



06-11 MAY 2018  
EMBRACING OUR SMART WORLD  
WHERE THE CONTINENTS CONNECT:  
ENHANCING THE GEOSPATIAL  
MATURITY OF SOCIETIES



# Fundamental Infrastructure for Spatially Enabled Societies

## *Global Land and Geospatial Agenda*

May 10, 2018

Keith Clifford Bell





# Presentation Outline

- ❖ Overview of World Bank
- ❖ New Approaches to Development Investment
- ❖ Overview of Global Land Portfolio
- ❖ Global Trends
- ❖ Investment in Modern Land Administration Systems & NSDI
- ❖ Opportunities
- ❖ Global Fora & Advocacy
- ❖ Final Remarks 😊



# The World Bank Group Structure



	International Bank for Reconstruction and Development (IBRD)	1944
	International Development Association (IDA)	1960



Over 10,000 employees

Over 5,000 consultants

120 country offices

 **IFC** | International Finance Corporation  
WORLD BANK GROUP

1956

 **ICSID**  
INTERNATIONAL CENTRE FOR SETTLEMENT OF INVESTMENT DISPUTES

1966

 **MIGA** | Multilateral Investment Guarantee Agency  
WORLD BANK GROUP

1988



## WBG Financing

WBG is one of the world's largest sources of funding and knowledge for developing countries, and is committed to reducing poverty, increasing shared prosperity, and promoting sustainable development.

- **Overall WBG Financing:** FY 2017, WBG provided nearly US\$59 billion in loans, grants, equity investments, and guarantees to partner countries and private businesses—including to multiregional and global projects.\*
- **Land-related Project Financing:** Globally, since 1980, WBG has financed over 70 Land projects, in at least 42 countries, with commitments of around US\$3 billion.

\*Source: <http://pubdocs.worldbank.org/en/982201506096253267/AR17-World-Bank-Lending.pdf>



# Sustainable Development Goals

<b>1</b> NO POVERTY 	<b>2</b> NO HUNGER 	<b>3</b> GOOD HEALTH 	<b>4</b> QUALITY EDUCATION 	<b>5</b> GENDER EQUALITY 	<b>6</b> CLEAN WATER AND SANITATION 
<b>7</b> RENEWABLE ENERGY 	<b>8</b> GOOD JOBS AND ECONOMIC GROWTH 	<b>9</b> INNOVATION AND INFRASTRUCTURE 	<b>10</b> REDUCED INEQUALITIES 	<b>11</b> SUSTAINABLE CITIES AND COMMUNITIES 	<b>12</b> RESPONSIBLE CONSUMPTION 
<b>13</b> CLIMATE ACTION 	<b>14</b> LIFE BELOW WATER 	<b>15</b> LIFE ON LAND 	<b>16</b> PEACE AND JUSTICE 	<b>17</b> PARTNERSHIPS FOR THE GOALS 	

**THE GLOBAL GOALS**  
For Sustainable Development

# The World Bank's Twin Goals



THE WORLD BANK GROUP GOALS

**END EXTREME POVERTY AND  
PROMOTE SHARED PROSPERITY**

# New Approaches for Development Investment

## MFD – Maximizing finance for development

- systematically leverage all sources of finance, expertise, & solutions to support developing countries' sustainable growth
- countries' resource needs surpass their own budgets and available donor funding.
- consider a spectrum of solutions, private as well as public – help tap a variety of financing opportunities, incorporate global lessons and good practices, and address equity and affordability for consumers.

**Harnessing Technologies** - Including disruptive technologies in the Bank Group's work to in support of new pathways to growth

- **Build:** Develop the foundational building blocks for sustainable, technology-led economies
- **Boost:** Expand the capacity of people and institutions to thrive in a resilient society
- **Broker:** Harness disruptive technology, data, and expertise to solve development challenges and manage risks through collaborations

## To apply a FIG term fit-for-purpose

embracing both MFD and harnessing technology (both disruptive and foundational) requires a savvy engagement with countries, understanding their needs, governance, political economy and citizen engagement.



# The Current WB Land Portfolio

- Active Projects: 11 operations (\$723 M)
- Pipeline (next 18 months): 11 operations (\$698 M)
- Analytical and Technical Assistance: 20+ tasks
- Two Reimbursable Advisory Services (\$11.8m)
- 15 Trust-Funded activities

From



To





# Global Partnerships

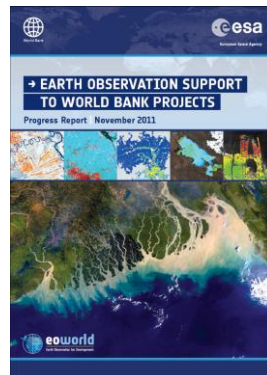


Cooperative  
Programme

VOLUNTARY GUIDELINES ON THE  
**Responsible  
Governance of Tenure**  
OF LAND, FISHERIES AND FORESTS IN  
THE CONTEXT OF NATIONAL FOOD SECURITY



**UN-GGIM**  
UNITED NATIONS INITIATIVE ON  
GLOBAL GEOSPATIAL  
INFORMATION MANAGEMENT



**giz** Deutsche Gesellschaft  
für Internationale  
Zusammenarbeit (GIZ) GmbH



# Global Trends: Food Production Needs to Increase

## Global food demand

To meet global food demand in 2050, agricultural production must be 60 percent higher by weight than in 2005.

*Alexandratos and Bruinsma, 2012*



*F. Fiondella, IRI/CCAFS*

## Increase of population

2 to 3 billion by 2050


60% increase in agricultural production

## Needs of...

another 2 billion tons of cereals

another 200 million of meat

another 130 million of oilseeds



# Global Trends

Natural Disasters Frequency & Severity increasing

- ❖ Links to Climate Change
- ❖ Other causes of natural disasters

**Resilience requires spatial enablement**



# Global Trends: Displaced persons\*

- ❖ An unprecedented **65.6 million** people around the world have been forced from home. Among them are nearly **22.5 million refugees**, over half of whom are **under the age of 18**.
- ❖ **There are also 10 million stateless people** who have been denied a nationality and access to basic rights such as education, healthcare, employment and freedom of movement.
- ❖ In a world where nearly **20 people are forcibly displaced every minute**.
- ❖ **Turkey is the top hosting country for refugees**

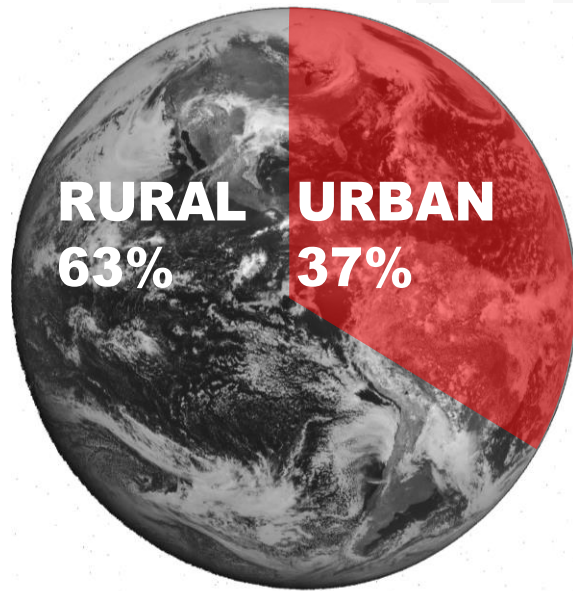
**Displaced persons need shelter, nutrition, security, ID, etc.**

**Solutions require access to land and to be spatially enabled**

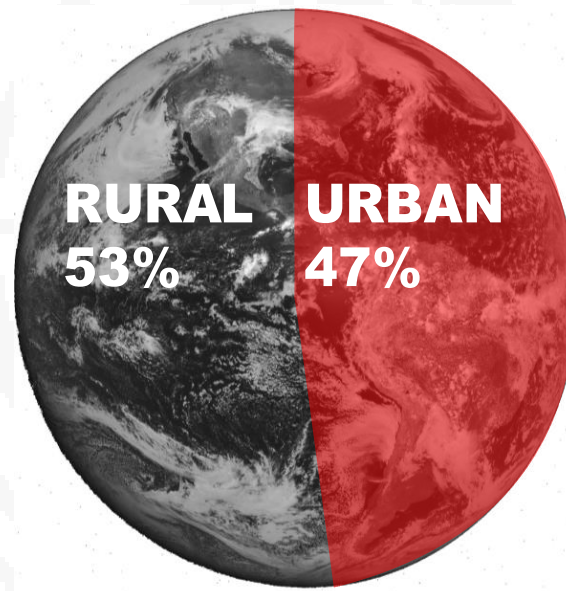
Source: UNHCR , Jun 19, 2017

<http://www.unhcr.org/figures-at-a-glance.html>

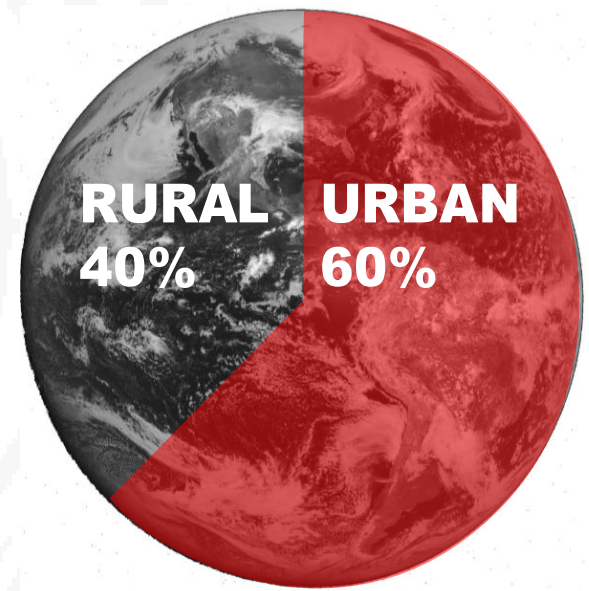
# Global Trends: The World Becomes Urban



**1970**



**2000**



**2030**



**2 billion new urban residents**  
**1.2 million new km<sup>2</sup> urban area**

# Modern Land Administration Links and Applies Data

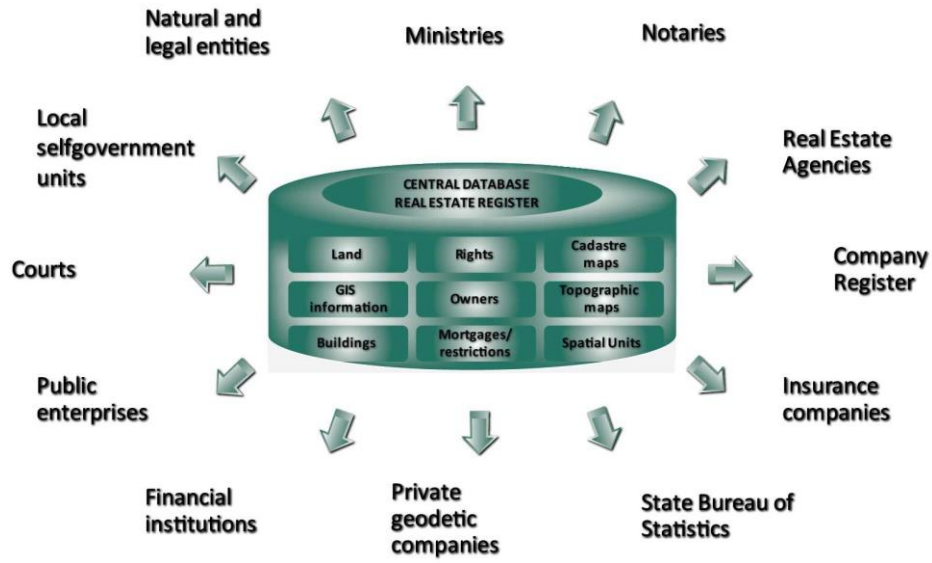
## Modern Land Applications

- Data/certificates compiled from **interlinked public datasets**
- Digital records used for **mass valuation systems** for taxes
- **State lands inventory and management** systems develop
- *One Map* defined as the baseline for **environmental conservation and management**
- **Geospatial data** provides the base for **Early Warning Systems** and other disaster resilience.

## Agrarian Reform and One Map, Indonesia

The diagram illustrates the integration of two data sources into a unified system. On the left, 'Forest and Village Boundaries' is shown as a map with colored zones for Mining, Forest, Residential Area, and Agriculture. On the right, 'Parcel Registration' shows a detailed parcel map with property information. A large plus sign (+) is placed between them, indicating their combination. Below the maps, the text reads 'Working Maps' and 'Parcel Map, Property Information'. To the right of the maps are four official logos: the Indonesian national emblem, the Ministry of Agriculture, Forestry and Fisheries, the Ministry of Land Management/Urban Planning and Construction, and the National Land Agency.

## Interlinked Data and Services, Macedonia



[www.katastar.gov.mk](http://www.katastar.gov.mk)

## Land Records for Mass Valuation, Slovenia

The screenshot shows the 'Zbirka vrednotenja nepremičnin' (Land Valuation Register) interface. It features a map of Ljubljana with color-coded valuation zones. The interface includes a search bar, a list of documents, and a legend for valuation ranges. The legend shows a color scale from yellow (low value) to red (high value). The text 'URAD ZA MNOŽIČNO VREDNOTENJE NEPREMIČNIN' (Office for Mass Valuation of Real Estate) is visible at the bottom right. The World Bank logo is also present at the bottom.

Improved Governance Through Interconnectivity

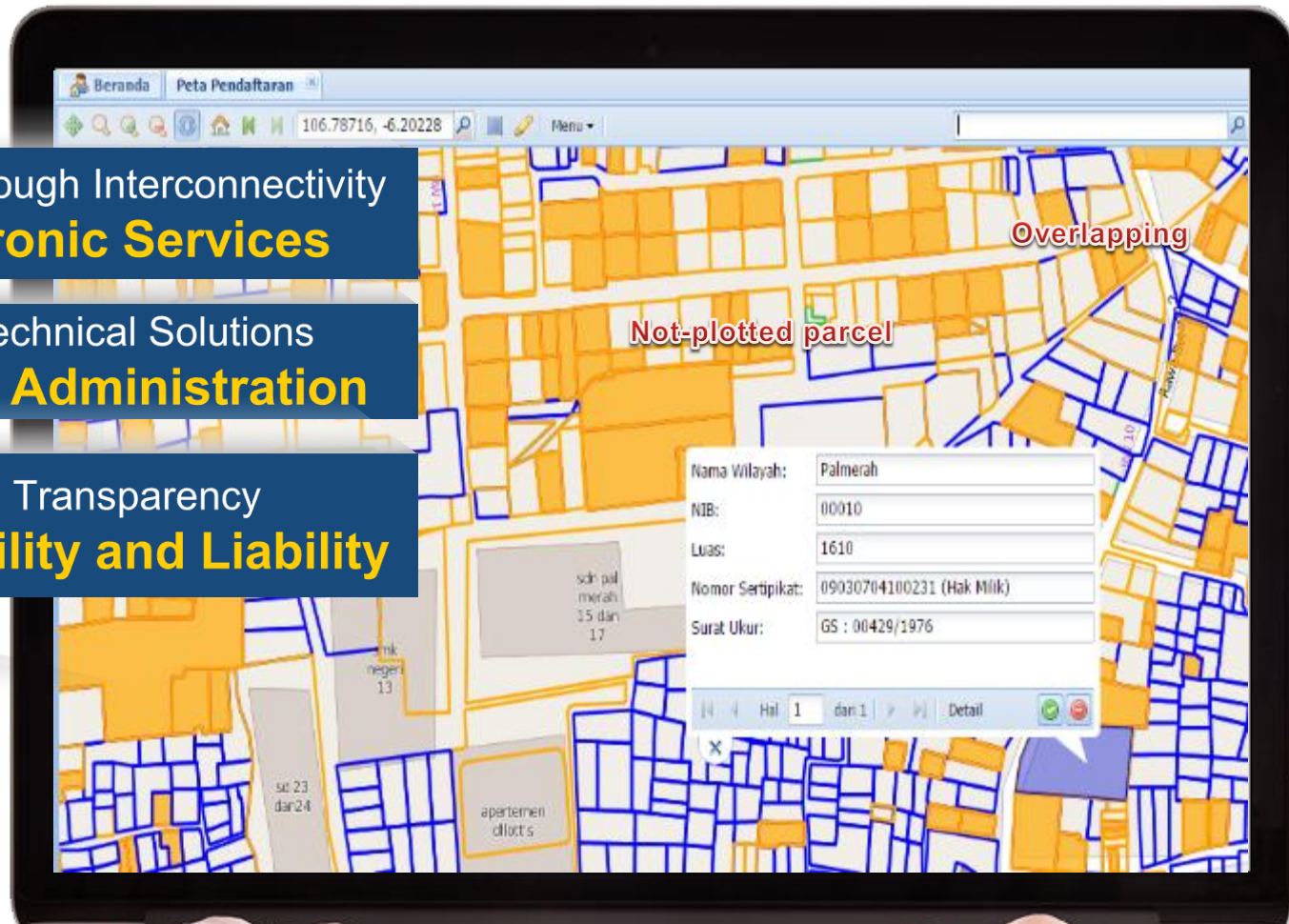
**Accessible Electronic Services**

Modern Institutional and Technical Solutions

**Sustainable Land Administration**

Improved Data Quality and Transparency

**Efficiency, Reliability and Liability**





# Land Administration & Geospatial Information Support Economic and Social Development & Generate Jobs

## Important for (value adding) investments:

- Clear tenure
- Transparency of markets/values
- Availability of data
- Incentivized stakeholders





# Our “Two-Speed” World – High Speed vs Low Speed



**80% of humanity live below US\$10.00 a day or where 70% of humanity do not have clear legally & spatially defined land or property rights ....”**

**Source:** Childress, M., Bell, K.C. & Cheehai, T., 2014, *Spatial Innovation & Good Practices in Land Administration Forum*, Report of the Joint World Bank-FIG Forum held March 28, 2014, Washington D.C., Coordinates, May 2014.





## Some of the Notable Characteristics of Land Sector\*

- ❖ **Colonial legacies** embedded in land administration systems, laws & institutions.
- ❖ **Land related conflicts** that have persisted over the years.
- ❖ Frequent occurrences of **natural disasters**.
- ❖ High proportion of **forestry lands, Indigenous Peoples & forest-dependent communities** who hold land in accordance with **customary tenure** arrangements.
- ❖ **Large-scale investments in land** (e.g., forestry, agriculture, palm oil & mining concessions – especially **FDI**).
- ❖ **Land acquisition** challenges.
- ❖ Rapid pace of **urbanization** & emergence of mega-cities.
- ❖ Strong interest & **growing investment in SDI** & related

**Understanding the political economy of land in each country is an essential pre-requisite for engagement.**

**\*Not all are applicable to all regions of the world**

# Land Agency Governance Challenges

## 1 Substantial Financing

required for building land records and infrastructure and retaining specialist personnel

- Failed financing leads to poor systems, data and services



## 2 Monopoly Commodity

(transaction registration) as the core business line creates vulnerabilities

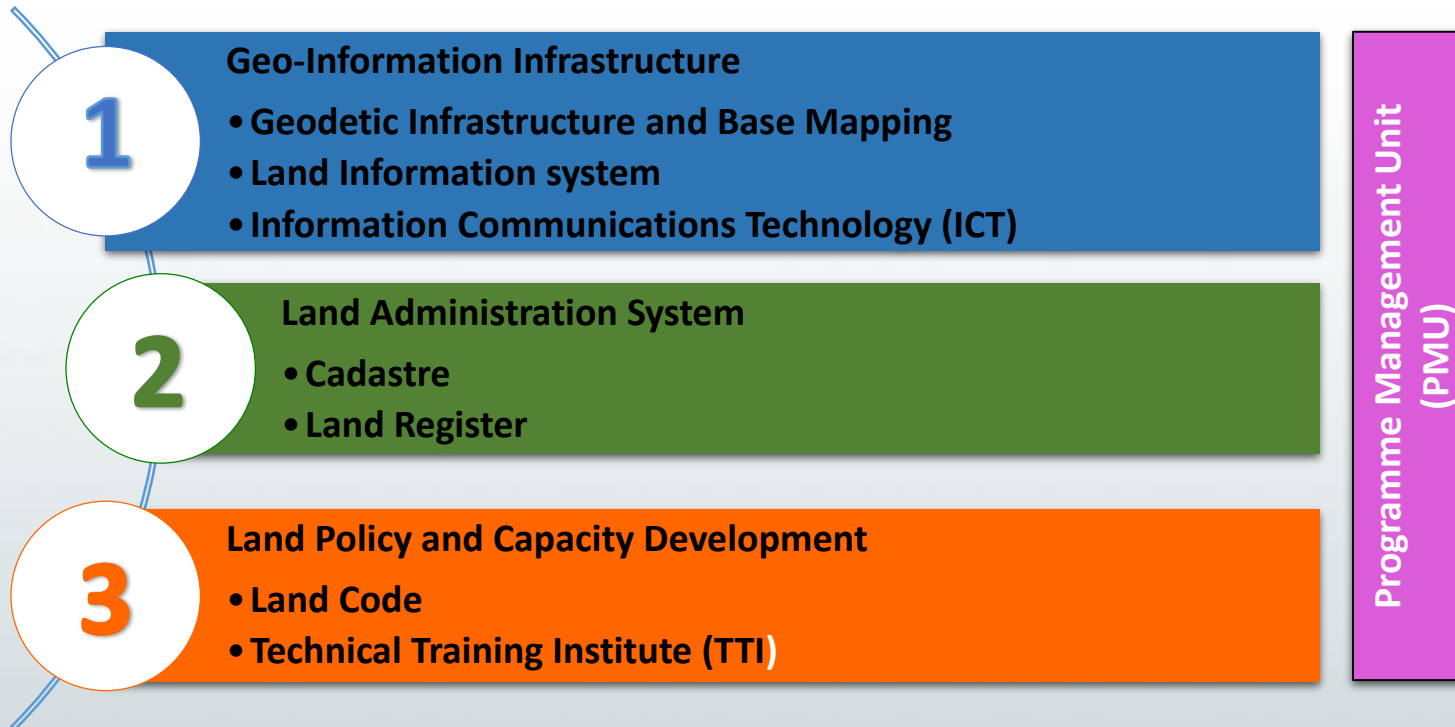
- Petty and grand corruption
- Wealth accumulation



**Governance arrangements and checks and balances** define whether land agencies serve, hinder or exploit social and economic growth

## The IDPL Architecture

The IDPL consists of the following 3 inter-related components and 7 sub-components:

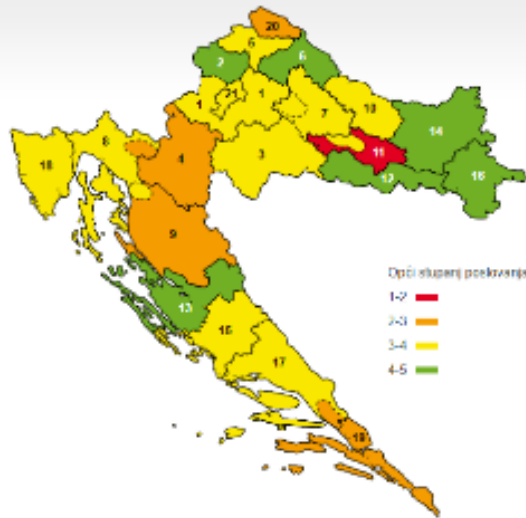


# 600,000 (Lebanon) vs 100,000,000 (Croatia)

UREĐENA ZEMLJA  
Nacionalni program izmjene zemljišnog katastra

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The image illustrates the average levels of operations of land registry courts at the county level. By clicking on a county, you can access specific levels of operations for each court based on data for the previous month on a 1 to 5 scale, where 1 is the lowest, and 5 the highest value. In addition, you can also see the contact details of the courts and corresponding cadastral offices as well as their office hours.

## Clean records

Since 2003, the Government Justice and the State Created National Real Property Register Organized Land (Uredena zemlja and the land registry) we have real property and its titles. The registers can be obtained online over the internet, 24/7.

For further progress, we need your help:

- check if your real property is online
- report all changes on your property

Remember: only orderly papers "clean papers" and guaranteed

English عربي

REPUBLIC OF LEBANON  
MINISTRY OF FINANCE

General Directorate of Land Registry and Cadastre

lrc.gov.lb

Home | Administration | Registry Offices | Cadastre | Forms & Reports | E-Services | Citizen's Guide | Complaints

Historical Overview | Registry & Cadastre Offices

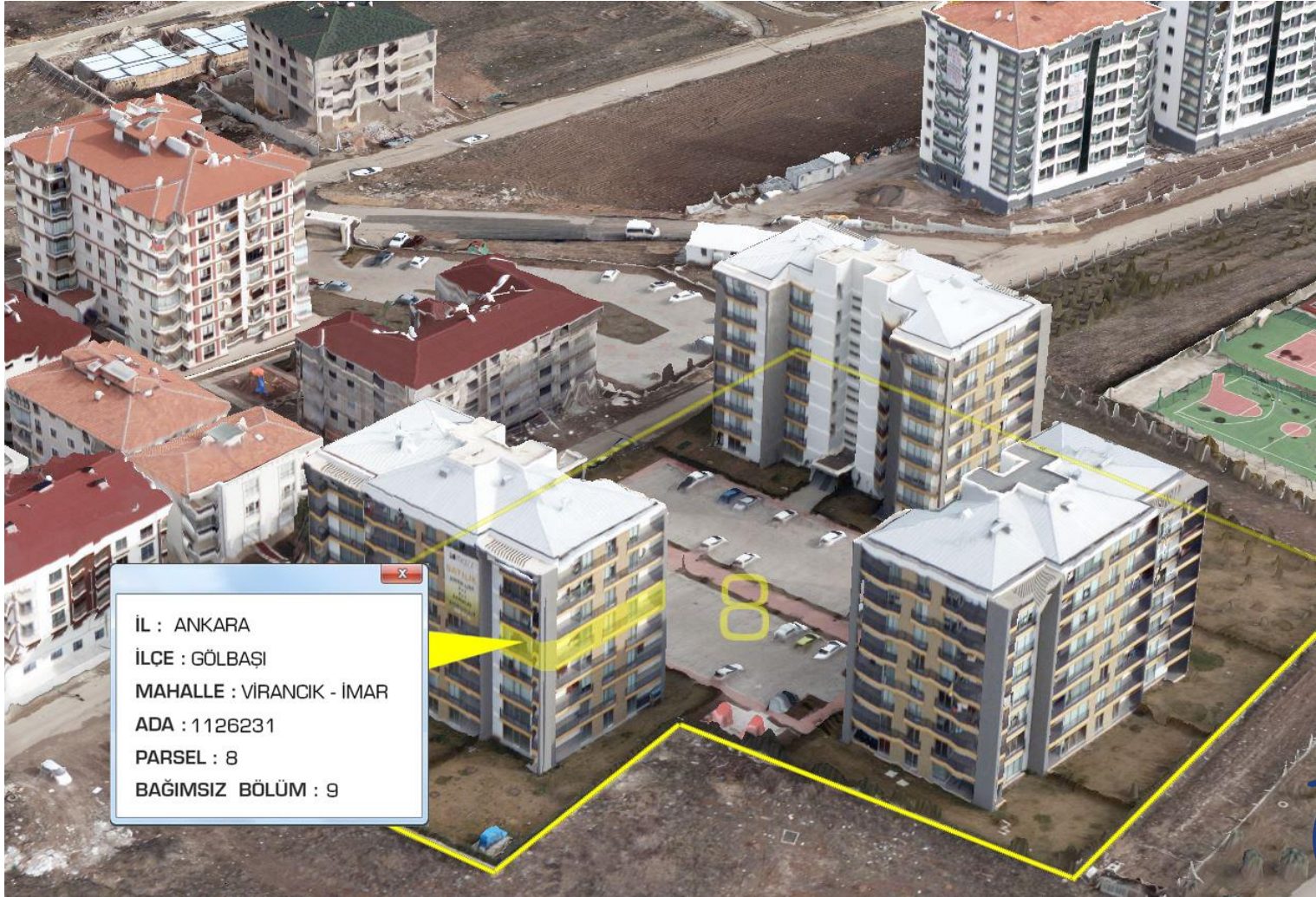
Estates in Lebanon used to abide by the Ottoman law that organized the registration of the property rights in what was called the "Dattar Khana", or record room, by virtue of which were registered the rights, easements, usufructs, demarcation and drafting, transfers and agreements over estates by simply mentioning their location and the name of the city or village, without any topographical description or clear and accurate measurements of their area. Moreover, the records of the "Dattar Khana" and the deeds issued to concerned parties were not established on clear legal grounds, did not reveal the adjacent owners and their approval and did not have any plan to make estate rights public. Therefore, banking and financial institutions did not trust these entries, rights or transactions. Later, the rights and transactions started to be registered at the civil courts and their entry was documented in records especially developed for being used among concerned parties. [more](#)



## Online services

- Cadastral data browser**  
Cadastral data browser used for providing access to the central database of the existing RoC cadastral data
- Z-case status check**  
Access to a case is possible by selecting the municipal court and the case designation and entering the serial number and year of the case.
- Access to registry**

# TURKEY: 3D City Model Production Project



1

## Participatory Mapping and Agrarian Reform

Prime Activity

Sumatra: Riau, Jambi and South Sumatra. Kalimantan: East, Central, West and South

Fit-for-Purpose Cadastral Mapping

*Land Registration*

Forest Boundary Demarcation

Strengthen Local Land Offices

Strengthen Land Information System

2

## Geospatial data Infrastructure

Support Activity

For Environmental and Natural Resources Management

Strengthen Geodetic Framework

Improve NSDI Technology Infrastructure

Prepare Satellite Imagery for Working Maps

3

## Project Management and Institutional Development

Driver of Change

For Overall Supervision and Improvement to the Policy & Legal Framework

Project Management and Monitoring and Evaluation

Strengthen Policy, Legal and Institutional Framework

Capacity Development, Outreach and Pilots



# National Land and Geospatial System Resilience

- **Land administration systems** provide secure tenure reducing vulnerability, and the baseline for estimating disaster damages and eligibility for support
- **NSDI** provides the common location platform for identifying the impact, directing responses, reconstituting the pre-disaster land use, identifying areas for temporary shelter, and facilitating planning and reconstruction.







# Strategic Partnership: World Bank – UN Initiative on Global Geospatial Information Management (UN-GGIM)

## “Bridging the Geospatial Digital Divide”: Two Key Activities



1. **Develop an overarching Geospatial Framework** for countries to reference when developing their national and sub-national spatial data infrastructures (SDIs).  
*To be endorsed by member states August 2018*
2. Assist countries to **prepare and implement Country-level Action Plans** to operationalize the Geospatial Framework



# Global Advocacy Campaign for Women's Land Rights

- Land rights are key for shelter, livelihoods, identity, security ...
- Yet many, especially women, lack secure rights to land.
- SDGs (1.4.2 and 5a) require reporting and action on women's access to land.
- Good laws not enough – implementation and impact on women matters.
- Change in social norms required – long term effort.
- Improving women's land rights is right and also good economics!
- The global advocacy campaign will be launched with WBG support to raise attention and action on the importance of secure land rights to women.



# *Sustainable Societies Must be Spatially-Enabled*



**CLEAN AND  
EFFICIENT**



**INCLUSIVE**



**RESILIENT**



**COMPETITIVE**

**And land is at the center of it all...**





# Final Remark: It is About Rights!

**“The technocratic illusion is that poverty results from a shortage of expertise, whereas poverty is really about a shortage of rights.”**

Easterly, W., 2013, *The Tyranny of Experts. Economists, Dictators, and the Forgotten Rights of the Poor.*

Access to land &  
spatial enablement  
are fundamental  
to redressing  
the shortage of rights



Pic Source: The Guardian, Jun 30, 2010