Project Information Document (PID)

Appraisal Stage | Date Prepared/Updated: 04-Apr-2024 | Report No: PIDA0074

BASIC INFORMATION

A. Basic Project Data

Project Beneficiary(ies)	Region	Operation ID	Operation Name
Indonesia	EAST ASIA AND PACIFIC	P180860	Integrated Land Administration and Spatial Planning Project
Financing Instrument	Estimated Appraisal Date	Estimated Approval Date	Practice Area (Lead)
Investment Project Financing (IPF)	25-Mar-2024	23-Sep-2024	Urban, Resilience and Land
Borrower(s)	Implementing Agency		
Republic of Indonesia	Geospatial Information Agency, Ministry of Agrarian Affairs and Spatial Planning / National Land Agency (ATR/BPN), Ministry of Home Affairs		

Proposed Development Objective(s)

to strengthen climate-informed spatial planning, land tenure security and land administration in Indonesia

Components

Climate-Informed Spatial Planning
Strengthening Land Tenure and Landscape Management
Land Information System and Valuation
Large-Scale Base Maps for Climate Action
Project Management and Capacity Building

PROJECT FINANCING DATA (US$, Millions)

Maximizing Finance for Development

Is this an MFD-Enabling Project (MFD-EP)?   Yes

Is this project Private Capital Enabling (PCE)?   No

SUMMARY

Total Operation Cost	**654.63**

Total Financing	654.63
of which IBRD/IDA	653.00
Financing Gap	0.00

DETAILS

World Bank Group Financing

International Bank for Reconstruction and Development (IBRD)	653.00

Non-World Bank Group Financing

Counterpart Funding	1.63
National Government	1.63

Environmental And Social Risk Classification

Substantial

Decision

The review did authorize the team to appraise and negotiate

Other Decision (as needed)

B. Introduction and Context

Country Context

1.   **Indonesia has undergone a dramatic economic and political transition in the last quarter of a century**. Indonesia is the fourth largest country by population in the world (275.5 million people as of 2022) comprising of more than 6,000 inhabited islands. Additionally, Indonesia is the largest economy in Southeast Asia and the world's 10th largest in terms of purchasing power parity and the only Association of Southeast Asian Nation (ASEAN) member of the G20. Since the outset of Reformation[1] in 1998, Indonesia has developed into a stable decentralized democracy, and its economy has experienced rapid growth, with an average annual growth rate of 5.5 percent from 2010 to 2019. Although the COVID-19 pandemic caused a slowdown to 3.7 percent in 2020, the economy quickly recovered and achieved a growth rate of 5.31 percent by 2022.[2] The country has made remarkable progress in reducing its poverty rate, which dropped from 24

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[1] The Reformation era began with the resignation of President Suharto in May 1998. The country then embarked on a transition period characterized by decentralization and a more open political-social environment.
[2] Source: *Badan Pusat Statistik.*

percent in 1998 to less than 10 percent in 2022.[3] Indonesia is characterized by an enormous diversity of natural and urban landscapes, spanning from the world's second most populated urban area[4] to the third largest share of rainforests.[5] It is also the home to 20 percent of mangrove forests, 36 percent of tropical peatlands, and the second-largest coastline globally. However, Indonesia's critical landscapes are under threat as the demand for land for cash crop cultivation, food production, renewable energy expansion, and urbanization grows.

2.   **Indonesia is one of the ten largest emitters of greenhouse gases (GHG)[6], which is primarily driven by land use change.** Its economy is largely dependent on unsustainable extraction of renewable natural resources (agriculture, forestry, and fish) that accounted for more than 12 percent of Gross Domestic Product (GDP) in 2022.[7] The country's abundant supply of carbon-intensive natural resources, land and energy matched by high demand drive growth –agriculture, urban expansion, industrialization, transportation and trade. Indonesia's economic development has led to rapid urbanization and conversion of land for commercial purposes. By 2020, over 55 percent of the population had become urban,[8] and much of the country's primary forests and peatlands[9] had been converted for timber extraction and agricultural development.[10] Urban expansion meanwhile converted agricultural areas into peri-urban settlements. Population growth has rapidly expanded the footprint of Indonesian cities, with spatial patterns of growth hampering connectivity of residents to services and jobs. The limited spatial planning capacity, rapid development, and lack of capacity to monitor land use have resulted in environmental losses and urban sprawl, and inefficient land use throughout the territory.

3.   **Climate change poses major development risks to Indonesia and the country is highly susceptible to climate-related disaster, such as flooding, landslides, and droughts.** These events are expected to occur more frequently in the coming decades.[11] Large-scale wildfires pose a recurring challenge in Indonesia, especially during El Niño years, releasing substantial amounts of carbon. Large areas of land will be rendered unsuitable for cultivation or habitation as a result of inundation from flooding. Similarly, Indonesia's coastal areas face critical challenges due to sea level rise (SLR), which is salinizing arable land, shrinking cities and also threatening the fragile carbon stock in mangrove forests. Removal of green spaces to give way to urban areas also adds to the environmental damage and risks of flooding.[12] Cities are increasingly at risk of flooding as concrete replaces natural ecosystems and limits land's absorptive capacity. Overextraction of coastal groundwater and consequent water subsidence further lowers land heights, increasing its vulnerability to flooding. Cities' climate resilience and smart land use will be keys for Indonesia's development. Climate change will impact all Indonesians, but the livelihoods of the poor land users will be particularly affected. Communities living in informal settlements are often in areas more prone to climate shocks, while indigenous peoples are vulnerable because of their dependence on natural resources, compounded by commonly pending legal recognition of their rights on land.

4.   **The Government of Indonesia (GoI) in 2022 committed to reducing GHG emissions by 31 percent by 2030, with a further reduction of up to 43 percent contingent on international support**.[13] Through its "Long-Term Strategy for Low

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[3] The poverty rate as of September 2022 was recorded at 9.57 percent, which means 26.36 million people live below the poverty line (Source: MoF, 2023).

[4] According to citimonitor, the greater Jakarta area has a population of nearly 34 million people, only exceeded by Tokyo-Yokohama (link).

[5] Indonesia's over 92 million hectares of forest form a significant part of the world's remaining tropical forests. FAO, 2019 (link).

[6] According to the World Bank's Indonesia Country Climate and Development Report (Indonesia CCDR), Indonesia accounts for about 3.5 percent of global GHG emissions, with emissions of 1,495 million tons of carbon dioxide (CO_2).

[7] World Bank National Accounts data. Agriculture, forestry, and fishing, value added (percent of GDP) (link).

[8] World Bank Group. 2023. Indonesia CCDR (link).

[9] Carbon stored in Indonesia's peatlands is estimated at 13.6 to 40.5 GtC, one of the largest biological carbon stores on Earth.

[10] The primary forest cover loss from 2000 to 2020 reached 8.49 million hectares. World Bank Group. 2023. Indonesia CCDR (link).

[11] It is estimated that the total cost of these and other climate-related impacts will reach 1.24 percent of GDP by 2030, increasing to 6.97 percent in the 2060s under 3°C warming (Kompas et al. 2018).

[12] From 1990-2018 in just Jakarta metropolis, vegetated area was halved from 60 to 29 percent. Source: CCDR. World Bank (link).

[13] Enhanced NDC Indonesia 2022.

Carbon and Climate Resilience 2050",[14] the GoI increased its ambition on GHG reduction to achieve net zero emissions by 2060 or sooner. Adaptation ambitions in the Enhanced Nationally Determined Contribution (Enhanced NDC) 2022 were raised through programs, strategies, and actions aiming to improve economic, social, livelihoods, and ecosystems and landscape resilience to climate change. More than 60 percent of the emission reduction target is expected from the Forestry and Other Land Use (FOLU) sector. This will involve restoring 2.7 million hectares of peatlands, rehabilitating 5.7 million hectares of degraded forestlands, and minimizing deforestation[15] and land degradation.[16] Slowing down emissions will also require optimizing urban land use, including efficiency gains in transport systems and urbanization patterns to reduce energy demand. Improved spatial growth patterns of Indonesia's cities, along with additional investment, are needed to accelerate the development of low-carbon mobility options. Promoting a compact urban form will be crucial in Indonesia's secondary and smaller cities (with populations under one million), where most of the infrastructure needs to be built and carbon-intensive spatial patterns are yet to be locked in.[17]

Sectoral and Institutional Context

5.   The World Bank's 2023 Indonesia Climate Change and Development Report (CCDR) stresses the importance of sustainable land management in mitigating climate change, noting that reductions in GHG emissions will largely need to be driven by land policies. The GoI ambitiously aims to make the FOLU sector a net carbon sink by 2030 (that is, zero or negative net emissions) under its FOLU Net Sink 2030 plan.[18] To achieve this, the CCDR calls for improving land tenure security, spatial planning, and addressing urban sprawl through more balanced cities.[19] Secure land rights are essential to reduce poverty and enable sustainable development. Complete land records are also critical as repository to respond to climate disasters ensuring fair compensation in cases of disaster related resettlement. The current lack of high-resolution maps, geospatial data on climate change impacts, and integrated information on land rights, boundaries and use hamper the ability of the government to manage land effectively. Climate-informed spatial plans are needed to improve flood-resilience, which should delineate flood-prone zones while controlling development accordingly via zoning. Base mapping and up-to-date land and property records and systems are critical prerequisites to climate-resilient spatial planning. They are also needed for improving valuation of land and property for leveraging public assets, capturing value and enabling fair and efficient property taxation. This is necessary for financing infrastructure investments and enhancing municipal services, including clean energy and green buildings, and sustainable public transport.

6.   The GoI has shown strong commitment to increase land tenure security for social inclusion, economic growth and the reduction of land-based emissions. Since 2015, Indonesia has implemented an Agrarian Reform Program[20], through which more than 9 million hectares (ha) of land have been registered for community and smallholder ownership. The Ministry of Agrarian Affairs and Spatial Planning/National Land Agency (ATR/BPN) has the mandate to register all land rights in Indonesia. It also has the mandate for spatial planning, land information systems and land valuation. In the last five years, ATR/BPN's flagship activity has been the nationwide Systematic and Complete Land Registration Program (PTSL). Through PTSL, first time land registration has progressed at an unprecedented speed doubling the number of

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[14] Long-Term Strategy for Low Carbon and Climate Resilience 2050, Government of Indonesia. (link).

[15] Positively, after the peak of 2.69 million hectares of forest loss in 2015, deforestation rates steadily decreased. Deforestation slowed from an average of 1.13 million ha per year between 2000 – 2006 to 0.12 million ha and 0.11 million ha in 2019 – 2020 and 2020 – 2021 respectively. Source: CCDR. World Bank (link).

[16] The GoI revoked 3.1 million ha of forest concession licenses in 2022 and required concessionaires to protect high conservation value Forest Area.

[17] World Bank Group. 2023. Indonesia CCDR (link).

[18] MoEF Ministerial Decree No. 168/Menlhk/PKTL/PLA.1/2/2022 on the Operational Plan for Indonesia's FOLU Net Sink 2030. This plan is more ambitious than the projected fall from 714 MtCO$_2$eq to 214 MtCO$_2$eq in 2030 under the NDC's unconditional target.

[19] World Bank Group. 2023. Indonesia CCDR (link).

[20] Indonesia's cornerstone land law, the Basic Agrarian Law (Law no.5/1960), provides the legal basis for agrarian reform. However, agrarian reform did not fully take off until after President Joko Widodo issued Presidential Regulation no. 86/2018 on Agrarian Reform.

registered land parcels to more than 100 million[21] in only a few years.[22] The ongoing World Bank financed Program to Accelerate Agrarian Reform (One Map Project, P160661) implemented by the ATR/BPN contributed to this transformative program with a targeted seven million land parcels surveyed and mapped in rural areas. However, not all registered parcels have been titled yet, and some 25 million land parcels remain unregistered, a sizable and immediate task for ATR/BPN that is set to be completed by 2025. In addition, there has been lack of progress with administrative boundary setting, particularly Village Boundary Setting. The GoI has mandated the establishment of all 75,000+ village boundaries, yet less than 4,500 (5.8 percent) of Indonesia's villages have established boundaries. This has resulted in frequent boundary and land resource conflicts between neighboring villages and impacts the fiscal transfers of Village Funds.

7.   **Despite ATR/BPN's rapid progress with securing land rights, land tenure remains insecure for most indigenous 'adat' communities**.[23] Customary land tenure systems are known to contribute to the sustainable management of land, including forests, and are therefore important to mitigate climate change.[24] Without secure land tenure, communities' landholdings are at risk and prone to overlap with extraction licenses and other land use permits, negatively impacting their livelihoods and sustainable community-based landscape management practices. A complicating factor is that 63 percent of Indonesia's land cover is designated as Forest Area, which overlap with more than 25,000 villages, home to some 37 million Indigenous Peoples and Local Communities (IPLC).[25] Forest Areas are state designated areas reserved for forest land managed by the Ministry of Environment and Forestry (MoEF). The unilateral process[26] to enact Forest Areas has lacked community participation, resulting in binding but often irrational boundaries that do not correspond with ground realities. Meanwhile, ATR/BPN's authority to register land rights is limited to areas classified as non-forest.[27] In Forest Areas, no individual land titles may be issued but adat communities can obtain Customary Forest decrees from MoEF, which recognize these communities as the collective owner and managers of the forest. Other communities can apply for temporary collective land use permits under the Social Forestry Program. Recent advancements include MoEF's recognition of more than 130 customary forests[28] and ATR/BPN's successful pilot to register customary agricultural lands outside Forest Areas under the One Map Project. However, these were still implemented in silos and particularly adjusting erroneous Forest Area boundaries remains a challenge. Indonesia's One Map Policy[29] has identified boundary discrepancies and overlaps between land rights, concessions, and Forest Areas, but a systematic attempt to resolve these through field verification and subsequent boundary settlement is pending.[30] The continued prevalence of insecure tenure at the forest/non-forest divide highlights the need for an integrated, landscape-based approach to ensure sustainable forest management and secure tenure rights.

8.   **Beyond tenure security, up-to-date land and property records, large-scale base maps and Land Information Systems (LIS) are needed not only as fundamentals for spatial planning and land management, but also to improve the**

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[21] The total number is estimated at 126 million land parcels outside Forest Areas.

[22] In 2021, the ATR/BPN surveyed and mapped more than 10 million land parcels.

[23] Adat communities in Indonesia refer to indigenous or traditional communities. The term "*adat*" itself translates to "customary" in Indonesian. Adat communities abide by distinct cultural practices and customary laws that are intrinsically linked to a collective territory.

[24] FAO & FILAC. 2021. Forest governance by indigenous and tribal peoples: An opportunity for climate action in Latin America and the Caribbean.

[25] Ministry of Environment and Forestry, Republic of Indonesia, 2020. The State of Indonesia's Forests 2018.

[26] Forest Area are established through Forest Area enactment, which entails several steps, including designation, boundary delineation, mapping and legal enactment.

[27] The prevailing legal interpretation is that ATR/BPN's authority to register land as per the Basic Agrarian Law only stretches over land categorized as non-Forest Area. The Forestry Law (Law no. 41/1999), meanwhile, authorizes the MoEF to govern and manage lands specified on the basis of its function as "forest."

[28] Customary Forest recognition is conducted as part of MoEF's Social Forestry Program and the real time data is available online for public (link).

[29] The Indonesia One Map Policy is an initiative to create a unified and comprehensive geospatial reference for the entire country.

[30] The Agrarian Reform Program and Social Forestry Programs together provide the policy tools to adjust erroneous Forest Area boundaries but joint implementation by ATR/BPN and MoEF is hampered by budget constraints and lack of inter-ministerial coordination.

government's land valuation services and tax base for property tax collection. Mass valuation systems are beneficial to increase access to real property market information and improve accuracy of corporate and public asset values providing a benchmark for fair compensation and state land leasing and monetization. The latter will be critical for landscape restoration activities, including mangroves, where land tenure and land-use issues need to be resolved with local communities. With proper infrastructure in place, value-based property taxes can be designed to be economically efficient and equitable. They can play important roles in financing local governments (LGs)[31] and in national tax systems. Mass valuation systems stem from and reflect the quality of the overall valuation infrastructure in the country. The foundation is a tenure system that ensures transparency in transactions to provide reliable data as the basis for the assessment of values. A credible system requires that valuation methods are consistent with international valuation standards, laying down the qualifications and professional education for valuers, and setting ethical and professional standards to be followed in valuation and tax assessments.

9.   **The ATR/BPN is the regulating ministry for land valuation and has embarked on several pilots to upgrade its land valuation zoning system.** Its system currently serves registration fee collection, but ATR/BPN's vision is to provide base values for property taxation and other uses. ATR/BPN currently maintains Land Value Zone (ZNT) maps in 449 of total 485 local land offices in the country but the zoning does not cover building values. Property taxes are therefore still collected through LGs' own valuation mechanisms or the Ministry of Finance (MoF) tax records that were last updated before the decentralization of property taxation in 2009. With the first instance improvement, ATR/BPN's ZNT maps could provide land values closer to market value than presently and over time become the basis for the property taxes. This will require updating and completing the ZNT maps across the country and finding a solution for inclusion of building values, which are currently not provided by the ATR/BPN. However, the vision is that the future land registry and cadastre in Indonesia will register both land parcels and buildings and provide values for both. Addressing simultaneously building valuation and land values is necessary to contribute to the property tax potential.

10.   **Despite the GoI's advancements in land administration there is still a notable gap in guiding sustainable land use through effective spatial planning.** Spatial plans often lack the necessary direction to align with the country's climate change mitigation and adaptation objectives. The ATR/BPN oversees Indonesia's spatial planning system and regulates the provision of national, regional (including provincial) and local[32] spatial plans. The Ministry's spatial planning mandate is to provide technical assistance and data to LGs to establish regional and local spatial plans (RTRW), spatial plans for National Strategic Areas (RTR-KSN), and detailed spatial plans (RDTRs). However, most spatial plans do not include clear guidance for establishing a long term, strategic development direction that prioritizes socio-economic outcomes in a form easily understandable for citizens, investors and government departments.[33] The weak ability of spatial plans to contain urban sprawl allows low-density development in the urban fringe areas, allowing encroachment to areas with high environmental and biodiversity value. Spatial planning needs to be improved at various levels: (i) Cross-jurisdictional spatial plans are needed for optimal configuration (land use, location of capital investments, accessibility networks provided by road/ transport networks) for climate-resilient, densified urban development beyond administrative boundaries; (ii) RDTRs should guide local optimization of the same, at the local level, focusing on functional zones and local transit nodes; and (iii) spatial plans should go beyond guiding land use to prioritize investment, but also restrict development for preservation purposes in non-urban areas. ATR/BPN's centralized mandate in spatial planning provides an avenue for addressing these challenges and upgrading Indonesia's planning capabilities to the needs of climate actions era.

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[31] In this document, local government (LG) refers to governments at the district (*kabupaten*) and city (*kota*) level.
[32] Local meaning district (*kabupaten*) or city (*kota*) level.
[33] Project Appraisal Document for the World Bank Indonesia National Urban Development Project (P163896).

11.   **Positively, the Job Creation Law (Law no. 6/2023, henceforth Omnibus Law) significantly enhanced Indonesia's spatial planning procedures to ensure greater coherence with business licensing and advance the country's investment climate and protection of critical landscapes.** Under the Omnibus Law and its implementing regulations, the ATR/BPN has the mandate to host and maintain a planning system that cascades from national spatial plans, RTRWs and RDTRs.[34] The Omnibus Law created a publicly accessible Online Single Submission (OSS) System to link spatial plans digitally to applications for business licenses and land use permits. OSS is an attempt to simplify licensing processes, enhance transparency and avoid creating new overlaps between land use rights, which has been a perennial problem with natural resource and extractives licensing for decades. OSS also embeds monitoring to ensure that land is used in accordance with its intended purpose. Following up, Indonesia has embarked to streamline the spatial planning procedures across sectors, regions and stakeholders, as well as to resolve inconsistencies and overlapping mandates in spatial planning and land administration/governance.[35] Provincial spatial plans (RTRW-P) and local spatial plans (RTRW-K) are largely in place and are aligned with the National Spatial Plan (RTRW-N). However, there are still two major gaps. First, RDTRs that should serve as the backbone planning instrument to verify (approve/reject) investment decisions in the OSS only cover 28 percent of cities/districts[36] and are costly and time-consuming to prepare; out of the 2,000 targeted RDTRs, there are so far approximately 330 RDTRs and only 194 have been incorporated into the OSS. Second, there is a lack of a climate-informed approach, meaning the integration of climate considerations into the process of planning and managing land use and development.

12.   **Indonesia needs climate-informed planning to effectively manage its land resources, provide livelihoods security for vulnerable communities and sustainably develop its growing economy.** Reducing Indonesia's GHG emissions and creating climate resilience in line with the Paris Agreement will depend on future land-based investments to stem current GHG emissions and meet NDC targets. These investments will be guided by the spatial plans which will be incorporated into the OSS and must be verified prior to licensing decisions. Climate-informed spatial planning increases protection and disaster resilience and increases the efficiency of land use while simultaneously improving the investment climate. The latter is needed to help unlock green investment potential to reduce emissions arising from urban expansion and tree cover loss, and improve livability, while creating conditions for low-carbon transport modes. Spatial planning that protects natural land–including forests at the urban periphery and high-risk flood zones–should be complemented by efficient urban design measures and transportation systems that make higher density livable.

C. Proposed Development Objective(s)

Development Objective(s) (From PAD)

to strengthen climate-informed spatial planning, land tenure security and land administration in Indonesia

Key Results

13.   The outcomes of the PDO will be measured by the following indicators:

Table 1. Project Outcomes and PDO-Level Indicators

PDO Outcome	PDO-Level Indicator

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[34] RTRWs are regional spatial plans at province and local level in 1:25,000 or 1:50,000 map scale, and RDTRs are detailed spatial plans in 1:5,000 map scale.

[35] Including Government Regulation no. 21/2021 on Implementation of Spatial Planning and Government Regulation no. 43/2021 on Settlement of Inconsistencies in Spatial Planning, Forest Areas, Permits and/or Land Rights.

[36] RDTRs currently cover only 146 of the 514 cities/districts and one province (DKI Jakarta).

Strengthened climate-informed spatial planning	• Climate-informed spatial plans developed (number)
Strengthened land tenure security	• Target population with land rights registered (number)
Strengthened land administration	• Area with enhanced land administration (hectares)

D. Project Description

14. More than 60 percent of the emission reduction target in Indonesia's Enhanced Nationally Determined Contributions (NDC) is set to be achieved through actions in the Forestry and Other Land Use (FOLU) sector. To this end, this project will support climate-informed spatial planning; (ii) advance Agrarian Reform through the registration of lands to enhance sustainable land use management and promote social inclusion; (iii) support the development of modern LIS; (iv) enhance the property and land valuation system to enhance own source revenue collection for urban services and; (v) produce large scale base maps for the entire Indonesian territory to enhance climate actions.

15. The ILASP Project will support the GoI in addressing climate change by strengthening spatial planning and increasing tenure security, both critical to reduce Indonesia's emissions _and_ implement climate change adaptation measures. First, the project will support the development of high-resolution geospatial data providing the foundation to developing climate-informed spatial plans that direct new agriculture and infrastructure away from high-carbon and sensitive ecosystems and guide urban densification to reduce further encroachment and build resilient cities. Under the ILASP project, climate-informed spatial planning entails conducting risks assessments on areas vulnerable to climate change impacts, identifying and designating critical landscapes for preservation, involving communities in the planning processes, and using climate data and modeling tools to better understand and predict potential impacts of climate change on a specific area. An upgrade to the national geospatial data infrastructure will enable the creation of multi-use and large-scale spatial data that accurately reflect climate risks and national economic priorities, ensuring that stakeholders are equipped with the tools to leverage geospatial information in support of comprehensive, climate-resilient planning and decision-making. Second, the project will clarify and register the tenurial and administrative status of different land functions and secure land rights for the most vulnerable communities, including indigenous peoples, which will both promote social inclusion and enhance sustainable landscape management. Third, the project will support the development of a land valuation system to enhance own source revenue collection for urban services and governance, facilitate land assembly for infrastructure investments, and increase property market efficiency and transparency. The paradigm shift to climate-resilient spatial planning, mass valuation, and comprehensive land tenure requires a digital transformation of land administration systems. To this end, land use (spatial planning) and land administration (tenure and valuation) will be integrated through a comprehensive and integrated Land Information System (LIS).

The project costs are estimated at US$653 million and will include five components:

 (a) Component 1: Climate-Informed Spatial Planning (US$105 million)
 (b) Component 2: Strengthening Land Tenure and Landscape Management (US$177 million)
 (c) Component 3: Land Information System and Valuation (US$45 million)
 (d) Component 4: Large-scale Base Maps for Climate Action (US$292 million)
 (e) Component 5: Project Management and Capacity Building (US$34 million)

16. **Component 1. Climate-Informed Spatial Planning (US$105 million)**. This Component will be led by ATR/BPN and develop Detailed Spatial Plans (RDTR) and cross-jurisdictional Spatial Plans for National Strategic Areas (RTR-KSN). The RDTRs are to be enacted by LGs under the oversight and approving authority of the ATR/BPN. The current GoI target is

to establish 2,000 RDTRs to be connected to the OSS. However, at the current pace, it will take more than 20 years (and around US$260 million) to fulfill the backlog of RDTRs, and the pre-identified 2,000 RDTRs. Therefore, the project will adopt a phased yet accelerated approach to ensure greater long-term success and cost efficiency and support the GoI in achieving the RDTR targets. The project will adopt a new RDTR prototype to strengthen analytical processes and data collection and Strategic Environmental Assessments (SEAs) to produce climate-resilient and low carbon spatial plans. This will enable the RDTRs to better guide capital investments to priority development areas (and avoid investments/urban sprawl/agriculture in designated forests, coastal and conservation or hazardous areas). Innovatively, the project will support the development of RDTRs for both urban and non-urban areas. The latter will be restrictive in nature to protect critical landscapes and limit development in these areas. The targeted 500 RDTRs will serve as the backbone planning instrument to verify (approve/reject) investment decisions in the OSS. The parallel development of cross-jurisdictional RTR-KSNs covering larger critical landscapes (including conservation areas and national parks spanning over multiple provinces) will be needed to ensure a landscape approach to spatial planning as a tool for addressing land degradation.

17.   **Component 2. Strengthening Land Tenure and Landscape Management. (US$177 million).** This Component, led by ATR/BPN and supported by the Ministry of Home Affairs (MoHA), will enhance land tenure security and clarity of administrative boundaries in target areas to strengthen sustainable land use, social inclusion and local livelihoods. It will support the existing gaps in the implementation of the GoI's Agrarian Reform Program through the mapping and registration of 5.2 million land rights, including communal and customary lands of IPLCs. Activities will include: (i) facilitating security of tenure through PTSL and improving the cadastre and land registry records; (ii) supporting the regularization of communal agricultural lands and customary forests of adat communities; (iii) digitalizing land records and cadastral maps; (iv) piloting a 3-dimensional (3D) cadastre in major urban areas; and (v) supporting administrative boundary setting, including village boundaries through Village Boundary Setting (VBS). The improved security of tenure and clarified administrative boundaries will improve land governance, particularly environmental preservation incentivizing better care of resources, hence making a significant contribution to climate change mitigation. IPLCs, including adat communities, will benefit particularly given their long history without legal rights to land. The project will contribute to closing the gender gap on women's land rights by increasing the percentage of women having their name on legally recognized land records.

18.   **Component 3. Land Information System and Valuation (US$45 million).** This Component, led by ATR/BPN, will finance a next-generation LIS to support land administration and management domains and government revenue generation. The modern LIS will provide base data, centralized repositories of integrated data, technical standards, applications, electronic services, and ICT infrastructure for all public sector land management in Indonesia. The Component will support the conceptualization of a 3D LIS in Indonesia, incorporating the modelling of buildings into the cadastre. The LIS will interlink land records, revenue data, base maps, and geospatial and planning data sets online and provide them as base systems and data to support various functions for multiple uses. Upgraded ICT and LIS will increase availability of land-related services with a particular impact to women and vulnerable groups by enhancing accessibility, providing platforms for feedback and community engagement, and empowering through information. Seamless exchanges of digital data between ATR/BPN, line ministries, and LGs to provide updated and reliable information will develop more trust in GoI, and increase participation by citizens, the private sector and other stakeholders. This Component will also support Indonesia's land and property valuation system by upgrading and roll out of ZNT maps, and land parcel-based value (NBT) maps to selected medium and large size cities for registration fee collection. The inclusion of buildings will be tested and a concept for an advanced single-reference land and property valuation system developed. The increased synergy between ATR/BPN values and LGs' needs will enhance property taxation and more generally facilitate land assembly for infrastructure investments, increasing property market efficiency and transparency, and improving state land management and monetization.

19. **Component 4. Large-Scale Base Maps for Climate Action (US$292 million).** This Component will be implemented by the Geospatial Information Agency (BIG), the national mapping authority of Indonesia. It will support the creation of large-scale base maps, high-resolution images, digital elevation models, and geospatial data infrastructure for standardization, processing, sharing and data exchange to benefit climate change mitigation and adaptation in Indonesia. These digital maps will serve as prerequisite data sets for components 1, 2, and 3 to implement climate-informed spatial planning and all land-based climate change actions, disaster risk modeling and responding and land use monitoring, as well as land valuation. Use of technologies to capture geospatial data will vary per climate and spatial planning needs between rural and forested areas, peat lands and plains, settlements and urban centers, and coastlines. The national geospatial data infrastructure[37] will be upgraded with multi-use and large-scale maps, reflecting climate risks and national economic priorities. Capacity building under this Component will focus on practical use of geospatial data for climate action, open data and access, and private-sector interaction to build geospatial data ecosystems and services. Data and services will be free for value adding entrepreneurship contributing to jobs and growth.

20. **Component 5. Project Management and Capacity Building (US$42 million).** This Component will finance policy, regulatory and procedural assessments and reforms, project management under Project Management Units (PMU) and Project Implementation Units (PIUs), monitoring, coordination, and institutional capacity building. The Component will facilitate improvements to the existing legal and institutional framework to address the main policy challenges of land administration and spatial planning in Indonesia. It is expected that policy changes resulting from Component 5 will incrementally enhance activities under Components 1-4. First, this Component will support assessments on policy reforms that enable a more integrated approach to spatial planning, particularly to address the forest and non-forest divide. Further, this Component will also support the regulatory change needed to enable ATR/BPN to expand from land valuation to property valuation to strengthen the linkages between ATR/BPN's centralized valuation and local level property tax collection. The Component will follow up the One Map Project's piloting of land redistribution in Forest Areas through policy assessments and capacity building for inter-agency coordination between ATR/BPN, MoEF and other governments stakeholders. Other activities will include policy assessments on climate change actions, sustainable growth, fiscal balance and social inclusion. Training and capacity building programs will be provided to key stakeholders to strengthen institutional capacity of the mass property valuation, spatial planning, and multi-purpose cadastre. Finally, this Component finances public awareness campaigns, project outreach, dissemination activities and targeted messaging for women and vulnerable groups.

21. **Geographic scope of the project and sequencing.** Although the project will have a nationwide scope, it will prioritize provinces in line with the GoI's FOLU Net Sink 2030 Program and identified ecoregions[38]. This shift presents a significant scale up from the One Map Project, which focused on ten target provinces in Sumatra, Kalimantan and Java. Furthermore, whereas the One Map Project implementation areas were limited to rural areas, ILASP activities, including spatial planning and land registration, will also cover urban and peri-urban areas. The project will adopt a phased geographic approach focusing on the islands of Kalimantan, Sumatra, Java, Bali in the first phase of implementation. Focusing on western Indonesia is strategic as stronger capacity of LGs will allow for piloting new approaches and modalities developed under ILASP. The second phase will focus on Sulawesi island and NTT/NTB provinces, while the third phase will focus on Maluku and Papua. Although this phased approach will be the guiding reference to select target areas for the overall project, actual selection of target provinces may vary on the strategic context and needs of the activities per sub-component. The more definitive list of target locations as per sub-component will be provided in the Project Operational Manual (POM). Given the size and wide interlinking scope of the project, activity sequencing will be critical

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[37] National geospatial data portal can be accessed online ([link](#)).

[38] The categorization of ecoregions in Indonesia aims to delineate management units by considering similarities in physical, biotic, and social conditions. This classification is designed to facilitate the development of environmental management strategies by policymakers at both the global and regional levels (MoEF Decree no. 8/2018 on Establishment of Ecoregions).

for successful implementation. In the first phase of implementation, large-scale base maps under Component 4 will be the priority, as these provide the foundation for activities under other components (spatial planning, property valuation, etc.). In addition, land registration activities under Component 2 will be scaled up during the first year of the project, to support the GoI's target to complete its cadastre by 2025.

Legal Operational Policies	Triggered?
Projects on International Waterways OP 7.50	No
Projects in Disputed Area OP 7.60	No

Summary of Screening of Environmental and Social Risks and Impacts

22. The overall environmental and social risk rating is Substantial. Environmental and Social Standards (ESS) that are currently relevant for the project include ESS1 (Assessment and Management of Environmental and Social Risks and Impacts); ESS2 (Labor and Working Conditions), ESS3 (Resource Efficiency and Pollution Prevention and Management), ESS4 (Community Health and Safety), ESS5 (Land Acquisition, Restrictions of Land Use and Involuntary Resettlement), ESS6 (Biodiversity Conservation and Sustainable Management of Living Natural Resources), ESS7 (Indigenous Peoples), ESS8 (Cultural Heritage), and ESS10 (Stakeholder Engagement and Information Disclosure). The project locations do not affect international waterways and therefore does not fall within the scope of application of OP 7.5 'Projects on International Waterways' and is not implemented in any disputed areas; thus, OP 7.60 'Projects in Disputed Areas' is also not triggered. The environmental risk rating is substantial. Direct environmental risks associated with the project are minor and mainly stem from the strengthening of ICT infrastructure (Data Center, Local Offices, and Local Governments) under Components 3 and 4. These activities may potentially generate electronic waste through the replacement of outdated ICT hardware. The TA activities will have positive environmental impacts and the overall environmental performance and quality of spatial plans will be improved since the project focuses on enhancing spatial plans and avoiding investments that encroach on designated forests, coastal areas, and conservation areas. However, there is a contextual and indirect downstream risks that could affect implementation of environmental mitigation measures and the achievement of project outcomes, elevating the project risk to substantial. The geographical scope (120 provinces) and number of plans to be supported contrinute to this risk clasification. This contextual and indirect risk is associated with failures to prioritize designated conservation areas, forests, and coasts, which could lead to urban sprawl and infrastructure development that encroach on these natural habitats. Additionally, the failure to consider ecological connectivity can result in the fragmentation of habitats. Neglecting resource efficiency and sustainable use may lead to suboptimal allocation of resources. The social risk rating is Substantial. There is a significant risk that weak community engagement and participation in the planning processes lead to losses of customary tenure rights or access to land and land-based resources as the spatial planning and land management processes may fail to properly recognize or exclude them due to overlapping tenure rights, unclear and erroneous boundaries and political economy issues. The risk is particularly significant for indigenous peoples and other socially excluded and vulnerable groups. Weak participatory processes in spatial planning and land management processes can also exacerbate existing conflicts or land disputes. Therefore, Guidelines for Social Impact Assessment that the ATR/BPN is currently developing with the support of the World Bank will be used to ensure participation of local communities in the planning process including vulnerable groups such as female headed households without secure tenure rights, which will serve as a basis of ESF instruments to developed for the project. There are also risks related to downstream changes in land use that may cause significant

social impacts including access restriction, involuntary displacement, forced eviction, and livelihood loss due to zoning changes in the improved RTRWs and RDTRs. Community members who rely on informal sector jobs within the changed zones may be particularly vulnerable There is also a risk of unequal distribution of benefits of the climate-resilient and low carbon developments where wealthier or more politically connected communities may have greater access to resources and opportunities compared to the poor and marginalized communities. Although the Project is not envisaged to support major infrastructures, the SEA/SH risk is rated moderate on the account of the dispersed and remoteness of the project location with possibility of limited access to Gender-Based Violence (GBV) service providers.
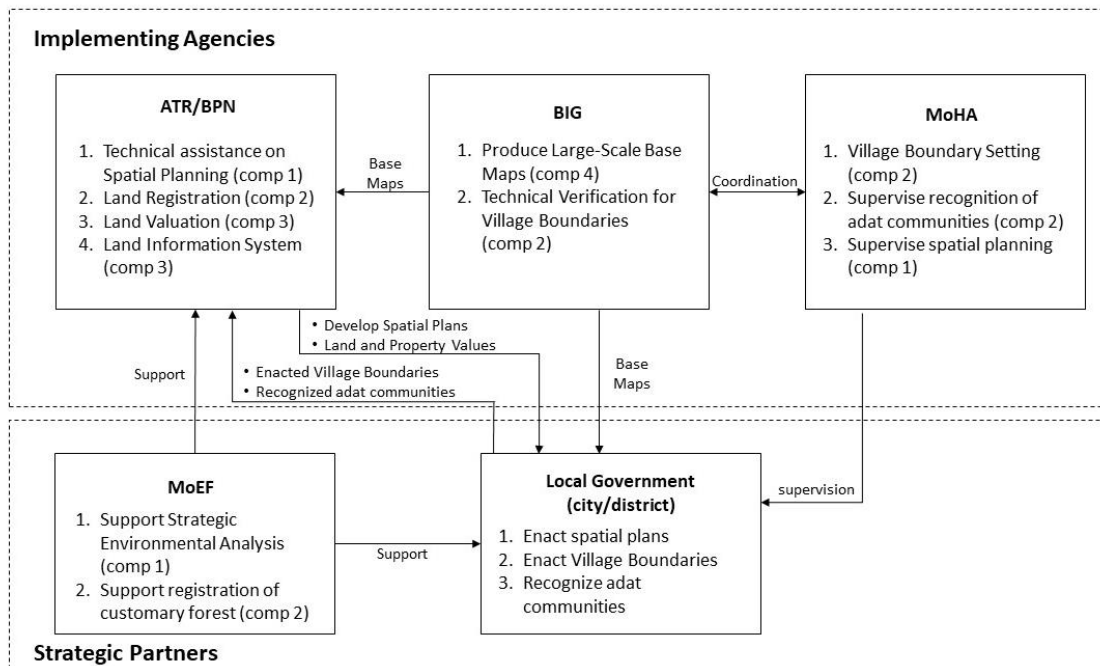
E. Implementation

Institutional and Implementation Arrangements

23.   The ATR/BPN will serve as the executing agency. Co-implementing agencies will be BIG (i.e., large-scale base maps) and MoHA (Village Boundary Setting and adat community recognition), while other strategic line ministries will join as members of a Project Steering Committee (PSC). MoEF will be a critical strategic partner and Steering Committee Member, and will support SEAs for spatial planning and customary forest registration under Components 1 and 2 respectively. Incrementally, MoEF may become a co-implementing agency supported by grant co-financing, contingent on ministerial endorsement and availability of grants. Both are pending at appraisal stage, which coincides with Indonesia's transition to a new government administration. Participating LGs will also be strategic partners in spatial planning, VBS, and adat community recognition. Other PSC Members will be the Coordinating Ministry of Economic Affairs (CMEA), as the responsible agency for the One Map Policy, and the Ministry of Maritime Affairs and Fisheries (MoMAF), which has the mandate for coastal management. The ATR/BPN will house the PMU which will be responsible for the achievement of project objectives and indicators, as well as overseeing and coordinating overall project implementation. To support the PMU, Project Implementation Units (PIU) will be established at the BIG and MoHA. Close coordination between ATR/BPN and sub-national governments, particularly district governments, will be key in project implementation, especially for the implementation of Component 1. LGs are responsible for establishing spatial plans through a Mayor/District Head Decree, while RTR KSNs are developed by ATR/BPN and enacted by Presidential Regulation. For better coordination with the sub-national government, ATR/BPN will be supported by Provincial and District ATR/BPN offices. MoHA will be responsible to promote alignment between project and sub-national government investments and programs.

Figure 2: Roles and mandates of IAs and strategic partners

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