

# Shared data bases - common knowledge: information infrastructures for nature conservation

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# Knowledge !!

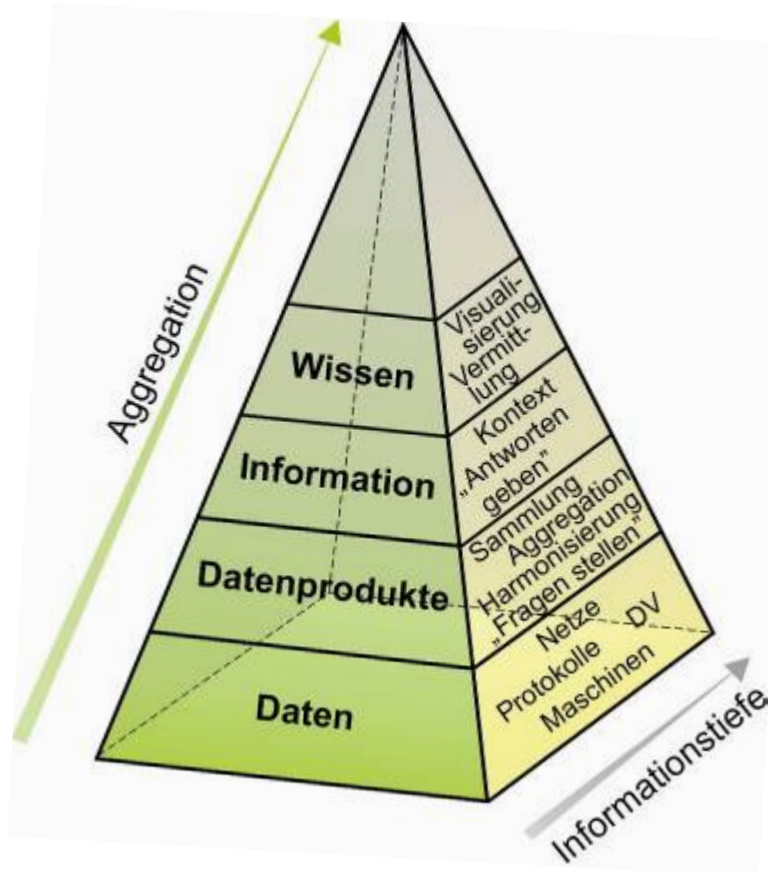
Introduction

Discover information

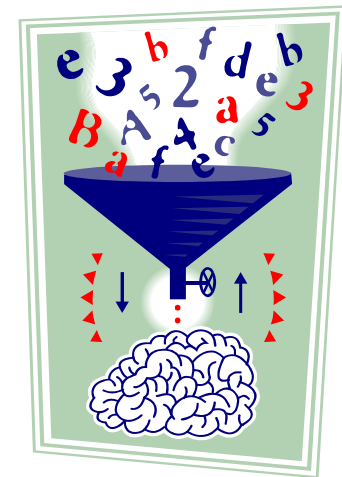
Access and use of information

Comparability

Conclusions



Reduction of information depth („information overflow“) goes hand in hand with increase of aggregation level



Knowledge is information in a certain context - *ready for use*

# Knowledge !!

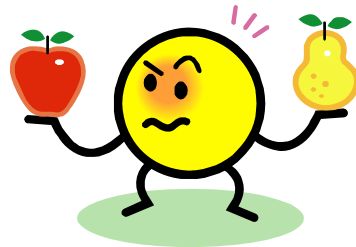
Preconditions when generating knowledge:



Discoverable information



Accessibility and  
usability



Comparability

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Access and  
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Conclusions

# How to search

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In Germany information on biodiversity is maintained on state (and on regional/municipal) level to a high amount.



From a federal point of view:  
Decentralized websites, databases and  
webservices, initially without harmonization

Generate knowledge by offering ...

a harmonized  
metainformation model  
(and software)

a central portal (“one stop  
shop” for still decentralized  
information)

a pre-structured information  
supply

# ... and find



Including a harmonized metadata model (UDK)

Including a harmonized semantic documentation using a common thesaurus

- [-] Bund
  - [-] Um
    - [-] Landschaft, Geographie, Geologie
      - Biotopgestaltung**
      - + Einzugsgebiet
      - + Fernerkundung
      - + Gartengestaltung
      - + Geologie
      - + Geomorphologie
      - + Grünanlage
      - [-] Landschaft
        - + Auenlandschaft
        - [-] Bewaldete Fläche
          - [-] Wald
            - Auenwald
            - Bannwald
            - Bergwald
            - Bestockung
            - Bruchwald
          - [-] Forst
            - Energiewald
            - Gebirgswald
          - [-] Hochwald

# Accessibility and usability

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Legal framework on international/european and national level:

- Aarhus Convention 1998
  - Access to information
  - Public participation
  - Access to justice
- Directive 2003/4/EG on Public Access to Environmental Information 2003
  - Implementation of Aarhus Convention in European law (directive)
  - Active dissemination of environmental information
- Environmental Information Law (UIG) 2005



# Accessibility and usability

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Common ideas of all regulations:

- ✓ Free access to environmental information (in a broad meaning!)
- ✓ Few reason for refusal of free access (Protection of species, IPR, reasonable business secrets)
- ✓ No formal declaration (why and how)
- ✓ Active assistance in access (electronic media, online)
- ✓ Active dissemination



# Comparability

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**Comparability**

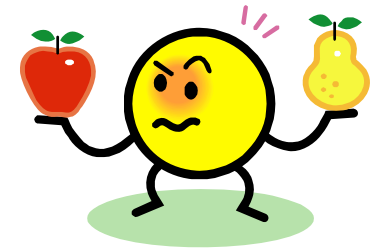
Conclusions

Harmonization from scratch leads to comparable information (Collection of comparable data from beginning):

- e.g. Habitats Directive, WFD

Harmonization of existing data sets step by step (plug existing DBs, infrastructures, MIS):

- INSPIRE, SEIS



# Comparability

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The Infrastructure for Spatial Information in Europe (INSPIRE) leads to comparable geographic information concerning environmental topics (and beyond!).

**The idea:** Building an infrastructure for geographic information on the basis of the de-centralized structures in the MS of EC. „*Keep the data as close as possible to the maintaining source*“.

**The tools:** Harmonize metainformation describing data and services, using (ISO-) standards and protocols for technical access, defining interfaces for services (view, download, transformation etc.)

**The content** (Biodiversity): Protected sites, land cover, bio-geographical regions, habitats and biotopes, species distribution



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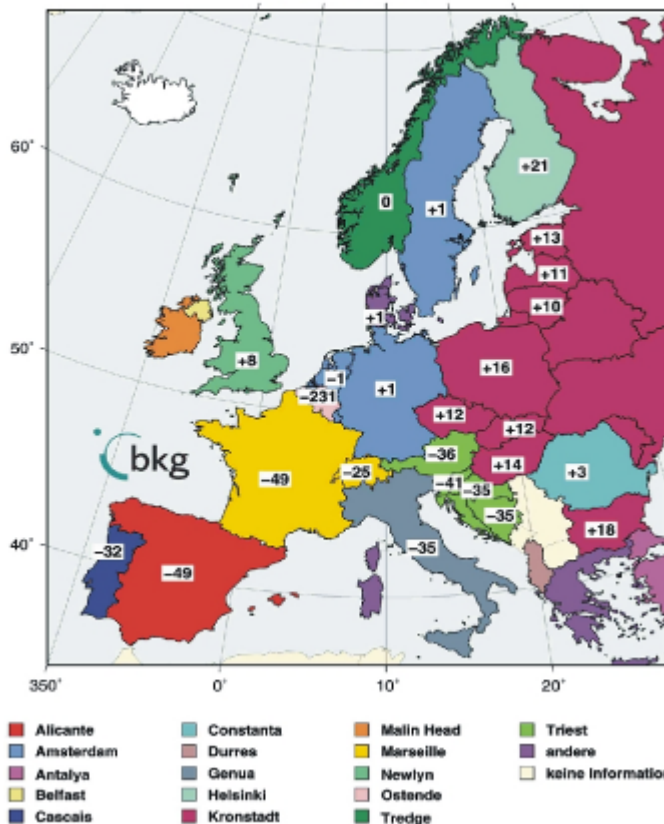
Comparability

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## Why INSPIRE ?

### Flood risks

Nationale Referenzpegel und  
Höhendifferenzen zum EVRF2000 in cm  
(Stand: Mai 2005)



# Comparability

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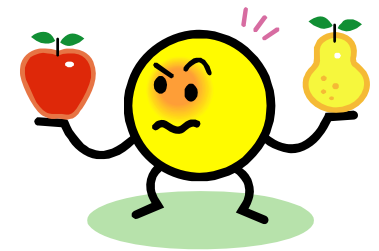
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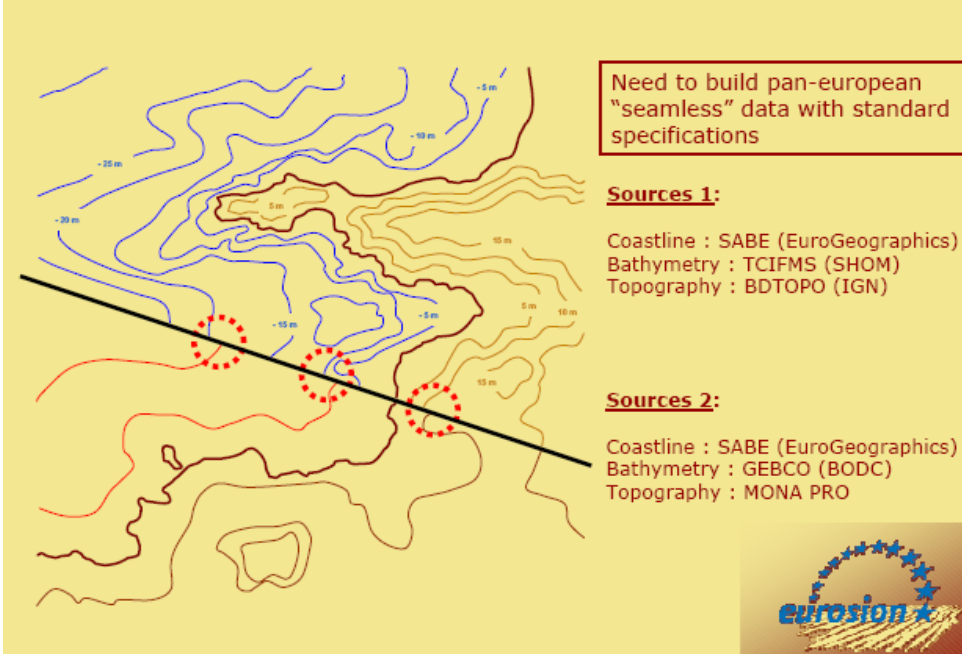
Conclusions

## Why INSPIRE ?

### Monitoring of marine environment



#### Issue No. 4 – Many data sources are not consistent



# Comparability

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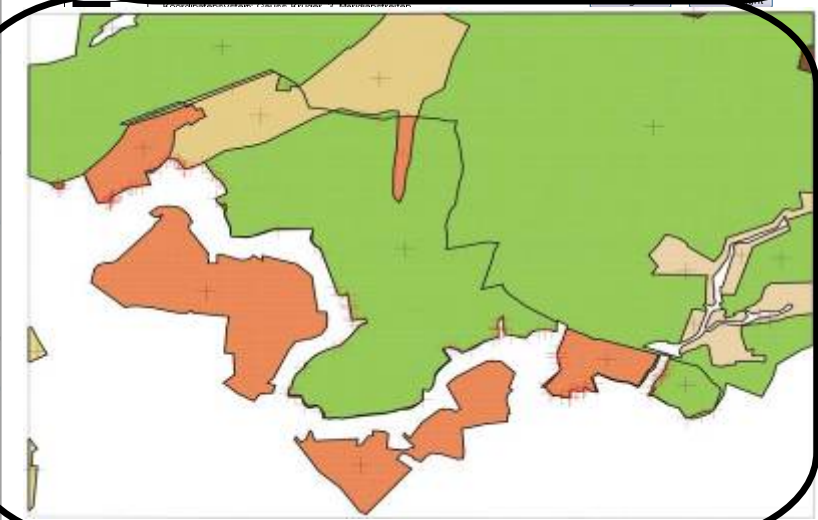
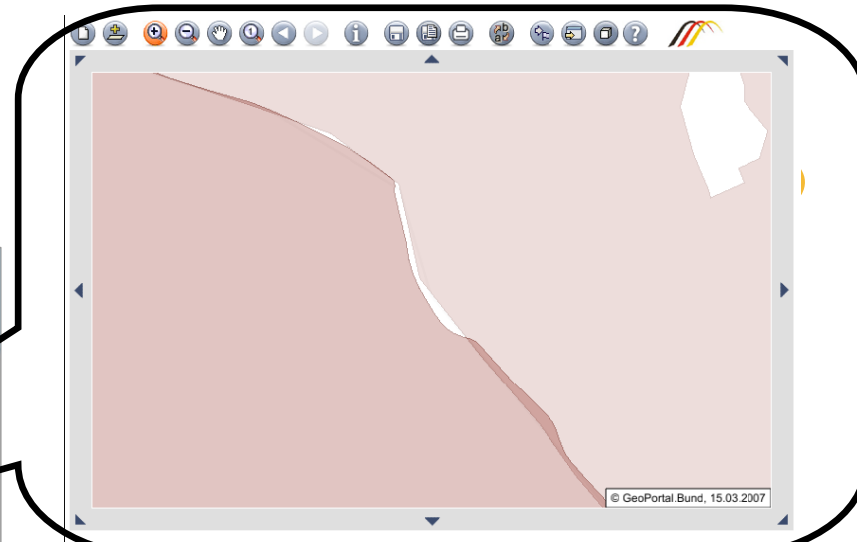
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Why INSPIRE?

Protected Sites



# Comparability

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EC initiative SEIS (Shared Environmental Information System) will build upon the same principles as INSPIRE (Connecting networks, using metainformation and standards, keep information at its source) but will broaden the approach to non-geographic data.



# Conclusions

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**Conclusions**

- ✓ Common knowledge building upon de-centralized information is possible if
  - well established standards and protocols are used (technique)
  - existing infrastructures and workflows are included, valued, maintained
  - the description of information is harmonized (meta-information)
  - people are willing to co-operate (spirit)

# Shared data bases - common knowledge: information infrastructures for nature conservation

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