A field mapping system for habitats and land cover

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Necessary because:

- Landscapes are complex
- Change is not simple
  - real changes or background noise
- Large is not always important
  - small changes need to be detected

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Three phases

- Design
- Field survey
- Analysis

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General

- Define objectives
- Identify compromises
  - practical versus scientific issues
- Use control sites
- Think long term

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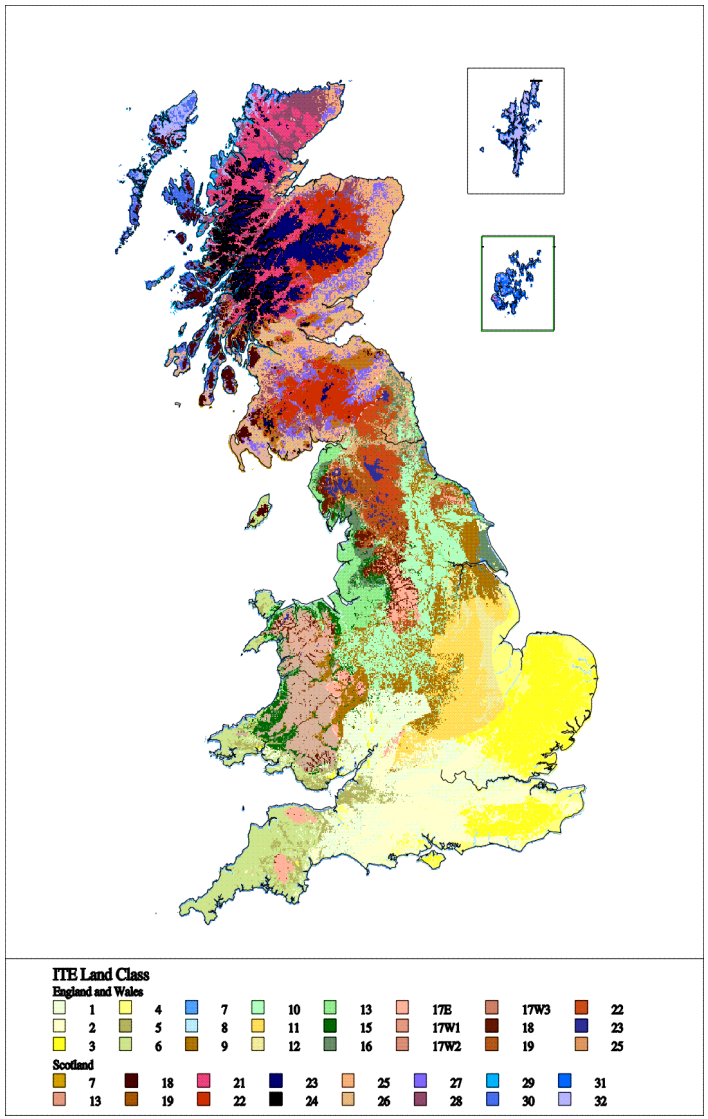
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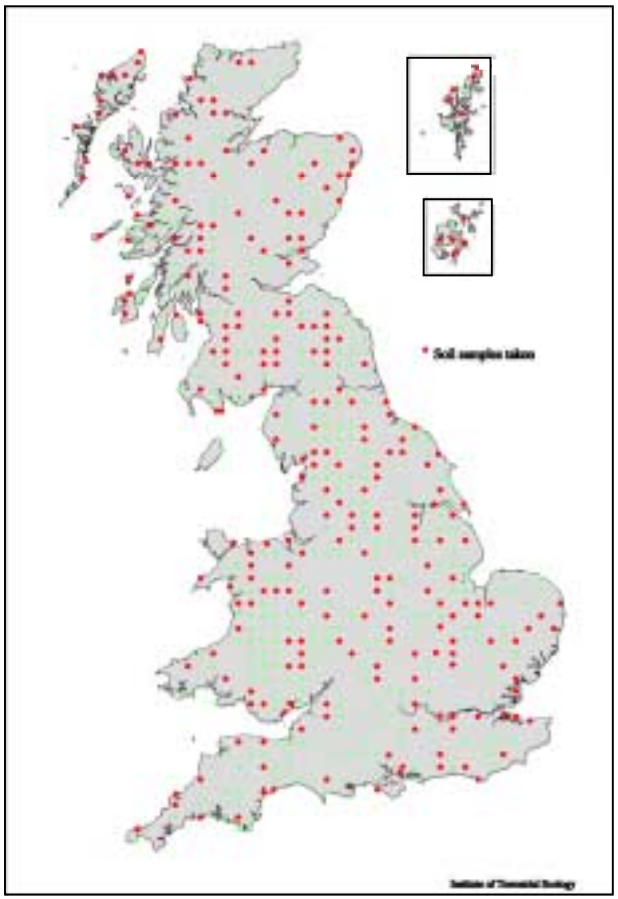
Design

- Define domain
- Sample objectively
- Spatially reference sites
  - reallocation into different strata
- Constant size unit

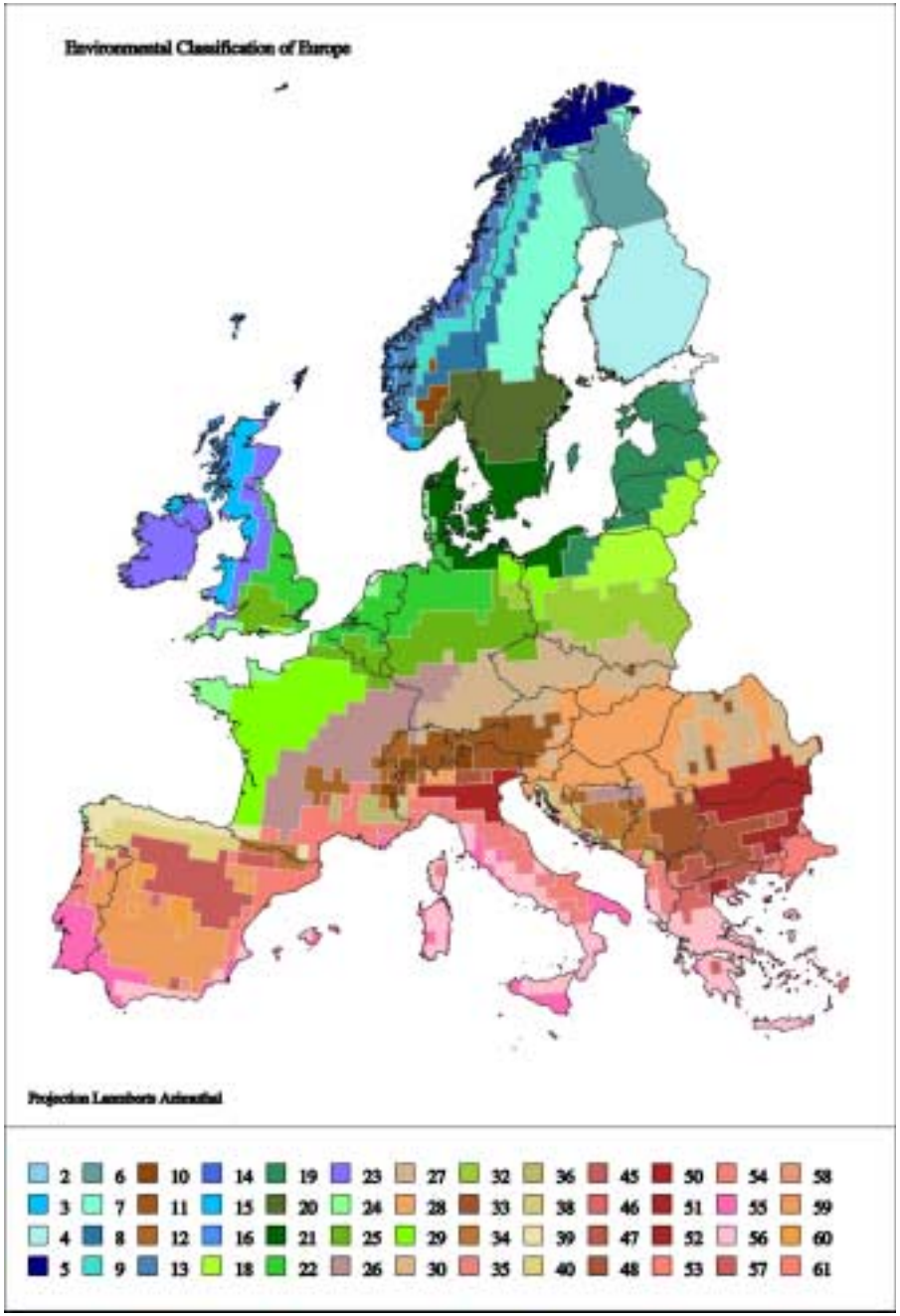
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Field survey

- Short time frame
- Consistent categories
- Relocation procedure
- Quality control and assurance
  - training and handbook
  - independent resurvey

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Broad Habitats 1990



Broad Habitats 2000



- Broadleaf
- Conifer
- Linear
- Arable
- Imp. grass
- Neut. grass
- Calc. grass
- Acid grass
- Bracken
- Shrub heath
- Fen
- Bog
- Open water
- River
- Montane
- Inland rock
- Urban
- Sup. Lit. rock
- Sup. Lit. sed.
- Lit. rock
- Lit. sed.
- Sea

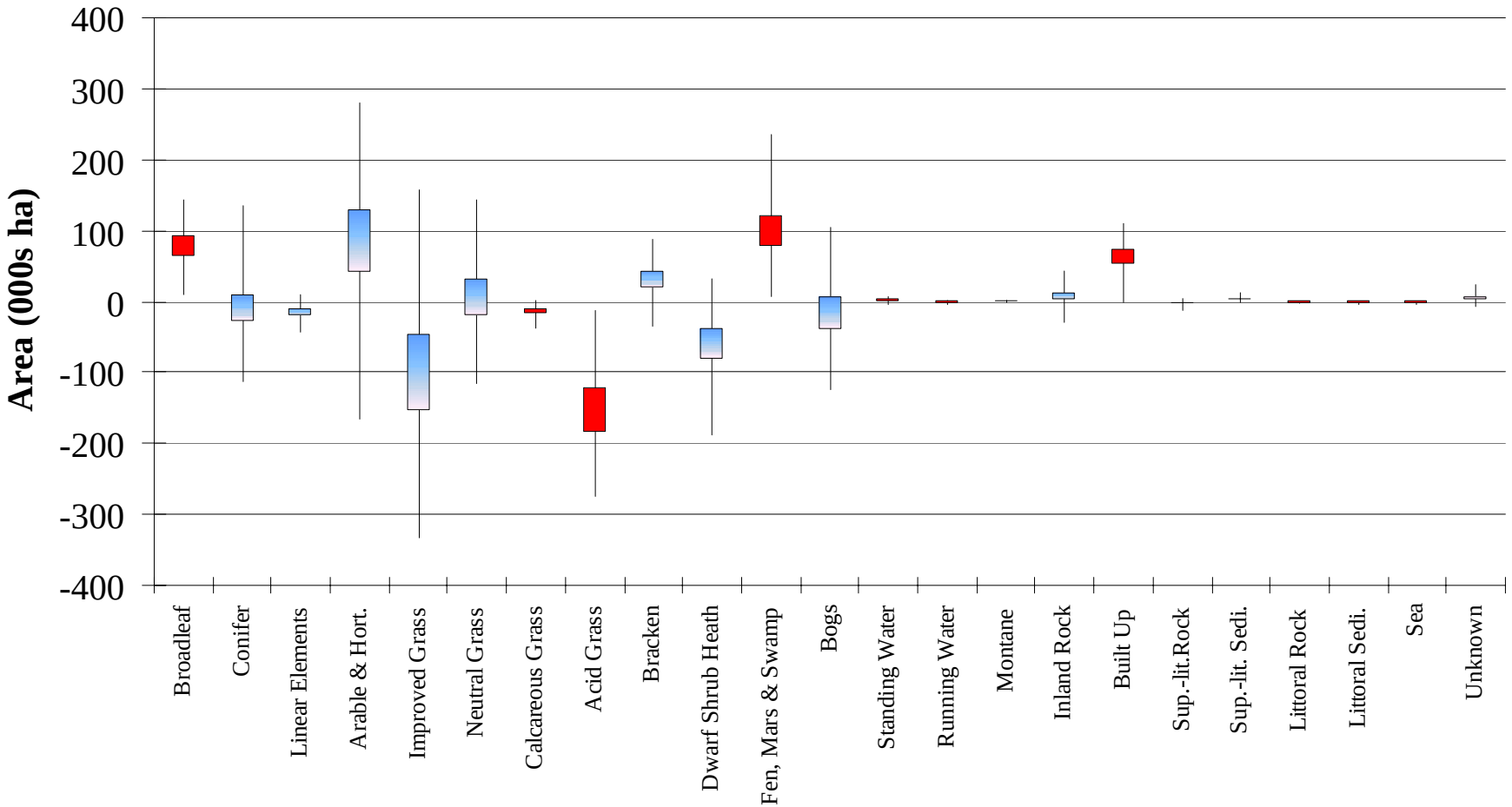
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Analysis

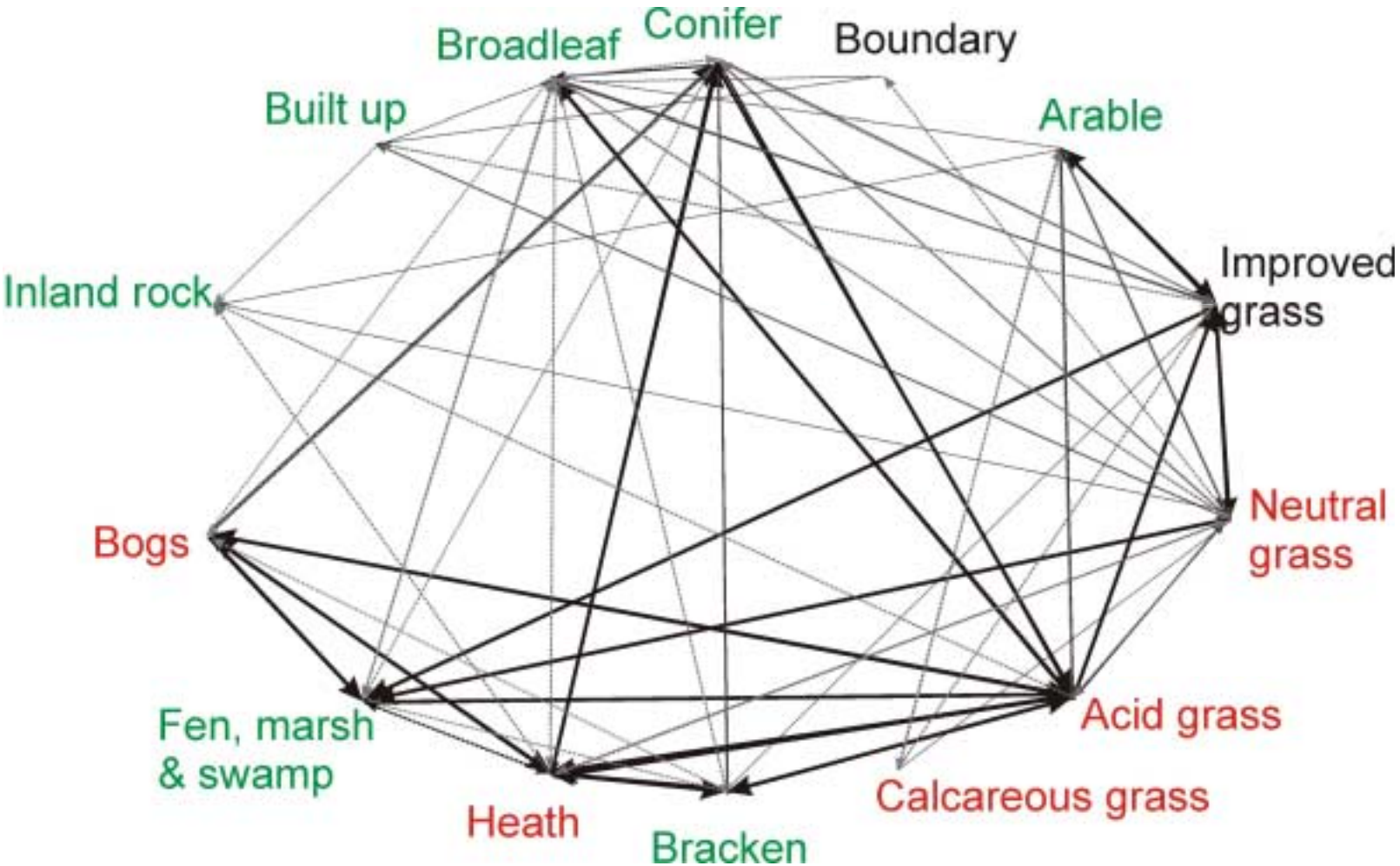
- Appropriate statistics
  - bootstrapping
- Check statistical assumptions
  - presentation of sub-regions
- Constant accuracy levels
- Audit trails

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Overriding

- Objective site selection and location of samples

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Concept: habitat & land cover



Mapping procedure

- Surveyors provided with a list of standard codes
- Combinations of data codes to annotate each category
- All features annotated with at least one primary code
- Map recognisably different, yet mappable units

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Mapping procedure: four fields

Alpha code	General Habitat				Land Cover/ Species/percent							EUNIS/ Phytosociological association	Qualifiers	

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Pathway for Mediterranean Woodland and Grassland General Habitats

In other words,

1. Forest, if trees ≥ 30%
2. *Maquis*, if shrubs>30% but trees are ≤ 20%
3. *Garrigue* if dwarf shrubs are >30% but trees or shrubs are ≤ 20%
4. *Garrigue* if trees + shrubs + dwarf shrubs are >20%
5. Herbaceous vegetation, if trees + shrubs + dwarf shrubs are <20%

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EUNIS habitat

- System based on the EUNIS level that can be consistently recorded in the field

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Field trial main conclusions

- Understanding level of recording
- Disaggregated codes for database management
- Species are necessary for detailed recording
- Percentage bands

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