

Online Assessment of the Land Governance Quality

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Terminology evolution

Land Management ⇒ Land Governance (LG)

What is going on?

Tools evolution

LG Innovative tools are changing technologies of management:

- E- gouvernement, cloud calculations, E-documents, digital archives
- GIS and SDI
- BIM – built information modeling and 3D-cadastre
- GPS, RTK GNSS – technologies
- Remote Sensing
- Crowdsourcing and M- gouvernement
- Lidars
- BPM – Semantic Web and BP-ontology
- CRM- and ERP-systems in LG
- SaaS (Software as a Service)

System evolution

- **Land Managment:** management is carried out by people using computers
- **Land Governance** : management is carried out by computers with people participation

BP evolution

- LG: BP-reengineering due to new tools
- LG: BP ontologies for E-Gouvernement

Ontologies - knowledge of BP in W (BP).

BP must be identified, specified and described in the special languages. Ontology should be sufficient for the electronic government agent interactions with customers and conducting BP (Web 2.0 technology or semantic Web).

Ontologies are specified in the special languages BPM: UML, IDEF, BPEL, IDEF, WSML, BPEL4WS

Quality assessment evolution

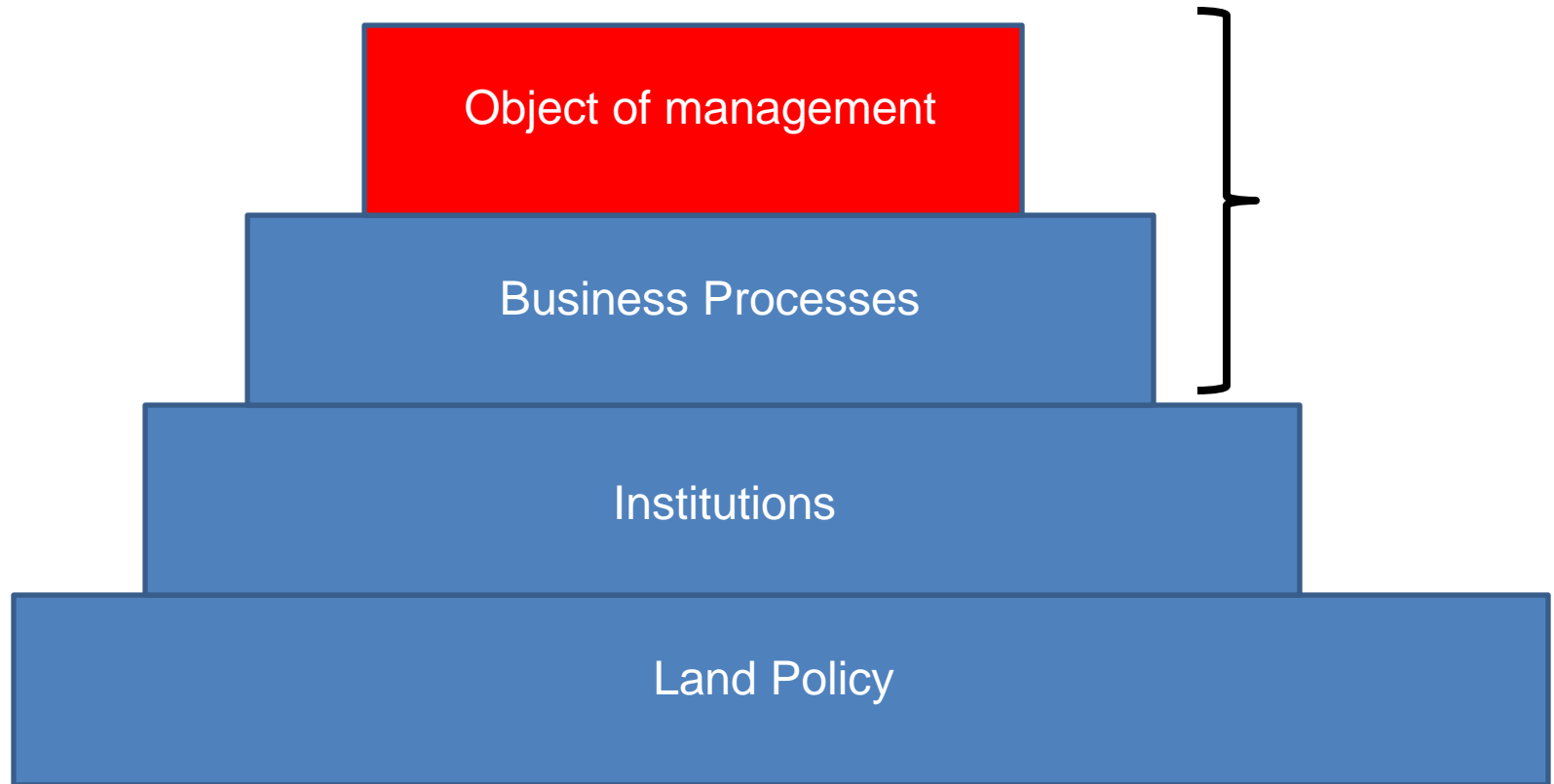
- LG is not a simple management. This is a **«good», purposeful management for Sustainable Development**, responded to Millennium Development Goals - MDGs
- LG is optimal management for ensuring Land Resource optimality.

Stig Enemark, Sustainable Land Governance: Three Key Demands // TS 03A – Land Governance, FIG Working Week 2012 “Knowing to manage the territory, protect the environment, evaluate the cultural heritage”, Rome, Italy, 6-10 May 2012

Enemark S, McLaren and P.van Molen, Land Governance in Support of Millennium Development Goals// Fig Publication №45, 2010, 39 p.

Spatially Enabled Society // FIG Publication N58, Edited by D.Steudler and Abbas Rajabifard, April, 2012, -68p.

Content of the term «Land Governance»



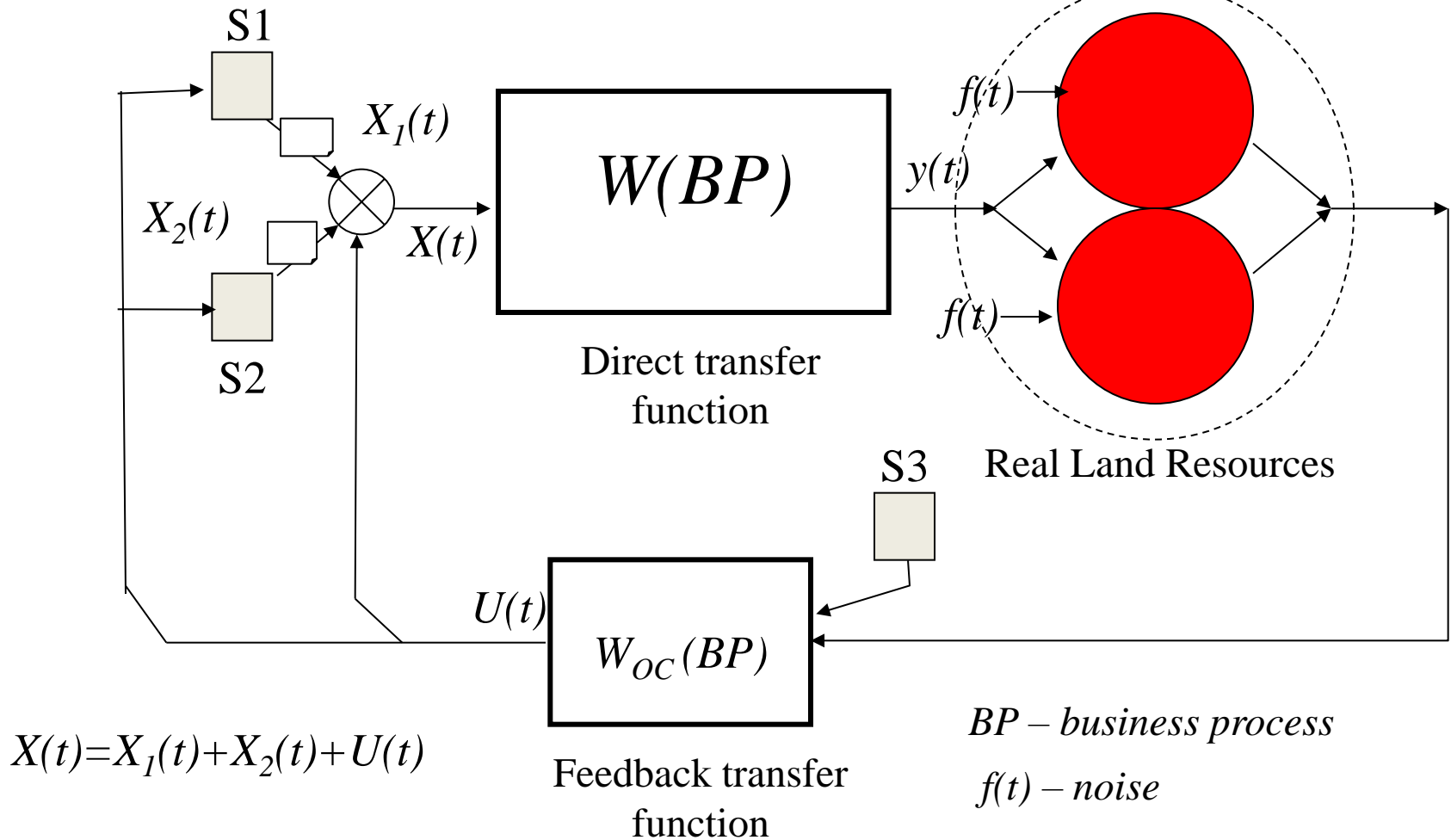
LGS Model

S1 – subjects responsible for physical planning

S2 – legal persons on immovable property market

S3 –stakeholders

Formal Land Resources
(Cadastre&Register)



Land Governance Assessment

BP Assessment

- **WB– LGAF (Land Governance Assessment Framework)**
- WB – Doing Business Methodology
- Grover R., Grover C., Modelling Indicators of Land Governance // FIG Working Week 2011, Marakesh, Morocco, 18-22 May, paper 4999/
- Joseph Salukvadze, Georgia, Improvements in Land Governance and Land Administration in transitional Countries of the Post-Soviet Region: Comparative Analysis // FS 3F – Land Management Projects, FIG Congress 2010 Facing the Challenges – Building the Capacity Sydney, Australia, 11-16 April 2010 /

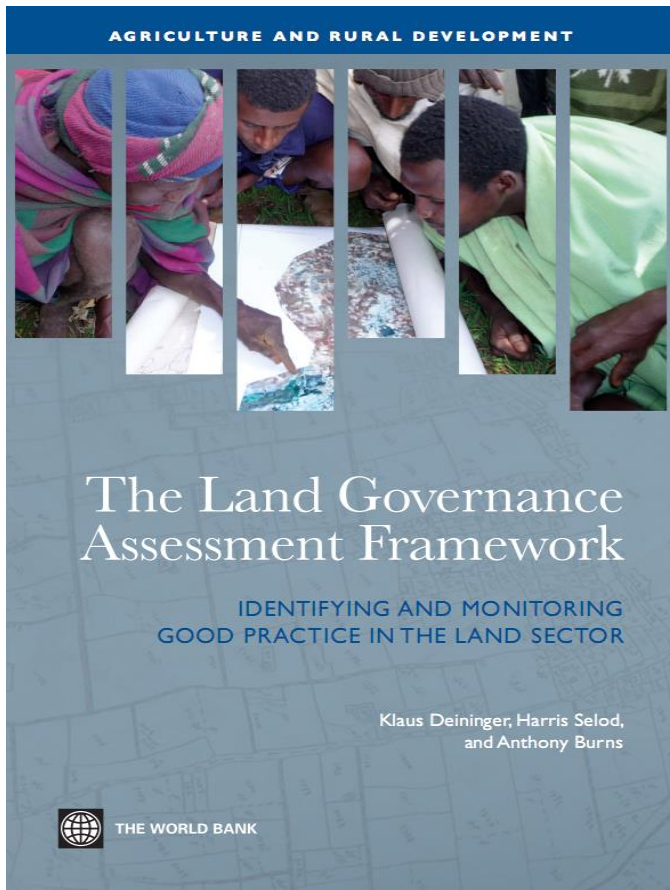
Formal Land Resources (Cadastre&Register) Assessment

- Committee on Housing and Land Management : Status of the survey on the benchmarking of land administration systems //, ECE/HBP/WP.7/2013/5, Distr. 3 January 2013, p.57
- **LGOA – Land Governance on-line Assessment (Belarus)**

Land Governance Assessment

LGAF - expertise

LGOA – on line calculations



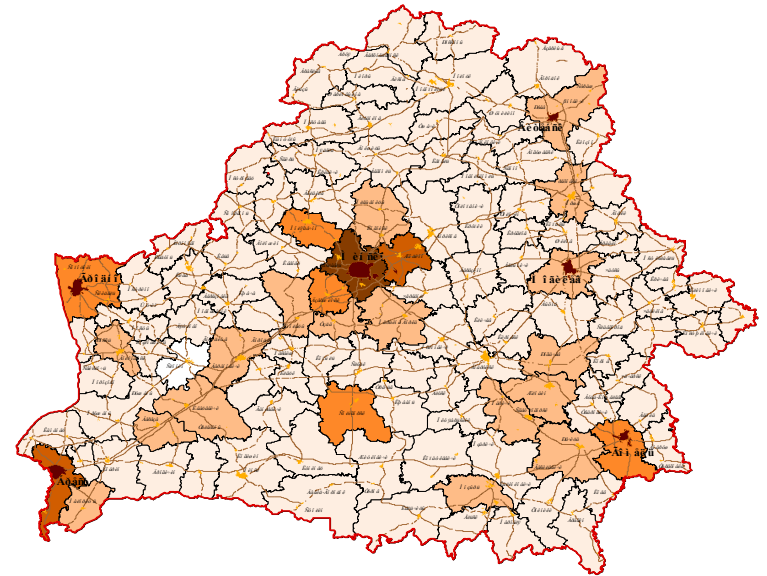
LGOA: Online Assessment of the Land Governance Quality based on Cadastre and Register

| LG Index | Land Administration Index | Remarks |
|---|---------------------------------------|--|
| Land as an asset | Coverage | $f(\sum S_i/S)$ |
| LG Efficiency | Cadastral value derivative | $f(V_c, dV_c/dt)$ |
| Land Development | Land Purpose variation | $f(N_c, dN_c/dt)$ |
| Commercial, Housing, Industry Office Building , Development | Registered new Real Estate objects | $f(N_b, dN_b/dt)$ |
| Investments via Mortgage | Registered Mortgage | $f(L_n, L_i, dL_n/dt)$ |
| Land Grabbing | Registered foreigner as owners | $f(\sum S_j/S, d\sum S_j/S/dt)$ |
| Gender Distribution | Man/Famale as registered owners | $f(M, F)$ |
| LG administrative units rating | Pareto efficiency | $f(\text{Index}_1, \text{Index}_2, \dots)$ |
| | | |

LGGOA: LG administrative units rating

LGGOA method may be used for every administrative unit of the country:

LGGOA := <LGGOA₁>, <LGGOA₂>, <...>, <LGGOA_n>



LG administrative units rating

Thanks for attention

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