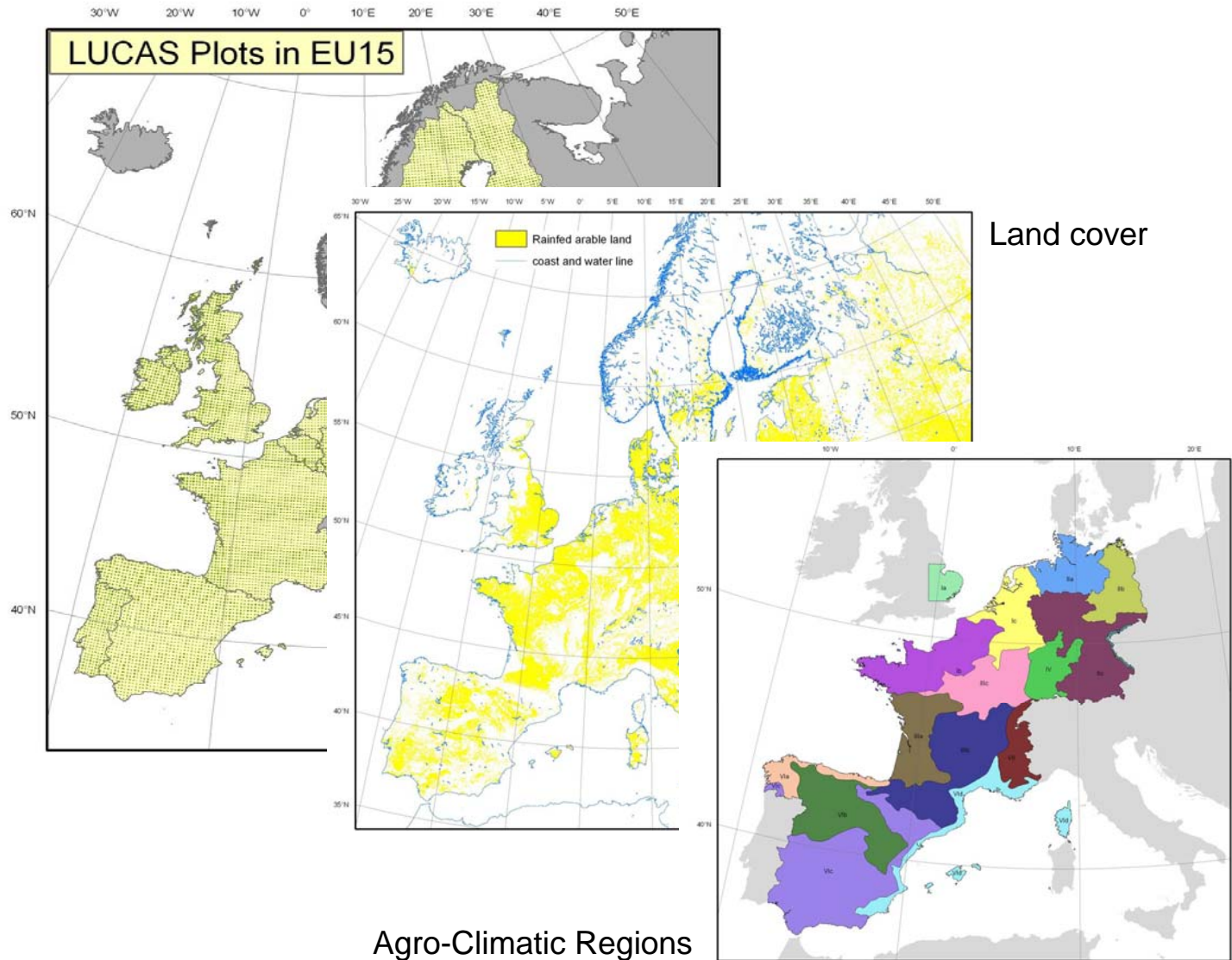
## Complexity of our bio-/anthro-geographic environment

- Soils
- Land cover



# ➤ Crop combinations

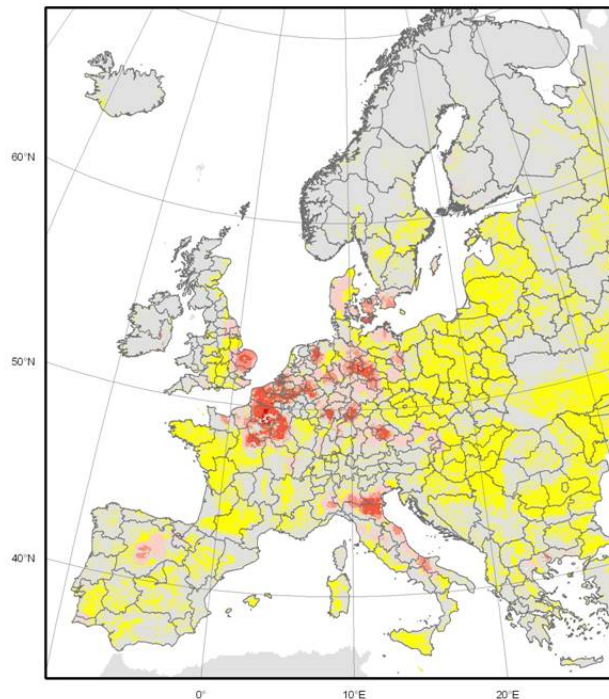
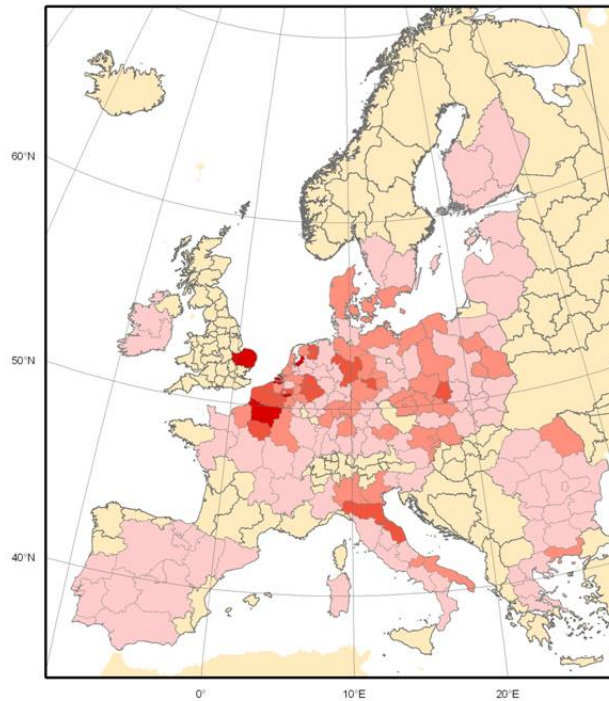
– data base



# ➤ Crop combinations

– mapping of crops

Example: sugar beet

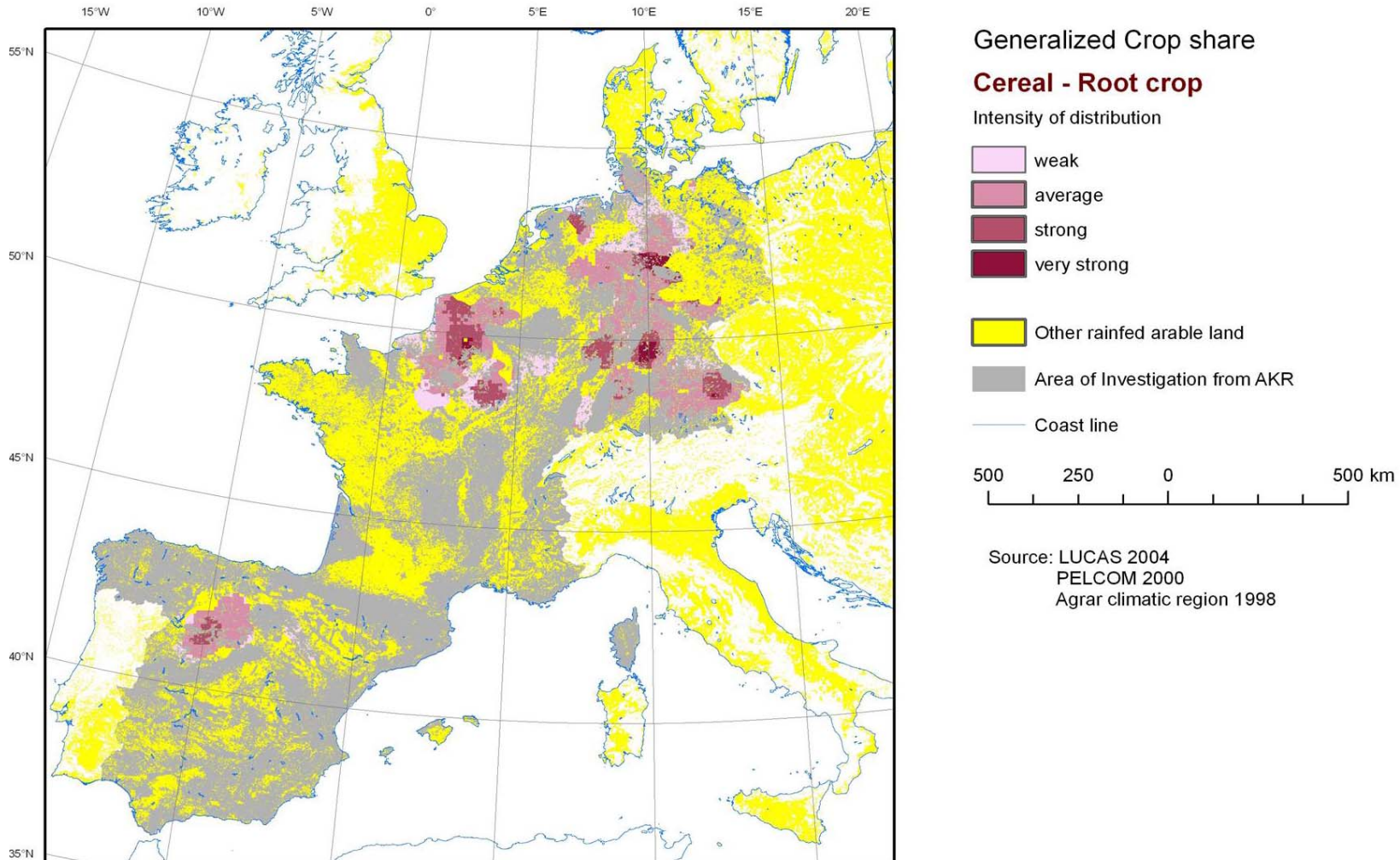




# – Generic crop combinations

- |     |                            |      |                                    |
|-----|----------------------------|------|------------------------------------|
| I   | - cereal – oleaginous crop | V    | - monocultural (maize, sun flower) |
| II  | - cereal – root crops      | VI   | - fallow land                      |
| III | - cereal – pulses          | VII  | - special crops                    |
| IV  | - cereal economy           | VIII | - fodder                           |

Example:



# Results

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Enormous data lacks have been identified for land management and climate.

Daily **climate values and variabilities** can be derived, but the density of original data is scarce.

The **mapping of crop rotations** and the abundance of management practices is difficult to assess because

- (a) statistical data for some variables exist but refer to administrative boundaries,
- (b) important information such as crop rotations cannot be derived directly (yet),
- (c) the controlling factors are mostly of socio-economic rather than of biophysical nature.

# Conclusions

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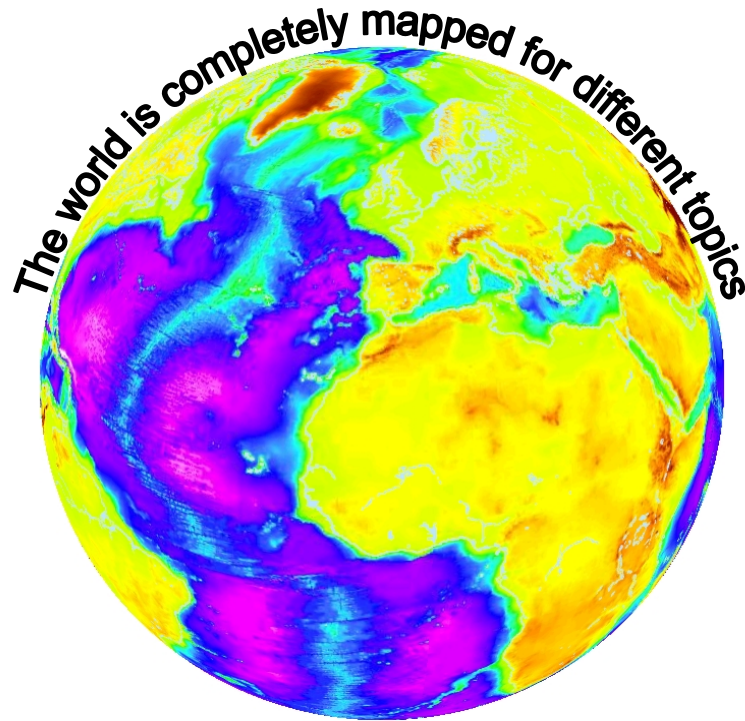
The preparation and generation of input data for biophysical modelling is not straight forward: it requires careful data processing and the development of specific aggregation techniques.

The work conducted in WP3000 did produce solutions, but the validity, reliability and resolution of the output is still limited unless expert, monitoring and data networks become intensified and strengthened.



# Data base strategy to operate and to improve the input for agro-economical simulations models

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**Vast data exist, but the effort to make it fit existing models is tremendous.**

**Data improvements, selection tools, model calibration and output validation, fit of input data to models, ...**

**.... still requires more efforts in the future**