

# Current Directions of Activities of the Geodetic and Cartographic Services in Poland

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## Key words:

## ABSTRACT

The Polish geodetic and cartographic service functions on the basis of the “Geodetic and Cartographic Law” Act and also executive regulations issued on the grounds of that Act. Technical order as regards performing geodetic and cartographic work and the certification system of qualifications of surveyor management personnel is defined by appropriate detailed regulations (technical and management standards). Legal regulations concerning geodesy, cartography, the cadastre and geographic information system are successively adapted to the development of technology and the requirement which are posed by the contemporary information civilisation. Tasks related to geodesy and cartography are implemented in Poland through a *civil service* system at the central, province, county and commune level, i.e. at all levels of the state’s organisational and administrative structure.

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## 1. INTRODUCTION

The Polish geodetic and cartographic service functions on the basis of the “Geodetic and Cartographic Law” Act and also executive regulations issued on the grounds of that Act. Technical order as regards performing geodetic and cartographic work and the certification system of qualifications of surveyor management personnel is defined by appropriate detailed regulations (technical and management standards). Legal regulations concerning geodesy, cartography, the cadastre and geographic information systems are successively adapted to the development of technology and the requirement which are posed by the contemporary information civilisation.

## 2. ORGANISATION

Tasks related to geodesy and cartography are implemented in Poland through a *civil service* system at the central, province, county and commune level, i.e. at all levels of the state’s organisational and administrative structure. A total of around 5,000 persons of very high qualifications are employed at all levels of the geodetic and cartographic administration structure. The civil service cooperates closely with military units of the geodetic and cartographic service.

A system of granting licences for the independent performance of jobs related to the profession of geodesist and cartographer exists in Poland. Such licences are already held by some 20,000 professionally active persons.

## 3. GEODETIC NETWORKS

Poland possesses its own section of the European geodetic network called EUREFPOL, which has been recently surveyed and calculated again. It constitutes the grounds for successive upgrading of all classes of geodetic networks. Poland boasts a full (100% complete) coverage of the country’s territory by high-quality, traditional geodetic networks. Technical standards require that all detailed measurements be related to a uniform, state network of an imperative high accuracy.

Between 1970 and 1980, horizontal, altitude, magnetic and gravimetric data banks were created, the data contained being successively updated.

## 4. CADASTRE

The history of the Polish cadastre is long and turbulent. After Poland regained national independence in 1918, intensive efforts were undertaken to integrate the three registration

systems which had existed in the Prussian, Austrian and Russian annexed sectors. The cadastres existing in the Prussian and Austrian annexed sectors of Poland had been established according to European criteria. In the Russian annexed sector, following the abolition of the corvee tenure system of peasants in 1864, a land register called the land table was established. Work to integrate the mentioned registration systems progressed up to the outbreak of the Second World War in 1939. That work continued between 1945 and 1951 when the institution of the cadastre was done away with to weaken the right to private ownership, in connection with the process of collectivisation of agriculture. A land and buildings register was established under a government decree of 1955, which was a *de facto* alternative name for cadastre. The Polish cadastre was reconstructed up to 1970 under the name of land register. The buildings register is presently being updated and added. A general classification of land was undertaken between 1950 and 1960 based on scientific grounds. At present a general valuation of real property is being performed.

## **5. CADASTRE – GIS (THEIR RELATION)**

The doctrine of constructing the GIS simultaneously “from above” and “from below” has been accepted in Poland. The GIS “from above” is to serve national territory management in the wide sense of the term while GIS “from below” is a system serving the relations between citizen and the state. A key function will be performed by a Topographical Data Base (TDB) during the process of implementing the GIS “from above”. Work on constructing, verifying and exploiting the TDB is an important line of the geodetic and topographic service’s operations at this moment. The TDB is to perform a role in cartography analogical to that performed by networks in direct geodetic measurements.

The cadastre is the core of the GIS in Poland and is assessed by us to be consistent with current European trends.

Support by the PHARE and World Bank financing systems in implementing this concept augurs well for the future, the more so that financing by PHARE comprises integration of three component parts of the Polish cadastre: the land and building register, real property rights register and the taxation register.

## **6. COVERAGE OF THE COUNTRY WITH MODERN TOPOGRAPHICAL MAPS**

The Polish geodetic and cartographic service is presently moving towards a general model of a map based on uniform standards depending on the scale of the elaborations. This is a map-system model, under which formula the foundation of the system is an IT data base while the analogue map, generated on paper, is only the form of editing the data base.

Cooperation within the civil and military service has led to Poland being covered by uniform vector maps for Level 0 V-maps and Level 1 V-maps. Elaboration of the data base for Level 2 V-maps – corresponding to a 1:50,000 topographical map - accounted for 62% of the country at the end of 2001.

## 7. INTERNATIONAL RELATIONS

Polish geodesy registered substantial international achievements between 1970 and 1980, including establishing a network for Iraq. A project for an African continental geodetic network was elaborated as a gift for African countries and was later used in the ADOS project for Africa, among other purposes. Within this project networks were created in Ethiopia, Libya and also Iraq. IGN controlled the network in Iraq under a French government order and delivered an excellent evaluation. We are presently open to proposals of cooperation with North African countries, to participate in the geodetic and cartographic work performed in that region.

### BIOGRAPHICAL NOTES

**Jerzy Albin** M.Sc., Surveyor General of Poland from 12/2001. Between 1976 and 1981 he was employed as an academic teacher in the Institute of Higher Geodesy and Geodetic Astronomy at the Warsaw University of Technology. From 1978 - 1996 he worked as a full-time employee of the Polish United Workers Party, trained management personnel for central and local government and also for banks and other sections of the economy. Between 1997 and 1998 he held the post of deputy president of the Head Office of Geodesy and Cartography. From 03/1999 – 11/2001 he was Surveyor General of Mazowsze Province.