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Tribzoon  
 TURKEY

## Evaluation of Land Parcel Identification Systems

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### Overview

- Land Parcel Identification System,
- Demarcation Methods in LPIS
- Turkey's Current Stance Regarding the Usage of LPIS
- The Challenge
- Conclusions

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### Land Parcel Identification System (LPIS)

A Spatial Reference System of Farm Land under IACS

Attributes: Stable over time, Use eligibility recorded officially, Has unique identifier, Boundary stored in GIS, Prevents Double Declaration, Locates [claimed] land, Area officially known.

Uses: Location in aid application, Use declared by farmer, "Contracted" area in application, May be unstable over time, Area claimed by farmer, Controlled object, Payment calculation.

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### Demarcation Methods in LPIS

- Cadastre Systems**
  - At the beginning
- Large Scale Topographic Mapping**
  - As base cartography (in the UK)
  - At the beginning, as ancillary cartography (in most Countries)
- Ortho Products**
  - As base cartography (especially in CEUC)
  - As ancillary data (except for the UK)

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### Demarcation - Based on Cadastre System

- Advantages:**
  - familiar to the farmers,
  - very detailed,
  - a unique ref. number,
  - gross area and official land use,
  - allow possible cross-checks.
- Drawbacks:**
  - variable geometric accuracy, various projection,
  - heterogeneous quality,
  - not regular map-sheets coverage
  - not digital in rural areas;
  - may not correspond to the agricultural parcels.

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### Demarcation - Based on Ortho Imagery/Photo

- Defining Reference Parcels**
- Demarcating Reference Parcels**
  - Declaration by Farmers
  - Disputes
  - Adjudication

Agricultural parcel (declared) ≤ (Farmer) plot (often declared) ≤ (Physical) Block (pred.defined / Admin.)

1 Piece of land cultivated by one farmer with a single crop ≤ 1 Piece of land cultivated by one farmer with one or several crops ≤ 1 Piece of land with permanent boundaries, may contain several crops and farmers

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## Turkey's Current Stance Regarding the Usage of LPIS

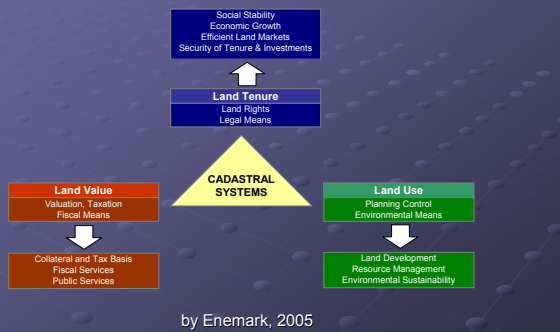
- Agricultural Reform Implementation Project**
  - National Registry of Farmer
  - Based on Titles
  - Cadastral – coverage > 90%
  - Cadastral – different coordinate systems, bases, mapping techniques and out of date
  - Cadastral is not ready yet willing to service
- Integrated Administration and Control System (IACS)**
  - LPIS - Pilot project
  - Ortho Images
  - Demarcation – Small farms
  - Demarcation – Highly vegetated regions
  - Admin & Maintenance – A new unit
  - Admin & Maintenance – Additional cost

## THE CHALLENGE

### For the Implementation of Integrated National, State or Provincial LAND POLICIES

- The Only Available Data (in most countries)**
  - Land Administration Infrastructure,
  - they are often **out of date**,
  - and **inadequate to serve a more integrated role**,
  - but they are usually the only option for an integrated approach,
  - result in purpose-built infrastructures.
- Isolated Information Silos**
  - they are jealously guarded,
  - can not be integrated or combined,
  - and usually not shared.

## THE CHALLENGE Interrelation between Cadastre System and LPIS



## THE CHALLENGE Interrelation between Cadastre System and LPIS – CAD 2014

- Registration of all Private and Public Rights & Restrictions**
- A modeling start
- Core Cadastral Domain Model




## THE CHALLENGE Different Reference Systems & Future Trends

- Different Reference Systems all over the EU**
  - Option of different referencing, other than cadastral data
  - Not comparable data sets throughout the EU or even a country
  - The notions "cheap to build", "easy to manage and maintain" are responsible
- Future Trends**
  - Using different reference systems disconnect the two data sets (Land Administration – IACS)
  - The needs under the second pillar of the CAP (Rural Development) is subject to constant change
  - Inclusion of IACS like data into cadastral system is most likely
  - Land Administration systems may not be neglected any further

## Conclusions

- Currently, Land Administration Infrastructure is not ready for the implementation of Integrated LAND POLICIES,
- The LPIS-IACS system towards rural land-use management,
- Cornerstones: Cadastre & Land Administration System,
- Land ownership, land tenure, cadastral, land administration and land-use management are closely interrelated,
- However, the LPIS under IACS conflicts with this trend,
- An overall Cost-Benefit analysis is needed,
- Are we late for such an integrated approach?



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Thanks...

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