Towards a Sustainable Land Administration and Management System in Myanmar

Land Sector Needs Assessment; Thematic Policy Notes

January 2018

Disclaimer: The findings, interpretations and conclusions expressed herein are those of the expert team/authors and do not necessarily reflect the view of the Union Government of the Republic of Myanmar or the World Bank Group, its Board of Directors or the governments they represent.
Introduction

This policy note on Land Policy and Regulatory Framework in Myanmar is the first of five policy notes prepared under the Land Sector Needs Assessment technical assistance initiative between the World Bank and the Ministry of Agriculture, Livestock and Irrigation, the Ministry of Natural Resources and Environmental Conservation and the General Administration Department of the Ministry of Home Affairs, and the Yangon City Development Committee. It is intended to assess and inform the land related discourse in Myanmar on the status of governance and administration of land with strategic options and recommendations on the way forward. The policy notes aim to promote consensus over priorities under the following five key themes of the land sector: (i) Land Policy and Regulatory Framework; (ii) Forestland Administration and Management; (iii) Land Administration; (iv) Geospatial Infrastructure and Services; and (v) Property Valuation and Taxation.

NOTE: The policy note was subject to a stakeholder workshop of almost 200 participants on October 23-24, 2017 and the policy notes were revised according to the recommendations of the workshop.

Executive Summary

Key elements for effective policy and regulatory framework on land that should be developed are:

- Ensuring proper human and financial resources are dedicated to implementation of the National Land Use Policy and functioning of the National Land Use Council.
- Developing an effective land governance system based on the current legal framework while drafting of new laws to cover: (i) protections for customary users’ tenure rights; (ii) the promotion of diverse agricultural practices such as livestock breeding and aquaculture; (iii) directing land allocation policies to improve land access for marginal farmers and landless households; and (iv) establishing programs such as a model land administration offices with enhanced service delivery.
- Amendment of current land laws to expand the roles of farmers and community members in land use decision making.
- The promotion of the revised community forest instruction, which broadly reinterpreted the forest law to remove restrictions on shifting cultivation to protect customary land rights and to protect in community decision making on land use, allocation and possible conversion to commercial use; including promotion of community forests and...
commercialization for inclusive economic growth at the grassroots level.

- The establishment of an open, multi-stakeholder process for making land governance decisions that includes civil society organizations, farmers’ unions, the private sector and affected citizens, in addition to government officials and other stakeholders.
- Drafting of a new national land law that incorporates the findings from earlier land administration work.
- Developing and analyzing data to effectively monitor and evaluate implementation of polices and to provide an evidentiary basis for further reforms.

Introduction of Land Policy and Regulatory Framework

Land access is a critical concern under the current system. Many forms of property tenure and the claimants to these, including those in industry, farmers, and customary tenure holders such as forest communities, lack proper land use rights, and many rural households do not have access to land at all. The current legal framework has no classification for seasonal or communal uses of land. Communities often use forests to gather firewood or graze livestock, but this land can be reallocated to people outside the community due to the community’s lack of formal security of tenure. Similarly, seasonal cultivation of paddy and fisheries often utilize an area for only part of the year. Broad land governance reform must consider varying uses of land in order to succeed.

The National Land Use Policy (NLUP), which was developed through an open, consultative, multi-stakeholder process, was endorsed by the outgoing President in January 2016. The NLUP was intended to be a living, foundational document to be built upon, with lessons learned from pilot activities incorporated into issue specific land governance policies that can be operationalized and developed over time. This approach would allow for the development of priorities and incremental initiatives. The NLUP established policies to manage, administer, and use the land resources of Myanmar for the purposes of “livelihood improvement of the citizens and sustainable development of the country”.

The objectives of the NLUP include:

- Promote sustainable land use management and protection of cultural heritage areas
- Strengthen land tenure security in urban and rural areas
- Recognize and protect customary land rights and administration
- Develop fair and effective land dispute resolution mechanisms
- Promote people-centered development and participatory decision-making
- Develop a National Land Law

To effectively implement the NLUP the GoM must develop a comprehensive legal and regulatory framework that ensures a land governance system that is fair and inclusive, and supports the full policy cycle, including monitoring and evaluation that guides decision-making. However, at present the legal and institutional frameworks remain highly fragmented.

Land Sector Institutional Structure
The institutional framework is led by the Ministry of Agriculture, Livestock, and Irrigation (MOALI) and its Department for Agricultural Land Management Statistics (DALMS). The General Administration Department of the Ministry of Home Affairs (MOHA) provides land leases (and other less common urban titles) to town and village lands, and it chairs a number of land-related committees. The Survey Department of the Ministry of Natural Resources and Environmental Conservation (MONREC) produces topographic maps in a range of map scales and supports the first and second order geodetic network of the country. The Forestry Department of MONREC issues rights to forest land in the form of Community Forest Certificates (30 years) and Concessions. Finally, City Development Committees provide land services in Myanmar’s 3 main cities instead of GAD and DALMS.

The NLUP provides for the restructuring of the institutional framework. The National Land Use Council (NLUC) was established in January of 2018 with a strong mandate to support implementation of the NLUP. Its membership includes representatives from relevant ministries and public-sector entities, but lacks the participation of civil society, agricultural organizations, ethnic minority groups and the private sector as envisioned by the NLUP. Regional and local committees are to be established under the NLUC, including: regional/State Land Use Committees; Self-administered Zone Land Use Committees, District Land Use Committees, Township Land Use Committees and Village-tract/Ward Land Use Committees.

Policy and Legal Framework on Land

Several key laws that affect agricultural land use are:

- **The Farmland Law of 2012** revived landholder rights to inherit and transfer the right of use and occupancy of land through Land Use Certificates. Gaps in the legislation include: non-representation of farmers in the farmland management bodies; restrictions on crop choice and fallowing practices; and restrictions on livestock breeding. These restrictions combined with constraining land use classifications deter smallholder agricultural productivity, as many farmers are unable to engage in aquaculture or grow a variety of crops that would best support their livelihoods.

- **The Vacant, Fallow, and Virgin Land (VFV) Law of 2012** legalized land concessions of “unused” land, which are often large grants given to investors or companies for commercial cultivation. The law also allows small-scale concessions to smallholder farmers, though these latter concessions are rare. Despite its potential, the VFV Law has not achieved its stated purpose of increasing productivity; cultivation of VFV land amounts to only 14.9% of the total land allocated under the law. Furthermore, large-scale land acquisitions that are more characteristic of this law’s implementation have led to conflicts with local communities that use the land for non-traditional farming purposes.

- **Village Development Plans (VDPs)** have been developed with the support of the Department of Rural Development (DRD) of MOALI. It is an example of participatory policymaking: the planning process includes many villagers voicing ideas of how to work with MOALI to improve the community through common area tenure security and agricultural development. The VDPs partially address past mismanagement in which village common lands were often lost in processes lacking in transparency and community participation.
**Recommendations**

The following recommendations have been developed with this goal in mind:

- **Support implementation of the National Land Use Policy (NLUP).** The NLUP sets a comprehensive framework for reforming land administration practices. Its implementation should be supported through provision of adequate human and financial resources to the National Land Use Council (NLUC). NLUC membership should be broadened to include civil society, agricultural organizations, ethnic minority groups and the private sector. The guiding principles of sustainable use of land, transparency and accountability of land administration practices, citizen participation, protection of property rights and promotion of international good practice should be applied throughout all initiatives.

- **Use the current legal framework to implement new land policies.** Effective reform of legal frameworks, which includes public consultation and use of development of data-driven evidence, takes time. Especially when replacing a fragmented legal framework with a single land law. In practice, much can be done with the existing primary legislation by making changes to the implementing rules and guidelines, or changing emphasis of implementation. Examples include:
  
  - Use of the **VFV Law** to improve land access to poor and marginal groups, farmers with small land holdings, and landless households
  - Issuance of Ministry instructions to clarify the rights of farmers under the **Farmland Law** and to address unnecessary restrictions
  - Establishment of service delivery models such as a Model Land Offices to make land administrations services more effective and efficient

- **Amend outdated laws to expand the roles of farmers and communities in land use.** Current land laws, such as the Farmland Law or the VFV Law, prohibit farmers from making decisions about crop choice or growth cycles, which puts them at risk of losing their land. As they are currently enforced, these laws limit farmers rather than protect them. Minor amendments to these laws that establish greater farmer freedoms and clarify the farming rights of women could provide critical land tenure security in the interim period before a comprehensive land law is written, while also providing foundational elements for the future land law. Amendments to operational guidelines of the **Land Acquisition Act** could allow for more community involvement in decision-making and better land tenure protections, such as stronger regulatory requirements for notice, comment and appeal procedures in proposed land acquisitions.

- **Establish an open, multi-stakeholder process for drafting the new Land Law.** Any successful land governance framework must be developed by a broad and inclusive group of stakeholders and the administration that supports this framework should continue to maintain an open, consultative process. This multi-stakeholder engagement should ensure that input is received from farmers’ unions, civil society organizations, communities that will be affected by land laws and policies, representatives of ethnic nationalities, women and other vulnerable groups. Without a truly inclusive process, land governance decisions, particularly regarding the drafting of the Land Law, will be questioned and challenged, resulting in less efficiency and trust.
• **Develop a comprehensive Land Law.** Eventually, drawing upon findings from both the implementation of programs based on the current legal framework and the process of issuing clarifying instructions and land law amendments in the near term, a comprehensive land law should be planned and drafted through an open, multi-stakeholder, consultative process. Such a comprehensive law can follow the NLUP directives and provide a broad framework to safeguard the initial steps taken to ensure land tenure security for smallholder farmers, land access for marginal farmers and landless families, the customary land rights of ethnic nationalities, and the protection of women’s land rights in Myanmar.

• **Promote community forest instruction to protect customary land rights.** Under the revised *Community Forest Instruction (CFI)* of 2016, the *Forest Law* has been interpreted to allow for greater protections by customary users of forestland. While the Forest Law was previously interpreted to forbid shifting cultivation and gardening, the newly revised CFI lifted these bans through a changed policy rather than an amendment to the law itself. This newly-revised CFI should be promoted by the concerned ministries and departments at the Union and State and Region levels to ensure that communities understand and can take advantage of the greater protections accorded to community forest users. It is of equal importance that the new CFI does not restrict the use of communal lands for commercial purposes upon need and will, to ensure communities can support local livelihoods and inclusive economic growth at the grassroots level for forest dependent communities.
Introduction

This policy note on Forestland Administration and Management in Myanmar is the second of five policy notes prepared under the Land Sector Needs Assessment technical assistance initiative between the World Bank and the Ministry of Agriculture, Livestock and Irrigation, the Ministry of Natural Resources and Environmental Conservation and the General Administration Department of the Ministry of Home Affairs, and the Yangon City Development Committee. It is intended to assess and inform the land related discourse in Myanmar on the status of governance and administration of land with strategic options and recommendations on the way forward. The policy notes aim to promote consensus over priorities under the following five key themes of the land sector: (i) Land Policy and Regulatory Framework; (ii) Forestland Administration and Management; (iii) Land Administration; (iv) Geospatial Infrastructure and Services; and (v) Property Valuation and Taxation.

Executive Summary

The protected nature of the forest sector and outdated administrative systems and procedures result in competing claims on land and forest use, which pose a considerable challenge to Myanmar’s forestland policy and regulatory framework.

Myanmar’s forest policy is gradually shifting from promoting the trade of forest products to balancing sustainable production of forest products along with addressing tenure rights, biodiversity, and climate change. This is reflected in the Myanmar’s biodiversity strategy and action plans, the environment policy, REDD+ action plans, Myanmar Investment Law (2016), revisions to the Community Forest Instructions (2016), and most recently, in the commitments made at the Panglong Peace Conference (2017). The Forest Law recognizes tenure rights to forests and allows reclassification of forest lands to accommodate actual use, but implementation is pending.

The following recommendations are for building a robust forestland administration and management system, to provide comprehensive tenure security and socio-economic benefits:

- **Fully endorse the National Land Use Policy** (NLUP), in particular those provisions related to forestland areas and recognition of communal and customary tenure, by preparing and implementing and accelerating commitments made at the Panglong Peace Conference.
- **Proposed revisions to the Forest Law and their implementation guidelines** need to start as soon as possible with broad stakeholder participation. The legal drafting of these important documents...
needs to be harmonized and coordinated in a timely manner. This includes updating and improving regulatory processes, procedures, and oversight mechanisms for forestland administration and management, and enforce Forest Law implementation rules and guidelines.

- **Emphasize the rights of all stakeholders**, in particular recognize customary tenure rights to forestlands held by traditional forest users and forest dependent communities, in revised arrangements for cost-effective administration and a reliable grievance redressal mechanism.
- **Prepare an Action Plan to implement Community Forestry Instructions** (2016) and implement it in partnership with civil society and local communities.
- Implement **decentralized forest tenure governance arrangements** to include appropriate training and capacity building programs.
- Develop reliable **forestland data and link it to national land information system(s)** and geoportal, allowing public access.
- **Set targets for forestland use** and periodically track progress, reporting on implementation, challenges, and best practices and support the benchmarking of priority forestland governance indicators for monitoring.

**Introduction: Forestland Administration and Management**

Around one-third of the land area in Myanmar is classified as forest land and is under the administration of the Ministry of Natural Resources and Environmental Conservation (MONREC) of which a significant portion is accessed and used by forest-dependent communities for long. Myanmar’s forestland administration and management (comprising reserved forest, protected public forest areas, protected wildlife areas, and botanical gardens) have long suffered due to political complexities, outdated policies and implementation rules and guidelines, deficient infrastructure, and weak planning and institutional capacities. 1 This undermines its bountiful natural endowments and immense forest potential, perpetuates poverty for many rural and upland communities, and prevents transparent and responsible private investments and sustainable development of forest resources. It also undermines the recognition of legitimate customary land tenure claims. 2 This note focuses on tenure issues in Forests and Forest Law and related instruments vis-à-vis opportunities for smallholders, forest-dependent and local communities, and other vulnerable groups. It is based on an understanding that forestland reforms will have a significant impact on better land

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1 The Forestry Department of the Ministry of Natural Resources and Environmental Conservation (MONREC) categorizes forests based on use, protection, and production value. The Forest Law sets up a framework for classifying lands directly related to the forest sector, which link to and overlap with land classifications in other highly relevant laws, such as the Farmland and Vacant, Fallow and Virgin Lands Management Laws. (1) **Reserved Forest**: Lands set aside primarily for the commercial production of forest products, though they may also serve other important social or environmental services. These lands fall within the broader Forest Land definition and are considered part of the Permanent Forest Estate. (Articles 2 & 4). (2) **Protected Public Forest**: Lands set aside primarily for environmental conservation purposes, though they may also be used for sustainable production of forest products. These lands fall within the broader Forest Land definition and are considered part of the Permanent Forest Estate. (Articles 2 & 5). (3) **Forest Land**: Land including Reserved Forest and Protected Public Forest. This land is also commonly referred to as the Permanent Forest Estate. Forest Land does not include land at the disposal of the Union Government, otherwise referred to as Virgin Land, Unclassified Forest or Public Forest. (Article 2). (4) **Land at the disposal of the (Union) Government**: Any land other than Forest Land, with the exception of land in which a government department, organization or any person has acquired a right of cultivation, right of possession, right of use and occupancy, beneficial enjoyment, heritable right or transferable right under any existing law. This land is also commonly referred to as Vacant, Fallow and Virgin Land, or Wasteland. (Article 2). Refer to Forest Law (1992) Tenure Opportunities Analysis and Quick Reference Guide, USAID (June 2017).

2 All ethnic groups have land under customary tenure arrangements mostly in the uplands, where shifting cultivation has historically prevailed, and what is known as forestland areas. Customary tenure pertains to both communal land (e.g. communally tenured shifting cultivation land) and private land claimed by individuals/families/clans. There are cases where all land inside the village territory is subject to individual or family claims, but where this land is still not alienated to outsiders. It is important to note that customary tenure falls over forest land, vacant fallow and virgin land, agricultural land, etc. There is no separate land classification for customary tenure. Taungya (shifting cultivation land) is mentioned as a subclass in government’s land classification class but it is unclear how specific boundaries are measured.
administration and management in Myanmar and strategic implementation of existing policies and laws to promote public and private investment in forestry, agriculture, and livelihood sustainability.

Policy and Legal Framework

The forest sector is becoming more sensitive to multiple forest use as demonstrated by Myanmar’s biodiversity strategy and action plans, the environment policy, REDD+ action plans, revisions to the Community Forest Instructions (2016), and most recently, in the commitments made at the Panglong Peace Conference (2017) that provide an opportunity for tenure reforms. The 1992 Forest Law supports conservation, sustainable forestry, and socio-economic benefits. It decentralizes forest management to some degree and encourages private sector and community participation in forest management. Sixty-nine districts have prepared 10-year forest management plans according to the new approach. Access and use rights for various forestland areas and zones are also identified by these instruments and in an array of supplemental regulations, all of which recognize customary practices and traditional arrangements. The recent adoption of the NLUP, biodiversity action plans, Myanmar Investment Law, and related implementation guidelines could have a significant impact in building a robust forestland administration and management system. But without adequate implementation support, these policies and laws will remain insufficient for building a better forestland administration and management system. Community Forestry (CF) can in some circumstances be a good interim measure to establish some customary land tenure security but fails as a long term and more comprehensive measure for better managing forestland areas and in recognizing customary tenure systems more broadly. Forest management needs to be improved urgently, in terms of environmental conservation, as large forest areas have been and are being converted to rubber and palm oil plantations, and many mangrove forests to aquaculture ponds. As a first step, it is necessary to update the Forest Policy, Forest Law and its implementing guidelines/rules, in line with the NLUP.

Challenges and Opportunities

Insufficient economic and social returns and growing concerns about State land concessions (or land-use permits) for forestlands. Commercially important forests in Myanmar have been managed under the Myanmar Selection System (MSS) by the Forest Department’s Myanmar Timber Enterprises (MTE). The government is working with the European Union to implement the Forest Law Enforcement, Governance and Trade (FLEGT) Program and guidelines. Sustained work on FLEGT measures should establish a legal, transparent, and sustainable source of timber and help tackle forestland conversion to agricultural land producing rubber, coffee, cocoa, and other crops. Positively, the National Forestry Master Plan (NFMP) and district-wide forest management plans have been formulated to ensure the supply of tangible and intangible benefits from forests for present and future generations. Additionally, regulations and disclosure requirements under the Myanmar Investment Rules (MIR) mandate land-use permits, but a mechanism for the administrative review of processes to enforce provisions and compliance is lacking. The policy of granting land-use permits for forest estates has had limited success because of the perceived low tenure security underlying the arrangements. As a result, investors have been reluctant to invest in forest lands other than aiming for short-term benefits.

Protection and recognition of long-term forestland use lacking. There is no formal system to secure tenure for the generations of forestland use by local communities. However, there are different pathways

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3 Historically forest land management has focused on mobilizing revenues from the forests as a State-owned asset.
in the existing Forest Law for recognition of land resource tenure rights such as smallholder/community commercial plantation, village firewood plantation, and reclassification of Forest Land and registration of rights under Farmland Law. Currently, most taungya and grazing land are not mapped or registered. In many upland areas, land classification is further complicated by internal conflict between the government and armed ethnic groups. The provisions of NLUP and certain provisions in the Farmland Law of 2012 (and to an extent, Vacant, Fallow and Virgin Lands Law of 2012) allow a way forward to protect and recognize forestland rights or rights over degraded forestland, some of which should come under plantation forest arrangements (held by private sector or communities). Their implementation demands not only political support but also active participation of different ministries and agencies.

**Objective assessment of forestland tenure and forest governance hindered by lack of quality data.** Myanmar lacks a unified and complete land record and cadastral. Government-maintained (DALMS/MOALI) deeds registry, revenue records and cadastral maps are not up-to-date and do not focus on forest land parcels. Thus, available information is often outdated, ad hoc, or conflicting. Major data discrepancies in forestland use (trade data including wood products) make in-depth analysis difficult. This has affected the government’s ability to respond to grievances and discontent over State land leases on forests. A large backlog in formal delineation of forest and non-forest land adds to the challenges in recording relevant data. The government’s recent focus on One Map (and the National Spatial Data Infrastructure, NSDI) is encouraging in terms of unifying and standardizing geospatial information to a common platform and contact point.

**Decentralized forest administration and management implementation remain constrained.** The seemingly centralized forest administration and management system is fragmented and characterized by opaque decision-making procedures and weak governance. Decentralization to state and regional levels has been limited, hampering engagement in forest land management. A successful forestland administration and management system requires clarity over the roles, mandates, and duties of central, state, regional, and other local governments and groups, and adoption of more bottom-up processes, greater use of inclusive, multi-stakeholder processes at the local level. It also requires better compliance of the interim measures and peace process agreements.

**Available evidence shows that forest land and resource conflicts are becoming a source of discontent in Myanmar and there are no good mechanisms for resolving them.** It is hard enough to find long-term strategies that might mitigate future conflicts; it is even harder to deal with existing ones that have the potential to escalate out of control. In such cases, the government must make clear decisions about who will be given access and user rights, but those decisions must be based on a fair and transparent process. Land disputes may be extraordinarily complicated, but allowing them to fester only makes them worse.

**Successes with community forestry prove socioeconomic benefits and tenure protection are feasible.** Recent community forestry experiences show that despite a weak regulatory environment and field level challenges, participatory efforts help to scale-up people’s access to and use of forest resources and the recognition of their tenure rights. Drawing from experiences and lessons learned, the government revised the Community Forestry Instructions in 2016, shifting focus from subsistence to balance between sustainable commercial production and other community interests, including those that are cultural and environmental related. This could help to: (i) reduce poverty; (ii) reduce overuse of forest products; and (iii) empower communities to be more proactive in forest management. Implementation demands context-specific management plans. Community forestry commercialization depends on collaboration with public and private sector partners.
Recommendations

Myanmar is undergoing multiple political-social-economic transitions that are creating immense opportunities for change. Establishing secure arrangements for forestland administration and reliable land-use plans are fundamental to their sustainable management. This demands political commitment and community engagement in land-use planning and allocation of rights of secure tenure. Given the government’s commitment to improve land governance, a flexible approach and interpretation of existing legal tools will help utilize the opportunities presented by the existing policy and legal instruments and the peace process and recognition of legitimate land tenure rights.

Develop action plans and guidelines for implementing the NLUP and Forest Law. The NLUP provides a platform for implementing transparent and sustainable forest tenure arrangements with accompanying land-use plans and capacity building on a national scale. Customary tenure includes forestland rights to family woodlots, community managed watershed forests, and community conserved areas. These forest tenure rights should be recognized in accordance to the NLUP in land use planning, boundary demarcation, and forest administration. Customary tenure must be integrated into the Forest Law and other forest sector laws, rules, and regulations. The Forest Law provides some flexibility to streamline procedures and processes to support responsible investments in forestland (commercial tenure) and formal recognition of land resource tenure rights, and delegation of authority to the local level in the forest sector. Ongoing discussions to prepare an action plan and guidelines for implementing NLUP and Forest Law should be accelerated with adequate technical and financial resources.

Recognize and gradually formalize customary rights and use and existing land tenure agreements. A range of customary rights could be issued to protect the land rights of traditional land users (and customary tenure holders). Within customary tenure systems practiced by ethnic nationalities in Myanmar, agriculture, agroforestry, and forests are managed in an integrated system within village land. Where customary tenure systems are still practiced and the institutions to manage them and enforce management rules are strong, forests can be incorporated into recognition of customary tenure land.

In other areas, community forest tenure and customary tenure can be recognized by the community forestry instruction. The Protection of Wildlife, Natural Plants, and Protected Areas law and rules can be easily amended to recognize conserved areas that are managed by communities, as planned in Target 11 and 5 in the National Biodiversity Strategy and Action Plan. Grazing rights and subsistence collection of non-timber forest products could be recognized by zoning within the permanent forest estate and buffer zones in protected areas. Village firewood plantations and forest plantations are two other mechanisms to grant use rights. This should include, as part of NLUP implementation, the development of a policy, formal regulations, and guidelines on the recognition and protection of customary tenure.

Develop reliable forestland data and link it to national land information system and geoportal, allowing public access. Data on land concessions and leases (and related land-use permits) should be gathered and reviewed systematically and transparently. The ongoing pilot work on a forestland database provides a way forward. Clear and approved standards and procedures and modern technology are needed. Eventually, forestland data should be integrated to a unified land registry and cadaster maps in Myanmar. Access to nationally consistent and complete geospatial data and land records would substantially improve land governance as well as the use and protection of forest resources.

Support development of local dispute resolution mechanisms. Many of the overwhelming number of land conflict cases brought to the attention of the government and its corresponding Regional/State committees concern forestland and customary tenure areas too. Unclear and insecure forest tenure is often identified as an indirect driver of land disputes. Such cases cannot be resolved based on current law and regulations only as they also relate to customary practices and local traditions in the use of forest
resources. In addressing such challenges and in preparation of future land registration, the work of the existing committees that relate to forestland and customary tenure needs to be strengthened and/or complemented by mechanisms of Alternative Dispute Resolution (ADR). Alternatively, Government of Myanmar could promote the setting up of special land courts. The procedures should include non-state actors as mediators for resolution of disputes and should consider customary leaders and community elders. The draft of the new land related legislations should include support for the development of locally based dispute resolution mechanisms to address the land conflict. An emphasis on social justice is essential in resolving forestland related disputes too. Such alternative mechanisms should be established by law (for example based on the Access to Justice model applied in several Southeast Asian countries). These mechanisms should be made as legally enforceable and realistic. Communities marked by land conflicts would be priority areas for provisional mapping and interim protection. Elimination of legal and procedural overlaps and clear institutional arrangements and mandates along with legitimacy (downward accountability), low-cost, and timeliness of adjudication of tenure disputes are central to effectiveness of a new legislation.

**Improve land classification and administrative area demarcation.** Forestland tenure issues often relate to community boundaries (mapped and delineated by communities, shifting cultivation areas) rather than administrative demarcations based on land classifications, especially in state reserve forest areas and where customary tenure arrangements dominate. The government should develop criteria for creating village administrative boundaries based on current land use and methods to reconcile differences between current land use and official records. This will aid better management of forestland and informally enhance tenure security among forest-dependent communities.

**Facilitate better implementation of existing procedures/guidelines and improved land management.** In line with the new Investment Law and related instruments, updated procedures should be developed and regulations enacted on pre-concession criteria in accordance with provisions enshrined in the Forest Policy and post-concession management. These include steps for compulsory land conversion measures and consideration of: (i) a legally binding provision for appropriate public disclosures, including compliance with Free, Prior and Informed Consent (FPIC) principles; and (ii) periodic review and compliance by a central, independent inter-ministerial mechanism with powers to enforce sanctions in case of deviation. A moratorium on new land-use permits for forestlands could help compile an up-to-date, comprehensive, and transparent inventory for existing land-use permits/concessions. In addition, measures are needed to build the capacity of government agencies, review permits/concession applications, monitor those granted, involve stakeholders in management and benefit sharing, and improve overall land governance.

**Upscale community forestry and forest user group approaches.** New opportunities for community forestry enterprise will strengthen forestland administration in two ways. First, it will increase local incomes and government revenues, reducing poverty. Second, the measure will enlist the help of the private sector to work with rural communities. The financial incentive in projects like community forestry (CF) will encourage local communities to manage and restore forests. Procedures to grant community forestry certificates efficiently on both on PFE land and on land under other classifications should be put

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4 Locally managed, community-based resolution mechanisms are generally simple, fast, culturally relevant, and context-appropriate. Local leaders remain the closest form of authority for most landholders and are the first contact for most government concerns including land and access to and use of forest resources. NLUP includes provisions for implementing such a dispute-resolution arrangement. However, it is currently contested in Parliament and awaits final decision.

5 As per current provisions, forest areas can be opened to community grazing after trees reach a certain age.

6 One option is to revive Annual Allowable Cut system. However, Myanmar has large tracts of degraded forestland, most of which should come under plantation forest arrangements (either by private sector or communities).
in place that will enable more effective coordination between different land-related agencies (e.g., Department of Agricultural Land Management and Statistics of MoALI, General Administration Department, and Forest Department). Joint capacity building for local staff in multiple departments may be necessary to enable officials working at subnational levels to effectively implement the CF Procedures.

**Strengthening forest reforms and the peace process.** The peace process and resolutions adopted at the Panglong Peace Conference (May 2017) have significant implications for land management, particularly the extent of legislative revision likely for Forest Policy in general and comprehensive statutory recognition of customary tenure. This acknowledges the diversity of customary forest practices in the country. Thus, the peace process should be adopted as another vehicle for promoting recognition of actual use and users of land and forests, be it customary, communal, or individual. In addition, the measures for improving tenure security of communities in conflict areas should be developed and put in place on existing mechanisms, that would catalyze the ongoing peace process.

**Improve local capacities of government and non-government actors both at national and sub-national levels.** Progressive steps are needed to develop capacity and facilitate changes at all levels in forestland administration and management are needed. This includes ability of the local authorities in reaching out to various actors, within and beyond government, to foster public support and to build confidence in the forest management process, and establishing safety nets to protect the rights of forest-dependent communities and poorer households. It will also send the right signals, reassure citizens (particularly disadvantaged groups), about the commitment of the Government and its intention to be more responsive to issues and priorities at the local level.

**Support benchmarking of priority forestland governance indicators for monitoring.** This will assess and prioritize indicators for national-level monitoring. Indicators should track progress in implementing forestland-governance and achieving the country’s priority development goals. This process should be linked to the implementation of the NLUP and programs like Reducing Emissions from Deforestation and Forest Degradation (REDD+) and FLEGT.
Introduction

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Executive Summary

Many kinds of land tenure are not formally recognized, certified or registered. Myanmar’s citizens have possessed, used and nurtured these lands over the long term but without formal documents and their land rights are not legally secure causing fundamental vulnerability.

Land sector services are mostly provided by DALMS, GAD and the Survey Department in addition to the three City Development Committees (CDCs). Their activities are usually not well coordinated and their land records are not shared, exchanged or harmonized. Land administration must serve all varieties of land tenures and all people, both rural and urban. DALMS takes most of the responsibility for land services and currently has inadequate human resources dedicated to land administration functions, and its services cover mainly only agricultural lands. The land administration system in Myanmar needs to be reformed to focus on completing records and maps, and providing feasible land administration services.

There is a concern over weaknesses in current land services. The land records are in poor condition and people often choose not to register land transactions. The limited coverage and lack of updating of land records compromises the goal of reliable land services and avoidance of land disputes. Land use certificates (LUC) contain many errors and there are inconsistencies with other land records. Many Kwin maps must be updated and many LUCs must be replaced. Awareness and knowledge regarding land laws,
land policy and land regulations by government staff, business, civil society and professionals is not complete nor consistent and contributes to disputes, conflict and confusion.

Much improvement can be achieved in the short and medium terms even before there are new land related laws and a new land policy. **There is no need to wait.** However, there is a **large task ahead** in order to restore confidence in land services and to rejuvenate the land records. This will require leadership and patience by the Government and investment in a large incremental cost. With proper planning, the roll-out across all Townships for the rejuvenation of records and services can be realized on a priority area basis over a **10-year period.** Once the land records are re-established, the cost and effort in maintenance and provision of land services will be lower. There are many **civil society organisations** of good will and capacity that are ready to cooperate with the Government in order to rectify land records and strengthen the land services.

**Recommended actions** for improved land administration services are:

- **A unified land service** and system for all land tenures and inclusive to serve all people is called for and to be fair and efficient and to avoid overlap and gaps. This land service and land system must be able to accommodate expected new land tenure types including customary tenure.

- **The reform of land services can start immediately and does not need to wait for further law reform and land policy reform.** An initial group of DALMS Township Offices should be established and operated as “**model land offices**” with a focus on the delivery of good quality land administration services to DALMS’ clients. This will result in; the re-organisation and re-engineering of DALMS programs at the Township level, including a new work program for all land tenure functions; capacity building of staff; new surveys and mapping; the conversion of paper records to digital form for easier update, safer keeping and efficient operations; and, strengthening of the DALMS Training Centre (CLRDTC). The new technology methods and learning packages that were developed of the UN-HABITAT’s Land Administration and Management Project (LAMP) can be used to fast track the start of operations in the model land offices.

- **Conversion of paper records to a digitized format.** A large initial investment will be required at the start of the reforms in each Township and will consist of the following: the conversion of all paper records to a digital format, new land surveys, the updating of maps and registers, establishing a suitable building and record storage facility and forming a service-oriented office.

- **The existing situation of land tax assessment** where the cost is many times the actual revenue and where the process demands large human resources should be changed by re-engineering the DALMS tax assessment process itself and capacity building the staff. The stakeholders expect that the basis of the property tax should be fair and be based on land value or property value.

- **The crop statistics function** should be separated from land administration work and preferably moved to separate administrative unit to DALMS. Land administration system completion development of sustainable land administration services requires a targeted focus and attendance.

- **Future land and geospatial system in Myanmar requires a common geodetic base and standards.** The existing situation shows that the topographic maps (Survey Department), the forestry and natural resource maps (MonREC) and the Cadastral Maps (DALMS & CDCs) are on 3 different coordinate systems (MM2000; WGS84; local system respectively).

- **Partnerships with civil society in Information, Education and Communication programs (IEC) should be part of a future land program.** The model land office concept has two parts; to
strengthen the service supply side (i.e. the DALMS institutional capacity) and secondly, to increase participation of the people and business as well as government (the demand side). IEC programs must be implemented and the programs would require a strong support from civil society.

- **A functional review of the land administration institutions in Myanmar should be performed.** The goal should be to develop an institutional development/reform plan with the objective of creating sustainable land administration institutions and services. Consideration should be given to **integrating the land functions** of the Departments of GAD, DALMS and the Survey Department (geodetic surveying functions and also possibly topographic mapping function) and possibly the creation of a National Land Agency. The realisation of key benefits should drive the model selected; viz. (i) government staff have much better access to all land related records and information; (ii) greater consistency and reliability in land records (iii) better efficiency in service delivery; and, (iv) higher transparency and accountability.

**Challenges with Land Administration**

Myanmar has moved to a market-led economy with the 2008 Constitution that stipulates that land is owned by the State, but citizens have property rights. This required consequential adjustments needed for the governance of resources and land administration services. The former colonial system of land administration was established in rural areas to support the expansion of orderly farming but it was not aimed at securing the tenure of farmers. Further, the system has not been well maintained after the end of World War II. For these reasons the land administration system was not ready for the enormous pressures placed upon it after the emergence of a land market following the 2008 Constitution.

Attempting improvement, about 8 million LUCs were issued to farmers in 2013-14, but based on largely outdated Kwin maps. Consequently, many LUCs need to be replaced but there are no procedures for renewal or updating. More generally, DALMS the land administration system have great difficulty meeting the demands and expectations of the public. The expansion of towns and villages over the past 50 years has created informal settlements outside the legal. The unclear legal situation in these settlements areas severely hampers the issuance of grant leases (i.e. the urban land use rights) by GAD in rural villages. Countrywide in town land, the surveys and block maps have not been properly maintained and the deed registers for updating ownership of town land plots are rarely used.

News on alleged land grabbing are frequent and widespread countrywide. Well-kept and up-to-date land records should provide a foundation for resolving these and other disputes, but in fact many records are dilapidated and lost, and the existing records are often unhelpful. As the direct consequence of the issues with land records, government staff spends a lot of time working on solving individual cases which results in less time for routine work. The public is not satisfied with the land services and many people have chosen to avoid using them. This results in further deterioration of the reliability of the records and opportunities for malpractices.

**Land Governance must be people-centered and its performance must be routinely measured, reported and continually improved.**
Figure 1: Land-to-People Relationships are at the Heart of the Land Administration System

Land administration services should support all types of land tenure and should be accessible for all people, including women, minors and the disadvantaged. Challenges in Myanmar include customary tenure, informal settlements and un-surveyed areas where people do not have access to formal security of tenure. Also, use rights to public lands such as for grazing land, water access and forest rights are not well established or clarified.

Institutional Framework for Land Administration

DALMS is responsible for the majority of land administration services, as shown in the table below. The main problem is that DALMS has inadequate resources for providing its 8 land administration services. Also, its mandate does not cover all land tenures. For example, the Forestry Department issues rights to forest land in the form of Community Forest Certificates (30 years) and Concessions. And, the GAD provides initial and updated grant land leases (and other less common urban titles) to town and village lands and chairs a number of key land-related committees. And, CDCs provide land services in Myanmar’s 3 main cities. To jumpstart the rejuvenation of land administration in Myanmar, one Land Register should be established at the Township level to record all rights in all tenures.

Table 1: Land Administration Services of DALMS

<table>
<thead>
<tr>
<th>No</th>
<th>Land Administration Services</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Updating of Kwin Maps to show farm holdings</td>
</tr>
<tr>
<td>2</td>
<td>Maintain the Farmland Register (Form 5)</td>
</tr>
<tr>
<td>3</td>
<td>Deed Registration</td>
</tr>
<tr>
<td>4</td>
<td>Creation of Village Block Maps of Land Plots</td>
</tr>
<tr>
<td>5</td>
<td>Updating of Block maps in towns and cities</td>
</tr>
<tr>
<td>6</td>
<td>Maintaining Urban Register of Grant Leases</td>
</tr>
<tr>
<td>7</td>
<td>Recording other land tenures for agricultural land</td>
</tr>
<tr>
<td>8</td>
<td>Maintaining Third Order Survey Control Network</td>
</tr>
</tbody>
</table>
The farmland Kwin maps are the basis for settlement planning and management, land tax collection, crop statistic data compilation and land rights allocation and mutation. These maps have deteriorated over many decades. It is estimated that at least 80% of land must be re-surveyed. In addition, there are agricultural areas that are not yet covered by Kwin maps, although permanent agriculture has persisted for many years. Together there is a large amount of field and office work that will be needed to make the maps up-to-date again. The method should be based on modern digital technology so that future maintenance of the maps will require less labor at lower cost and will be achieved in less time.

As mentioned about **8 million LUCs on farmlands were issued in 2013-14 by SLRD (DALMS), but they are based on outdated data and need to be replaced**. The renewal of LUCs needs to be done systematically parcel by parcel and must be accompanied by information and education and communication to the farmers, CSOs and government staff. The proposed changes to LUC would have to be advertised locally in case objections are raised.

**Deed registration is barely operational in towns and has not yet started in farmlands**. Grant leases and their registration to the deed registry in town land have been out-of-date for many yearsThe process of the deed registration system needs to be streamlined and in the longer term should be replaced by a feasible new land registry and procedures. The current process requires several visits to GAD and DALMS offices, as well as the Department of Finance, and is unfeasible. For farmlands, deed registration operation has not yet started, resulting in many transactions not being captured formally. A new affordable and sustainable land registration service is needed.

**The transfer tax on property should be changed**. The tax rate is as high as 30 percent on town land, which results to a disincentive for registering transactions. It is suggested to eliminate the tax or reduce the tax to no more than 2 percent, and to grant amnesty in order to allow past informal transactions to be registered. More information can be found in the land taxation policy note.

**Figure 3: Estimate of Number of Urban Block Maps in the Whole Country for Various Land Types**

Villages have never been surveyed for land tenure purposes.

Systematic process will be required for the issuance of grant land leases in villages About 45,000 block maps in rural villages need to be created.

*Note: a suitable survey technique should be used rather than expensive land surveys lest the cost and time for this work becomes too much compared to the benefits and the budget.*
For Townland outside Myanmar’s 3 largest cities, DALMS is responsible for land surveys and preparation and updating of the block maps (usually on a scale of 64 inches to the mile or 1:990). An example is shown to the right. The block map is required to accompany application for the initial grant lease and each registration of a transaction on a grant lease.

The reality is that there are many problems with the quality and completeness of the block maps and very few existing DALMS staff have ever practiced creating them. This is due to: (i) informal expansion of the townland to agricultural land without any planning and block map surveys; (ii) informal sub-divisions of land plots; (iii) poor quality of the original block maps; (iv) loss of skills and knowledge of DALMS staff regarding block map surveys; (v) local disputes on land, especially regarding land boundaries between neighbors; and (vi) informal settlers encroaching on other people’s land. This function needs to be re-specified in work instructions and staff must be trained and re-organized. This requires a specific partnership between DALMS and GAD to perform these works, which adds to complexity and delays. This indicates a need for the rationalization of the functions of DALMS and GAD on town land matters and, simultaneously, on village land.

A register of deeds of DALMS registers grant leases, but in practice the register is out of date. Instead GAD and DALMS maintain ad hoc records on grants.

This is one of the oldest records kept at DALMS and many leases are nearly unreadable. It is estimated that there are up to 2.6 million plots in town land, excluding the 3 main cities, and 1.5 million issued grant leases (titles in the table).

The rationalization of GAD and DALMS functions should remove the duplication of the Register of Grant Leases (and other urban titles).
Other than farmland and town land tenure with known issues, other land tenures are not registered anywhere (see the land to people relationship figure 1). Seeking a unified and covering land register, customary land should be recognized in the law for registration to the land register and have its own special form of tenure with rights, restrictions and conditions assigned by local decision-making. Ownership of the rights should be assigned to groups, families, communities or individuals as appropriate for the particular situation. The spatial entity subject to customary title registration should be able to enclose one or more plots and should be described as appropriate and mapped sufficiently to ensure that there can be no encroachment or ambiguity so that the boundary is meaningful to the community and its neighbors while not becoming too expensive. Once this tenure is formally recognized, it should be added to the land register. Similarly, communal grazing land, water rights, forest rights, National Government land and Local Government land and informal urban settlements should all have their rights regularized/registered and secured in the land register; each with their own unique set of rights, restrictions and conditions. By using a unified land register, it can be assured that the land rights cannot overlap; this is a powerful and necessary step to move out of the current confusing situation.

To guarantee that land parcels do not overlap there must be one standardized coordination system across the country that is used to map the parcels of all land tenures at all various map scales and land survey standards7. Currently, there is no dense control network or easily accessible CORS network to realize this key requirement. DALMS has started a third order network but has difficulty accessing information on the second order network of the Survey Department (SD). Adoption of a joint national coordinate reference system for land administration is a key priority towards integrated and coordinated land administration services.

Four Programs of Work of DALMS at Township Level

There are four programs of work at DALMS at the Township level and historically very little human resources were ever expended on land tenure. The non-performing land tax function and crop statistics function are manpower intensive and consume almost all resources at the Township level. Restoring land administration in Myanmar requires a sustained and priority focus and attention.

The land administration staff need to work on restoring records and maps for the next decade at least, and moving the crop data function to another organization should be a priority because it is not a function of land administration and it takes a lot resources and specialist skills.

Challenges and Opportunities

In summary, the land administration system, maps, surveys, land records and facilities have both strengths and weaknesses. The coordinate system and topographic maps are up-to-date and in digital form, but the maps are only accessible to the military. The cadastral maps (Kwin maps and block maps), or land records,

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7 With boundary definition by general boundaries, the land surveys can be very low-cost and the demands regarding the rural mapping of land parcels is much less than fixed boundaries.
or issued LUCs and Leases are not up-to-date, especially for town land, resulting in many errors and conflicting records. DALMS buildings exist in 300 Townships, but many are inadequate and in disrepair and lack proper rooms for document storage. Staff are trained but most do not have training or education in modern land surveying, land management, ICT and GIS.

Advantageously, DALMS and GAD serve the public at the local level through Township offices, however, ordinary people are not accustomed to seeking land-related services and are not familiar with the law and procedures. Moreover, the services are not well advertised and the staff are not trained to serve clients. The land administration services are primarily delivered through 3 different Ministries: GAD in MOHA; DALMS in MOALI; the Survey Department in MONREC. This makes cooperation and coordination more complex, less responsive and less complete. The legal framework is outdated. However, the NLUP provides a sound policy framework for strengthening land administration and a starting point for replacing the major land related laws. The ADS and other strategies and plans provide also related framework for new government programs. Further, the Government has overarching policies such as e-Governance and One Map that will help to underpin any reform in land administration. Overall, Government and stakeholders realize that there is great amount that can be done even before the adoption of a new land policy and new laws.

**International Best Practices**

The FIG⁸ and its Commission 7 for Land Registration and Cadastre is the peak professional body for land administration. The following presents 6 key statements on FIG’s vision of Cadastre 2014 that is still relevant to Myanmar:

Table 2: Statements of the Modern Cadastre Promoted by FIG in “Cadastre 2014 and Beyond”

<table>
<thead>
<tr>
<th>No</th>
<th>Principle</th>
<th>Impacts</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Show the complete legal situation of land including public rights and restrictions.</td>
<td>All facts about the land must be made obvious to ensure security of tenure.</td>
</tr>
<tr>
<td>2</td>
<td>The separation of maps and registers to be removed.</td>
<td>It is essential for the integrity of land administration that the spatial entity—the land parcel—is linked to ownership.</td>
</tr>
<tr>
<td>3</td>
<td>The spatial description of a land parcel will be determined according to need and not according to the kind of mapping.</td>
<td>Land parcel definition policy must be paramount and must not be dictated by technical matters. This will avoid over-servicing and high cost. On the other hand, mapping the land parcels will allow the multi-use of the cadastral data, as the requirements will be specified from the needs of all sectors, including planners and modelers.</td>
</tr>
<tr>
<td>4</td>
<td>Using computer technology will no longer be optional.</td>
<td>Efficiency and multi-use concerns have dictated that cadastral data will always be computer-based.</td>
</tr>
<tr>
<td>5</td>
<td>The private sector will do more to maintain the cadaster and provide services.</td>
<td>The government sector will have a key role in regulating and setting standards and making land information easily accessible. However, the actual workload will increasingly fall upon the private sector, as it is more efficient and more flexible.</td>
</tr>
</tbody>
</table>

⁸ Federation International Geodetic
Cost recovery is key to keeping the cadaster up-to-date in order to protect tenure security. Both government and private sector costs must be recovered from fees for services. This includes operating costs and initial investment costs. All internal costs and indirect costs should be identified. In developing countries, the transfer tax must be low or else people will not remain in the formal system.

The land administration system of a country should enable secure land rights for all people and cover all land types. The national program and institutional arrangements should realize multi-purposes from investment in the land administration system; viz., as a basis for securing rights; for land valuation and taxation (see the Voluntary Guidelines on Governance of Tenure, VGGT, promulgated by the UN in 2012). It must also secure the rights of land that is held by the state. At the outset, the land administration system may differ from place to place, being very simplistic in some (rural) areas of the country (e.g., uplands) while other (densely populated) areas may be covered by more accurate and legally complete surveys and allow more complex transactions (mortgages, strata title etc.), especially where land is of high value and in short supply. Through updating procedures, the system can develop into a modern and fully integrated system for land information and administration.

Table 3: Fit for Purpose Land Administration: Four Key Principles

<table>
<thead>
<tr>
<th>No</th>
<th>Principle</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>General boundaries rather than fixed boundaries.</td>
<td>Using general boundaries to delineate land parcels will be sufficient for most land administration purposes, especially in rural and semi-urban areas. In the present context, the term “general boundary” means one whose position has not been precisely determined, although delineation usually relates to physical features in the field.</td>
</tr>
<tr>
<td>2</td>
<td>Aerial imagery rather than field surveys.</td>
<td>The use of high resolution satellite / aerial imagery is sufficient for most land administration purposes. This approach is three to five times cheaper than survey instrument-based field surveys.</td>
</tr>
<tr>
<td>3</td>
<td>Accuracy relates to purpose rather than technical standards.</td>
<td>Accuracy of land information should be understood as a relative issue related to the use of spatial information.</td>
</tr>
<tr>
<td>4</td>
<td>Opportunities for updating, upgrading and improvement.</td>
<td>Building the spatial framework should be seen in a perspective of opportunities for on-going updating, sporadic upgrading, and incremental improvement whenever it is relevant or necessary for fulfilling land policy aims and objectives.</td>
</tr>
</tbody>
</table>

It can be noted that three important concepts of FIG’s vision on Fit-for-Purpose Land Administration are already embedded in DALMS regulations and operational guidelines: (i) the general boundaries principle used for describing land parcels; (ii) land parcel-based record management; and (iii) the multi-purpose cadastre. These are three powerful practices that will contribute greatly to the efficiency and effectiveness of Myanmar’s future land administration.

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9 Source: FIG 2015; ISSN 2311-8423
### Appendix 1: Recommended Options for Rationalizing the Land Service Functions

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>OPTION 1: Land Related Organizations Remain As Is</th>
<th>OPTION 2: Integration of Land Related Organizations into One New Agency</th>
<th>Existing Mandate of Three Land Related Organizations</th>
</tr>
</thead>
</table>
| **Organization Reform** | Existing organizations of DALMS, GAD, SD remain as they are; DALMS internal re-organization at Township level; DALMS renamed to reflect its mandate on land administration in all tenures; establish a steering committee to oversight implementation of LAS reform and also create a stakeholder platform for monitoring LAS performance. | Integration of land related functions of GAD, DALMS, SD into one new agency attached to a suitable Ministry; The new land agency is quasi-governmental with a Governing Board and an Advisory Stakeholder Panel. | • Grant Lease (& other urban rights) Issuance  
• Town land  
• Village land  
• Land Tax Collection  
• Town land  
• Farmlands |
| **Vehicle of Reform**   | Creation of **model land office** based on re-organization of the existing Township DALMS office; Replication of model land office throughout the country. | Integration of GAD and DALMS Township level offices. Creation of **model integrated land office**. Integration in central office & others. | • Deed Registration  
• Town / Village  
• Farmland  
• Lease Register  
• Town & Villages  
• Land Tax Collection  
• Land Data  
• Tax Roll & Vouchers  
• Farmland Title (LUC)  
• Register of LUC  
• Issuance of LUC  
• Survey & Mapping of Parcels  
• Town & Villages  
• Farmlands  
• Third order control |
| **Institutional Reform**| Change attitudes of staff to a client service focus and to professional standards. Existing staff re-trained on modern technology. | New offices at Township level. Change of institutional culture from bureaucratic to service orientation. Recruitment of new staff. | |
| **Business Model**      | Government funded organization with most land services delivered through Township level offices. Land information updated regularly to government portal for web access by the public and government. Small fee for services. | In long term the new agency is self-funding. Land information available for a small fee or no fee. | • National Survey & Mapping  
• First & Second Order Geodetic Network  
• Topographic Maps  
• Height Datum |
| **Functions**           | Existing functions of GAD, DALMS & Survey Department, except:  
- The crop statistics functions is moved to a more suitable organization;  
- DALMS name is changed to reflect the fact that it has key functions on land tenure other than agricultural land. | The new land agency has all land-related functions transferred from the existing three departments except:  
- Crop statistics move to another Department at MOALI;  
- Land Tax Collection remains with GAD (land tax valuation by the lands agency). |
Appendix 2: Kwin Map Digitizing and Spatial Data Processing under LAMP Pilot Project in Two DALMS Townships Using the Land Record Management System (2013-15)

There was already a pilot LAS computer system and database developed and tested at the Township level during the LAMP Project that is suitable for long term use and development. The new spatial data process includes: (i) map scanning; (ii) image enhancement to make it readable; (iii) geo-referencing the Kwin map; (iv) digitizing each holding shown in the Kwin map; (v) digitizing the equivalent holding boundary off the imagery and labelling with the holding number and calculating the land area; and (vi) preparation of field maps prior to visiting the field. An open source software GIS system is used. The methodology could be reasonably rolled out across the country without expenses for GIS. The first-time digitizing of the Kwin maps performed very well by the open source software GIS; it was configured for compatibility with LRMS and for ease of use and for making checks on spatial topology.

The digitized data is plotted out in two colors to highlight any significant differences:

The land records are compared on the quality control screen for identifying errors:

Holding Boundaries in Myingyan (Red Line: Kwin Map / Blue Line: Satellite Image)

Checking Land Records (example of conflicting name of owner on two land records)

Each line in the image above is a land holding entry. The surveyor can easily check for inconsistencies or missing records such as if the owner’s name is not the same on the LUC as it is in the Land Register. The errors can be resolved in many cases prior to going to the field. Outputs include tailored maps and tables.
The linking and matching results are best shown in a combination of tabular and map formats. They are printed out and taken to the field for updated surveys, which make the process of field work run more smoothly.

One of the more common errors are cases in which the LUC title was issued on a holding that does not exist on the Kwin map but exists on Form 105 in the case file. There are situations where the LUC was issued based on an “office sub-division” that was not shown on the Kwin map. The GIS makes the errors very obvious for follow-up in the field survey (see below).

In many Kwin maps during the last 50 years, there have been engineering works such as roads and canals that have neither been shown on the Kwin maps nor have the holdings been sub-divided. In the vast majority of cases, the sub-divisions were never made ahead of issuing the LUC title due to time pressures. Consequently, there are a large number of erroneous titles. The LAMP LRMS system allows for a straightforward process for updates by first validating the new boundaries in the field, editing the spatial data, creating new parcels and validating the new Kwin map by public display before uploading the changes to the database and setting a transaction for issuing a replacement title (after authorization by the FAB).
Introduction

This policy note on Geospatial Infrastructure and Services in Myanmar is the fourth of five policy notes prepared under the Land Sector Needs Assessment technical assistance initiative between the World Bank and the Ministry of Agriculture, Livestock and Irrigation, the Ministry of Natural Resources and Environmental Conservation and the General Administration Department of the Ministry of Home Affairs, and the Yangon City Development Committee. It is intended to assess and inform the land related discourse in Myanmar on the status of governance and administration of land with strategic options and recommendations on the way forward. The policy notes aim to promote consensus over priorities under the following five key themes of the land sector: (i) Land Policy and Regulatory Framework; (ii) Forestland Administration and Management; (iii) Land Administration; (iv) Geospatial Infrastructure and Services; and (v) Property Valuation and Taxation.

NOTE: The policy note was subject to a stakeholder workshop of almost 200 participants on October 23-24, 2017 and the policy notes were revised according to the recommendations of the workshop.

Executive Summary

Peace building, food security, poverty eradication, sustainable economic development, disaster and climate resilience are all topical government challenges that can be resolved most efficiently and effectively when governance decisions are informed by authoritative, high-quality location information. Modern geospatial (digital mapping) infrastructure and location services have a high potential to bring about valuable socio-economic benefits. Governments play a leading role in setting up geospatial infrastructure as a public good.

The National Land Use Policy (NLUP, 2016) of Myanmar outlines a common vision among Myanmar’s government actors, civil society, businesses and academia for building the infrastructure to provide institutionally sanctioned, automated means for easy access and sharing of authoritative geospatial information and delivering land related e-services. Nascent geospatial infrastructure and services in Myanmar should be systematically supported to underpin peace building, NLUP implementation and e-governance advancement. The demand for better geospatial information and services can be met gradually in a systematic process of developing national spatial data infrastructure (NSDI) and ensuring overall efficiency and effectiveness. In contrast, prevailing procedures, regulations, traditional rules and standing laws prevent easy access to sharing and dissemination of digital geospatial information.

Myanmar is on the verge of launching digital geospatial services and has an opportunity for rapid progress and catch up by using the experiences and lessons learned of geospatially-advanced countries. As the first steps, key government departments should agree on common road map, standards and take pragmatic
steps to improving their geospatial systems aiming to short term gains while following the longer-term vision of NLUP.

Positively, the One Map policy initiative of the Government of Myanmar, supported by the One Map Myanmar project already involves 25 land-related government agencies, civil society organizations and academia, and paves the way for a unified digital map that is accessible on the web for government and public use. Civil society engagement in the geospatial sector should be sustained and further encouraged, involving them for example in verification of land and geospatial data, participatory mapping and land use planning.

International good practices and trends are well documented on the establishment of geospatial infrastructure, mostly in association with the modernization of land administration and management systems. Many countries have already established NSDIs or have ongoing NSDI initiatives providing a repository of knowledge that Myanmar can benefit from.

Investment in technological innovation and capacity building of the core land administration and management institutions provides a concrete way forward and can forerun the legal and institutional reforms and drive change in the future. International development partners have shown interest in supporting the sector.

Stakeholders’ participation at every level of society, mindset development towards transparency and open data and interoperability, as well as institutional coordination/integration and systematic approaches are necessary for progress.

**Introduction of Geospatial Infrastructure and Services**

Peace building, food security, poverty eradication, sustainable economic development, disaster and climate resilience are all topical challenges that are resolved most efficiently and effectively when governance decisions are informed by authoritative, high-quality location information which is provided through digital cartography.

Digital geospatial (mapping) information, technology and services are critical for evidence-based decision-making and good governance. Modern geospatial infrastructure and corollary location-based services have a high potential to bring about socioeconomic benefits. Governments play a leading role in setting up geospatial infrastructure as public good, as well as generating and maintaining core geospatial data sets.

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**Digital Revolution** is changing our world. Half of the world’s population was connected to the internet in 2016. Communities are now more information dependent. E-governance is rampant. Timely, reliable digital information is a valuable asset and a unique resource. The information weaved into service-delivery or decision-making also remains intact after multiple usage!

A **National Spatial Data Infrastructure** (NSDI) is a framework of policies and laws, institutional arrangements, technologies, geospatial information, and a community of data and service providers and users. It enables the exchange, sharing, effective use and management of geospatial information and technologies. NSDI allows geospatial data to be combined from various sources and disciplines for a range of uses by creating reliable, intelligent, interactive, unified electronic maps, where each map layer is maintained independently by its authorized agency. NSDI improves data quality, reduces duplication of efforts and resource waste, it lowers costs to society while making geospatial information more accessible, it increases the benefits of using and re-using data, and builds partnerships at the international, central and decentralized levels between government actors, civil society, businesses and academia.
In line with global e-governance and geospatial trends, Myanmar is committed to going digital and is experimenting with a nascent geospatial infrastructure. A common vision among Myanmar’s government actors, civil society, businesses and academia prioritizes NSDI to provide institutionally sanctioned, automated means so that information and service providers / users can post, discover, evaluate, exchange and share geospatial information.

**Key NSDI building blocks** are: apt geospatial policies and legal framework; strong coordinating body; enforceable interoperability standards; efficient access mechanisms (e.g. geo-portal); core geospatial datasets and e-services; adequate capacity and resources to operate the NSDI; and a sustainable business model.

**Main NSDI principles:** data interoperability (implying open standards, common geo-reference frame and easy / open access); data discoverability by using search engines (requires catalogue of metadata); one-time collection and multiple re-use; efficient data stewardship (datasets are kept by the agency liable for their quality); free, transparent, accessible core data sets; information sharing among all levels / scales; streamlined coordination.

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**Policy and Legal Framework**

The vision and priority of geospatial infrastructure and services in Myanmar are broadly framed in NLUP and the e-Governance Master Plan (eGMP 2016-2020). NLUP and eGMP are interrelated, complementary and consistent with Myanmar’s pressing geospatial needs.

In the context of land use and in line with international good practices, several NLUP chapters spell out fundamental demands for coordination, systematic land information management led by a dedicated entity, and geospatial information sharing across all stakeholders and governance levels. NLUP dictates equal access and transparency, map digitizing and transformation, timely updates, acquisition and mastering of modern geospatial technology (including evidence-based satellite imagery), and geographic information systems (GIS). Furthermore, NLUP prioritizes authoritative, high-quality (i.e. complete, up-to-date, precise, accurate) location information that can be verified on the ground with inclusive, participatory, gender- and ethnicity-sensitive mapping approaches. NLUP outlines the core national datasets (e.g. administrative boundaries, land classification, land tenure (incl. customary), land use, land cover, urban and rural planning, etc.) and promotes a single-window public land information services mechanism. NLUP also calls for adequate capacity and sufficient resources to be channeled through a specialized fund that encourages piloting and research. Under NLUP, the One Map Myanmar policy initiative is already piloting several of the land use policy guidelines to draft a One Map policy that specifies and details a geospatial infrastructure and service policy in line with Myanmar’s pressing needs.

Implicitly, all these fundamental demands under NLUP fall in the field of geospatial infrastructure and services. They can be met gradually in a systematic process of developing NSDI that ensures overall efficiency and effectiveness. The first steps have been made to establish land use bodies at all governance levels, which are charged with geospatial information sharing and maintenance. Notably, a National Land Law is to be drafted that falls in line with NLUP and a Land Survey Act is being conceived, which will harmonize several old laws and sectoral legislation and address geospatial issues holistically. Also, the One Map Myanmar policy initiative will generate experience and knowledge aiming to outline and recommend relevant reforms in the geospatial sector.

In the broader context of Myanmar’s e-governance, eGMP emphasizes the fundamental importance of common and shared geospatial information (maps, land records, roads, administrative-territorial hierarchy, GIS) and services, as well as the pioneering role of the One Map Myanmar policy initiative.
(among others). In parallel, eGMP recommends the use of open source and open standards, which should be a key consideration for NSDI development that is in line with international trends\textsuperscript{vii}. Moreover, eGMP promotes shared applications and common data services and specifically prioritizes applications and data for natural resource utilization and management in both the national map / GIS and land administration (cadastre and land registry) system. eGMP’s recommendations are in line with urban and rural development priorities, governmental strategies for attracting foreign investment and the provisions for geospatial data in the Agricultural Development Strategy (ADS).

Nevertheless, recent analyses of the legal framework in Myanmar identify complexities, gaps, departmental fragmentation and shortcomings in the standing laws in terms of failing to set standards and norms for the geospatial infrastructure. The framework is not fully conducive to open access, sharing and interoperability, nor to a change towards modern information and communication technology (ICT); it does not adequately support the development of e-Governance and NSDI. Most official procedures, regulations and traditional rules prevent any practices of easy access to geospatial information sharing and dissemination, even if no laws explicitly disallow this or pose secrecy restrictions. The legal framework fails to encourage equal access to and dissemination of digital geospatial information. Further, it does not provide for adequate digital data security, privacy, copyright protection and cybercrime prevention. However, detailed NSDI strategy documents identifying legislative needs for geospatial standardization and interoperability are in the process of being developed, as part of the One Map Myanmar effort. The NSDI strategy development and pertinent amendment of the legal framework should be kept as an explicit government priority.

### Challenges and Opportunities

The growing demand for innovative geospatial technologies bring about a number of geospatial data or infrastructure initiatives in Myanmar, including on the part of civil society. There is a positive vision towards a highly demanded informatization of its governance, land administration and mapping sector, yet it is only on the verge of going digital with geospatial infrastructure and services. Currently, Myanmar’s NSDI elements are in their conceptual phase. This is an opportunity for rapid progress and catch up, as Myanmar can benefit from the ample experience and lessons learned of countries with advanced geospatial industry and avoid mistakes that others made in developing their geospatial sectors. In anticipation of translating Myanmar’s geospatial and e-governance vision into concrete geospatial strategy, road map, institutional and legislative reforms (which are being discussed and agreed upon as part of the One Map policy initiative and other NSDI initiatives), the stakeholders should be proactive in solving the many practical challenges. Key government departments should take a pragmatic approach to improving their internal systems and finding partners for advancing short-term geospatial improvements.

With a strong focus on capacity building, technological innovation, transparency and compliance with the concept of NSDI, various technical interventions should proceed, as they require no immediate legal or institutional reforms and can operate in harmony with each other. International development partners have shown interest in supporting and coordinating their inputs in such interventions. A systematic approach to building NSDI should be followed, with strengthened institutional and stakeholders’ coordination.

The ongoing One Map Myanmar project\textsuperscript{10} (that actively involves 25 land-related government agencies, civil society organizations and academia) targets the creation of an online open access geospatial data

\textsuperscript{10} with support by the Swiss Agency for Development and Cooperation (SDC), 2015 - 2023
platform and a national digital mapping system as embryo NSDI. It aims to unify and make accessible all
government held, land-related spatial data sets for government and public use. With its multi-stakeholder
and participatory consultation approach, the One Map Myanmar is already building strong consensus on
the way forward with geospatial infrastructure and services. The One Map technical unit supports the
government departments producing core geospatial datasets and facilitates their capacity development.
The initiative deserves high priority and high-level political backing. It can be coordinated with the ongoing
technological innovation and informatization processes in the core land and forest administration,
management and mapping institutions. Along with urban and agricultural tenure administration,
authoritative forest, fisheries and customary tenure data on concessions and leases (and related land-use
permits) should be systematically integrated into a national land information system and geoportal,
allowing public access. Access to nationally consistent and complete geospatial data and land records
would substantially improve land governance, as well as the use and protection of forestry and fisheries
resources.

One serious practical limitation for geospatial progress is the scarcity of digital data in Myanmar. In fact,
authoritative land records and maps in Myanmar are still predominantly paper-based and are not fully
covering their potential target territories. They suffer from varying quality, compatibility, accessibility and
usability issues. Key government stakeholders have piloted updating and digitized map products (e.g. the
national topographic maps, rural and urban cadastral maps and forestry maps in pilot locations,
administrative units, etc.) and plan for the expansion of cadastral mapping coverage. Their efforts need
more support to become systematic and to scale up a national digital mapping program that aims to
accelerate the process of comprehensive coverage of Myanmar’s territory with core map layers. In
parallel, the civil society and non-profit sector initiatives on participatory mapping, and on geospatial data
collation, especially in the Myanmar Information Management Unit has demonstrated that much can be
achieved in producing, verifying and disseminating geospatial information and services via a web portal
within the current legal framework.

Another practical limitation refers to the scarcity of digital geospatial data and poor variety of up-to-date
base mapping products. Myanmar’s national mapping system has a gap in its base map series, especially
for purposes such as land use management and planning at local levels (township / village tract / village,
\textit{i.e.} in scales 1:10,000 - 1:15,000). Digital aerial or satellite ortho-images are a very useful mapping product
that satisfies most potential users compared to the slow and more costly production of topographic line
maps. Such innovation of base mapping on a national scale, and opening the access to such geospatial
products as web-services, can practically solve shortages of up-to-date base maps in priority areas.
Combined with the potential establishment of an open geospatial imagery bank and mechanism for
coordinated acquisition of satellite and aerial imagery for everybody’s benefit, this may be a valuable
upfront input in Myanmar’s geospatial infrastructure that could considerably improve the effectiveness
and quality of geospatial data generation across all sectors.

The application of a variety of map projections, coordinate systems and geodetic reference frameworks
pose the core obstacle for the interoperability of geospatial data in Myanmar. While the Myanmar Datum
2000, which was established to become the national standard, may have deficiencies that should be
addressed (e.g. non geo-centricity which deviates from international good practice) it should be applied
as the standard to all geospatial data production. This should be facilitated by the development of
adequate ground control networks and continuously operating reference stations (CORS) to serve
governmental and private sector mapping. The application of a joint coordinate system should be solved
immediately as the first practical priority allowing full usability of all new products and information.
Another serious issue for interoperability is the lack of a harmonized or standard place code system, which
can be resolved promptly by negotiations among the geospatial stakeholders.
Also, weaknesses in geospatial coordination among initiative groups, and wanting knowledge and capacities among stakeholders at all levels pose a challenge. All analyses indicate a shortage of skilled persons and a lack of sufficient capacity among civil staff in ICT along with geospatial knowledge in many government departments. Geospatial education, research and development, and academic institutions in Myanmar are insufficient. This is a field where actions should forerun the legal framework and institutional reforms, thus making it worthwhile to invest in said field. Targeted resources are needed to support training, capacity development and knowledge transfer.

**Geo-reference interoperability issues:** The Survey Department of Myanmar maintains a network of primary and secondary geodetic (ground) control points with known coordinates, which materialize the Myanmar Datum 2000 (MMD). MMD uses as reference surfaces an antiquated, non-geocentric spheroid (Everest 1830) and a geoid model that are incompatible in shape, size and orientation with the International Terrestrial Reference System (ITRS – the global theoretical standard). ITRS was practically realized in the satellite-based World Geodetic System WGS84 (used by the Global Positioning System, GPS) and later the International Terrestrial Reference Frame (ITRF) updates. Between the two systems (MMD and WGS84 / ITRF), there is, in practice, an offset of nearly 860 meters, which in Myanmar projects to a displacement of about 411 meters in ground position, which causes a variable location shift (e.g. about 4.1 cm on 1:10000 maps). Furthermore, the Survey Department does not have a mandate or the power to disseminate information that would allow users to access the geodetic control network. The MMD – WGS84 transformation parameters and formulae are not included in standard GIS packages.

To bypass restrictions and practical difficulties, natural resource management users in Myanmar have massively applied WGS84 rather than MMD. In addition, a Land Administration and Management Program (LAMP) study found weaknesses in the secondary geodetic control network that require additional network observations prior to a network re-adjustment. Notwithstanding the significant geoid slope on the WGS84 ellipsoid in Myanmar, LAMP recommended a re-adjustment of the geocentric (ITRF) ellipsoid to establish compatibility with WGS84 and to disseminate information on the new geodetic control network to users.

For land administration purposes, especially in urban areas, there is a need for users in Myanmar to access the national geodetic control network at the sub-meter level. The Government should decide to provide either a third order geodetic control network based on the second order network or an affordable, nationally accessible and responsive Continuously Operating Reference Stations (CORS) network system. Any program of ground control densification by the Department of Agricultural Land Management and Statistics (DALMS) to develop a third order geodetic control network should be preceded by a Government decision on the two main alternatives, as it is costly to create and maintain such a system.

The map projection and plane geodetic coordinate system adopted recently in Myanmar is a standard UTM (Universal Transversal Mercator projection with Gauss-Krueger plane coordinate system) that is widely used around the world for large and medium scale base mapping, and is well suited in Myanmar with its large North-South extent at low latitudes. Transformations of two-dimensional (plane) geospatial data from one map projection (e.g. the historical Lambert Conical Orthomorphic projection of Myanmar) to another (e.g. UTM) uses relatively simple mathematical formulae that all GIS packages can accommodate, and only requires map projection parameters and ellipsoid parameters (i.e. no transformation parameters of the coordinate reference system). The transformations will be more complex if the geospatial data is three-dimensional (including heights such as the location data produced by high-class geodetic GPS / GNSS receivers).

Overall, the coordination of the geospatial activities is challenging. A concrete geospatial strategy, road map, institutional and legislative reforms should be designed, which clarify and define the roles of all stakeholders. The government should identify and empower champions to drive the changes ahead.
International Good Practice and Trends

Over the last two decades, the importance of geospatial infrastructure and services has been widely recognized and highlighted along with the tremendous growth of geospatial technologies and solutions all over the world. The international evidence shows the significant value of geospatial services that leverage decision supports, planning and operations across a wide variety of industry sectors, including crucial changes in land administration and management. Many countries have established or already have ongoing NSDI initiatives. With the growth of awareness and demand, more governments now launch national geospatial infrastructure as a fundamental information service of their country.

The United Nations Committee of Experts on Global Geospatial Information Management (UN-GGIM) reiterates that “Due to their many benefits, National Location Strategies and National Spatial Data Infrastructures have become more prevalent, and will continue to grow over the next five to ten years. Some of the benefits include the ability to make location data and processing services available to a wider audience, and proven return on investment capital”. In the line with this, a land information system (LIS), as one pillar that buttresses NSDI, plays a core role in securing tenure rights and supporting the real property markets with reliability, transparency and efficiency.

The practices of Pakistan and Korea that link successful LIS with public e-services are particularly relevant.

In Pakistan, agriculture is at the heart of rural livelihoods, particularly in Punjab Province where 102 million inhabitants (56 percent of Pakistan’s total population and 70 percent of the province’s population) live in rural areas. Pakistan has a paper-based land administration system inherited from the British, involving rules and regulations for the sale, purchase and use of land linked mainly to land tax collection.

The dispersed and duplicative nature of Punjab’s land records made land rights uncertain, adversely impacted economic development and threatened the vulnerable and poor, whose rights were virtually unprotected. Well-defined land rights are crucial for productive development and functioning factor markets including credit. Therefore, the Land Records Management and Information System (LRMIS) has been established, for computerization of rural land records (see http://plra.punjabzameen.gov.pk), aiming to improve and modernize the maintenance of land revenue records and provide land record related services to the public. Parcel data of 1,729,776 parcels is available on the website, of which 90% matches LRMIS records. Overall, 3,487,922 page views by 406,733 users occurred as of February 2017.

LRMIS has revolutionized the process of keeping land records in Punjab. The computerized land record keeping offers numerous advantages over the older manual system. There are fewer delays in the processing of transactions, more inclusion for women, less scope for corruption and no risk of battered or missing records. The new process of transaction is considerably simpler for citizens and holds great potential for sustainability.

The Republic of Korea digitized and unified its land information systems over the last decade to have comprehensive data on rights, parcels, and land use. The Parcel Based Land Information System (PBLIS) and the Land Management Information System (LMIS) were integrated in 2006 to become the new Korea Land Information System (KLIS) with efficient services and easy access for clients. KLIS is the very foundation of NSDI that combines agricultural land information, urban planning, environment, forest, and cultural assets, playing a core role as an infrastructure for land-related administrative affairs and civil services. (see http://www.nsdi.go.kr) KLIS became a key pillar of Korea’s e-government system, which has been internationally recognized as one of the best information systems globally. KLIS has 37 million parcels, 750,000 digital maps, and a unified One Map that has brought transparency, efficiency, reliability, and better services for Korean citizens in a cost-effective way.
The Netherlands has also inspiring experience with geospatial infrastructures and services.

In the Netherlands, NSDI efforts are in line with the INSPIRE directive of the European Union. Thanks to the Public Services on the Map (PDOK, https://www.youtube.com/watch?v=79mGJe08Fpk), the Dutch population makes use and benefits from a wide array of spatial data, information, and services. Distributed base registers in the Netherlands contain authenticated high quality data about citizens / population, businesses, land and real property, addresses, buildings, topography, land use, altitude, aerial photography, transportation, etc. This information is open, up-to-date, reliable, free of charge, fast and accessible on a single electronic portal. It is mandatory for all government branches to use this official, trustworthy information without further investigation, since a self-correcting mechanism is in place. In case of doubts, the data provider who authenticated the data is in charge and liable of data verification.

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1. *i.e.* spatial data collected, integrated, managed, analysed, modelled, aggregated, and communicated with technologies like geomatics (land surveying, satellite navigation: Global Positioning System (GPS) / Global Navigation Satellite Systems (GNSS), remote sensing, information and communication technology (ICT)), geographic information systems (GIS), Internet and the World Wide Web
2. *e.g.* improved governance (better public e-services, increased transparency, reduced corruption and red tape, etc.), better disaster resilience and emergency response, economic benefits (increased gross domestic product (GDP) and real income, generation of jobs, savings of public time and funds, better consumer services, etc.)
3. c.f. Future Trends in Geospatial Information Management: the five to ten year vision, UN-GGIM, 2nd ed., 2015, http://ggim.un.org/docs/UN-GGIM-Future-trends_Second%20edition.pdf: “Governments retain a key role in ensuring that comprehensive and robust frameworks are put in place with related policies, resources and structures to ensure that geospatial information is easily accessible to decision makers in a coordinated way.”
4. *e.g.* topography, geospatial imagery, land tenure (cadastre and land registry records), land use and cover, urban and rural planning, administrative boundaries, postal addresses, census enumeration units, etc.
5. *e.g.* the Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the context of National Food Security, (CFS/FAO, Rome, 2012 http://www.fao.org/docrep/016/i2801e/i2801e.pdf): “States should establish policies and laws to promote the sharing, as appropriate, of spatial and other information on tenure rights for the effective use by the State and implementing agencies, indigenous peoples and other communities, civil society, the private sector, academia and the general public. National standards should be developed for the shared use of information, taking into account regional and international standards.” (subs. 6.5), “In order to enhance transparency and compatibility with other sources of information for spatial planning and other purposes, each State should strive to develop an integrated framework that includes existing recording systems and other spatial information systems.” (subs. 17.2), “As part of broader public information sharing, records of tenure rights should be available to State agencies and local governments to improve their services. Information should be shared in accordance with national standards, and include disaggregated data on tenure rights.” (subs. 17.4)
7. the Survey Department, SD (Ministry of Natural Resources and Environmental Conservation, MONREC) and the Department of Agricultural Land Management and Statistics, DALMS, formerly Settlement and Land Records Department, SLRD (Ministry of Agriculture, Livestock and Irrigation, MOALI) are the main government producers of geospatial data; the majority of users have to depend on their maps.
8. *e.g.* the Myanmar Information Management Unit (MIMU, United Nations Resident and Humanitarian Coordinator)
9. *e.g.* administrative units / place-codes (P-codes), base maps and data for geographic information systems, demographic data, natural hazards maps, transportation maps, population maps and other geospatial data
Introduction

This policy note on Property Valuation and Taxation in Myanmar is the last of five policy notes prepared under the Land Sector Needs Assessment technical assistance initiative between the World Bank and the Ministry of Agriculture, Livestock and Irrigation, the Ministry of Natural Resources and Environmental Conservation and the General Administration Department of the Ministry of Home Affairs, and the Yangon City Development Committee. It is intended to assess and inform the land related discourse in Myanmar on the status of governance and administration of land with strategic options and recommendations on the way forward. The policy notes aim to promote consensus over priorities under the following five key themes of the land sector: (i) Land Policy and Regulatory Framework; (ii) Forestland Administration and Management; (iii) Land Administration; (iv) Geospatial Infrastructure and Services; and (v) Property Valuation and Taxation.

NOTE: The policy note was subject to a stakeholder workshop of almost 200 participants on October 23-24, 2017 and the policy notes were revised according to the recommendations of the workshop.

Executive Summary

The recurrent property tax in Myanmar is largely under-performing in terms of a stable and important annual revenue source. This policy note emphasizes the need to re-engineer the agricultural land tax in terms of basis of assessment and tax rates. The urban property tax or building tax is equally in need of major reform if it is to provide sufficient revenue for the City Development Committees (CDCs) to meet the growing cost of infrastructure and local services. There are several structural impediments that the government of Myanmar must address, including the reduction of property transfer tax rates, which from an international comparison are much too high. Valuation skills and infrastructure are largely undeveloped, a fact that will withhold confidence in the market in terms of the pricing of real estate for acquisition, disposal, investment, development and compulsory compensation.

Key elements for a value-based agriculture land tax and urban property tax include: (i) an active, transparent real estate market that key participants have confidence in; (ii) a property registration system that provides incentives for parties to register their property on a voluntary basis and at low cost in both time and money; (iii) a valuation infrastructure that provides for those involved in giving professional advice to have appropriate underpinning education and training; (iv) a land assessment methodology based on land value zones and land quality (or use); and (v) a cost-effective administration system.

To achieve the elements described above, Myanmar should undertake the following activities as part of a systematic reform program:
Reforms to help stabilize and generate a more transparent real estate market that would contribute to economic growth within this sector:

- Significantly reduce the current rates of stamp duty and property transfer tax to improve incentives to register transactions; the government should consider a time period in which a zero-rate policy on transfers would apply;
- Create the necessary legal environment that would open the residential and commercial property markets to foreign investment;
- Provide tertiary level real estate programs with the university sector to provide professional education and training in property valuation and management;
- Introduce a statutory licensing and registration system for estate agents/realtors and valuers.

The government should commit to reforming the agriculture land tax to address the extremely low revenue yield:

- A simplified assessment system should be introduced based on two factors: (i) location of land parcels through land value zones; and (ii) land quality;
- Categories of land quality (a maximum of 5) should be developed based on the potential yield of the land parcel;
- Land tax rates per hectare by quality category should be increased from the historic low levels currently applied;
- Progressive tax should be introduced to lands with unauthorized use;
- Reduction or exemption for land tax should be considered in case of the natural disasters or other critical causes that prevent from proper land use.

The current property tax applied on urban buildings should be reformed to reflect the market value of the property:

- The recurrent property tax applied to land and buildings should be introduced into all urban areas;
- Value zones should be created within the CDCs and other urban areas reflecting the market value of commercial property;
- Residential property including condominiums should be valued through a simplified approach such as value banding aligned to international standards.

Introduction of Property Valuation and Taxation

City governments in Myanmar face several economic and financial challenges in dealing with expanding urban populations: (i) they must manage their increasing populations in a manner that generates economic growth; (ii) they must fund infrastructure and services to accommodate the residential population and support commercial and industrial investment and development; and (iii) they must accommodate economic growth in a planned and structured manner. Urban financing strategies are key to the provision of infrastructure and services. CDCs particularly need access to sufficient source revenues. However, they often lack revenues and those that they have access to are frequently under-preforming due to poor administration and a lack of capacity.

Currently, Myanmar is an agrarian society but urban areas are becoming increasingly important drivers for economic growth. According to the 2014 national census, some 30 percent of Myanmar’s population of approximately 50.2 million resides in Yangon City, Mandalay City and Nay Pyi Taw. While most of the population live in rural areas, only around 25 percent of the GDP is derived from agriculture. Future levels of urbanization will require substantial investments in locally-based infrastructure such as roads, water,
sewerage and electricity. Having a stable, predictable and robust revenue base such as a recurrent real property tax that can fund such investments will become increasingly important.

Current Position of Property Tax

The property tax on land and buildings has and still is a pillar of source revenue for sub-national governments in both developing and developed countries and its importance increases in parallel with increased urbanization. There are a few broad-based subnational taxes that can raise significant revenue on a recurrent basis: the most notable one is the tax on urban land and buildings. Research shows that recurrent property taxes can contribute significantly to sub-national government revenues. For example, an average of 35 percent of sub-national government revenues in middle-income countries like Indonesia come from property taxes. In cities of metro Manila (Philippines), it is as high as 55 percent. This demonstrates the clear capacity of well-designed, value-based taxes to generate public funds for local infrastructure needs.

The recurrent property tax in Myanmar largely consists of an agriculture land tax levied in rural areas and a form of building tax levied in Yangon CDC. The land tax generates a very low yield, largely because the rates are fixed in a schedule that is over 70 years old. Given this scenario, the land tax could be characterized as a ‘nuisance tax’, as the administrative costs exceed the revenue collected. This would imply that the land tax should become a more meaningful source of revenue for States and Regions. Part VII of the National Land Use Policy (NLUP, 2016) talks about the assessment and collection of land tax, land transfer fee and stamp duties. In this regard, the NLUP refers to land taxes that are ‘equitable, fair and appropriate’. It is clearly in the mind of the national government to consider a review of the current land tax. It is unclear what annual collection rates for the land tax are even though anecdotal evidence would suggest that they are very low. Any proposed reform of the land tax should include all administrative processes including billing, collection and recovery. The agricultural land tax will never raise significant revenue. Nonetheless, it could be redesigned to raise modest revenues that could be reinvested back into the local communities. If the land tax is to survive, tax rates should increase from the historically low rates currently levied and the assessment should be an area calibrated based on the quality of the land, which could reflect the income that the land could generate. In this regard, the LAMP project of DALMS provided two reports on the agriculture land tax and made suggestions on ways to implement a more effective tax.

The current agricultural land tax is jointly administered by the General Administration Department (GAD) and the Department of Agricultural Land Management and Statistics (DALMS) of the Ministry of Agriculture, Livestock and Irrigation (MOALI) on behalf of States and Regions. In terms of administrative functions, DALMS is responsible for the assessment of the land tax and GAD is responsible for collection activities. This is not an unreasonable division of responsibilities, as best practices suggest that there should be a separation between collection and valuation/assessment. The building tax falls under the competence of the CDCs that, in theory, should have the necessary systems and competence to administer property-based taxes within their jurisdiction.

Benefits of a Value-based Recurrent Property Tax

Yangon is the only city that levies a tax on buildings although it could be applied to buildings in all urban areas. This tax represents only a small source of funds for Yangon and the ‘building’ tax seems to be a general term for a group of four taxes related to property: a building tax, garbage tax, water supply tax
and a street lighting tax. The building tax is fixed at 10 percent of the ‘standard rental rate’. This assessment approach likely originates from the British rating system, which still uses rental value as base for the property tax on commercial property. While rental values are a standard value basis, it does require a system that collects rental value transactions for those properties that are being rented. This is often a significant weakness of this approach except in commercial zones. The building tax could be reformed into a traditional value-based property tax, particularly in urban areas. Simplified valuation approaches could be developed, such as the use of value zones. In the value zone, average commercial property values per square meter could be determined and then applied to all properties within the zone. The NLUP is somewhat silent on the ‘property tax’ in urban areas, although under Section 54 reference is made to the value of improvements to the land.

Levying a property tax on agricultural land requires policies that do not result in adverse behavioral actions. For example, giving an exemption for small land holdings of less than 5 hectares can result in land fragmentation. To deal with unused land, however, a penalty or surcharge could be applied until the land is brought into use. This form of idle land tax is widely used and a good example is found in the Philippines. This policy has also referred to in the NLUP (Section 52).

If properly designed and administered, the recurrent property tax could generate significant source revenues for CDCs and other urban areas. For example, in Malaysia and the Philippines property tax generates 0.5 percent of GDP and even more significantly the City of Manila collects 54% of its revenue through property taxes. Adopting a modest 0.3 percent of GDP, the property tax in Myanmar could raise the equivalent of about USD 188 million. Therefore, the tax has the potential to play a more progressive and transparent role in terms of sub-national revenues. A significant factor is that the constitution of Myanmar guarantees land-based taxes as a source revenue for states and regional governments, which is a case of international best practice. Of course, any such tax would be incrementally “phased in” over a period of years.

International best practice clearly demonstrates that a value-based property tax improves taxpayer equity and allows the government to recoup revenue on increasing property values that are due to government infrastructure investment. In effect, the property tax is a buoyant tax that captures within the tax net all new developments and investments in real estate. The visibility of property makes it very difficult to hide and represents an ideal tax for sub-national governments. The value-based property tax can directly contribute to the development of valuation skills. Valuation processes and methods must be developed by the authorities to determine the underlying value of real property. This also supports compensation assessments in cases where land is acquired.

Property tax valuations lend themselves to the application of automated mass valuation approaches. Although this is international best practice and something that Myanmar strive to achieve, this will realistically take several years. The land registry and cadaster would need to be fully operational, transaction prices would need to be reliable with no under-declaration, sale prices and rents should be automatically entered in a database and details on property ownership recorded.

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11 The Constitution of Myanmar under Schedule 5 and Section 254 specifically allocates the land tax revenue to States and Regions that can be considered an excellent practice. There are only a few countries, namely Kenya and the Republic of South Africa, that constitutionally provide land and property taxes for sub-national governments.
Challenges and Prospects with the Real Estate Market and Property Valuation

Myanmar has one of the highest property transfer taxes in the world, where the buyer of property is levied at a top rate of 30 percent. In addition, a Stamp Duty of 5 percent is levied on property located outside of the three CDCs, with an additional 2 percent if the property is located within the CDC. To compound matters, the seller of property has to pay a flat rate of 10 percent. These rates are in stark contrast to those levied in neighboring countries. Malaysia has a progressive transfer tax with a minimum rate of 1 percent up to a maximum of 3 percent whereas in Thailand property transfers are levied at 2 percent.

A high property transfer tax can lead to distortions in the pricing of real estate and the volume of property transactions. Where elasticities of demand and supply of property are high, a high transfer tax can lead to a significant reduction in transactions and higher prices for properties. This is evident within the Yangon real estate market: it acts as a disincentive for investment in immoveable property, spuriously supports an informal real estate market, buyers are reluctant to register their property and it creates an incentive for the under-declaration of transaction prices and corruption. Most importantly, it destroys the basic purpose of land administration—securing land tenure—because the person named in the title is no longer the real owner on the ground, thus creating a dysfunctional and ineffective policy. A reform of the transfer tax would include ensuring an up-to-date valuation base and bringing rates down to ‘reasonable’ levels to minimize distortions. This should be done in conjunction with implementation or reform of a recurrent property tax.

The very high transfer taxes in Myanmar were a reaction of the government in its attempts to control an ‘over-heated’ residential real estate market. This approach to dealing with volatile markets is frequently used (see examples in Hong Kong and China). However, the success of such approaches is debatable as speculators can circumvent the process by holding back on property registration or informal transactions (i.e. deeds signed and witnessed but not subsequently registered or the use of a power of attorney as a proxy). A transparent and active property market is important because it contributes to economic growth in several ways, such as: (i) an increase in development activity; (ii) supporting the construction industry; and (iii) indirect employment in service industries. If transfer taxes are too high, they can create significant negative externalities such as under-declaration of transaction prices, which can affect the data that a value-based property tax depends on. Myanmar needs to address the high transfer and separate stamp duty in a manner that does not significantly impede the working of the real estate market.

The property valuation industry in Myanmar is largely undeveloped notwithstanding the presence of several international property companies such as Colliers International and Savills. However, more needs to be done to bridge the gap to build a strong valuation infrastructure that can be leveraged to support value-based property taxation. However, it should be noted that within the CDCs and national government there are no valuation specialists. To aid transparency within the valuation process, it will be important for the government to consider adopting the international valuation standards developed by the International Valuation Standards Council (IVSC). In addition, progress could be made to develop tertiary-level curricula in property valuation to provide for appropriate educational qualifications. A good

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12 The Property transfer tax is progressive; property with a value less than K50m (USD) is levied at 3 percent; less than K150m (USD) at 10 percent; and over K300m (USD) at 30 percent.
example are the programs established under the World Bank supported Land Administration Modernization Project in the Open University of the University of the Philippines.

A range of other valuation activities are undertaken by national government, particularly for assessing compensation for people dispossessed of their land for public purposes. Clearly a major difficulty for government ‘valuers’ is the lack of a database for transaction evidence upon which transparent valuations can be made and justified. It is currently a significant challenge for the government to assess compensation for land taken when there is little to no market evidence. In many respects, having a value-based urban property tax can provide a degree of evidence for other valuation purposes.

The real estate market in Myanmar has been described as a ‘frontier’ market, which implies the lack of transparency in the operation of the market. It is also characterized by weak regulation of those actors involved in the market, such as real estate agents. Regulation could strengthen ethical practices and create a much-needed confidence in the market. However, it is evident that there is significant interest in the urban property markets by investors and developers. There are several major constraints holding back the real estate market, including: (i) the inability of foreign investors to own real estate; (ii) a weak banking system to support lending within the market; and (iii) the country’s long isolation from the international community. Recent economic liberalization has led to a clear rise in consumer spending and is now driving the retail sector forward. Developments in the office and hotel sector see both of these markets responding to demand and investor interest. Cities in particular can benefit from new developments through a value-based property tax.

Myanmar should move to a position to leverage data held within a land registry system for the purposes of property valuation and taxation. A comprehensive multi-purpose cadastre and land registry is the essential building block of the property tax system and, more importantly, international best practice. Being able to have a complete inventory of land and building assets within jurisdictions provides the necessary tax base. Yangon CDC has started developing its own GIS parcel-based system with scanned and digitized block maps that has many important applications for the city, including the building tax. This is an important long-term investment in people and modern systems and should be commended.

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13 The Condominium Law, which has yet to be passed, is an attempt by government to open the real estate market to foreign investors. Within an eligible condominium project, foreign ownership is restricted to 40 percent and only units above the sixth floor can be purchased.