Establishment of an Environmental Spatial Planning Portal in Turkey

Gencay SERTER
City and Regional Planner
Presentation Plan

- **Introduction**
  - INSPIRE and Europe
  - INSPIRE and Turkey
  - Importance of Environmental Spatial Planning Portal
  - Logical&Legal Hierarchy

- **Environmental Spatial Planning Portal**
  - Relationship between Planning Portal And 1/100.000 Scaled Territorial Plans
  - Standards Which Are Used On The Period Of Establishing Planning Portal
    - Specifications Which We Used According To ISO TC 211
    - Data Specification Guidelines of INSPIRE
  - Project Stages
    - Analysis & Design
    - Data Integration
    - Web Application & System Design
  - Aims of Planning Portal
  - Characteristics & Scope of Planning Portal
INTRODUCTION

• Supranational Integration Process and EU

• Integration of Geographical Information Management

• INSPIRE
INSPIRE, (as a legal framework)

• Producing geographical data
• Access to data
• Standards
• Protocols
• Coordination
• Politics about geographical data
INSPIRE and Turkey

- QUALITY
- FAST
- PARTICIPATORY
- TRANSPARENT
- EFFECTIVE
- BASIC PROCESS

INFRASTRUCTURE FOR EFFECTIVE STATE PROCESS

Ministry of Environment and Forestry
Department of IT

INSPIRE and Turkey

Ministry of Environment and Forestry
Department of IT
Importance of Environmental Spatial Planning Portal

“Establishment of Environmental Spatial Planning Portal” is an very important and unique tool for Turkey in which the % 80 percent of datas related with geographical information

Source: SDI Policy in Europe, A.Ç.Aydinoğlu, Ph.DeMaeyer, T. Yomralioğlu
http://www.gislab.ktu.edu.tr/yayin/PDF/05AAB02.pdf
Logical & Legal Hierarchy

- **INSPIRE Directive**
  - **Information Society Action Plan**
    - **Environmental Spatial Planning Portal**
      - European Commission
      - State Planning Organisation
      - Ministry of Forestry and Environment
Environmental Spatial Planning Portal

Ministry of Environment and Forestry and ESRI Turkey aims to “Establishment of Planning Portal on Geographical Information in Turkey”

In the light of this aim “Information of 1/100.000 scaled territorial plan database and web application works” has been done by Ministry of Environment and Forestry.
Relationship Between Planning Portal And 1/100.000 Scaled Territorial Plans
STANDARDS WHICH ARE USED ON THE PERIOD OF ESTABLISHING PLANNING PORTAL

- 1/100.000 Territorial Plans Legislation
- Geographical Information Systems Circular
- ISO TC-211 Standards
- INSPIRE Directive
- OGC (OGC Working Groups),
- XML, UML...etc
**SPECIFICATIONS WHICH WE USED ACCORDING TO ISO TC 211**

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<th>Specification</th>
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<td>ISO/TS 19103</td>
<td>(Geographic Information - Conceptual schema language)</td>
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<td>ISO 19131</td>
<td>(Data Product Specifications)</td>
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<td>(Geographic Information-Metadata-XML Schema Implementation)</td>
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<td>ISO/CD 19142</td>
<td>(Web Feature Services)</td>
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DATA SPECIFICATION GUIDELINES WHICH WE USED ACCORDING TO INSPIRE

INSPIRE Data Specifications on:

- Administrative Units (D2.8.I.4)
- Transport Networks (D2.8.I.7)
- Hydrography (D2.8.I.8)
- Protected Sites (D2.8.I.9)
PROJECT STAGES

1. ANALYSIS & DESIGN
   1.1. Analysing existing data
   1.2. Database Design

2. DATA INTEGRATION

3. WEB APPLICATION & SYSTEM DESIGN
### 1. ANALYSIS & DESIGN / Analysis of Existing Data

#### PROJECT STAGES

**Ministry of Environment and Forestry Department of I.T.**

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PROJECT STAGES
1. Analysis and Design/ Standardisation
   1. Filtering
   2. Reclassification of attribute values
   3. Renaming of feature classes or attributes
   4. Merge / split of features or attributes
   5. Type conversions

Spatial types
   Spaghetti lines to Network
   Polygon to Line - Line to Polygon

Other types
   e.g. Numeric to String

6. Augmentation
PROJECT STAGES

1. Analyse and Design Studies/ Database design

**UML diagram:**

- ISO 19131 (Data Product Specifications)
- ISO/TS 19103 (Geographic Information - Conceptual schema language)
PROJECT STAGES

1. Analyses & Design Studies / Database Design

Database which is

• Compatible with national and international standards,
• Compatible with topological structure of GIS,
• Integrated Geographical Data Server,
• Practicable on multi-user screen,

and Database which simplify

• data transfer,
• updating of data,
• synchronisation of changes
In the second stage of project, all these 1/100,000 scaled territorial plans which have different geographical database have been integrated. Moreover, this geographical database became manageable and navigable.
1/100,000 Scaled Territorial Plans in Turkey

- Approved 1/100,000 territorial plans by MoEF: 46%
- 1/100,000 scaled territorial plans which will be finished by MoEF between 2009-2011: 31%
- 1/100,000 scaled territorial plans which will be finished by municipalities or province (local authorities): 18%
- Provinces which are not in program about 1/100,000 scaled territorial plans: 5%

At the end of 2011, 77% of the total area of Turkey (814,578 km²) will be planned by approving 1/100,000 scaled territorial plans.
3. Web Application and System Operation

Web Application:
- Users can get geographical data and information form this portal.
- Rights + participation.
3. Developing Web Base Application

- Query according to administrative unit.
- Buffer analyses
- Visualising of Google maps
- Access to plan notes from planning units.
- Querying Planning Data
- Query land use decisions
- Access to related national and international legal documents.
- Ability to exporting maps in pdf format
Planning Portal make possible to access 1/100.000 scaled plan information for everyone by organizing information.

With the planning portal;

- All the (current) plans has been joined in one portal,
- To check relationship between land-cover (corine) and land-use (plan) systems, monitoring
- Access to plan data for everyone (according to some permission),
- GIS infrastructure for all planning data,
- Integrated Models by using GIS infrastructure,
- Planning Information system.

Aim of the Planning Portal;

Ministry of Environment And Forestry Department of IT
AIM of MINISTRY of ENVIRONMENT and FORESTRY ABOUT PLANNING

Planning Portal:

- Search
- Interoperate
- Share
CHRACTERISTICS OF PLANNING PORTAL IMPLEMENTATION SOFTWARE

Plan Revision Automation
- Plan Updating
- Plan Monitoring
  - Analysing
  - Inquiring
  - Modelling
- Access to services
  - Reporting
  - Printing
- Mapping on the web screen and access to Metadata
- Vectorial Plan Datas
  - Raster Maps
  - Tablo Datas

Planning Portal Implementation Software
- Metadata Searching/Projection
  - Metadata entry
- Access to Mapping Services
- Access to Web Services
- Access to international distributor of metadata

Documents Management
- Documents Searching
- Documents Projection
  - Documents Entry
  - Documents Updating
    - Recording

Standarts
- REST API
- GeoRSS
- KML
- SOAP
- ATOM

Portal Management
- Access rights
  - Filling according to dates
- Version

Data Record System
- Satelitte View
  - Topographic MAps
  - Ortofoto
- Quick raster data projection and access
GIS service
- Data
- Mapping
- Geographical processes
- Metadata

GIS Portal

Client
- Scanner
- Desktop
- Mobile

Open/Interoperable
THANK YOU…

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