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INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

PROJECT APPRAISAL DOCUMENT

ON A

PROPOSED LOAN

IN THE AMOUNT OF US\$43 MILLION

TO THE

THE LEBANESE REPUBLIC

FOR A

LAND ADMINISTRATION SYSTEM MODERNIZATION PROJECT

May 14, 2018

Social, Urban, Rural and Resilience Global Practice  
Middle East and North Africa Region

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## CURRENCY EQUIVALENTS

(Exchange Rate Effective Mar 31, 2018)

Currency Unit = US\$

LPD 1515.50 = US\$1

## FISCAL YEAR

January 1 - December 31

Regional Vice President: Hafez Ghanem

Country Director: Saroj Kumar Jha

Senior Global Practice Director: Ede Jorge Ijjasz-Vasquez

Practice Manager: Jorge A. Munoz

Task Team Leader(s): Mika-Petteri Torhonen, Olivera Jordanovic

## ABBREVIATIONS AND ACRONYMS

BDL	Banque du Liban
COA	Court of Account
COMAP	Cadastral Organization Modernization and Automation Project
CPF	Country Partnership Framework
CQS	Consultants' Qualifications Based Selection
CTB	Central Tender Board
DA	Designated Account
DOF	Directorate of Finance
ECA	Europe and Central Asia
eGovernance	Electronic Governance
EMP	Environmental Management Plan
eService	Electronic Service
FB	Fixed Budget Selection
FM	Financial Management
FO	Financial Officer
FY	Fiscal Year
GAD	Geographic Affairs Directorate of the Ministry of Defense
GDLRC	General Directorate of Land Registration and Cadastre
GIS	Geographical Information Systems
GRS	Grievance Redress Service
HR	Human Resources
ICB	International Competitive Bidding
ICMSS	Integrated Cadastre Mapping and Surveying System
ICR	Implementation Completion Report
ICT	Information and Communication Technology
IFAC/INTOSAI	International Standards on Auditing
IFR	Interim Financial Report
IPF	Investment Project Financing
IOF	Institute of Finance
IPSAS	International Public Sector Accounting Standards
IRR	Internal Rate of Return
IRS	Integrated Registration System
ISO	International Organization for Standardization
LBP	Lebanese Pound
LCS	Least Cost Selection
M&E	Monitoring and Evaluation
MOF	Ministry of Finance
MOOC	Massive Open Online Course
NCB	National Competitive Bidding
NIRS	National Integrated Registration System
NPV	Net Present Value
NSDI	National Spatial Data Infrastructure
OGC	Open Geospatial Consortium

OMSAR	Ministry of Administrative Reforms
OP/BP	Operational Policy/Bank Procedures
PDO	Project Development Objective
PFS	Project Financial Statements
PGP	Private Government Property
PGP	State Property Held in Private Domain
PMU	Project Management Unit
POM	Project Operational Manual
RFB	Request for Bids
RFQ	Request for Quotations
SOE	Statement of Expenditure
SSS	Single Source Selection
STEP	Systematic Tracking of Exchanges in Procurement
3D	Three Dimensional
TOR	Terms of Reference
QBS	Quality Based Selection
QCBS	Quality and Cost Based Selection
UNDP	United Nations Development Program
UPS	Uninterruptable Power Supply
USD/ US\$	United States Dollar
VAT	Value Added Taxes
WA	Withdrawal Applications



**BASIC INFORMATION**

Is this a regionally tagged project? No	Country(ies)	Financing Instrument Investment Project Financing
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- Situations of Urgent Need of Assistance or Capacity Constraints
- Financial Intermediaries
- Series of Projects

Approval Date 8-Jun-2018	Closing Date 31-Dec-2023	Environmental Assessment Category B - Partial Assessment
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Bank/IFC Collaboration No
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**Proposed Development Objective(s)**

To improve access to land use and value data, property rights data, and geospatial information through the Land Registry and Cadastre System modernization.

**Components**

Component Name	Cost (US\$, millions)
Modernization of the Digital Land Registry and Cadastre System	19.00
National Spatial Data Infrastructure	2.50
Property Valuation and Taxation	11.00
State Land Inventory and Management	3.00
Institutional Development, Capacity Building and Project Management	7.40



**Organizations**

Borrower : Lebanese Republic

Implementing Agency : General Directorate of Land Registration and Cadastre

**PROJECT FINANCING DATA (US\$, Millions)**

<input type="checkbox"/> Counterpart Funding	<input checked="" type="checkbox"/> IBRD	<input type="checkbox"/> IDA Credit	<input type="checkbox"/> IDA Grant	<input type="checkbox"/> Trust Funds	<input type="checkbox"/> Parallel Financing
Total Project Cost: 43.00	Total Financing: 43.00		Financing Gap: 0.00		
	Of Which Bank Financing (IBRD/IDA): 43.00				

**Financing (in US\$, millions)**

Financing Source	Amount
International Bank for Reconstruction and Development	43.00
<b>Total</b>	<b>43.00</b>

**Expected Disbursements (in US\$, millions)**

Fiscal Year	2018	2019	2020	2021	2022	2023
Annual	0.20	2.00	6.00	9.00	12.00	13.80
Cumulative	0.20	2.20	8.20	17.20	29.20	43.00



**INSTITUTIONAL DATA**

**Practice Area (Lead)**

Social, Urban, Rural and Resilience Global Practice

**Contributing Practice Areas**

**Gender Tag**

Does the project plan to undertake any of the following?

a. Analysis to identify Project-relevant gaps between males and females, especially in light of country gaps identified through SCD and CPF

Yes

b. Specific action(s) to address the gender gaps identified in (a) and/or to improve women or men's empowerment

Yes

c. Include Indicators in results framework to monitor outcomes from actions identified in (b)

Yes

**SYSTEMATIC OPERATIONS RISK-RATING TOOL (SORT)**

Risk Category	Rating
1. Political and Governance	● High
2. Macroeconomic	● Moderate
3. Sector Strategies and Policies	● Substantial
4. Technical Design of Project or Program	● Moderate
5. Institutional Capacity for Implementation and Sustainability	● Substantial
6. Fiduciary	● Substantial
7. Environment and Social	● Moderate
8. Stakeholders	● Moderate
9. Other	
10. Overall	● High



**COMPLIANCE**

**Policy**

Does the project depart from the CPF in content or in other significant respects?

Yes  No

Does the project require any waivers of Bank policies?

Yes  No

**Safeguard Policies Triggered by the Project**

**Yes No**

Environmental Assessment OP/BP 4.01

✓

Natural Habitats OP/BP 4.04

✓

Forests OP/BP 4.36

✓

Pest Management OP 4.09

✓

Physical Cultural Resources OP/BP 4.11

✓

Indigenous Peoples OP/BP 4.10

✓

Involuntary Resettlement OP/BP 4.12

✓

Safety of Dams OP/BP 4.37

✓

Projects on International Waterways OP/BP 7.50

✓

Projects in Disputed Areas OP/BP 7.60

✓

**Legal Covenants**

**Sections and Description**

Schedule 2, Section IV, A: In order to ensure the effective implementation of the Project, the Borrower shall ensure that the seamless base map developed under the Project is made accessible to public and private users in accordance with national laws.

**Sections and Description**

Schedule 2, Section I, A.1: The Borrower shall, through GDLRC, establish no later than four (4) months after the Effective date and thereafter maintain, at all times during Project implementation, a Project Management Unit (“PMU”) within the GDLRC, with a mandate, staffing and other resources satisfactory to the Bank. The PMU shall maintain a Project Director, Financial Management Specialist and Procurement specialist all under terms of reference acceptable to the Bank.





**Sections and Description**

Schedule 2, Section I, B.1: The Borrower shall prepare no later than one (1) month after the Effective date in accordance with terms of reference acceptable to the Bank, an operational manual, containing detailed arrangements and procedures for: (a) administration, institutional coordination and day-to-day execution of the Project; (b) monitoring, evaluation, reporting and communication; (c) financial management arrangements including accounting, financial reporting, and auditing procedures; (d) procurement arrangements including application of STEP for preparation of procurement plans; and (e) such other administrative, financial, technical and organizational arrangements and procedures as shall be required for purposes of implementation of the Project.

**Conditions**

**PROJECT TEAM**

**Bank Staff**

Name	Role	Specialization	Unit
Mika-Petteri Torhonen	Team Leader(ADM Responsible)	Land Administration	GSULN
Olivera Jordanovic	Team Leader	Land Administration	GSULN
Lina Fares	Procurement Specialist(ADM Responsible)	Procurement	GGOPM
Rima Abdul-Amir Koteiche	Financial Management Specialist	Financial Management	GGOMN
Aanchal Anand	Team Member	Economics	GSULN
Alvaro Federico Barra	Team Member	Geospatial Infrastructure	GSULN
Andrianirina Michel Eric Ranjeva	Team Member	Finance Officer	WFACS
Chaogang Wang	Social Safeguards Specialist	Social Safeguards	GSU05
Christine Makori	Team Member	Senior Counsel	LEGAM
Michelle P. Rebosio Calderon	Team Member	Social Development	GSU05
Paul Scott Prettitore	Team Member	Law	GSULN
Rock Jabbour	Team Member	Financial Management	GGOMN
Saba Nabeel M Gheshan	Team Member	Associate Council	LEGAM
Sarah Leigh Hammill	Team Member	Senior Program Assistant	GSULN



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Shafick Hoossein	Environmental Safeguards Specialist	Environmental Safeguards	GEN05
Wael Zakout	Team Member	Land Policy	GSULN
<b>Extended Team</b>			
Name	Title	Organization	Location
Alexander Solovov	Consultant/ICT Specialist	WB	Rome,Italy
Richard Frederick	Consultant/Governance	WB	Spain
Vladimir Evtimov	Land Tenure Officer	FAO	Rome, Italy
William McCluskey	Consultant/Revenue Expert	WB	United Kingdom
Caroline Plancon	Consultant/Senior Legal Land Specialist	WB	Washington, DC

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LEBANON  
LAND ADMINISTRATION SYSTEM MODERNIZATION PROJECT

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## I. STRATEGIC CONTEXT

### A. Country Context

1. Lebanon is a small, culturally, politically and economically open, middle-income country with 4.5 million people in 2015 (not taking into account the approximate 1.5 million Syrian refugees residing in the country)<sup>1</sup>, with tourism and financial services being the backbone of the national economy. Lebanon is exposed to sizeable political and security shocks with elevated risks of violence and conflict as evidenced by the devastating civil war that lasted from 1975 to 1990, the more recent 2006 hostilities<sup>2</sup> and the ongoing spillover into Lebanon of the conflict in Syria. Currently, Lebanon hosts about 1.5 million Syrian refugees of whom three quarters are poor, and about half a million other refugees. The influx of refugees has created pressure on land use, and demand for access to shelter, services and jobs. Frequent conflicts have fundamentally altered conditions across sectors (governance, infrastructure, and the macro-economy) compromising the country's development trajectory<sup>3</sup>. For the past 25 years, Lebanon has struggled to reduce widespread poverty (28 percent live below poverty line) and has been compromised by two overarching constraints: (1) a confessional system of governance that has increasingly led to paralysis of decision-making; and (2) conflict and violence (stemming, in part, from the broader dynamics of conflict in the Middle East).<sup>4</sup>

2. Climate projections in Lebanon include increasing mean annual temperatures, evapotranspiration, extreme weather events (such as drought and heat waves), decreasing precipitation, and rising sea levels. These changes are expected to impact various sectors, including agriculture, water, energy and tourism, as well as have significant impacts on land use and natural resource governance. The impacts of climate change on Lebanon's natural resources are further exacerbated by rapid urbanization and population growth, in addition to the influx of refugees.

3. A series of reforms must be tackled with a sense of urgency, if Lebanon is to generate the number and quality of jobs it needs for its citizens, to avoid further deterioration in the well-being of citizens and, importantly, to manage the added pressures stemming from regional conflicts. The key actions that could improve Lebanon's development prospects are: a) reduce macro-fiscal vulnerabilities; b) improve governance and effectiveness of public institutions; c) address energy gaps to increase productivity of the private sector and reduce the macro-fiscal burden; d) strengthen ICT so Lebanon is fully connected to the global economy and can develop jobs to improve the business climate to ease the burden on firm creation and operation; e) increase investments in transportation so people and products can move efficiently; and f) address environmental issues to protect Lebanon's natural resources, including water<sup>5</sup>.

4. Data availability and access to information are foundational constraints that impact governance

<sup>1</sup> Country Partnership Framework for the Lebanese Republic (FY17-FY22), World Bank Group

<sup>2</sup> Country Partnership Strategy for the Lebanese Republic (FY11-FY14), World Bank Group

<sup>3</sup> *The Vulnerability Assessment of Syrian Refugees in Lebanon*, the United Nations Children's Fund, United Nations High Commissioner for Refugees, and the United Nations World Food Programme, 2017.

<sup>4</sup> *Lebanon, Promoting Poverty Reduction and Shared Prosperity*, Systematic Country Diagnostic, World Bank Group, 2015.

<sup>5</sup> *Lebanon, Promoting Poverty Reduction and Shared Prosperity*, Systematic Country Diagnostic, World Bank Group, 2015.



and the effectiveness of public institutions, making evidence-based policy making difficult and standing in the way of an informed population and increased private sector investments. Major deficiencies exist in the timeliness of data, its reliability due to weak overall statistical capacity, and inadequate data coverage of poverty, income distribution, and economic measures such as balance of payments. While some ministries have enhanced disclosure of data and reports published, the general public has limited access to information that is typically publicly available in other countries.

5. Improving the clarity over land and property rights will be important to prevent land-related conflicts from exacerbating other conflict dynamics and for improving the investment climate and access to credit. Similarly, increased access to reliable geospatial data will boost innovation, business development, job creation and growth, and informed decision making, and enhancing the revenue base and local governance. An accountable and transparent land administration and geospatial system will improve the management of public assets including natural resources leading to a stronger social contract and trust between citizens and the government.

## **B. Sectoral and Institutional Context**

6. Land tenure in Lebanon is based on the French Protectorate era Civil Law and private ownership of land and property. Investments in land and buildings are perceived as among the most attractive sources of profit in the country and there are visibly active property markets and a high-end construction boom. Still, there is lack of clarity on land ownership, incomplete overall registration of lands and properties, overly prescribed and complex land administration processes, and weak institutional arrangements and governance. State land management responsibilities are split between several government agencies and municipalities, and no comprehensive inventory of state and public lands and properties exists. These weaknesses in land administration have led to inefficient utilization of natural resources, land and property, and have also impacted the environment by allowing overexploitation, encroachment and informal development.

7. The institution in charge of Land Administration in Lebanon is the General Directorate of Land Registration and Cadastre (GDLRC) which operates a well maintained digital land register and cadastre system<sup>6</sup>. However, when compared with similar agencies globally, the system underperforms in sharing digital geospatial data, record coverage, state land inventory and management, and property taxation valuation. For example, a) the Lebanese land register processes 800,000 manual information requests per year, while the Croatian Land Registry portal (covering roughly the same size population) processes 25 million online queries annually; b) while the Lebanese digital land register and cadastre provide some electronic services to the public, the digital records are not recognized as legal records and the manual records are maintained in parallel based on a Registration Law from 1926; c) the Lebanese land register has a good coverage of private properties (land parcels and apartments), but the cadastre covers only 55 percent of land parcels; and d) no direct access to digital land registry and cadastre is provided beyond some technical departments of the Ministry of Finance (MOF) and GDLRC.

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<sup>6</sup> The current system dates back to 1995 and to the World Bank's Revenue Enhancement and Fiscal Management Technical Assistance project (P005340), which financed automation of real estate property registration and transactions (Cadastral Organization Modernization and Automation Project 1 – COMAP 1) and digitization of cadastre maps (COMAP 2).



8. Also, while the Private State Lands<sup>7</sup> are registered in the Land Registry their designation (i.e. the institution, which is recorded as the owner/custodian of the land) is not standardized and thus, for example a query of *list all State Lands vested to the Ministry of Education* does not produce a reliable result. In addition, the Public State Lands<sup>8</sup> are not registered in the Land Registry at all. Thus, the government does not have access to reliable information on its property assets. The State Property Department of GDLRC controls and manages the registered state properties. In practice, the Department focuses in disposing state property via auctioned sales and leases. The unregistered state properties are administered by regional Cadastral Court Judges. Encroachment and unauthorized land use are believed to be common on State Lands, but there is no data, resources or means for monitoring State Lands systematically.

9. The leading geospatial agency in Lebanon is the Directorate of Geographic Affairs of the Lebanese Army (GAD), which produces topographical mapping and geospatial data for both military and civil purposes. The Directorate's products can be purchased subject to case by case approval. In an attempt to open broader access through a National Spatial Data Infrastructure (NSDI) approach, the Ministry of Administrative Reforms (OMSAR) implemented a GIS portal few years ago, and created a NSDI regulatory framework and coordination mechanism for access to geospatial data, but the implementation failed due to lack of funding or sustainable arrangements for coordination, access, sharing and dissemination of data. However, there was progress in standardization and for example the Lebanon-Syria coordinate reference system is used for all mapping in Lebanon and thus, the most important key standard for NSDI is being applied.

10. There is wide sectoral consensus<sup>9</sup> in Lebanon on the need for full deployment of the digital land administration and geospatial infrastructure to public service and consumption. GDLRC launched the first three publicly accessible electronic land registry services for: a) requesting title registry extracts, b) tracking transactions, and c) fee simulation. The land registry and cadastre are public records by law, and regulations and restrictions on geospatial data date back to the era of printed maps and provide no clear guidance on online access to geospatial data and services.

11. Finally, there is lack of access to land and property values in Lebanon, which has implications for revenues, sustainable land management and beyond. Specifically, the transaction (value) registration process (to the land registry) leaves room for subjectivity. The process is vulnerable to corruption, and results in registration of lower-than-market values. Therefore, the current process impacts available market information and, together with non-harmonized valuation practices, equitability of property taxation and, for example, State property lease levels. Property tax revenues are also impacted by exemptions, such as on vacant properties. The way forward in the short term, which will allow quick return for investment, is to improve property value information that is used as the benchmark for property transaction registration and as the basis for recurrent property tax valuation.

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<sup>7</sup> Private State Lands are State properties, which the State holds in Private Domain and thus can be disposed (sold, auctioned etc.).

<sup>8</sup> The State holds the Public State Lands in Public Domain and thus they cannot be disposed.

<sup>9</sup> Stakeholders include representatives from MOF's GDLRC, GDF, Ministers' advisors and Legal Department; Presidency of Council of Ministers; OMSAR; Lebanese Army - Geographic Affairs Directorate; Municipality of Beirut; Ministry of Energy; Ministry of Public Works & Transport; Mount Lebanon Cadastral Court; Water Authority; Electricité Du Liban (EDL); Banque Du Liban; IOF; Real Estate Valuation Experts' Syndicate; Building Developers' Federation; and Topographers' Syndicate.



12. Overall, Lebanese land administration has many basic elements and capacities in place, but the potential is not capitalized to modern digital land administration infrastructure and services.

### C. Higher Level Objectives to which the Project Contributes

13. The project aims to modernize the digital land administration system. It supports the World Bank Group Lebanon Country Partnership Framework (CPF) FY17 – FY22 (Report No. 94768-LB, discussed by the Board of Executive Directors on July 14, 2016) under the cross-cutting theme *Governance and Renewing the Social Contract*. The project is expected to contribute to transparency and good governance in land administration, property taxation, and geospatial sectors. The project will increase the transparency of property transactions, and improve access to Land Registry and geospatial data, and thus enhance accountability and informed decision making. The project will also strengthen the eGovernance program by linking the land and geospatial records and services to the eGovernance portal. In addition, the project will contribute to both Focus Areas of the CPF by expanding physical and institutional capacity in the land sector (enhancing land administration, state land management, property valuation and property taxation capacities) and by expanding economic opportunities through widened access to land and geospatial data to support multiple private and public-sector innovations.

14. The proposed project also advances the World Bank Group strategic goals of ending extreme poverty and boosting shared prosperity in a sustainable manner. By improving clarity over property rights, the project will make a positive impact on economic growth and poverty reduction in Lebanon. Better information on the land and property assets is expected to improve the management of resources and resource allocation to best use promoting investments and growth. The impact is significant as one-half to three-quarters of a country's wealth lies in the capital value of land and property. By supporting the development of a unified national platform for effective geospatial data exchange, the project will improve communication between various public agencies enabling, among other things, efficient environmental monitoring and better natural resource and disaster risk management. It will support the country's increased capacity to plan and implement climate change mitigation measures. Access to information plays a key role in the property and credit market functionality and has a direct link to banking sector risks. Improved property value data will, over the short term, increase the transfer tax yield, and over the longer term improve the fairness of the property taxation system and create positive distributional effects for those who are poorer but pay their fair share of property tax.

15. The project will support the *Renewing the Social Contract* pillar of the World Bank Group Strategy for Middle East and North Africa by enhancing the land administration system's capacity to register and manage lands, support land and property markets and reduce banking sector risks by provision of more accurate property value data, and by opening wider access to land records and geospatial data. These together provide a fundamental legal infrastructure and geospatial base for inclusive growth and poverty reduction, as well as information helping to prevent land and property conflicts. The project investments will enhance public sector functionality and revenue collection through improvement of public services and provision of geospatial information.

16. The project is the first part of a 10-year Land Administration Modernization Program in Lebanon to allow widened access, transparency and use of land registry and cadastre data for decision making, state land management and revenue enhancement. This first phase includes investments in information and communication technology, spatial data infrastructure, property valuation and taxation, state land





management and institutional development. The emphasis during the first phase is on technology, and capacity upgrades that can be achieved without major regulatory and operational framework reforms. The second phase is expected to focus on broadening and sustaining the Land Administration Modernization Program's impact by modernizing the operational environment and completing the land records' coverage. The investment in land administration modernization is a part of the Ministry of Finance's (MOF) plan to increase automation of its services as part of an effort to build a modern State and services in Lebanon.

## **II. PROJECT DEVELOPMENT OBJECTIVES**

### **A. PDO**

17. The project development objective is to improve access to land use and value data, property rights data, and geospatial information through Land Registry and Cadastre System modernization.

### **B. Project Beneficiaries**

18. The beneficiaries of the project will be: a) the public who can own, lease, mortgage and use land and property under the protection of legal registration of rights; b) property tax payers and owners whose property could be subject to expropriation, that will benefit from more equitable and transparent land values; c) Revenue Directorate which will have improved access to property value information; d) investors who can rely on the secure access to real estate and improved access to credit; e) government, municipalities, non-governmental organizations, the private sector and academia that can make use of online access to accurate geospatial information; and f) GDLRC in particular, that gains from more sustainable operations and institutional structures. Society overall will benefit from improved land governance supported by up-to-date and accessible spatial information on land and property and their transactions, which will increase accountability and informed decision making, as well as policy making concerning land, property and natural resources.

### **C. PDO-Level Results Indicators**

- (a) Number of Land Registry and Cadastre eService transactions implemented annually;
- (b) State Land Registration Datasheets quality improved in the digital Land Registry (%);
- (c) Number of Districts/Municipalities covered by the mass valuation system.

## **III. PROJECT DESCRIPTION**

### **A. Project Components**

19. The project consists of five components: (A) Modernization of the Digital Land Registry and Cadastre System; (B) National Spatial Data Infrastructure; (C) Property Valuation and Taxation; (D) State Land Inventory and Management; and (E) Institutional Development, Capacity Building and Project Management. The project costs are US\$43 million.



Component A - Modernization of the Digital Land Registry and Cadastre System (US\$19 million)

20. The objective of this component is to implement an integrated Information and Communication Technology (ICT) solution for the Digital Land Registry and Cadastre System that is integrated/linked with other functions such as Property Valuation and State Land Management. The component will improve the quality of services provided by the government and trust in the sector through promotion of transparency, equal access to information, electronic services and streamlined processes. Land and property markets, location based investments, and land management will benefit from facilitated access to land records and electronic services. This component will: 1) establish a unified database for the integrated Land Registry and Cadastre system; 2) improve its ICT infrastructure and applications; 3) implement new e-services and integration with external systems; 4) establish digital archives and a disaster recovery center; 5) scan and vectorize remaining paper cadastral index maps; and 6) improve key technical centers and office premises. The system will be developed based on a business processes analysis and re-engineering, and then piloted and rolled out with training of the operational staff.

Component B - National Spatial Data Infrastructure (US\$2.5 million)

21. The objective of this component is to enhance the identification, storage, use, sharing and exchanging of geospatial data and services in Lebanon. The component will facilitate provision of a unified geospatial database and access point for all planning and value adding services in the country having direct impact on jobs and growth. The focus lies in unblocking the wealth of information in the public geospatial datasets. While intangible, conflict monitoring and prevention activities will also benefit from improved geospatial information and e-services. This is achieved by providing public access to Land Registry and Cadastre data and other public geospatial datasets through the NSDI in accordance with national laws. The NSDI will serve users and providers within all levels of government, non-governmental organizations, private sector, academia and public. This component will: 1) support the development and implementation of a NSDI Strategy based on international best practices and open standards; 2) upgrade NSDI technologies and infrastructure; 3) create a seamless base map (orthorectified satellite imagery and/or aerial photo) of the whole territory of Lebanon; 4) support the creation, collection, and harmonization of geospatial data (of GDLRC and GAD initially) for integration to NSDI; and 5) develop electronic services and link the NSDI to the eGovernance system of Lebanon. Expansion of NSDI through a common framework agreement and data access is planned during the second phase.

Component C – Property Valuation and Taxation (US\$11 million)

22. The objective of this component is to establish a mass valuation system for all built property and undeveloped land in Lebanon, initially covering the main urban areas of the country. This will increase market transparency, reduce banking sector/mortgage risk as well as improve infrastructure for the recurrent property tax. In the medium term, the transfer tax revenue will increase due to the improved value benchmark data to support transaction price validation at registration. In the longer term, the system will enable recurrent property tax and state land leasing enhancement through improved value information. Enhanced value based property taxation will have governance and distributional impacts that benefit the bottom 40 percent. The component will: 1) develop mass appraisal methodologies; 2) undertake a data inventory of physical data on land and property in main urban areas of Lebanon; and



3) develop a mass valuation system for Lebanon. In addition, under Component E, the project will improve valuation capacity and facilitate adherence to international valuation standards of the valuation profession in the country. During the second phase (of the ten-year program), the valuation system is expected to be extended to cover all urban and rural areas, and to develop a Land Value Map in association with real estate indices.

Component D - State Land Inventory and Management (US\$3 million)

23. The objective of this component is to improve data quality on state lands in the Land Registry and Cadastre System and enhance State Land Management capacity of the GDLRC. The component invests in upgrading the existing State Land Management ICT system. Data content will be improved, and to the extent possible without regulatory changes, external information on state lands will be inserted and/or linked to the Land Registry and Cadastre System. The state land information compilation to one location will, among others, serve conflict response readiness by improving information on public lands available for temporary shelter for refugees, as well as inform alternatives to unsustainable land use practices, and build capacity for short-term and long-term resilience to the impacts of climate change. The component will: 1) facilitate a new strategy, inter-institutional agreements and inter-agency coordination for State Land Management; 2) improve state land data quality in the Land Registry and Cadastre System; 3) integrate external state and public land datasets to the Land Registry and Cadastre System; 4) upgrade the State Land Management ICT systems; and 5) link spatial zoning plans to the Land Registry and Cadastre System.

Component E - Institutional Development, Capacity Building and Project Management (US\$7.4 million)

24. The objective of this component is to improve the capacity and governance of GDLRC and ensure quality and timely implementation of the project. The component will support: 1) institutional development and sustainability of GDLRC by (i) developing and implementing an institutional vision, strategy, citizen service charter and roadmap for GDLRC improving, among others, citizen engagement in the sector; and (ii) implementing structures to enhance the accountability of GDLRC to key stakeholders; 2) improving GDLRC's customer orientation and servicing by (i) conducting public outreach activities to improve public perception of the GDLRC and its services, and inform the public on project activities; (ii) conducting periodical customer surveys using the results to guide further improvement of services; and (iii) establishing the mechanisms for feedback and grievance redress drawing on international experience; 3) conducting studies and analyses of the policy, legal and regulatory frameworks for administration of public and private land and make recommendations for improvement, and conducting social impact assessments that will analyze the direct and indirect impacts of the project activities on different social groups, and develop recommendations for mitigating social risks; 4) developing and implementing capacity building and knowledge transfer program (on ICT, NSDI, State Land Management, Property Valuation, Public Sector Governance, etc.) based on annual training plans; and 5) project management, monitoring and evaluation, and reporting by (i) providing technical assistance to support project implementation; and (ii) maintaining a Project Management Unit (PMU) through the project period.

**B. Project Cost and Financing**

Project Components	Project cost (USD million)	IBRD or IDA Financing	Trust Funds	Counterpart Funding
A. Modernization of the Digital Land Registry and Cadastre System	19.0	19.0	0.0	0.0
B. NSDI	2.5	2.5	0.0	0.0
C. Property Valuation and Taxation	11.0	11.0	0.0	0.0
D. State Land Inventory and Management	3.0	3.0	0.0	0.0
E. Institutional Development, Capacity Building and Project Management	7.4	7.4	0.0	0.0
<b>Total Baseline Costs</b>	42.9	42.9	0.0	0.0
Total Project Costs	42.9	42.9	0.0	0.0
Front End Fees	0.1	0.1	0.0	0.0
<b>Total Financing Required</b>	43.0	43.0	0.0	0.0

25. **Retroactive Financing.** Payments for expenditures paid on or after May 1, 2018 are eligible for retroactive financing for an amount not exceeding 10 percent of the loan amount.

**C. Lessons Learned and Reflected in the Project Design**

26. The World Bank has funded land administration projects globally for decades and the relevant comparison to Lebanon is provided with over twenty years of land projects in the Europe and Central Asia (ECA) region where over forty land administration projects have been completed. Twenty years ago, ECA countries did not have good land registers or cadastres, and the land administration sectors were operationally and institutionally fragmented, paper based and bureaucratic. Today, many of these countries, with a history of World Bank support, operate fully digital systems for land and property registers and cadastres, and provide geospatial data and electronic services online as part of the overall electronic government structure. Today Lithuania, Georgia, Estonia, the Slovak Republic, the Kyrgyz Republic, Belarus and the Russian Federation are in the top 10 of the World Bank's Doing Business Ranking for Registering Property (Lebanon is 102<sup>nd</sup>, Doing Business – Registering Property 2018). Lebanon can follow the ECA example, and make a quantum leap forward in modernizing its land administration system. This project design has incorporated the following lessons from the ECA experience:

- a. Public perception and participation is critical for success, and public awareness and education



- campaigns add important value;
- b. Communication and training need to reach out to multiple stakeholders including vulnerable groups and women considering their priorities and varying ways they access information;
- c. A well-functioning real property registration system that serves market needs and provides tenure security to land holders can be operated like a business and be financially sustainable able to retain capable staff and pay reasonable remuneration;
- d. The technical leap forward needs to be combined with a capacity building program to transform land administration agencies into customer-centric service organizations that also engage in social development activities;
- e. Reform of technical processes and the legal/regulatory framework needs to move in parallel for full impact;
- f. Incremental and progressive expansion of proven basic ICT systems (as in place in Lebanon) allow a targeted system development that becomes operational quickly, builds in-house capacity, is in line with the country's business needs, can make use of the latest technologies, and can mitigate risks effectively;
- g. The use of technologies for land and resource administration, such as ICT, GPS, GIS, special data infrastructures and satellite-based remote sensing, can contribute to evidence-based land policy and governance which incorporates climate change adaptation and mitigation and disaster risk management;
- h. Providing access to gender disaggregated data and including gender specific messages in public awareness campaigns, training, and education can have significant positive impact in improving women's access to land. Tailoring project activities to men and women when appropriate can help to prevent unintended biases and mitigate against negative gender impacts;
- i. Conflicts have long term impacts on institutional capacities, which needs to be taken into account when designing a project. Also, potential institutional capture for personal and interest group gains need to be considered. Transparency, predictability and accountability approaches can prevent and mitigate institutional liability and build public trust among citizens.

27. In addition, country-specific lessons learned from previous Bank engagements in Lebanon have also been incorporated, and in particular in designing the project activities so that they can proceed and be completed without changes in the regulatory framework. The achievement of the project objectives will not depend on completion of a full legal reform. However, it is also recognized that the land administration sector in Lebanon would greatly benefit from a legislative reform and once completed it would have major tangible and intangible positive impacts that would multiply the positive impacts of this project.

## **IV. IMPLEMENTATION**

### **A. Institutional and Implementation Arrangements**

28. The implementing agency of the project will be GDLRC in close cooperation with the Directorate of Finance of MOF, and *UNDP's Fiscal, Policy, Advisory and Reform Project* at the Ministry of Finance, institutions vested with State Land Management responsibilities, the National eGovernance Program, the National GIS Committee, the Directorate of Geographic Affairs of the Ministry of Defense (GAD), the Center for Remote Sensing and other public and private sector institutions producing and managing



Spatial Data as well as municipalities. GDLRC has not implemented a World Bank loan project in over ten years and there is only limited relevant institutional memory. A Project Management Unit (PMU) will thus be established in the GDLRC and will be responsible for project management, financial management, and monitoring and evaluation. The PMU will be led by a Project Director and include specialists in land registration, cadastre, ICT, law, valuation, capacity building, M&E, procurement and financial management. Fiduciary staff familiar with Bank procedures will be recruited externally on a competitive basis following the Bank's Procurement Regulations.

29. Thematic, inter-agency, Project Component Working Groups, namely A – Digital Land Registry and Cadastre System B – NSDI; C – Mass Valuation; D – State Land Management; and E – Institutional Development and Project Management, will be established to ensure coordination between various relevant institutions.

## **B. Results Monitoring and Evaluation**

30. Monitoring and Evaluation (M&E) will be essential in determining the effectiveness of the project. Project monitoring will include two areas: 1) Regular output monitoring of project performance and an evaluation system to be established in the first few months of project implementation. This system will monitor higher-level indicators including the number of eServices developed and in use, number of available datasets through NSDI; areas of state land inventorized, and a number of intermediate targets. 2) Regular customer surveys conducted biannually (total three surveys during the life of the project) will monitor customer satisfaction in order to improve citizen engagement. Baseline will be established during the first year of the project implementation. 3) A Grievance Redress Mechanism set up in the GDLRC will monitor feedback received from users of systems supported by the project as well as other services provided by the GDLRC. The GDLRC will respond to all feedback, and the information gathered will also be used to improve services provided and to mitigate against negative social impacts on individuals.

31. A dedicated officer in the PMU will carry out the M&E function to provide quarterly progress reports. These reports will be submitted to GDLRC and the Bank.

## **C. Sustainability**

32. Sustainability of project results will be ensured through institutional capacity building, coupled with customer focus and improvement in service delivery, including the ability of the GDLRC to provide real estate information to the government and the private sector in accordance with the national laws. Also, the project will have a strong focus on institutional development and capacity building with particular emphasis on ICT infrastructure maintenance, the governance of the Land Registry and Cadastre System as well as the operational sustainability of the NSDI. It is believed that the sustainability of GDLRC depends on establishing a clearer link between services and resources that the GDLRC provides and uses, respectively. The project will help the GDLRC to reform its business model and the project will also promote institutional transformation through the development of strategic and business planning, and capacity building.



## V. KEY RISKS

### A. Overall Risk Rating and Explanation of Key Risks

33. The *Overall Project Risk* is High because of the high Political and Governance Risk associated with the project. The political risk is overriding due to the political standstill in Lebanon, which perpetuates old laws and regulations, and prevents fundamental sectorial reforms. The leadership in the MOF and in the GDLRC is committed to a land administration legislative reform, but it is a political reality in Lebanon that legal reform timelines are unpredictable. In addition, closely related to the political risk is the governance risk associated with the GDLRC. Globally, as well as in Lebanon, complicated multi-stage processes contribute to the weak governance in land administration, and if not addressed, threaten the sustainability of reforms. The main regulatory (or lack of regulation clarity) issues potentially limiting the project impact include: a) excessive manual era registration processes, b) unclear legal status of digital data, and c) outdated restrictions/mindsets in sharing geographical information. However, the project's technical investments have been designed to be implementable without policy and regulatory changes. While it is clear that accompanied regulatory reforms would help maximize the project impact, the project can be implemented without regulatory reforms.

34. The *Sector Strategies and Policies Risk* is Substantial as during the course of the project the government could adopt other priorities and dilute interest to land administration modernization. The sector strategies and political risks are mitigated by project activity design. The project design is built on the premise that regulatory reform that will be needed for materializing the full positive impacts of the digital and accessible land administration system to Lebanon may not happen during the project duration.

35. Further, concerning the downstream *Sector Strategies and Policies Risk*, the project will improve accessibility of information on the State Lands and while all stakeholder groups benefit from increased access to information, the project will have to carefully mitigate that the improved State Land management capacity (through increased knowledge) does not lead to negative impacts to the current occupants of State Lands including informal occupants. The project will support a Social Assessment to mitigate against this risk focusing on the clarity, status, designation, occupancy, disposal mechanisms, disputes etc. of State Lands estimating the project investment's risks to the State Land users and developing detailed mitigation mechanism for each identified risk scenario. The GDLRC has agreed to avoid involuntary displacement or resettlement of vulnerable populations without due compensation and livelihoods restoration support. The project will ensure that as part of the technical advice provided to the client on the management of state lands, advice on measures to protect vulnerable people who have encroached on lands is provided and implemented.

36. The *Fiduciary Risk* is Substantial and it relates to the ICT investments by the project. The technical risks related to ICT development, which are present in all complex ICT system development projects, is lower than in other World Bank's land administration projects because the GDLRC has demonstrated good capacity to develop and maintain ICT systems. However, procurement of the ICT system presents a substantial risk to the project in Lebanon and globally, and multiple land administration projects have faced issues with ICT contract delays and completion. Commonly, these issues have stemmed from the unique and complex nature of national land administration systems,





overly ambitious technical specifications. The project will mitigate the fiduciary risk by applying an incremental and modular approach to ICT procurement and development, which has proven more sustainable than large big bang development contracts in other Bank-funded investment projects.

37. The GDLRC's capacity to implement the project according to the World Bank guidelines and processes presents an *Institutional Capacity for Implementation and Sustainability* risk, which is considered Substantial. The GDLRC's previous World Bank collaboration experience dates back more than a decade, and most involved personnel have since retired or moved on. The risk is mitigated by hiring a professional PMU. The longer-term sustainability risk will be mitigated by investments in business planning and institutional transformation of GDLRC, and capacity building, aiming to increase the operational and financial autonomy of GDLRC. The project duration contributes directly to the sustainability risk stems from land administration investments being of long term nature in terms of both completion and impact. Five year project periods tend to be too short for completing necessary investments and reforms. In Lebanon, the project duration risk is mitigated by aligning with the 10-year Land Administration Modernization program.

## **VI. APPRAISAL SUMMARY**

### **A. Economic and Financial Analysis**

38. The project's financial benefits related to increased property tax collection are expected from Component C whereas the economic benefits are expected from improved decision making as well as cost and time savings gains coming from Components B and D on NSDI and State Land Management respectively. Other benefits can be expected from the modernization efforts under Component A but these are not quantified as there is insufficient information on how the number and cost of transactions will evolve with the modernization of the system in Lebanon.

39. The quantifiable economic and financial benefits that have been determined are split into two categories. The first category estimates benefits assuming that no legislative changes take place. The second category estimates benefits assuming that appropriate legislative changes are made.

40. The main results of the net present value (NPV) and internal rate of return (IRR) estimates can be found in the table below. For details on assumptions, please refer to Annex 4. Note that since the NPV is greater than zero and the IRR is greater than the discount rate of 15 percent, the investment is considered financially and economically viable.





Figure 1: Summary of Financial and Economic Benefits of the Project

	Without Legislative Changes	With Legislative Changes
<b>Financial Benefits</b>		
NPV (USD M)	23.4	89.8
IRR (%)	24.2%	41.5%
<b>Economic Benefits</b>		
NPV (USD M)	1.8	16.7
IRR (%)	15.8%	21.3%

41. Based on the economic analysis presented in Annex 4, the financial benefits are greater with legislative changes and the NPV in the scenario with legislative changes exceeds the NPV in the scenario without legislative changes by a factor of 3.8. Similarly, the economic benefits are greater with legislative changes and the NPV in the scenario with legislative changes exceeds the NPV in the scenario without legislative changes by a factor of 9.4.

42. Based on the financial analysis, the GDLRC and the Government of Lebanon can be expected to recover the project investment of US\$43 million in: (a) 5 years and 7 months in the scenario without legislative changes; and (b) 4 years and 7 months in the scenario with legislative changes.

## B. Technical

43. Lebanon has already developed a digital Land Registry and Cadastre and the system has been well maintained even though it is not adopted as the legal record, and some licenses and solutions have expired. The project will build on these existing systems and will adopt an incremental approach, which develops new tools for property valuation and state land management, but adopts a long-term approach to reforming land management practices and property taxation, and applies gradually intensifying use of technologies module by module. The new ICT system’s operationalization will be phased and each new version/module will be piloted in test environments and later in designated offices. This gradual approach will ensure reliable registration operations at all times while allowing progress towards an efficient and accessible Land Registry and Cadastre System and finally to the phasing out of manual records and processes (regulations permitting). This approach will allow investments with simple and realistic targets, while using and strengthening local capacity for further system expansion.

44. There is a good level of technical preparedness in Lebanon to implement the project. The project design allows full project implementation without regulatory reforms, but it is also recognized that Lebanon needs a new digital era land administration and geospatial regulatory framework and such a legal reform will help to multiply the project impact.

45. The legal framework governing land administration of both private and public land is outdated and highly fragmented. A series of ad hoc decrees have been issued in attempts to modernize the framework in the absence of legislative amendments. Despite recognition that the legal framework is inadequate to support modern administrative practices, there is no government policy supporting substantial reforms. The fragmented and outdated nature of the legal framework negatively impacts



quality of services and land tenure rights. The legal framework has not kept pace with automation of land administration functions, particularly regarding digitization and e-services. Land disputes are reportedly a considerable problem, but there is no comprehensive data on the number and the extent to which they are effectively addressed. Access to information linked with private and particularly public land records is not restricted by law.

### **C. Financial Management**

46. Project financial management arrangements, including accounting, reporting, and auditing functions will be centralized at the PMU within the GDLRC. The flow of funds process will be undertaken through a Designated Account. The project financial reports will be prepared by the PMU and submitted to the Bank along with the project's progress reports.

47. The GDLRC has limited experience in implementing World Bank-financed projects. The GDLRC has implemented one World Bank-financed project of US\$26 million, which closed in 2005. The project supported Technical Assistance for revenue enhancement and fiscal management. The current head of the department who is handling the financial and procurement operations was not involved in that project. The PMU will handle the fiduciary aspects of the project, and will include a fully dedicated financial officer for the project, preferably with previous experience with implementing World Bank-supported projects. The financial officer, who will be part of the PMU, should be able to undertake all FM responsibilities, including funds flow management, accounting, reporting, and facilitating an acceptable external audit.

48. In order to mitigate the FM related risks, GDLRC will recruit an acceptable external auditor in the early stages of the project to enable audit compliance, and a Project Operational Manual (POM) which includes a FM chapter details the financial management arrangements to be established for carrying out the project FM implementation and defining the roles and responsibilities.

### **D. Procurement**

49. **The World Bank carried out a procurement capacity assessment.** To mitigate procurement risks, the following measures are proposed: (i) include review of time taken to make decisions and justifications for over-riding decisions in the TOR of an independent audit; (ii) agree on a training program (internal/ external) to be implemented over the life of the project that is both relevant and practical; (iii) arrange for appropriate support (staff, training, tools) to handle procurement management and engage current civil servants (technical/procurement) in procurement activities; (iv) prepare acceptable sample bidding documents for Request for Bids using national market; (v) ensure criteria of evaluation are clear and quantifiable in monetary terms, and monitor compliance with the set criteria; (vi) set deadlines for submission of complaints and for decision making by the agency; (vii) establish system to monitor and expedite contract modifications or change orders and include this requirement as part of the TOR for procurement audits; and (viii) agree on appropriate publication (i.e. on a website or press bulletins) of procurement decisions and other relevant information as minimum.

50. **Market analysis.** The project will rely on the quality of consulting services, in particular the ICT sector. The sector is internationally and nationally competitive.



51. **The following project procurement arrangements are envisaged:**
- a) Project regulations: “World Bank Procurement Regulations for Borrowers under Investment Project Financing” dated July 1, 2016 (“Procurement Regulations”) and revised in November 2017, will be applied.
  - b) Beside the regulations proposed procurement method, the project may be using “Direct Selection of government institutions and state-owned enterprises”: “Directorate of Geographic Affairs of the Ministry of Defense” for the production of aerial photography and geographic data, and the “Institute of Finance” for capacity building. The eligibility of such contracts will need to be cleared by the WB and in line with the regulations.
  - c) Staff: The procurement function will be assigned to the Procurement Specialists in the PMU and supported by the MOF’s technical staff. Technical assistance support may be provided by OMSAR on ICT activities, as well as their participation in evaluation process and contract management.
  - d) *Procurement plans:* The procurement plan of the project shall be developed by GDLRC using Systematic Tracking of Exchanges in Procurement (STEP) tool. *Frequency of supervision mission and post procurement review* is foreseen respectively twice and once yearly.
52. Guidelines on Preventing and Combating Fraud and Corruption in Projects Financed by IBRD Loans and IDA Credits and Grants”, dated October 15, 2006 and revised in January 2011 and as of July 1, 2016, shall apply to the project.



### **E. Social (including Safeguards)**

53. Overall, the project is expected to have positive social impacts. The impacts come mainly from the project's focus on increasing the capacity of the public sector and the transparency and availability of information.

54. Because the project consists largely of technical upgrades, data improvement, data access improvement and institutional reforms, it will directly contribute to improving access to gender disaggregated data on property, and generating knowledge and awareness on gender and land issues. Reforms will be tailored whenever necessary such that the impact on male and female beneficiaries is equal. Policy guidance provided by the project will also be gender-sensitive, and whenever appropriate, an analysis of differential gender (and broader social) impacts will be carried out. In addition, any information and communications campaigns carried out as part of the project will be designed in such a way that they reach male and female beneficiaries, and in full understanding and acknowledgement of the different ways that men and women obtain information. In addition, databases and all other ICT infrastructure will be created such that including options for including multiple owners which is especially beneficial for women who are not typically selected as a primary owner, encouraging households to register male and female heads of household and therefore increasing women's access to land and property rights. Geospatial data will enable men and women to have better information on use and availability of land, which could also provide them with information they may need for livelihoods or business investments.

55. The project is also expected to have positive impacts on social cohesion and conflict. Because the project does not include activities that would have impacts on land occupancy or registration, no direct impacts on refugee populations or host communities are expected. However, better information on land use, including state lands, is likely to help manage land conflicts that may emerge and can also help the government better manage land use in a time of increased pressure on land caused by the refugee crisis.

56. The project will not cause land acquisition or associated impacts to land holders. The project will not include field survey or registration campaigns, which are seen as overly risky due to multiple complexities, lack of clear state land designation and delineations, potential high level of encroachment and growing pressure on land due to the large refugee population in the country. Thus, no impact to land occupancy is expected, and no involuntary resettlement will be caused by the project. Therefore, the Bank policy on Involuntary Resettlement OP 4.12 will not be triggered. The social assessment implemented as part of Component E will fulfill the requirements of OP 4.01 to mitigate against social risks.

### **F. Environment (including Safeguards)**

57. The project is Category B and triggers partial environmental assessment under OP/BP 4.01 Environmental Assessment. The project activities will not entail any significant environmental impacts. However, the minor renovation works that are planned under Component A for the technical facility and office space will result in minimal environmental impacts. Such environmental impacts will include dust,



noise, on site safety issues and waste management. An Environmental Management Plan (EMP) was prepared<sup>10</sup> to provide the necessary environmental conditions and guidelines for the minor renovations, installation or small works contractors that will be contracted by the project. The environmental conditions and guidelines will be included as an integral part of the tender documents. The PMU will be responsible to ensure that the contractors will abide by these conditions and that there is adequate monitoring and supervision for such measures.

## **G. World Bank Grievance Redress**

58. Communities and individuals who believe that they are adversely affected by a World Bank (WB) supported project may submit complaints to existing project-level grievance redress mechanisms or the WB's Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed in order to address project-related concerns. Project affected communities and individuals may submit their complaint to the WB's independent Inspection Panel which determines whether harm occurred, or could occur, as a result of WB non-compliance with its policies and procedures. Complaints may be submitted at any time after concerns have been brought directly to the World Bank's attention, and Bank Management has been given an opportunity to respond. For information on how to submit complaints to the World Bank's corporate Grievance Redress Service (GRS), please visit <http://www.worldbank.org/en/projects-operations/products-and-services/grievance-redress-service>. For information on how to submit complaints to the World Bank Inspection Panel, please visit [www.inspectionpanel.org](http://www.inspectionpanel.org).

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<sup>10</sup> The Project's EMP was disclosed in-country and in the World Bank on June 16, 2017 and June 30, 2017 respectively.  
<http://www.lrc.gov.lb/sites/default/files/styles/EMP.pdf>  
<http://documents.worldbank.org/curated/en/107861498547958817/pdf/SFG3452-EA-P159692-Box402916B-Public-Disclosed-6-27-2017.pdf>



## VII. RESULTS FRAMEWORK AND MONITORING

### Results Framework

COUNTRY : Lebanon

### Land Administration System Modernization Project

#### Project Development Objectives

To improve access to land use and value data, property rights data, and geospatial information through the Land Registry and Cadastre System modernization.

#### Project Development Objective Indicators

Indicator Name	Core	Unit of Measure	Baseline	End Target	Frequency	Data Source/Methodology	Responsibility for Data Collection
<b>Name:</b> Number of Land Registry and Cadastre eService transactions completed annually		Number	10000.00	500000.00	Annually	GDLRC	GDLRC, PMU
<i>Description:</i> This indicator measures the number of e-services provided as a result of the project (such as property value data, land parcel data, etc) . The baseline value will be the number of e-services the GDLRC provides at the start of the project.							
<b>Name:</b> State Land Registration Datasheets quality improved in the		Percentage	30.00	70.00	Annually	GDLRC	GDLRC, PMU



Indicator Name	Core	Unit of Measure	Baseline	End Target	Frequency	Data Source/Methodology	Responsibility for Data Collection
digital Land Registry							

Description: This indicator measures the datasheets in the digital Land Registry (DLR) with improved data quality as percentage of the total number of datasheets in DLR.

<b>Name:</b> Number of Districts/Municipalities covered by the mass valuation system		Number	0.00	5.00		GDLRC, MOF	GDLRC, PMU
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Description: This indicator measures the number of districts/municipalities in Lebanon with operational mass valuation system established.

**Intermediate Results Indicators**

Indicator Name	Core	Unit of Measure	Baseline	End Target	Frequency	Data Source/Methodology	Responsibility for Data Collection
<b>Name:</b> Avg no. of days to complete recording of purchase/sale of property in land adm system		Number	34.00	25.00	Quarterly	GDLRC	GDLRC, PMU
Avg no. of days to complete recording of purchase/sale of property– Urban		Number	34.00	25.00	Quarterly	GDLRC	GDLRC, PMU



Indicator Name	Core	Unit of Measure	Baseline	End Target	Frequency	Data Source/Methodology	Responsibility for Data Collection
Avg no. of days to complete recording of purchase/sale of property– Rural		Number	34.00	25.00	Quarterly	GDLRC	GDLRC, PMU

**Description:** This indicator measures the improvements in the timeliness of recordation of property purchases or sales, distinguishing between rural or urban, applicable to the project. The baseline value will be the average number of days required to complete the recordation of a purchase/sale of a property in the land admin system at the start of the project.

<b>Name:</b> Number of external databases linked to the Land Registry and Cadastre system		Number	0.00	5.00	Annually	GDLRC	GDLRC, PMU
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**Description:** This indicator measures the number of external databases that are connected to the GDLRC system, allowing real-time, automated updates. The baseline is zero as no such external datasets are currently linked.

<b>Name:</b> Number of Districts where the Land Registry and Cadastre Archives have been converted to the Digital Archives		Number	0.00	2.00	Annually	GDLRC	GDLRC, PMU
Land Registry and Cadastre Digital Archives established		Yes/No	N	Y	Annually	GDLRC	GDLRC, PMU

**Description:** This indicator measures the number districts where land registry and cadastre records have been digitized and stored in the centralized digital archive. The baseline is zero as this has not been done for any district at the moment.





Indicator Name	Core	Unit of Measure	Baseline	End Target	Frequency	Data Source/Methodology	Responsibility for Data Collection
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<b>Name:</b> Percentage of the Cadastral and Land Registry Maps digitized		Percentage	50.00	70.00	Quarterly	GDLRC	GDLRC, PMU
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**Description:** This indicator measures the percentage of cadastral and land registry maps that have been digitized as a result of the project. The baseline is 50% as roughly half the maps already exist in a digital form.

<b>Name:</b> Sales Price and Rental Price Registers created		Yes/No	N	Y	Annually	GDLRC, DOF	GDLRC, DOF, PMU
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**Description:** This indicator is a yes/no indicator and reflects whether or not property sales and rental price registers have been created. The baseline is N or No because these registers do not exist at the moment.

<b>Name:</b> Generic mass valuation models developed for five key property types		Number	0.00	5.00	Annually	GDLRC, DOF	GDLRC, DOF, PMU
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**Description:** This indicator measures the number of mass valuation models that have been developed for key property types. The baseline is zero because these models do not currently exist.

<b>Name:</b> Property valuation results published and made accessible to the public		Yes/No	N	Y	Annually	GDLRC, DOF	GDLRC, DOF, PMU
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**Description:** This indicator is a yes/no indicator and reflects whether or not property valuation results have been published and made accessible to the public. The



Indicator Name	Core	Unit of Measure	Baseline	End Target	Frequency	Data Source/Methodology	Responsibility for Data Collection
baseline is N or No because these results do not exist at the moment.							

<b>Name:</b> New Automated State Land Management System implemented		Yes/No	N	Y	Annually	GDLRC	GDLRC, PMU
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**Description:** This indicator is a yes/no indicator and reflects whether or not a new state land management system has been established and implemented. The baseline is N or No because such a system does not exist at the moment.

<b>Name:</b> Institutional development and business plan developed for the General Directorate of Land Registration and Cadastre		Yes/No	N	Y	Annually	GDLRC	GDLRC, PMU
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**Description:** This indicator is a yes/no indicator and reflects whether or not an institutional development and business plan have been developed for the GDLRC under the project. The baseline is N or No because a new plan does not exist at the start of the project.

<b>Name:</b> Percentage of users satisfied with the quality of Land Registry and Cadastre services		Percentage	TBC	66.00	Biannually	GDLRC	GDLRC, PMU
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Percentage of users satisfied with the quality of Land Registry and Cadastre services (female)		Percentage	TBC	66.00	Biannually	GDLRC	GDLRC, PMU
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Indicator Name	Core	Unit of Measure	Baseline	End Target	Frequency	Data Source/Methodology	Responsibility for Data Collection
<p><b>Description:</b> This indicator measures the customer satisfaction by quantifying the user perception of GDLRC services. The baseline value will be the user perception measures under the baseline survey at the start of the project. This indicator will be disaggregated by gender.</p>							

<b>Name:</b> Number of people trained		Number	0.00	2000.00	Annually	GDLRC	GDLRC, PMU
Number of people trained (female)		Number	0.00	600.00	Annually	GDLRC	GDLRC, PMU

**Description:** This indicator measures the number of participants who received training under the project. The baseline is zero because the participants relate to project-funded trainings. This indicator will be disaggregated by gender.

<b>Name:</b> Number of institutions providing data to NSDI		Number	0.00	2.00	Annually	GDLRC	GDLRC, PMU
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**Description:** This indicator measures the number of institutions that are providing data for the Geoportal built under the National Spatial Data Infrastructure. The baseline is zero because the Geoportal doesn't currently exist and will be developed under the project.

<b>Name:</b> NSDI accessible online and through the Lebanese e-Government portal		Yes/No	N	Y	Annually	GDLRC	GDLRC, PMU
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**Description:** This indicator is a yes/no indicator and reflects whether or not NSDI is accessible online through the e-Government portal. The baseline is N or No because the NSDI doesn't currently exist and will be developed under the project.



Indicator Name	Core	Unit of Measure	Baseline	End Target	Frequency	Data Source/Methodology	Responsibility for Data Collection
<b>Name:</b> Number of online requests processed annually by the Land Registry and Cadastre System		Number	50000.00	10000000.00	Annually	GDLRC	GDLRC, PMU

**Description:** This indicator measures the number of online requests processed in the land registry and cadastre system each year. The baseline value will be the number of e-services the GDLRC provides at the start of the project and is currently estimated at 50,000.

<b>Name:</b> Number of requests processed annually by the NSDI		Number	0.00	7000000.00	Annually	GDLRC	GDLRC, PMU
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**Description:** This indicator measures the number of requests processed by NSDI each year. The baseline value is zero as NSDI has not yet been established and will be implemented under the project.

**Target Values****Project Development Objective Indicators** FY

Indicator Name	Baseline	End Target
Number of Land Registry and Cadastre eService transactions completed annually	10000.00	500000.00
State Land Registration Datasheets quality improved in the digital Land Registry	30.00	70.00
Number of Districts/Municipalities covered by the mass valuation system	0.00	5.00

**Intermediate Results Indicators** FY

Indicator Name	Baseline	End Target
Avg no. of days to complete recording of purchase/sale of property in land adm systm	34.00	25.00
Avg no. of days to complete recording of purchase/sale of property–Urban	34.00	25.00
Avg no. of days to complete recording of purchase/sale of property–Rural	34.00	25.00
Number of external databases linked to the Land Registry and Cadastre system	0.00	5.00
Number of Districts where the Land Registry and Cadastre Archives have been converted to the Digital Archives	0.00	2.00
Land Registry and Cadastre Digital Archives established	N	Y
Percentage of the Cadastral and Land Registry Maps digitized	50.00	70.00



Indicator Name	Baseline	End Target
Sales Price and Rental Price Registers created	N	Y
Generic mass valuation models developed for five key property types	0.00	5.00
Property valuation results published and made accessible to the public	N	Y
New Automated State Land Management System implemented	N	Y
Institutional development and business plan developed for the General Directorate of Land Registration and Cadastre	N	Y
Percentage of users satisfied with the quality of Land Registry and Cadastre services	0.00	66.00
Percentage of users satisfied with the quality of Land Registry and Cadastre services (female)	0.00	66.00
Number of people trained	0.00	2000.00
Number of people trained (female)	0.00	600.00
Number of institutions providing data to NSDI	0.00	2.00
NSDI accessible online and through the Lebanese e-Government portal	N	Y
Number of online requests processed annually by the Land Registry and Cadastre System	50000.00	10000000.00
Number of requests processed annually by the NSDI	0.00	7000000.00



## **ANNEX 1: DETAILED PROJECT DESCRIPTION**

**COUNTRY: Lebanon**

### **Land Administration System Modernization Project**

1. The project development objective (PDO) is to improve access to land use and value data, property rights data, and geospatial information through the Land Registry and Cadastre system modernization.
2. The PDO will be achieved by: i) modernizing land administration solutions, technologies and networks, ii) implementing NSDI for public sharing of geospatial data and services, iii) developing a mass valuation system for property transaction verification and property taxation enhancement, iv) upgrading the state land register content and the state land management system, and v) encouraging land registry and cadastre sector/system sustainability and enhancing the implementation of institutional reforms and capacity building through better governance, and vi) over the longer term, phasing out the overlapping and parallel (historical) land administration operations.
3. The PDO indicators are: 1) Number of Land Registry and Cadastre eServices implemented annually; 2) State Land Registration Datasheets quality improved in the digital Land Registry (%); and 3) Number of Districts/Municipalities covered by the mass valuation system.
4. The project costs are estimated at US\$43 million. The project includes five components:
  - (a) Component A; Modernization of the Digital Land Registry and Cadastre system, US\$19 million
  - (b) Component B; National Spatial Data Infrastructure, US\$2.5 million
  - (c) Component C; Property Valuation and Taxation, US\$11 million
  - (d) Component D; State Land Inventory and Management, US\$3 million
  - (e) Component E; Institutional Development, Capacity Building and Project Management, US\$7.4 million

#### **Component A – Modernization of the Digital Land Registry and Cadastre System (US\$19 million)**

5. The objective of this component is to implement an integrated ICT solution for the Digital Land Registry and Cadastre System to be integrated/linked with other functions such as Property Valuation and State Land Management. The component will improve the quality of services provided by the government and trust in the sector through the practical promotion of transparency, equal access to information, electronic services and streamlined processes. Land and property markets, location based investments and sustainable land management (particularly, that which mitigates and adapts to the impacts of climate change, rapid urbanization, and population growth) will benefit from facilitated access to land records and electronic services. This component will: 1) establish a unified database for the integrated Land Registry and Cadastre system; 2) improve its ICT infrastructure and applications; 3) implement new e-services and support integration with external systems; 4) establish digital archives and a disaster recovery center; 5) scan and vectorize remaining paper cadastral index maps; and 6)



improve key technical and office premises. The system will be developed based on a business processes analysis and re-engineering, and then piloted and rolled out with training of the operational staff.

#### A.1 Implementation of Integrated Land Registry and Cadastre System

6. This sub-component will develop and implement the new integrated Land Registry and Cadastre system. The project will unify GDLRC's land related information systems (Integrated Registration System (IRS), Integrated Cadastre Mapping and Surveying System (ICMSS), Private Government Property (PGP), and the National Integrated Registration System (NIRS)) to a unified database of the new Land Registry and Cadastre system. System development will be outsourced under the management of the ICT unit of GDLRC. The latest technological platforms, international open standards and best practices will be applied and the system will be developed based on a thorough business process analysis and re-engineered processes and functionalities. All existing data will be converted to new data structures. The new design will be tested and piloted by GDLRC and, finally, all existing systems (IRS, NIRS, ICMSS and PGP) will be replaced with the new integrated Land Registry and Cadastre system.

7. Mass trainings of users, administrators and developers will be tailored to main user groups. GDLRC's ICT unit will be trained to install, configure, maintain and develop the system. The hardware and system rollout to the GDLRC headquarters and regional offices will be done based on a detailed data migration and rollout plan.

8. Finally, system support will be arranged. It will cover bugs fixing and further development of the system features and improvements.

#### A.2 ICT Infrastructure Improvement

9. The GDLRC's main and disaster recovery data centers' equipment will be upgraded to host the new integrated Land Registry and Cadastre system. Various hardware equipment, software licenses and communication lines will be acquired under this sub-component. Operational and maintenance costs will not be covered by the project.

10. The following equipment/systems will be acquired for the data centers, as needed:

- (a) Servers
- (b) Racks
- (c) Data storages
- (d) Tape libraries
- (e) UPS systems
- (f) Switches and routers
- (g) Backup software and appliances
- (h) Security software and appliances

11. In addition, the regional offices' hardware and software solutions will be acquired and/or upgraded as per the system design (software licenses, workstations, plotters, and other), which is assumed to be based on a centralized architecture. Among others, scanners for digitizing incoming documents will be introduced to stop the need for future conversion of paper documents.





### A.3 E-services and External Systems Integration

12. This sub-component will facilitate creation of new e-services for the Land Registry and Cadastre System through linkages to external databases and systems. Mass Valuation and State Land Management systems will be integrated to the core system and multiple other systems will be linked to provide joint services. The system linkages to other public databases and services will be done in the context of the broader electronic government structure and may include the NSDI, municipal systems (such as urban planning and addresses), census registry, legal entity records, etc.

### A.4 Establishment of Digital Archives

13. The sub-component will establish technical solution for a digital archive in a form of an ICT Application and a methodology for a digital archive as an integral part of the Land Registry and Cadastre system. The sub-component will finance development of a digital archive strategy, preparation of technical specifications and scanning methodology, mass digitizing, verification of data and quality control, and migration of the data from temporary (transitional) databases into the main system. The Land Registry archives include more than 2.7 million folders/records and none have been digitized. The volume of the archive folders varies from a few pages to hundreds of pages, the proxy volume of digitization work is estimated to the range of 40 million pages/sheets.

### A.5 Cadastral Index Maps Digitalization

14. This sub-component will support the digitalization and georeferencing of old paper maps of areas where no 'new cadastral survey' has been completed. These maps capture a simple (and historical) delineation of property boundaries. After a systematic quality control, the maps will be integrated to the new Land Registry and Cadastre System. The integration will benefit from the new base map produced under the Component B.

### A.6 Modernization of Data Centers and Office Premises

15. This sub-component will modernize the premises and engineering systems of the GDLRC's (or MOF's) data center and disaster recovery center. The data centers will be upgraded with fire-extinguishing, air conditioning, video-surveillance, secured door, security alarm, backup power supply system etc. features of international best practice.

16. In addition, the project will renovate at least one model land registry and cadastre office to improve working environment and customer services. The "model office" (in Beirut) will be redesigned, renovated, and equipped for the front-office, back-office and archiving functions.

17. The equipment installed in data centers and model cadastre office will meet the high energy efficiency standards. The construction works will utilize building techniques and materials that enable the reduction of energy consumption; for example, better insulation which contributes to increased efficiency in air conditioning and heating.



## **Component B – National Spatial Data Infrastructure, (US\$2.5 million)**

18. The objective of this component is to enhance the identification, storage, use, sharing and exchanging of geospatial data and services in Lebanon. The component will facilitate provision of a unified geospatial base and access point for all planning and value adding services in the country having direct impact on jobs and growth. This sub-component aims at unblocking the wealth of information in the public geospatial datasets for the benefit of all development. Indirectly, conflict monitoring and prevention activities will benefit from improved geospatial information. This is achieved by providing public access to Land Registry and Cadastre data and other public geospatial datasets through the NSDI and in accordance with the national laws. The NSDI will serve users and providers within all levels of government, non-governmental organizations, private sector, academia and public. This component will 1) support the development and implementation of a NSDI Strategy based on international best practices and open standards; 2) upgrade NSDI technologies and infrastructure; 3) create a seamless base map (orthorectified imagery and/or aerial photo) of the whole territory of Lebanon; 4) support the creation, collection, and harmonization of geospatial data (of GDLRC and GAD initially) for integration to NSDI; and 5) develop electronic services and link the NSDI to the eGovernance system of Lebanon. Expansion of NSDI through a common framework agreement and data access is planned during the second phase.

### **B.1 NSDI Strategy and Implementation Plan**

19. This sub-component will support preparation of an NSDI Strategy and Implementation Plan for Lebanon.

20. The NSDI strategy will establish an integrated, harmonized, governed and coordinated mechanism and infrastructure for sharing, exchanging and disseminating geospatial data and providing electronic services with the data. The strategy will define the specifications for the (i) institutional framework, responsibilities and governance of NSDI; (ii) technological framework, standards (metadata, data policies/quality/security), formats, and applications; (iii) identification of initial geospatial datasets and services; (iv) data sharing/exchange/dissemination mechanisms; and (v) financial arrangements including the business and financial models.

21. The Implementation Plan will be a costed to implement the NSDI strategy. This will help achieve a fully operational NSDI structure and services based on GDLRC and GAD's data by the project end. With that, the NSDI will be served by the two key geospatial data providers of the country<sup>11</sup>. Subsequently, other data providers will be supported opportunistically within the budget constraints, but a more systematic external dataset facilitation is expected during the second phase of the ten-year program.

### **B.2 ICT Applications for NSDI, Electronic Services and eGovernment Integration**

22. NSDI hosting and technical requirements will be defined in the NSDI strategy and the ICT solutions (including the Geoportal) will be developed as a linked or integrated functionality to the Land Registry and Cadastre System and will include viewing, queries and other integrated services (including

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<sup>11</sup> In comparison, the NSDI of Norway has over 600 data providers.



cataloging, discovery, portrayal and processing<sup>12</sup>) based on the linked geospatial datasets. The solutions will be web based, service-oriented and based on open ISO/OGC standards<sup>13</sup> and protocols independent of any particular technology. Open Source solutions will be preferred.

23. The NSDI will be integrated to the government's eGovernment portal<sup>14</sup>. The user will be directed seamlessly from the eGovernment portal to the project developed Geoportal that will provide the "one-stop-shop" interface the NSDI.

### B.3 NSDI Datasets

24. This sub-component will provide support to identification, production and linking of core geospatial datasets provided by GDLRC and GAD to the NSDI. The sub-component will provide an orthorectified, geo-referenced and mosaicked high-resolution satellite imagery or equivalent orthorectified aerial photography of all Lebanon (estimated at 10,400 sq.km) as the base map of NSDI. In addition, major urban areas and areas with high demand and pressure on land (approximately 2,000 sq.km not covered by cadastral maps) will be covered by very a high-resolution orthorectified aerial photography.

25. Support to the national spatial data infrastructure will provide contributions to climate change adaptation and mitigation. The datasets provided by the NSDI and found in the geoportal that are provided by separate government institutions will help to streamline information from multiple sources into one location in order to help determine which areas are most vulnerable to climate change, which will help the government determine which services are most appropriate to help those affected by natural hazards. By building on the datasets initially provided through the project the government agencies would be able to, for instance, identify greenhouse gas (GHG) accountability through the use of air quality datasets by helping to determine which areas release increased levels of carbon into the atmosphere, thus helping other projects to reduce their own GHG emissions as well as to determine which activities are greater carbon emitters than others.

### Component C – Property Valuation and Taxation, (US\$11 million)

26. The objective of this component is to establish a mass valuation system for all built property and undeveloped land in Lebanon initially covering the main urban areas of the country. This will increase market transparency, reduce banking sector/mortgage risk as well as improve infrastructure for the recurrent property tax. In the short term, the transfer tax revenue will increase due to the improved value benchmark data to support transaction price validation at the registration. In the longer term, the system will enable recurrent property tax and state land leasing enhancement through improved value information. Enhanced value based property taxation will have governance and distributional impacts that benefit the bottom 40 percent. The component will: 1) develop mass appraisal methodologies; 2) undertake a data inventory of physical data on land and property in main urban areas of Lebanon; and 3) develop a mass valuation system for Lebanon. In addition, under Component E, the project will

<sup>12</sup> See Open Geospatial Consortium's service standards at <http://www.opengeospatial.org/docs/is>.

<sup>13</sup> ISO stands for International Organization for Standardization/OGC stands for Open Geospatial Consortium

<sup>14</sup> <http://www.e-gov.gov.lb/Cultures/en-US/Pages/default.aspx>



improve the valuation capacity and facilitate the adherence to international valuation standards of the valuation profession in the country. During the second phase of the ten-year program, the valuation system is expected to be extended to cover all urban and rural and areas, and to develop a Land Value Map in association with real estate indices.

### C.1 Mass Valuation Methodologies and Pilot

27. This sub-component will develop mass valuation models appropriate to the underlying property market in Lebanon. This will provide automated modelling solutions for valuing apartments, single family dwellings, undeveloped land, offices and retail properties. In addition, valuation approaches will be developed for specialized properties such as hotels and industrial properties. Statistical analysis tools will be applied to review and test the accuracy of the models. Finally, a mass appraisal pilot project (focusing on high value residential and commercial properties) will be undertaken to inform on the model specifications and their strengths and weaknesses. Based on the pilot, a mass valuation system will be linked or integrated to the Land Registry and Cadastre system.

### C.2 Data Inventory

28. This sub-component will develop a data collection implementation plan for a valuation data collection of all built and un-built land and properties in Lebanon. This will utilize NSDI's base map/imagery to assist in identifying properties, and require in-field inspections and the use of self-declaration of data from owners of property. In addition, the inventory will build upon the database currently held by the Tax Offices.

### C.3 Mass Valuation System

29. This sub-component will develop a mass valuation system initially providing for a general valuation of main urban areas in Lebanon. A strategy will be developed to provide for a valuation implementation plan and the project will support its application in main urban areas. Full urban and rural areas coverage is expected to be achieved during the second phase of the ten-year program. The mass valuation system will also provide mechanisms for the handling of objections and appeals. Following the publication of the valuation roll and after the period for objections has elapsed the new values may be used by registrars for verifying property transaction values at registration, and for defining property tax values for recurrent property tax, and multiple other purposes.



### **Component D – State Land Inventory and Management, (US\$3 million)**

30. The objective of this component is to improve data quality on state lands in the Land Registry and Cadastre System and enhance State Land Management capacity of the GDLRC. The component invests in upgrading the existing State Land Management ICT system. Data content will be improved, and (to the extent possible without regulatory changes) external information on state lands will be inserted and/or linked to the Land Registry and Cadastre System. The state land information compilation to one location will, among others, serve the conflict response readiness by improving information on public lands available for temporary shelter for refugees, as well as inform alternatives to unsustainable land use practices. The component will: 1) facilitate a new strategy, inter-institutional agreements and inter-agency coordination for State Land Management; 2) improve state land data quality in the Land Registry and Cadastre System; 3) integrate external state and public land datasets to the Land Registry and Cadastre System; 4) upgrade the State Land Management ICT system; and 5) link spatial zoning plans to the Land Registry and Cadastre System.

#### **D.1 State Land Management Strategy**

31. This sub-component will develop a coherent strategy and action plan for harmonization of state land management datasets and procedures. The sub-component will finance technical assistance to analyze the currently ill-coordinated state land management practices, evaluate the records kept by the custodians of state lands, and suggest ways for improving the efficiency of state land management, decision-making, land data quality and inter-operability. The sub-component will support an inter-departmental State Land Management working group to: i) specify the user requirements for the integrated State Land Management System (which will be developed under Component A); ii) revise and enhance the state land assets classification; and iii) support the establishment of inter-institutional agreements for improved inter-agency coordination in state land management, data sharing and harmonization.

32. The strategy will cover at least the key state land management functionalities to be addressed also in the development of the new State Land Management System: maintenance of the government land asset inventory; state land archives and document flow management; public state land recording; state land identification, delineation, and survey; public auctions for leases and sales of government land; rent-roll for government land leases; acquisition and expropriation of land assets for public or government purposes; transformation of state land between the public and private domain; valuation of government land assets; land use monitoring of state land assets (to underpin decision making on illegal buildings, encroachment, pending land litigation cases, etc.); and inter-departmental data sharing on state land assets.

#### **D.2 State Land Registration Data Quality Improvement**

33. This sub-component will: i) improve data quality of all state lands recorded in the unified database of the Land Registry and Cadastre System; ii) expand the coverage of the unified database by integration/connection of non-registered (such from the Ministry of Public Works) datasets on State Lands; and iii) link spatial zoning plans to the Land Registry and Cadastre System (possibly through NSDI).



Only private domain government property records are maintained in the Private Government Property (PGP) system at present. Therefore, the sub-component will finance a campaign of office operations both in GDLRC and external state land management units. This campaign will rely on access to the unified database of the Land Registry and Cadastre System through the new ICT system, access to existing paper or digital records kept by the key stakeholders, and a link established to the spatial zoning plans.

34. Such unified database of state lands will support better land management and better land use planning all of which would contribute to increased ability for climate adaptation (decreased land degradation) and resilience to climate change (improving land use plans).

### **Component E –Institutional Development, Capacity Building and Project Management (US\$7.4 million)**

The objective of this component is to improve the capacity and governance of GDLRC and ensure quality and timely implementation of the project. The component will support: 1) institutional development and sustainability of GDLRC by (i) developing and implementing an institutional vision, strategy, citizen service charter and roadmap for GDLRC improving among others citizen engagement in the sector; and (ii) implementing structures to enhance the accountability of GDLRC to key stakeholders; 2) GDLRC's improved customer orientation and servicing by (i) conducting public outreach activities to improve public perception of the GDLRC and its services, and inform the public on project activities; ii) conducting periodical customer surveys using the results to guide further improvement of services; and (iii) establishing the mechanisms for feedback and grievance redress drawing on international experience; 3) conducting studies and analysis of the policy, legal and regulatory frameworks for administration of public and private land so as to identify gaps and make recommendations for improvement, and conducting a social impact assessment that will analyze the direct and indirect impacts of the project activities on different social groups, and develop recommendations for mitigating social risks; 4) developing and implementing capacity building and knowledge transfer program (on ICT, NSDI, State Land Management, Property Valuation, Public Sector Governance, etc) based on annual training plans; and 5) project management, monitoring and evaluation (M&E), and reporting by (i) providing technical assistance to support project implementation; and (ii) maintaining a Project Management Unit (PMU) through the project period.

#### **E.1 Institutional Development and Sustainability**

35. This sub-component will: develop and implement an institutional vision, strategy, citizen service charter and roadmap for GDLRC improving among others citizen engagement in the sector. It will promote the institutional development of GDLRC and its regional offices and develop a means to ensure the Land Registry and Cadastre's financial sustainability. The sub-component will also develop and implement good governance initiatives in the areas of statistical reporting and analysis, accounting and annual reporting. It will support GDLRC in implementing structures to enhance the accountability of GDLRC to key stakeholders, including conducting regular meetings with key user groups (professionals) and user representatives to provide a means of interacting with users, testing proposals and receiving feedback.



36. The sub-component will produce a functional review of the GDLRC in comparison with international best practice of public sector corporate governance. The review will include a detailed legal, institutional and business environment analysis concluding to an institutional development roadmap for implementation during the project period. The roadmap will include: a) GDLRC's overall vision and mission; b) strategy definition; c) assessment of institutional and operational challenges with proposed solutions; d) operational plan; e) definition of the target governance structure; f) stakeholder mapping and structure for stakeholder involvement/feedback; g) needed legislative changes; h) rationalization of decision making authorities; and i) needed changes in rules and procedures.

### E.2 Customer Services

37. The objective of this sub-component is to improve GDLRC's client orientation and servicing. The investments will focus on improving services to the public other than those derived through activities under the other components and will relate to efficient delivery of services, good governance and openness. A public information campaign (PAC) will raise the public's awareness of property related matters and services, with a special focus on women and youth. PAC will help sharing project related information with the broader public. It will also help the GDLRC to communicate to the public the purpose, timeline, and expected results of the valuation reforms, seeking feedback from the public to test the effectiveness and transparency of the new valuation system. Customer surveys will be conducted periodically (three customer surveys will be conducted throughout the life of the project) and results will be used to guide further improvement of services. Online interactive services, including a forum for dissemination of information, will also be established. Further, a set of service standards will be published, and a code of conduct and ethics will be developed for staff to improve their responsiveness to customers' needs and raise professional standards. Finally, anti-corruption, good governance initiatives (such as expanding the customer hotline and mechanisms for feedback and grievance redress) drawing on international experience will be introduced as part of improving customer services and institutional development.

### E.3 Sector Studies and Analysis

38. The objective of this sub-component is to improve the understanding of the constraints to the modernization of land and geospatial sectors in Lebanon. The sub-component will support an analysis of the current policy and regulatory framework developing recommendations to support more efficient and effective land registry and cadastre operations, improve tenure security and develop an efficient and informed real property and land market. Policy, technical and legal studies will analyse current issues and challenges, develop recommendations, present findings and pursue acceptance of recommendations within government. Identified areas for study include policies and regulations related to Land Registry and Cadastre, NSDI, State Land Management, Property Valuation and Taxation. This sub-component will also support the GDLRC in conducting social impact assessment that will analyze the direct and indirect impacts of the project activities on different social groups, and develop recommendations for mitigating social risks.





#### E.4 Training and Education

39. The objective of this sub-component is to improve GDLRC and other stakeholder capacities to implement the new Land Registry and Cadastre system in Lebanon. The project will support sectorial<sup>15</sup> curriculum development and training courses, which will be delivered both in person and remotely to GDLRC staff and to other public sector and private sector personnel engaged in land registration, cadastre services and real property market related work. Courses on human resources, ethics, customer service, management will also be developed and presented. Where appropriate, private sector professionals (surveyors, valuers, real estate agents, lawyers, notaries, court officials) will be invited to take part in project supported training sessions. Early in the project, a thorough training needs assessment will be conducted and a detailed long-term training plan prepared, and specific training plans will be prepared annually. A training portal will be designed and established. The sub-component will also fund study tours and conference attendance to raise GDLRC's and the government's awareness on international practices and to facilitate regional peer networking. Gender disaggregated statistics on participants and satisfaction levels will be kept throughout.

#### E.5 Project Management, Reporting and Monitoring and Evaluation

40. The objective of this sub-component is to ensure efficient implementation of the project. A PMU will be established in the GDLRC and financed under this sub-component. The PMU will be responsible for day-to-day implementation of project activities, the project's fiduciary functions and monitoring and evaluation. The PMU will be located in GDLRC and will include: (i) Project Director; (ii) Financial Management (FM) specialist; (iii) Procurement specialist; (iv) Monitoring & Evaluation specialist; (v) Information and Communication Technologies (ICT) specialist; (vi) Land Registration Specialist (government staff); (vii) Cadastre Specialist; (viii) Property Valuation and Taxation specialist; and (ix) NSDI / GIS – specialist. Additionally, government will assign (x) Legal Advisor, (xi) Technical Coordinator, (xii) Media Coordinator, (xiii) Procurement Assistant, (xiv) Financial Management FM Assistant, (xv) Capacity Building Specialist, (xvi) and secretarial and translation staff. GDLRC will appoint a coordinator for each project component to oversee project activities and outputs. A monitoring and evaluation system will be designed and implemented. This sub-component will also support technical assistance for project implementation not provided through other sub-components, on a need basis.

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<sup>15</sup> Law, surveying, cadastre, land rights registration, valuation, sustainable land management (including to enhance resilience and prevent land degradation in the face of climate change, rapid urbanization and population growth), archive management, GIS/SDI, data entry, scanning, integration and harmonization, etc.





## **ANNEX 2: IMPLEMENTATION ARRANGEMENTS**

**COUNTRY: Lebanon**

**Land Administration System Modernization Project**

### **Project Institutional and Implementation Arrangements**

1. The implementing agency of the project will be GDLRC in close cooperation with the Directorate of Finance of MOF, and UNDP's Fiscal, Policy, Advisory and Reform Project at the Ministry of Finance, vested with State Land Management responsibilities, the National eGovernance Program, the National GIS Committee, the Directorate of Geographic Affairs of the Ministry of Defense (GAD), the Center for Remote Sensing and other public and private sector institutions producing and managing Spatial Data as well as municipalities. The GDLRC has not implemented a World Bank loan in over ten years, and there is only limited relevant institutional memory. Therefore, a Project Management Unit (PMU) will be established in GDLRC and will be responsible for project management, the project's fiduciary functions, and monitoring and evaluation. The PMU will be led by a Project Director and tentatively include specialists in land registration, cadastre, ICT, law, valuation, capacity building, M&E, procurement and financial management, and be assisted by secretarial and translations staff. Fiduciary staff familiar with Bank procedures will be recruited externally on a competitive basis following the Bank's Procurement Regulations.
2. Thematic, inter-agency, Project Components Working Groups, namely A – Digital Land Registry and Cadastre System B – NSDI; C – Mass Valuation; D – State Land Management; and E – Institutional Development and Project Management, will be established to ensure coordination between various relevant institutions.

### **Financial Management**

3. **Staffing:** the GDLRC is understaffed, and has limited capacity and experience in managing donor-funded projects. As for the existing staff in the financial department, it consists of a head of department with two staff who are newly appointed and still under training. The head of department handles both Procurement and FM functions and does not have prior experience with World Bank-funded projects. In order to ensure that the project's FM arrangements are well maintained, a fully dedicated Financial Officer (FO) will be recruited for the project, who will handle the project's Financial Management (FM) arrangements, including accounting, reporting and auditing, and who will be part of the PMU in the GDLRC. The FO needs to be recruited as soon as possible to ensure proper follow up of project FM implementation, and to handle the various tasks involved in the retroactive financing, if used. The main duties of the FO will include, but will not be limited to, the management of the Designated Account (DA), honoring the entity requests for issuing payments, consolidating the projects accounts, and issuing quarterly Unaudited Interim Financial Reports (IFRs) to reflect the project's overall financial position. The Bank will provide the FO the necessary guidance and implementation support to acquaint them with the Bank's reporting requirements and guidelines.



4. The GDLRC has a functioning accounting information system, which is linked to the central information system at the MOF. The entries include mainly two types of transactions: contract commitments, and disbursements. The system allows users to generate a statement showing budget, approved commitments, allocated commitments, disbursements, and remaining balances per budget categories. Nevertheless, the system does not allow generation of Unaudited IFRs in a format and content as required by the Bank. For the purpose of the project's FM implementation, GDLRC will ensure an adequate accounting system (Excel spreadsheet if needed) is in place that is able to process the project's transactions, to produce quarterly project consolidated Unaudited IFRs and annual project financial statements in compliance with the cash basis of accounting (IPSAS)<sup>16</sup> and in alignment with World Bank reporting requirements. The quarterly consolidated IFRs will be submitted by the PMU to the Bank within 45 days after the end of the concerned quarter.

5. The format and content of IFRs was agreed upon, and will be included in the Project Operational Manual (POM). Training will be provided to the FO in the preparation of IFRs. The IFRs will be comprised of:

- a) **Statement of Cash Receipts and Payments by category** for the year then ending and cumulatively from inception date up until the fiscal year's end, including funds received from third parties.
- b) **Accounting policies and explanatory notes including a footnote** disclosure on schedules:
  - (i) Statement of Designated Account reconciling period-opening and end balances;
  - (ii) Statement of project commitments, showing contract amounts committed, paid, and unpaid under each signed contract under the project;
  - (iii) Fixed assets listing report indicating all relevant information (such as description, location, quantity, serial number, etc.) which need to be updated and including any discrepancies between the regular physical inspection and the accounting records.

6. **Project Financial Statements (PFS).** The PFS, prepared in accordance with IPSAS, should contain the same information as the quarterly IFRs but should cover an annual period. The audited PFS will be submitted to the Bank no later than six months after the end of each fiscal year (see External Audit Arrangements below).

7. **External Audit arrangements.** The Project PFS components will be audited by an independent private external auditor acceptable to the Bank. The audit report and PFSs, along with management letter, will be submitted to Bank no later than six months after the end of each fiscal year. In addition, the project management letter will contain the external auditor assessment of the internal controls, accounting system, and compliance with financial covenants in the Loan Agreement. The audit will be comprehensive and will cover all aspects of the project, including compliance with the POM, review of effectiveness of the internal controls system, and compliance with the Loan Agreement. The audit will be carried out in accordance with International Standards on Auditing (IFAC/INTOSAI). The PMU of GDLRC will be responsible for selecting and entering into a contract with an independent and qualified external audit firm acceptable to the Bank that will undertake annual audits of the PFSs. In addition, the

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<sup>16</sup> IPSAS stands for International Public Sector Accounting Standards



PMU will be responsible for appointing the external auditor early in the project life, within six months of project effectiveness.

8. Moreover, according to the Bank Access to Information Policy effective July 1, 2010, the Bank as well as the Borrower will make publicly available the Borrowers' audited annual financial statements for all investment lending operations for which the invitation to negotiate was issued on or after July 1, 2010. Accordingly, this the project's audited annual financial statements once issued and accepted by the Bank will be made available to the public on the GDLRC/ MOF website.

9. **Budgeting.** The project will be implemented using the World Bank's guidelines, policies and procedures for investment project financing (IPF). A set of FM arrangements will be undertaken to ensure proper project accounting, reporting, controls and audits. As to the project budget, the project's allocation and categories of expenditures will be disclosed in the loan agreement. A project quarterly and annual budget and disbursement plan will be maintained by the GDLRC based on the project procurement plan and implementation schedule to ensure timely availability of funds. It will be used as an effective tool for comparing planned expenditures with actual ones and monitoring the existing variances.

10. **Internal Controls:** GDLRC's does not have an internal audit department. The GDLRC is reviewed by the Court of Accounts on ex-ante basis for transactions exceeding LBP 75 Million. The CoA audits as well the GDLRC on an ex-post basis being a government public entity. The GDLRC reports to the MoF as organizationally, it is part of it. For the purpose of this project, and as a mitigating measure, a Project Operational Manual (POM) is to be prepared and will contain a detailed chapter on Financial Management including accounting, financial reporting, and auditing procedures related to the project.

11. **Flow of Funds and Cash Management.** The funds will be transferred from the Bank to the project in accordance with the provisions of the Loan Agreement (LA). The funds will be channeled from the World Bank to the MOF Treasury account for "Loans" and then transferred to the DA opened for the project at the Banque du Liban in US\$. Deposits into, and payments from the DA will be made in accordance with the provisions stated in both LA and disbursement letters and as outlined in the World Bank "Disbursements Guidelines for Projects".

12. In requesting disbursements into the DA for expenditures incurred, the project will make use of a Statement of Expenditure (SOE) in the form attached to the Disbursement and Financial Information Letter, accompanied with the list of payments against contracts subject to the World Bank Prior Review, the Designated Account Reconciliation Statement and its related bank statements.

### **Disbursements**

13. The loan funds will be transferred from the Bank to the project in accordance with the provisions of the Loan Agreement. A Designated account (DA) for the project's loan funds will be opened at the Banque du Liban (BDL) in US\$ under a Ministry of Finance Treasury Account. The funds will then be transferred to the loan account at BDL following the internal procedures adopted by the MOF for loans. The PMU will use this DA to pay for eligible expenditures related to the project's components activities.



14. **Retroactive Financing.** Payments for expenditures paid on or after May 1, 2018 are eligible for retroactive financing for an amount not exceeding 10 percent of the loan amount.
15. **Disbursement plan.** A disbursement plan based on the procurement plan will be developed by GDLRC. The Disbursement plan will include detailed description of all components, sub-components, contracts and other relevant information. GDLRC will update the disbursement plan periodically and will closely monitor any significant variances.
16. The proceeds of the Loan will be disbursed in accordance with the Bank's disbursements guidelines for projects and as outlined in the Disbursement and Financial Information Letter. Transaction based disbursement will be used under this project. Accordingly, requests for payments from the Loan will be initiated through the use of Withdrawal Applications (WAs) either for Advances, Reimbursements, Special Commitment issuance and Replenishments to the Designated Account. All WAs will include appropriate supporting documentation including detailed Statement of Expenses for reimbursements and replenishments to the DA.
17. **E-Disbursement.** Under e-disbursement, the project's required transactions will be reported and associated supporting documents scanned and transmitted online through the Bank's Client Connection system. E-disbursement will considerably speed up disbursements and facilitate project implementation. All documentation showing expenditures shall be retained by the GDLRC and shall be made available to the Bank and its representatives for audit, if requested.
18. The Bank will honor eligible expenditures completed, services rendered and goods delivered by the project closing date. A four months' grace period will be granted to allow for the payment of any eligible expenditure incurred (i.e. services, goods or works, received and accepted) before the Loan Closing Date.
19. **Authorized Signatories:** Authorized signatories will be nominated by the Minister of Finance to sign the Withdrawal Applications. Names and corresponding specimen of their signatures will be submitted to the Bank prior to the receipt of the first WA (advance to DA) in the form attached to the Disbursement and Financial Information Letter. Each WA will be approved and signed by the authorized signatories.
20. **Supervision Plan:** Supervision missions will be conducted at least twice a year. The supervision mission objective is to ensure that adequate financial management systems are maintained throughout the life of the project. IFRs will be reviewed by World Bank staff and the results and issues will be followed up during supervision missions. Financial audit reports will be reviewed and issues will be identified and followed up by the Project's Financial Officer. Additionally, during supervision missions, the project's financial management and disbursement arrangements (including a review of sample payments and financial movements of the DA) will be reviewed to ensure compliance with the Bank's minimum requirements.



## Procurement

21. Implementing agency: The GDLRC of MOF abides by the Decree of 1959 on Tender Regulations and the Public Accounting Law of 1963. Accordingly, GDLRC operates under the ceiling of LBP100 million (US\$67,000 equivalent). Above that ceiling, bidding is processed centrally by the Central Tender Board (CTB) at the general inspection. Prior review is exercised by the Court of Account (COA) for Goods and Works above LBP75 million (US\$50,000 equivalent) and Services above LBP25 million (US\$17,000 equivalent).

22. Past experience in World-Bank projects: GDLRC implemented a project financed by the WB for US\$26M. The project was a Technical Assistance for revenue enhancement and fiscal management. A Project Management Unit (PMU) was created as a temporary body to implement the project and to disband upon its completion. For the life of the project, the Minister of Finance and its direct advisor provided steadfast political support and guidance to ensure that the program was carried out in a competent and efficient manner. The fact that some PMU members were GDLRC staff and that all PMU members were Lebanese was helpful in avoiding the mistrust of strangers inherent to such situations. The GDLRC performed well over the life of the project<sup>17</sup>.

23. GDLRC responsibilities and procurement envelope: The directorate is procuring equipment, rehabilitating its regional centers, and providing maintenance services for an annual public procurement envelope of LBP18,106 million (US\$12 million) in 2014 and LBP6,890 million (US\$4.6 million) in 2015. Beside the General Directorate in Beirut, GDLRC caters services for 25 regional centers in Akkar (1 center), North Lebanon (6), Baalbeck (2) Bekaa (3), Mount Lebanon (6), South Lebanon (3), Nabatieh (4).

24. Applied taxes: The following are the three types of taxes applied: (1) Stamp Duties of (a) 4/1000 of the contract price for contract registration at ministry of finance (MOF), and (b) 4/1000 on each payment; (2) Value Added Taxes (VAT) of 11 percent applied on consultants and contractors who are registered and eligible for VAT; and (3) Income Taxes that are a flat rate of 7.5 percent for non-resident consultants and variable for resident consultants, depending on their job classification at MOF. Exemption of consultants from Income Taxes may be observed if they are registered in countries that have entered with Lebanon into agreements prohibiting double taxation. Contracts financed by international donor proceeds are exempted from VAT (Law No 379 dated December 14, 2001).

25. Audit: Currently MOF does not have an internal audit but relies on the Court of Accounts for ex-ante and ex-post reviews. The Central Inspection, Central Tender Board, plays a role in procurement processing and resolution of complaints cases.

26. Current Procurement Staff: The GDLRC procurement department is composed of the head of department and three staff out of which two are newly appointed.

27. Procurement Planning: The activities are planned according to availability of budget released in

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<sup>17</sup> Implementation Completion Report (ICR) of "Technical Assistance for revenue enhancement and fiscal management" (June 2006).



March of the given year. The planning is thus done ad-hoc; no particular attention is given to packaging activities. Though some procurement could be using Framework Agreement type of purchase, the efficient strategic approach seems to be not used.

28. To reduce the identified risk, the following measures are proposed to mitigate the risk rating to Moderate: (i) include review of time taken to make decisions and justifications for over-riding decisions in the TOR of an independent audit; (ii) agree on a training program (internal/ external) to be implemented over the life of the project that is both relevant and practical; (iii) arrange for appropriate support (staff, training, tools) to handle procurement management and engage current civil servants (technical/procurement) in procurement activities; (iv) prepare acceptable sample bidding documents for Request For Bids using national market; (v) ensure criteria of evaluation are clear and quantifiable in monetary terms and monitor compliance with the set criteria; (vi) set deadlines for submission of complaints and for decision making by the agency; (vii) establish system to monitor and expedite contract modifications or change orders and include this requirement as part of the TOR for procurement audits; and (viii) agree on appropriate publication (i.e. on a website or press bulletins) of procurement decisions and other relevant information as minimum.

29. Market analysis. The project will use consulting services, in particular in the ICT sector. The sector is internationally and nationally competitive. Full-fledged development of software may not be needed, and the project will be exploring purchase of off-the-shelf software to be customized and actualized to the project objectives.

#### Proposed Procurement Arrangements

30. Project regulations: "World Bank Procurement Regulations for Borrowers under Investment Project Financing" dated July 1, 2016 ("Procurement Regulations") and revised in November 2017 will be applied for the project.

- (a) *Procurement methods for goods and non-consulting service:* The project is expected to use:
  - (i) International Request for Bids- RFB (old ICB); (ii) National Request for Bids- RFB (old NCB);
  - (iii) Request for Quotations (old Shopping); (iv) Direct Selection (old Direct contract).
- (b) *Selection of consultants:* the project is expected to conduct (i) National & International Quality Cost Based Selection (QCBS), (ii) Fixed Budget Based Selection (FBS), (iii) Least Cost Based Selection (LCS), (iv) Quality Based Selection (QBS), (v) Consultant's Qualification Based Selection (CQS), (vi) Direct Selection (SSS), (vi) Selection of individual consultants.
- (c) *Particular procurement: Direct Selection of government institutions and state-owned enterprises:* The project may need to contract the "Directorate of Geographic Affairs of the Ministry of Defense" for the production of aerial photography and geographic data, and the "Institute of Finance" which is under the custody of Ministry of Finance for pertinent capacity building. The eligibility of such contracts will need to be cleared by the WB and in line with the regulations section III article 3.23 c whereas goods, works, non-consulting services or consulting services provided by SOE or borrower's institutions are of a unique and exceptional nature because of the absence of suitable private sector alternatives or



because of the regulatory framework, or because their participation is critical to project implementation.

31. The “Guidelines on Preventing and Combating Fraud and Corruption in Projects Financed by IBRD Loans and IDA Credits and Grants”, dated October 15, 2006 and revised in January 2011 and as of July 1, 2016, shall apply to the project.

32. Staff: The procurement function will be assigned to the Procurement Specialists in the PMU and supported by the MOF’s technical staff. A particular technical assistance support is expected to be provided by OMSAR on ICT activities, as well as participation in evaluation process and contract management.

33. Project Operation Manual (POM): The procurement section of the POM will include specification of the procurement processing and contract management. It comprises the standard bidding documents that shall be used in the project. It tackles the record-keeping requirements and the complaint mechanism expected arrangements.

34. Procurement plan: The procurement plan of the project will be developed by GDLRC through STEP. It defines the market approach options, the selection methods and contractual arrangements, and determines the World Bank’s reviews. The summary procurement plan for the project and the ToRs for the first year were agreed. The following is a summary of the agreed procurement plan:

Table 1- Consultancy for major Assignments with Selection Methods and Time Schedule

Proc. System Ref. #	Comp	Location/ Description of Assignment	Estimated Cost (US\$)	Selection Method	Bank Rev.	TOR Start Date	Contract Start Date	Execution in months	Completion Date (original)
FC001	C1	<b>C1.1</b> Develop and update ICT strategy for GDLRC and development of the specification and bidding document for the S&I for digital Land Registry (PG001) <b>IC1.4</b> Development of Digital archive strategy and technical specifications for digital archiving	400,000	QCBS	PO	16-Feb-18	3-Jun-18	2	3-Aug-18
FC002	C2	<b>C2.1-</b> NSDI Strategy and Implementation Plan (strategy dvlpmt, impelmentation plan)!	200,000	QCBS	PO	18-Mar-19	3-Jul-19	6	2-Jan-20
FC003	C2	<b>C2.2-</b> ICT Applications for NSDI and eGovernment Integration (Geoportal; integration land regist, cadaster)	200,000	QCBS	PO	18-Mar-19	3-Jul-19	6	2-Jan-20
FC004	C4	<b>C4.1</b> State Land Management Strategy (classification, user requirements, evaluation of land mgmt practices)	200,000	QCBS	PO	18-Mar-18	3-Jul-18	6	2-Jan-19
FC005	C5	<b>C5.1</b> Customer survey	300,000	QCBS	PO	18-Mar-18	3-Jul-18	58	24-Apr-23
FC006	C5	<b>C5.2</b> Institutional Development and Sustainability (Roadmap; HR policy; organizational structure)	350,000	QCBS	PO	18-Mar-21	3-Jul-21	12	4-Jul-22
FC007	C5	<b>C5.5</b> Independent Financial Audit for the project	250,000	LCS	PO	18-Sep-18	3-Jan-19	58	25-Oct-23





Table 2. Procurement of Major Goods, Works and Non-consulting Services with Procurement Methods and Time Schedule

Proc. System Ref. #	Comp	Location/ Description of Assignment	Estimated Cost (US\$)	Selection Method	Bank Rev.	Bid. Doc/ Specs prep. Start Date	Start Date	Execution In months	Completion Date (original)
PG001	C1-4	<b>[S&amp;I-G]: C1.1</b> -Business Analysis, System Specification, Design, Dvlpmt, Trg, Rollout, Maintenance/Communication (3Y) <b>/ C1.3</b> Implementation e-service, Integration with external systems <b>/ C1.4</b> Integration with land registry and cadaster system <b>/ C4.2</b> State Land Registration Data Quality Improvement (GDLRC internal inventory, recalssification; State land inventory, Linking spatial zoning plans to LRC DB) <b>/ C1.2</b> ICT Infrastructure Improvement (Main data center, regional network equipment, computer and office equipment, standard software licences)	11,750,000	ICB	PR	22-Aug-19	15-Jan-20	24	16-Jan-22
PNC002	C1	<b>[Non-Consulting Services]: C1.4.</b> Scanning and indexing land registry cases; <b>/ C1.5.</b> Index maps scanning and georeferencing; <b>/</b>	7,950,000	ICB	PR	20-Jan-19	15-Jun-19	24	16-Jun-21
PNC003	C2	<b>[Non-Consulting Services]: C2.3.</b> NSDI Datasets (orthophoto or orthorectified imagery; Access to external datasets)	2,000,000	ICB	PO	3-Oct-19	15-Jan-20	12	15-Jan-21
PW004	C1	<b>[W]: C1.6;</b> Modernization of Data Centers and Office Premises	1,700,000	ICB	PO	3-Oct-19	15-Jan-20	6	16-Jul-20
PG005	C3	<b>[S&amp;I-G]: C3.2;</b> Mass valuation methodology and Pilot (dvlpt methods, statistics software and licences, pilot project) <b>/ C3.3;</b> Data Inventory (Main urban areas Beirut, Mount Lebanon, Tripoli ...) <b>/ C3.5</b> Mass valuation system (Dvlpt of systme, on-line publication, handling of objection and appeals)	10,900,000	ICB	PR	8-May-19	1-Oct-19	36	3-Oct-22
PNC006	C5	<b>[Non-Consulting Services]: C5.1;</b> Public outreach campaign; (Could be modified to firm consultancy)	300,000	NCB	PO	16-Feb-22	31-May-22	12	1-Jun-23

35. Frequency of supervision mission and post procurement review is foreseen respectively twice and once yearly.

Risk Summary

36. The procurement risks include: (i) Accountability of procurement decisions: Insufficient independent checks and balances, (ii) Staffing: Obsolescence in procurement and contract management knowledge; (iii) Planning: Delay to project processing and implementation due to lack of proper planning, (iv) Procurement packaging: Implementation delays due to repetitive bidding for the same regular purchases, (v) Evaluation and award of contract: Political interference in procurement decisions, (vi) Resolution of complaints: Lack of trust in the system due to inefficient system that does not deliver results, (vii) Contract management, (viii) Procurement oversight: Lack of public oversight may lead to abuse and corruption.

37. To mitigate procurement risks, the following measures are proposed: (i) include review of time taken to make decisions and justifications for over-riding decisions in the TOR of an independent audit; (ii) agree on a training program (internal/ external) to be implemented over the life of the project that is both relevant and practical; (iii) arrange for appropriate support (staff, training, tools) to handle procurement management and engage current civil servants (technical/procurement) in procurement activities; (iv) prepare acceptable sample bidding documents for national request for bids; (v) ensure criteria of evaluation are clear and quantifiable in monetary terms and monitor compliance with the set criteria; (vi) set deadlines for submission of complaints and for decision making by the agency; (vii)





establish system to monitor and expedite contract modifications or change orders and include this requirement as part of the TOR for procurement audits; and (viii) agree on appropriate publication (i.e. on a website or press bulletins) of procurement decisions and other relevant information as minimum.<sup>18</sup>

### **Environmental and Social (including safeguards)**

38. Environmental. The project is Category B and triggers partial environmental assessment under OP/BP 4.01 Environmental Assessment. The project activities will neither entail any significant environmental impacts nor is expected to have any large scale or irreversible negative environmental impacts. However, the minor renovation works that are planned under Component A for the technical facility and office space will result in minimal environmental impacts. Such environmental impacts will include dust, noise, on site safety issues and waste management. An Environmental Management Plan (EMP)<sup>19</sup> was prepared to provide the necessary environmental conditions, guidelines and measures to be taken by the small works contractors that will be contracted by the project to ensure that the minor renovation/rehabilitation and installation works meet health, safety and environmental standards. To this end, the environmental conditions and guidelines will be included as integral part of the tender documents. The PMU will be responsible to ensure that the contractors will abide by these conditions and that there is an adequate monitoring and supervision for such measures.

39. Social. Overall, the project is expected to have positive social impacts. The impacts come mainly from the project's focus on increasing the capacity of the public sector and the transparency and availability of information. Specific impacts by component are described below.

40. Components A and B will positively impact the ability of men and women to access information about land and property, as well as increase their access to geospatial data. The component design includes activities to enhance the access to information for particularly vulnerable or underserved groups, including consultations to understand how these groups currently access property data, their barriers to using ICT systems, and then putting in place processes that will help them overcome these barriers. In addition, databases and all other ICT infrastructure will be created such that it includes options for including multiple owners which is especially beneficial for women who are not typically selected as a primary owner, encouraging households to register male and female heads of household and therefore increasing women's access to land and property rights. Geospatial data will enable men and women to have better information on use and availability of land, which could also provide them with information they may need for livelihoods or business investments.

41. Component C will have positive social impacts due to its effects on creating a more transparent and fair system of valuation that will eventually lead to fair taxation. A clearer system of valuation will have positive social impacts by clarifying the value of properties held by the population, enabling for

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<sup>18</sup> E.g. on a website or press bulletin.

<sup>19</sup> The Project's EMP was disclosed in-country and in the World Bank on June 16, 2017 and June 30, 2017 respectively.

<http://www.lrc.gov.lb/sites/default/files/styles/EMP.pdf>

<http://documents.worldbank.org/curated/en/107861498547958817/pdf/SFG3452-EA-P159692-Box402916B-Public-Disclosed-6-27-2017.pdf>



better long-term planning on the use and disposal of assets as well as greater access to credit markets. It is possible that a small number of vulnerable (asset rich, cash poor) individuals would be negatively impacted if their properties were to be assessed as having greater value and therefore a greater tax burden causing burden over their capacity to pay taxes. This kind of impact will be identified through the social assessment that is part of Component E and technical assistance on mitigating these impacts will be provided to the client. In addition, the project helps the client develop a grievance redress mechanism, also as part of Component E that can address help to identify and mitigate against these risks.

42. Improvements in state land management supported by Component D are also expected to have overall positive social impacts. Through the identification of state lands, the project will support the Government of Lebanon to better plan for the use of their assets which could in turn benefit citizens overall through promotion of state efficiency. However, it is clear that there is encroachment on state lands. Preliminary discussions suggest that encroachers include both non-vulnerable individuals that exploit State Land uncertainties but, poor informal occupants. Although the component will not alter existing rights to property and therefore will not affect land use or occupancy on the ground or result in involuntary resettlement, the project could have risks to the current occupants of State Lands including informal occupants. The social assessment carried out under Component E will be the key tool used to mitigate against any risks to vulnerable groups encroaching on state lands.

43. Component E has positive social impacts related to citizen engagement activities, the proposed grievance redress mechanism, and the implementation of the project social assessment. Citizen engagement activities supported through this component include (1) the development of a citizen service charter, which will improve the services citizens receive and citizen access to information, and (2) public outreach activities to increase public awareness of GDLRC activities and promote use of services. Citizen engagement activities will be designed such that they reach vulnerable or underserved groups, and reach women. In addition, Component E also funds the GDLRC grievance redress mechanism, which will provide citizens a mechanism to provide feedback on GDLRC activities and which can help identify potentially negative impacts on individuals and households, including those that are vulnerable. A project social impact assessment will be funded to analyze the impact on multiple components impact different social groups, with a particular emphasis on identifying ways that the project may be negatively impacting vulnerable populations. The social assessment will place a great deal of focus on understanding the impacts of Component D, since this component provides greater clarity to the Government on the land assets it owns and decisions on the use of these assets could present risks to encroachers. The social assessment will serve to comprehensively assess the legal framework and implementation of the Government's approach to informality and will make recommendations to protect vulnerable informal users of state lands. Because the social assessment needs some of the information collected through the other components to better assess impacts, work on the social assessment will take place during implementation, and specifically after there is a preliminary mass valuation system and a preliminary inventory of state lands. The social assessment will also include mitigation/management measures for any social risks identified.

44. Because the project consists largely of technical upgrades, data improvement, data access improvement and institutional reforms, the project does not have a great deal of gender-differentiated impacts. However, reforms will be tailored whenever necessary such that the impact on male and



female beneficiaries is equal. Policy guidance provided by the project will also be gender-sensitive, and whenever appropriate, an analysis of differential gender (and broader social) impacts will be carried out. In addition, any information and communications campaigns carried out as part of the project will be designed in such a way that they reach male and female beneficiaries, and in full understanding and acknowledgement of the different ways that men and women obtain information.

45. The project is also expected to have positive impacts on social cohesion and conflict. Because it does not include activities that would have impacts on land occupancy or registration, no direct impacts on refugee populations or host communities are expected. However, better information on land use, including state lands, is likely to improve land conflicts that may emerge and can also help the government better manage land use in a time of increased pressure on land caused by the refugee crisis.

46. The project will not cause land acquisition or associated impacts to land holders. Apart from a small methodology pilot, or pilots, as preparation to the follow-on project investment, the project will not include field survey or registration campaigns, which are seen overly risky due to multiple complexities, lack of clear state land designation and delineations, potential high level of encroachment and growing pressure on land due to the large refugee population in the country. Thus, no impact to land occupancy will be made, and no involuntary resettlement will be caused by the project. However, the property valuation investment under the Component C will include building delineation and identification for fiscal purposes, and the Component D will compile state land data from multiple sources. The identification might reveal properties that have not been delineated or registered in the Cadastre. However, these activities will not alter existing rights to property and therefore will not affect land use or occupancy on the ground or result to involuntary resettlement. The project task team will thus need to pay due attention to how the project produced data impacts the government's land management actions.

### **Monitoring and Evaluation**

47. Monitoring and Evaluation (M&E) will be essential in determining the effectiveness of the project. Project monitoring will include two areas: 1) Regular output monitoring of project performance and evaluation system to be established in the first few months of project implementation. This system will monitor the number of eServices delivered; areas of state land inventorized; districts/municipalities covered by the mass valuation system, etc. 2) Regular customer surveys conducted biannually (total three surveys during the life of the project) will monitor customer satisfaction. The baseline will be established during the first year of the project implementation.

48. A dedicated officer in the PMU will be assigned with the M&E function and that person will provide not only statistical reports but also an analysis of the statistics produced within the quarterly progress reports. The quarterly reports will be provided to GDLRC, and the Bank.



## **ANNEX 3: IMPLEMENTATION SUPPORT PLAN**

**COUNTRY: Lebanon**

**Land Administration System Modernization Project**

### **Strategy and Approach for Implementation Support**

1. The Implementation Support Plan (ISP) describes how the World Bank will support the implementation of the risk mitigation measures identified in the Systematic Operations Risk-rating Tool (SORT) and provide the technical advice necessary to facilitate the implementation of project activities for achieving the project development objective. The main objective of the ISP is to ensure timely award of contracts, quality of consultants' outputs including timely review and decision-making on outputs by the GDLRC, effective knowledge transfer, and adherence to the implementation schedule.
2. The ISP also identifies the minimum requirements to meet the World Bank's fiduciary obligations. Emphasis will be placed on upstream reporting, auditing and accountability, and technical compliance measures to ensure early detection and remedy of problems.
3. The PMU/GDLRC will prepare and submit to the Bank a detailed project implementation progress report on a bi-annual basis, which will provide the status of project activities and identify implementation issues. These reports combined with site visits will be used as the basis for undertaking substantive reviews of implementation progress and reaching agreement with the client on: (i) the outcome of the reviews, (ii) project areas requiring strengthening and more targeted capacity building, (iii) approaches for the resolution of implementation issues, and (iv) revision of the implementation schedule and verification of consistency between the project activities as planned and the financing plan, if needed. The PMU will also submit an annual work plan, updated budget, training and procurement plan at the end of the calendar year for World Bank non-objection for the following year.
4. The Bank's project team will provide timely and effective implementation support through a combination of regular supervision and liaison with the client from HQ (via audio/video) and semiannual implementation support missions in-country. An effort will be made to have a project focal person in the World Bank country office in Beirut to provide more effective supervision and timely implementation support to GDLRC. Key members of the Bank's team, including the procurement and financial management are based in the country office and will also provide timely support and guidance.

### **Implementation Support Plan and Resource Requirements**

5. **Technical inputs.** Technical knowledge of land registration and cadastre, information technology, property valuation, geographic technical standards and engineering works and site supervision are required for reviewing bid documents to ensure fair competition through proper technical specifications and fair assessment of the technical aspects of bids/contracts. During project implementation, technical supervision is required to ensure contractual obligations are met. The Bank's Project team and PMU staff will conduct site visits to regional and local offices and other government



agencies on a regular basis throughout the duration of the project to review ICT roll-out progress and other project activities.

6. **Fiduciary requirements and inputs.** Training will be provided by the Bank's financial management specialist and the procurement specialist during project implementation. The team will support the PMU/GDLRC in their financial management capacity and to improve procurement management efficiency. The financial management and procurement specialists will be based in the field and thus be able to provide timely support. Supervision of financial management arrangements will be carried out semi-annually as part of the project supervision plan and support will be provided on a timely basis to respond to client needs. Procurement supervision will be carried out on a timely basis as required by the client. Concerning financial management, the World Bank will conduct risk-based financial management implementation support and supervision within six months from the project effectiveness date, and then at appropriate intervals, as part of its project implementation and supervision missions. During project implementation, the World Bank will supervise the project's financial management arrangements in the following ways: (i) review the project's quarterly IFRs as well as the project's annual financial statements and the auditor's management letters and remedial actions recommended in the auditor's management letters; and (ii) during the World Bank's on-site missions, review the following key areas: (a) project accounting and internal control systems; (b) budgeting and financial planning arrangements; (c) disbursement arrangements and financial flows, including counterpart funds, as applicable; and (d) any incidences of corrupt practices involving project resources. As required, a World Bank-accredited financial management specialist will participate in the implementation support and supervision process.

7. **Environmental and Social Safeguards:** The Bank's environmental and social safeguards specialists will provide regular support in strengthening the safeguards management capacity of GDLRC. In particular, the social specialist will conduct an assessment of: a) existing law and practice, b) the governance and political economy dimensions of the Lebanese government's approach to informality, and c) the track record for evictions when undertaken. In the case the of an increased risk of the project leading to decision making on increased evictions, the social specialist will prepare a risk management strategy on conducting policy discussions for forced eviction, regularizing illegal occupation, and/or integrating informal communities into mainstream society.



Time	Focus	Skills Needed
First twelve months	Start-up of large consultant support contracts, and review of bidding documents; M&E arrangements/ defining baselines; Support with implementation of institutional capacity building	Project Management/Operations/M&E Cadastre and Geodesy ICT Legal FM Procurement Social Environmental
12-48 months	Supervision and M&E	Same as above
Other	Supervision and M&E	Same as above

Skills Mix Required

Skills Needed	Number of Staff Weeks	Number of Trips	Comments
Project management	10/year	2/year	To be adjusted annually
Operations	4/year	2/year	
Land Administration/Legal	5/year	2/year	
Cadastre Specialist	5/year	2/year	
IT expertise	6/year	3/year	
Social	2/year	1/year	
Environmental	2/year	1/year	
Procurement	2/year		
Financial Public	1/year		
Communications	1/year		



## ANNEX 4: ECONOMIC ANALYSIS

COUNTRY: Lebanon

Land Administration System Modernization Project

1. This annex looks at the economic and financial benefits of the Lebanon Land Administration System Modernization Project. The annex will focus on quantifiable benefits and mention briefly the non-quantifiable benefits towards the end. All models presented in this annex assume a high discount rate of 15 percent to reflect the country risk and a 10-year period, of which 5 years are in the implementation period and the next 5 years are the initial phase of the post project period. This longer-term view is taken to account for the fact that several socioeconomic benefits of land projects come towards the end of the investment period but, if maintained properly, can yield benefits in perpetuity. For example, increases in GDLRC revenues will last well beyond the 10-year period presented here.<sup>20</sup> Therefore, 10 years is a reasonable period that allows for the short- to mid-term benefits of the Project to be captured without taking into account long-term benefits that may have taken place more organically in the absence of Bank financing.
2. The quantifiable economic and financial benefits have been determined are split into two categories. The first category estimates benefits assuming that no legislative changes take place. The second category estimates benefits assuming that appropriate legislative changes are made.
3. The quantifiable financial benefits of the Project are driven by Component C. Assuming that no legislative changes are made, the financial impact is expected to come from the development of real estate price indices. Currently, property transfer fees amount to 5 percent of the declared transaction price. However, there is no standard way to check the declared transaction price against the true market value of the asset. The development of real estate prices indices and land value maps will provide registrars with a transparent benchmarking system with which they can more easily detect under-declarations. A similar exercise in Jordan led to a 30 percent increase in transfer tax collection in the first year of implementation. However, this analysis takes a more conservative approach and assumes that transfer taxes will increase by only 10 percent by the final year of the Project. Given that the GDLRC's income of US\$500 million is based largely on transfer fees, a 10 percent increase in transfer fees will result in an income of US\$550 million or an additional US\$50 million per year. To be more conservative, the financial model assumes only 50 percent of this additional US\$50 million income per year can be attributed to the Project, resulting in a per year estimate of US\$25 million.
4. Even though the potential for increased financial benefit is US\$25 million per year, this benefit will not appear immediately. Therefore, the model assumes no benefits for Year 1 and 2 of the Project.

<sup>20</sup> Note: Both the financial and economic analysis models assume no benefits in the first 2 years as it will take some time for the Project activities to begin and start producing results. Thereafter, the percentage of benefits captured each year is estimated higher in the case of the financial analysis compared to the economic analysis due to the greater certainty and ease of measuring associated with the financial benefits. For reference, the estimates for the percentage of benefits captured for the financial analysis are: 10 percent in Year 3, 40 percent in Year 4, 70 percent in Year 5, 5 percent and 100 percent between Years 6 and 10. Similarly, the estimates for the percentage of benefits captured for the economic analysis are: 10 percent in Year 3, 20 percent in Year 4 and so on till 100 percent in Year 10.





Thereafter, the model assumes 10 percent, 40 percent and 70 percent benefit of the total amount in Years 3, 4 and 5 respectively. Starting Year 6, which is the first year in the post Project period, 100 percent of the benefits are assumed. This is because the real estate price indices and land value maps are expected to be completed and fully in use by the end of the Project. The details for the expected financial cash flows as well as estimates for the net present value (NPV) and internal rate of return (IRR) are presented in Figure 3.

5. The annex also estimates the quantifiable economic benefits of NSDI and state land management without legislative changes. However, since the full potential value of NSDI and state land management can be realized with legislative reforms, the annex assumes that the per year economic benefits for the scenario without legislative changes are 75 percent of the scenario with legislative changes. The rationale behind calculating the full potential value of NSDI and state land management are presented in paragraph 9 of this annex.

6. If appropriate legislative changes can be implemented during the course of the Project, additional economic and financial benefits are expected.

7. In terms of quantifiable financial benefits, the legislative reforms under Component C should result in the taxation of vacant lands and properties. There are over 280,000 vacant properties in Lebanon that are currently untaxable. Including them in the tax base at an average annual property tax of US\$183 per property<sup>21</sup> alone will increase the annual revenue collection for the Revenue Directorate and the municipalities by another US\$50 million per year. To be more conservative, the financial model assumes only 50 percent of this additional US\$50 million income per year can be attributed to the Project, resulting in a per year estimate of US\$25 million. Together with the financial benefits in the scenario without legislative changes, this produces a total of US\$50 million additional income per year. Once again, the model assumes no benefits in the first two years. Thereafter, the model assumes 10 percent, 40 percent and 70 percent benefit of the total amount in Years 3, 4 and 5 respectively and 100 percent starting Year 6, which is the first year in the post-Project period. The quantifiable financial benefit cash flows as well as NPV and IRR estimates are presented in Figure 3.

8. The project also intends to transition the system so that annual property taxes are based not on rental value but capital values. This reform is further expected to lead to significant increases in revenue collection. However, it is difficult to estimate this gain in an ex-ante analysis so this will not be done at this stage.

9. In terms of the quantifiable economic benefits, data-sharing and improved decision making driven by Components B and D on NSDI and State Land Management respectively can result in time and cost savings for the public and private sectors. These benefits accrue from a variety of channels, deduplication of data collection and maintenance, benefits from data sharing and improved decision making, improved disaster risk management, improved urban planning (including transport models) etc. While the exact impact of these benefits is difficult to quantify without an economic analysis deep dive, studies on the value of geospatial information in other countries suggest significant gains. For example, the average NSDI gains in four developed economies—Australia, Canada, the Netherlands, and New

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<sup>21</sup> Current estimate from the GDLC.





Zealand—have been estimated at 0.54 percent of GDP. Assuming that middle-income countries like Lebanon achieve only half those gains, the gains remain significant at 0.27 percent of GDP. This full potential value of NSDI in Lebanon is, therefore, estimated at 0.27% of Lebanese GDP i.e. US\$127.2 million per year based on the US\$47.1 billion GDP estimate for 2015.<sup>22</sup> Given the Project's investments the analysis assumes that Lebanon will achieve only 30 percent of its total potential at the end of 10 years (5 years project implementation and 5 years post-project period). This amounts to US\$38.2 million per year.

10. Even though the potential for increased financial benefit is US\$38.2 million, this benefit will not appear immediately. Therefore, the model assumes no benefits for Year 1 and 2 of the Project. Thereafter, the model assumes 10 percent for Year 3, 30 percent in Year 4 and so on till 100 percent in Year 10. This accounts for the fact that NSDI benefits increase with time, maturity and greater use of the data sets.

11. With respect to the economic benefits of NSDI in the scenario without legislative changes, the per year benefit is assumed to be 75 percent of the per year benefit of NSDI with legislative changes. The 75 percent assumption is made of account of the fact that one of the legal conditions of the loan will be the public sharing of all data produced under the Project. This will help boost the production and consumption of spatial data infrastructure for more informed decision making. Therefore, the benefits expected under the scenario without legislative changes should not be much lower. To be conservative, a 25 percent reduction is assumed.

12. Figure 4 shows the economic benefit cash flows and the NPV and IRR for both scenarios: with and without legislative changes. As NSDI develops and data sharing becomes more common, these gains are expected to increase and move closer to Lebanon's full potential of US\$127.2 million per year but this analysis does not attribute those benefits to the Project alone. Moreover, this is a long-term gain and will not be included in the PAD analysis.

13. Finally, in terms of **non-quantifiable benefits**, productivity increases related to the time and cost savings from Component A time and cost savings. These benefits are likely to result from a reduction in the time to process transactions. On the GDLRC side, this means that employees can process more transactions assuming the demand and requests for additional transaction exist. On the citizen and business side, this means a saving in terms of both time and possibly costs since their transactions can be processed more quickly resulting in gains elsewhere. Since the exact nature of demand for additional transactions and time and cost savings for each citizen and business is difficult to model, this annex will not quantify this benefit but note that the productivity gains exist and can be significant in some cases.

### Net Present Value and Internal Rate of Return

14. This section puts together the quantifiable economic and financial benefits of the Project to estimate the NPV and IRR of this investment. Some key assumptions for this analysis are, once again, presented here:

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<sup>22</sup> Source: World Bank data.



- a. Taking into account the overall high risk of this Project, the discount rate is assumed at 15 percent.
- b. All benefits are calculated over a ten-year period of which the first 5 years correspond to the Project implementation period and another 5 years are the post-Project period. This is based on the experience that benefits of land administration projects run far beyond the implementation period and a fair way to capture these gains is to look at a post-project period for at least 5 years.
- c. Two scenarios are presented with respect to financial and economic benefits: (i) without legislative changes; and (ii) with legislative changes.
- d. Both the financial and economic analysis models assume no benefits in the first 2 years as it will take some time for the Project activities to begin and start producing results. Thereafter, the percentage of benefits captured each year is estimated higher in the case of the financial analysis compared to the economic analysis due to the greater certainty and ease of measuring associated with the financial benefits. For reference, the estimates for the percentage of benefits captured for the financial analysis are: 10 percent in Year 3, 40 percent in Year 4, 70 percent in Year 5 percent and 100 percent between Years 6 and 10. Similarly, the estimates for the percentage of benefits captured for the economic analysis are: 10 percent in Year 3, 20 percent in Year 4 and so on till 100 percent in Year 10. The rate at which these two benefits accrue is presented below:

	Implementation Period					Post-Project Period				
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Annual financial benefit as % of total expected benefit per year	0.0%	0.0%	10.0%	40.0%	70.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Annual economic benefit as % of total expected benefit per year	0.0%	0.0%	10.0%	20.0%	30.0%	40.0%	50.0%	60.0%	80.0%	100.0%

- e. Even though the Project’s financial benefits will be driven by Component C and the economic benefits driven by Component B and D, the NPV and IRR analysis takes into account the full costs associated with all Project components. This is done for two reasons. First, it is to account for activities under Component E that benefit the entire Project. Second, this is to remain conservative in estimating the NPV and IRR of the Project.

15. Based on these assumptions, the NPV and IRR estimates for the Project are calculated on the following page. The main results are summarized in the table below. Note that since the NPV is greater than zero and the IRR is greater than the discount rate of 15 percent, the investment is considered financially and economically viable.

16. Based on the financial analysis presented in this annex, the financial benefits are greater with legislative changes and the NPV in the scenario with legislative changes exceeds the NPV in the scenario without legislative changes by a factor of 3.8. Similarly, the economic benefits are greater with legislative changes and the NPV in the scenario with legislative changes exceeds the NPV in the scenario without legislative changes by a factor of 9.4.

17. Based on the financial analysis, the GDLRC and the Government of Lebanon can be expected to recover the Project investment of US\$43 million in: (a) five years and seven months in the scenario without legislative changes; and (b) four years and seven months in the scenario with legislative changes.



Figure 2: Quantifiable Financial Benefits

Quantifiable Financial Benefits

	Implementation Period					Post-Project Period				
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
<b>Without Legislative Changes</b>										
Increase in transfer tax collection	0.0	0.0	2.5	10.0	17.5	25.0	25.0	25.0	25.0	25.0
Project Costs	43.0									
Net Cash Flows	-43.0	0.0	2.5	10.0	17.5	25.0	25.0	25.0	25.0	25.0
Discount Rate	15%									
<b>Financial Benefits NPV (Without Legislative Changes)</b>	<b>23.4</b>									
<b>Financial Benefits IRR (Without Legislative Changes)</b>	<b>24.2%</b>									

	Implementation Period					Post-Project Period				
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
<b>With Legislative Changes</b>										
Increase in property tax collection (transfer+vacant property)	0.0	0.0	5.0	20.0	35.0	50.0	50.0	50.0	50.0	50.0
Project Costs	43.0									
Net Cash Flows	-43.0	0.0	5.0	20.0	35.0	50.0	50.0	50.0	50.0	50.0
Discount Rate	15%									
<b>Financial Benefits NPV (With Legislative Changes)</b>	<b>89.8</b>									
<b>Financial Benefits IRR (With Legislative Changes)</b>	<b>41.5%</b>									



Figure 3: Quantifiable Economic Benefits

Quantifiable Economic Benefits										
	Implementation Period					Post-Project Period				
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
<b>Without Legislative Changes</b>										
NSDI and State Land Management Benefits	0.0	0.0	2.9	5.7	8.6	11.4	14.3	17.2	22.9	28.6
Project Costs	43.0									
Net Cash Flows	-43.0	0.0	2.9	5.7	8.6	11.4	14.3	17.2	22.9	28.6
Discount Rate	15%									
<b>Economic Benefits NPV (Without Legislative Changes)</b>	<b>1.8</b>									
<b>Economic Benefits IRR (Without Legislative Changes)</b>	<b>15.8%</b>									
<b>With Legislative Changes</b>										
NSDI and State Land Management Benefits	0.0	0.0	3.8	7.6	11.4	15.3	19.1	22.9	30.5	38.2
Project Costs	43.0									
Net Cash Flows	-43.0	0.0	3.8	7.6	11.4	15.3	19.1	22.9	30.5	38.2
Discount Rate	15%									
<b>Economic Benefits NPV (With Legislative Changes)</b>	<b>16.7</b>									
<b>Economic Benefits IRR (With Legislative Changes)</b>	<b>21.3%</b>									