



# Manual of Procedures

**1:250.000 Soil Database  
(Version 2.1)**

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# Georeferenced Soil Database of Europe (1:250,000); one of the main elements of EUSIS

*Structure* and *contents* of database are defined according to Manual of Procedures.

*The purposes* of the present Manual are:

- To define the structure and contents of the database.
- To describe the methods of georeferencing the data.
- To outline suggested procedures for regional mapping and sampling programmes.
- To prescribe a format of data storage.
- To ensure inter-regional and inter-country harmonization of data acquisition, processing and interpretation.
- To pave the way for the creation of a user-friendly soil database which will cater for present and future demands for specific soils information, **e.g. how to incorporate the soil threats into database?!??.**

# Why Revision of the Manual?

- New version of the manual is intended for full implementation in support of the EU Thematic Strategy for Soil Protection and the Soil Framework Directive.
- Soil data and monitoring are both crucial elements of any soil protection strategy. Currently available soil information in Europe is scarce and often of little use in a soil policy development process.

## Purposes of Manual

- Tool for ESDAC
- Tool for contributors of data when processing them on European level

## Internal Working Group

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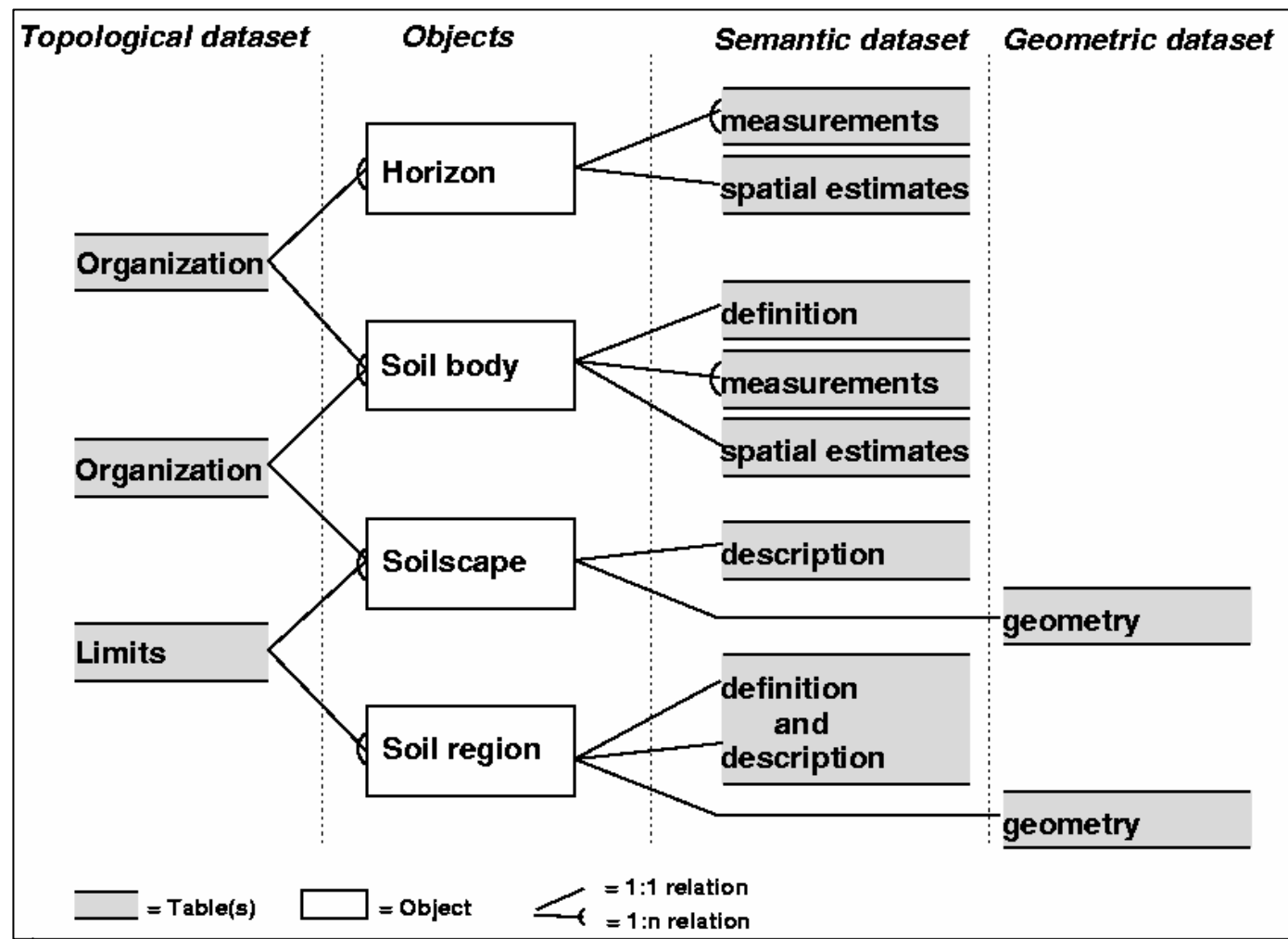
# Structure of the Manual

- 1. Preface
- 2. Background
- 3. Objectives
- 4. General concepts
- 5. Soil regions of Europe – elaborated by BGR
- 6. Structure of the database
- 7. Sampling and validation of reference areas
- 8. Implementation, data acquisition, applications of a georeferenced soil database, MEUSIS
- Appendix (partly paper version, partly CD: Soil Regions)

## What is new

- Soil Profile
- The structure of 1:1 M was adopted: Soil body  $\approx$  Soil typological Unit (STU) and Soilscape  $\approx$  Soil Mapping Unit (SMU)
- The procedure for users how to create metadata (basic set), but also give them possibility to do it on their own with explanation how it was done – metadata.
- The methodology how to create metadata
- Towards a Multi-scale European Soil Information System (in Chapter 8 together with examples: Exchange Format for MEUSIS Slovakia and Exchange Format for ECALP.

# Structure of the Database, Ver. 1.1



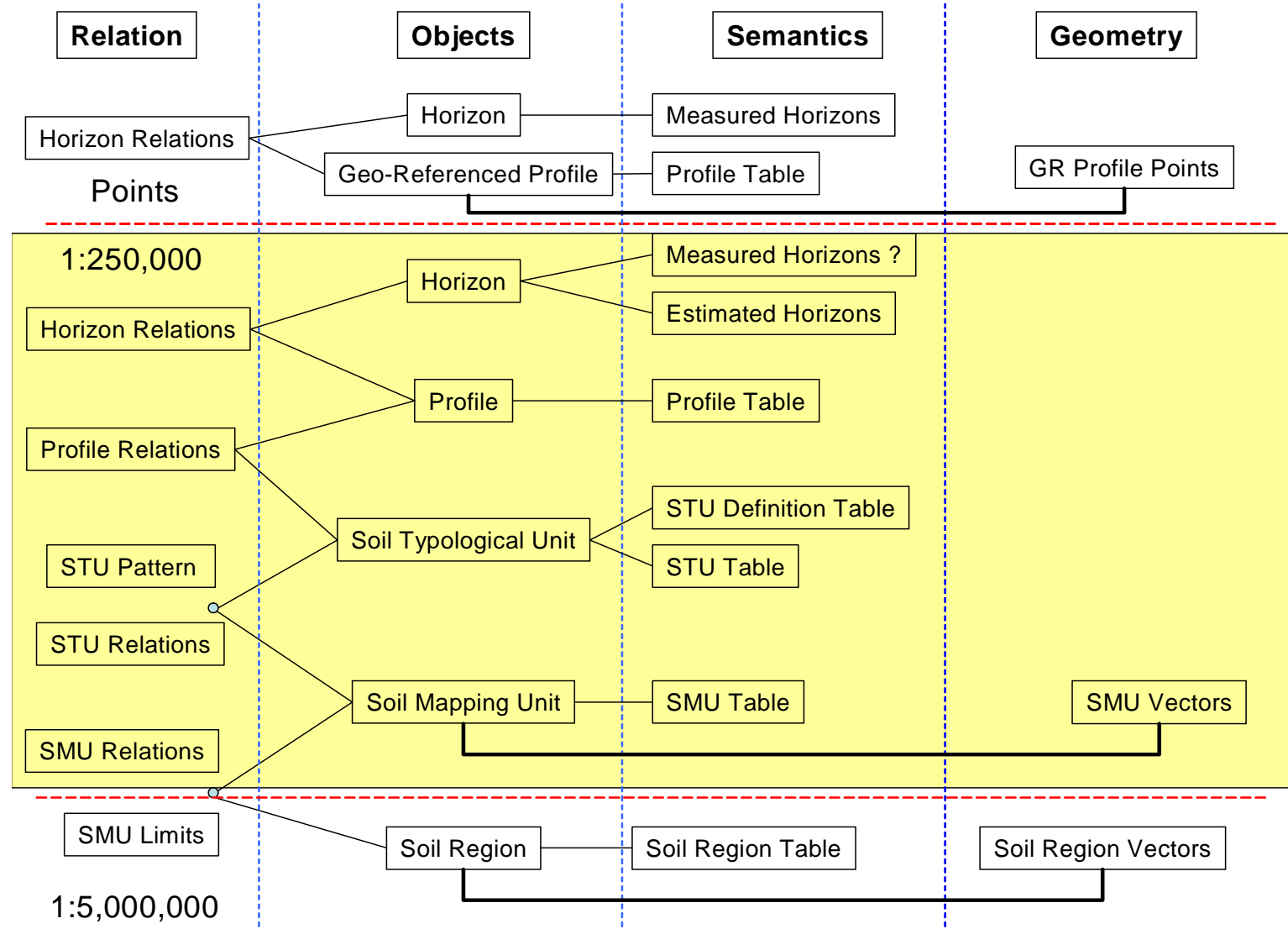


## Some Remarks from Users

- Is a soil body the same as pedon? All characteristics of soil profile – taxonomical units – are related to the pedon. If a soil body is characterized not only by the vertical, but also lateral dimension no attention was paid to this evaluation in the past.
- The soilscapes should be identified and delineated using the SOTER approaches.
- Whereas taxonomic soil classification has achieved a high degree of the international unification, there are problems of correlation of : soil associations, soilscapes, soil regions.
- The substrate (better than parent materials) and the texture (inc. stratification) should be regarded as qualifiers, which have relation to any level of the hierarchy.
- The depth to obstacles of rooting is very subjective and cannot be introduced into the soil taxonomical criteria.
- Based on our experience we recommend to delineate soilscapes and regions in the first stage individually in each country and make the international correlation later.

# Structure of the Database, Ver. 2.1

Joint Research Centre



# STU Definitions

What does the term **Soil Typological Unit** mean?

## 1:1 Million

- Soil name (SOIL) – Full 1974 (modified 1985) FAO name.
- Dominant surface textural class (TEXT1)
- Secondary surface textural class (TEXT2)

## Manual of Procedures v1.1

- WRB 1998 Soil name
- Parent Material
- Depth to obstacle for roots
- Dominant soil texture class (0-30 cm)

## Soil Framework Directive (Threat specific STU?)

- ?
- WRB (Reference Group + 'dominant' prefix?)
- .....

## Open questions

- Open possibility to include in the manual the new methods used in digital soil mapping.
- Definition of STU – not yet fixed.
- **Soil threats – how to deal with this fact?!???**



- Manual of Procedures, Vers. 1.1 from 2003 (ESB, IES/JRC), EUR 18092 EN.

**Thank you for your attention.**