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Policies Alignment in Land Administration

Case: Territory Completeness for Peace Process Support in Colombia

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ABSTRACT

Since November 2018, the Colombian Government has promoted a legal, procedural, and organizational transformation process aiming an updating of the current land administration scheme, considering the peculiarities of the reality of a country wherein cadastral matters considered in the peace agreement evidenced significant social debt. Herein, challenges in adopting new policies that break traditional patterns are outlined, especially in situations where the system as a whole is expected to address high expectations among citizens and a need for adoption of better policies that allow for fulfillment of related commitments.

Such comprehensive vision of land administration in Colombia has included making decisions that include the adoption of an international modeling standard (LADM); the inclusion of the complete reality of the territory in the massive survey process, including informality; transforming cadastral functions into a public service, decentralizing duties historically exclusive to the Agustín Codazzi Geographic Institute; and the regularization process transformation—from individual demand to mass offering.

Colombia's goals display great ambition, not only in terms of expected coverage of an issue perceived as highly sensitive, which in turn usually effects technical and technological impact; but also because of the application of disruptive policies requiring greater efforts for resistance to change across institutional culture, processes and procedures.

Key Words: LADM, Land Governance, Land Policy, Multipurpose Cadaster.



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1. INTRODUCTION

The traditional approach to land management, a consequence of the isolated evolution of institutions dedicated to fulfilling their internal mission, push the Cadaster toward biased views of fiscal or legal matters, having great impact on the policy implementation efficiency of the State. For example, in excluding informality from official records, the country lacks the required information to implement massive regularization processes. Moreover, the lack of a comprehensive land management outlook forces institutions managing legal territorial objects of public rights, such as protected areas, national parks, river protection, etc., to store information for internal processes, not making such information available for other stakeholders and potential users. This eventually has an impact on citizens, whose satisfaction is the public service.

The comprehensive view promoted by public policies in Colombia, especially regarding the Land Administration and Multipurpose Cadaster within the framework of the peace process currently undergoing in the country, seeks to break down barriers held by the traditional approach via the inclusion of a full picture of the reality of the territory in matters of information and citizen focused processes. Regarding information management, the new view involves the adoption of the LADM standard to model the continuous coverage of cadastral information, conveying both formality and informality records across the territory, in addition special regime objects affecting the land domain, use, occupation or provision. Regarding the processes, the integration of stakeholders, tools and procedures is included as well under this vision of a Land Administration System, aimed at improving efficiency in services required by citizens

2. TERRITORIAL CONTINUITY AS A CADASTER 2014-2034 STATEMENT & VGRT-BASED LAND GOVERNANCE

The philosophy of complete land information is strengthened into a global perspective in the FIGi declarations contained in the Cadaster 2014 and the vision for 2034. Such perspective seeks to ensure that private property and the public rights imposing restrictions and responsibilities thereupon are modeled under the same reference frame, thus enabling a transparent setting for citizens to know their property rights limitations as well as an efficient basis for territorial planning policy enforcement by the State. Additionally, in compliance with sustainable development goals for 2030, it is essential to consider different tenure types as per the Voluntary Guidelines on Responsible Governance of Tenure (VGGT)ⁱⁱ observed by the country.



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In the case of Colombia, according to Law 1955 of 2019 – National Development Plan for 2018-2022 and the national planning instruments known as CONPES (CONPES 3859, CONPES 3951), it is established that the Land Administration modernization will include the adoption of policies based on Cadaster 2014-2034 philosophy. Translating these philosophical concepts and international trends into a specific national context has an impact on technical and technological matters, which Colombia has been addressing for over five years to date. Application of the above concepts to policies and land regularization is a much more complex challenge, due to decision-making processes and procedural changes.

3. POLICY BACKGROUND, DESIGN & IMPLEMENTATION

Social debt represented by the lack of policies to facilitate access to land was evidenced by the fact that one of the commitments included in the peace agreement signed by the Government and armed groups was to update cadaster records all over the country. Although an information update is a main requirement of modernization, the lack of policies ensuring efficiency and results for citizens may halt the expected transformation at a mere information inventory level. Considering this within the Colombian scenario, it is important to draw attention to high-level regulation that enable or guide process improvement at institutions responsible for implementing public policies.

Considering that the expansion of cadastral coverage and its update facilitate formalization of rural and urban properties, in addition to the undeniable need to implement the first interoperability phase for information between cadastral and registry information from the Multipurpose Cadaster, Law 1955 of 2019 – National Development Plan adopted learning from prior experiences and addressed the cadastral concept very differently, based on an evident need for a cadastral update featuring national coverage as well as urgent interoperability with legal registry, under the principles of Agreements 02 to 05 of 2019 issued by the Superior Council of Rural Land Administration and Use Planning and Decree 148 of 2020.

The implementation of the latest digital tools for cadastral purposes, leading to a much-needed simplification of cadastral procedures by the Agustín Codazzi Geographic Institute (IGAC, for its acronym in Spanish).

The need to implement a stage-wise multipurpose cadaster, its top priority is addressing the urgent need for cadastral and registry information interoperability implementation.



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- The implementation will be carried out observing the cost-effectiveness principle in order to expand coverage and update the cadastral database, as well as to cross-check registry information under an interoperable system that allows for future integration of information related to subsequent phases of the multipurpose cadaster.
- The adoption of international cadastral standardsⁱⁱⁱ, currently based on the Land Administration Domain Model (LADM), was necessary to maintain the evidence of ownership title on properties in accordance with registry jurisdiction and to keep the ownership history and no-lien certificate as the single evidence of property ownership or real estate transactions.
- The Multipurpose Cadaster created a need for enabling the implementation of cadastral management in territorial stakeholders. Considering the ambitious goals of the upcoming four-year period in cadastral coverage and updating matters, the cadastral management have been designated as public service, which will be transferred in to providers across the country.
- Under applicable law, the former decentralized and delegated cadasters that once operated migrated to the cadastral management scheme without requiring any additional formalities with the aim of accepting the provision of cadastral service at the national level.
- The IGAC lost the cadastral monopoly in Colombia as under its management to date cadastral formation has not been possible in 28.32% of the national area and updating has been done only in 5.6% of the Colombian area. Considering that following fiscal rules impede the creation of new institutionality, the IGAC will have to revamp itself to comply with these requirements by assuming new functions.

Although this Project is implemented in Colombia using multilateral resources from IDB and World Bank, the completion rate that may be achieved using these funds is minimal given the size of the territory. Thus, mechanisms to decentralize management and fund its cost were activated to ensure consistency between commitments to citizens and resource availability. In addition, a roadmap of minimum policies was defined (Figure 1) as necessary to ensure the results of the massive reach proposed.

To reduce the risk of needing new legislation or acting outside the current legal framework, a mechanism was chosen in Colombia to guarantee making prompt decisions. Although new policies were enabling, there were gaps at the operational level that each officer could interpret at his or her discretion. Therefore, the concept of Superior Council of Rural Land Administration and Use Planning was found, currently in force, with which enabling guidelines were defined while new regulatory frameworks were being defined.



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AVANCES EN LA IMPLEMENTACIÓN DE LA POLÍTICA

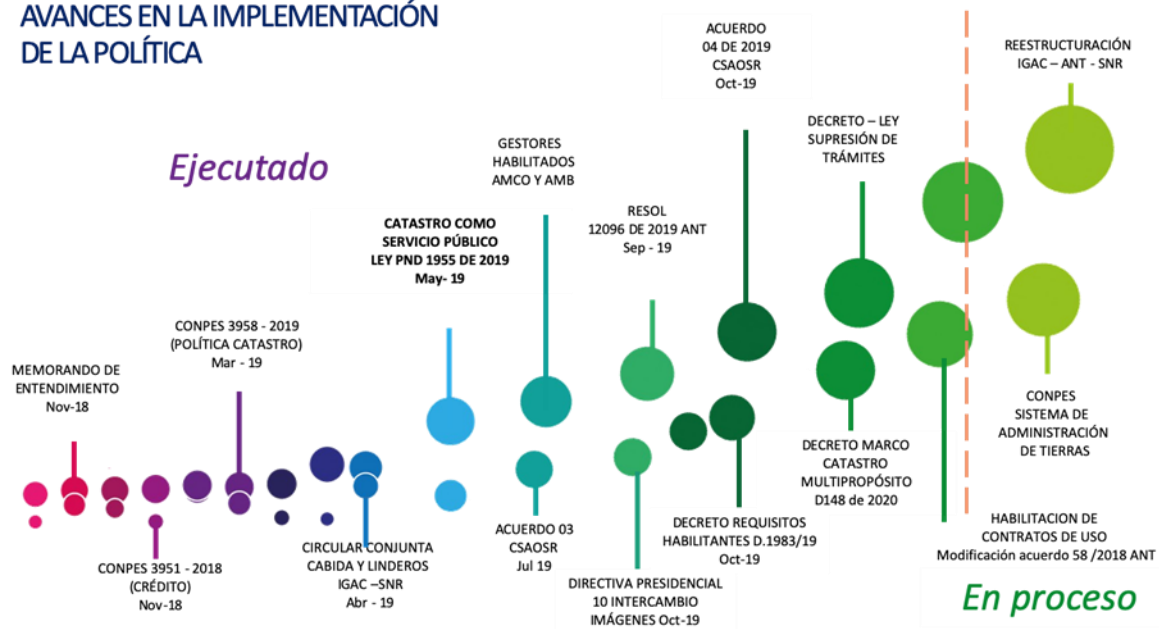


Figure 1. Policy implementation advances

4. THE NEED TO STANDARDIZE LAND ADMINISTRATION INFORMATION

The initiative to standardize the relationship between human and land is one of most important milestones in this matter, especially because it is in line with digital transformation trends that the Government, academia and industry should aim at in an integrated manner. Due to this coordination, the LADM has have global acceptance, particularly in the technological aspect as its approach is to simplify the digital modeling of the physical world in versions that allow better use, operation, maintenance, planning and management of assets, systems and services. In addition, the LADM has had an significant impact due to its philosophical foundation (Beyond Cadastre, 2014), which has obtained valuable contributions in relation to fundamental definitions and guiding values required for facilitating the creation of territorial policies which can be extrapolated to humanity sensitive problems. Therefore it has been included in the global development agenda due to its contribution to many SDGsiv.

Regarding technology, standardization provides a significant balance between the creative offer from the private market and institutional demand to improve services to citizens. Additionally, as it is a general application domain standard focused on information modeling, it leaves the door wide open for their principles to be applied to process standardization related to the operation made by chain stakeholders such as surveyors, notaries or authorities associated with territorial licensing. The above is possible as the current



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ISO 19152 standard, which has been in force since 2012, is applicable regardless a country's legal and institutional framework. Thus, it is feasible to model a "perfect" reality under the same domain in which physical and legal items match with official registries, including every item of the current civil code as well as social tenure realities that are not recognized by the legislation but that should be identified for conflict resolution or changes in regularization policies.

4.1. Policy on the adoption of LADM standard for property continuity.

As part of the modernization of land administration in Colombia, updating cadaster arises as one of the commitments in the peace agreement signed by the Government and armed groups. Among the public policies promoted by the Government, the adoption of LADM principles and the implementation of ISO 19152 standard was a significant decision to attack the whole problem of this context as different institutions execute multidisciplinary but unarticulated procedures on the same property such as cadastral and land registry management, tax collection, land titling, granting of permits and restriction application. LADM adoption aims at providing a single domain model to solve problems related to existing registries.

- Properties appearing in the cadastral database that although have their official registries, only their registered information gets formally updated, which differs from the physical reality as these have been outdated for many years.
- Properties registered in the Public Instruments Registration office which only recognizes formal rights, that is not consistent with the reality of cadastral records.
- Massive land data survey of which only pilot exercises have been carried out but will store all findings over the territory for both recognition of informal information and input to the National Land Titling Agency (ANT, for its acronym in Spanish) and other stakeholders involved such as municipalities.

The purpose of adopting the standard is to facilitate the domain of the entire territory, placing these and many other realities on the same relationship semantics, which will not be solved in the short term but will allow their control keeping their legal independence. Figure 2 shows the multipurpose cadastral approach based on a LADM core.



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Figure 2. LADM based – Multipurpose Cadastre approach schema

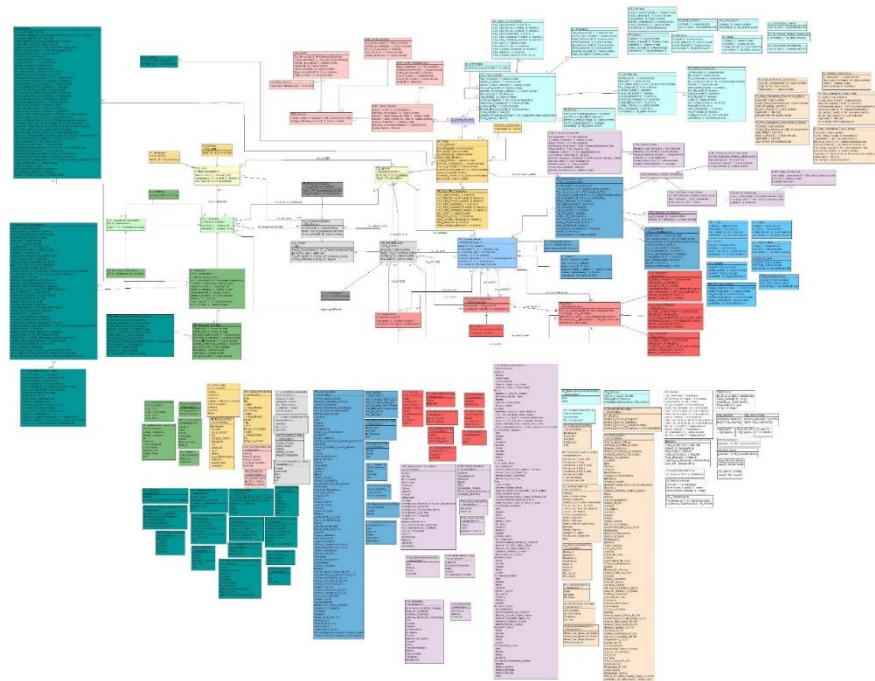


Figure 3 LADM-COL version 3.0

At present, the stage of the Colombian LADM-COL profile definition has been completed, which is currently in version 3 as shown in Figure 3. The implementation stage is currently in progress, prioritized in the Cadastre and Registry integration, on which operational processes have been defined for massive



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land data survey technological tools vi with which standard cadastral and registry information can be available based on the input provided by official registries.

4.2. POLICY ON THE ADOPTION OF LADM STANDARD FOR LEGAL TERRITORIAL OBJECTS

Furthermore, in order to comply with the principle of territorial completeness, it is necessary to consider territorial objects that constitute public or private rights ruled from other legislation and that cause limitations to the use, domain, occupation or availability of property. The LADM standard models it through classes and relationships of rights, restrictions and responsibilities (RRR), applicable to objects such as zoning land use plans, national parks, protected areas, risk areas, etc.

In the Colombian case, “non-parcel layers” vii are referred to within the framework of the new cadastral decree viii, which, rather than referring to external relations, focuses on the proposals for future version ix of the current regulation. This is also in line with the second trend of Cadaster 2034 known as “Orienting objects for Rights, Restrictions and Responsibilities”, which were modeled as additional properties but followed the approach of legal territorial objects having legal independence. Figure 4 shows the differentiation between data contained in the spatial data infrastructure in general and the modeling of special regime objects applicable to property reality using extended LADM models x of LADM-COL core, which will be applied by process stakeholders to facilitate license management and citizen transactions.

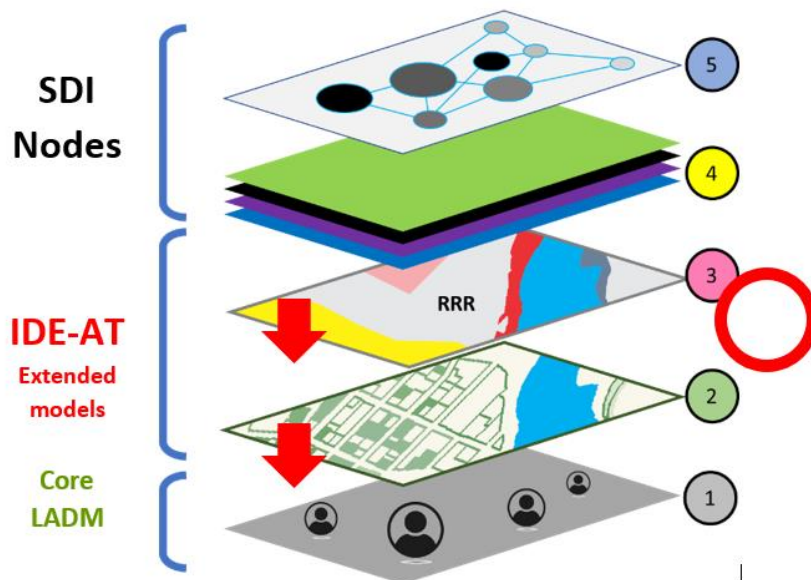


Figure 4 Schema of the LADM and RRR model integrated to the SDI.



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As the policy of legal territorial objects is adopted and systematized, a significant impact will take place in reducing the conflicts that in many cases have been created by the legislation itself, leading to the planning of decisions on the territory that are not visible as they are not organized under the same model and standards.

The current status of extended models that have been applied to “non-parcel layers” using the LADM standard is in its definition stage, including prototype versions for land use planning. The Implementation Agency, funded by the Swiss Cooperation, has assisted the Colombian Government in the adoption of LADM standard for the management of properties and special regime objects. In its second stage, support will be focused on the application of these policies in process decentralization and improvement.

5. THE CHALLENGES OF POLICIES APPLICABLE TO TERRITORY COMPLETENESS

5.1. BIAS ON THE LEGAL VISION OF THE CADASTER

The IGAC, as the cadastral authority in Colombia, keeps in its registries only those properties that are linked to real estates registered in the Property Registry records. This responds to a traditional vision that the “legal” cadastral approach does not involve keeping the “informal” reality nor public properties up to date and in use. Although cadastral data survey collects a continuous reality, the administration for conservation purposes or the issuance of cadastral certificates only focuses on formal properties, which is a practice reflected on documented procedures.

Colombia faces a major challenge in changing this policy under a “multipurpose” view so that the institutional transformation of the Agustín Codazzi Geographic Institute, through Cadastral Managers, provides to the State with the necessary information both for formal real estate market and implementation of informality regularization policies, in addition to other purposes in which both real formal and informal data are required. To this effect, the country has relied on mechanisms for the restoration of the ideal objective of Cadaster on data management, independent from the discipline of Right Registration and most importantly, with a functional organic transformation closer to citizens.

APPLIED POLICY: THE PRINCIPLE OF COMPLETENESS FOR THE CADASTER TO INCLUDE THE COMPLETE REALITY OF THE TERRITORY



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A significant difference in the new multipurpose cadastral policy in Colombia is the change of the traditional approach that only accounted for an inventory of private properties. The multipurpose cadaster surveys data from public and private properties, ejidos, adjudicated and non-adjudicated wastelands, rivers, lakes, moors and other geographic **features**, including informal tenure as data required by the State.

The principle of completeness adopted in this policy requires the cadastral map to be identical to the real map in order to adopt all decisions on public policy matters required, including the exact definition of the number and location of wastelands in the country.

The completeness principle can be extrapolated to guidelines breaking up the institutional domains, which is still the case among public institutions themselves. Presidential directive number 10 of 2019 requires national entities to share available satellite images and orthophotos of the national territory with the cadastral authority, resulting in saving 40% of costs. Figure 5 shows the result of the policy application covering up to 65% of the territory.

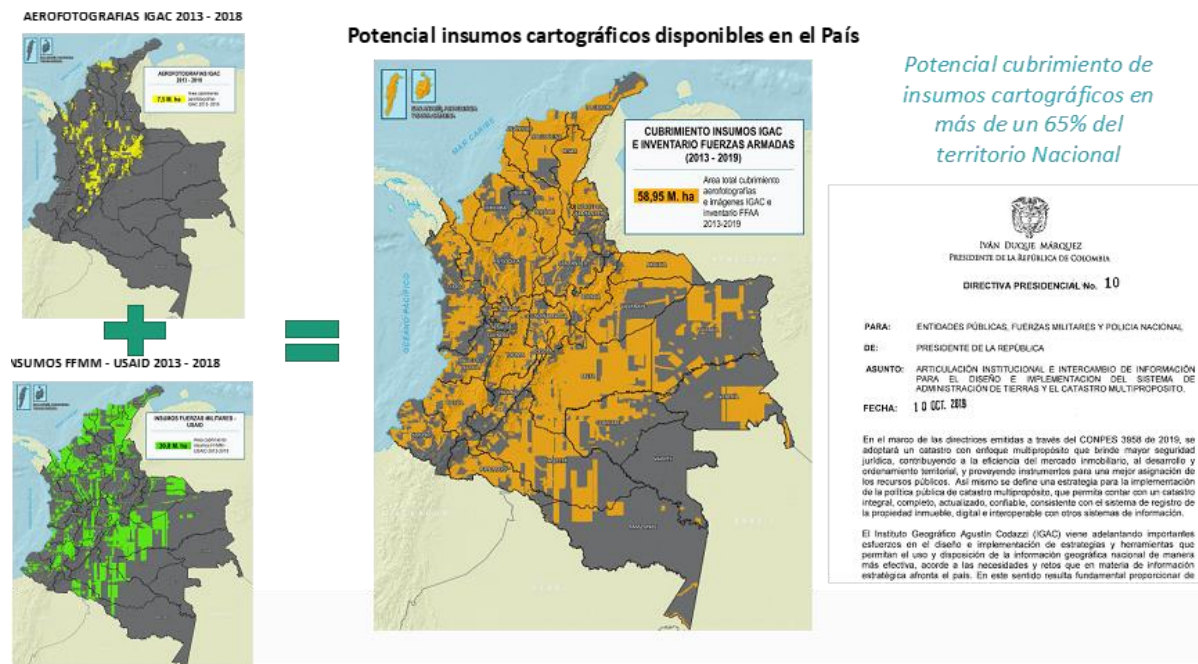


Figure 5 Raster information coverage.



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APPLIED POLICY: THE TRANSITION OF THE CADASTER INTO A PUBLIC SERVICE

Considering that cadastral formation, updating and conservation is just one step towards achieving high formalization rates of ownership titles on rural properties, it is clear that the achievement of the main public policy objectives in equality matters set out by the current government will depend on the correct implementation of the new Multipurpose Cadaster by high-level government agencies. The National Government, performing all actions leading to the implementation of public policies, issued Decree 1983 of October 31st, 2019 for the consolidation of the new era of real estate information in Colombia.

In this policy, cadastral management changed its legal nature from public function to public service, a change that was included in Articles 79 to 82 of Law 1955 of 2019. However, the chance for territorial entities to become qualified cadastral managers is now real. To date, the monopoly of the Colombian Agustín Codazzi Geographic Institute (IGAC) had updated only 5.68% of the national area, giving territorial entities the possibility of acting as authorized cadastral managers so that departments, municipalities, municipal organizations, metropolitan areas or territorial association schemes can be licensed.

Independent cadastral management implemented by municipalities, departments or territorial association schemes implies the possibility of managing the territory in an orderly manner; adopting consistent public policies in accordance with the elements of judgement provided by the multipurpose cadaster, which will be useful to obtain accurate information for the design of better public policies; increasing the chances in access to real estate to inhabitants, the independent administration of local real estate assets and the consolidation of tax equity.

APPLIED POLICY: OPENING FOR MANAGEMENT OF ECONOMIC RESOURCES TO FUND THE CADASTER

The goal established by the current Government involves the cadastral coverage of 60% of the national area, being an ambitious goal considering that it is a new public policy whose implementation, as explained above, relies on the transformation of the cadaster from a public function to a public service and the methodological adaptation of IGAC and entities involved in the cadastral management process.



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Breaking up IGAC's monopoly led to the birth of new cadastral managers that joined the supply side of the country's cadastral service provision. These managers are public entities at national or territorial level that should develop new skills and get a learning curve in cadastral management.

In the case of Barranquilla, after the creation of the cadastral division under the previous regime, the learning process was rapid and quickly surpassed IGAC in terms of quality and capacity. However, considering that all cases will not have the same effect, a support model was introduced to assist capacities at the territorial entities.

After the adoption and issuance of Decree 1983 of 2019 dated October 31st, 2019, three additional cadastral managers have been authorized so far (Central West Metropolitan Area, Bucaramanga's Metropolitan Area, and Valle del Cauca Area). More than one hundred territorial entities have expressed to the IGAC their intention to become authorized cadastral managers, for which each prospective manager must demonstrate sufficient resources for the provision of public cadastral service, being considered a very important source of funding the fulfillment of the goal.

In addition to the resources from multilateral banks (World Bank – IDB) and public treasury funds, there are other resources from parallel cooperating partners such as USAID, Swiss Cooperation and the United Kingdom. Additionally, Decree 98 of January 28th, 2020 gives the possibility of allocating resources from the “public works for royalties” mechanism to the multipurpose cadaster in low-development municipalities classified as PDET (Territorial-Based Development Plan in Spanish), mainly due to the presence of violent groups

5.2. ON-DEMAND PROPERTY TITLING

In Colombia, titling programs have been traditionally focused on meeting citizen demands rather than on a massive supply by country's institutions. This led the institutions, that dealt with this task at different periods, to turn their organization's tasks into non-homologous procedures which had complex and numerous steps, requirements and times.

The Government is committed to a massive supply policy that, following the VGRT guidelines, is linked both to the Sustainable Development Goals (SDGs) and internal social commitments established in the 2016 peace agreement. To achieve goals on a massive scale, regularization policies currently include



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difficult tasks to simplify procedures at the National Land Agency (ANT for its acronym in Spanish) for the massive collection of candidates for regularization and the efficient file management.

APPLIED POLICY: MASSIVE SUPPLY TITLING

The Multipurpose Cadaster targets several functions, and considering Colombia's developing state, its first purpose is to allow the massive regularization of properties, taking into account that cadastral survey was the most expensive input in all the phases of property consolidation that had to be implemented to title real estate. Consequently, once the multipurpose cadaster is established, it enables the possibility for massive quick property titling at a lower cost. From 2016 onwards, some exploratory activities known as "pilots" were carried out for the Multipurpose Cadaster policy in Colombia in order to implement the policy and the massive regularization model of real estate based on supply and not on demand as had traditionally been the case in the country.

The difference between the regularization policy of urban and rural properties based on supply and the policy previously implemented on demand lies in the fact that citizens do not have to approach the State to request a property title (considering all barriers to access that it implies) but rather the State takes all its institutional services to citizens to resolve their requests. These pilots were initiated in 2016 and should have been completed by 2017, but due to difficulties in coordination between State institutions as well as inconsistent indications provided by the involved institutions to the institutions in charge, these exploratory activities could not be completed at the beginning of the current Government.

By the time the current Government started to address this policy, a top-level management was established by the Presidency of the Republic for the definition of public policies.

The priority was to redirect those pilots that still had resources, particularly those donated by USAID, analyzing the reasons why the intervention in the territory generated rework and cost overruns. In collaboration with several international cooperation agencies, including the National Planning Department, the National Land Agency, the Agustin Codazzi Geographic Institute, the National Administrative Department of Statistics (DANE in Spanish) and the Counseling for Management and Compliance of the Presidency of the Republic, it was possible to determine the reason why, at that time, no title had been granted in favor of inhabitants and the cadastral progress had been practically zero:



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Regulations, resolutions and decrees were intervened at a hierarchical level to simplify processes. An example of this is Resolution 12096 of 2019 issued by ANT in rural property adjudication process is simplified.

The Superior Council for the Administration and Management of Rural Land was reactivated by adopting a simplified form using a minimum number of variables (passing from 400 field variables to 19) as well as other changes.

With regard to the unfinished pilot of USAID, as a result of these modifications and the persistent monitoring and follow-up of the involved entities, 1,058 ownership titles have been granted to date, leaving a similar volume pending that covers all paths of property right regularization, as well as some contracts for the quite enjoyment of unallocated wastelands whose use is in accordance with environmental limitations. As of December 31st, 2019, the National Government had granted 43,912 titles in rural and urban areas.

It was necessary to make an inventory of the detailed regulations on the routes of property right regularization led by private individuals, as shown below in the Figure 6:

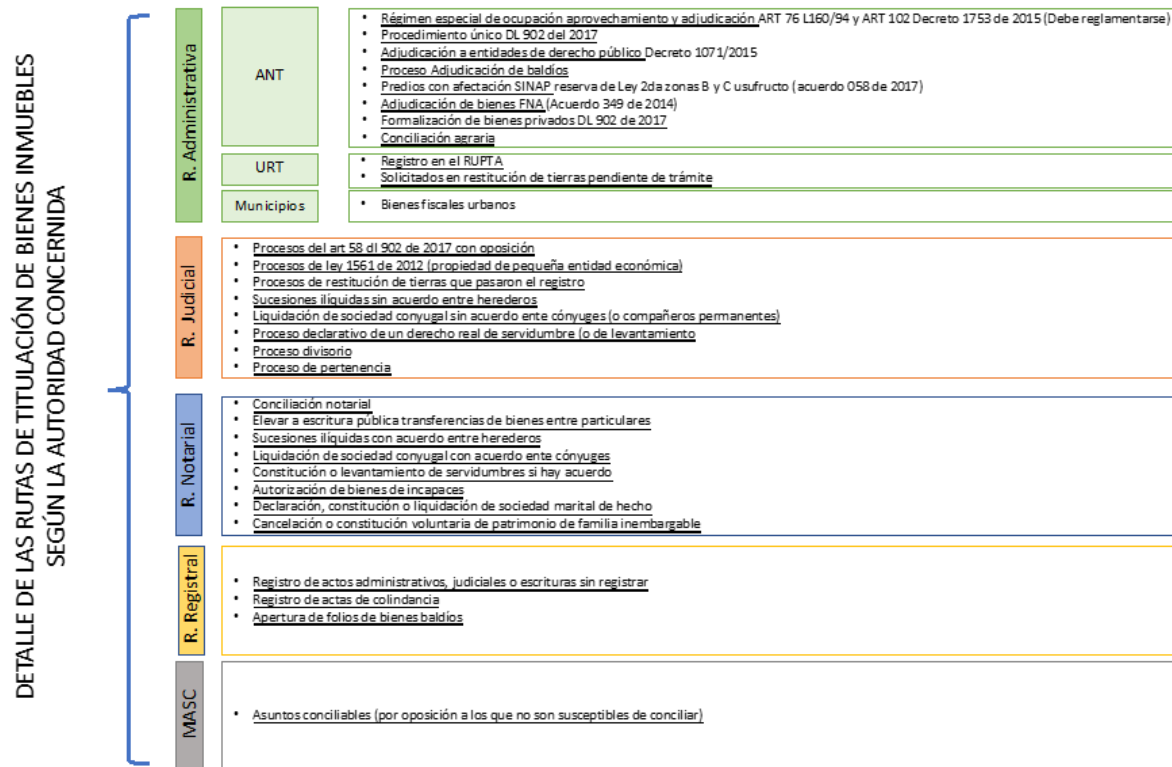


Figure 6 Routes of property right regularization



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Finally, it was necessary to classify the types of access to land ownership with a view to massification, in parallel with the implementation of the Multipurpose Cadaster. The consolidation of land titles led by individuals was always based on the necessary mass implementation of Alternative Dispute Resolution (ADR) Mechanisms, as shown in the Figure 7:

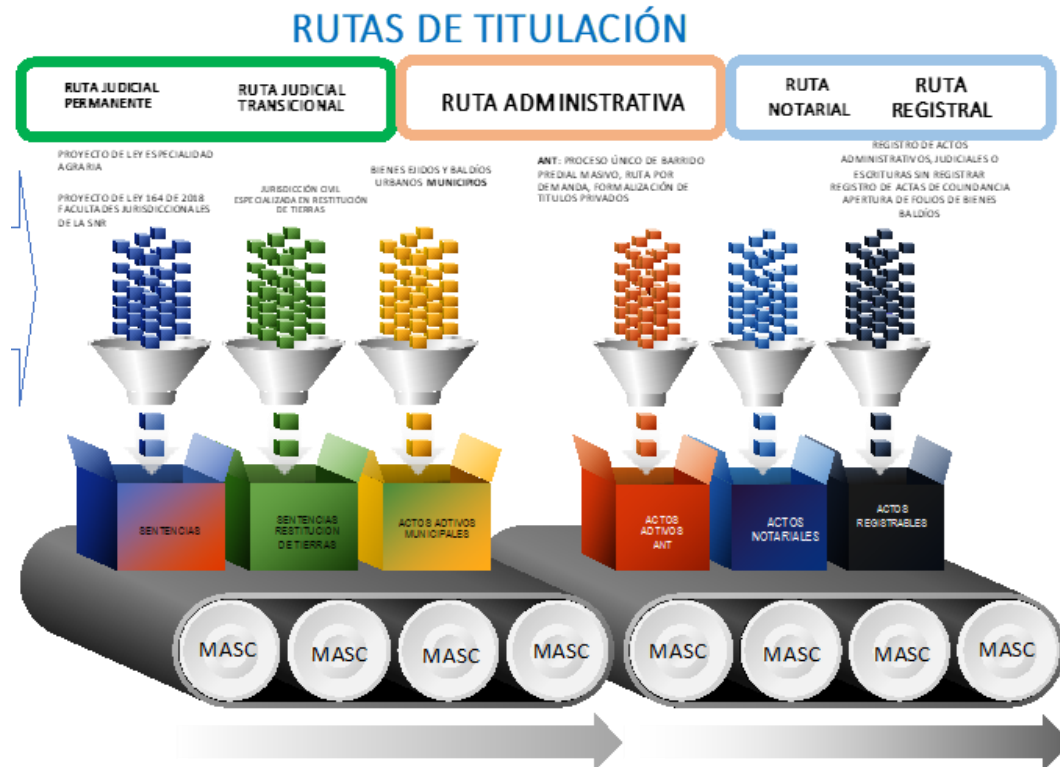


Figure 7 Titling unified and parallel routes

5.3. THE POLICY TO IMPROVE THE LAND ADMINISTRATION SYSTEM (SAT FOR ITS ACRONYM IN SPANISH)

The Constitution of the Republic of Colombia establishes in the first articles that the essence of public service is the satisfaction of the needs of citizens. In line with this statement, currently most of the policies promoted by the Government of Colombia generally aim at the digital transformation, which increases the commercial competitiveness and productivity indexes at the macro level, as well as the quality of life and public welfare.



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The Multipurpose Cadaster is the main current policy on landxi with which beyond being a response to the peace agreements, the institutional, technological and even educational scheme is now being transformed. However, one of the proposals that both the Government and the cooperation agencies are promoting is to see how this transformation will impact on better conditions for decision making based on reliable information as well as the provision of better services to citizens. Although the legislation for procedure simplificationxii on land administration has been in force since 2012, the concept of system modernization as a whole was included in policy instruments such as the National Development Plan 2018-2022xiii, CONPES 3859xiv and CONPES 3951xv that aim at a gradual transformation of processes.

EL SISTEMA DE ADMINISTRACIÓN DE TIERRAS EN COLOMBIA (SAT)

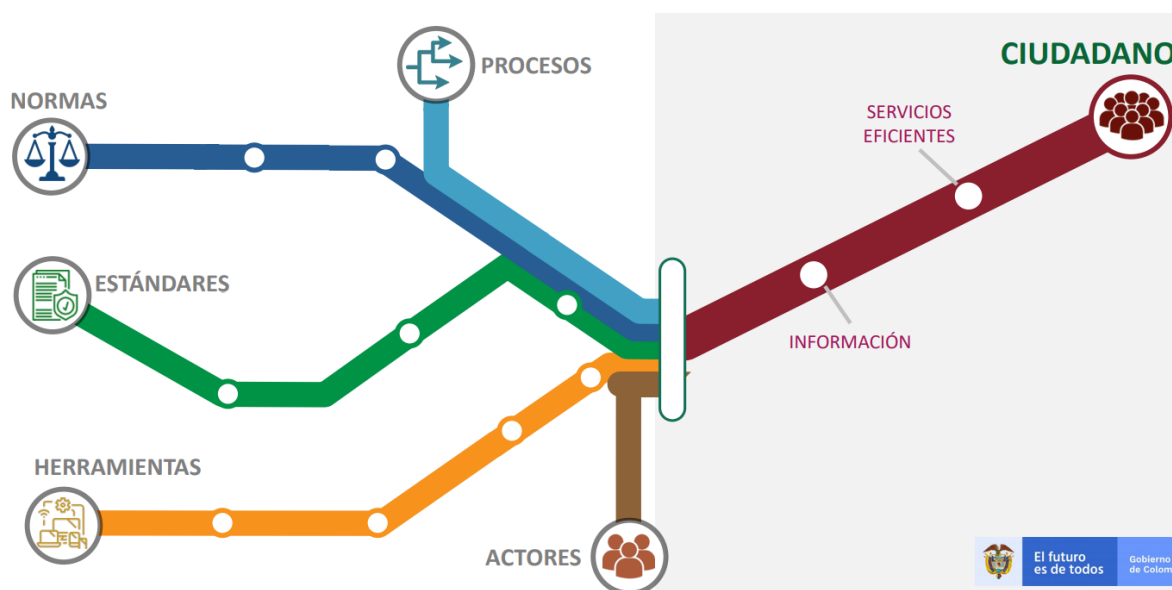


Figure 8 Visión esquemática de los componentes principales del SAT

Figure 8 of Land Administration System (SAT in Spanish) vision on Colombia's public policy does not have a merely technological connotation, but rather the set of norms, standards, processes, stakeholders and tools that jointly participate in the value chain of land administration, and which if it not considered in its overall vision, will lose its focus on process improvement in which technology is only an application tool. Therefore, the SAT policy becomes important in the Colombian context as there are currently many initiatives from institutional, private and international cooperation stakeholders that must work under a common vision.



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The SAT policy, as shown in Figure 9, focuses on the convergence of the main axes: Information management to have better data and operation management to provide better services on the premise that better decisions, based on better data, will lead to better results for citizens.

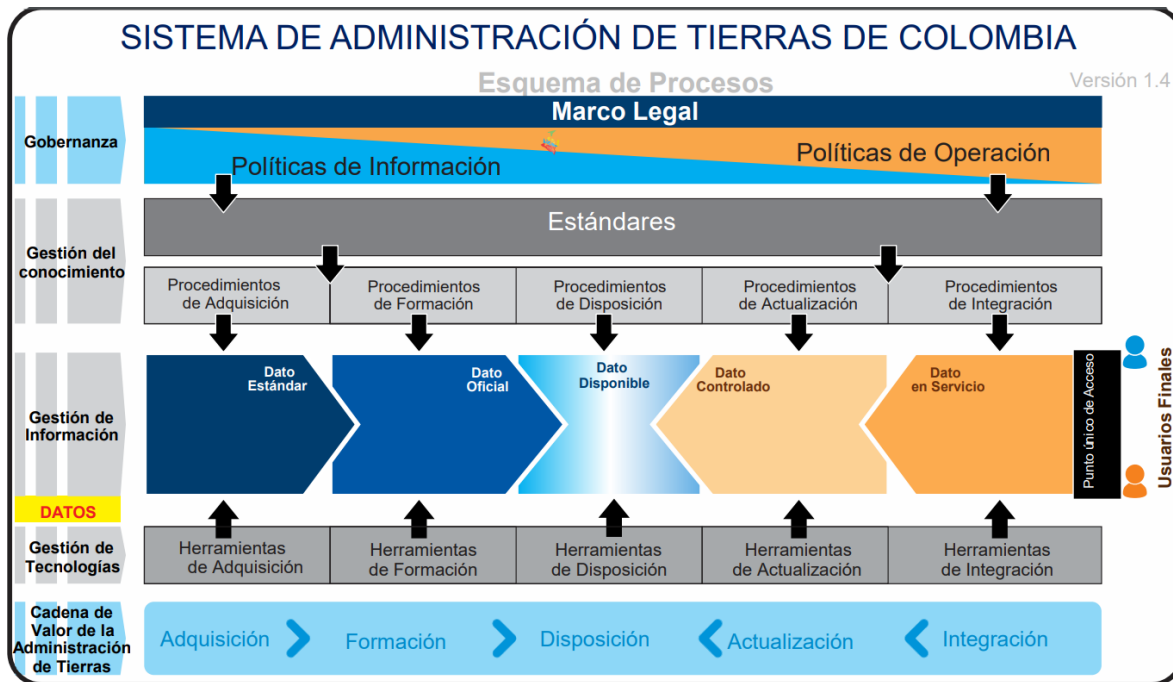


Figure 9 SAT conceptual diagram

Information management. This implies the processes and procedures to produce information in a massive way following the established quality standards, which implies the creation of an infrastructure that contributes to decision making in the organizational processes of the cadastral, registry and mainly of social land use planning of properties. A great part of this scope is included in the policy of Multipurpose Cadaster, which is committed to making a traceable and efficient interaction between these stakeholders who capture, deliver, receive, validate, regularize and make available information to society as a public asset.

Operational Management. This implies improving procedures for providing the services demanded by citizens, in which not only the internal stakeholders of the cadastral/registration work participate, but also external stakeholders such as surveyors who measure fields, notaries who prepare deeds, urban curators or municipal officials who authorize a property split off, and even banks that collect transaction taxes.



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This is a scope that SAT envisages on the premise that citizens will see the results of modernization if intermediaries, steps, times, and requirements are reduced to perform a real estate transaction or apply for a license on the territory.

A reference for the goals to which SAT's policy is committed are the Doing Business ranking^{xvi}, which measure a country's competitiveness indicators in the simplicity or complexity of procedures such as opening business, obtaining a construction license, paying taxes or obtaining loans.

Figure 10 shows Colombia's indicators in which it is close to the top in access to credit (position 11) and protection of minority investors (position 13). It also reflects that there are 61 countries with better indicators in registration and 88 with better practices in dealing with construction permits.

Rankings on Doing Business topics (1-190) - Colombia

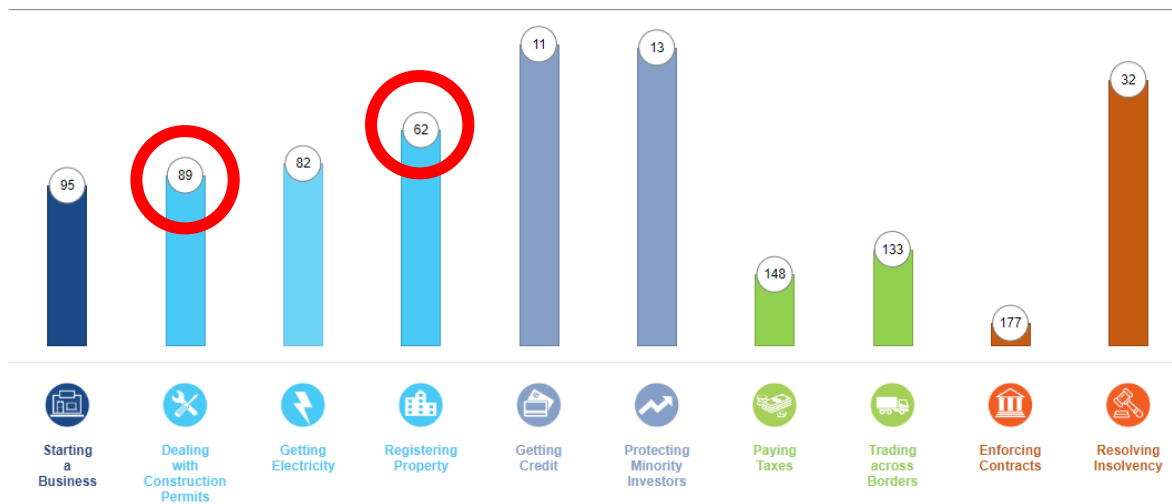


Figure 10 Colombia Doing Business ranking - Feb 2020



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Topics	DB 2020 Rank	DB 2020 Score	DB 2019 Score	Change in Score (% points)
Overall	67	70.1	69.2	↑ 0.9
Starting a Business✓	95	87.0	85.3	↑ 1.7
Dealing with Construction Permits	89	69.1	68.8	↑ 0.3
Getting Electricity	82	76.3	75.8	↑ 0.5
Registering Property	62	71.2	71.2	..
Getting Credit	11	90.0	90.0	..
Protecting Minority Investors	13	80.0	80.0	..
Paying Taxes	148	58.6	57.9	↑ 0.7
Trading across Borders✓	133	62.7	61.8	↑ 0.9
Enforcing Contracts	177	34.3	34.3	..
Resolving Insolvency✓	32	71.4	67.4	↑ 4

Figure 11 Change in score 2019 - 2020 DB

Figure 11 shows that other efforts to improve these indicators are achieving results in the comparison of the last two years, the registration process does not show any improvement. The most significant change reported using this methodology is in 2015 when provisional registration was removed.



Figure 12 Registering property score - Colombia comparison

Figure 12 shows that Colombia's index is better than other countries in the region, and although the methodology has certain biases as it responds to a sample of large cities, it shows that 71 countries have adopted better practices in reducing intermediaries, registry quality, public access to data and other aspects that impact on reducing time and costs for citizens.



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Hence the importance of the Land Administration System Policy has an impact on the macroeconomic level since it attracts more investment with better indicators and impacts on many aspects of the economy. However, in terms of improving services, facilitating access to land and improving transactional indicators, it also has an impact that citizens recognize.

6. CONCLUSIONS AND RECOMMENDATIONS

In general, besides being an interesting reference for the adoption of standards and technologies for land administration, the Colombian case is going through a very important moment of definition and application of best practices in terms of policies supporting modernization under a comprehensive approach. Although cadastral updating was one of the commitments in the peace agreements, the benefit that the policies have will impact on many other development elements. The following are specific conclusions in relation to the proposals in this document:

1. Inter-institutional processes work more efficiently if a high-level mechanism is established to promote coordination, compliance with commitments and decision-making in areas where the application of public policies is stagnating due to institutional discrepancies.
2. The ISO 19152 as a standard for land administration has been a significant decision in Colombia's public policy, which to date has facilitated making important decisions that will be key enablers in technological issues such as the joint management of all forms of land tenure and the interoperability between the systems operated by the institutions responsible for ensuring property regularization.
3. The adoption of fundamental principles based on LADM philosophy (Beyond Cadastre 2014) has made it possible to influence policies representing global challenges in terms of sustainable development goals, which the current regulatory scheme did not fully accept such as the territorial continuity by including legally registered information and informality in the same semantic domain, aspects that if had not been considered before, would have limited the response to the needs of citizens such as social problems among others, for which cadastral updating was a commitment in the peace agreements.
4. Committing to a policy on the improvement of the entire Land Administration System allows a balance to be maintained between the demands from the institutional point of view for good decision-making and their results that will be represented for the services required by citizens.



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5. The promotion of a policy focused on solving the social problems of property, under a supply approach, has a high impact on the expectations of the population. Massing file survey and collection is simple since it can be outsourced or incorporate multiple stakeholders. However, if process improvement and simplification are not considered, the bottleneck will be institutional action in the qualification and granting of property titles.

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