

**Albania:**  
**Status Review of the**  
**Immovable Property Registration Office (IPRO)**  
**(Now Superseded by the State Cadaster Agency**  
**(ASHK)**  
**Services and Data Quality**

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## ACRONYMS

AITPP	Agency of Inventory and Transfer of Public Properties
ADISA	Agency for the Delivery of Integrated Services Albania
AITPP	Agency for the Inventory and Transfer of Public Properties
ALBPOS	Albanian Positioning System (CORS)
ALBSREP	Albanian System for Immovable Property Registration
ALUIZNI	Agency for the Legalization and Urbanization of Informal Areas
ASHK	State Cadaster Agency
ASIG	State Authority for Geospatial Information
ATP	Agency for Treatment of Property
CORS	Continually Operating Reference System
CPF	Country Partnership Framework
CZ	Cadastral Zone(s)
DLO	District Land Office
DQI	Data Quality Improvement
EU	European Union
FY	Fiscal Year
GDP	Gross Domestic Product
GoA	Government of Albania
ICT	Information & Communication Technology
ILM	Integrated Land Management
ILMP	Integrated Land Management Program
IMC	Inter-Ministerial Committee
INSPIRE	Infrastructure for Spatial Information in Europe
IPRO	Immovable Property Registration Office
ISO	International Standards Organization
LADI	Land Administration Data Improvement
LADM	Land Administration Domain Model
LAMP	Land Administration Management Project
MoJ	Ministry of Justice
NSDI	National Spatial Data Infrastructure
OSCE	Organization for Security and Cooperation in Europe
PM	Prime Minister
PMO	Prime Minister's Office
SOP	Standard Operating Procedure
UN	United Nations
UNDP	United Nations Development Programme
VGGT	Voluntary Guidelines on responsible Governance of Tenure of Land, Fisheries & Forests
WB	World Bank

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## EXECUTIVE SUMMARY

This report is a status report that follows on from the *Detailed and Costed Roadmap for Land Market, State Land Management, Tourism, & Agriculture* that was produced in May 2018 as an output of the World Bank funded Integrated Land Management Program. An analysis and a road map that was costed was included. The Government of Albania (GoA) considered this and are utilizing the road map as they try to improve the efficiency and effectiveness of the land administration sector, and as a first step have put into force one of the recommendations of the road map by creating a new State Cadaster Agency (ASHK). The State Cadastral Agency was created as part of the institutional consolidation process. Law No.111/2018 (dated 7.02.2019) “On Cadaster” brings together the Immovable Property Registration Office (IPRO), the Agency of Inventory and Transfer of Public Properties (AITPP), and the Agency for the Legalization and Urbanization of Informal Areas (ALUIZNI). The consolidation aims to improve coordination between state institutions related to immovable properties, to improve land related data administration and management, and to improve services to the public as part of the broader integrated land management (ILM) reforms. Digital systems, data, and services are the ILM foundation.

The original road map and discussions related to the work of the IPRO, but as the ASHK was established by a law that was adopted only on February 7, 2019, most of the references in the text refer to the IPRO.

This report contains two parts. The first describes the IPRO, the Albanian public agency responsible for the national cadastre and land register until February 7, 2019. This is done by firstly providing some historical context. The “big picture” of the overall land sector is summarised, and some significant projects described, for example the Land Administration Data Improvement (LADI) project and the Integrated Land Management (ILM) Program. After explaining some of the key blockages, and problems involved, the remainder of the first part of the report lists a number of recommendations that are aimed at overcoming the constraints currently experienced, thereby providing a framework for future development. The second part of the report focuses on the specific technical issue of data quality in the national cadastre and land register. The poor state of these data, and the resulting poor services offered to clients, is a constraint to security of tenure, to transparency in the land market, and to national economic and social development. The report describes some historical background, the current status, recent initiatives, conclusions and recommendations.

The IPRO (and now the ASHK) is responsible for the cadaster, and for maintaining an up to date register of ownership titles and other real rights over immovable properties. Within the Albanian National Spatial Data Infrastructure (NSDI), it is also responsible for providing and maintaining the cadastral parcels and buildings themes. IPRO was limited in its ability to fulfil these responsibilities however, by a number of technical, institutional, legal and capacity factors.

Albania occupies position rank 98 out of 190 countries measured for registering the ownership of a (business) property following a sale in the World Bank’s Doing Business list for 2019, largely due to the high cost (9.2% of the property value) and long duration (19 days) for registering the property sale. The IPRO were also involved in the process for issuing building construction permits<sup>1</sup>, for which Albania ranks 151/190, partly due to the long time needed for getting information on ownership for the land parcel and then registering the construction permit. In its Strategic Business Plan 2015-2019, the IPRO recognised the need for improving performance and customer service. There are sections of the IPRO Business Plan that articulate the need for a consumer-orientated approach, the use of up-to-date Information Communications

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<sup>1</sup> <http://www.doingbusiness.org/data/exploreeconomies/albania>

Technology (ICT) and standards for the use and exchange of data. Unfortunately, there appears to be little progress towards these good intentions.

The key to the effective functioning of a registration system is the management of the organization, and the services it provides, and these have clearly been lacking. Lack of transparency and the use of intermediaries and informal payments to staff are often reported by users. There appears to be also a failure on the part of the supervisory board – if the IPRO is not able to deliver the products and services intended, to the quality required, then the supervisory board has a responsibility to identify the reasons and initiate appropriate changes. In terms of land registration, it is IPRO's responsibility to deliver reliable, secure and accessible services to its users, which in turn requires a secure, complete and well-maintained register. Apart from the need to complete the registration of all Albanian private and public properties (as much as this is practically possible) there is a need to securely manage and update the data already held – through maintaining the digital data in a unified integrated property registration ICT system. Under the Land Administration Management Project (LAMP), which closed in 2014, an ICT system, called ALBSREP (Albanian System for Immovable Property Registration) was developed and implemented. The ALBSREP is a fully centralized, web-based system. The system supports all IPRO cadaster and property registration processes; including First Registration of property rights, amending the registers when sales, gifts, inheritance, mortgages, restrictions, sub-divisions, building constructions, etc. occur, and it provides various statistical reports and e-services via an e-Government gateway. It was recently linked to the National Spatial Data Infrastructure (NSDI) Geoportal. The ALBSREP data model is Land Administration Domain Model<sup>2</sup> (LADM) compliant, which has been an International Standards Organization (ISO) standard since November 2012. It could be further extended to cover property tax, urban planning, a utility cadaster and other land related areas. As part of the LAMP, a system quality audit was completed by an independent quality auditor (KPMG). The ALBSREP system has subsequently been further developed, allowing notaries to submit online applications, and 51 e-services were developed, all accessible via the e-Government gateway. ALBSREP is now interoperable with the Civil Register and will be linked to the Address Register, when it is completed. The old records have no information about the personal IDs, which requires additional efforts to be included in the system. The ALBSREP has been upgraded to use a type of e-signature, called "e-seal" that allows the issuing of digitally signed documents that can replace paper documents, but this is not in use at the moment.

As part of LADI project, an IT review report was delivered, recommending the creation of a WEBGIS module for data quality improvement. This will allow access to the existing data sources, processing and storing data in a unified system from where, once data quality improvement is completed and data are validated and accepted, those data could be imported into the ALBSREP and from there changes will be maintained with the ALBSREP and access to data provided via NSDI Geoportal and the e-Government gateway. Draft General Technical Specifications for the data quality improvement system has been developed and are available in the IT review report that was produced as part of the ILMP. In addition, a recommendation has been made for the development of a module for the surveyors, which will ensure that once data are improved and uploaded into the ALBSREP, those data will remain in good quality. Surveyors will be able to download data in digital format and submit digital geodetic reports in a standard digital format. The IT review report includes general technical specifications for the surveyor's module.

None of the recommendations made in the LADI IT review report have so far been implemented and the IPRO have continued to use old IT systems for data quality improvement and data digitization, which have different and incompatible data models to ALBSREP, and different database structures. Graphical and alphanumeric data are not linked. This leads to more errors at the time of data digitization and data import

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<sup>2</sup> ISO 19152:2012, Geographic information - Land Administration Domain Model (LADM).

into the ALBSREP. Although a national standard has been created for depicting and recording cadastral parcels within a common national co-ordinate system, these are not universally accepted and used. Over time the ALBSREP has been allowed to fall into a state where its full functionality is not utilized and this is partly because of staff turnovers within the IT unit and the loss of those staff that fully understand the system itself and what it is capable of doing. Key specialists should be hired (perhaps on a consultancy basis at first) to bring the system back into full use.

Part 2 of this report goes into some detail about the errors in graphical data that are endemic in the IPRO. This largely stems from a lack of professionalism within the land survey and mapping units within IPRO that have led to poor quality records and numerous erroneous surveys or cartographic errors being accepted. A reluctance to change graphical data already existing in the register means that newly surveyed, and more spatially correct data, have to be distorted to fit the existing, less accurate data. This is clearly wrong; updating to better quality data should be a fundamental principle that must be adopted. IPRO does not appear to have a clear understanding of the extent of the errors in the register, or a clear vision for what the level of data quality should be. The current Data Quality Improvement Program is well intentioned, but after more than two years it has produced very limited results for considerable expenditure and effort. Much work has been done using hundreds of people over nearly three years, and a great deal of this work is useful and will provide good information and improvement of the records if they are integrated into ALBSREP. The analysis of the results and subsequent integration is an important next step in data quality improvement.

The issue of data quality is a serious one. There is evidence from multiple sectors to show that problems of land parcel data quality – issues such as how up to date the records are, the correctness of the information and the degree to which the records are complete, are a real encumbrance. This is a blockage that will continue to restrict the land market and economic development in Albania unless it is corrected. The second part of this report attempts to identify the data quality problems and make constructive recommendations for effective change – showing how current records can be made more complete and accurate. Combined with the recommendations for organizational, capacity, legal and technical improvements in part one, this report is intended to provide a reference to support future initiatives to improve the cadastre and land register.

There is successful data update/improvement experience from the Trans Adriatic Pipeline (TAP) project which started in 2013 and has helped more than 12,000 families with 34,000 properties in 138 communities (villages), either conducting full first registration (three villages) and updating/correcting the data in the others. The processes and procedures developed provide valuable experience for developing a

In addition, it is considered necessary to institute a system of licensing surveyors so that only professionally competent persons are involved in this aspect of cadastral survey work and to develop clear regulations and manuals that will ensure that new accurate surveys take precedence over the inaccurate records that are currently recorded in the registration office database. The old regulations for survey work were prepared in 1999 and are both technically dated and need updating to cater for the current situation for registering property. The competence of the ASHK staff in this sector will also need to be addressed as they will need to make the professionally correct decisions in what to accept and what to modify. A comprehensive human resources strategy that focusses on retaining the best quality staff and a training program is needed. It will take many years to systematically correct and improve the current graphical records, and procedures that can cater for the daily operations of the registry offices quickly and with immediate effect are needed.

The move to digital services is also reflected in the new Law No.110/2018 “On Notary” which anticipates that property transactions will be completed in electronic form. This move to digital services will be helpful for owners who will no longer need to go to the State Cadastre Agency and also for the Agency which will be able to receive and process information digitally, without the need to interact with the public or manage large volumes of paper documents. The ALBSREP system can be easily modified to support e-conveyancing (end-to-end digital transactions) and this could be the basis of a ‘quick win’ that will address some of the office malpractices that have been apparent in the past.

*Improving gender equality in property ownerships:* The new Law on Cadastre and the Law on Notaries introduce mandatory registration of both spouses, which will improve the protection of women property rights in Albania. Gender disaggregated data could be generated from the ALPSREP, which provides opportunity for monitoring the implementation of the two new laws, in respect to gender equality as well as provides statistics, which can be used to assess if the measures taken to improve gender equality are increasing the gender equality in property ownerships.

Finally, the institutional changes that are in process gives the opportunity to make clear that the government is addressing problems in the sector that concern the poor reputation of the IPRO. A public information unit that keeps the public informed of the changes occurring through media presentations and reports, and establishes anti-corruption measures and systems for dealing with complaints will be key. Also, it is important to establish regular consultations with key users, especially the chamber of notaries, banks, real estate agents and the private land survey profession. The link with the notaries is particularly important to facilitate e-conveyancing and anti-corruption measures.

## PART 1 – The Immovable Property Register Office (IPRO)

### 1. Introduction

Part 1 of this document describes the recent history and current status of cadastre and land registration in Albania, focusing mainly on the IPRO. The background of World Bank (WB) support to the land sector and the key issues that are currently constraining the cadastre and land registration system are summarized. There are numerous technical, legal, institutional and organizational issues and constraints to be addressed. These are briefly described, along with recommendations for overcoming the problems involved. Central to the problems faced by the IPRO is that of data quality, and this is described separately, in more detail, in [Part 2](#).

### 2. Background

The table below provides a summary of the key immovable property programs, investments and results.

Date	Project/Program	Notes
1990-2000s:	<p>First Registration funded by EU and USAID, mostly in rural areas</p> <p>'Pasurite' software developed for alpha-numeric data, Autocad used for graphic data</p> <p>World Bank-financed Agricultural Services Project financed re-construction, refurbishment and equipping of central IPRO and Tirana offices</p>	<p>2,500+ mostly rural zones registered including with digital, but maintenance has been in paper only; in some rural zones only agricultural land was registered but not the forest/pastures</p>
2007-2014	<p><b>World Bank-financed LAMP:</b></p> <ul style="list-style-type: none"> <li>- IT system ALBSREP developed: ISO standard compliant Land Administration Domain Model (LADM), fully centralized, web-based system</li> <li>- First Registration in 125 priority cadastral zones</li> <li>- Archives for 11 main cities scanned</li> </ul>	<p>LAMP data and systems are maintained in digital format, connected through AKSHI</p>

<b>2007-2010</b>	<b>EU -financed project</b> (implemented by OSCE) included First Registration of southern coastline	EU funded First Registration was not completed: IPRO rejected the data because not compliant with the legal/regulatory framework or quality control procedures  LADI South Coast Report <sup>3</sup> confirmed government findings for not accepting the data but offered suggestions for use of the mapping field work for data update and improvement process.
<b>2015-2018</b>	<b>World Bank Environmental Services Project</b> supported some forest /pasture registration	Used 'pasurite' software for registration
<b>2016-2019</b>	<b>IPRO data digitization and improvement program:</b>  <ul style="list-style-type: none"> <li>- Law 33 changed for IPRO self-financing</li> <li>- In house massive data digitization improvement program for both <i>kartelas</i> and maps using old programs rather than following ALBSREP data model</li> <li>- Sporadic <i>Kartelas</i> opened using ALBSREP</li> <li>- 50+ e-services enabled through AKSHI and link to ASIG geoportal</li> <li>- Notary module developed</li> <li>- ADISA front office registration adopted for Tirana office</li> </ul>	Reference: LADI legal, technical and IT system reports. <sup>4</sup>  No massive digital data successfully updated/transferred to ALBSREP as of May 2019 (problems include data migration and validation from old software to ALBSREP);  Sporadic opening of <i>Kartelas</i> in ALSREP done in some offices  Unclear what changes made to ALBSREP after 2014 and whether the changes are properly documented or not- a technical quality audit is needed to verify and update the status

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<sup>3</sup> Land Administration Data Improvement Technical Assistance (LADI TA) Phase II Report: South Coast data (2016), financed under the *EC - World Bank Partnership Program for Europe and Central Asia, CRIS Contract No. 2014/350-393*.

<sup>4</sup> LADI TA prepared 3 reports to support IPRO data improvement: Legal Review in Albanian language (2015), Technical Review of Selected Cases (2016) and Technology for Data Improvement (2016) under the *EC - World Bank Partnership Program for Europe and Central Asia, CRIS Contract No. 2014/350-393*.

<p><b>2013-2018</b></p>	<p><b>Trans Adriatic Pipeline (TAP) project:</b></p> <ul style="list-style-type: none"> <li>- Regulation for data update developed;</li> <li>- completed data update and improvement along large infrastructure corridor in 6 districts (parts of 138 cadastral zones)<sup>5</sup>;</li> </ul>	<p>Verification is needed whether TAP data is uploaded and maintained in ALBSREP or not (<i>note: ALBSREP would need to have been modified to allow for data transfer and maintenance in blocks rather than by the whole cadastral zone</i>)</p> <p>TAP hired its own staff to work in IPRO district offices to maintain the data</p>
<p><b>2016-2019</b></p>	<p><b>World Bank Integrated Land Management and Geospatial Infrastructure (ILMGI) Technical Assistance:</b> Developed ILM Road Map with key reforms for government priorities including land market, tourism, agriculture, FDI</p>	<p>Integrated land management and geospatial infrastructure program</p> <p>Key bottleneck is IPRO data</p>
<p><b>2018-2019</b></p>	<p><b>Government initiates reforms based on ILMP roadmap</b></p> <p>Institutional reform: Law 111/2019 “On Cadastre” creates State Cadastre Authority</p> <p>Pending Law on Completion of Transitory Land Privatization Provisions</p>	<p>Cadastre Law consolidates land related institutions based in ILMP Road map recommendations; new agency combines IPRO, ALUIZNI, AITPP</p> <p>Draft Completion law attempts to finalize post-1991 land allocation/privatization processes contained in 14 various laws issued between 1991-2018.</p> <p>Except Legal framework and institutional structure for restitution/compensation of land to former owners remains separate due to agreement with EU and Strasbourg court</p>

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<sup>5</sup> <https://www.tap-ag.com/news-and-events/tap-stories/2017/09/06/tap-supported-12000-families-in-receiving-landownership-certificates-in-albania>

Land and property rights reform is one of six priority areas set by the Government of Albania and is a key pillar in the WB's Country Partnership Framework for Albania<sup>6</sup> (2015-2019). Land related reforms are essential for ensuring transparent and efficient management of Albania's land assets to promote both rural and urban investments, economic growth and sustainable development. Lack of access to land and an inefficient land market, have been identified as key obstacles for development and investment in the country. Improvements in this area can significantly support Albania's progress to EU accession.

There have been three main phases of interventions in the land registration and cadastral sector in Albania:

1) During 1990s - The Government of Albania (GoA) began a program of land privatization reform, followed by a program of land registration, and the establishment of the Immovable Property Registration System. Many different privatization activities of immovable properties were carried out through various programs and supporting legislation. The privatization programs include the following activities:

- Distribution of the ex-cooperative agricultural land to rural households, mostly in 1991 and 1992;
- Distribution of ex-state farm land also to households, approved in November 1992;
- Sale of business sites mostly in 1991-92 to individual owners;
- Sale of housing units in state constructed apartment buildings to adult residents begun in 1993;
- Restitution of mostly urban properties to their owners prior to state acquisition, or to their heirs, also begun in 1993;
- Privatization of enterprises;
- Transfer of artist studios to their artist occupants in ownership.

The laws that have regulated the property privatization processes have been amended continuously to try to address problems as they are identified. Sometimes these laws have been vague however and have still not addressed the problems sufficiently. This has led to further legal problems and allowed some abuse in the way the laws are interpreted. Due to mismanagement of the privatization process some owners have been engaged in long legal processes that continue to the present day. One example of this is where there is lack of clarity over the borders between villages and urban/rural areas. Various privatization commissions may have issued privatization acts for the same plots of land. Agencies, which have managed the privatization process, are constantly restructured and the employees have changed. Facts and decisions have not been properly recorded over time, allowing scope for errors or the opportunity for malpractice.

As a result of the implementation of these programs, about 3 million properties were privatized. But, neither of the existing institutions were able to support registration of the titles that were distributed to individuals from various privatization programs. There were comprehensive maps of properties however and there was a need to establish a new system of registration. With support funding provided by the USAID, European Union (EU), and the United Nations Development Programme (UNDP), the GoA initiated the process for registration of individual properties for the first time, focusing mainly in rural properties and privatized apartments across Albania. Privatization programs, especially those of agricultural land and apartments, moved rapidly, and as a result the land market gradually began to activate. Privatization was not always implemented technically or legally correctly, because non-expert people in the field of cadastre were

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<sup>6</sup> <http://documents.worldbank.org/curated/en/602151467991993190/Albania-Country-partnership-framework-for-the-period-FY15-FY19>

involved in the implementation process. It was thought that the first registration process would highlight and correct these problems.

With the adoption of law 7843, dated 13/09/1994 "On Registration of Immovable Property" (which entered into force 15 days after publication in the Official Gazette 1994, no. 10, page 443, publication date 26/08/1994), a new institution was established for the registration of immovable property in Albania. This institution was the Office of Immovable Property Registration (IPRO), based on law no. 7843, with its objective: registration of property titles and other rights to immovable property with legal documents that prove ownership over the immovable property, and the preparation, storage and management of data, the indicative maps of registration, and the documentation, which confirms the right of ownership and other real rights over the immovable properties.

First registration brought a new way of organizing cadastral information. The information on land parcels was summed up in a property sheet or register that was called the "Kartela" and their boundaries were shown on a Property Index Map. This information was displayed for 90 days in the registration area to give landowners the opportunity to raise any issues with the newly recorded property data. The involvement of the landowners was poor in practice however, mainly due to the lack of proper mechanisms for raising public awareness.

The process of first registration gradually began to involve elements of ICT solutions to manage the digital land registration and cadastral data, but for various reasons IPRO local offices maintained the new data only in paper form, without strictly applying the rules for maintaining and archiving the paper form of the property register and maps.

During this time (1990s):

The Law on the Land (No. 7501/1991) was passed, principally concerned with the privatization of ex-cooperative farmland. It was intended that land should be distributed to families that resided on the cooperatives. Land Commissions were set up in each village to oversee the distribution of ex-cooperatives' agricultural land to 383,600 individual rural households. The ownership certificates (AMTP or "tapis") issued to each family, indicated, amongst other things, the name of the household head, a list of parcels assigned to the household, their area, the main use of land in each parcel, and the "local" names of the bordering parcels. The local cadastre offices then archived the tapi. In assigning land ownership and use rights, however, the Land Law did not recognize the land ownership, size and boundaries as they existed prior to collectivization. This caused resentment on the part of pre-1945 owners and eventually led to a Law on the Restitution and Compensation of Properties of Ex-Owners (Law No. 7698/1993), and the creation of district Restitution Commissions to deal with claims. The law enabled ex-owners to have their ownership of land in some areas recognized, or they could be compensated with alternative parcels of land. {The Agency for the Treatment of Property (ATP) was established by the Albanian Government in 2016 to specifically deal with the issue of compensation and restitution, but this remains a contentious and incomplete topic. }

2) During the 2000's – There were two main land registration projects: The EU-funded Organization for Security and Cooperation in Europe (OSCE) project and the World Bank funded Land Administration Management Project (LAMP). A prior World Bank funded project, the Agricultural Services Project, ran from 2001 to 2007 and this had a land component that funded the construction and equipping of the IPRO office, pilots for land consolidation and some technical assistance. LAMP ran from 2007 to 2014 and was designed to facilitate the development of an efficient land and property market through enhancing tenure security and improving land administration and management services. The main results of the LAMP project were:

- First Registration of 125 priority Cadastral Zones, mostly urban, out of approximately 3,057 total zones);
- Development of a web-based integrated ICT system for cadastre and property registration (ALBSREP);
- A scanned archive of paper property records.

In its summary of lessons learned from the LAMP project, the WB highlighted the importance of capacity development for ensuring success, and identified the need for wider government engagement in order to stimulate new initiatives in the land sector and strengthen the sustainability of the project. Capacity problems remain today in IPRO however, in terms of the quantity, quality and experience of staff. This appears to have been a significant constraint over recent years. The lack of a joined-up Government approach to the land sector has been evidenced in seemingly parallel and unconnected activities in institutions such as IPRO, ALUIZNI, AKSHI and ASIG<sup>7</sup>, resulting in outcomes like the setting up of a second Continually Operating Reference System (CORS) to support the national geodetic reference network.

In parallel with developments in IPRO, two significant geospatial ICT initiatives in recent times have now resulted in operational services. The GoA has developed and put into operation a National Spatial Data Infrastructure (NSDI) geoportal that provides web access to national orthophoto coverage, and various other national geospatial datasets. The State Authority for Geospatial Information (ASIG) is the agency responsible for making functional the Albanian NSDI and managing the National Geoportal. An Albanian Government e-Gateway has also been designed and is operational as a single point of access to various government datasets and services, including the personal ID register and business register. The e-Gateway is managed by the National Agency for Information Society (AKSHI). The process of formalizing informal buildings and land parcels is the responsibility of another state agency - ALUIZNI.

3) 2014-2019 - First and subsequent registrations have continued since the LAMP project, but the records have largely remained in analogue form, making it difficult to efficiently maintain them and provide effective transaction services. Approximately 80% of private properties in Albania are registered, but their records exist only in paper format. The mapping records are often in poor physical condition (see Figure 1 below) and this adds to the difficulty of maintenance.

To assess and then address the problems associated with the 80% of properties in paper format the European Union (EU) funded the WB, in 2016, to examine the subject under a project called Land Administration Data Improvement (LADI). Shortly after the project began, however, the Albanian Ministry of Justice (MoJ) announced that IPRO would not require further WB involvement in its data quality improvement activities. The IPRO then began a program of digitization of its existing text (kartela) and graphical (map) records. This is described further below, along with the status of the program at the time of this final report, in December 2018.

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<sup>7</sup> ALUIZNI is the agency responsible for formalizing previously informal land and property, AKSHI is National Agency for Information Society - the agency responsible for providing the Government's ICT infrastructure, and ASIG is the National Mapping Agency – these are described later in the report



Figure 1: The poor state of IPRO property index maps

Unable to work in partnership with IPRO to improve the cadaster data, the WB instead responded to a request from the Prime Minister’s Office (PMO) of the GoA to develop and support a program that would take a much broader and “joined up” approach to land administration and management, involving a National Land Policy, sub-sector land strategies, institutional restructuring, as well as components covering legal, technical and organizational reforms. The design for the Integrated Land Management (ILM) Program has been underway since the beginning of 2016. Both the LADI project and ILM Program are described in brief further below following an overview of IPRO.

### 3. IPRO

The following paragraphs provide a high-level summary of the IPRO in terms of its organization, role and some of the current issues. Some of those issues, in particular that of data quality, are described later in more depth (in Part 2). The reader should bear in mind that there is now a change in management since the establishment of ASHK and that the responsibilities of ASHK are greater than those that were the responsibility of IPRO.

The IPRO was principally established through laws number 7843/1994 “*On registration of immovable property*”, and 33/2012 “*On registration of immovable property*”. This second law initiated a process that transformed IPRO into a self-funded institution with a supervisory board, intended to support IPRO and to ensure its effective operation. The IPRO remit was “*the registration of ownership titles and other real rights over immovable properties in Albania, based on legal documents that prove ownership of immovable property, and the preparation, keeping and the administration of immovable property registers, cadastral maps, and documentation, which prove the right to ownership and other real rights over immovable properties*”<sup>8</sup>. A system of notaries is used to verify the identity of parties to transactions and the register is guaranteed by the state<sup>9</sup>. In addition to this, the NSDI Law (72/2012) passed in June 2012, and based upon the EU INSPIRE principles, defines standard geospatial themes (data layers) that should be made available

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<sup>8</sup> IPRO Strategic Business Plan 2015-2019, drafted by IPRO with the assistance of LANTMATERIERT, Sweden

<sup>9</sup> Doing Business, World Bank, 2018

through the national NSDI geoportal. These include cadastral parcels and buildings, for which IPRO is responsible.

**Organisation** - IPRO was described as a public, non-budgetary legal entity, under the overall responsibility of the MoJ, and it consists of the Central Immovable Property Registration Office (Tirana) and 35 District Land Offices (DLOs). The Prime Minister approves the organisational structure and the staff structure. The level of salaries is determined by decision of the Council of Ministers. ASHK will report to the MOJ on legal issues and must give the MOJ access to their database. It has joint reporting obligations to the MOJ and the Prime Minister. The provisions of the Labour Code and other sub-legal acts in implementing the Code govern the staff employment relations. In terms of governance, the IPRO (and now ASHK) governing bodies are the supervisory board and the Chief Registrar. In 2014 when the current IPRO Strategy document was written, there was a staff of 580 employees, 107 of which were employed in the Central Office and the rest in the 35 DLOs. Under ASHK the staffing figures are nearer to 1,000, but this will need to be assessed as ASHK begins the migration process from the original three institutions into one.

**Finances** – The IPRO was guided by a business plan and a medium-term strategy that was approved in 2014. It was intended that this would be revised annually but this was not achieved. The revenue received from IPRO services provides for payment of the staff, maintenance of equipment and other day-to-day investment needs. For the last three years IPRO was able to retain its surplus income for re-investment into the agency, and the current data quality improvement program is an example of such re-investment.

**Registration** - In round numbers the status of the property records in Albania is:

- 10% of properties are registered, in digital format, and in the IPRO ALBSREP digital database;
- 10% of properties have not been registered yet (mainly in the south coast region, forests and AMTPs);
- 80% of properties are registered but only updated in paper format.

**ICT** - Considerable progress has been made in recent years to provide a centralized ICT system for cadastral records and property registration. Under the Land Administration Management Project (LAMP), closed in 2014, an ICT system, called ALBSREP (Albanian System for Immovable Property Registration) was developed and is in operation in all local offices. The ALBSREP is a fully centralized, web-based system. The system supports all IPRO cadaster and property registration processes; for example, registration of property rights (sales/purchase for example), registration of restrictions (mortgages for example), registration of parcels and buildings (graphical), digital archive (scanning of incoming documents), provides various statistical reports and e-services via e-Government gateway and recently was linked to the National Spatial Data Infrastructure (NSDI) Geoportal. The ALBSREP data model is Land Administration Domain Model<sup>10</sup> (LADM) compliant, which has been an International Standards Organization (ISO) standard since November 2012. It could be further extended to cover property tax, urban planning, utility cadastre and other land related areas. The ALBSREP system has subsequently been further developed, allowing notaries to submit online applications, and 51 e-services were developed, all accessible via the e-Government gateway. ALBSREP is now interoperable with the Civil Register and will be linked to the Address Register, when it is completed. The ALBSREP has upgraded to use a type of e-signature, called “e-seal” that allows the issuing of digitally signed documents that can replace paper documents, but this is not in use at the moment. As part of the LAMP project, a system quality audit was completed by an independent quality auditor (KPMG).

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<sup>10</sup> ISO 19152:2012, Geographic information - Land Administration Domain Model (LADM).

**Data Accessibility** – The registration Law 33/2012 provides rights for access to information during the period of public display for first registration of properties, so that individuals can inspect the proposed registration and present their claims where applicable. After completion of the first registration, however, access to information was limited to just the owner. In the new Cadastre Law this is re-enforced with a restriction that information can only be provided to owners, unless there is authorization from the court. The NSDI Law, however, includes articles (19-22) that encourage data sharing between public authorities. IPRO has a portal in operation that can be used to provide information to clients about the ongoing systematic registration; citizens can check the status of their registration applications. As mentioned above, the ALBSREP is linked to the e-Government gateway and the NSDI Geoportal from where digital data are accessible via number of e-services. However, only approximately 10% of property parcels are in digital format and this remains a considerable obstacle to effective and efficient nationwide service delivery. The current status of the digitization process is described later in this report.

**Current Status** – As a result of support from the WB ILM Program, the Government of Albania has passed a Cadastre Law that established a new Cadastre Agency operating under the guidance of a governing board. IPRO was merged with ALUIZNI, the Agency of Inventory and Transfer of Public Properties (AITPP). At some future date the Agency for Treatment of the Properties (ATP) might be included. The ASHK will remain self-financing. As well as generating income from fees, additional funding sources may be the state budget, donations and loans. The Law on Cadaster includes a financial compensation fund for paying compensation to people that suffer from inaccuracies, which is created under the law no. 133/2015 “On the Treatment of Properties”.

One related issue to note is that the GoA is developing a property tax system (referred to as the fiscal cadaster) that will be independent of the ASHK register.

Draft legislation on transitional processes currently under discussion covers the final allocation of privatized land and some registration procedural changes, for example, allowing more flexibility over changes to existing records to reflect the correct situation on the ground. The new Cadaster Law defines the rules for the establishment, organization and functioning of the new State Agency of Cadaster, as the state institution responsible for the administration of the immovable property register as well as for the completion of the outstanding land privatization processes. In terms of the percentage of the country registered and held in digital format, the situation is still very poor and does not show any signs of improvement in the near future. The IPRO program of Data Quality Improvement has been underway for over two years and to date only six cadastral zones have been forwarded to the IPRO for final assessment and approval. It is unclear whether these data are compatible with the existing ALBSREP data model and specifications. This issue is covered in more detail later in this report.

During 2017, the IPRO accepted approximately 300,000 applications for transactions. Analysis showed that approximately 50% of the applications concerned a group of nine services. A group of cadastral experts from Tirana IPRO was dedicated to the task of accepting and completing all applications that fell into these nine categories, within 24 hours. The system, known as “Fast Track” has now been operational in Tirana office since 1st November 2018, and the service was planned to be extended to all the IPRO local offices over the course of 2019. The “Fast Track” was stopped briefly when the ASHK was established, but is now back functioning. It is hoped that in this way the service delivery time for half of all applications will be reduced to a maximum of 24 hrs during 2019.

**ALBSREP – the Immovable Property Registration System** is generally working well, but there are a number of issues relating to system management, system maintenance and further development, IPRO ICT resources, end user training, lack of disaster recovery data center and the need for upgrade the equipment that need management attention and these are described later in this report.

#### **4. Land Administration and Data Improvement (LADI) Project**

The quality of the 80% of land registration and cadastral records that are still held in paper form, is widely recognized as being very poor. To address this problem, the Land Administration and Data Improvement (LADI) project was initiated in April 2015 through funding from the EU. The project ended in December 2018, but some of the staff have been retained. As the title suggests, the main focus of the project was the improvement of the analogue and digital data in the IPRO system.

At the beginning of the LADI project, IPRO established a data quality control office to support the project and agreed to set up a dedicated quality control team of 2 x lawyers, 2 x surveyors, 2 x software development experts, and 1 x expert from ASIG, the national mapping agency. The team was to be supported by additional local experts (GIS, Web developer and, on a part-time basis, a lawyer and a surveyor) hired by the LADI project. After this positive start, however, the Albanian MoJ announced in Feb 2016 that IPRO would directly fund data improvement work using its own revenues under a “National Plan” for data improvement. As a result, the data quality control office was not established, and the WB was no longer directly involved with IPRO in data quality improvement. IPRO produced a document<sup>11</sup> to guide their data improvement work that contained a series of measures aimed at the short, medium and long term. The overall objective was the digitization of all areas of Albania by September 2018, in accordance with Decision 688/2015, and completing a process of improvement and updating of data on the entire territory of the country by the same date.

Following this IPRO announcement, a revised work plan for LADI was developed by the WB team. The data quality aspects of the LADI project are described further in Part 2 of this report, but in summary the results of the project have been:

1. Technical, Legal and ICT reports that clearly describe the background and current status of the IPRO data and systems, and provide recommendations for the way forward;
2. An action plan document<sup>12</sup>, which was provided to IPRO to help with the creation of the National Data Quality Improvement Plan. Although only in outline form, the 12 page document provided a structured approach and represented a sound foundation for defining the detailed activities required; defining how to deal with aspects such as governance, pilot testing, implementation, quality assurance and risk management;
3. An analysis of the southern coastal zone First Registration data that were captured in 2011/12 through an EU funded project, but not accepted by IPRO for inclusion in the land register;
4. Analysis and recommendations for possible ICT solutions to support data quality improvement and maintenance of the register in the ALBSREP database.

#### **5. Integrated Land Management Program (ILMP)**

The ILM Program is described in brief in this section to further explain the situation in the land sector at the end of 2018. Over the past two years, the WB team worked closely with the representatives from the Albanian Prime Minister’s Office (PMO) on the ILM Program concept. During the December 2016, March

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<sup>11</sup> IPRO document - Direction and Policy Document on Short, Medium and Long for Improving the Registration System of Real Estate, Report (Plan) Action

<sup>12</sup> World Bank document - IPRO National Data Improvement Program – Overview and Action Plan, Dec 2015

2017, December 2017, January 2018 and May 2018 WB missions, WB analyses and consultations for the ILM Program has resulted in:

- (i) Land sector institutional analysis and report;
- (ii) Analysis and report on the socio-economic benefits of implementing the ILM program;
- (iii) Review of the existing legal and regulatory framework supporting the land sector;
- (iv) Draft ILM Program roadmap, including costs, to guide implementation over the initial five years; and
- (v) Briefing material for the Inter-Ministerial Committee (IMC).

The latest (June 2017) Albanian Government has confirmed that land remains a priority sector and that the work on the ILM Program design should continue. The Government views the priority policy focus within the land sector to be land market, state land management, tourism and agriculture; there is a requirement to complete documentation of the agricultural allocations from state farms and cooperatives (AMTPs) by the end of 2018. The registration of the AMTPs by IPRO is intended to take place in 2019.

In November 2017, the Prime Minister Order (PM Order 201) on the “Establishing and Functioning of the Special Working Group for the Reorganization of Property Institutions and Reviewing of the Legal Framework” was signed, which paved the way for the merging of property institutions (IPRO, ALUIZNI and AITPP) into a single institution, as described elsewhere, and revision of the corresponding legal framework. ASIG may be integrated into the central State Agency for Cadastre over the next four to six years.

At the time of writing this report no further significant WB support has been agreed. However, potential areas of future support to contribute to the institutional reform already begun could include, for example: development of a strategic planning for the integration of ICT solutions across the institutions; capacity assessment and development of a capacity development strategy; support for investments in real estate; strategic planning for the new institution, including the development of a business plan; review of draft legislation; and support for change management in large organizations.

## **6. Key Blockages**

At a national level, looking at the “big picture” of the land sector as a whole, a number of obstacles have been identified that are limiting the benefit that land could make to national development and the economy. Data quality is such a significant and recurring issue that it is covered as a separate topic in Part 2. The following issues are considered to be significant bottlenecks, preventing the efficient and effective working of the land sector in Albania:

### **6.1 Governance / Institutional / Organizational**

- There is no National Land Policy framework to guide land institutions in their sub-sector policies and strategies;
- Inconsistent and overlapping legal and regulatory frameworks (partly resolved through the recent Cadaster Law);
- Very fragmented land institutions, sometimes working in parallel (partly resolved through the recent Cadaster Law) ;
- IPRO has not been effectively served by its Supervisory Board, although it is recognised that the Supervisory Board may also be restricted in its ability to effect change;
- Land transactions can lack transparency;
- Insufficient internal and inter-agency communication;
- Weak governance overseeing and coordinating land institutions;
- There is disagreement over the responsibility for the CORS system (ASIG/IPRO), with a danger that there will be two national systems working in parallel;
- A poorly functioning land market is inhibiting the move to modern economy.

## 6.2 Capacity

- Very low levels of capacity across IPRO and DLOs in terms of numbers and skills – no on-going capacity development program established;
- No availability of training courses for staff and insufficient training.
- There is no land registration and cadastral profession or professional association;
- Frequent staff changes and turnover, sometimes related to changes in Government;
- Lack of unified working procedures;
- Leakage of ICT staff to the private sector;
- The understanding of existing paper mapping is in the hands of a few people in each DLO;
- Lack of staff and office performance monitoring standards.

## 6.3 Legal Constraints

Many examples of legal constraints exist and have been identified in the LADI legal report. They are too numerous to list in full here, but two significant examples are:

- Lack of clear legal procedures related to registration of agriculture properties allocated by the Land Ownership Acquisition Act (AMTP). In the new Law 111/2019 “On Cadaster” there are some articles for the registration of AMTP such as issuing AMTP when they have not been issued previously, first registration, and improvement/updating. However, clear legal and sublegal acts are needed to clarify and solve the known problems for this type of immovable property. For example, under the previous Decision 2/13/06/2013 "*On procedures of public administration bodies for immovable property acquired with the AMTP*" defined the procedures for handling the cases where there are inconsistencies of area recorded on the AMTP with that registered in the IPRO or recorded in the field during the first registration process. Due to the solution mandated in this instruction, the excess part of the land parcel is divided into imaginary parcels and registered in the name of “STATE” owner. In reality, the original parcel on the ground is generally still in use by the private owner;
- Lack of legal procedures for registration of old (pre-1991) private houses which were never confiscated under the communist regime and for which no historical ownership documents exist.

## 6.4 Information Technology

As with the previous categories of issues, there are numerous examples. Many of these relate to the ALBSREP system in use in IPRO:

- ALBSREP requires further development – for example, limitations of the graphical functionality result in IPRO staff creating the complex parcels in AutoCad and importing data in ALPSREP (especially dealing with curves on boundaries), introduction of digitally signed documents by the new Cadastre agency and introduction of e-conveyancing (end-to-end digital services) for citizens and professional users, such as notaries, banks, surveyors and others. Another area of quick improvement is the introduction of electronic calculation of the transfer tax. This has been introduced in the fast track module for notaries;
- ALBSREP interoperability with the Civil Register, Business Register and Address register is critical for data quality and this has to be set as a standard automated mandatory processes, when entering any new application to avoid typo mistakes;
- The system has to be further developed to ensure that it supports the business processes, resulting from the new institutional set up and to provide additional services to different users groups, like banks, notaries, real estate agents, others

- The Bank has been recommending development of a web-based system for data quality improvement and first registration, based on ALBSREP data model and the draft General Technical Specifications are included in the LADI Final report – IT part.
- There is a need of development of a module for private surveyors to download data form the e-Government gateway and generate digital cadastre elaborates in a standard GML format, which will guarantee that once data are improved, they will be kept in good quality. Further details about this module are available in LADI final report- IT part.

### **6.5 Data Quality and Completeness**

- Existing national standards (data, co-ordinates systems and projection systems) are not universally accepted and used across land agencies; this severely inhibits interoperability and integration of land information;
- The immovable property rights register is incomplete (first registration has not been finished) and much of the existing data is in analogue form and of poor quality;
- There is insufficient information about the number of parcels with incorrect data, missing data or the extent of the existing errors – the baseline information needed to make a plan for data quality improvement is missing;
- Lack of quality parameters – no quality standards are defined and published. There is no adoption of the Fit-For-Purpose Land Administration approach that would accelerate the data quality improvement process;
- Immovable Property data maintenance lacks efficient, standard procedure, e.g. standard operating procedures and checklists.

### **6.6 Land Survey Licensing and Regulations**

- It will take some years yet to complete the improvement of graphical data in the registration system, but in the meantime procedures need to be put in place to improve the quality of data as new transactions occur and to accept the more accurate surveys that have been concluded, but may contradict the records in the cadastral index maps. Several actions need to be take:
- Introduce a licensing regime for surveyors so that only survey professionals with adequate graduate level qualifications, experience and who have passed a test showing that they understand sufficient land law for their operations may practice as land surveyors undertaking boundary surveys;
- Introduce a set of survey regulations that outline clearly the requirements for surveying, accuracies and reporting required when a property boundary survey is conducted;
- Introduce a classification of survey records such that those surveys that are reliable are given precedence over those that are suspect. This could be through classifying surveys as class A (accurate and approved), B (appears to be correct based on underlying orthophotomaps), or C (does not match underlying orthophotomap or overlaps with other records). A note on the Kartela that a a new survey is recommended (or required) for any Class C survey.

- Introduce a survey examination unit within ASHK that contains well qualified professionals capable of ensuring that surveys submitted are technically and legally correct.

## 7. Key Recommendations – Land Sector<sup>13</sup>

Five key recommendations for change in the land sector under the ILM Program are listed below, followed in the next section by a more detailed list of recommendations that relate specifically to the setting up of a new National Cadastral Authority.

### 1. New National Land Policy:

Create a policy framework that identifies what the government wishes to achieve utilizing land as a resource and what access and rights people will have with regard to the land. The policy will coordinate and align the various existing policies relating to land to more fully achieve the government’s overall policy and provide each sector with clear measurable goals. Land sub-sector specific land management strategies and associated interventions and instruments will then stimulate growth, evolve a vibrant land market and other socio-economic uses of land and safeguard the environment; all leading to sustainable development.

### 2. Institutional Reform:

Rationalise the land sector institutions and merge similar functions to create a more effective institutional framework for implementing the National Land Policy and delivering more effective e-services to the citizen. This may incrementally lead to a National Land Agency / Ministry of Lands with the creation of the State Agency of Cadastre (which is now done), being the first step towards this more holistic management of land.

### 3. Harmonised Legal & Regulatory Framework:

Remove the errors, inconsistencies, gaps and overlaps that now exist and create a roadmap for harmonization of laws and regulations across the land sector. This will include the laws and regulations governing the new land institutions.

### 4. Access to Information about Land:

Provide electronic access to integrated, fit-for-purpose information about land to enable public sector agencies to make good evidence-based decisions and deliver effective e-services and for the private sector to make sound investment decisions. This ‘create once, use many times’ approach requires coordination across a wide number of agencies, provision of ICT, adoption of data standards to support interoperability, essential information quality improvement programs and an appropriate business model to ensure on-going maintenance of information. This includes creation of Key Registers that are essential for supporting e-services, e.g. addresses, parcel boundaries, administrative boundaries, building footprints, citizen IDs and business register.

### 5. Capacity to Manage Land:

Initiate training and longer-term capacity development initiatives to create a new generation of Land Professionals in the public sector and beyond who have this wider understanding of sustainable land management. It should be an objective to create professionals and corresponding professional associations across the land sector in Albania.

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<sup>13</sup> World Bank - ILMP Intervention Recommendations, May 2018

## 8. Key Recommendations – State Agency of Cadastre

The recommendations listed above relate to the land sector as a whole. The set of recommendations in this section relate specifically to the setting up of the new State Agency of Cadastre (since concluded). The WB team has developed these points further<sup>14</sup>, and a detailed set of costs has been defined, alongside a suggested timetable for implementation. They relate to the setting up of the State Agency of Cadastre, and then making investments in the ICT infrastructure. Completion of first registration is envisaged alongside a comprehensive program of activities aimed at maintaining existing data and improving data quality:

### 8.1 Establishing the new State Agency of Cadastre<sup>15</sup>

- Plan and implement the integration of IPRO, ALUIZNI, and AITPP, including the creation of a business plan to ensure sustainability (completed apart from the business plan);
- Modify laws and regulations to transfer responsibilities to the new institution (partly completed);
- Update regulations, procedures and instructions for various functions/programs (general IPRO regulation, First Registration, Data Update/Improvement, etc.);
- Create & implement public communication plan to ensure citizens are engaged with institutional reform;
- Establish the new institution and incrementally integrate the IPRO, ALUIZNI etc;
- Conduct Capacity Needs Assessment, Prepare Capacity Development and Certification Strategy and implement Strategy;
- Prepare Office Assessment and investment plan to integrate and upgrade DLOs;
- Upgrade critical offices (office space and infrastructure).

### 8.2 State Agency of Cadastre – ICT Infrastructure

- Perform an ALBSREP technical quality audit (to make sure that the system is fully documented and meets international good practices and standards);
- Develop new software modules for surveyors to ensure that once data are improved they will retain their quality during the update process, including consultancy to develop a standard for a digital cadastre elaborate:
  - Develop a module for private surveyors to download data from ALBSREP and upload digital cadastre updates in a standard digital format;
  - Develop a module for the private surveyors to generate standard GML file format for the digital cadastre updates. Different software tools are currently in use by different private surveyors. This will allow them to use their software, but to generate the GML file in the standard format for submission to IPRO (in digital form at the DLOs or online);
  - Develop a module for the Financial Services to allow access to the IPRO data for the purpose of mortgages and also to submit digital applications on behalf of their clients to register the mortgage.

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<sup>14</sup> World Bank document – Land Market Roadmap, May 2018

<sup>15</sup> Some of the steps recommended are underway at the time of writing

- Develop a new web-based software tool for data quality improvement, based on ALBSREP data model – detailed user requirements were developed by the WB team as part of the LADI project (see ICT Annex to the final report);
- Create software for Data quality improvement (the best would be to be interoperable with the e-Government gateway and NSDI Geoportal ) – this will ensure accessibility of the orthophoto, addresses, data for the Civil Register and Business Register and other data from the Geoportal from ALBSREP;
- Develop a crowd sourcing mechanism for data quality improvement (an example from Ukraine has been provided);
- ALBSREP further development:
  - ALBSREP Modifications – advanced graphics, modification of workflows and e-services to support the new legal framework (the merger and the new laws), development of management reports to allow staff and offices performance monitoring, modifications to support the import and export of data from blocks with fixed boundaries (related to the data quality improvement in blocks);
  - ALBSREP Interoperability of the old IPRO digital archive – currently the system is disconnected, previously the scanned archive was connected to ALBSREP;
  - Develop software to generate data errors reports per Cadastre Zone for the data imported in ALBSREP from the old software applications with errors (for example form Passorite) and provide the reports to the DLOs for error correction.
- Upgrade the IPRO hardware;
- Develop software to provide interoperability of ALBSREP with the proposed Property Tax system (fiscal cadastre under development with support of Sweden);
- Establish Disaster recovery data center;
- On-going enhancements of ALBSREP.

### **8.3 State Agency of Cadastre – First Registration and Data**

- Complete First Registration of unregistered state and private land - systematic registration by Cadastral Zone according to priority areas;
- Finalize First Registration of approximately 20 cadastral zones from the WB LAMP project pending since 2014;
- Complete registration of the AMTPs being issued by the Ministry of Agriculture / Municipalities that need to be registered sporadically (these parcels are not part of the systematic registration process);
- Correct Kartela massive data entry, which was not done using ALBSREP data model (2016-2018 by IPRO) and migrate into ALBSREP;
- Register state land identified by AITPP and migrate into ALBSREP;
- Complete registration of forest/pastures which were not part of original First Registration process in 1000+ agricultural cadastral zones from 1994-2005 (assumed to be part of the state land registration process above);
- Implement the Data Quality Improvement Program for other zones/properties to digitize/update/upgrade the quality of land registration and cadastral information, and migrate into ALBSREP.

### **8.4 Future considerations**

Establishing a national cadastre and land register that is for the most part complete, listing private and public land parcels, and holding up to date and high-quality standardized data, providing accessible and affordable services is the number one objective. In the longer term however, some of the following extensions could be considered as part of the development of the Albanian land sector.

1. Development of an ICT System for agricultural subsidies – linked to ALBSREP. This would support the EU accession process and is in line with the Government priorities within the land sector – the land market, state land management, tourism and agriculture. In addition, there is an urgent requirement to complete documentation of the agricultural allocations from state farms and cooperatives (AMTPs) by the end of 2018;
2. Professionalize the cadastral surveying functions by introducing licensing and professional quality control within ASHK.
3. Open Data interoperability with the NSDI Geoportal;
4. Development of an ICT System for forestry registration (which differs from property registration, but has many similarities). The forestry first registration data will be uploaded in ALBSREP, but the processes to maintain the forestry rights are different – similar, but not the same;
5. Development of a utility cadastre – utilities are not currently registered in the IPRO cadastre. This requires a legal base and the system for registration of utility infrastructure is similar to the ALBSREP, but the data model would have to be extended and processes developed;
6. Marine Cadastre – a new innovation under implementation by several EU Member States – it would be prudent to assess the usefulness of a marine cadastre for Albania;
7. Urban Plan standardization;
8. Digitization of critical geospatial datasets to meet the Government's top priorities;
9. Introduction of a mechanism to stimulate innovations, by using the available data and services – could be by allocating funds for hackathons on specific topics and then providing funds to the winners to develop innovative solutions for priority areas;
10. Support to the AKSHI Innovation Hub – to help government and municipal institutions to make better use of the available data and services and stimulate innovations;

## PART 2 – Data Quality Improvement

### 9. Introduction to IPRO Data Quality

#### Scope of Property Registrations & Digital Data

The quality of both alpha-numeric and graphic data held in IPRO is very mixed and varies from location to location. In very general terms, the alpha-numeric data are more up to date and held in digital format, whereas the graphic part of the cadastre and land register is mainly held in analogue/paper form, of poor physical quality and largely out of date. Supported by numerous previous international donor projects, IPRO has sought to update its data and the ways in which those data are collected, managed, maintained and delivered. Approximately 10% of the properties in Albania are registered in digital form, mainly as a result of the WB's LAMP project that finished in 2014. Those 10% are in Tirana, in the urban and peri-urban areas that experience a high turnover of transactions. Another 80% of properties in Albania have been registered as part of First Registration activities during the period 1992-2001. The graphic records for these properties are in paper form and often in poor and outdated condition. The remaining 10% have still to be registered for the first time. Part of this remaining 10% includes the southern coastal area characterized by high property demand and turnover. The poor state of the data is a risk for tenure security and a constraint to investment and the effective working of the land market. In summary:

- 10% parcels registered and digital;
- 80% parcels registered and analogue;
- 10% parcels not yet registered.

There are 3,057 Cadastral Zones (CZs) in Albania managed by 35 IPRO DLOs. 2,500 of the CZs have been captured as part of First registration. Digital data were originally delivered for all of these 2,500 CZs – maps of parcel boundaries and buildings in AutoCad (dwg and dxf formats), and kartelas in Microsoft Access (MDB format). In addition, there was a WB project in 2007 to assess the degree to which the maps and kartela data agreed – or disagreed. This resulted in ESRI shape files, covering most of the 2,500 CZs, being produced for the 11 DLOs involved. Since then, however, new transactions are not digitized (the graphic part), so the original mapping data have become progressively out of date and are not synchronized with the legal records. The remaining 10% of properties still to be registered are mainly forest and pasture areas, although part of this area is the southern coastal area, which has a high demand for tourism, related investments.

It is widely accepted that a 100% digitized land register is urgently required and there is a Council of Minister (COM 688) decision requiring that a data improvement process should be completed by Dec 2018. Since 2015, following an order from the Chief Registrar, alpha numerical data (not the graphical parts) are updated digitally for all new registrations. As part of the process of moving towards fully digital data, all records (maps, legal docs) have been scanned and the current IPRO Data Quality Improvement program has sought to convert this into digital data that can be used in the official ALBSREP system.

In summary - the kartela alpha/numeric data exists for all the 90% of registered properties and is now maintained digitally. Relatively recent digital map data (2014) exists for 10% of the properties but is not maintained. The map data for the 80% is in paper form, in a wide range of physical condition and currency, although this has been scanned. IPRO has many of the components in place to begin data improvement, but before it can begin a comprehensive plan has to be created to develop the methodology, estimate the resources, deal with legal and ICT implications, and plan the activities, timescales and budget.

#### Standards

An essential aspect of data quality is the development of standards to ensure that data are created to a uniform and fit for purpose standard that will be consistent, efficient and allow interoperability. There has been work on this, both at the IPRO and at ASIG, and important standards have been developed: the

projection / co-ordinate system; a national “base” map derived from 2015 orthophotography; and cadastral parcels. Unfortunately, however, these standards are not being widely and consistently used. New graphic data for parcels are distorted and “fitted” to existing IPRO data, rather than truly representing what is on the ground, and there is no system for automatically extracting and importing surveyor’s data into the ALBSREP system.

### **Co-ordinate system**

It is essential, for ongoing consistency and efficiency that all stakeholders within the land administration sector work with a single national projection and co-ordinate system. The responsibility for geodesy lies with ASIG as part of their role as the national mapping agency. However, geospatial information in Albania is currently held in a number of horizontal co-ordinate models, principally:

1. “Korniza Rreferuese Gjeodezike Shqiptare 2010” (KRGJSH-2010). Based upon ETRS89, this is the official Geodetic Framework for Albania, and was approved by the Decision of Council of Ministers no. 669, dated on 08/07/2013. Data in ALBSREP are in this system;
2. ALB 87 Gauss-Kruger projection - the previous official reference geodetic system. Some IPRO digital data are still held in this projection / co-ordinate system;
3. WGS84 Ellipsoid (World Geodetic Datum) - which has been used for the 2007 orthophotos;
4. ETRS 89 – used by the ALBPOS Continuously Operating Reference Station (CORS) system.

ALUIZNI and IPRO using different co-ordinate systems for their land parcel data provides a good illustration of inconsistency across land agencies.

## **10. The LADI project**

The Land Administration and Data Improvement (LADI) project was initiated in April 2015 with EU funding and stopped at the end of 2018. The main focus of the project, when it was initiated, was the improvement of data quality for the 80% or so of IPRO registration records held in analogue form. When the Albanian MoJ announced that the WB team was no longer required for the data improvement process, the project was redesigned and the LADI outputs were then changed to be an assessment of the existing data quality, and associated reports covering the technical, legal and ICT aspects of the data. An additional deliverable was an assessment of data captured in 2012 in the southern coast area of Albania as part of a First Registration project managed by the EU. In order to evaluate IPRO data quality, the LADI team reviewed examples from several sources and based their assessment upon evidence gathered from:

- The views of IPRO staff, and other key stakeholders, at various levels;
- A “desk exercise” using the ASIG geoportal to look at the correlation between cadastral parcels and the latest orthophotography;
- Analyzing data gathered from field visits - a cross section of urban, peri-urban and rural areas were compared with the real-life situation with the records held by IPRO;
- Results from the Trans Adriatic Pipeline (TAP) project; and
- Assessment of the process by which the IPRO receives data from ALUIZNI.

The general impression that the IPRO cadastral mapping records are generally out of date, deteriorating and poorly maintained seems to be well recognized. It is not so clear, however, just how serious the problem is across the whole of the country – how bad the various categories of cadastral mapping are (for example, digital but out of date, paper but capable of being scanned, geo-referenced and fitted to new orthophotography, or just so bad that re-survey is required). The metrics of the types of problem, the extent of each one and the methodology and resources required to solve them still require significant work, and it appears that IPRO is not aware of these metrics. The current understanding of the problem(s) is not enough on which to base a plan for data improvement, and more work is required to categorize the types of cadastral mapping records held, to evaluate methodologies for improving each type, and to create a plan to do the work.

In order to get a better understanding for the types of issues involved, the WB team sampled data from three different areas – urban, peri-urban and rural areas. Although the sample was small, it was significant that the results clearly backed up the anecdotal evidence, and experiences from previous projects.

### 10.1 Cadastral Data Errors<sup>16</sup>

Existing cadastral maps held by IPRO do not generally reflect the current situation “on the ground” and this is recognized by the IPRO. The immovable property units (cadastral parcels and buildings) are often incorrectly positioned, and the problem has been compounded over time by changing specifications and reference systems. There may be several copies of the same map sheet currently in use in the DLO (see figure 2 below), and it can be unclear which map is most current and/or most “accurate”, often relying on one person’s knowledge of the past. The IPRO staff, through using the maps on a daily basis and relying on memory, can generally find parcel information, but cannot confirm that the maps represent the current situation, or the accuracy of the property rights information. This is mostly the situation in the urban areas around Tirana and a few of the larger coastal areas where a lot of informal settlement has taken place over the past decade and many changes have occurred.

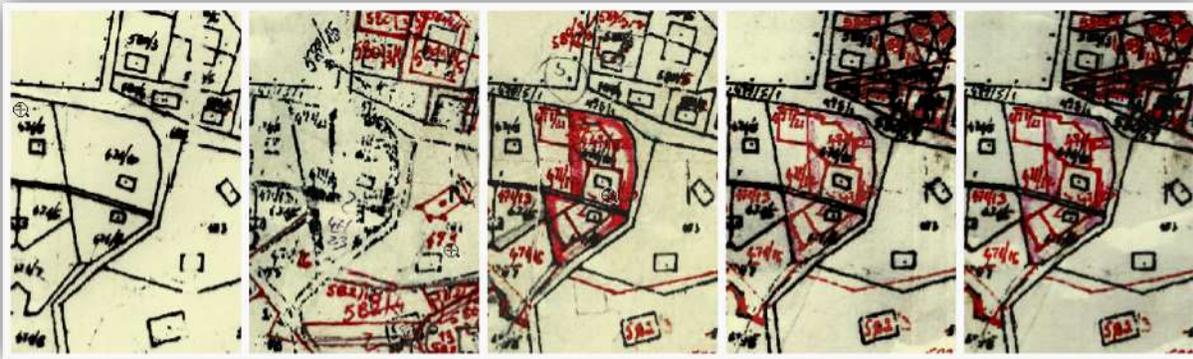


Figure 2 – Different Map sheets currently used by IPRO sheets for the same location in the same cadastral zone

It is assumed that First Registration property boundaries in rural areas, where relatively few transactions have taken place, are less likely to have changed.

#### Cases from selected cadastral zones

To evaluate and understand typical errors occurring across the CZs, the WB LADI project team firstly studied available data as a desk exercise, and then secondly, looked at a small sample of examples in the field. Initially, the team analyzed the existing information of the IPRO digital Registration Index Maps that were produced as part of First Registration, and available on the ASIG geoportal. The examples below illustrate discrepancies between the cadastral maps and the field boundaries<sup>17</sup> as they appear in the 2007 orthophotos. The ASIG geoportal layer group “Cadastral” and the 2007 orthophotos layers were used to

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<sup>16</sup> This section is copied from the LADI Technical Report, which goes into additional details, conclusions and recommendations.

<sup>17</sup> There is some potential for misinterpretation here because the orthophotos show land use the patterns that generally match the extent of ownership rights - but it could be that in some cases the land use boundaries are not the legal boundaries.

analyze the current information. The following figures present different types of cases found during this analysis. These cases may not be indicative of all possible errors, but they illustrate some of the more commonly observed ones.



**Figure 3 - Malas - Breg (Berat)**

Figure 3 shows a section of an orthophoto of the Berat area, and the associated parcel boundaries (in yellow). Looking at the right side of the image it can be seen that the correlation between the data layers is not good. The yellow lines of the vector map appear to be shifted to the northwest. The area to the left appears to fit better than the right but seems to have a small shift to the west. An analysis of the orthophoto also shows that IPRO index map (vector map) is not up to date. For example, new roads through the area are not shown on the vector maps.



**Figure 4 - Armath (Durrës)**

The situation in Figure 4 indicates that there may be a scaling and rotation problem. Some parcel features match with the orthophoto, but the vector roads appear larger than the roads shown on the orthophoto (displayed at the same scale as the map).



**Figure 5 - Gramsh (Lezhe)**

Figure 5 shows that the left part of the vector map needs a shift toward East, while the right part of the image does not appear to be shifted, but seems to have a rotation or scaling problem.



**Figure 6 - Demiraj (Malesi e madhe)**

In the Figure 6 it appears that the whole block of parcels has a shift toward the southeast. The shift appears to be consistent over the whole zone. If the vector map was shifted toward the northwest the roads and building would (generally) match the orthophoto. In this case a transformation could be applied that would shift the whole block (approximately) into the correct place.



**Figure 7 - Vukatane (Shkoder)**

Figure 7 shows that the vector data have a general shift toward the east. The size of the shift is not consistent however. The parcels on the left of the image need to be shifted less than those on the right, for example. In this case a systematic transformation of the whole vector map could not be applied, as correcting one section of the map would distort another section.



**Figure 8 - Shesh (Tirane)**

Figure 8 shows a case in which it is impossible to identify a systematic approach for improving the vector data. The cadastral map data appear to be very out of date; the roads and the buildings do not match at all with the orthophoto. In this case significant effort would be required to investigate the problem in the field, probably involving some re-survey, in order to harmonize the vector map and the orthophoto.



**Figure 9 - Sherishte (Vlore)**

In Figure 9 it appears that the vector data need scaling, rotating and shifting in order to make the features fit the orthophoto. The shape (form) of some features of vector data match with the orthophoto features (for example, the roads), but they do not spatially match at all.



**Figure 10 - Fushe Milet**



**Figure 1 – Durres**

Figure 10 and Figure 11 also illustrate the same problem; the parcel boundary lines don't match at all with in the field layout as seen in the orthophoto.

The examples above illustrate several types of positioning inconsistencies, when comparing cadastral parcels, or blocks of parcels, with the 2007 orthophotos. These can be put into generalized categories in which the cadastral parcel vectors, compared to the orthophotos, can be said to:

1. Be shifted in one direction, or rotated, either uniformly or to different degrees;
2. Have a different scale (some features are larger/smaller than the orthophoto image);
3. Have all of the above differences simultaneously;
4. Appear to have plotting errors (there are zones in which the divisions do not match with the reality as interpreted from the orthophotos);
5. Are not updated in the areas where new infrastructure projects were implemented; and
6. The information is completely positioned wrong and there is no systematic procedure (approach) that could be applied for improving the graphical information.

Data *errors* identified at IPRO can be categorized into the following groups:

1. **Omissions:** (*differences with the real situation occurring because some action has not been taken, or because something has been left out*): these could include, for example, missing documents or incomplete documents. These discrepancies should have been identified at the front office, or by the notary, prior to accepting an application for registration.

**Recording mistakes:** (*discrepancies that occur as a result of errors made when creating the records in the IPRO*); examples of this might be incorrect and/or misspelled names, incorrect addresses, incorrect documents for both ownership and location, inaccurate plotting of parcels and buildings on the cadastral maps, or incorrect boundary plotting (using incorrect coordinates or other points of reference) on parcel maps. Back office IPRO staff are responsible for these errors, but they can be mitigated by comprehensive Standard Operating Procedures (SOPs) and checklists, thorough training and checking processes; quality control procedures can be implemented when standard SOPs are developed and implemented across all the DLOs (the SOPs themselves can be constantly revised and improved based upon operational experience).

Errors are typically discovered at the time a transaction on the respective immovable property unit is taking place. Until the time a transaction takes place, the property owner or adjacent property owners have no knowledge of the errors associated with the property. Unless the error in the property directly impacts the property rights of the adjacent owner, the owner of the property "in error" will not be made aware of that any problem exists.

A practice reported by some surveyors, and members of the public, is that the IPRO will reject a document on the basis that "*it does not fit with the official IPRO map*" (which has been proven to be inaccurate). The documents will only be accepted if the surveyors will change them to fit the inaccurate map in the IPRO. This could be classified as a forced error to make good data fit bad data, to accommodate inaccuracies already in the IPRO system. A similar practice is fitting new map data to fit the data held in the kartela – another example of distorting reality to fit the incorrect data already held. Both these practices must be stopped. A change of mindset, and law, will be required so that the latest up to date mapping / orthophotos, showing the real situation on the ground, is accepted as correct, and the supporting data adjusted so that the mapping and textual data are in sympathy. This can be achieved by providing new, accurate and up to date maps / orthophotos that reflect the true situation on the ground. Legal changes will have to be put in place, SOPs created and IPRO staff trained to the new way of working.

3. **Errors in the survey and notary documents:** These are the responsibility of the surveyors and the notaries, although both should be supported by IPRO in terms of providing information, and training if required, to ensure that the correct procedures are followed and the correct documents, to the correct

level of quality, are submitted. The documents can be checked by the IPRO staff responsible for entering the data into the appropriate database fields in the databases. The surveyors and notaries must have “standards of practice” for their services that meet the data requirements of the IPRO and these standards must be enforced either within the respective professions or by a body responsible for the licensing of these professions. If there are obvious omissions, missing documents, non-conforming standards of form and format then these should be picked up by the IPRO processing staff and the respective documents returned to the applicant for revision and resubmission.

## 10.2 Summary of the Technical / Legal and IT reports

The main output from the LADI project was a set of reports that summarized the current status, identified problems and made recommendations for change. The reports included:

**Summary of the Technical Report** - The cadastral maps investigated within the urban and peri-urban areas of the study revealed that the existing IPRO cadastral maps do not reflect the current immovable property situation on the ground. The majority of immovable property units (parcels and buildings) are in the incorrect location on the maps, often several copies of the same map sheets exist, and staff working in the IPRO are sometimes unsure of which map is the most current or most accurate. The IPRO staff, through using the maps on a daily basis and relying on memory, can generally find parcel information, but cannot confirm that the maps represent the current real situation on the ground, or the accuracy of the property rights information.

In many cases, the Kartelas and supporting documents were found not to be fit-for-purpose: the transactions after the First Registration process had only been recorded manually on the paper Kartelas; new buildings and apartments had only been registered in the paper Kartelas; and there were also cases where the transactions had been registered only in the Hipoteka books (the old deeds registers), but not on the paper Kartelas; and some transactions had not been recorded.

Recommendations were made in the technical report concerning:

- New geospatial data;
- Existing / legacy data;
- Categories of Data Quality problems and methodologies matched to each one;
- Creation of an IPRO Data Quality Improvement Plan including sections on Governance / Regulatory framework / Information Management / Engagement / ICT;
- Short Term actions to reduce further data quality degradation;
- Reference Framework and Base mapping;
- Priority Cadastral Zones;
- Changes to the Legal & Regulatory Framework; and
- Documents received from notaries.

**Summary of the Legal report** - The legal report also summarized the current situation, highlighting the areas in which changes are required, and discussing the problems involved in introducing new policies and methodologies. It illustrated, for example, how the current legal framework prevents the introduction of key data improvement processes. One example of the negative impact of the legal/regulatory framework is that the parcels registered digitally under LAMP, with the principle of reflecting the reality in the field, are being degraded when IPRO members of staff subdivide the parcel to reflect the surface area figures from the original privatization document. New, fictitious parcels, often as little as 20-50m<sup>2</sup>, are registered in the name of State. The IPRO is carrying out this subdivision based on a 2012 Council of Ministers Instruction, a relatively low-level regulation;

**Summary of the ICT report** – This report recommended the creation of a WEBGIS module in which data improvements could be processed and stored, and suggested tools, using available web-based solutions, which could use the import/export data from ALBSREP and could be linked to the ALBSREP Digital

Archive, NSDI Geoportal and the Government e-Gateway. The focus of the ICT part of the report was on the ICT systems and potential technology-related tools that could support IPRO data improvement programs. The IT part of the report contains the following sections:

- Section 1: WEB Platform for data quality improvement and first registration.
- Section 2: e-Services for Surveyors.
- Section 3: Import/Export Module from/to the ALBSREP.
- Section 4: Managing the existing paper index maps.
- Section 5: GIS Related Capacity Development.

The report made recommendations for minimum technical standards to be adopted and respected, including:

- ISO 19152:2012 Geographic information - Land Administration Domain Model;
- The national orthophoto (2016), available via the ASIG geoportal;
- The cadastre parcels and building standards, DCM 321, 27.04.2016 (On approval of the document "Technical Specifications Standards for geospatial information in Albania, Topic: Cadastral parcels ").

## **11. IPRO Data Quality Improvement (DQI) Program**

Recognizing the need to create digital cadastral data, Decision 688/2015 set a target of digitizing all cadastral records in Albania by Sep 2018. IPRO produced a document<sup>18</sup> to guide their DQI work with a series of measures aimed at the short, medium and long term. IPRO intended to meet the digitizing target and to complete a process of quality improvement and updating of data for the entire country also by September 2018. Measures included, for example, improving the legal and regulatory framework, completion of initial property registration in the remaining CZs and restructuring the IPRO staff and DLOs.

During the second week of September 2016, the IPRO DQI team began work in Tirana, initially by compiling legal records (kartela) into digital format, and then later that month beginning work on the cadastral mapping. It should be noted that neither the kartela or the graphical records were being digitized in a way that would enable them to be added to the ALBSREP land register database; the data models being used to capture the data were not compliant with the national standard being used in ALBSREP.

IPRO started their process of DQI with the aim of completing 180 CZs, which includes all 148 CZs for the municipality of Tirana. 32 other CZs were selected from the CZs located in the territory of Durres, Fier, Korce, etc. Over 360 employees were recruited by IPRO to complete the DQI project. All funds for this process were provided by IPRO using its budget revenues. The Directorate for Project Management at IPRO central office coordinated this activity from October 2017.

### **11.1 IPRO DQI Methodology**

The IPRO methodology for DQI involves three Phases: 1) The textual part of the register (Kartela) and the graphical/mapping part are both digitized and then linked together where possible. Article 64 of Law No.33 / 2012 "*On the Registration of Immovable Property*" opens the legal path for the updating and improvement of immovable property data. Decision No. 245/2014 defines the overall work procedures. 2) After digitization,

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<sup>18</sup> *Direction and Policy Document on Short, Medium and Long for Improving the Registration System of Real Estate, Report (Plan) Action*

the planned methodology is for data to be updated where possible, put on public display. 3) Data updated again, registered and entered into ALBPOS. These phases are described in detail below.

### Phase 1- Digitization

#### Kartelas –

1. Paper Kartela books are scanned and the images used to enter data into a database using e-Pasurite software written specifically for the task. Two different people enter the same data, independently. If there is a discrepancy it is flagged up for investigation. According to the staff involved in digitization of the Kartelas, the software does not allow automatic controls for the quality control of data entry, which results in more people having to be involved than is necessary. The process for updating includes the allocation of the parcel ID number.

#### Property Parcel Maps –

The process for improving the graphical data involves using:

- a. Existing (and out of date) First Registration vector digital data;
- b. Orthophotography (2007);
- c. Scanned and vectorized mapping from the paper master maps used to update the original First Registration data.

In the demonstration provided to the WB team, orthophoto from 2007 was being used because it used the same Gauss Kruger co-ordinate system as the First Registration vector data that was being used in the AutoCad software being used. This is not the official national standard for cadastral parcel co-ordinates (KRGJSH-2010).

1. The First Registration vector mapping exists in 2,500m x 2,500m map tiles covering each CZ. In the area demonstrated there were 15 such tiles. The data have not been updated since the original survey and so are approximately 20 years old;
2. These vector lines and polygons are then superimposed over the 2007 orthophoto. The fit varies, and shifts are random, not systematic. In the sample demonstrated there was a discrepancy of over 140 metres;
3. After the original mapping vectors (which are typically dated pre-2000) are fitted to the 2007 orthophoto, an attempt is made to add any updates made since the original map was made. The operators do not have access to the original survey documents – just the master plan(s) onto which the parcel polygons are copied;
4. In some rural areas, there are no updates. In more complex urban areas the changes can be very complicated. The paper working master copy is scanned. Where possible the corner points are used to provide co-ordinates, after which the new line work (shown in red ink) is vectorised by the operator. In many cases the line work is worn, may have been updated multiple times, or is illegible. There are often multiple parcel IDs and sometimes none. The IDs are added to the updated mapfile;
5. In some cases, there are no corner marks to use to geo-reference the line work, making accurate alignment to the grid impossible;
6. An Excel file is extracted from the data, showing the CZ, parcel ID and the surface land area;

#### Linking the Data –

6. Another software application, made “in-house” (Audit-Karte-Kartela), is used to match the parcels from the Kartela to those from the map. Data from the Kartela (in e-Pasurite) is extracted into an Excel file. Not all Kartela fields are included; just CZ, Volume, Page, Parcel ID, Area, Type of property and the Label “active” or “non active”.
7. The data fields are compared and results in three sets of parcels:
  - Those where the same parcel ID is matched in both the Kartela and the map;
  - Those where the parcel appears in the Kartela, but not on the map, and

- Those where the parcel ID appears on the map, but not in the Kartela.
8. In the cases where there is a match in both Kartela and map, a report is generated that shows the list of CZ, Parcel IDs, Volume, Page, Area shown in Kartela, Area shown on map, and the difference in area. In the files viewed by the Bank team, only one parcel matched exactly in area in both the Kartela and map.
  9. A further report is generated that lists all the parcels that can be forwarded for Public Display.

#### Phase 2 – Public Display

10. The intention is to use the list of updated parcels, with copies of the updated map, to allow owners to inspect and approve the updates. Claims will be processed and the data updated. This process had not yet been tested.

#### Phase 3 – Updated Registration

11. The intention is to register the updated and approved data in the system, and enter it into ALBPOS. IPRO has reportedly (December 2018) accepted quality improved data for 2 cadastral zones, although it is unclear whether these are in a format which can be used by the ALBSREP system.

### **11.2 Current Status of the IPRO DQI Program – December 2018**

The DQI program has employed significant numbers of people, with a maximum in 2017 of 380, but by April 2018 the numbers employed had fallen to approximately 200. Those met by the Bank team appeared to be skilled and enthusiastic. The Bank team was told that there are currently (December 2018) still 180 CZs being processed for DQI, including 148 in Tirana. Work is ongoing in all of these, but 6 CZs have been forwarded to IPRO and another 50 are said to be nearly ready for forwarding.

The task has clearly been a difficult one and progress has been nothing like that anticipated. It would be fair to describe the IPRO program as a data digitizing program rather than a data improvement program as the current work has resulted in a great deal of digital data, but there has been almost no data improvement – the program has not resulted in any more combined text/graphic records in the ALBSREP system. At the time of the April/May 2018 WB mission, the IPRO estimated that “nearly all” of the kartelas had been digitized, but only around 25% of the 4.2 million properties in Albania were in the ALBSREP database. It was reported, however, that 4-5 thousand kartelas were being added to ALBSREP each month. For the graphical part, it was estimated that 50 of the target 180 CZs had been digitized, but it had not been possible to add any of these data to the ALBSREP system.

In summary, the DQI program results as of December 2018 were:

- The data produced by the DQI program are considerably behind schedule; only 6 CZs have been forwarded to IPRO, and no new data uploaded to ALBSREP;
- None of the CZs have been field checked for quality – there has been no field survey and no ground check on positional accuracy, and no field checks of the textual data;
- All CZs contain errors that need further investigation. The vast majority of parcel polygons show differences between the mapped area and the kartela recorded area;
- Any data updates produced using the 2007 orthophotography cannot show features built after 2007;
- No parcels have been forwarded for public display;
- It is unclear whether current legislation permits updates to the register from this DQI program source;
- Both the Kartela and mapping data remain unregistered and outside the ALBPOS system - data in e-pasurite cannot be extracted into ALBPOS

### 11.3 IPRO DQI Program - Conclusions

The methodology being used by IPRO is not logical and difficult to understand, resulting as it does with data that cannot be directly imported into the official ALBSREP software that holds the register. The usual cross checks and validation measures one would expect to be included do not appear to have been used, and all work is done without any reference to the “real world” – there is no field checking taking place. The data are not in the national co-ordinate standard, updates are at best over 10 years out of date, and work does not appear to have been implemented to change the legislation in order to allow these updates to be included in the register.

On the positive side - although no changes to the register have been made, or currently can be made, there is a large body of digitized data that could possibly be used to improve the current register if a well-planned methodology is designed, if modules are developed, based on the ALBSREP data model to assist the process, and if necessary legal changes are made. However, it is questionable whether the current program should be continued in its current form given the poor results to date and the lack of a clear plan for completion. Another critical element is to ensure that once data quality improvement is completed, data will be maintained in a good quality. This has not been considered by IPRO, despite the LADI project recommendations for development of a module for surveyors. Technical Specifications for such a module have been prepared and available in LADI ICT report.

IPRO engaged an independent consultant to evaluate its data update and improvement project. The consultant participated in the meeting when the WB team met with the Director of First Registration and Cartography early in 2018. During the discussion, the consultant emphasised that her findings were preliminary and still had to be concluded and presented to IPRO management. Based on her preliminary evaluation, however, the DQI project appears to have started without clearly identifying its strategy, goals and objectives. According to the consultant, the project also has weakness in the way it has been managed and coordinated so far. The consultant was to submit a report to the Chief Registrar on the evaluation of the project. The report will include all consultants’ findings and will provide concrete recommendations for improving project management schema, as well as for completion of necessary documentation, which is needed for a successful project implementation<sup>19</sup>.

## 12. Data Quality issues:

### 12.1 Data Completeness and Quality

- First Registration – this is not complete: there are still 20 CZs unfinished from LAMP and the southern coastline;
- Public land - Registration of Public/State/Municipal Properties is not yet completed in full. It is estimated that there could be around one million state properties;
- Analogue records - Most of the IPRO data are only in paper format (mostly cadastre maps). For example, in Durres out of 81 CZs, only 5 CZ have digital cadastre maps (4 urban and 1 rural);

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<sup>19</sup> The situation mentioned here was described in early 2018, the report mentioned may have been completed by now but the World Bank team has not had any further update

- Poor quality of records - The quality and readability of the paper versions of cadastral index maps are in some cases extraordinarily bad, making it difficult to make out the location of a property or understand the status of subdivisions or apartments within buildings;
- Not always unique IDs - The parcel identifier is not unique at the national level and also at the cadastre zones level (due to the old paper based systems and the maintenance of digital data outside the ALBSREP);
- Procedures - There is a lack of unified procedures and instructions (a knowledge base) on how to deal with problematic cases – each office invents its own way to deal with problems and there are different ways of using the ICT system and dealing with errors in data and the system;
- Data not matching reality - IPRO cadastre plans do not always match the reality on the ground (which can usually be checked with an up to date orthophoto – 2016 orthophotos are available);
- Multiple records - ALUIZNI cadastre plans do not always match the IPRO cadastre plans;
- Incomplete data - The legal records in the kartela often do not match the cadastre plans (e.g. different ground areas recorded).

## 12.2 ALBSREP and other software systems

- Incompatible systems - IPRO is using various old software systems, which have a different structure and different data models than the ALBSREP (e.g. “*Pasurite*” for digitizing Kartela records, AutoCad for digitizing cadastre plans, Access to link the Kartela digital records with the cadastre plan. Old systems are being used for the IPRO DQI program and for First registration;
- Lack of data integration - The scanned old archive has been fully integrated with ALBSREP at the time of LAMP project completion, but later on disconnected from ALBSREP (for example all archive documents in Durres have been scanned, but are not accessible from the local office anymore). The old digital archive was developed prior to the ALBSREP and made interoperable with ALBSREP, Unfortunately for an unknown reason, IPRO disconnected the digital archive from ALBSREP, which made the investments for data scanning under LAMP project meaningless;
- Migration problems - The process to migrate data from the old systems into ALBSREP has insufficient verification controls and can be problematic. Some data are migrated with mistakes, for example parcels unique number in ‘*Pasurite*’ is text format and the same unique number in ALBSREP is a real number format, making them difficult to match or migrate;
- Institutional linkage -ADISA (Land Registry front office) uses a separate software system, which exchanges data with ALBSREP only once a day due to the agreed procedure between the IPRO and ADISA for data transferring. Software upgrades - ALBSREP needs further development – advanced graphics, development of surveyors module, generation of management reports, and others. Staff reported some problems with ALBSREP that were mainly related to administration and maintenance rather than functionality;
- Maintenance – IPRO does not have maintenance contracts for the hardware and other equipment, for example, the big UPSs (Uninterruptable Power Supply) have no batteries and some need to be repaired. Old servers in use at the IPRO, which have been recently flooded, need to be replaced.

## 12.3 Other Data Issues

- Linkage with other institutions - The NSDI portal includes a cadastre layer showing cadastral parcels. These are first registration records, and none of the updated cadastral maps are included in the portal. There appears to be no update procedure for including updated cadastral parcels in the NSDI portal. The development of a parallel tax cadastre is clearly inefficient;

- Linkage with Municipalities - Petrela is an administrative unit located within the territory of the Municipality of Tirana. Its representatives have chosen to prepare updated maps to reflect properties as they are in reality and find ways of collaborating with the Municipality of Tirana and the IPRO DLO to enable property registration based on that reality. This information has not yet been submitted to IPRO for final data update and improvement, and the process for finalization is not clear or standardized;
- Procedures – There is a need to examine all IPRO procedures and find ways to streamline existing methods to improve efficiency and transparency. The process of taking surveyors recently surveyed data and then “fixing” it to match existing data is clearly wrong. The same situation can happen to data from ALUIZNI. Applications to the Tirana IPRO can be made either through ADISA, or electronically by a notary. It is apparent that, despite having a sign at the back-office entrance that only ADISA deals with the public, that many come through the back door to meet IPRO staff. There is no record of the meetings, queries or conclusions of these meetings. The staff member spoken to about these informal meetings said it was primarily to give advice to those that lacked understanding;
- Scanning - Every application is scanned as it comes in to the IPRO DLO. Paper versions are packaged and delivered at the end of the day to the relevant IPRO division. Unfortunately, the scanning and archiving activity that used to run effectively before 2015 no longer functions. So, records are no longer accessible electronically if they need to be reviewed in subsequent transactions. The principle of having all necessary information on-line to the IPRO staff member processing an application no longer works and the staff member often has to visit the archive and collect paper documents in order to complete his or her investigations. This seriously delays work and is one of the reasons that about 50% of cases do not get completed within the specified required completion date.
- Surveyors - Within each IPRO office there are both surveyors and lawyers working on transactions or processing documents for First Registration – including the mass of documents coming from ALUIZNI for registration. The survey activities and procedures appear to be very inefficient. The surveyors do not appear to utilize coordinates provided by private surveyors, or to download electronic documents. They often still work in AutoCAD rather than using the tools provided in ALBSREP. Orthophotos that are currently available through the ASIG portal and being utilized by the data upgrading and digitizing teams are not available in the ALBSREP system. The orthophoto (2016) is an essential tool that can ensure that the location of a property shown in a plan fits the ground situation.

### 13. Data Quality Conclusions and Recommendations

#### Data Quality Conclusions

Data quality problems are engrained in many different aspects of the land administration process and stem from many different causes. There are technical, legal, and organizational issues involved and these need to be addressed in a joined-up way as part of a well thought through action plan.

The precise quality of IPRO cadastre and registration data over the whole country is not fully known, but for large parts of the country it appears to be unfit for purpose; it is out of date, inaccurate and of poor quality.

The problems of cadastre and land registration data are having an impact on security of tenure and are a constraint to investment and economic development. There is a need for greater transparency, and for more efficient procedures providing better services for users.

Part 1 of this document listed some of the principle [blockages](#) affecting the land sector and a list of [recommendations](#) for overcoming them. Many of those recommendations were directly related to data quality and could be implemented via activities within the new National Cadastral Authority.

One of the most fundamental aspects of the current problem with data quality is the ongoing legal interpretation and principle that the original land allocation documents had accurate surface area calculations and that the existing legal registration must be right and therefore cannot be changed – even if the new,

accurate surveys or other information shows them to be incorrect. For example, many old parcels were defined in the days of poor ground survey methods (or even none), but the law does not outline an easy procedure to correct the data– so an up to date and accurate parcel boundary survey has to be “adjusted” to fit the incorrect details already held. This is clearly wrong and until this principle and way of thinking is changed, along with the relevant legislation, there is little chance of having an accurate, up to date and reliable cadastre and land register.

### **Data Quality Recommendations**

1. The Cadastre Law includes some positive changes, particularly relating to proposed institutional change;
2. Despite considerable effort and expense, the current IPRO DQI program has not yet produced any improved data into the ALBSREP database. It is recommended that the current DQI program is suspended, a plan is made for using the data already digitized and a new DQI program formulated;
3. The WB provided IPRO with a document<sup>20</sup> that provided an initial framework for dealing with the data quality improvement issue. This would still be a good starting point for constructing a planned approach to indentifying, quantifying and dealing with the data quality problems faced by IPRO;
4. Data Quality Improvement should also take place within the package of activities recommended in the ILM Program Land Market Roadmap drafted by the WB in May 2018;
5. The new National Cadastral Authority strategy, and annual business plan should reflect the principles and recommendations made in this document;
6. Albanian national standards should follow the recommendations set by the EU INSPIRE Directive<sup>21</sup> (for Cadastral Parcels and Buildings). In the case of cadastral parcels for example, this would mean adopting the recommended positional accuracy of 1m in urban and 2.5m in rural areas. This would allow and encourage more use of the orthophoto for delineating cadastral boundaries; the adoption of the Fit-For-Purpose Land Administration approach being advocated by the WB, UN-HABITAT and the International Federation of Surveyors (FIG). The INSPIRE data specification lists three data quality elements: completeness; logical consistency; and positional accuracy. IPRO should be publishing targets for these, and metadata to indicate how well the data match the criteria;
7. It is recommended that an audit is completed of data quality, using samples across the whole of Albania in order to establish the range of qualities of existing data. This will highlight areas that need further improvement, identify the categories of error, and allow IPRO to set standards targets that can be published so that users know what to expect. There are international conventions and examples for this and the INSPIRE Directive provides guidance (see above). Typically, standards would include:
  - a. Completeness – the match between real world objects and those included in the map;
  - b. Positional accuracy – how closely mapped data fits to its real-world position;
  - c. Temporal accuracy – using unique IDs and providing data relating to history / lineage (is it complete and does it conform to the standard?);
  - d. Logical consistency – how well the data matches the specification;

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<sup>20</sup> World Bank document - IPRO National Data Improvement Program – Overview and Action Plan, Dec 2015

<sup>21</sup> INSPIRE Infrastructure for Spatial Information in Europe, Data Specification on Cadastral Parcels – Technical Guidelines, D2.8.1.6, 17<sup>th</sup> April 2014

- e. Attribute accuracy – how well the attributes match the real-world situation.
8. To improve the quality of data in the cadastre, IPRO should follow the following guidelines:
- a) Adopt the principle that the property parcel map must reflect the situation on the ground – not fitting the good new data to incorrect existing data;
  - b) Accept the “curtain principle” that the last version of the registered property is the correct one (don’t undertake a search each time a transaction takes place);
  - c) Adopt the principle of using topographic blocks with fixed borders (streets, rivers, bridges, etc.) for DQI (systematic and sporadic) and for First Registration (IPRO is using this principle for the ALUIZNI data);
  - d) Use a common WEBGIS Module as a working environment for all staff involved in DQI and First Registration processes (data entry staff, local offices staff, HQ staff, quality assurance staff);
  - e) Adopt the national standard cadastral parcel and co-ordinate system: this should be mandatory for all surveyors, government and municipal users. Land rights are issued by 12 other government agencies, but principally ALUIZNI, TAP and the Municipalities;

Set up a standard GML/XML format for digital elaborates and make obligatory the submission of digital elaborates (online or at the front office).