

## **Turkey National GIS Structure and Development of Geo-data Standards**

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### **Abstract:**

Turkey National GIS actions started in 2004 and have continued with consecutive actions until now. These actions determined current situation and general vision of National GIS like NSDI approach in the world. However, technical, standard, and policy deficiencies result in time and effort losses on production, management, and sharing of geographic data. General Directorate of GIS was established in 2011 and accelerated building process of National GIS. Projects were triggered to define geo-data standards and to build legal and administrative structure of National GIS. Hereby, national GIS strategy and the legal framework were determined. General administrative structure was designed for building National GIS committee and working groups. Geo-data portal is being built to use in National GIS project. To develop geo-data standards, data requirement analysis was utilized to all stakeholders of National GIS, including 15 of ministries, 88 of general directorates, 88 of departments, 118 of sub-departments. Reference geo-data themes were determined as geodesy, topography, ortophoto, land cover, hydrography, transportation, administrative unit, cadastre, building, and address. ISO/TC211, INSPIRE standards, and international standards were analyzed for these geo-data themes. As a result of analyzing existing geo-data, data requirement works, and international standards; UML and GML application schemas were designed for these reference geo-data themes. These standards are being tested to use in GIS projects corporately.

**Keywords:** geo-data standards, NSDI