



## **LANDac Conference 2018**

### **Land Tenure Atlas** Paper

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## 1 Background and rationale

It is estimated that 70% of the global land-to-people relationship is not recorded or registered. Interventions, for instance as part of the LAND Partnership between the Dutch Kadaster and the Ministry of Foreign Affairs, claim to increase land recordation but it is difficult to measure this as long as there are no exact figures or references. There is a need to validate the above mentioned estimation and to monitor land recordation coverage in the future.

The Committee of Experts on UN GGIM (United Nations Global Geospatial Information Management) confirmed the importance of good land administration and management as one of the pillars of good governance, addressing the challenges and opportunities related to the 2030 Agenda. The framework of the Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests by the Food and Agriculture Organisation (FAO) and the development of Fit-For-Purpose Land Administration by the Global Land Tools Network (GLTN) are considered essential tools for the development of land administration and management, especially in developing countries.

The Committee of Experts therefore committed itself to realise, measure and report progress to document, record and recognise people to land relationships in all its forms globally, and sustain partnerships and joint actions with UN entities, involved in the monitoring and reporting the Sustainable Development Goals (SDG's) indicators related to land – in particular SDG 1, 2, 5, 15 and 16. This was summarised in a declaration at the Fourth High Level Forum on United Nations Global Geospatial Information Management at United Nation Economic Committee for Africa (UNECA) Headquarters in Addis Ababa, Ethiopia, from 20-22 April 2016.

Several authorities in a country have different responsibilities in the process of recognition, recording, registering and managing the various land tenure types within different areas such as urban and rural. Therefore, at national level coordination is needed. In this context, it would be essential to present an overview of the tenure systems and land rights. For this purpose, a Land Tenure Atlas with a national orientation would be useful for providing insight in the spatial distribution of legitimate tenure types across a country, e.g. areas of customary tenure, areas of informal tenure, areas of private ownership, state land, etc.

This report presents a framework of a digital land tenure Atlas of the world keeping in mind that "Progress in land rights is measurable and can be monitored globally". Such Atlas might provide insight in the state of play of land tenure situation at global as well as national levels, bundling relevant information on land tenure, land value, taxation and also presenting specific information on general progress, relevant projects, gender issues, fit-for-purpose approaches. The next chapters of this report presents the Atlas architecture, Atlas application design and development, and data content feeding the Atlas.

The proposed Atlas architecture is designed to serve the demands of potential users such as land policy makers, donors, and other land professionals who have an interest in land tenure (management) at world and/or national levels.

## 2 Atlas architecture design

### 2.1 Main functionalities

The Atlas is designed around three standardised interfaces allowing the potential users to utilise the relevant content and functionalities and applications in an easy and straightforward way. The manner in which these functions are implemented will affect the usefulness and quality of the finished Atlas design. The three interfaces are: 1) Main entry providing access to the 2 other interfaces; 2) World Level bundling functionalities and themes relevant for accessing, analysing, visualizing land tenure information at world level; and 3) Country Level with a national land tenure focus. At the main page the user can select the world level and country level. On this screen he will find also general functions that lead him to features such as linked websites, information on the atlas, special topics, contacts and a mail box function. The information in the atlas will be visualised with several techniques: maps, infographics, tables and textboxes. In a special panel with buttons he can select the format in which he wishes to view the requested information. In addition to the Country level interface the atlas system also provides functionalities facilitating trend and statistical analyses at (sub-)national level including analysis tools and visualisation options.

### 2.2 Main access

This interface can be considered as the home page of the Atlas. It is the main webpage a possible visitor is navigating to from a web search engine. Moreover, it is also the page that may also serve as a landing page to attract visitors. The entry interface is used to facilitate navigation to other pages on the site by providing links to key contacts, relevant news, prioritized special topics, and key source materials and detailed information about the rationale and background of the Atlas.

The Main Entry also includes a search box with a dedicated function of accepting Atlas user input to be searched for in a database.

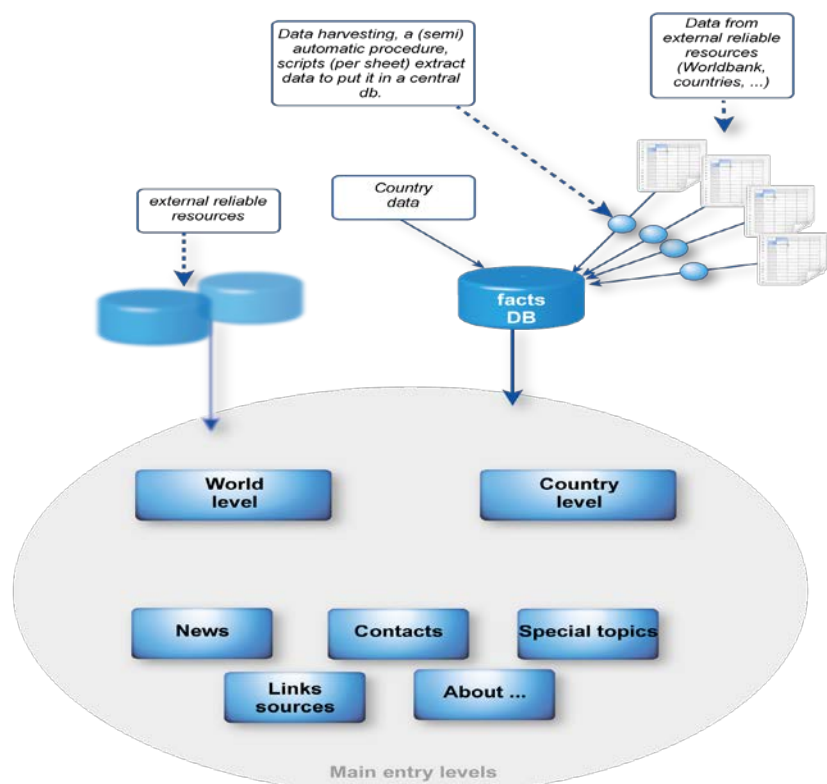


Figure 1: Main entry of the Atlas

Such box allows users to enter a query to be submitted to a Web search engine server-side script, where an index database is queried for entries that contain one or more of the user's keyword search. This search box can also be linked to a metadata catalogue describing the relevant available

Atlas data. Figure 1 presents the main functionalities of the Atlas. The main entry clearly directs the Atlas users to the interfaces of the two levels: World and Country.

### 2.3 World level

This interface bundles themes and functionalities relevant for accessing, analysing visualising land tenure information at world level. The relevant five themes at world level as we propose are: 1) Justice & Institutions, 2) Sustainable land development, 3) Gender equality & Minority, 4) Boundaries & Borders, and 5) Land registration (tenure) projects. Each theme includes relevant information in the shapes of facts, maps, graphs, videos, images, reports, narratives, etc.

In the section below the themes on **World level** are listed (**W1-W5**).

#### W1. Justice & institutions

This world level theme is about frameworks covering legal issues referring to the administration of fairness as well as institutional issues referring to the process of embedding some conception (for example a belief, norm, social role, particular value or mode of behaviour) within an organisation, social system, or society as a whole.

#### W2. Sustainable land development

This theme is about practices and technologies aiming to ‘develop’ the land in order to meet sustainability of land services and livelihoods. In the context of the Land Tenure Atlas, this theme focuses on issues such as tenure systems, ownership, land taxation and land market at international levels.

#### W3. Gender equality & Minorities

This theme refers to practices and application of technologies at international levels strengthening to

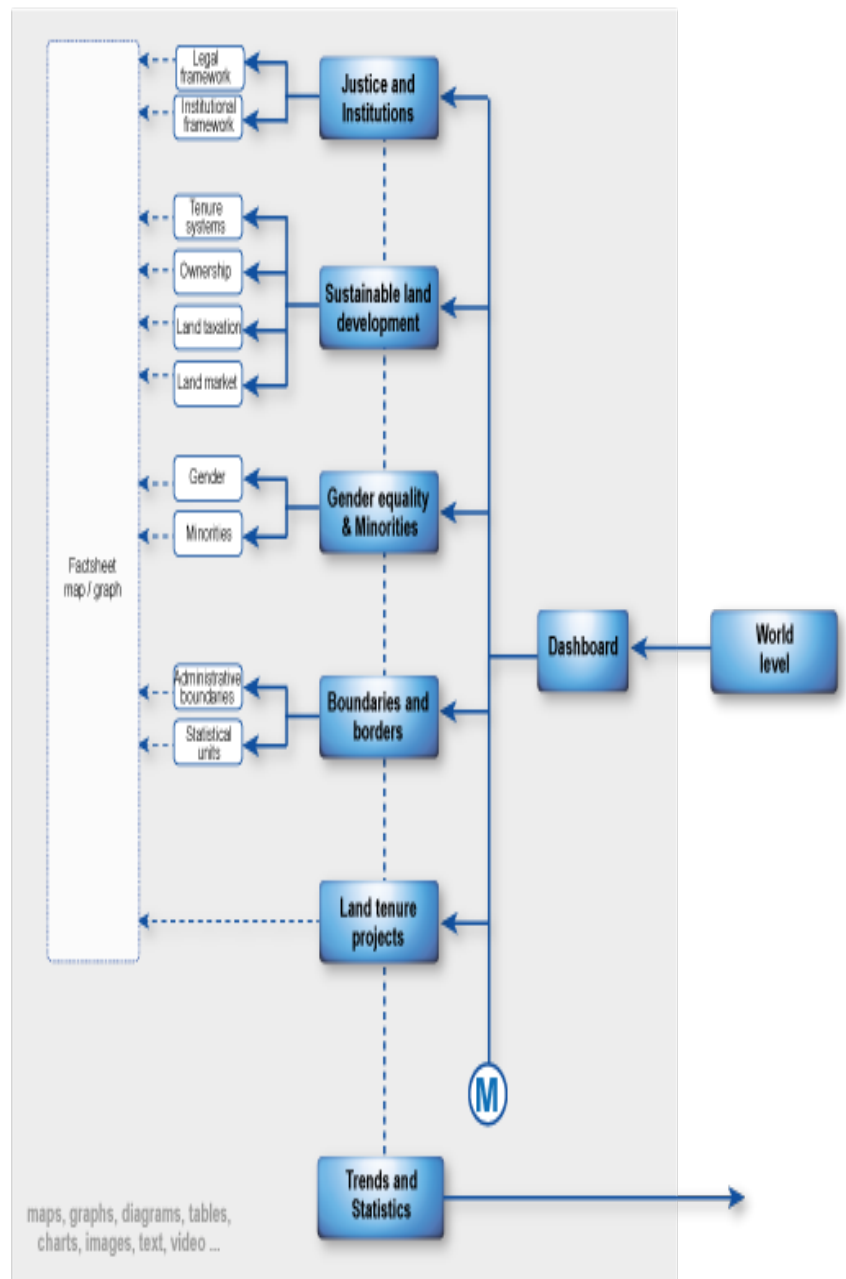


Figure 2: World level interface

the belief that everyone should receive equal treatment and not be discriminated against based on their gender, religion, race/ethnicity, tribe, disability, age or language.

*W4. Boundaries & Borders*

This theme distinguishes boundaries and borders. Boundary refers to the unit of real estate or immovable property limited by a legal boundary. The boundary may appear as a discontinuation in the terrain: a ditch, a bank, a hedge, a wall, or similar, but essentially, a legal boundary is a conceptual entity, a social or statistical construct, adjunct to the likewise abstract entity of property rights. Border refers to geographic boundaries of political entities or legal jurisdictions, such as governments, sovereign states, federated states, and other subnational entities. In the context of the Land Tenure Atlas, this theme focuses on issues such as: administrative boundaries and statistical units.

*W5. Land registration projects*

This theme is a compilation of past, current and future relevant project descriptions supporting land registration/tenure recordation/administration in multiple UN Member States.

**2.4 Country level**

This interface bundles themes and functionalities relevant for accessing, analysing visualising land tenure information at country level. The relevant eight themes at country level we propose are 1) Ownership & Property, 2) Land markets, 3) Land taxation (financial services), 4) Natural resources, 5) Conflicts & Disputes, 6) Gender equalities, 7) Reference systems, and 8) Land tenure policies & projects. Each theme includes relevant information in the shapes of facts, maps, graphs, videos, images, reports, narratives, etc.

*C1. Ownership & Property*

This theme refers to country issues related to land ownership and property. Land ownership of property may be private, collective, or common, and the property may be of land or real estate. Determining land ownership in law involves determining who has certain rights and duties over the land property. These rights and duties, can be separated and held by different parties.

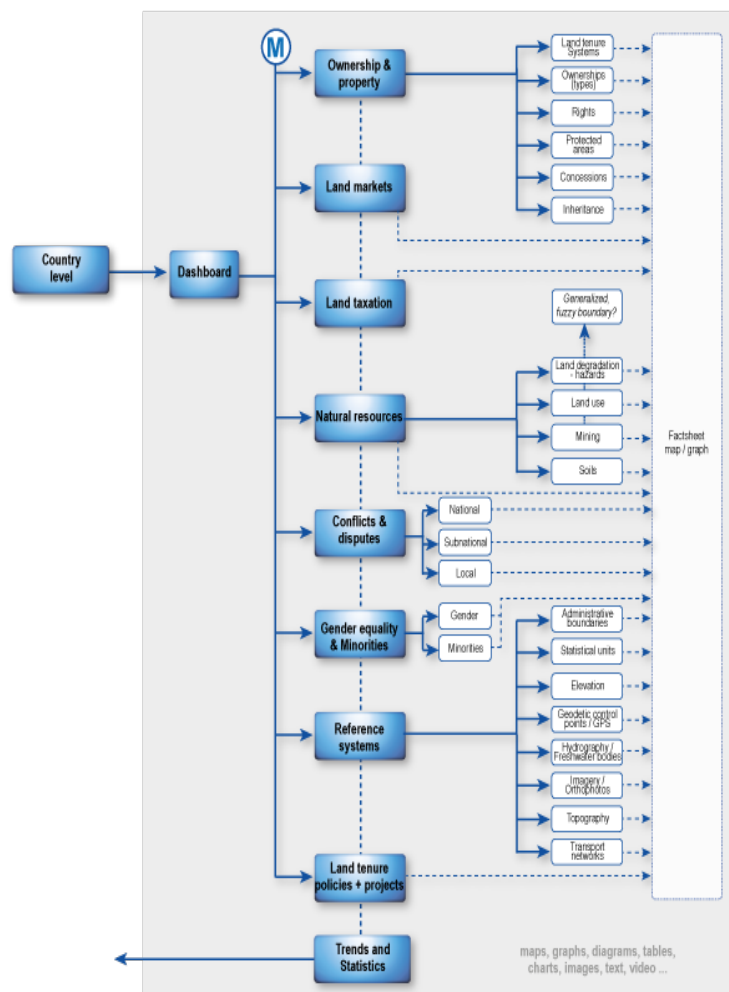


Figure 3: Country level interface

*C2. Land markets*

This theme considers the trading of land as a commodity within a country. Efficient functioning of land markets require efficient and updated land tenure systems which clearly indicate the legal ownership of land.

*C3. Land taxation (financial services)*

This country theme refers to the levy on the unimproved value of land, which is a value tax that, unlike property taxes, disregards the value of buildings, personal property and other improvements.

*C4. Natural resources*

This theme is about all resources of a country that exist without taking any actions of humankind. In the context of the Tenure Atlas, this mainly refer to land resources (including all minerals) along with all vegetation that naturally subsists upon or within the heretofore identified characteristics and substances.

*C5. Conflicts & Disputes*

This country theme refers to disagreements over the possession/control of land between two or more territorial entities or over the possession or control of land, usually between a new state and the occupying power.

*C6. Gender equality & Minorities*

This theme refers to practices, laws and policies of a country strengthening to the belief that everyone should receive equal treatment and not be discriminated against based on their gender, religion, race/ethnicity, tribe, disability, age or language.

*C7. Reference systems*

This theme includes a set of fundamental geospatial datasets that could be harmonised in order to enable the measurement, monitoring and management of sustainable development of a country in a consistent way over time and to facilitate evidence-based decision-making and policy-making.

*C8. Land tenure policies & projects*

This theme is a compilation of past, current and future project descriptions supporting land registration/tenure recordation/administration within a country.

### 3 Atlas application design and development

#### 3.1 Design of a system

When creating an application to be disseminated through a website (or basically any application) as a developer you want it to be used. Therefore it is important to design it from the user's perspective. The first step in the process is identifying the users. For the Atlas the targeted users are:

- UN-GGIM (Committee of Experts)
- Land administration professionals
- Land administration policy makers
- National Mapping, Land Registry and Cadastre Agencies
- International Institutions (World Bank, UN-Habitat, FAO, etc.)
- NGOs?
- Donors (public and private)
- Academia

Second step in this application process is to get to know the user, starting with listing the user-requirements by experts. For the development of this Atlas this step was executed. For further and sound design this list needs verification by interviewing a selection of intended users (as shown above). The user requirements have to be mapped to the schedule below (Figure 4), such that the to-be-developed application follows the user's expectations and is fully comprehensible (intuitive).



Figure 4: User-centred application design

#### 3.2 Development cycle

The application development cycle describes the phases involved in the process of creating an application. Development cycles can differ per product, but it always includes design, development (the actual creation), testing and implementation.

Most time consuming will be the design stage, in which different stakeholders (also the developers) need to analyse the requirements and specifications of as well as the users and the technology ('Identification' in Figure 5). Integrated in this stage is also the system design, defining how all elements like data-storage, data modelling, and application logic and system framework come together. Crucial in correct functioning of a web based application (like this atlas) is the availability of data. Identifying data requirements and analysing the gaps in available data may lead to re-definition of the application requirements, development is an iterative process and the final product often will not be equal to the identified product in the first stage.

Designing the User Interface is a process of close cooperation with potential users, and has to lead to an intuitive environment where the users easily find their way and feel comfortable. This stage requires usability testing. The steps as shown in Figure 5 are not strictly separated, application development requires parallel and iterative processing.

The data for the application can be stored in a dedicated database, harvested from or maintained by Domain specific organization like National Cadastres and more globally operating organizations like



the World Bank (Doing Business, Land Governance Assessment Framework (LGAF), Enabling Business in Agriculture (EBA)) or other initiatives (GLTN, Landportal). Another possible source for data can be the connection to various web- or map-services hosted by above mentioned organisations or initiatives.

Depending on the type of the data, the user has options to select from of a variation of visualisations, which can be maps, graphs, tables, charts and diagrams (Figure 5).

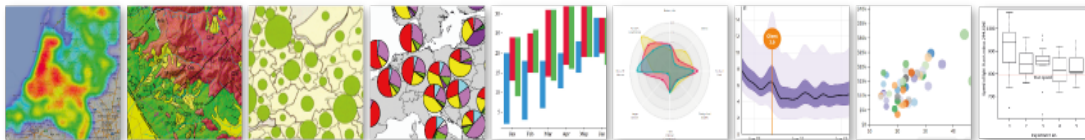


Figure 5: Selection of possible data visualisations.

### 3.3 Prototype

Best practices learn that building a User Interface Prototype communicates the design of the system most effectively and gives the potential users insight in the possibilities of the design. In a fully worked out Design Cycle, this prototype is developed in interactive sessions with the potential users in an iterative manner.

The prototype as shown in Figure 6 is designed and created without any interference of potential users, it served as a demonstration tool for discussions with a steering group of UN GGIM and other interested stakeholders about the possible development of the Atlas.

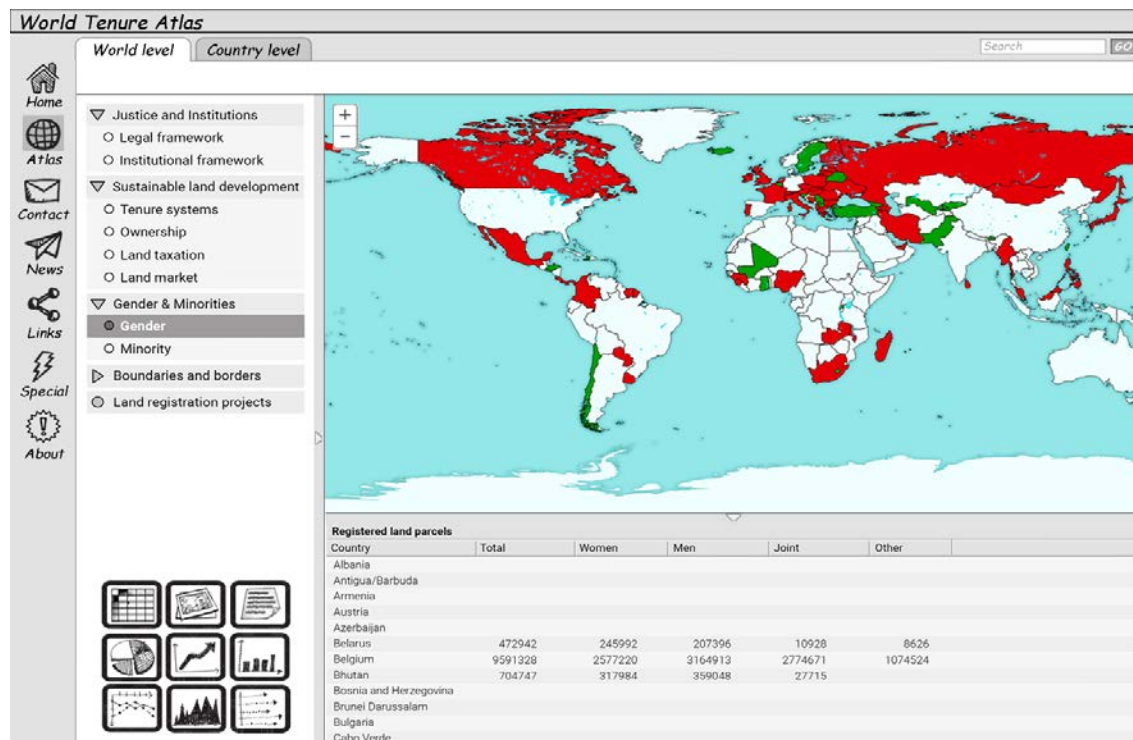


Figure 6: detailed wire-frame sketch of a theme view on world level.

The prototype follows a strict click-sequence (the prototype consists of a series of pre-cooked pages and is not dynamic).

## 4 Overview available data sources

### 4.1 Introduction

In Chapter 2 the themes relevant for the content of the Atlas were briefly described. In principle, it is recommended that only already available data will be used in the Atlas. In this section the focus is on those datasets and information sources available on international level. These data are in almost all cases aggregations of the national level. That means that for the atlas both the global maps as well as national maps can be prepared. At national level data sets and information portals are available most of the time free of charge. These sources will be considered while preparing the maps and graphics at national level. In the prototype we demonstrate that direct linking to these sources is technically very well possible.

In paragraph 4.2 we will study 5 different data sources, with the highest potential. There are more sources available like data in the Global Land Indicators Initiative (GLTN) and data at the website of Landportal.info. However these are less accessible and do not match the selected themes. Paragraph 4.3 provides a summary of the research on the data. Finally in section 4.3 the match is studied between the data that potentially are to be covered (see paragraphs 2.3 and 2.4) and the data available (see paragraphs 4.2 and 4.3 below).

### 4.2 Data sources at global level

#### 4.2.1 Doing Business

Source Doing Business records the full sequence of procedures necessary for a business (the buyer) to purchase a property from another business (the seller) and to transfer the property title to the buyer's name so that the buyer can use the property for expanding its business, use the property as collateral in taking new loans or, if necessary, sell the property to another business. It also measures the time and cost to complete each of these procedures. Doing Business also measures the quality of the land administration system in each economy. The quality of land administration index has five dimensions: reliability of infrastructure, transparency of information, geographic coverage, land dispute resolution and equal access to property rights.

The ranking of economies on the ease of registering property is determined by sorting their distance to frontier scores for registering property. These scores are the simple average of the distance to frontier scores for each of the component indicators.

As recorded by Doing Business, the process of transferring property starts with obtaining the necessary documents, such as a copy of the seller's title if necessary, and conducting due diligence if required. The transaction is considered complete when it is opposable to third parties and when the buyer can use the property, use it as collateral for a bank loan or resell it. Every procedure required by law or necessary in practice is included, whether it is the responsibility of the seller or the buyer or must be completed by a third party on their behalf. Local property lawyers, notaries and property registries provide information on procedures as well as the time and cost to complete each of them.

To make the data comparable across economies, several assumptions about the parties to the transaction, the property and the procedures are made by the World Bank.

The data in Doing Business are available in digital format and can be queried in very flexible way. Data selected can be downloaded by a special application that allows to make multiple selection. The

downloaded data are made available in excel-files. The website that gives access to the archive and the download services can be reach via the URL: <http://www.doingbusiness.org/reports>.

4.2.2 Land Governance Assessment Framework (LGAF)

LGAF is developed by the World Bank and provides a systematic and participatory assessment of land governance at the country level to set benchmarks, priorities for multi-stakeholder policy dialogue, and establishes a basis to monitor progress. LGAF is structured in five key thematic areas. These thematic areas are examined by nine expert panels, organized by subject.

Land governance indicators are broken down into a number of ‘dimensions’ with pre-coded statements on a scale from A to D. The panels will rank these dimensions by selecting an appropriate answer among the list of pre-coded answers. The panel deliberations are based on preparatory data gathering and analysis by an “expert investigator”.

An example of the Framework’s presentation of results is presented in the graphic below. The country reports have all the same structure and use all the same score cards. Reports are available in digital format. However the data itself are not available in an accessible way (Figure 7).

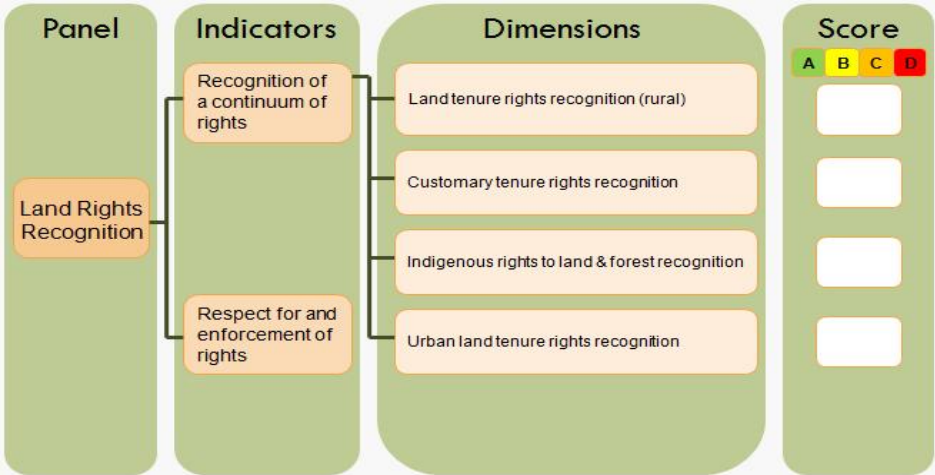


Figure 7: Structure of the score card for Panel Land Rights Recognition

Administrative data produced by the land sector and related agencies (registries, cadasters, inventories, tax authorities, municipalities, judiciary etc.) can be an important source for monitoring as these data are low-cost and produced on a routine basis with high frequency. Experience suggests that assisting governments to use administrative data on land access, tenure, land transactions, land taxation, and land disputes for monitoring while reporting in a standard way, and in a gender-disaggregated fashion will be important. The results of the assessment are published in reports. In general the information is not easy accessible, in most cases in textual format and are not available in a format that allows for automated downloading.

The geographical coverage of LGAF is limited to 36 countries mainly Asia and Africa. However it is expected that by 2018 60 countries will use the LGAF instrument, so that data will be more widely available.

LGAF represents a huge source of information with several reporting methods in parallel. The data is difficult to access because of the massive reports, bulky tables and difficult to extract information. The coverage of 60 countries is considerable, but when it comes to assemble world level maps this number is still limited.

#### 4.2.3 Enabling the Business of Agriculture

The *Enabling the Business of Agriculture* (EBA) project focuses on identifying and monitoring regulations that negatively affect agriculture and agribusiness markets. EBA aims to inform and encourage policy decisions that support inclusive participation in agricultural value chains and foster an environment that is conducive to local and regional businesses in agriculture.

Eighteen indicators, covering six topics, have been developed to address aspects related to production inputs and market enablers that facilitate farmers, firms and producers to sell their goods and services. Four additional topics, including “Land” are under development and are included in the 2017 report.

Two overarching themes—gender and environmental sustainability—have been explored to ensure that the indicators being developed encourage inclusive and sustainable practices.

The EBA indicators are of two types in nature. *De jure* or “legal” indicators stem directly from reading the laws and regulations in order to measure relevant aspects of regulatory quality. *De facto* or “time and motion” indicators reflect the efficiency of a country’s regulatory environment, such as the number of procedures and the time and cost to certify seed for sale in the domestic market, register fertilizer products or export agricultural goods. All indicators use specific rules that are applied equally across countries to ensure that the data are comparable.

Though in the official reports the topic Land is not yet covered, the following overview gives all the themes that will be covered (between brackets the relative weight of the criteria). These data groups are now covered in the questionnaire and from 2017 on they will be officially reported.

The data are available for public use and are reported in textual form and by means of numbers as well as yes/no answers. Current data and analysis are available for 40 countries.

#### 4.2.4 OECD reports on land use

The Organisation for Economic Co-operation and Development (OECD) has executed research and published two reports that contains quite interesting information on land use:

- Land-Use Planning Systems in the OECD: Country Fact Sheets;
- The Governance of Land Use in OECD Countries Policy Analysis and Recommendations.

Only the first report has data pertaining to the state of play on land and related topics.

The quality of cadastre data varies strongly across OECD countries. The majority of countries has precise and up-to-date cadastral maps in digital format that are often available online. However, in 13 countries experts judged the quality of cadastre as insufficient. Often, this concerns predominantly rural areas. As Figure 8 shows, in 8 of the 13 countries, experts deemed this to affect land-use planning whereas in 5 it primarily affected other areas. Several experts remarked that countries, which have quality issues with their cadastral data, are working on initiatives to improve their precision and digitize them.

The degree to which imprecise cadastral data poses a problem for land-use planning varies between countries and depends on the severity of the issues and also on the role that cadastral data plays in

the planning process. In some countries, land-use plans are prepared directly on the basis of cadastral maps, whereas in other countries different sources are used. While cadastral data is often most important for the preparation of detailed plans, the limited geographical scope of many detailed plans makes land surveying or other data collection methods feasible if inaccurate cadastral data causes problems in their preparation.

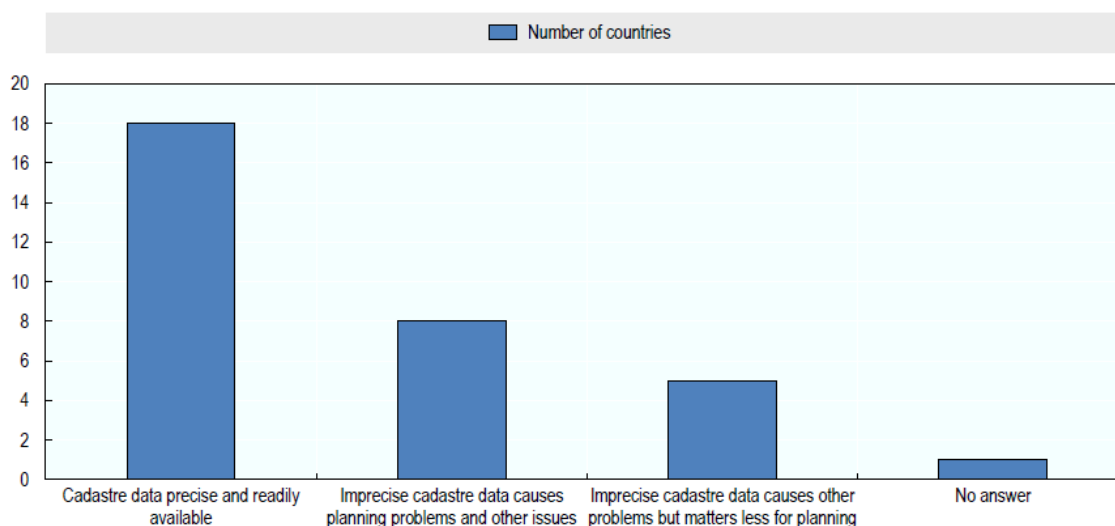


Figure 8: Quality of cadastral data in OECD countries<sup>1</sup>

#### 4.2.5 World Bank: Administrative data on land and tenure

As we speak the World Bank is putting together a data bank on land related data. In the first place this is to support the SDG's and the progress on a number of themes where land related data are a source to feed a number of indicators.

The data represent some 70 countries and are stored in an Excel spreadsheet. It covers various topics. Below a small selection of the types of data is listed.

- Number of registered land parcels
- Number of land parcels registered in the name of women
- Area of registered land parcels
- Number of registered land transactions (purchase; sales)
- Number of mapped land parcels with delineated property boundaries included in the cadastre
- Area of mapped land parcels included in the cadastral system

Data are available but the completeness of the data is still an issue. Some countries are completely covered other countries have practically no data yet. It is expected that in the coming 1-2 years the data will be more complete and of good or at least known quality.

<sup>1</sup> Source: OECD (2016d), *Land-Use Governance Survey 2016*, [www.oecd.org/gov/governance-of-land-use.htm](http://www.oecd.org/gov/governance-of-land-use.htm).

### 4.3 Match between the required and available data

For the content of the atlas, it is important that the required data are available, easy accessible and have a good and ideally worldwide coverage. From the summary in table 3 (see section 4.2 above) it appears that only Doing Business data has a worldwide coverage. The other data sets only cover 35-70 countries. That does not mean that these are not suitable, but this limited coverage must be considered when using these data to be used in the atlas.

When it comes to the accessibility, an important feature when automating the process of data acquisition is that data can be downloaded in a digital format and “readable” in a way that maps, infographics or tables can be produced. Also here the doing business data comply with this requirement. Nevertheless, it seems that also EBA data has to be made available in a useful format.

The most important requirement is the match between the 5 selected themes and the required data. If this is not in place no information can be derived at all. Table 4 provides a global overview.

Table 4. Match of the required and available data at global level

Theme	Doing Business LGAF	EBA	OECD	Admin data
<b>Justice &amp; Institutions</b>				
Institutional framework	X	X	XX	
Legal framework				
<b>Sustainable land development</b>				
Tenure type	X	X		
Ownership	XXX			X
Land Taxation	XX			
Land market				XX
<b>Gender Equality &amp; Minorities</b>				
Gender disaggregation	XX	XX		
Rights of minorities				
<b>Boundaries &amp; Borders</b>				
Administrative boundaries				
Statistical units				
<b>Land Registration Projects</b>				
Project budget				

A first look at the table shows that at global level not all the themes are covered. Doing Business data cover only the themes “Ownership” and “Gender” and EBA data cover “Institutional framework” and “Tenure type”. LGAF covers also these themes as well as “Land taxation”.

Though two main themes (“Boundaries & Borders” and “Land Registration Projects”) are not covered at all, the most important theme related to land (ownership) are however covered. Further detailed study is needed to check if the data are really fit-for-purpose. If not, additional data acquisition might be needed for specific countries to meet completeness or quality. It might be necessary to broaden the coverage of countries, or even new types of data have to be acquired for all countries. That is why it is very important to keep close collaboration with the World Bank and the OECD.

The situation for the national level is very similar in the sense that only data for the priority themes are available. In view of the even greater number of themes defined at this level, more acquisition for data should be anticipated for, when we strive to cover all the themes.

## 5 Outreach and discussion

This research puts quite some effort in promoting and discussing the production of the tenure atlas. This was needed to gain insight, find out what the relevance of the tenure atlas is in potential. It was also important to assess interest to share data and to collaborate in producing and maintaining the atlas.

Main events where we presented and discussed the outcome of the project were:

- UN-GGIM conference; March 2017. Goal: Presentation of the results and demonstration of the prototype during a gathering of the UN-GGIM in Delft, the Netherlands.
- Workshop Expert Group Land Administration Management (LAM), March 2017. Goal: experts from the expert group were fully updated on the results of the project including the prototype. Based on a set of statements discussions were held. The experts are convinced that an atlas will serve several goals and the presented design will cover the requirements in term of functionality and user-friendliness.
- Session World Bank Conference Washington; March 2017. During a 1.5h session, the principles of the atlas were explained. Also the topic of the data was discussed: what data are needed, what data are available and what additional data shall be acquired to fill the gap.

We had also contact with several individual stakeholders to discuss and demonstrate the land tenure atlas. The most important contacts are with World Bank, Kadaster International, and OECD.

From the discussions and feedback it is clear that there is definitely a need for a tenure atlas. Various stakeholders have a need for adequate insight in land related matters for policy making and for monitoring the effects of their investments.

Based on the input gathered we can observe that the priority lays with the information on **tenure security** like registration of ownership, acknowledgement of legitimate rights and capturing customary rights. Another important element that is referred to, is information on the **risks for disputes and conflicts** on land rights. More specifically is referred to indicator 1.4.2 as crucial piece of information: **the percentage of land rights** that is registered in a given country.

When it comes to the functionality of the atlas respondents indicate that a first simple implementation is to be preferred when it can be implemented in due course. Later on both data themes as well as functionality can be added to the atlas-system.

On the basis of this report more consultations are needed notably in order to get more information on available data and the data acquisition and also to answer the question "what will be the functionality of the first version of the tenure atlas".



## 6 Conclusions and follow up

### 6.1 Conclusions

The main conclusions are summarized in this section.

1. Several organisations indicate that they have a need for a tenure atlas

Based on several stakeholder sessions and presentations there is a real need for an atlas on tenure. Especially the analysis and trend tools are of particular interest for policy makers. More specifically WPLA, UN-GGIM and World Bank indicated their interest in such an atlas.

2. The functionality of the atlas should be a simple in the first implementation.

In order to get an atlas in operation at short term, a first simple version of the atlas should be constructed. The basic design should be extendible and scalable, but the functionality can be confined to 3 or 4 indicators and the trend and analysis functionality can be simple as well.

3. There are a number of priority themes to be covered in the tenure atlas.

Based on the input from various stakeholders we suggest to start with the following themes:

- portion of land registered in the official registers (% of owners and % area);
- the acknowledgement and/or the registration of legitimate rights;
- the potential risk on land grabbing and dispute and conflicts on land.

4. The match between required and available data is feasible when we focus on the priority themes.

It appears that when we only select the priority topics to be covered in the first implementation of the atlas, that most of these topics can be covered by existing data. The coverage concerns all the available data, though Doing Business data seems to cover the priority themes.

### 6.2 Follow up

The project prepared a framework and a prototype for the future tenure atlas. It is now advised to start a follow up activity that focus on the construction and implementation of an atlas with a limited set of functionalities and covering only a few priority themes. The themes would be limited to 1 or 2 priority SDG-indicators (% registered rights and % completeness/quality registry) and 1 or 2 themes on customary rights and land grabbing. The follow up activities would include:

- Organize ownership and governance of the atlas;
- Preparation of final architecture of the atlas;
- Design of the functionality with a basic provision for a trend analysis;
- Selection of the priority themes (maximum 3-4 elements) consulting stakeholders;
- Construction and implementation of the atlas;
- Making arrangements for data acquisition and use in the tenure atlas.