

## **Worldwide development of national spatial data clearinghouses (2000 – 2005)**

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Enabling SDI Access  
11.00 – 12.30 hrs.

### Overview Presentation

1. Introduction (Definitions, History, Examples)
2. Web survey
3. Main results
4. Evaluation of results

# 1. Introduction

## **Clearinghouse**

An electronic facility for searching, viewing, transferring, ordering, advertising and disseminating spatial data from numerous sources via the Internet and as appropriate, providing complementary services.

Such a clearinghouse usually consists of a number of servers that contain information (metadata) about available digital data.

## National clearinghouse for spatial data

The access network of a national (federal) SDI.

Focus on the facilitation of spatial data discovery, access and related services

Not a national repository where datasets are simply stored

Recognition (in legal or institutional sense) by the national government (mainly through the national council for Geo-Information).

## History



1994 Federal Geospatial Data Committee (USA)

First National (Federal) Clearinghouse for Spatial Data

Initial objectives: 1) minimising duplication of effort in the collection of expensive digital spatial data;  
2) fostering partnerships where common needs exist

# Uruguay

**ClearingHouse**  
NACIONAL DE DATOS GEOGRÁFICOS  
República Oriental del Uruguay

**Búsqueda**

Buscar

- [Búsqueda Avanzada](#)
- [Parajes del Uruguay](#)
- [Búsqueda Global](#)
- [Búsqueda por proveedor](#)

En este momento hay **4734** metadatos en la base

**Servicios**

- [Información sobre los Datos \*\*NOVED\*\*](#)
- [Servicios de Información](#)
- [Trámites Electrónicos](#)
- [Base GPS](#)

Sea uno de nuestros **1759** usuarios y regístrese en el Clearinghouse accediendo a Datos & Software GRATIS

**Categorías**

- [Mapas de Base](#)
- [Departamentos](#)
- [Imágenes satelitales](#)
- [Administración - Infraestructura](#)
- [Geología y Minería](#)
- [Hidrología y Recursos Hídricos](#)
- [Flora y Fauna](#)
- [Recursos Forestales](#)

**Organizaciones Integrantes**

- ANTEL
- CAJA de PROFESIONALES
- CATASTRO
- CONAPROLE
- DINAMIGE
- EUIFORES
- MTOP
- OSE

# Denmark

**Geodata-info.dk**

Webstedet opdateret 21. august 2001

En National metadatatjeneste som beskriver digitale kort og andre samlinger af stedbestemte data i Danmark.

[Opdatering af metadata](#)

Alle titler | Efter område | Geogr. nøgle | Organisation

Find frem til datasamlingerne, enten ved at vælge én af de 4 knapper, eller ved at vælge en produkttype fra listen herunder.

Vælg produkttype  
Efter produkttype

[Seneste 10 datasætkbeskrivelser](#) | [Seneste 10 opdateringer](#)

Antal besøgende: 4437

Dette websted drives af **Kort & Matrikelstyrelsen**

Slovenia



REPUBLIC OF SLOVENIA  
Ministry of environment  
and physical planning



Geoinformation centre  
Slovenian National  
Spatial Data Catalogue

Profile of the Geoinformation Centre – Slovenian National Spatial Data Catalogue

## Slovenian National Spatial Data Catalogue

**About**

- [Cadastral register of caves](#)
- [Cadastral register of dangerous substance and dangerous wastes in the municipality of Maribor](#)
- [Cadastral register of petrol derivatives warehouses in the municipality of Maribor](#)
- [Cadastral register of snow strips](#)
- [Cadastral register of utilities installation](#)
- [Cadastral register of utilities installation at Grosuplje](#)
- [Cadastre of hazardous materials](#)
- [Calcite stone-pit – Stahovica](#)
- [Catalogue of limno-fauna and limno-fauna of Slovenia](#)
- [Categorization of agricultural lands](#)
- [Central population register of the Municipality of Ljubljana](#)
- [Centroid plots in the municipality of Sencur](#)

**Slovenian National Spatial Data Catalogue**

summary of metadata content  
[click here for detail description conformed to CEN TC/287 metadata standard](#)

**the best metadata**

Quick search

**find**

<b>title</b>	<b>Cadastral register of snow strips</b>
<b>sample</b>	
<b>abstract</b>	areal is polygon; attributes: code, the TTN, atlas, municipality, settlement, hydro-system, road, location, centroid, max. altitude, min. altitude, inclination, length, data on counter line (more attributes)
<b>purpose of production</b>	elaboration of information system on snow erosion
<b>usage</b>	Key words: threatening of Slovenia with snowslides, lanscape planning, snow-slides
<b>spatial subschema type</b>	point, area, annotation
<b>source</b>	capture source: the TTN10, land, previous sources, source code: 1:10000, source data: 1995-1999, data include: 1994

## 2. Web survey

- 1) Making Inventory existing clearinghouses
- 2) Measuring characteristics for description
  - ease of measurement,
  - objective character
  - clear representation of history and spatial distribution, use, content, and management of the national clearinghouse
- 3) Calculating clearinghouse suitability index

Inventory and Measurements on systematic and periodical manner (April 2000, 2001, 2002, **2005** and December 2000, 2001, 2002)

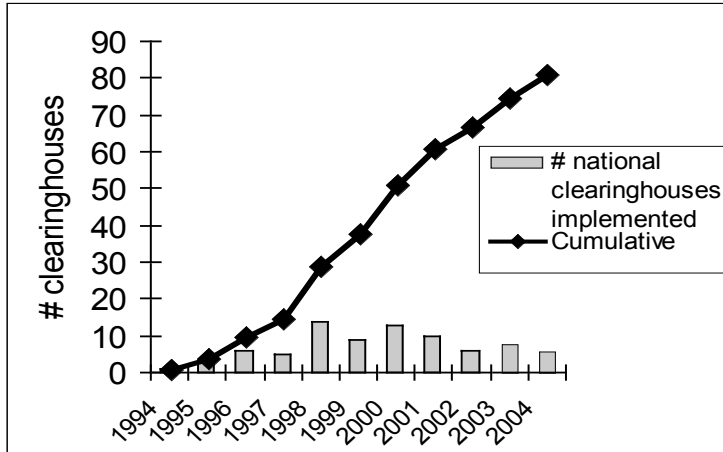
### **Characteristics measured and recorded**

- Year of first implementation on the web
- Number data suppliers
- Monthly number of visitors
- Level of (meta)data accessibility)
- Number Datasets
- Most recently produced dataset
- Availability of view (web mapping) services
- Frequency of web updates
- Web address change
- Funding continuity, and
- Metadata-standard applied

### 3. Main results

*History + Spatial distribution*

## History of Implementation



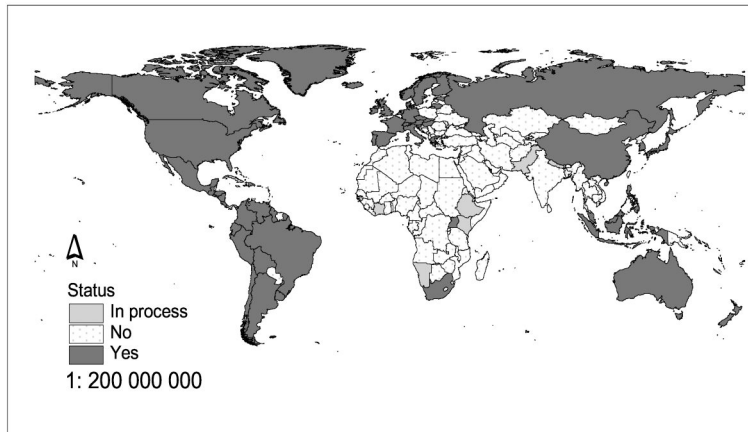
First Year of national clearinghouse implementation (per year (columns) and cumulative (line)).

## Spatial distribution

**Table: First year of national clearinghouse implementation**

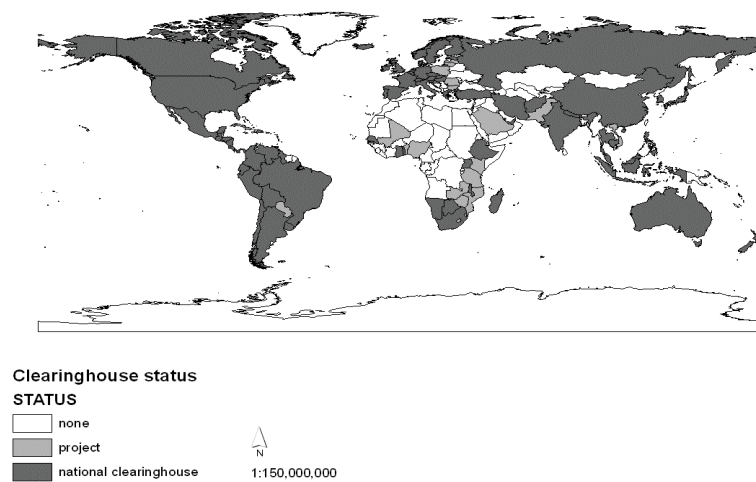
Year first implementation	Total number countries	Number African countries	Number Asia-Pacific countries	Number European countries	Number American countries
1994 – 2005	83	11	21	27	24
Project	25	12	5	5	3
No initiative	85	28	38	11	8

## Spatial distribution



Distribution of status of national clearinghouses (December 2001)

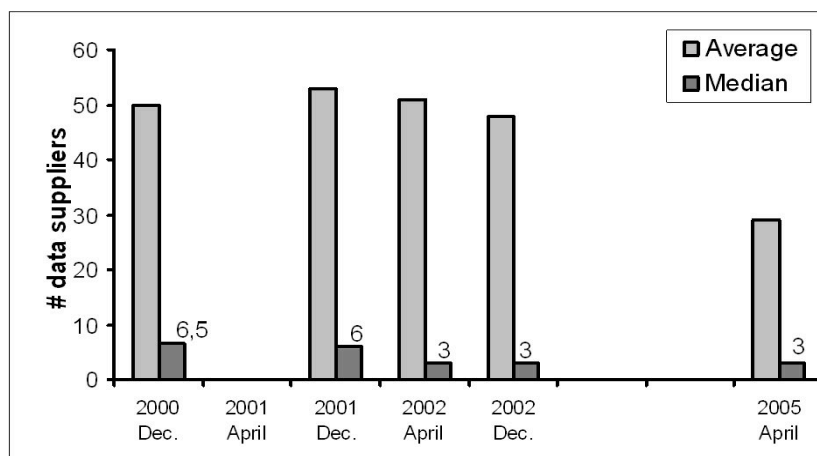
## Spatial distribution



Distribution of status of national clearinghouses (April 2005)

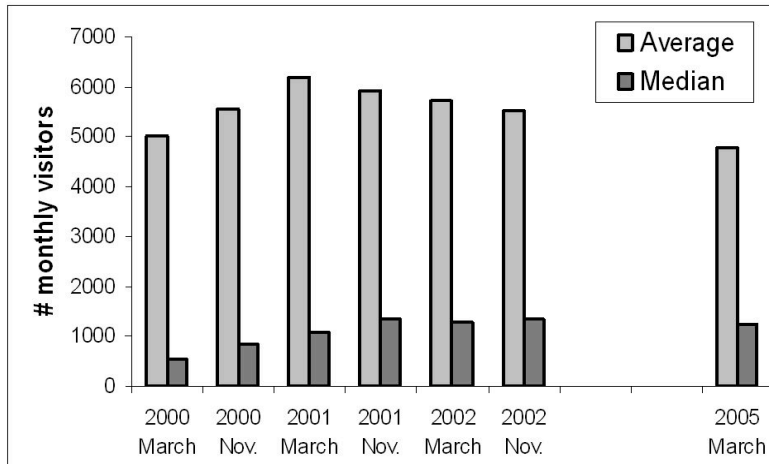
*Use*

## Data suppliers



Number of data suppliers during time (average and median)

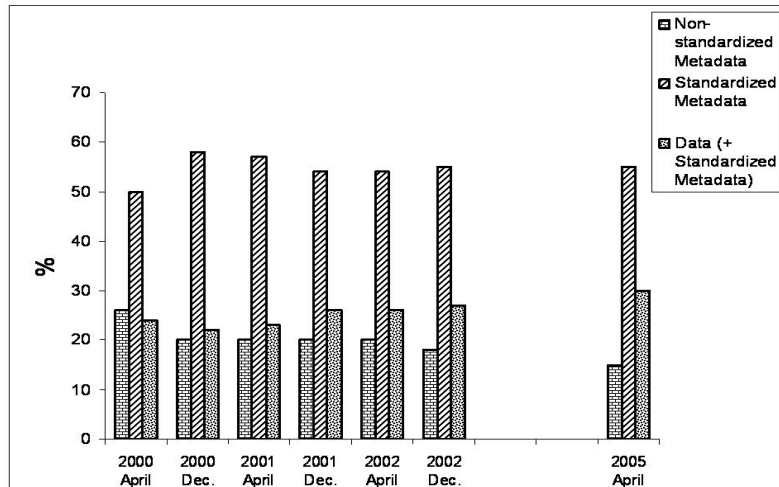
## Clearinghouse visitors



Number of monthly visitors during time (average and median)

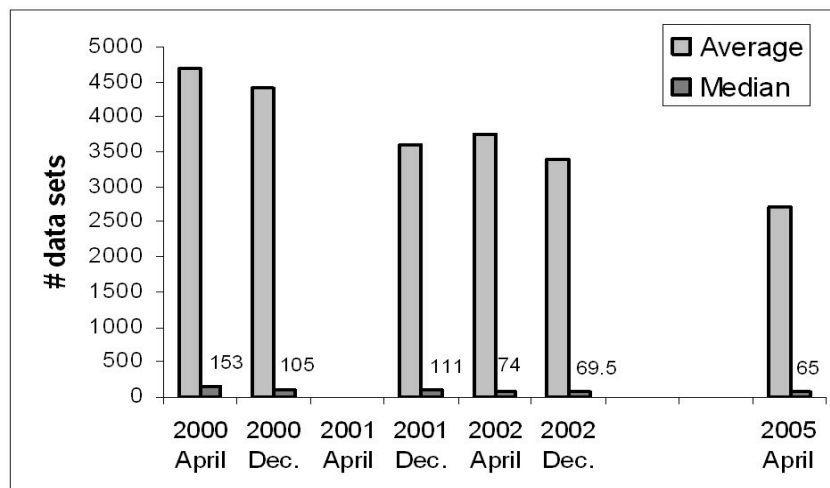
*Content*

## (meta)data accessibility



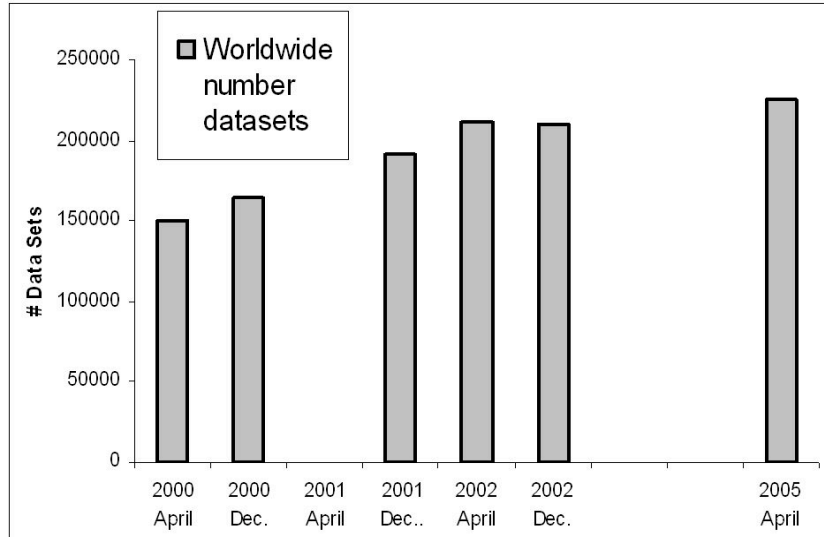
Percentages of the level of (meta)data accessibility during time

## Datasets



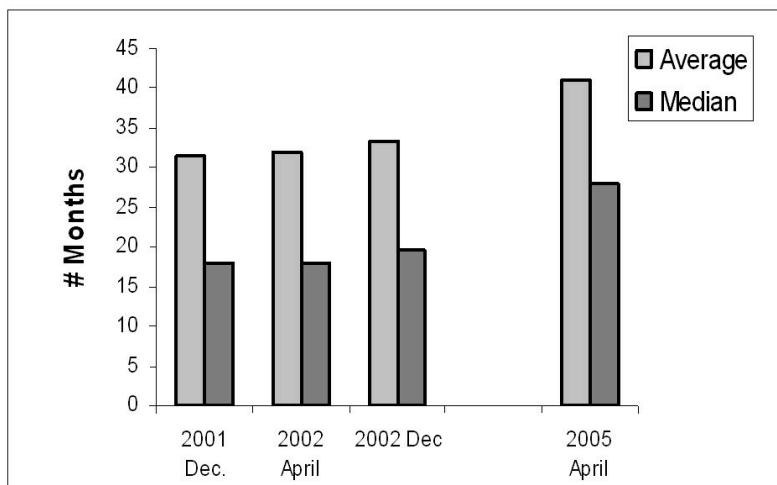
Number of datasets during time (average and median)

## Total number of Datasets



Total number of datasets to be accessed by all nat. clearinghouses

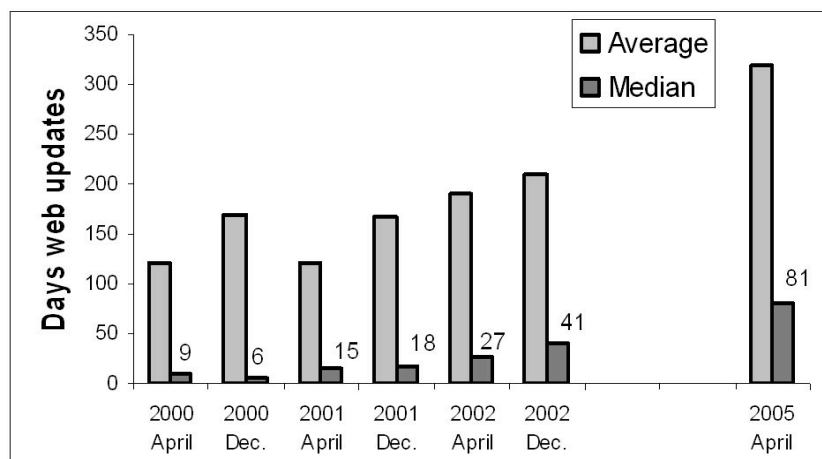
## Number of month of most recently produced Dataset



Number of months of most recently produced datasets (average and median)

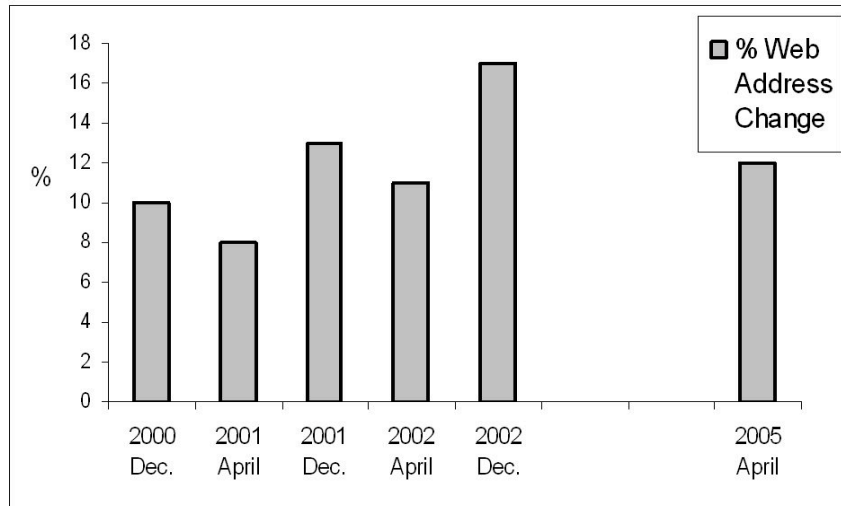
# Management

## Web updates



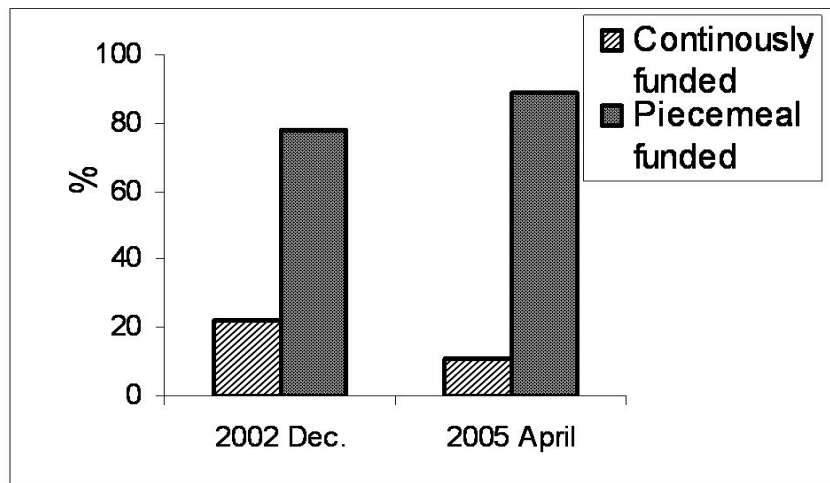
Frequency of web updates during time (average and median)

## Web address change



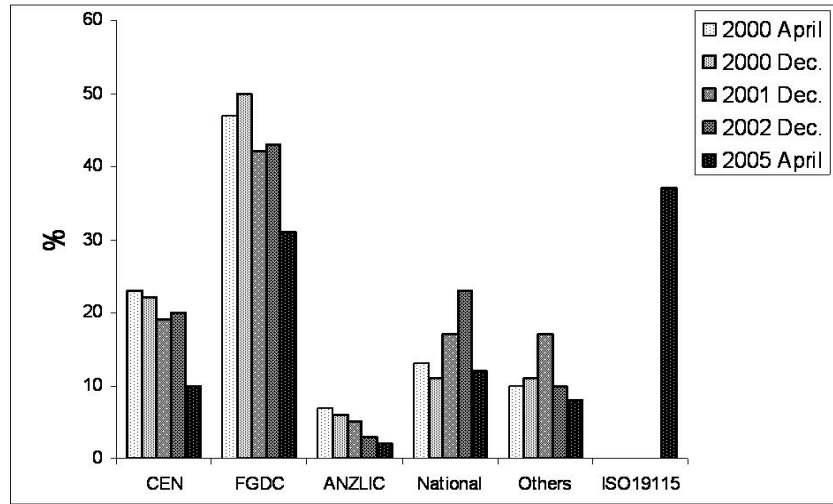
Percentages of periodically changed web address during time

## Funding



Type of funding (%)

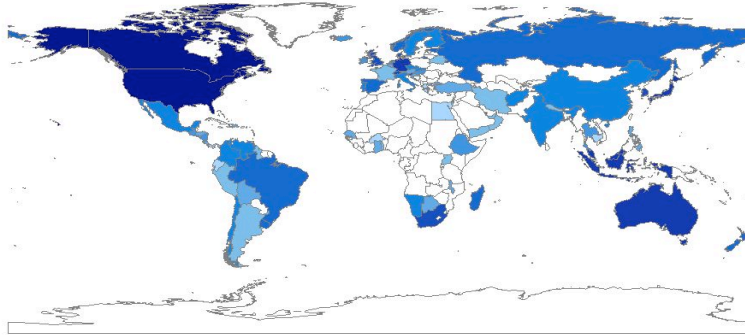
## Metadata standards



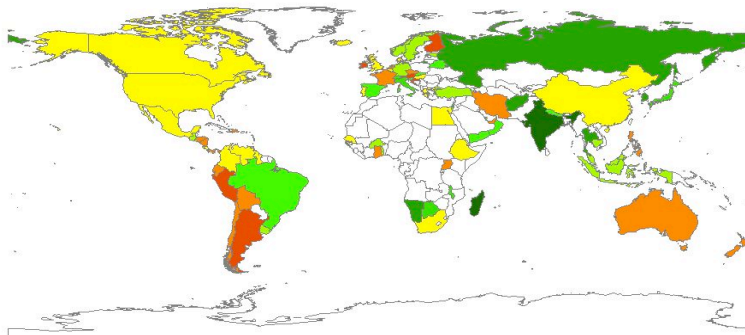
Distribution (%) of metadata standards applied during time

*Clearinghouse suitability index*

## Clearinghouse suitability index (April 2005)



## Index difference between 2002 and 2005



## 4. Evaluation of results

### **Worldwide developments**

- Steady increase number of national clearinghouses
- Distributing worldwide
- Decline in use
- Decreasing content (Qualitative as well as Quantitative)
- Worsening management

Possible reasons for negative trends:

- 1) Dissatisfaction of spatial data community with the functional capabilities of national clearinghouses (see low clearinghouse suitability index values)
- 2) No stability of funding

## Encouraging worldwide developments

More view (web mapping) services  
Small increase of download services  
High application of ISO19115

Indication of change into a more service-oriented facility

Web services are main technological indicator of second-generation SDI -> able to fulfill the needs of users and improve the use and sharing of spatial data

## Critical factors for success I



- **Creating awareness** of the clearinghouse functional capabilities;
- **Introducing web services** to clearinghouses (e.g. view and download services);
- **Building user-friendly interfaces** with less jargon;
- **Applying ISO19115**
- **Funding continuously**
- **Motivating data suppliers** to participate within the clearinghouse
- **Ensuring a motivating environment** so that clearinghouse coordinate the clearinghouse more regularly

## **Critical factors for success II**

Support for clearinghouse coordinators and policy  
Makers in the development of successful strategies for  
Establishing and/or maintaining national clearinghouses

Contribution to the enhancement of national  
clearinghouses and national spatial data infrastructures  
in many countries

No single best solution or recipe for clearinghouse  
establishment and maintenance

Thanks for your attention