



# Responsible Land Governance: Towards an Evidence Based Approach

ANNUAL WORLD BANK CONFERENCE ON LAND AND POVERTY  
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**THE CABO VERDE LAND MANAGEMENT INFORMATION AND TRANSACTION  
SYSTEM (LMITS). INTEGRATING SPATIAL AND ALPHANUMERIC  
INFORMATION ON LAND AND PROPERTY, TO IMPROVE ACCESS AND  
RELIABILITY AND TO STRENGTHEN TRANSPARENCY**

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**Abstract**



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## Abstract

In the last 5 years Cape Verde has undertaken an ambitious intervention on the clarifications on the boundaries and property rights given that, the country has been faced so far with no conclusive source of information about land property. At least 2 different land records systems each contain partial information about only a limited share of the country's land parcels. Additional records systems hold information about state-owned land. No source contains complete map-based information indicating actual location of a parcel of land over which a right is claimed. Confusion over ownership and boundaries has resulted in unauthorized and informal land sales and the delay or cancellation of public as well as private investment projects and limits the ability of small firms and households to create value and increase incomes through investment in their property. The land rights registration process is time-consuming and costly for all land users, hampering domestic and foreign investment and economic growth.

The Land sector is therefore considered a key constraint to the country's economic growth. In this context, with MCC funding under the second Compact (2012-2017) signed between the US Government's Millennium Challenge Corporation and the Government of Cabo Verde, the Land Management for Investment Project was conceived and currently under implementation by the MCA-Cabo Verde II. This project has a strong and critical legal, procedural and institutional reform component, includes the development of an integrated land management information and transaction system and is conducting rights and boundaries clarification in four islands of high tourism potential. Project activities are ultimately intended to improve Cabo Verde's investment climate, and it is expected that the country will be provided with sufficient tools to achieve a robust and self-sustaining land administration system, managed by various institutions in the single and central information database.

***Keywords: information systems, data integration, spatial data interoperability, standards specifications, cadastre***



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**By Carlos Varela, Sónia Schofield and Maria da Luz Bettencourt**

**The Cabo Verde Land Management Information and Transaction System (LMITS).**

Cabo Verde is a small island country, with a small domestic market, lacking in natural resources and whose development is unavoidably dependent on the ability to compete in the global marketplace. Considered unfeasible in 1975, when it became independent, the country has achieved important gains, to reach to the middle-income countries group.



**Fig 1: Cabo Verde Islands locations**



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It should be noted that good governance was a key factor for removing Cape Verde from the group of Least Developed Countries (LDCs) through "a democratic and transparent political system" and "virtuous and effective governance."

The country in 15 years changed its internet penetration indicators from 1% to 54%, and has been recognized in recent Doing Business reports as being amongst the top 10 reformist countries in the world, and first amongst West African countries in the area of e-governance. Cabo Verde maintained much of its progress in modernization through the adoption of new information technologies and the promotion of Integrated Electronic Government.

The overall strategy for electronic governance is based on the integration of systems and the adoption of a common technological platform, managed by the State, which minimizes the challenges of interoperability. Avoiding this barrier to the sharing and exchanging of data, which has constituted a major problem for many countries, is critical for an island nation like Cabo Verde.

A key driver of the Cabo Verdean economy is tourism and the transformation of the economy and the reduction of poverty are dependent on the ability of the nation to attract investments. It is therefore important to loosen land-related constraints to investment in this, and other, sectors. Good land management and legal security in land transactions constitute a major factor in bringing efficiencies to investments.

The current situation tells us that in Cabo Verde in regards to land rights information, there are two different types of records systems, one judicial and one municipal (there are twenty two municipalities), each one contain partial information about only a limited share of the country's land parcels. Additional records systems hold information about state-owned land. No source contains complete map-based information indicating actual location of a parcel.. None of these sources contain conclusive information. This is aggravated by the fact that the various institutions that maintain land records don't share information among them. Confusion over ownership and boundaries has resulted in unauthorized and informal land sales and the delay or cancellation of public as well as private investment projects which limits the ability of small firms and households to create value and increase incomes through investment in their property.



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The actual level of development that the country has reached now continues to require endeavors to address certain remaining inefficiencies that hinder some vital sectors for economic development, including a lack of ability to implement policies in the land sector and a chaotic system of property rights, resulting in weak land management and risking assets and inheritance.

Both central government and local authorities have shown the political and institutional will to change current paradigms and guide their actions towards more productive and sustainable use of land, given that land is a limited and strategic resource for the development of the country.

The absence of a credible, effective and rigorous system for rights registration and land management has generated conflicts, burdensome land management procedures, and legal uncertainty in land transactions and indiscipline in use of the territory. Real estate speculation and informal transmission of property rights has also resulted. These situations are found at all levels: in land owned by the State, by municipalities, and by private parties. This situation represents a constraint for foreign investments and creates obstacles for Cabo Verdean citizens, who experience long and inefficient land registration and transaction processes.

Therefore, under the second Compact with the US Government's Millennium Challenge Corporation (MCC), a Land Management for Investment Project (LMI Project) was designed to support the Government creating conditions to increase investment and productivity. Its overall goal, is to reduce the investment constraints and transaction costs arising from unreliable land rights and boundary information, the time and cost to users of existing procedures, and the lack of legally secure land rights.

Those important agenda for legal and institutional reforms are still on going in the area of land management and land transactions. It should be noted that the reform started in 2009 with the new Cadastral Law, calling for the integration of land related information and databases, followed by the approval of the new Registry Code in 2010, making registration mandatory following the implementation of the cadaster (conclusion of rights and boundaries clarification) in a given area. Recognizing that these initial reforms were not sufficient to operationalize the legal foundations for an efficient and clear land sector, Over the last four years (since mid-2012) , with the technical



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and financial support of the Land Management for Investment (LMI) Project, financed by the MCC and implemented by the Millennium Challenge Account – Cabo Verde II (MCA-CV II, legal studies were conducted and more than 25 reforms were drafted, approved and under implementation.

As referred to above, the foundations work implemented under the LMI Project also includes the development and installation of a new and integrated Land Management Information and Transaction System. Rights and boundaries clarification are being implemented in four islands of high tourism potential (island of Sal as the pilot followed by the islands of Boa Vista, Maio and São Vicente). The data collected and clarified is being populated into the new land integrated platform.

### **LMITS - INTEGRATING SPATIAL AND ALPHANUMERIC INFORMATION ON LAND AND PROPERTY RIGHTS**

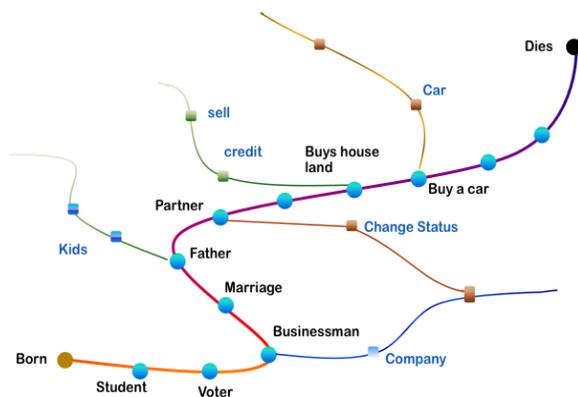
Based on those above constrains, the Government seeks to create a single reliable and more easily accessible system for land information management and transactions(LMITS) in order to strengthen Cabo Verde’s land rights information through the different institutions for a reduction of the land rights registration and transaction time and cost for all users.

The core objective of the LMITS is based on linking information held by a range of institutions, to create a shared information platform – “write once and read many”. This way each institution can more consistently and transparently focus on its core functions, relying on shared information. This will create consistency of public service provision because the inconsistencies in information will be eliminated. By including tools to speed up transactions, the system will also create efficiencies for users.

The Land Project, in particular the IT platform (Land Management Information and Transaction System or LMITS) builds off of Cape Verdean strength in e-governance and connects to various other public databases (i.e., national identification database, marriage database, municipal, national deeds and registries, etc.) which provides all relevant and complementary information about the right holder. After the project is implemented, all land-related transactions in Cabo Verde



will be done via the platform. It is expected that all revenues that currently exist will remain and distributed to each relevant institution. It is also expected that the system will achieve self-sustainability by providing services, retaining percentages of each institutions' revenue, or other forms.



#### Principles of the approach:

- Citizen-centric: Services to focus on the needs of the citizens and maximize their satisfaction.
- One Stop Shop: Horizontal service delivery by the public administration agencies as to provide one front office for all products and services.
- Oriented by Life Events: The services and products are organized by groups around the life cycle needs of the citizens & companies. Not on how the Government is organized.
- Quality: Strong emphasis on the quality of service delivery.

Figure 2 - life cycle approach

The LMITS Platform under the Land Project is therefore supporting the following:

- Creation of conditions for each relevant government institution to work through the same platform, using their own module but where information generated is visible to other institutions and can be used by all. All institutions have the same perspective over a given land parcel or situation, given that information is no longer scattered;
- Effective coordination between the various relevant institutions;



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- Training and capacity building on the use of the system and new procedures in the various institutions that interfere with the land management process;
- Computerization of new procedures and work flows in different institutions;
- Digitalization of documents related with land rights and related information existing in Land Registry, Notary services and in the Municipality services. These are resulting in the creation of specific information systems based on an architecture supported by international and interoperability standards, ensuring long-term sustainability of the system and its constant updating. There are therefore specific modules for each service (Registrar, Notary, Municipality, Spatial Data) which are then integrated so relevant information produced in one module is visible in the others and each user has access to all relevant data in each module
- A spatial data infrastructure framework supporting the above systems, which consists of the integration of spatial planning instruments at national, local and sectoral levels in a single base layer. The modules for the Land registry, the Notary and the Municipal information systems are all integrated to the same spatial data infrastructure.

During the last four years of compact implementation, significant results are being observed in various institutions that have responsibilities in the Land sector. The results so far achieved are related to the reforms and effective use of certain modules of the integrated Land Management Information and Transaction System

- As a result of the SIRP (Sistema de Informação do Registo Predial – Judicial Land Registration Module), the information system for legal registration of rights is developed and installed country-wide. Land rights information certificates, which used to take more than 30 days, can now be processed in 3 days or less. The new software allows land registry officials to access needed registry information in a quick, efficient way, because all the information that existed before in the paper book was digitized and integrated in the system;
- SIM 3.0 (Municipality Information System Module, 3.0): Expanding, up-grading and improving various services inside the municipality, SIM 3.0 includes the spatial information of the plots managed by the municipal planning office, integrated with information of the taxation office.



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Activities to linking of spatial and fiscal information is ongoing for the entire country and the full system is being deployed and installed in Sal Island, the pilot intervention island;

- SIN (Notary Information System Module) – Notary information (contained in public deeds) has been digitized for the four LMI project island and has been integrated in the SIN. A similar process for the other islands has been designed and is currently being implemented. The SIN is completely installed in Praia, the capital city of the Country, located on the island of Santiago.

- The full-operationalization of the Spatial Data Infrastructure (IDE-CV) of Cabo Verde containing the prototype of the information for the four LMI project. The system has integrated all the spatial information included in the Land-Use planning documents, that encompasses zoning, i.e, regulates the types of activities that can be accommodated on a given piece of land, as well as establishes the servitudes, environmental risks areas and all other restricted areas to allow the users, owners, buyers and the institutions the additional information related to each parcel.

## **LMITS \_- RELIABILITY AND STRENGTHENING OF TRANSPARENCY**

Unlike many other countries, prior to LMI project, Cabo Verde has never in its history undertaken a systematic operation of parcel rights and boundary clarification and of rights adjudication, regularization and registration.

As referred to above, in preparation for the current efforts to improve the reliability of parcel-level information and harmonize it across land-related institutions, the Cabo Verdean legal framework for land rights administration and rights registration has undergone a number of revisions, with new legislation introduced to ensure a transition to an harmonized and integrated system of legal, fiscal and cadastral information in respect to real property.

Under the rights and boundaries clarification activities of the LMI Project, executing entities (private firms and the new Land Management Institute) were hired to do systematic acquisition of information from all rights claimants and occupants of each parcel, as well as land rights adjudication and rights registration for all parcels that do not have an unresolved dispute.



The objective is to establish the parcel in Cape Verde’s Unique Cadastre Database and to clarify and complete the first registration of all property rights, or the updating of an existing correct registration of property rights with accurate spatial information.

This unique database implies a deep change in the property management process, namely the mandatory registration of land, as well by the fact there is a unique number of identification of each property, allowing the integration of processes between the Municipalities, The Notaries and the Registrars, which will use the LMITS.

The process for data acquisition, treatment until his integration in this Unique database complies with a methodology and workflow described in an operations manual developed within the scope of the project.

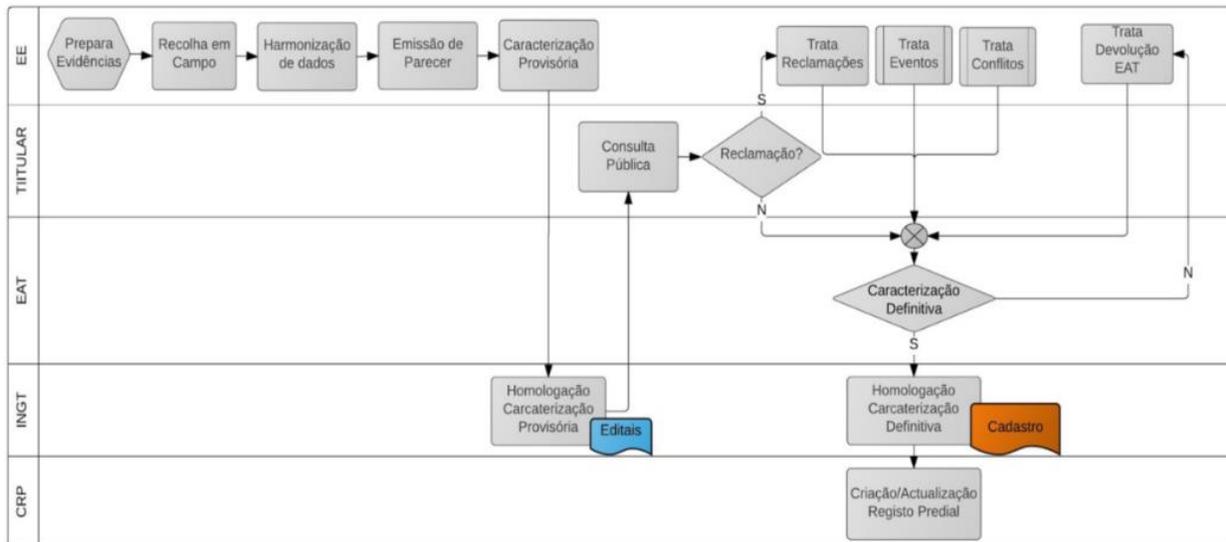


Figure 3 – Work flow of the systematic cadaster predial in Cabo Verde

The workflow for the rights and clarification process, established by law and reflected in the LMITS includes:



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- Data collection with land owners and their neighbors to ensure transparency to the process.
- Harmonization work between data collected in the field and data and records that exist in the database. This work is conducted before generating a per-parcel legal and spatial recommendation to ensure all relevant information is taken into account and reviewed.
- A public consultation period followed by a claim and objections phase to allow users or owners of private, municipal or state land to confirm the results. This confers a very high degree of transparency to the process.
- A technical support team, formed by representatives of key institutions (Municipality of the area where the activity is being implemented, Notary and Registrar, National Institute for Land Management and Department responsible for State Assets) whose role is to validate all per-parcel recommendations issued by the executing entities. Only after this validation and homologation by the National Institute for Land Management, the clarified data is entered in the national land cadaster. This ensures great security to the data that is entered into this database.

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After this clarification works it will be possible identify in whose domain a parcel lies: State ownership, municipal ownership, or private ownership, and the nature of any secondary rights in a property that exist and are subject to registration. Parcels that are in a clear legal and spatial situation can be registered (which becomes mandatory when all data of the targeted area is clarified and integrated in the national land cadaster). Parcels for which the legal and spatial information is not clear, including the need for a concrete action or step to formalize a right, are in a deferred status until the situation is resolved so that parcel can be registered.



**Table 1 – Results of cadastre operations in Sal Island**

<b>Description</b>	<b>Land Parcels</b>	<b>Condominium Units</b>	<b>Total</b>
Data collection	11051	8359	19410
Provisional Recommendation by the executing entity	12507	8857	21364
Parcels ready for public consultation	11050	8359	19409
Parcels in public consultation	11050	8359	19409
Final Recommendation by the executing entity	2350	467	2817
Decision of the technical support team	4943	2406	7349
Homologation by the National Institute for Land Management	10597	8212	18809
Final stage	9097	6462	15559

The same platform has been used in the other three islands, Maio, Boa Vista and São Vicente Islands and so far with good results.

In the islands where the project is not funding rights and boundaries clarification work, because the reforms and the LMITS have a national coverage, the SIRP (Judicial Registration Module) is being used in all registrar departments and all related transactions are fully computerized. The upgraded municipal module (SIM 3.0) is in the process of being installed so the spatial and taxes department inside the municipalities can be integrated. The full integration of the modules in these islands will not occur by the end of the LMI Project, but the completion and use of the individual modules prepare a sound basis for the future completion of the land cadaster.

### **Land Management Systems in Cabo Verde- Challenges versus sustainability**



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There are several challenges that are being addressed by establishment of the land management system in Cabo Verde. These include:

- ▶ **Land Tenure Security.** Many parcels in the existing land registration systems are uncertain with ambiguous information. Most land and property is not registered and the existing information is not updated. The rights and boundary clarification activity will gather comprehensive and accurate spatial and legal data on land and enter it into the land management system, after which the system will be used for all transactions and other land management operations.
- ▶ **Institutional Framework.** Because there is very little spatial information available, and the information that exists is scattered across institutions, land information is not accurate and managing that information is very difficult between government departments at the national level, between national and local levels of government, and between government and the private sector and users. Coordination is therefore a critical issue. There is a need to strengthen the production of relevant information as well as standards and technical specifications that could be used to integrate alphanumeric and spatial information on land and property. The land management system will integrate the comprehensive spatial and legal information that is being gathered for a geographic area (i.e., the entire islands of Sal, Maio and BoaVista or part of the island of Sao Vicente) and share this information among the institutions that require it for land transactions and land management operations.
- ▶ **Legal Framework.** The legal framework prior to reform allowed institutions to operate in a “stovepipe” using incomplete information.. Because information was not integrated each institution completed operations that negatively impacted on the ability of other institutions to complete their work and establish unambiguous rights and boundaries for citizens. When operating in their own environment, there is room for misinterpretations among various stakeholders engaged in the process, which constitutes a problem. The new legal framework is quite advanced and modern and allows for the clarification of legal rights and spatial boundaries and the sharing of this information among the institutions that perform land related functions and provide land related services to the public.



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- ▶ **Information.** Now there is limited information about land rights and boundaries that is publicly available. In most cases, property owners do not have access to information nor are they able to easily examine public records to better understand the location of their land and the rights recorded in their favor and their neighbors. The land management system will make land information widely available to citizens and investors, facilitating land transactions and tenure security.
- ▶ **Technical Arrangements.** There is a general lack of technical and human capacity. This is compounded by the fact the current systems are manual and many of these are out of date, expensive to maintain, and inefficient to search. There is also a lack of standards and organizational criteria to facilitate inter-operability between some systems already in use. The land management system will address the need for searchability of data bases and inter-operability between the modules described above used by the various institutions.
- ▶ **Administrative Processes.** There is significant redundant amount of work being performed by all the different players in trying to ascertain the boundaries, ownership and encumbrances of a property object. For instance, the search for proof of ownership is lengthy and costly. The practice also show that the public services in general don't have a culture of sharing and exchanging information with other entities, including those with similar responsibilities. Again, the new land management system will promote sharing of the information gathered in rights and boundary clarification activities among the various institutions that need this information to perform land related services and support land transactions.
- ▶ **Informal transactions.** There is in Cabo Verde a high level of informal transactions that occur due to a variety of factors such as lack of information or cultural reasons, a non-efficient institutional environment (time and cost) and lack of clarified/ conclusive data. The fact that registration is not mandatory until the area is subject to rights and boundaries clarification and entered in the land cadaster, also contributes to this reality. The information gathered in the LMITS identifies cases of informality and what are the steps necessary to formalize. This information is made available to citizens and institutions. The reforms approved under the project provide for a number of special and normal tools to



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help citizens formalize rights. It is expected that with the system in place and availability of information, informality will reduce and citizens will have their rights better protected.

## **Conclusion**

In conclusion, the Government of Cabo Verde is committed to improving land tenure security for all citizens of Cabo Verde and to improve the ability of investors in the Country to access land for investment purposes. The new land management system will use information gathered during the land rights and boundary clarification activity to establish a comprehensive data base on land and make this data base available to all institutions that provide land services, manage land, and assist in generating investment opportunities in Cabo Verde. These activities are expected to generate economic growth in the country and reduce poverty among Cabo Verdeans.