

NSDI'S –CLASSIFICATION AND COMPARISON BETWEEN VARIOUS NATIONAL REPORTS

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- First attempt to outline some information collected during Com3 meetings in Prague & Athens
- Optional “frame” for additional information of interest in future national reports

Need for Mapping & Geoinformation

- Rapidly increasing population
- Increasing demands for agricultural production & water resources
- Environmental monitoring
- Protection of natural resources

Global-Regional-Local monitoring

Small-medium-large scale datasets

COMPILATION

1:200.000 complete

1: 50.000 2/3

1: 25.000 1/3

UPDATING

3,5% (every 30 years)

2% (every 50 years)

5% (every 20 years)

Europe: 7,5% (every 15 years) update rate
(UN 1990)

No statistics available on large scale data

Geoinformation Systems

25%	GIS users utility companies	● common base map
19%	land information	-core data
13%	business	thematic layers
	applications	● new surveying &
11%	environmental	mapping tools
	applications	Geoinformatics
9%	cartography	

All countries have some 'NSDI' activity
active / proposed / demanded

- Countries with active NSDI responsible agency, official policy, nationwide
- Countries with existing framework SDI activity no official policy, regional / local level
- Countries in transitional situation framework for NSDI –under development, initiative proposal no official policy
- Countries with traditional geodetic, cartographic, cadastral activity

Proposal of the “Frame” of national reports on NSDI

● General Information – Statistical Data

- Country area (km²)
- Population
- Education in geoinformatics (high school, Uni, postgraduate courses, on-going training)
- Number of surveyors / GIS specialists
- Role of the surveyor
- Publications on the issue, Magazines, Conferences
- Internet access - increasing rate

● Brief Description of the present situation

- NSDI state of the art
- Initial efforts in implementing a policy / strategy / time
- Relative historical information / experience

Existing Barriers/Problems

- Lack of basic infrastructure (technical/legal)
- Availability/accessibility to new technologies/methods
- Education
- Cost/funding issues
- Lack of policy/coordination in geoinfo-activities
- Lack of data compatibility, Standards, Technical specifications

● Brief Definition & Vision of NSDI

- Concept
- Advantages
- Values to the society
- Financial support – budget/funding sources
- Sustainability, Recoverability perspective

• Legal framework for NSDI

- Political support
- Existing legislation
- Establishment of responsible agency/organization
- NSDI strategy-policy documents
- Access to the data
- Protection of databases
- Copyright / rights to the data
- Legislation / regulations for digital services (through Internet)
- Relative legislation (land tenure, cartography, etc)

● Responsible Organization (active or proposed)

- Organizational plan
- Human resources-personnel
- Data providers / users

or

- Existing spatial data providers
- Main organizations of public and private sector (personnel-equipment etc)

● Technical Aspects (existing / proposed)

- Network (structure, operation)
- Hardware
- System Software, Application Software
- Data modeling (Contents, Structure)
- Standards, technical specifications
- Metadata
- Compilation/ updating time, agency, capturing & updating methods (traditional, GPS, digital RS, digital photogrammetry)
- Quality control

- Geodetic infrastructure – Control networks - Reference systems - Projection
- Map series – Scales – Coverage
- Analog / digital form
- Maintenance - updating frequency
- Existing Databases
- Volume of data
- Products
- Value-added products / services
- Clearinghouses
- Delivery mechanisms of data
- Accessibility
- Internet (data, services)

● Pricing Policy

- Data
- Services
- Level of privatization
- Commercial involvement
- Business culture
- Profit, Self-recoverability level

● Future Strategies

- 2 years – 5 years action plan
- Research activities

● International Projects / co operations

- Type
- Scope
- Funds
- Results, level of development
- Support projects - PHARE, World Bank
- EUROGI, CERCO, GLOBAL MAPPING etc.

● Identity data of the author

- Name, address, e-mail

● References

Recognition of the diversity and similarities,
requirements and constraints characterizing
various national reports

- Level of progress in NSDI (orientation, concept, scope etc)
- Point of view / experience / field of work of the delegate (policy issues, legal, technical, descriptive)
- Level of demand for NSDI

All kind of such information is of great value, importance & for the benefit of:

- FIG Com3 Create overview of the state of the art
Facilitate the transfer of experience
- Individual delegates Better awareness
More familiar with more relative
issues within the country
- Country Exchange experiences
Even a more detailed national report is
a step to the right direction

PROPOSAL

► Create a Com3 database:

- List of titles of full presentations (authors data)
- List of selected main characteristics of each presentation

► Update: Every Com3 meeting

► Present status:

Burkina Faso	Czech Republic
Denmark	Germany
Greece	Hungary
Israel	etc.

COUNTRY: BURKINA FASO

1. General Information – Statistical Data

1.1 Area: 274.000 Km²

1.2 Population: 12 millions, growing rate 2,68%,
20% in urban areas, 30% educated

1.3 Education in geoinformatics: < 50 surveyors
of bachelor level, ~ 250 technicians

1.4 Role of the surveyor: 15 private companies,
poor involvement of surveyors in land tenure
projects, restricted mainly in public sector trying
to set up a cadastral system in urban land.

2. Brief Description of the present situation – Barrier/Problems

2.1 NSDI state of the art: need for NSDI activity,
need for security of land tenure

2.2 Barriers-Problems: lack of coordination,
many existing systems of geodetic infrastructure
not integrated,
lack of standards official norms,
insufficient training,
old fashioned equipment,
lack of policy

3. Brief Definition & Vision of NSDI

(no available data)

4. Legal framework

4.1 Relative legislation:

1904 Law for West Africa French Colonies for
“Security of Land Tenure”

1932 Land policy

1960 Law 77/60 recognition of customary
ownership

1984 All land rights transferred to the government

1991 Possibility for private property

1996 Liberalization of Land Market, Law 14/96/ADP

5. Responsible Organizations/Agencies

22 GIS data provides (available list)

Most of them are projects of World Bank -
International Cooperation funds

6. Technical Aspects

6.1 Geodetic Infrastructure:

1950 Astronomic network of 200 points, by
IGN-France

coverage: all west Africa French colonies

ellipsoid: Clarke 1880

precision: ~ 50 m

projection: UTM Fuseaux 30&31

1958 Triangulation of Quagadougou area (54 points) by IGN-France

coverage: 9.500 hectares

ellipsoid: Clarke 1880

precision: 9 cm

projection: UTM Fuseaux 30

1960 Points (46) along 12th parallel by IGN

coverage: line of the 12th parallel

ellipsoid: Clarke 1880

precision: 10-20 cm

projection: UTM Fuseaux 30&31

datum: ADIN DAN

- 1979** Doppler Network (16 points)
coverage: all country
ellipsoid: by Doppler on WGS 72,
 computing final results Clarke 1880
precision: ~ 5m
- 1997** Official geodetic network - 55 GPS points
ellipsoid: WGS 84, GRS 80, Clarke 1880
precision: 7-10 cm
projection: UTM Fuseaux 30&31
today: more 217 points ~ 15cm

6.2 Databases:

1998 Rural cadastre: transformation of customary rights to legal rights

No spatial data

1980 Urban land management in two main towns

7. Pricing Policy : (no available data)

8. Future Strategies: (no available data)

9. International Projects

World Bank: “Urban project III” in two towns

10. References: (no available data)

COUNTRY: DENMARK

1. General Information – Statistical Data

- 1.1 Education in geoinformatics: Aalborg University offers master degree in Geo-informatics
Distance learning courses

2. Brief Description of the present situation

- 2.1 NSDI state of the art: no official policy, existing framework
- 2.2 Development of Policy:
1999 NGO developed the NSDI strategy,
Ministry of Building & Dwelling created an advisory committee

3. Brief Definition & Vision of NSDI

- Vision 2009:
- a) Geographical Information Infrastructure (coordination & standardization)
 - b) Nation-wide Collections of Data
 - c) Research & Development
 - d) International Cooperation

4. Legal framework: (no available data)

5. Responsible Organization

- National Survey & Cadastre, Denmark (KMS)
- Municipalities

6. Technical Aspects

6.1 Reference Systems:

National Map Projection System 34

Height System DNN

GPS enable System 2000

6.2 Databases:

A. KMS: Mapping DB at National level

a) vector database TOP 10 DK

1:10.000, updating policy every 5 years

b) sea charted, finished since 1987

c) cadastral register finished since 1987,
digital cadastral map database finished
since 1997

d) production of 1:50.000 from TOP 10 DK

B. Administration for counties

C. Municipalities

Large-scale digital maps 1:500 or 1:1.000
urban areas, 1:10.000 rural areas

utilities (do not contain full topography)

D. Private Company (Kampsax-Geoplan)

Digital orthophotos

6.3 Metadata

CEN standards, version 2 of METADATA service

KMS responsible for maintenance

Data owners responsible for registration

6.4 Standards

1983 group responsible for the development and distribution of a national exchange format for Spatial Info (DSFL)

TK-99 at the municipalities

UML within KMS

6.5 Delivery mechanisms

Since 1998 cadastral info is available to professional users via the web.

6.6 Value –added products:

1. Ministry of Environment: forest,
coastal protection zone,
polluted parcels on the Cadastral database
2. Countries: administration & registration on
KMS products
3. Municipalities: digital address & road
database (DAV) on municipality maps

7. Pricing Policy: (no available data)

8. Future Strategy

Research development: Cooperation between
Aalborg Uni,
Danish Technical Uni,
Copenhagen Uni,
KMS

9. International Projects: (no available data)

10. References: (no available data)