

#### INTEGRATED SINK ENHANCEMENT ASSESSMENT



Data base strategy to operate and to improve the input for agroeconomical simulation models

### Main Focus

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

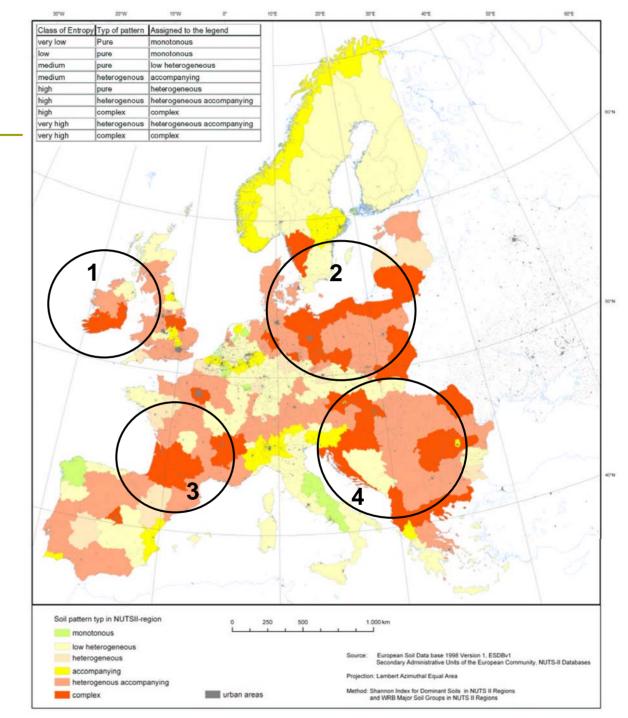
Are the available data sufficient?

Are the choices of tools and software solutions sufficient?

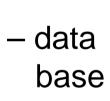
➤ Test area selection tool

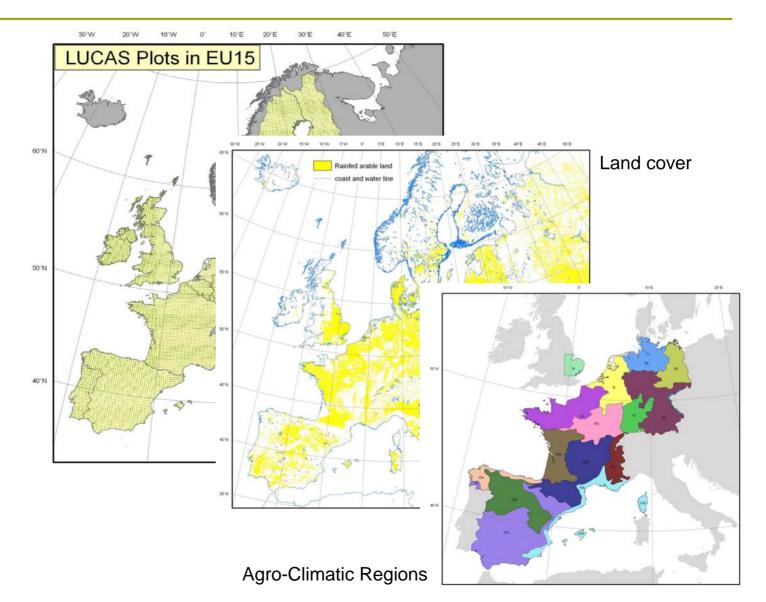
# Complexitiy of our bio-/anthro-geographic environment

- Soils
- Land cover

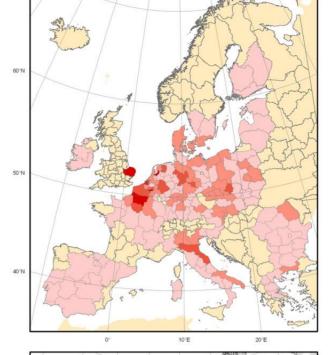


# Crop combinations





Crop combinations



Comparision between administrative units and monitor territory

Center of sugar beet cultivation by statistical units

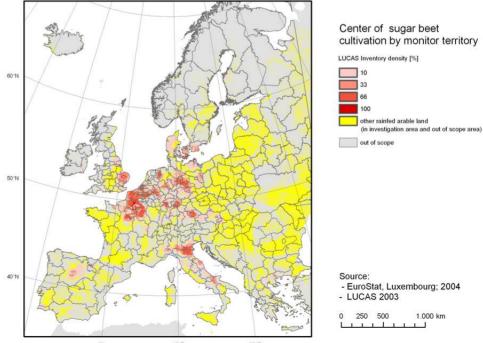
sugar beet density in NUTSII [min 0,003 % NUTSII area] [max 11 % NUTSII area] 10 (< 1,1 % NUTSII area)

33 (< 3,8 % NUTSII area)

66 (< 7,6 % NUTSII area)
100 (< 11,6 % NUTSII area)

missing values or out of scope

mapping of crops



Example: sugar beet

## Generic crop combinations

- cereal - oleaginous crop V

- cereal - root crops

- cereal - pulses

IV - cereal economy

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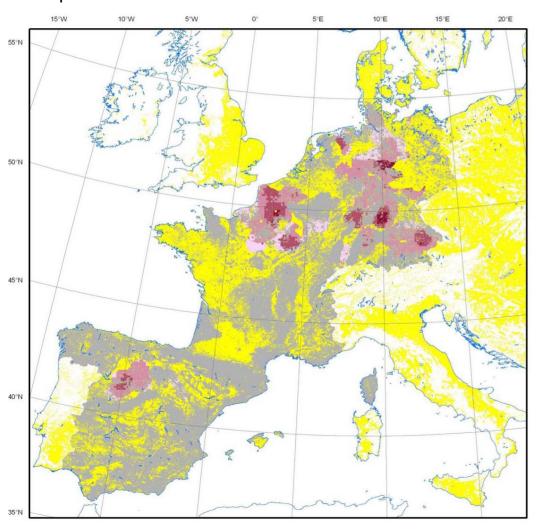
- monocultural (maize, sun flower)

fallow land

VII - special crops

VIII - fodder

#### Example:



#### Generalized Crop share

#### Cereal - Root crop

Intensity of distribution

weak
average
strong

very strong

Other rainfed arable land

Coast line

Area of Investigation from AKR

500 250 0 500 km

Source: LUCAS 2004 PELCOM 2000 Agrar climatic region 1998

### Results

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

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

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

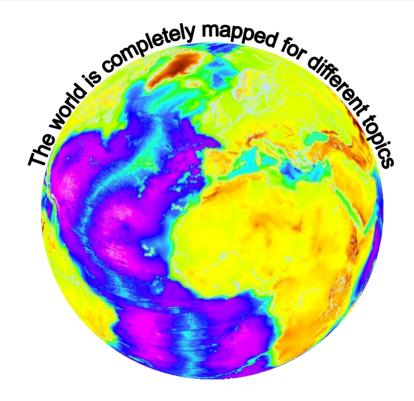
- (a) statistical data for some variables exist but refer to administrative boundaries,
- (b) important information such as crop rotations cannot be derived directly (yet),
- (c) the controlling factors are mostly of socio-economic rather than of biophysical nature.

### **Conclusions**

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, reliablity 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



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

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

.... still requires more efforts in the future