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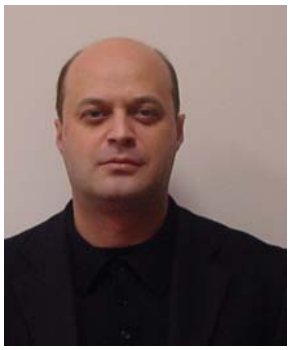
Increasing Role of Geoinformation Technologies in Land Management and beyond: Case of Georgia

Abstract

Introduction of geoinformation technologies for building up a modern land management system in Georgia goes back to mid-1990s. Such demand has originated after start of land reform resulting in privatization of over 3 million agricultural land plots in the entire country. These new properties were to be properly surveyed, registered and recorded in a newly established cadastral system with the aim of launching free market transactions.

During following five years (1996-2001) very different approaches, methods and technologies have been tested in various pilot areas by multiple donor projects, financed and conducted by the World Bank, UNDP, USAID, GTZ, etc. Such exercises resulted in creation of a big amount of parcel-based information, quite distinct in quality and not always compatible with each other. In such circumstances, start of a new *Cadastre and Land Register* project (in 2000), co-financed by the German government through KfW, designated for creation of *unified cadastral and land register system* for the whole country, could be considered as a turning point in implementation of a modern land management system in Georgia. The project introduced advanced technologies and modern methods in obtaining, processing, storing and presenting land-related data. It used aerial photography (or satellite imagery) and orthophoto maps as a base for cadastre, applied high accuracy field measurements by mass usage (over 25 sets) of digital plain tables (DPT) and total-stations and designed geo-databases, assuring integration of all data collected before by other donor-projects. By the end of 2006 eight out of 11 regions of Georgia will be completely covered by precise and highly reliable parcel-based information, organized in geo-databases, embracing over 5 million land plots (over 80% of all existing) in rural and urban places. This makes Georgia quite successful and advanced case not only among other countries of the South Caucasus region, but also former-Soviet states (excluding Baltic).

Other advantages of implementation and use of geoinformation in land management are: (i) *multipurpose use* of [cadastral] data, allowing broader and efficient application for land-related (e.g. land consolidation, land taxation) and adjacent (e.g. urban planning, environmental zoning, infrastructure development) fields of activities; (ii) wide involvement of a relatively newly emerged and fast developing *IT-oriented private sector* (GIS, RS, surveying companies and consultants), as a guarantee for sustainability of a system, technological advance and effective public-private partnership; (iii) obtaining and dissemination of *sufficient know-how* by organizing IT based short-term training courses for public and private sectors, as well as long-term academic programs and courses (e.g. at the universities and colleges), assuring quality and sustainability of land-related professions.



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Short biographical notes

1974-1979	Studies in Human Geography at Tbilisi State University
1980-1985	Post-graduate/doctorate studies and dissertation; Department of Human Geography, Tbilisi State University
1988-2000	Associate Professor, Department of Human Geography, Tbilisi State University
1991-1992	The Swedish Institute visiting scholar- Department of Human Geography, University of Stockholm; Department of Social and Economic Geography, Lund University.
1993-1994	Head of Department, Department of Land Resources and Cadastre, Mayoralty of Tbilisi
1996-1997	National co-ordinator, GTZ - financed *Land Management project* for Tbilisi, together with the Municipality of the city of Saarbruecken
1998-1999	Visiting Fulbright Scholar; *Special Program for Urban and Regional Studies (SPURS),* Department of Urban and Regional Studies (DUSP), Massachusetts Institute of Technology (MIT)
2000-2005	Head of Department, Department of Human Geography, Tbilisi State University
2000-up today	Co-team leader, GFA-Terra Systems; *Cadastre and Land Register project for Georgia*, co-financed by KfW
2002-up today	Visiting Lecturer, Postgraduate International MSc Program *"Land Management and Land Tenure";* Technical University of Munich
Since 2005	Professor, Department of Human Geography, Tbilisi State University