



XXIII International FIG Congress  
**INTERGEO®**  
 8 - 13 October 2006 - Munich, Germany



## THE NEEDS FOR IMPROVEMENT IN TURKISH LAND ADMINISTRATION SYSTEM: LESSONS LEARNED FROM GERMAN CASE

Mehmet CETE, Holger MAGEL and Tahsin YOMRALIOGLU

### Content

- Introduction
- Land registry and cadastre (LRC) system
  - Turkish LRC system
  - Lessons learned from German case
- Topographical Mapping System
  - Turkish topographical mapping system
  - Lessons learned from German case
- Real Estate Valuation system
  - Turkish real estate valuation system
  - Lessons learned from German case
- Conclusion

1 / 12

### Introduction

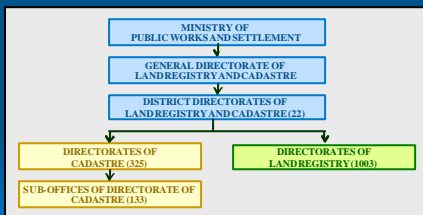
- Importance of effective land administration systems
- The aim of the study is to evaluate efficiency of present Turkish land administration system (LAS) and to submit some proposals to develop its efficiency.
- Research on efficiency of Turkish LAS
- Research on German LAS
- Lessons learned

2 / 12

## Land Registry and Cadastre System (LRC)

### Turkish land registry and cadastre system

- Organizational structure consistent with modern requirements
- No inconsistency between the works and data of LRC offices

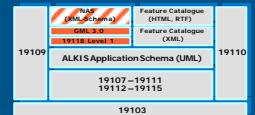


Organizational Structure of Turkish Land Registry and Cadastre System

3 / 12

### Lessons learned from German LRC system

- Turkish Cadastre Information System (TAKBIS) in development process
- German Cadastre Information System (ALKIS)
  - international standards
  - common application schema with Authoritative Topographic-Cartographic Information System (ATKIS) and Authoritative Control Points Information System (AFIS)



4 / 12

## Lessons learned from German LRC system

- Thanks to encouragement in transfer of real estates to heirs; up-to-date registers
- All rights, responsibilities and restrictions (RRR) in land registration offices
- Thanks to special groups in cadastre offices; up-to-date buildings data on cadastral maps



5 / 12

## Topographical Mapping System

## Turkish topographical mapping system

- Responsible authority for:
  - 1:10.000 and smaller scale: General Command of Mapping
  - 1:5.000 and larger scale: different government institutions
- Main producers and users of large scale maps: Municipalities
- The two ways to have large scale maps in municipal areas:
  - Municipality personnel
  - Provinces Bank



6 / 12

## Lessons learned from German topographical mapping system

- Turkish General Command of Mapping (GCM):
  - central organization
  - not enough technical personnel and tools to carry out topographic mapping works for the whole country
- No digital topographical maps in vector format and object-oriented structure in most part of the country.
- The responsible organization for topographical mapping in Germany: Surveying and mapping administrations of the states.
- In Turkish case: The District Directorates of Land Registry and Cadastre.



7 / 12

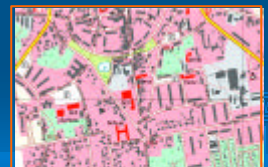
## Lessons learned from German topographical mapping system

- Lack of:
  - effective coordination in production of 1:5.000 and larger scale topographical maps in Turkey
  - effective coordination in building up geodetic control points in the field
- The District Directorates of Turkish LRC should also:
  - contract and supervise municipal mapping works
  - carry out works for topographic and geodetic control point information systems
- General Directorate of Turkish LRC could be responsible for nation-wide data requests and supervise works of District Directorates like in Germany.

8 / 12

## Lessons learned from German topographical mapping system

- Thanks to the proposed approach:
  - All mapping activities under the same organization
  - Prevention of overlapping works
  - Data captured once, used in all mapping levels
- International standards
- The same data structure with other spatial information system works
- Topographical Information System



9 / 12

## Real Estate Valuation System

### Turkish real estate valuation system

- Valuation works for taxation purpose once in 4 years by municipalities
- Valuation works especially for expropriation purpose by some government institutions
- Each municipality and government institution has its own valuation committee
- About 15 institutions carrying out valuation works in Turkey

10 / 12

### Lessons learned from German real estate valuation system

- A specific valuation law and guidelines in which the system is clearly defined
- Evaluation of purchase prices and object characteristics in valuation works of the committees
- Guiding prices, annual reports and maps based on real market prices
- Using the valuation information provided by the committees by all public and private users



11 / 12

### Conclusion

- Countries should evaluate effectiveness of their land administration systems and adapt them to new developments.
- This study aims at evaluating effectiveness of Turkish LAS and submitting some proposals for better administration of it.
- In defining improvement way, the experiences learned from German land administration system have been a guide.
- Such case study approaches are also proposed to the other countries where there are needs for reengineering or improvement in the land administration system.

12 / 12



thanks for your attention

Mehmet ÇETE  
Karaman Technical University  
Department of Geodesy and Photogrammetry  
Trabzon - TURKEY  
Tel: +90 (462) 3722794  
Fax: +90 (462) 3289918  
e-mail: mceste@ktu.edu.tr