INSPIRE implementation in the Turkish Ministry of Environment and Urbanization
Producing and Publishing Environmental Data

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Ministry of Environment and Urbanization is responsible for the environment and urban planning in Turkey.

- **Directorate General of Environmental Management (DG-EM)**
- **Directorate General of Environmental Impact Assessment, Permit and Inspection (DG-EIA)**
  
  Produce spatial and non-spatial data related to environment.

- **Directorate General of Geographical Information Systems (DG-GIS)**
  
  Manages, transforms and publishes environmental data.

- **Directorate General of Spatial Planning (DG-SP)**
  
  Develops environmental plans, spatial strategy plans, integrated coastal zone plans using environmental data.
INSPIRE Directive is obligatory only for EU member states. Turkey builds Turkish NSDI based on INSPIRE directive.

In February 2015, “Regulation on the Establishment and Management of National Geographic Information Systems” (official gazette no. 7179/2014) has entered into force. MoEU and the other national authorities in Turkey are obliged to make existing datasets conformant to Turkey’s National Spatial Data Infrastructure (TR-NSDI) specifications based on INSPIRE, ISO and OGC standards.
Turkish NSDI Themes

**MAIN THEMES**
1. Address
2. Building
3. Cadastral Parcels
4. Administrative Units
5. Transport Networks
6. Hydrography
7. Land Cover
8. Orthoimagery
9. Topography
10. Geodetic Infrastructure

**THEMATIC THEMES**
1. Protected Sites
2. Plan Sites
3. Environment
4. Production and Industrial Facilities
5. Social/Cultural
6. Infrastructure
7. Natural Resources
8. Bio-diversity
9. Air/Climate
10. Geology
Published Data Related to Environment

2. Plan Sites
   - Environmental Plans
   - Spatial Strategy Plans
   - Integrated Coastal Zone Management Plans
   - Construction Plans
   - Zoning Plans ...

3. Environment

4. Production and Industrial Facilities

- Flow Monitoring Stations
- Water Quality Monitoring Stations
- Lake Monitoring Stations
- Air Quality Monitoring Stations
- Sea Pollution Monitoring Stations
- Emission Measurement Points
- Environmental Impact Assessment Areas
- Air Pollution Measurements
- Noise Data
- Sanitary Landfills and Dump Sites
- Waste Collection Points
- Blue Card Ship Waste Receiving Facilities
- Facilities with Permit and License
- All Facilities
- Contaminated Sites
Conceptual Database Design
Database Overview
Atlas and Web Services - Infrastructure

Oracle Spatial Database

File Databases

Enterprise GIS Servers

Atlas & Geoportal
www.atlas.gov.tr

External Applications Using Web Services

- MoEU Users
- Municipalities
- Other Ministries
- Other Organisations and Institutes

- Online Environmental Permits
- E-EIA
- Marine and Coastal Management System
- Ship Waste Tracking System (GATS)
- Bluecard Waste Tracking System
- National Air Quality Monitoring Network
- E-inspection
- ...

Enterprise GIS Servers

WMS, WMTS

WMS, WFS, WMTS
Atlas Web-based GIS application

Atlas is a web-based GIS application;

- Running on MoEU servers
- Client-server architecture
- Works with most of the web server applications that support OGC standards
- More than 500 layers (mostly prepared at the TR-NSDI standards) are updated continuously by the MoEU and the data producer Organizations
- Provides base mapping functions
- Has open and flexible architecture
- 3D interface where the end-users can use via web browsers
- WMS services combined with the any shapefiles on their local drives.
Atlas User Management System

- The Atlas Administrator account can manage users, roles and layer authorization for users.
- Users can only access the layers authorized for themselves.
- All necessary Atlas users created by the MoEU depending on their institutional needs.
- All necessary layers published via web services added by the MoEU DG-GIS.
In accordance with Turkey’s NSDI studies and the tasks of the DG-GIS, Turkey’s National Geographic Data Portal (Geoportal) Project was completed and has been opened to the public. Geoportal is based on INSPIRE, ISO and OGC standards. Geoportal Application includes;

- Discovery Service
- View Service
- Download Service
- Transformation Service (only Coordinate Transformation)

Implementation of Transformation Service, E-Commerce and Mobile versions are planned.
TR-Geoportal: www.geoportal.gov.tr
Thank you for your attention!

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