
Classification Systems - Basic Principles and Concepts

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Aim

- basic definition of classification system,
- basic principles and
- general rules for the design of a “good” classification system

Land Cover -Land Use Classification Systems

- Definition:

Classification Systems are basic methods for ordering objects based on their interrelationships. The aim is to structure information, facilitating communication and exchange of information between different stakeholders.

Components of a Classification System

- Systematic:
Hierarchical structure of all objects (systematic)
- Nomenclature:
Naming and description of all objects/groups
- Identification:
Assignment of an individual object to a specific class based on a set of criteria and rules

Principles of Classification System

- Spatial consistency:
Classification system should be comparable between different sites, regions or countries.
- Temporal consistency:
Classification systems should reflect the current state at the time of observation (stocks).

Principles of Classification System

- Compatible with existing systems
including nomenclature, observation units, observation methods, identification (classification) principles
- Independence from observation tool
Classification systems should be constructed independently from the data gathering method.

Principles of Classification System

- Completeness
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- no overlap between classes
 - each object has to be assigned to only one class,
 - mixed classes are to be avoided
 - observation unit and scale dependent

Principles of Classification System

- Rules for identification
Assignment of an object to a class has to be based on transparent and clear rules.
- Rules for naming
Essential prerequisites are naming conventions, including semantic consistency
- Rules for inclusion of new objects

Conclusions

- Classification systems are a approximation of reality.
- Definition of objects, nomenclature and identification rules and criteria are often user specific and difficult to harmonise.
- Compromise and dialog necessary