



# **Land Tenure Security in Rural Areas**

**(HA-L1056. 2720/GR-HA)**

## **Project Completion Report (PCR)**

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## **Electronic Links**

1. [Development Effectiveness Matrix \(DEM\) Summary](#)
2. [Changes to the Results Matrix](#)
3. [Final version of the Progress Monitoring Report \(PMR\)](#)
4. [PCR Checklist](#)

## **Optional Electronic Links**

1. [Ex post Cost-Effectiveness analysis](#)
2. [Impact Evaluation Report](#)
3. [Final Evaluation](#)
4. [Note from Beneficiary](#)

## **Acronyms and Abbreviations**

CEA	Ex-post cost effectiveness analysis
CIAT	Inter-ministerial Committee for Territorial Management
CO	Project Closure Date
CNIGS	National Centre for Geospatial Information
DGI	General Direction of Taxes
EOP	End of Project
ESG	IDB Environmental and Social Solutions Unit
ESMR	Environment and Social Management Report
GDP	Gross Domestic Product
GPS	Global Positioning System
GNSS	Global Navigation Satellite System
GoH	Government of Haiti
IDB	Inter-American Development Bank
IE	Impact Evaluation
LAC	Latin American and Caribbean
MARNDR	Ministry of Agriculture and Rural Development
MEF	Ministry of Economy and Finance
NAIP	National Agriculture Investment Plan
NGO	Non-Government Organization
ONACA	National Cadastre Office
PBG	Policy Based Grant
PCR	Project Completion Report
PDNA	Post-Disaster Needs Assessment
PFB	Plan Foncier de Base (Basic Land Registry) Land Tenure Data Base
PMR	Project Monitoring System
PSDH	Strategic Plan for the Development of Haiti: an emerging country 2030
PSE	Paris School of Economics
PSFMR	Land Tenure Security Program in Rural Areas
PSM	Propensity Score Matching
PVA	Procès Verbal d'Arpentage (Land Survey Minute)
RCT	Randomized Control Trial
SMART	Specific, Measurable, Achievable, Relevant and Time-bound
SO	Specific Objective
SUTVA	Stable unit treatment value assumption
UIS	Update to the Institutional Strategy (IDB)

## BASIC PROJECT INFORMATION

PROJECT NUMBER (S): HA-L1056  
 TITLE: LAND TENURE SECURITY PROGRAM IN RURAL AREAS  
 LENDING INSTRUMENT: GRANT  
 COUNTRY: HAITI  
 BENEFICIARY: REPUBLIC OF HAITI  
 GRANT: 2720/GR-HA  
 SECTOR/SUBSECTOR: AGRICULTURE AND RURAL DEVELOPMENT/LAND ADMINISTRATION AND MANAGEMENT

DATE OF BOARD APPROVAL: 04/25/12  
 DATE OF GRANT AGREEMENT EFFECTIVENESS: 06/08/2012  
 DATE OF ELIGIBILITY FOR FIRST DISBURSEMENT: 08/05/2013  
 CO DATE: 04/10/19

GRANT AMOUNT (S):  
 ORIGINAL AMOUNT: US\$27,000,000  
 CURRENT AMOUNT: US\$26,999,760.34  
 PARI PASSU: N/A  
 TOTAL PROJECT COST: US\$27,000,000

MONTHS IN EXECUTION  
 FROM APPROVAL: 84  
 FROM FIRST ELIGIBILITY: 76

DISBURSEMENTS PERIODS  
 ORIGINAL DATE OF FINAL DISBURSEMENT: 06/08/2017  
 CURRENT DATE OF FINAL DISBURSEMENT: 09/30/2018  
 CUMULATIVE EXTENSION (MONTHS): 15  
DISBURSEMENTS  
 TOTAL AMOUNT OF DISBURSEMENTS TO DATE: 26,999,760.34  
DISBURSEMENT GRAPH

REDIRECTIONING. HAS THIS PROJECT?  
 RECEIVED FUNDS FROM ANOTHER PROJECT [No]  
 SENT FUNDS TO ANOTHER PROJECT [No]

### Ratings of project Performance in PMRs:

No.	PMR DATE	PMR STAGE	PERFORMANCE	ACTUAL DISBURSEMENTS (USD MILLIONS)
1	2013	AFTER ELIGIBILITY	SATISFACTORY	1,832,205
1	2014	AFTER ELIGIBILITY	SATISFACTORY	4,617,429
2	2015	AFTER ELIGIBILITY	PROBLEM	9,297,093
3	2016	AFTER ELIGIBILITY	SATISFACTORY	17,217,887
4	2017	AFTER ELIGIBILITY	SATISFACTORY	22,342,265
5	2018	AFTER 95% OF TOTAL DISBURSEMENTS	SATISFACTORY	27,000,000
6	2019	AFTER 95% OF TOTAL DISBURSEMENTS	SATISFACTORY	26,999,760

EX POST ECONOMIC ANALYSIS METHODOLOGY: COST-EFFECTIVENESS ANALYSIS  
 EX POST EVALUATION METHODOLOGY: PROPENSITY SCORE MATCHING

DEVELOPMENT EFFECTIVENESS CLASSIFICATION: PARTLY UNSATISFACTORY

**BANK STAFF**

POSITIONS	AT PCR	AT APPROVAL
VICE PRESIDENT VPS	ANA MARIA RODRIGUEZ-ORTIZ	SANTIAGO LEVY
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COUNTRY REP	YVON MELLINGER	JOSE AGUSTIN AGUERRE
PROJECT TEAM LEADER	BRUNO JACQUET	MICHELLE LEMAY AND GILLES DAMAIS
PCR TEAM LEADER	BRUNO JACQUET	

**Staff Time and Cost (direct)**

Stage Project Cycle	# of staff weeks	USD (including travel and consultant costs)
<b>Preparation</b>	74.34	369,126.67
<b>Supervision</b>	141.09	546,239.35
<b>Total</b>	215.42	915,366.02

**STATEMENT OF THE DEVELOPMENT OBJECTIVES OF THE PROJECT/PROGRAM:** THE GOAL OF THE PROGRAM IS TO CONTRIBUTE TO AGRICULTURAL PRODUCTIVITY AND PROMOTE MEDIUM- AND LONG-TERM INVESTMENTS IN AGRICULTURE AND SUSTAINABLE LAND AND NATURAL RESOURCES MANAGEMENT. THE OBJECTIVES ARE TO INCREASE LAND TENURE SECURITY OF RURAL HOUSEHOLDS IN PILOT TARGETED AREAS AND IMPROVE THE QUALITY OF LAND MANAGEMENT SERVICES.

## I. INTRODUCTION

At the time of project preparation Haiti was a predominantly rural country with approximately 60 percent of the population living in small communities<sup>1</sup>. Land constitutes a critical asset for rural households, facilitating access to labour and financial resources. There are around 1.5 million rural parcels in Haiti, and an estimated 80% of rural households have some form of access to land. Landholdings are typically small (under 1.7 hectares), fragmented (generally two or more parcels) and of poor quality. Farmland is under pressure of food production, soil deterioration and unplanned urban development, in a context where most farmers do not have clear land titles.

Haiti's land titling regime is rooted in its French colonial past, where private professions with public service delegation are responsible for processing property rights transactions (Government-appointed notaries and surveyors) and public institutions guarantee their legality. Private property rights are established through notary deeds, based on Land Survey Minutes, and registered at the *Direction Générale de la Conservation Foncière*, a part of the *Direction Générale des Impôts (DGI)* of the Ministry of Finance (MEF). The Ministry of Justice and Public Safety also shares jurisdictional competences by authorizing land transactions and resolving ownership conflicts. Land without private property rights is state land managed by the DGI's *Direction du Domaine*. An attempt to create a cadaster was done during the 80's through the creation of the *Office Nationale du Cadastre* (ONACA) but this entity was never really able to achieve its mandate because of lack of resources and collaboration with other land administration institutions.

After independence in 1804 all land not legally owned by freed slaves became state land; various types of land transaction have since taken place, including grants of state land to private owners, sale between private owners, and inheritance as well as leases of state land. In the later part of the 20th century, rural households became more impoverished and rural emigration saw many legal landowners move to Haiti's growing cities and overseas. Increasingly, transactions have not been legally registered because of the high costs involved in formalizing what are gradually smaller plots, reflecting a perception that the incurred costs of registration might be higher than the benefits they would capture. In inheritance cases, a "family in-division" situation has been created through successive generations of heirs with co-access to land, but without formal sharing arrangements, surveys and land registration to establish legal rights. A largely informal land titling process has produced a chaotic co-existence of different title holding modalities. Around 30 percent of individually owned plots have full documentation, including a notary act; around 35 percent are owned individually without full documentation; and around 30 percent are owned jointly (family in-division) through inheritance. The balance is made up of parcels belonging to the state. In sum, more than 60 percent of all individually owned parcels have no property title.

Systemic weaknesses in the titling process have contributed to land tenure insecurity. At project approval, less than 5 percent of lands nationwide were included in a cadaster, and parcel surveying was carried out using outdated methods lacking geo-referencing, in part because of an incomplete national geodesic system for appropriate geographic positioning. The manual registration of deeds by the DGI and their chronological archiving hindered records' retrieval. Further, state lands were not registered in a geo-referenced inventory. While transfer and land sale procedures existed, their administration could take 301 days on average and cost up to 40 percent of the value of the plot because of institutional weaknesses. This conjuncture constituted an incentive to resort to informal arrangements in spite of the tenure insecurity this might

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<sup>1</sup> This introduction draws on background documents prepared during for the design of the Project, including, Couralet, Pierre-Emmanuel, Michele Lemay, and Leonardo Corral, (2011) *Economic Analysis Annex*, mimeo., and, Kevin Barthel and Gabriela Rodrigues (2011) *Situation Analysis. Report submitted to the IDB*, mimeo.

engender. Tenure insecurity also affected farmers with leases on state lands since the current legal arrangements theoretically allowed for a suspension by the State. In short, a risk existed of multiple and competing claims over the same plot of land with overlapping boundaries precipitating land conflicts, which were reported to be a large share of cases brought to local courts.

Land is a central economic asset and major source of income for rural households. Neoclassical theory posits that land titling programs establishing property ownership can incentivize greater investment, improve credit access and produce more efficient resource allocation (Besley and Ghatak, 2010)<sup>2</sup>. Empirically, enhancing land tenure security has been found to yield a number of economic benefits, from increased investment and credit access to productivity improvements, and enhanced environmental and resource management (Lawry et al., 2017<sup>3</sup>). Despite its importance, the Latin American and Caribbean (LAC) region still faces high levels of land tenure informality and insecurity in rural areas. In the case of Haiti specifically, the limited quantitative evidence available at the time of project preparation suggests that land insecurity adversely impacts investments in agriculture and the management of environmental resources. One study<sup>4</sup> shows a correlation between farmers with formal land tenure rights and agricultural incomes, though evidence derived from rigorous impact evaluations does not exist for Haiti.

In this context, this project was conceptualized and designed under the logic that secure land tenure generates economic as well as environmental benefits. For that purpose, the project provided financial resources to invest in cadastre creation as well as land tenure clarification, and to implement, and refine, a cost-effective methodology to improve land tenure security in rural areas (component 1), and to strengthen the capacity of the institutions providing land administration services (component 2). The project strategy addressed the limited documented experiences associated with the use of systematic land tenure clarification procedures. Given that the project was conceived as a pilot before expansion in future phases, the project design included a rigorous evaluation exercise to answer key questions on the relationship between land tenure security and agricultural productivity and natural resource management. The project intended to introduce technical improvements across the land tenure process, the creation of a land tenure database, the digitization of land records and institutional strengthening activities in targeted municipalities. The project was complemented by a program of policy-based grants (PBG), Institutional Strengthening and Reform of the Agricultural Sector I, II and III (HA-L1074, HA-L1082 and HA-L1094), a contemporaneous effort designed to promote sector administrative and legal reforms to facilitate efficiency gains and sustainability sought in the land tenure security program.

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<sup>2</sup> Besley, T. and M. Ghatak (2010). "Property rights and economic development." In D. Rodrik and M. Rosenzweig, eds., *Handbook of development economics*, Volume 5, pp. 4525-4595. Amsterdam: North-Holland

<sup>3</sup> Lawry, S., Samii, C., Hall, R., Leopold, A., Hornby, D., and Mtero, F. (2017). The impact of land property rights interventions on investment and agricultural productivity in developing countries: a systematic review. *Journal of Development Effectiveness*, 9(1):61–81

<sup>4</sup> Smucker, G.R., T.A. White and M. Bannister (2002), *Land Tenure and the adoption of agricultural technology in Haiti*.

Dolisca, F et al, Land Tenure, population pressure, and deforestation in Haiti: The case of Forêt des Pins Reserve (2007), *Journal of Forest Economics*, 13 (277-289)

Verner, D (2008) Labour Markets in Rural and Urban Haiti, *Policy Research Working Paper 4574*, World Bank.



## II. CORE CRITERIA. PROJECT PERFORMANCE

### II.1 Relevance

#### a. Alignment with country development needs

At the time of project design in 2011, Haiti was facing major poverty and inequality challenges. In income distribution terms, the poorest 10% were receiving 0.7% of national income whilst the richest 10% received 47.7%. In 2010, GDP per capita was US\$659; more than 72% of the population lived on less than US\$2 dollars a day and 55% on under a dollar per day. The lack of universal access to education and basic social services as well as unemployment rates around 41% mean that Haiti was ranking 149th in the Human Development Index. Agriculture was playing a dominant role in the Haitian economy, contributing over 25% of GDP, accounting for around 50% of overall employment, 66% of employment in rural areas, and 75% of employment in low-income households. Over one million families were owning mainly small-scale subsistence farms. While 55% of Haitians were living below the poverty line, the impact of poverty and of extreme poverty was far more important in rural areas, where 88% of individuals were living below the poverty level and 59% earned less than US\$1 a day.

The earthquake of January 12, 2010 highlighted the weaknesses of the land tenure system in Haiti. It showed the failures of the identification of property, people and rights. The causes included: outdated land tenure administration tools and legal framework; lack of cadaster and disorganized archives management; weak managerial and technical capacities in land tenure institutions; and unclear or even contradictory legal and institutional framework. These weaknesses have turned into structural problems which affected both public and private land management. High transactions costs were a disincentive that prevented owners from regularizing their titles. The resulting absence of cadaster and land tenure administration tools complicated the post-earthquake reconstruction and economic recovery, as it hindered territorial planning, public and private investments, and environmental management.

The Government of Haiti's (GoH) *Post Disaster Needs Assessment (PDNA)* made for grim reading given the human costs – an estimated 220,000 killed, 300,000 injured and 1.3 million displaced – and the economic damage; losses estimated at US\$7.8 billion was an amount greater than Haiti's 2009 gross domestic product (GDP). With its catalogue of damage to public and private social, physical and productive infrastructure of greater Port-au-Prince, the PDNA highlighted the dangers associated with the concentration of economic and social activities in the capital region to make the case for greater investments in local economies across the country.

The *Strategic Plan for the Development of Haiti; an Emerging Country in 2030 (PSDH)*, a GoH document fully supported by the international community, used the PDNA to outline a bold proposal to meet the immediate and longer-term challenges presented by the earthquake. At its core was the concept of *refondation*, understood as the need to reboot Haiti in territorial, economic, social and institutional terms. The PSDH highlighted the imperative to modernize and stimulate agriculture and livestock activities. It saw the absence of clear land tenure rights as an obstacle to urban reconstruction and rural development by limiting investment and fueling social conflict. It visualized how cadastral programs could have a cascade effect by resolving conflict, formalizing property rights, and reinforcing land access to stimulate rural investment and housing reconstruction.

In the face of such challenges, the Haitian Government decided in 2010 to deal with the land tenure reform as a whole with the objective of improving the security of land rights, in order to

promote sustainable development and improve regional planning and agricultural productivity. The proposed reform was based on the modification of the legal framework, the modernization of land administration tools and the development of a “pre-cadaster” methodology which clarifies the identification of property, people and rights. In this context, the Land Tenure Security Program in Rural Areas (PSFMR), conceived in this unique moment in Haiti’s recent past, was part of the wider Inter-American Development Bank (IDB) response not just to the damage inflicted by the earthquake but also to a perceived opportunity for the post-earthquake transformation of the country.

The situation of the agriculture sector and its growth priorities was set out in the *2010-2016 National Agriculture Investment Plan (NAIP)*, product of a close collaboration between the GoH, development agencies, farmers organizations, non-government organizations (NGOs) and the private sector. The 2010-2016 NAIP identified critical areas of intervention including capital investments in irrigation and rural infrastructure, but also investment in non-infrastructure priorities such as improved access to land with secure title. The 2016-2021 NAIP broadly sustains the investment rationale and specific issue concerns contained in its predecessor. Consequently, given the programmatic continuity inherent over time (2010-2021) in the NAIP, a key national and sector planning document it can be concluded that the PSFMR responded to a country development need and priority both at approval and at the time of closure.

#### **b. Strategic Alignment**

The IDB’s Country Strategy with Haiti 2011-2015 (GN-2646) identified agriculture as a priority sector. The sector objectives set out then were environmental preservation; responding to the challenges of climate change; improved food security; strengthening sustainable value chains; and employment creation. Investment operations were prepared and executed to support action on (i) infrastructure investment for flood control and irrigation; (ii) the promotion of sustainable agricultural practices; (iii) modernization of agricultural services, particularly agricultural health and food safety and (iv) modernization of rural land tenure processes and institutional framework. All the interventions in these key sub-sectors were designed not only to seek policy reforms as well as the modernization of regulatory and institutional frameworks requiring legislative approval but also to finance investment components. To support the GoH in its reform efforts, the IDB agreed to finance a program composed of three agriculture sector policy based grants (PBGs), though only two were approved (HA-L1074 and HA-L1082 approved; HA-L1094 canceled). The PBGs provided quick disbursing, budget support, financial resources for progress in delivering a package of agreed modernization measures, including parliamentary approved laws. The PSFMR and the first agriculture sector PBG, which were approved one month apart in 2012, were designed to work in tandem on the agriculture sector reform agenda.

The PSFMR was consistent with the lending priorities presented by the Report on the Bank’s Ninth General Increase in Resources (AB-2764) and its Results Framework agreed in 2010. It contributed to: (i) poverty reduction and social equity, as the program supported small farmers; and; (ii) climate change initiatives and environmental sustainability, as the program provided incentives for the adoption of agricultural technologies and practices aiming at reducing land degradation encourage a resilient agriculture. Likewise, the program was consistent with the institutional priority sector of protecting the environment, responding to climate change, and enhancing food security. It contributed to the capital replenishment’s Regional Development Goal, expressed as “Annual growth rate of agriculture Gross Domestic Product (GDP)” and its output “Farmers given access to improved agriculture services and investments”.

At the time of its closure in 2019 the PSFMR remained consistent with the IDB Group Country Strategy with Haiti 2017-2021 (GN-2904). One of its three strategic priorities is “Improve the business climate to enhance productivity”, which embraces operations that are “enabling conditions for increased productivity in agriculture”. Specifically, the current country strategy commits to “improving land registration, land ownership and use of land rules, with an emphasis on protecting women’s rights in the land titling process”.

At closure the project was also consistent with two sector policies (i) the “Agriculture and Natural Resources Management Sector Framework Document” (GN-2709-5) since it focused on the provision of public agricultural goods by strengthening land tenure security, and (ii) the “Food Security Sector Framework” (GN-2825-3) as it was designed to increase agricultural productivity which in turn, improves food availability and access.

The PSFMR is consistent with the Update to the Institutional Strategy 2010-2020 (UIS AB-3008) and addresses the development challenges of productivity and innovation by increasing agricultural investment and productivity with enhanced land tenure security. With respect to the Corporate Results Framework 2016-2019 (GN-2727-6), the PSFMR contributes to the targets associated with the crosscutting issues of “Climate Change and Environmental Sustainability” and “Institutions and Rule of Law”. Further, the project is aligned with country development result of “beneficiaries of improved management and sustainable use of natural capital” and “beneficiaries of IDBG projects that contribute to at least one key dimension of food security” by improving food availability through productivity increases.

### **c. Relevance of Design**

The land tenure reform sought by the Haitian Government was led by the Inter-Ministerial Committee for Territorial Management (CIAT), a public entity attached to the Prime Minister’s Office with the mandate to define public policies and strategies related to territorial development and land tenure reform. The CIAT was the repository of relevant technical and operational expertise acquired from the implementation of a land tenure demarcation and clarification project in Port-au-Prince, financed by the French Cooperation. The success of this urban focused project was assessed as adaptable and scalable for application in the rural areas. The project vertical logic was developed based on this experience, on the land tenure reform axis, and on complementary situation diagnosis carried out during project design.

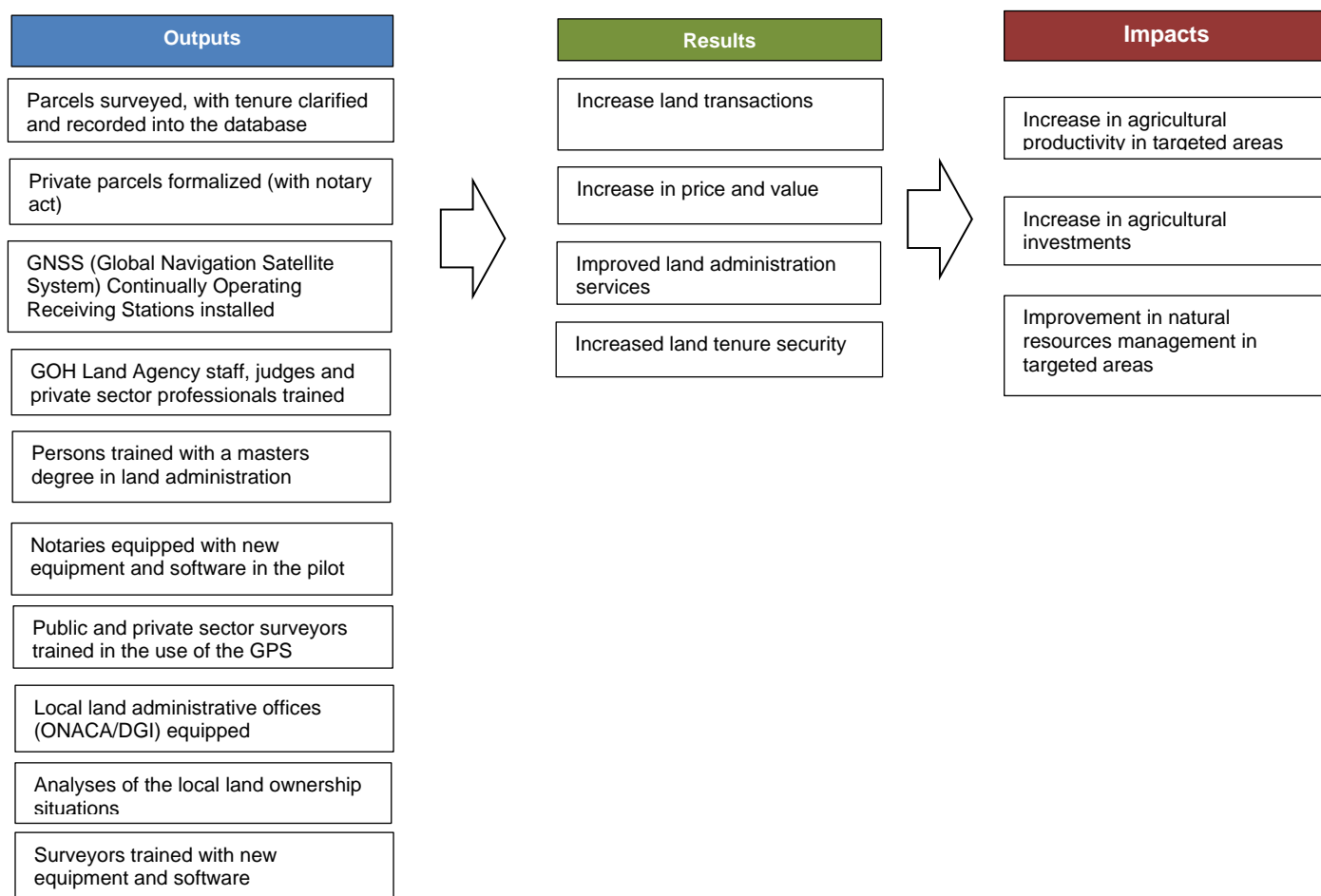
The logic of the PSFMR was also based on substantial empirical evidence<sup>5</sup> from other parts of the world that links improved land tenure security to increased investment by farmers in their parcels, resulting in improved agricultural productivity and better land management practices supported by improved land administration services. To address this strategy, the program would provide investments in cadastre creation and land tenure clarification with a view towards testing and refining a cost-effective methodology for improving land tenure security in rural areas (Component 1) while simultaneously strengthening the institutional capacity for the provision of

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<sup>5</sup> The literature consulted on rural land titling and productivity gains and improved resource management includes Feder, G. and A Nishio (1999) The benefits of land registration and titling; economic and social perspectives, *Land Use Policy* 15:1 25-43; Barnes, G. (2003) Lessons learned: an evaluation of land administration initiatives in Latin America over the past two decades, *Land Use Policy* 20:4 367-374; and, Besley, T (1995) Property Rights and investment incentives: Theory and evidence from Ghana, *Journal of Political Economy* 103:5 903-937. A recent systematic review of the impacts of land property rights interventions finds that enhancing land tenure security can yield a number of economic benefits, from increased investment and credit access to productivity growth (Lawry et al. 2017: <https://doi.org/10.1080/19439342.2016.1160947>).

land administration services (Component 2). The project followed the vertical logic presented in Figure 1.

**Figure 1. Project vertical logic**



As stated in the project proposal, the goal of the program was to contribute to agricultural productivity and promote medium- and long-term investments in agriculture and sustainable land and natural resources management.

The Program had two Specific Objectives (SO): (i) **Increased land tenure security of rural households in pilot targeted areas (SO1)**; and (ii) **Improved quality of land management services in pilot targeted areas (SO2)**.

With respect to SO1, Component 1 was designed to finance activities that piloted a methodology to demarcate and clarify land tenure rights pertaining to an estimated 66,000 rural parcels on private and State lands in 8 priority communes in the north and south of Haiti. The methodology also provided for the creation of a Basic Land Registry or *Plan Foncier de Base* (PFB) in each commune as well as individual geo-referenced ownership documents, Land Survey Minutes or *Procès Verbal d'Arpentage* (PVA). Specifically, in Haiti, private property rights are established through notary deeds, inspired of the French system. However, in rural areas the 1962 Duvalier Rural Code also recognizes the survey minutes PVA (rural) as a legal document to act land

ownership. The notary deeds or PVA are registered at the *Direction de la Conservation Foncière* of the *Direction Générale des Impôts* (DGI), which is a dependence of the Ministry of Economy and Finance. Based on current legislation, the PVAs represent legal tenancy of the land in rural areas (“*de jure*” recognition of land property rights). The PVA is attained only when tenancy has been clarified after the parcels are surveyed and demarcated. Not all the parcels obtain a PVA after the program but all the parcels in the treated communes were surveyed and demarcated.

The process for land tenure clarification was implemented as follows: The parcel demarcation and tenure clarification follow a ‘*systematic parcel sweep*’ methodology which achieves economies of scale by treating all adjacent parcels of land in a defined geographical area. To ensure full participation, the ‘*parcel sweep*’ is preceded by a thorough socialization campaign with local community leaders and individual landholders. Next, each parcel is accurately surveyed, and the limits of the parcel are marked on the ground while legal documentation on the ownership history of each parcel is collected to corroborate land tenure. When the surveying of all parcels within the commune is completed and the land tenure situation for each parcel has been legally analyzed (genealogic analysis of parcel), the results are presented to the community for final validation. Lastly, PVAs are delivered to those households that provide sufficient legal documentation validating their land ownership. Hence, not all parcels received PVAs only those with sufficient proof of legal ownership. Regardless of legal status, all parcels were surveyed and their basic information, including land holder’s and/or land owner’s identification, and registered in the PFB. Throughout the process, parcel surveys and land tenure data are digitized and stored in a geographic information system which forms the PFB. The PFB links the geographic location and physical extension of the parcel with land tenure information (i.e., current landowners or landholders). The full PFB process consists of the following steps: (i) cartography of the commune; (ii) administrative delimitation of the commune and section communes; (iii) information dissemination campaign; (iv) field campaigns for parcel surveying and collection of land tenure data; (v) land tenure analysis and ‘genealogy’ of the parcels; (vi) ‘harmonization’ of field data and finalization of maps and landholders lists; (vii) community validation; (viii) recording of the PFB information at the government land registry.

The rural communes<sup>6</sup> targeted by the program exhibit significant differences in their general geographical and socio-economic characteristics, and it was anticipated that their diverse characteristics would be a good test for assessing how to replicate the project to other regions of Haiti. Likewise, the target communes were differentiated in terms of the presence and absence of key state institutions central to the land tenure process, particularly Justices of the Peace and local DGI officials, working in offices and with equipment in varying states of physical deterioration. Their choice was also motivated by logistical and operational sense, in a country with difficult topography and weak communications. The cost of mobilizing a project field team to work in contiguous communes was expected to be far less onerous than it would have been in a selection of dispersed municipalities. It was also anticipated that experiences of setting up and executing the pilot would be more effectively transferred between neighboring communes inside the same jurisdictions than between communes physically and geographically remote from each other.

The experience of executing the project in the targeted communities highlighted the historical weaknesses of land tenure information in the country, that supported the project design. Though the PSFMR managed to demarcate and clarify 64,510 parcels, almost as indicated in the project

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<sup>6</sup> Communes initially targeted : Camp-Perrin, Maniche, Chantal, Grande Riviere du Nord, Bahun, Ranquitte, Vallieres, Sainte Suzanne.

document, finally these were located in 5 communes<sup>7</sup> instead of the expected 8. The main reason of this difference was a significant underestimation in the number of parcels of land in the targeted communes. At design stage, the quantity of parcels was estimated using photointerpretation of satellite orthophotos and other statistical data such as the 2010 Agricultural General Census, however the field reality revealed to be different. In short, the demarcation and clarification fieldwork shows that the average size of the parcels was substantially smaller than anticipated initially, using the information available at the time of project preparation. The uncertainty in the actual number of parcels to be surveyed is normal for these types of programs. In fact, the lack of precise information on the number and location of parcels is a key aspect that justifies undertaking these land administration programs in the first place.

SO1, through Component 1, had two expected outcomes: (i) increase land transactions and (ii) increase land values. For outcome (i) the indicators were: (a) Difference in the volume of land sales and leases between beneficiary and control groups; for outcome (ii) the indicators were: (a) Difference in land price per hectare between beneficiaries and control group and (b) Difference in prices of land transaction between beneficiaries and control group. The verification source was the impact evaluation (IE) based on a randomized control trial methodology.

However, a delay to reach agreement on the initial evaluation methodology deferred data collection, and the household survey was subsequently impacted by the effect of Hurricane Matthew in October 2016. Specifically, the process was as follows: (i) program finalized most of its intervention in the South of the country mid-2016; (ii) the Hurricane hit the South of Haiti in October 2016; and (iii) data collection was postponed to June-July, 2017. The initial experimental methodology proposed during the project design (i.e. randomized control trial) was not seemed appropriate considering the project logistics during the execution. Specifically, the parcel demarcation and tenure clarification must follow a '*systematic parcel sweep*' methodology which achieves economies of scale by treating all adjacent parcels of land in a defined geographical area. Hence, households within the same commune should be treated simultaneously to define the parcels' borders and implement the community validation process. This logistical approach made it impossible to follow an RCT methodology which requires that households are randomly assigned to treatment and control groups. Instead, a quasi-experimental approach of Propensity Score Matching (PSM) was implemented using a sample of 634 beneficiary households and 923 controls. Unfortunately, the results from the PSM analysis did not provide enough evidence to confirm that land transactions or land values were affected by the program. Specifically, 12% of beneficiaries and 11% of control group performed a land transaction, not statistically significant difference was found between both groups. Given the low number of transactions performed, the data for the land value or prices was not representative or relevant for extrapolation.

There are two possible explanations for not finding an impact on land transactions. First, the indicators included in the results matrix are long term effects rather than short term effects (i.e. land transactions and land prices). Then, the impact evaluation might not have been able to capture these changes as they had not yet materialized (the program finalized most of its implementation in Camp-Perrin in early 2016 and the data collection for the impact evaluation was collected in June and July 2017). This implies that more modest, short term outcomes should have been included in the results matrix.

Second, the hurricane Mathew highly affected the households in the area of analysis (October 2016). Specifically, 91% of respondents in the beneficiary group indicated that their dwellings had been significantly damaged or destroyed, compared to 96% for the control group. Moreover, 42%

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<sup>7</sup> Camp-Perrin, Chantal, Grande Riviere du Nord, Bahon, Sainte Suzanne.

replied that their residence had been destroyed and 48% indicated that their residence had been seriously damaged. The hurricane also affected other household assets. More than 90% of farmers said the hurricane damaged their crops and trees or other permanent crops. Farmers also lost their livestock assets as a consequence of the hurricane. In fact, 85% of the farmers in the beneficiary group declared having lost livestock compared to 92% for the control group. This suggests that both groups (beneficiaries and controls) were strongly affected by this disaster, losing their houses and their source of livelihood. Then, when comparing differences between control and treatment groups using indicators such as land sold, value of land sold, prices of land transactions, etc., no differences were found due to the precarious situation faced by both groups.

In this sense, this PCR proposes three additional indicators to capture the program short-term effects. First, the indicator “Parcels surveyed, with tenure clarified and recorded into the PFB database” be considered as a valid indicator to demonstrate achievement of SO1 **Increased land tenure security of rural households in pilot targeted areas**. Indeed, the PFB database with the parcels surveyed and their tenure clarified provides high quality data on land limits and historical ownership. Built through a highly participative manner, it addressed land conflicts. The clarification process includes a sound genealogical analysis of land tenure, which provides a high level of accuracy on parcels’ ownership. This database constitutes an asset and a reference for any further land transactions or land management activity in the future and enhances land tenure security.

Second, the indicator “difference between treated and control households with legal document (PVA) to corroborate land tenure for all their parcels” will be considered a suitable indicator to demonstrate achievement of SO1 Increased land tenure security of rural households in pilot targeted areas. In fact, the PVA is the legal document that proves tenure status in rural areas (as mentioned before all parcels were delimited and surveyed but not all received a PVA). In fact, 38% of the control vs 57% of the beneficiary households have PVAs that corroborate ownership for all of their parcels.

Third, the indicator “difference between treated and control households that received a loan.” was also included as it provides evidence on the effectiveness of the program on having access to credit which is an outcome widely associated to land tenure projects. Specifically, improving land tenure security is expected to increase access to credit as farmers are more likely to undertake long term investments to improve their land.

With respect to SO2, Component 2 supported activities to improve the effectiveness and efficiency of land administration services in order to increase land tenure security. The component was structured to support the necessary institutional reforms nationally as well as to provide improved infrastructure and equipment specifically in the targeted communes. The intended beneficiaries were the public institutions and private notaries and surveyors involved in land tenure administration. The reforms supported by this program and the PBGs were expected to address the costly and cumbersome procedures framed by obsolete and often contradictory laws, implemented by a poorly coordinated set of actors in charge of land tenure administration. The reforms also sought the modernization of registration and cadastral processes and revision of their related fees, which were above an acceptable economic cost because of poor regulation of monopolistic-type services.

In anticipation that Parliament would approve reforms to introduce modern technologies, such as the use of *Global Positioning System* (GPS) for land surveys<sup>8</sup>, the PSFMR financed a number of equipment upgrades – including modernization of the national geodetic infrastructure for surveying and mapping as well as the purchase of advanced surveying technology – and training of professionals involved in the land tenure definition and clarification process – including, staff at the ONACA, surveyors, notaries, justices of peace, clerks and lawyers. The PSFMR also had resources to construct and equip five local land administration buildings for ONACA and DGI staff in the target communes. Project implementation anticipated the completion of the construction and training activities prior to the execution of the plot demarcation and tenure clarification methodology to count on these improved physical and professional assets, however both processes ultimately developed in parallel.

SO2 had one expected outcome, namely improved quality of land management services. The indicators were the average time and cost of parcel registration with the the land tenure database as source of verification.

The PSFMR was designed as a pilot project to test the applicability of a plot demarcation and tenure clarification methodology in rural areas, and to answer key questions concerning the relationship between rural land tenure security, agricultural productivity and natural resource management. Therefore, the PSFMR's design also included a rigorous impact evaluation that was expected to provide critical inputs and lessons learned for the preparation of a second stage land tenure project. As mentioned above, the impact evaluation was affected by a number of events, including Hurricane Mathew.

Improvements in the efficiency and effectiveness of land administration institutions and associated legal frameworks also constituted one of the five areas of reform sought by the PBG series (HA-L1074, HA-L1082 and HA-L1094), which was seeking to address the policy, legal and institutional constraints that were affecting the effectiveness and/or sustainability of IDB-financed investment operations under execution at that time in the agricultural sector. In that sense, the PBG series included a set of conditionalities related to land administration reforms, and CIAT led the effort on this component. The first PBG required that a draft bill on land administration be submitted to the Prime Minister that would reform the roles of surveyor and notary, modernize title registration, update archive maintenance and see the introduction of technologies into the process, such as global positioning system (GPS) and the use of typewriters and word processing to produce notary minutes and other written documents. Under the second PBG, CIAT presented to the Prime Minister a draft bill on ONACA and the land registry, which covered the relocation of ONACA from MTPTC to MEF. In addition, CIAT presented a draft bill modifying the laws on public surveyors, land registration and mortgage registry to the Prime Minister. This included removing language on tariffs charged by surveyors, recognizing that surveys done by public surveyors are valid for the cadaster and give legal force to digital documents. CIAT also presented a National Policy on Land Tenure Security to the Prime Minister for approval, in order to redefine the roles of all the actors concerned with the land tenure process. The key conditions set out for the third PBG included the presentation to Parliament and the approval of the draft laws developed in the previous PBG's. However, when it became clear that there was no possibility that the conditions would be met, the decision was taken not to proceed with the third project in the PBG series (see [PCR for HA-L1074 and HA-L1082](#)).

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<sup>8</sup> According to the law, land administration professionals such as notaries and surveyors are not permitted to use printers, computers and GPS in their work. However, such restrictions are largely ignored in large urban centers where land administration has been modernized *de facto*. It is in the rural areas where outdated administration persists and change is difficult to introduce into a body of professionals wedded to "old ways of working".



The objectives and design of the PSFMR were fully aligned with the country's development needs and priorities as well as with the Bank's country strategy, at the time of project approval and its closure. The PSFMR's approach demonstrated a strong association between the project's development goals and Haiti's development reality. Although the concept of the PSFMR has been adequately designed in line with the national land tenure reform, the vertical logic at the outcome level was not realistic and not in line with the pilot nature of the intervention. It is unlikely that outcomes such as increase in land values would have been realized, and even less likely that sufficient transactions would have been observed during the project timeframe. Therefore, as a whole, the assigned rating for this criterion is **Satisfactory**.

**Table 1. Results Matrix (@ approval, Start-up plan and @exit)**

Indicators	At approval			Start-up plan			At project completion (PCR)			Comments
	Unit of measure	Baseline	EOP (P) (2016)	Unit of measure	Baseline	EOP (P) (2017)	Unit of measure	Baseline	EOP (A) <sup>i</sup>	
SO 1 – Provide secure land tenure to private and state lands through parcel delimitation, rights clarification and formalization										
Difference in has of land sold and leased between beneficiaries and control group	%	0 (2012)	10	%	0 (2012)	10	%	0 (2012)	No impact	About 12% of treated households and 11% of control households had performed land transactions. The difference between treated and control groups is not statistically significant.
Difference in land value (price/ha) between beneficiaries and control group	%	0 (2012)	10	%	0 (2012)	10	%	0 (2012)	Not measured	The IE did not measure this indicator due to the low number of land transactions conducted in the areas of the analysis.
Differences in prices of land transaction between beneficiaries and control group	%	0 (2012)	10	%	0 (2012)	10	%	0 (2012)	Not measured	The IE did not measure this indicator due to the low number of land transactions conducted in the areas of the analysis
Difference between treated and control households with legal document (PVA) to corroborate land tenure for all their parcels	%	N/A	N/A	%	N/A	N/A	%	N/A	19 (2017)	38% of the control vs 57% of the beneficiary households have a PVA that corroborates ownership for all their parcels. This indicator has been included as it provides evidence on the effectiveness of the project to formalize land tenure in treated areas.
Difference between treated and control households that received a loan.	%	N/A	N/A	%	N/A	N/A	%	N/A	5 (2017)	13% of the beneficiary households received a loan compared to 8% of the controls.
Number of parcels demarcated, clarified and included in a PFB.	#	0 (2012)	66,000	#	0 (2012)	65,031	#	0 (2012)	64,510 (2017)	This indicator is initially an output, but given the value of the result achieved, it is recommended to consider it as an outcome.

Indicators	At approval			Start-up plan			At project completion (PCR)			Comments
	Unit of measure	Baseline	EOP (P) (2016)	Unit of measure	Baseline	EOP (P) (2017)	Unit of measure	Baseline	EOP (A) <sup>i</sup>	
Beneficiary farmers with new registered parcels	N/A	N/A	N/A	Farmer	0	1000	Farmer	0	2,145	Number of farmers who received official registered Land Survey Minutes with the new format at the end of the PFB process. At approval, this indicator was an output, but has been upgraded to outcome at project start-up.
<b>SO 2 – Modernization of land administration services</b>										
Average time for parcel registration	# of days	319 (2012)	66	# of days	319 (2011)	66	# of days	319 (2011)	261 (2017)	Baseline data: World Bank Doing Business 2011 EOP (A) data: own calculation on the basis World Bank Doing Business 2018 and CIAT monitoring reports
Average cost of parcel registration	US\$	600 (2012)	150	US\$	600 (2012)	150	US\$	600 (2012)	525 (2017) <sup>2</sup>	Ex-post cost effectiveness analysis (2018) EOP (A) value in 2012 constant price
Households benefitting from increased land tenure security and/or improved access to land tenure administration services in the pilot areas	N/A	N/A	N/A	Household	0	30,000	Household	0	Not measured	This indicator was introduced at start-up plan, but the way to measure it was not defined. At project's end it was too complex to measure since the indivision status of more than a third of the land make it difficult quantifying all the heirs.
Farmers benefitting from improved access to land tenure administration services in the pilot areas	N/A	N/A	N/A	Farmer	0	20,406	Farmer	0	Not measured	This indicator was introduced at start-up plan, but the way to measure it was not defined. At project's end it was too complex to measure since the indivision status of more than a third of the land make it difficult quantifying all the heirs.

## **II.2 Effectiveness**

### **a. Statement of project development objectives.**

The goal of the PSFMR was to contribute to agricultural productivity and promote medium and long-term investments in agriculture and sustainable land and natural resource management. The specific objectives were to increase land tenure security of rural households and to improve the quality of land management services in pilot targeted areas.

### **b. Results Achieved**

#### **SO 1 Increase land tenure security of rural households in pilot targeted areas**

Result 1 Increase in land transactions

Result 2 Increase in land values

The impact evaluation conducted to measure these outcomes was a quasi-experimental approach of PSM (see c. Counterfactual analysis). The estimations were performed using a sample of 1,557 households (i.e. 634 treated and 923 controls).

The results obtained after the estimations do not confirm that the program had a positive impact on land transactions or land values. With respect to land transactions, it was found that 12% of the beneficiaries were engaged in land transactions compared to 11% of the control households. In addition, given the low number of transactions, the price difference between treatment and control is not representative and does not provide any meaningful information. For Result 2, given the low number of transactions conducted in the area, the sample was not representative, and the indicator was not measured. Also, farmers were found to be notoriously coy about providing financial information concerning land transactions, and there is a tendency to under-declare land value during the transactions to reduce the taxes proportional to it. In addition, given the short period of time between the treatment and the evaluation it is unlikely to find any significant changes in this variable.

The lack of impacts on the indicators of interest might be caused by: (i) the short period of time between the implementation of the program in the southern region and the impact evaluation; and (ii) the devastation caused by Hurricane Mathew.

To measure the result and effectiveness of this SO, this PCR includes three additional indicators.

First, it considers that the achievements related to parcel demarcation and clarification in the framework of the creation of PFBs should be considered as a valid outcome that is clearly related to the SO1 -- increase land tenure security of rural households. The initial target was to reach 66,000 parcels in eight communes of the country. This objective was reduced to 65,031 parcels at project start-up, and the PSFMR finally achieved 64,510 parcels surveyed and clarified, included in the PFB database, in five communes.

The project's methodology, which combined a set of different techniques, including the mobilization of field teams capable of working with local communities and GPS technology to demarcate parcels; genealogical analysis of parcel ownership going back into the nineteenth century; archival research in notary records; and the scanning of documents for insertion into a PFB, produced highly trustworthy data. With this verified information, land tenure security is substantially enhanced since land cannot be stolen, boundaries cannot be shifted, and fake ownership papers cannot be produced as a means of stealing land. The very existence of a

complete PFB database therefore contributes to increased land tenure security in the pilot targeted areas, it constitutes an asset and a reference for any further land transactions or land management activity in the future. It provides a high level of certainty on the identification of property, people and rights on the land that have been surveyed. Local and national actors recognized the PFB's social function. The very fact of demarcating parcels for inclusion in a PFB, a locally held plan, reduced informality and conflicts. Even though most participating farmers did not receive the official Survey Minutes (*Procès Verbaux d'Arpentage, PVA*) because of lack of time and resources of the project, nevertheless, the social and juridical clarification process brought certainty over what is owned by whom and delivered an element of tranquility in a national and local context defined by perceived and real land theft and conflicts. The modicum of official certainty around land tenure that was introduced by the project into an otherwise uncertain rural context contributed an important degree of confidence around a critical asset.

A second indicator included is the difference between treated and control households with a legal document (PVA) that corroborates land tenure status for all their parcels. This indicator measures the effectiveness of the project on clarifying property rights and securing land tenure. Overall, beneficiary households were 19% more likely to have a formal PVA for all their parcels compared to the control group. This indicates that beneficiary households have more secure property rights over their land. Overall, the program delivered 2145 modern registered PVAs with the new format including GPS data, to farmers in Camp Perrin and Chantal, which constitutes an additional level of legal protection not just for the farmers receiving these documents but also, indirectly, in a network type effect to adjacent farmers.

The third indicator is the difference between treated and control households that received a loan. This indicator aims to measure whether households with land tenure clarified are more likely to have access to credit and take risks to undertake investments on their land or other assets. The results from the impact evaluation show that beneficiary households are 5% more likely to receive a loan compared to the control households, which may indicate that the greater land tenure security enable farmer to take more risks.

In addition, it has to be highlighted that thanks to the PFB implementation, CIAT and other land tenure stakeholders such as notaries, surveyors and DGI, were able to assess the technical feasibility and relevance in the new way to conduct land surveys and tenure clarification. This field experience substantially fed the design of the draft bills of the land tenure reform on multiple aspects, such as the best suited GPS system and Real Time Kinematic to be used for land surveys, the community participation modalities and the roles of the different stakeholders along the land registration process, among other issues.

When the project was designed, using the best available data about landholding and parcel size in rural Haiti, it was assumed that rural agricultural parcels were much larger than they turned out to be. There was, in short, a significant under-estimation of the number of parcels in the targeted communes. This important clarification concerning parcel size would not have been possible without the systematic work of the PSFMR; this finding of the project constitutes an important contribution to the thinking not only about agriculture sector policy but also national development strategies. The production of this type of trustworthy and reliable information on the number and size of the parcels is a key motivation for countries to undertake this type of land administration programs in the first place (see for example PCRs for EC-L1071; GU-L1014)

Among these 64,510 parcels, the PFB reveals that around 96% are private property and 4% are State land. The PFB also shows that 45% of this land is owned under the *indivision* status,

meaning that parcels can be owned by multiple heirs and family members, making it difficult to quantify the exact number of people with tenure of these parcels.

## **SO 2 Improved quality of land management services**

Result 1 Average time for parcel registration reduced

Result 2 Average cost for parcel registration reduced

Result 1 was partially achieved in the areas worked by the PSFMR during project implementation. The initial 2012 baseline, coming from World Bank Doing Business report, was 301 days. However, the same source nowadays indicates a figure of 319 days for the same 2012 year. It also indicates a figure of 319 days for 2018, supposing that there was no impact attributable to the project on this aspect. Thanks to the PFB methodology, the PSFMR however speeded up several suboperations of the registration process, particularly the land survey, in the framework of the project intervention. In this sense it is calculated (see annex of the CEA report) that the with-project scenario enabled a reduction to 261 days (-18%), thanks to the reduction of time of land survey. This result derives from the investment undertaken to establish PFBs that have substantially and significantly improved geo-referenced data for analyzing and certifying land tenure situations and accelerated land tenure clarification procedures.

Result 2 was partially achieved in the areas worked by the PSFMR. The baseline data, calculated from a study undertaken in 2011, put the average cost for parcel registration at US\$600, including parcel survey, notary act and registration (full legal requirements for parcel legalization). The ex-post cost-effectiveness analysis (see annex of the CEA report) looked in more detail at the “with project” and “without project” scenarios with regards to parcel demarcation and clarification. The analysis is anchored in the ex-ante cost effectiveness analysis conducted during project preparation<sup>9</sup>, which compared the projected costs of the project per unit of outcome (demarcated parcel with tenure clarification) with the estimated costs incurred without the project to formalize everyday transactions. This analysis found that the parcel demarcation and clarification work carried out under the project was US\$294, while under a business as usual scenario it was US\$373 (in 2019 adjusted US\$). By adding the other costs of notary act and registration, the total registration cost as calculated in the results matrix reaches US\$991 in 2019 adjusted US\$, which is significantly higher than the expected US\$600, but mainly due to the high inflation and devaluation of the Haitian gourdes. In 2011 constant price, the total registration cost reaches US\$525, showing a reduction of 12.5% thanks to project implementation and methodology.

Looking forward, the use of fully geo-referenced land tenure databases (PFBs) with sound legal information on 64,510 parcels, supported by professionals trained by the project, should have additional positive outcomes tending to further lower parcel registration costs in the future. It should be recognized nevertheless that the “without project” scenario is still relevant for the untreated areas largely because progress in the reform legislation to facilitate parcel clarification has stalled.

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<sup>9</sup> See: [https://idbg.sharepoint.com/teams/EZ-HA-LON/HA-L1056/80%20IDBDocs%20Legacy/010.%20Project%20Preparation,%20Planning%20and%20Design/Economic%20Analysis%20-%20Impact%20on%20Income%20\[36666530\].PDF](https://idbg.sharepoint.com/teams/EZ-HA-LON/HA-L1056/80%20IDBDocs%20Legacy/010.%20Project%20Preparation,%20Planning%20and%20Design/Economic%20Analysis%20-%20Impact%20on%20Income%20[36666530].PDF) and annex of the CEA report.

**Table 2. Results Achieved Matrix**

Components and Indicators	Unit	Baseline value	Baseline year	Targets and Actual achievement	% Achievement	Verification Method
<b>SO 1 – Provide secure land tenure to private and state lands through parcel delimitation, rights clarification and formalization</b>						
<b>Outcome 1. Number of farmers given access to better services</b>						
Number of parcels demarcated, clarified and included in a PFB.	#	0	2012	P P(a) A	65,031 57,227 64,510	99  PMR Jan-Dec 2018
Difference between treated and control households with legal document (PVA) to corroborate land tenure for all their parcels	%	N/A	N/A	P P(a) A	N/A N/A 19	N/A  Impact evaluation
Difference between treated and control households that received a loan.	%	N/A	N/A	P P(a) A	N/A N/A 5	N/A  Impact evaluation
Beneficiary farmers with new registered parcels	#	0	2012	P P(a) A	1,000 1,000 2,145	100  PMR Jan-Dec 2018 Final evaluation
<b>Output 1</b> Parcels surveyed, with tenure clarified and recorded into the database	#	0	2012	P P(a) A	65,031 57,227 64,510	99  PMR Jan-Dec 2018
<b>Output 2</b> Private parcels formalized (with notary act)	#	0	2012	P P(a) A	1000 0 0	  PMR Jan-Dec 2018
<b>SO 2 – Improve the quality and efficiency of land administration services provided nationally and in targeted areas by CIAT, CNIGS,DGI, MoJ, ONACA and professional providers</b>						
<b>Outcome 1. Improve land administration at the national level</b>						
Average time for parcel administration	Days	319	2011	P P(a) A	66 66 261	23%  Baseline data: World Bank Doing Business 2011 EOP (A) data: own calculation on the basis World Bank Doing Business 2018 and CIAT monitoring reports, with project scenario.
Average cost for parcel registration	US\$	600	2011	P P(a) A	150 150 525	17%  CIAT monitoring information system. Cost effectiveness analysis.

Components and Indicators	Unit	Baseline value	Baseline year	Targets and Actual achievement		% Achievement	Verification Method
<b>Output 1.</b> GNSS (Global Navigation Satellite System) Continually Operating Receiving Stations upgraded and/or installed	#	0	2012	P P(a) A	16 16 16	100%	HA-L1056 PMR Jan-Dec 2018
<b>Output 2.</b> GOH Land Agency staff, judges and private sector professionals trained in land tenure, property rights and land administration	#	0	2011	P P(a) A	170 220 220	129%	PMR Jan-Dec 2018
<b>Output 3.</b> Persons trained with a masters degree in land administration	#	0	2011	P P(a) A	3 4 4	133%	PMR Jan-Dec 2018
<b>Output 4.</b> Notaries equipped with new equipment and software in the pilot areas	#	0	2011	P P(a) A	19 9 9	47%	PMR Jan-Dec 2018
<b>Output 5.</b> Public and private sector surveyors trained in the use of the Geographic Positioning Network	#	0	2011	P P(a) A	30 40 40	133%	PMR Jan-Dec 2018
<b>Output 6.</b> Local land administrative offices (ONACA/DGI) equipped	#	0	2011	P P(a) A	5 1 1	20%	PMR Jan-Dec 2018
<b>Output 7.</b> Analyses of the local land ownership situations	#	0	2011	P P(a) A	4 3 3	75%	PMR Jan-Dec 2018
<b>Output 8.</b> Surveyors trained with new equipment and software	#	0	2011	P P(a) A	18 13 13	72%	PMR Jan-Dec 2018

Where: P = Start-Up Plan; P (a) = Revised Annual Target; A = Actual.

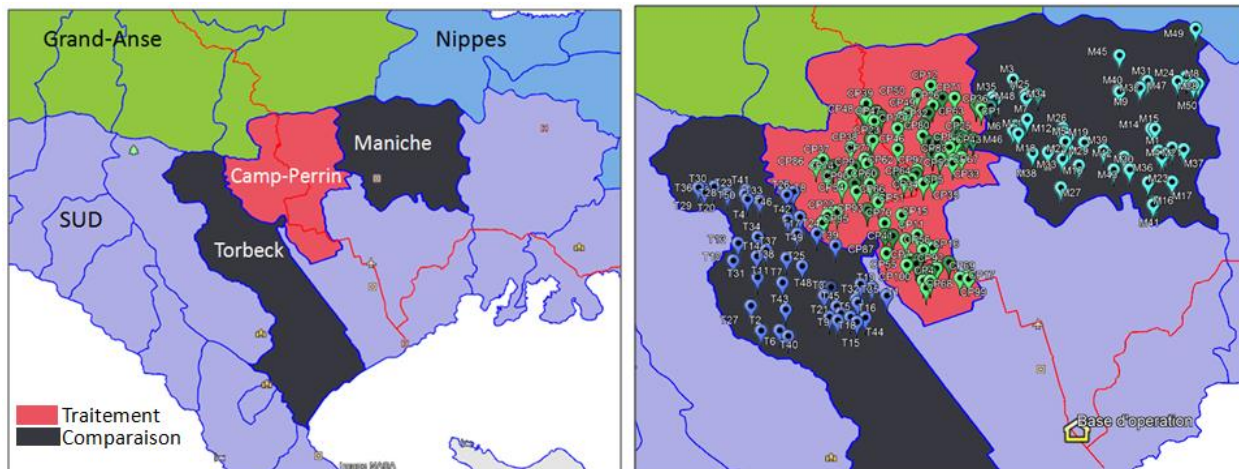


### c. Counterfactual Analysis

As explained previously, the initially planned IE was a methodology based on randomized control trials, but this approach proved incompatible with the PSFMR's land demarcation methodology and the creation of a PFB, which demanded territorial continuity. In the case of this project, the logistical implications of randomly selecting beneficiaries (either at the individual level or grouped within small geographical units) or of randomly phasing them in were perceived as a significant and costly constraint to the project's execution.

Instead, a Propensity Score Matching (PSM) approach was favoured to construct a control group based on a set of observable characteristics from the group of beneficiaries. As illustrated in Figure 2 below, a sample of beneficiaries was selected in the commune of Camp-Perrin (634 households), while the control group sample was constructed using households with similar observable characteristics from the neighbouring communes of Maniche and Torbeck (923 households).

**Figure 2 – Map of treatment (or beneficiary) and control communes**



The survey collected information about socio-demographic characteristics, productive characteristics of the plots, economic characteristics of the household, among others. For the calculation of the propensity score a logit estimation was applied that included the following covariates: female head of household, education of the head of the household, economic activity of the head of the household, age of the head of the household, number of household members and number of adults that participate in economic activities. The results showed that head of households with higher education degree, and households with greater number of adults performing economic activities increases the probability to receive the treatment while being an older head of household in the agriculture sector reduces the probability of participation (see table below).

**Table: Propensity Score (Logit)**

Outcome : Treated (Yes/No)	Coeff.	se
<i>Household Characteristics</i>		
Female	-0,0357	(0,120)
Education (excluded : none education)		
Elementary	0,307*	(0,123)
Beyond elementary	0,588***	(0,170)
Economic activity (excluded : none)		
Agriculture	-0,653***	(0,194)
Family enterprise	-0,280	(0,225)
Other	0,601	(0,468)
Age (excluded : 18-30 years)		
31 - 60	-0,211	(0,231)
More than 60	-0,553*	(0,250)
<i>Household Characteristics</i>		
Number of adults that participate in economic activities	0,145***	(0,0430)
Household members	-0,0283	(0,0317)
N	1 554	

Source: Impact evaluation report (NORC and Land Alliance)

This methodology cannot control for potential differences in unobservable characteristics (especially in the absence of baseline data). Changes measured with this methodology can be attributed to the project under the assumption that unobservable characteristics do not significantly differ between the treatment and the control groups; that the stable unit treatment value assumption (SUTVA) holds; and that other characteristics used in the matching were not affected by the project. It is a quite reasonable assumption to make here considering that control households were selected in areas located close to the border of the commune of Camp-Perrin, a quasi-random geographical cut-off, which means that households located on each side were unlikely, on average, to be significantly different. It is also unlikely that they would have been affected by treatment. In any case, if there were spillovers, they are likely to generate underestimation of the project's impact and not an overestimation. This created an opportunity to identify a comparable counterfactual.

The survey<sup>10</sup> was conducted in the communes of Camp-Perrin (beneficiary), Maniche and Torbeck (control communes) in June 2017, while the project had finalized most of its activities in Camp-Perrin. By then, 86% of beneficiary respondents in Camp-Perrin declared that their plots had already been surveyed by the project. The objective of this impact evaluation was to measure the project's short-term impact (or the impact measurable within the project's timeframe) on a number of key outcome indicators such as the volume of land transactions (SO 2 – Result 1), difficulties encountered in land transactions and future intentions of land transactions, which could be measured directly at the household level and which could be attributable to the project through the identification of a control group, or counterfactual.

As described in the previous sections, the results obtained after the estimations do not confirm that the program had a positive impact on land transactions or land values. First, with respect to

<sup>10</sup> The impact evaluation was initially planned to be carried out by Paris School of Economics (PSE), but PSE withdrew itself when it was finally found that a RCT was not suitable. NORC at the University of Chicago was finally hired through a competitive process and carried out the IE, with Bank's support.

land transactions, it was found that 12% of the beneficiaries were engaged in land transactions compared to 11% of the control households. In addition, given the low number of transactions, the price difference between treatment and control is not representative and does not provide any meaningful information. However, some positive impacts were found. Farmers in the beneficiary group are more likely to have ownership documents and to have all their plots surveyed and registered with a validated PVA than their counterparts in the control group (+19%). In addition, treated households are more likely to have received a loan compared to the control group (5%) which might indicate greater access to credit.

With respect to the “Number of parcels demarcated, clarified and included in a PFB” and “Beneficiary farmers with new registered parcels” this can be directly attributable to the project itself. As discussed before, neoclassical theory posits that land programs clarifying parcel ownership can incentivize greater investment, improve credit access and produce more efficient resource allocation, such as land sales and rent (Besley and Ghatak, 2010)<sup>11</sup>. Empirically, enhancing land tenure security has been found to yield a number of economic benefits, from increased investment and credit access to productivity improvements, and enhanced environmental and resource management (Lawry et al., 2017)<sup>12</sup>. Thus, although these types of impacts are likely to take longer to manifest themselves, the vertical logic and counterfactual analysis of the project is underpinned by the theoretical and empirical evidence.

With regard to the project’s impact on average time (SO 2 – Result 1) and cost (SO 2 – Result 2) for parcel registration, they are estimated by comparing administrative data in the area of intervention before and after the project. Because no other intervention aiming at improving the efficiency of parcel registration processes took place over the same period of time, these changes are likely to be the direct result of the project.

**The effectiveness of the project is considered being unsatisfactory.** The project has been very effective in developing and implementing the PFB methodology in five communes of the country, however the evaluation does not confirm that the program had a positive impact on land transactions or land values, and the average cost and time of parcel registration have not been reduced as initially expected. It is however important to highlight that the initial vertical logic, with its outcomes and related indicators, was not adequately designed, and most of the indicators and targets were over-optimistic.

#### **d. Unanticipated outcomes**

There were no unanticipated outcomes.

### **II.3 Efficiency**

An ex-post cost effectiveness analysis was conducted (for details, see CEA annex), which compared the estimated costs of parcel surveying and tenure clarification under a business as usual approach with the costs of parcel demarcation and clarification under the project. The cost structure of the ‘business as usual’ alternative, which was analyzed during project preparation, remained relevant and could be priced in 2019 dollars, the chosen year of analysis. The CEA

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<sup>11</sup> Besley, T. and M. Ghatak (2010). “Property rights and economic development.” In D. Rodrik and M. Rosenzweig, eds., *Handbook of development economics*, Volume 5, pp. 4525-4595. Amsterdam: North-Holland

<sup>12</sup> Lawry, S., Samii, C., Hall, R., Leopold, A., Hornby, D., and Mtero, F. (2017). The impact of land property rights interventions on investment and agricultural productivity in developing countries: a systematic review. *Journal of Development Effectiveness*, 9(1):61–81

found that the parcel registration carried out under the project resulted in a lower cost per parcel than the updated business as usual alternative, US\$294 to US\$373, respectively. This represents a 21 percent difference.

In addition, the initial investments in comprehensive parcel demarcation and clarification provides continuing benefits in the form of high-quality data that can be used to reduce the costs of future land transactions, since it will reduce the time necessary for parcel survey and archive retrieval. Parcel limits have been defined and measured, and just require updating in the case of a land transaction. With geo-referenced survey minutes attached to each parcel, future transaction of the same parcel should be more efficient and cost effective. With juridical and administrative data digitalized and archived, the time and money spent by surveyors and notaries to locate the relevant documents can be reduced to a minimum in the future. It must be mentioned here that the business as usual remains a relevant and present alternative, since the progress in legislation reform to facilitate parcel clarification has stalled. Thus, surveyors, notaries and others involved in the parcel registration process can revert to the established option, citing legal reasons for their actions.

The PFB has been implemented directly by CIAT in Camp Perrin, Baho and Chantal communes, and by a specialized external service provider in Sainte Suzanne and Grande Rivière du Nord, selected through an international bidding process. It is interesting to compare that the unit cost per parcel incurred by CIAT is slightly lower than the one of the external service provider, with US\$264/parcel versus US\$274/parcel. It is however important to note that some project management costs of CIAT are counted in the administrative costs, which let suppose that both unit costs are finally quite similar. In comparison to other land tenure projects in the LAC region, this cost is quite high but can be explained by the logistical costs in mountainous and isolated areas, as well as by the important initial investments needed to train the field surveyors.

	<b>PFB costs</b>	<b>Parcels</b>	<b>Unit cost</b>
<b>CIAT</b>	11,073,234	41,985	264
<b>External provider</b>	6,164,806	22,525	274
<b>Total</b>	17,238,040	64,510	/

The implementation of the PSFMR had to manage substantial operational challenges, explaining why administration costs reached 14.7 percent of total project costs. The training and subsequent mobilization of large survey teams in remote and inaccessible communes to deliver services to the door of participating farmers required an important administrative team to manage all the associated resources. The PSFMR, as the first of its type to be implemented in rural Haiti, did not benefit from an extensive body of prior empirical operational guidance.

Finally, the PSFMR did not enjoy the efficiencies expected from the administrative reforms promoted under the complementary series of projects comprising the agriculture sector PBG. Without the legal introduction of the new technologies and revised roles of the professionals engaged in the parcel demarcation and clarification exercise the project had to persuade participating surveyors and notaries to accept the new ways of working. With reforms the PSFMR would have been in the position of expecting them to discharge their new duties acquired under the law.

**The efficiency of the project is considered being excellent.** Indeed, the CEA demonstrate that the cost is lower under the project scenario than under the business-as-usual scenario. Other ways to assess the efficiency are also showing positive results.

**Table 3 Costs of the Project**

1 Component I: Cadastre, tenure clarification and formalization in targeted rural areas									
Outputs		2012	2013	2014	2015	2016	2017	2018	Cost
1.1 Parcels surveyed, with tenure clarified and recorded into the database	P			\$830,163.00	\$4,528,845.00	\$6,199,027.26	\$2,645,845.00		\$14,203,880.26
	P(a)			\$830,163.00	\$4,528,845.00	\$4,473,744.51	\$4,080,012.00	\$3,933,901.00	\$17,175,543.00
	A			\$938,659.00	\$3,007,107.00	\$5,399,325.00	\$3,896,551.00	\$3,996,398.00	\$17,238,040.00
1.2 Private parcels formalized (with notary act)	P			\$0.00	\$150,000.00	\$0.00	\$0.00		\$150,000.00
	P(a)			\$0.00	\$150,000.00	\$0.00	\$0.00	\$0.00	\$0.00
	A			\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
2 Component II: Modernization of the Land Administration System									
Outputs		2012	2013	2014	2015	2016	2017	2018	Cost
2.1 GNSS (Global Navigation Satellite System) Continually Operating Receiving Stations upgraded and/or installed	P		\$0.00	\$500,000.00	\$1,300,000.00	\$500,000.00			\$2,300,000.00
	P(a)		\$0.00	\$440,000.00	\$1,785,000.00	\$851,744.45	\$1,302,329.00	\$799,791.00	\$2,807,780.00
	A		\$0.00	\$0.00	\$742,559.00	\$591,446.00	\$673,984.00	\$789,733.00	\$2,797,722.00
2.2 GOH Land Agency staff, judges and private sector professionals trained in land tenure, property rights and land administration	P			\$100,000.00	\$325,000.00	\$375,000.00	\$155,010.00		\$955,010.00
	P(a)			\$100,000.00	\$325,000.00	\$75,000.00	\$0.00	\$0.00	\$393,493.00
	A			\$162,736.00	\$107,891.00	\$122,866.00	\$0.00	\$0.00	\$393,493.00
2.3 Persons trained with a masters degree in land administration	P				\$91,350.00	\$45,000.00	\$59,000.00		\$195,350.00
	P(a)				\$30,000.00	\$70,000.00	\$47,000.00	\$0.00	\$143,198.71
	A			\$20,041.71	\$32,420.00	\$47,186.00	\$43,551.00	\$0.00	\$143,198.71
2.4 Notaries equipped with new equipment and software in the pilot areas	P			\$100,000.00	\$200,000.00	\$175,000.00			\$475,000.00
	P(a)			\$100,000.00	\$250,000.00	\$400,000.00	\$130,000.00	\$0.00	\$233,027.00
	A			\$0.00	\$0.00	\$102,968.00	\$130,059.00	\$0.00	\$233,027.00
2.5 Public and private sector surveyors trained in the use of the Geographic Positioning Network	P								\$0.00
	P(a)			\$60,000.00		\$0.00	\$0.00	\$0.00	\$340,642.00
	A			\$340,642.00	\$0.00	\$0.00	\$0.00	\$0.00	\$340,642.00
2.6 Local land administrative offices (ONACADGI) equipped	P				\$360,000.00				\$360,000.00
	P(a)				\$360,000.00	\$0.00	\$25,000.00	\$0.00	\$120,920.00
	A				\$66,877.00	\$0.00	\$54,043.00	\$0.00	\$120,920.00
2.7 Analyses of the local land ownership situations	P			\$20,000.00	\$20,000.00	\$40,000.00	\$20,000.00		\$100,000.00
	P(a)			\$20,000.00	\$40,000.00	\$0.00	\$0.00	\$42,476.00	\$131,559.00
	A			\$0.00	\$24,557.00	\$0.00	\$64,526.00	\$15,873.00	\$104,956.00
2.8 Surveyors trained with new equipment and software	P			\$150,000.00	\$580,000.00	\$350,000.00			\$1,080,000.00
	P(a)			\$150,000.00	\$559,679.00	\$480,000.00	\$0.00	\$0.00	\$170,321.00
	A			\$170,321.00	\$0.00	\$0.00	\$0.00	\$0.00	\$170,321.00
Other costs									
Other Cost		2012	2013	2014	2015	2016	2017	2018	Cost
Monitoring and Evaluation, Impact Evaluation, Audit, Contingencies, etc	P			\$80,000.00	\$942,123.00	\$702,123.00	\$762,123.00		\$2,486,369.00
	P(a)			\$80,000.00	\$942,123.00	\$502,000.00	\$725,516.00	\$678,634.00	\$944,564.45
	A			\$92,476.45	\$27,442.00	\$52,130.00	\$93,882.00	\$413,388.00	\$679,318.45
Program Coordinating Unit, Equipment and Operating Expenses, Accounting System.	P		\$380,365.00	\$892,053.00	\$820,702.00	\$733,140.00	\$598,140.00		\$3,424,400.00
	P(a)		\$380,365.00	\$892,053.00	\$920,702.00	\$633,140.00	\$712,232.00	\$418,448.00	\$4,532,385.44
	A		\$380,365.00	\$502,099.00	\$1,411,339.00	\$955,295.44	\$864,839.00	\$657,618.00	\$4,771,555.44
Total Cost		2012	2013	2014	2015	2016	2017	2018	Total Cost
	P		\$380,365.00	\$2,772,216.00	\$10,398,020.00	\$9,219,290.26	\$4,240,118.00		\$27,010,009.26
	P(a)		\$380,365.00	\$2,772,216.00	\$10,971,349.00	\$7,615,628.96	\$7,022,089.00	\$5,873,250.00	\$27,000,000.00
	A		\$380,365.00	\$2,226,975.16	\$5,426,758.40	\$7,271,216.44	\$5,821,435.00	\$5,873,010.00	\$26,999,760.00

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<sup>13</sup> Total project disbursement was US\$26,999,760 while the amount of the grant was US\$27,000,000. The remaining US\$239 were returned to the Bank.

## II.4 Sustainability

### a. General Sustainability Aspects

Issue	Sustainability challenge
<b>1. Cadastre, tenure clarification and formalization in targeted rural areas</b>	
PFBs maintained.	A PFBs is a living document that incorporates precise geographic and legal data, including parcel boundaries and genealogical data, which needs to be updated on a constant basis as parcel ownership changes with ongoing land transactions. Without the input of new data, a PFB slowly becomes obsolete. The PFB legitimacy stems from the broad farmer participation involved in their creation, which must be validated continuously. Part of local professionals and government officials share this sense of ownership deriving from broad participation, but its sustainability is threatened by the adjournment of the legal and institutional reform intended to support its broader use. CIAT was however able to mobilize a EU€3 million project financed by the French Development Agency to continue consolidating the initiative and reform.
New format PVAs with GPS continue to be used.	The new format of the PVA, supported by the project, incorporates GPS generated data as well as handwritten information provided by notaries. This new format PVA is a legal document with a strong legitimacy, based substantially on the participatory process allowing its creation. Local notaries, surveyors and land offices in project area have been trained and equipped, and are aware of the benefits of using the PFB and new PVA as a reference for land tenure transactions. However, a broader use of this format depends on the legal and institutional reform which is currently on hold. With support of the French cooperation, CIAT is continuing to consolidate the changes of practices at local level.

Institutional expertise maintained.	CIAT's arrival with the PSFMR in the targeted rural areas was met with skepticism that good operational management was able to overcome. The CIAT project team learnt by doing in order to acquire the technical, communication and management skills to transfer the PFB methodology between the two regions covered by the project. Hard-earned expertise and knowledge will potentially be lost without follow-up projects. The reconstitution of the CIAT operational fieldwork team is not impossible but will become ever more difficult as time passes and with the passage of time the transfer of expertise to other participating entities responsible for legal matters also becomes more difficult. French financing has been obtained to continue the CIAT institutional strengthening agenda.
<b>2. Modernization of Land Administration System</b>	
Improved land administration services measured in terms of average times and average cost for parcel registration.	Available figures point to improving land administration services in the land administration local offices and services supported by the project. The time needed to register a parcel was cut in half from 301 to 261 days and the cost of registration was 21 percent lower for the "with project" versus the "without project" scenarios (US\$294 vs US\$373). Maintaining this progress will be difficult given the failure to adopt new regulations and procedures anticipated in the draft laws and will depend on the trained professionals continuing to use their new knowledge and tools. Extending the "with project" option will not be possible because of the lack of progress in reforms and the absence of institutional support proffered through projects such as HA-L1056.
Draft legislation delivered for Parliamentary scrutiny.	The draft legislation on land administration reform was delivered to the Prime Minister's office in 2013. It was not transferred to Parliament for its consideration and today's conjuncture suggests that there are no clear incentives to create the political will to move forward on the legislation.
Enhanced professional capacity maintained.	The PSFMR financed in-country training for nearly 300 notaries, surveyors and other professionals in different land administration aspects as well as supported 4 people to acquire master's degrees in land administration. This body of trained staff is an important asset that is encouraged by CIAT to continue to use its expertise.
National Centre for Geospatial Information (CNIGS) network maintained.	The CNIGS now comprises 16 global navigation satellite system stations (GNSS) though part of the network suffers from poor internet connection. Trimble, the installer, has a three-year knowledge transfer and maintenance contract. After that time payment has to be made to use the Trimble RTK system.

## **b. Environmental and Social Safeguards**

The PSFMR was classed as a category “B” operation under the Bank’s Environment and Safeguards Compliance Policy (OP-703). ESG did not provide active supervision during project implementation since it was focusing at that time on “A” category projects. During implementation, no major risk was identified that required special oversight and the participatory methodology employed by the PSFMR was considered capable of managing issues arising.

The Environmental and Social Management Report (ESMR) concluded that the project would have no environmental impact, or any social impacts considered as “involuntary resettlement”. The ESMR did identify potential risks that included increased social conflict as well as the danger of exclusion of the most marginal from the parcel demarcation and clarification process. Of particular concern was the situation of those farmers occupying state lands as well as those owning land under family in-division. In response attention was given to ensure that the methodology was able to identify those holding tenure on state lands and also to collect the requisite data corresponding to land held in family in-division.

Further, strong creole-based information and communications campaigns designed to clarify the purpose of the PSFMR, and to encourage the fullest participation in the process to prepare PFBs were launched before the parcel demarcation and clarification methodology was started. This included one on one discussion and small group meetings to ensure that everything possible was done to allay the concerns and fears of the intended beneficiaries. This prior communication and consultation effort were an essential part of the precautionary approach adopted by the PSFMR which addressed comprehensively ESMR concerns about documenting existing rights, recognizing women’s tenure and defusing social conflicts.

During project execution, given the absence of environmental risks identified, Bank supervision substantially focused on the social risks highlighted by the ESMR that would be managed through the application of the demarcation and clarification methodology. This was done through regular meetings with CIAT and during the field visits undertaken periodically. In addition, the ESMR raised the issue of sufficient numbers of local professionals, including surveyors and notaries, being available and buying into the project. The training program with professional groups aimed to produce support and engagement with the project and this aspect of execution was also followed-up through project supervision activities.

Many of the ESMR identified social risks were addressed by the PFB process, which was participative; thereby differentiating it from previous attempts to determine land ownership and allowing local farmers to situate themselves at the center of the demarcation and clarification process. This tended to marginalize traditional institutional actors and the PSFMR was considered disruptive of established land administration relationships, creating some disaffection, even “push-back”, among surveyors and notaries in the north who often resided in their assigned communes. This lack of connection with farmers interests was not found in the professionals in the south who proved more accepting of the need to use new ways of working and to support fully the plot demarcation and clarification effort.

Local and national actors largely came to recognize the social function of the PFBs and how delimiting parcels for their inclusion in a PFB, a locally held plan, reduced informality. Even though most participating farmers in the PSFMR were not provided with a piece of paper in the form of a PVA the social and juridical clarification process brought certainty over what they owned to deliver an element of tranquility in a national and local context defined by perceived and real land theft.



The importance of communicating clearly about the parcel demarcation and clarification methodology was underscored in both the mid-term and final evaluations. Part of the issue was that beneficiary populations initially found it difficult to comprehend that the state would promote a free land tenure demarcation and clarification project. The widely held, and very understandable, view is that, until the PSFMR, state action had not provided solutions to the land tenure problem, but on the contrary may have made situations more intractable. Changing this perception at the start of project implementation at the local level proved a challenge that was addressed successfully with clear communications and solid preparatory work. Lessons were learnt and the design of the follow-up project incorporated actions to strengthen communication and information about the purpose of the parcel demarcation and clarification methodology.

Finally, the main risks that CIAT had to deal with during project implementation were rent-seeking behaviors of local authorities in some communes who were trying to leverage jobs for local constituents. CIAT had to further communicate with them to explain the project approach and procedures and organized some local activities to increase the involvement and buy in of local stakeholders (small agricultural competition). The external service provider also experimented some threats from a local armed gang, for this reason it has been decided to cancel the PFB activities in a communal section. These are important issues that will have to be considered for future similar operations. It would be helpful to implement, in parallel to land tenure operations, some labor-intensive activities through other projects, to alleviate these local demands. It will also be important to further work with the local police if some gang threats are probable.

**The sustainability of the project is considered being partly unsatisfactory**, since the continuity of important results is tied to the approval and implementation of the legal and institutional reform, which is currently on hold. It is however important highlighting that this pilot project allowed developing and fine-tuning the new land administration procedures and methodology in rural areas, which in turn fed the detailed design of the set of bills that sustain the land reform. Without this project, the bills would certainly have been incomplete since they would not have benefited from this field participative experience.

### **III. NON-CORE CRITERIA**

#### **III.1 Bank Performance**

The CIAT considered the Bank as an interlocutor that understood the strategic importance of the PSFMR and land tenure administration reform. This understanding was founded on first-hand and on-going knowledge of Haiti's rural areas and the evolving challenges facing small-scale farmers. In the counterpart's opinion, the deep experience of the IDB facilitated a close and productive collaboration over the course of the project cycle from conceptualization, and design through to execution. The technical quality of the project's design and its alignment with country and Bank priorities as well as the technical discussions with counterpart and beneficiary were however undermined by the complex political economy of reform as well as by the definition of outcome indicators unlikely to be affected and measurable during the project lifetime.

With respect to reforms, the PSFMR, as well as the related PBG series, that targeted small-scale farmers as beneficiaries, underestimated both the lack of political interest as well as the pushback by vested interests to attempts to enact meaningful pro-poor farmer reforms. The draft reform bills sent to the PM's offices were not conveyed to Parliament for its consideration, for example, despite commitments acquired with the PBG funding (see [PCR for HA-L1074 and HA-L1082](#)).

An experimental impact evaluation was part of project design though it did not take place as expected initially, for several reasons explained previously. The grant proposal presented an RCT methodology which was finally found not to be compatible with project methodology. The full understanding project's impact has been compromised by the delays in agreeing and implementing the new IE methodology and by the fact that the results and impact indicators were too ambitious and hardly measurable in a project timeframe.

The location of the project team leader in Haiti not only facilitated the non-objection process but also allowed for timely discussion of the many issues arising throughout the execution process. The Bank's technical and fiduciary supervision also contributed to improve the CIAT's fiduciary capacity.

### **III.2 Beneficiary Performance**

The national land tenure administration reform has been designed in a participatory way under the leadership of the CIAT, and CIAT seized the opportunity of Bank's financing to adapt and upscale this initiative in rural areas and to support the legal and institutional reform. In that sense, CIAT has been very proactively involved in project preparation and implementation, and always demonstrated a very strong buy-in of the project. As stated previously, the PFB methodology was a very innovative approach, and implied conducting intense consultations and dialogue with national and local stakeholders involved in land tenure administration, including the project beneficiaries, door-to-door. However, at some point the land tenure reform lacked of a high level political buy-in and support from the legislative and executive branches, which would have fostered the legal and institutional changes.

The project experimented some delays in the first two years reflected in a disbursement path lower than the average of the IDB country portfolio, mainly due to the necessary time to set-up and train the technical and fiduciary team, to fine-tune and agree with the different stakeholders the design of the different activities (including the PFB methodology), and to carry out the procurement processes of the required goods and services. These delays had to be compensated by a cumulative extension of 15 months. Despite this setback, the implementation path has been globally satisfactory, as the PMR annual classification shows. The CIAT constituted a performing team which was able to manage both technical and administrative project matters. Some difficulties were experimented with the management of the contract of the external service provider hired to carry out the PFB in some communes. The provider experimented some delays attributable to its own performance but also to external factors, and on general agreement a reduction of the scope of his contract has been agreed, with no objection of the Bank. CIAT directly implemented the PFB where the provider withdrew. During the implementation, CIAT experimented several implementation issues, to which it found timely solutions. For instance, working in mountainous isolated areas implies having poor access to infrastructure. In this context CIAT implemented several solutions to these logistical issues, such as the use of mobile field teams with temporary bases in remote areas, or the rehabilitation of some public infrastructure to be able to host the field teams during the PFB implementation.

During the design of the operation, the Bank considered the overall fiduciary risk rating to be high due to the lack of appropriate computerized accounting systems and weaknesses in internal control in the current structure. Procurement and financial specialists were hired and throughout project execution the Bank supported CIAT to strengthen its fiduciary management capacities with technical assistance, supervision visits and day-to-day exchanges. The same assessment

made while designing the subsequent operation HA-L1128<sup>14</sup> in 2017 concluded that CIAT's fiduciary (organizational, financial administration and procurement systems, and internal and external control) systems had reached a medium level of development and risk, showing therefore an improvement since the beginning of the operation. During project execution, CIAT complied with the contractual clauses of the grant agreement 2720/GR-HA.

CIAT experimented however some difficulties in its monitoring and evaluation system during the first years of the project, which made the monitoring of the PFB implementation difficult. The system was however enhanced through the improvement of the data management system.

Regarding other institutional aspects, it took more than a year to train, construct and then mobilize the field team to undertake the PFB methodology. This effort reflected the uniqueness of the PSFMR as a social program working intensively and profoundly in a selected rural area over an extended period of time. CIAT identified different ways to gain acceptance for the project. In Camp Perrin, CIAT wisely sought help from two local NGOs that had been active in the commune over an extended period of time, including one that has been present in the commune since 1986. Locating the PSFMR's operational base in the compound on one local NGO allowed CIAT to acquire a level of credibility that permitted an expedited launch of project activities. In Bahon, CIAT rehabilitated a compound with accommodation and utilities; the local police station was also hooked up to the generator providing power to the offices used by the project. The timely decision to support the police station with electricity also helped to insert the PSFMR into the local social context.

CIAT has been rigorous in organizing periodic meetings of the Steering Committee joining the main land tenure administration stakeholders (Ministry of Justice, ONACA, DGI, notaries, surveyors, etc.), to maintain them updated about project status and planning, and to receive their technical and strategic feedback. There was a conscious effort to reach out to other GoH agencies with an interest in the PSFMR. The project sought to create and maintain good relations with the Ministry of Agriculture and Rural Development (MARNDR). The DGI was involved in the project and provided office space in Camp Perrin for the project. Wherever possible training was provided to key professional actors such as surveyors and notaries and provided support to local authority institutions constituted by the Mayors and Justices of the Peace. Of course, some actors were alienated since the PSFMR upset cozy arrangements particularly those associated with monopolistic economic behaviors.

In terms of transition post closure, after the project ended CIAT remained active and continued lobbying for the land tenure reform. It still maintains close relationship and contact with the local teams involved the PFB, and was able to mobilize a EU€3 million project financed by the French Development Agency to continue consolidating the initiative and reform.

## **IV. FINDINGS AND RECOMMENDATIONS**

### **IV.1 Dimensions 1 to 5**

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<sup>14</sup> In 2018 the Bank and the Government agreed to condition the HA-L1128 project to the approval of the pending land tenure administration reform laws.

**Table 4**  
**Findings and Recommendations**

Findings	Recommendations
<p>The project was designed as a pilot to test a parcel demarcation and clarification methodology in rural areas in order to assess whether the results could then be incorporated into a program for wider implementation across Haiti. Although the project was well designed at output level, the vertical logic failed to define outcomes that could reasonably be expected to materialize and be measured at the end of the project. In fact, although increased land transactions and land values are associated with land tenure projects, their expected effect is likely to take place in the long run not in the short term.</p>	<p>For future similar operations, it is recommended to further design the vertical logic and identify achievable outcomes and adequate SMART indicators to measure them. Intermediate outcomes such as access to credit, investment, land security indicators, among others, are more likely to be materialized in the short-term. These additional indicators would complement the long-term indicators.</p>
<p>The Monitoring and Evaluation Plan foresaw an ambitious impact evaluation based on a RCT, which was found, during project execution, to be not adapted to the PFB methodology (see 2.2.c). A new methodology had to be agreed, based on a PSM.</p>	<p>For future similar operations in land tenure, it is recommended to further analyze the appropriateness of the RCT. As mentioned, it is expected that land tenure interventions are more efficient when implementing a 'systematic parcel sweep' methodology which achieves economies of scale by treating all adjacent parcels of land in a defined geographical area. To ensure full participation, the 'parcel sweep' is preceded by a thorough socialization campaign with local community leaders and individual landholders. This implies that an experimental approach that randomly assigns households to treatment and control is not adequate. Therefore, other quasi-experimental analysis such as regression discontinuity or PSM must be implemented.</p>
<p>The PFB provides a very accurate picture of the land tenure situation at a given moment. It contains sound geographical and legal data and information, constituting a robust tool that can be used to combat illegal land grabs. The participatory methodology used to create a PFB ensures its legitimacy with the poor farmers it is designed to serve. The long-term sustainability of the PFB depends on bottom-up pressure to ensure new data is fed into the PFB as well as on the legal and institutional reforms anticipated by the project.</p>	<p>The PFB proved its worth in the pilot project, which merits additional effort to continue its development and implementation across Haiti's rural areas in benefit of small-scale farmers. The IDB should engage with Government with respect to the laws that are pending discussion and approval by Parliament. The results achieved by the PSFMR benefited small and poor farmers in a way that demonstrated why it is important to maintain a focus on the land tenure agenda in Haiti and for the IDB to look for institutional avenues to discuss with Government the best way to present Parliament with the draft laws and the supporting arguments for their approval. The reform of structural relationships would be an important step forward to assess if conditions exist for the follow-up project.</p>

Findings	Recommendations
The arrival of the PSFMR in poor communities created expectations beyond the scope of the project, particularly with respect to the creation of employment and income generating opportunities. Notwithstanding the implementation of a strong and clear communication campaign to explain the purpose of the project, local mayors and others still perceived the project in rent seeking terms, expecting the field team to hire local people even though they did not have appropriate skills.	During project execution, it would be helpful to find solutions to deviate the local job demands and expectations from the project, in order not to hinder project execution. It will also be important to further work with the local police if some gang threats are probable.
The GNSS network is a very powerful positioning tool that can be used by a wide range of public and private stakeholders and easily profitable, but institutional weaknesses might interrupt its operations and maintenance.	It is important to develop an GNSS operations and maintenance management plan that could include a cost-recovery strategy encompassing the sale of services to the private sector. This issue has been a point of discussion with the GoH by the IDB but a plan has yet to be developed.
The project was identified after the 2010 earthquake, which highlighted the importance of land security and tenure issues. With the clear expression of GoH interest to address the issue the Bank took the opportunity to work with CIAT, the Haitian counterpart. The PFB field experience successfully fed the design of the draft bills on multiple aspects, since it could assess what was technically more relevant or performing in land surveys and tenure clarification. Over the course of subsequent decade, the energy for reform ebbed and key institutions lost interest as social and political instability eroded the broader context. CIAT maintained its focus on this issue of land tenure security, but the assumptions about the reform agenda supported by the project proved over-optimistic.	An assessment of the appetite for reform should cover the commitment and actions that have to be taken by national authorities to ensure institutional arrangements are in place to implement reforms. The GoH and IDB should maintain this issue in their public policy agenda, in order to move the legal reform ahead and take the land tenure security investments up again.
The project was designed to provide benefits to small farmers, some of Haiti's poorest citizens. A CEA analysis shines a small light on how the project impacted the parcel registration process. The finding that the cost of parcel registration "with project" was 21 percent below the cost of parcel registration under the business as usual alternative represents a significant saving for poor people seeking improved security over their assets.	As the project brought important cost savings on parcel registration demonstrated benefit was enjoyed by a segment of Haiti's poorest, neglected rural population, which constitutes an important argument for a reassessment of the place of such projects in the Bank's strategy and active portfolio with Haiti.

<sup>1</sup> The end of project data refers to impacts in the south only.

<sup>2</sup> The without project costs of parcel registration was recalculated by the CEA.