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CLIMATE CHANGE AND TENURE RIGHTS

Interlinked challenges in Myanmar

Policy brief

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1. Introduction: unpacking the interlinkages between climate change and tenure rights

This policy brief sheds light on the challenges imposed on rural land tenure security by the risks and impacts of climate change, and enables a meaningful policy dialogue on pathways and opportunities to strengthen the protection of legitimate tenure rights in the context of climate change in Myanmar. The brief's objectives are to: 1) provide a broad overview of the major issues involved in the intersection between climate change and land tenure; 2) engage policy-makers and other relevant stakeholders at national and international levels in an informed discussion; and 3) inform further analytical work on these matters. The brief builds on a series of policy briefs aimed at strengthening the recognition and legal protection of customary tenure systems in countries of the Mekong region (FAO and MRLG, 2019), in line with the "Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security" (VGGT) (FAO, 2012).

Land use and management (including land tenure rights) and climate change are intrinsically linked. While land provides the basis for human livelihoods and plays a key role in the regulation of the climate system, human use has directly changed more than 70 percent of the ice-free land surface of our planet, causing great environmental impact. Further, approximately 23 percent

of total anthropogenic greenhouse gas (GHG) emissions that lead to climate change come from agriculture, forestry and other land-use activities. Importantly, emissions from agricultural production will likely increase due to projections of population and income growth, and changes in consumption patterns around the globe in the coming decades (IPCC, 2020).

Conversely, climate change has an increasing impact on land and terrestrial ecosystems, with important consequences on the way land can be used and, consequently, on land tenure rights. The 2019 Special Report on Climate Change and Land of the Intergovernmental Panel on Climate Change (IPCC, 2020) noted that climate change poses severe risks to human populations and ecosystems due to increases in global mean surface temperature, leading to desertification (e.g. decreased rainfall), land degradation (e.g. soil erosion, vegetation loss), wildfire, permafrost thaw, and challenges to food security (e.g. decrease in crop yields and food supply instabilities). The report further highlights that the most severe projections are focused on tropical regions, including Asia and Africa with the highest numbers of vulnerable people, where warming is projected to result in unprecedented climatic conditions by the mid to late twenty-first century. Impacts include high risks of soil erosion, declines in crop yields, sea-level rise and more intense weather extreme events. Such factors put at risk the livelihoods of farmers and small-scale food producers, foresters and fisherfolk who depend on land and natural resources. This in turn leads to increased displacement and induced migration, both within countries and across borders, disrupted food chains, and increased conflicts. Vulnerable groups such as indigenous and local communities, women, youth, disabled, elderly and poor are considered among those most at risk.

These grave projections also have important consequences for land and resource

governance and associated rights across different landscapes. Changing climate conditions can alter how land and natural resources are accessed and used because they imply geographic shifts in resource productivity, resource scarcity, and land-use patterns. Climate change is also considered both a cause and a consequence of land inequality, which has become a growing phenomenon worldwide. Climate change may reduce agricultural yields and force people off the land, and the more sustainable land practices of small-scale farmers and Indigenous Peoples are threatened by pressure on water and other natural resources due to large-scale, environmentally damaging monocultures, which are contributors to climate change (International Land Coalition, 2020). In addition, ethically and gender discriminative, insecure land and resource tenure rights often disincentivize rural people from investing in sustainable land management practices and forest conservation, ultimately leading to poor mitigation and adaptation outcomes in the face of climate variability (Quan and Dyer, 2008).

The VGGT emphasize the importance of respecting and protecting, as well as safeguarding, promoting and facilitating the enjoyment of legitimate tenure rights of those likely to be affected by climate change, particularly farmers, small-scale food producers and other marginalized communities (e.g. indigenous and local communities), and groups (e.g. ethnic minorities, women and youth) (VGGT para 23). The VGGT also highlight the need to address tenure concerns caused by climate change or natural disasters (VGGT paras 24 and 25). Important enabling elements in this regard include:

- the recognition and security of all legitimate tenure rights, especially considering that millions of smallholder farmers worldwide hold land under customary tenure systems, enjoying socially recognized tenure rights but

frequently lacking legally recognized tenure rights; and the mainstreaming of climate change considerations and responses into land administration and management frameworks (FAO, 2020).

- tenure security, also considered a direct investment in disaster recovery ability and resilience, as secure tenure rights and systems render land users less vulnerable for eviction or loss of livelihoods in the case of disasters. Accurate and secure land records offer important protection for tenure rights when populations are displaced by climate hazards and disasters (World Bank, 2020a).
- Land and geospatial systems and the data they contain are critical, but also vulnerable to natural hazards and human interference. Relevant strategies to face this include ensuring resilience of land and geospatial information systems by providing digitalized and electronically stored land records; and sharing this information with disaster risk management agencies and stakeholders to enable the use of this valuable data in planning and operations (World Bank, 2020b).
- Measures and policies can achieve positive adaptation and mitigation outcomes, while generating revenue and encouraging the rehabilitation of degraded lands. These actions include: a) land-use zoning, spatial planning and integrated landscape planning; b) land degradation neutrality; c) land valuation, as a basis for climate disaster-related insurance and compensation schemes; d) securing Indigenous Peoples and customary land tenure regimes, and validating their practices for restoring ecosystems, as much of the world's carbon is stored in the biomass and soil on the territories of customary land users, including Indigenous Peoples; and e) incentives, such as payment for ecosystem services, standards and certification for sustainable production, and use of scientific, local and indigenous knowledge and collective action (IPCC, 2020).

“Climate-proofing” land policies and legislation is important for assessing their responsiveness to address impacts and risks of climate change on tenure governance (Land Portal, 2020). This includes assessing legal and policy frameworks, with a view to:

- identifying how existing land and resource governance regimes – in particular, types of production systems – will be affected under various climate change scenarios, in order to strengthen tenure security, especially in climate change “hotspots”;
- mainstreaming climate change considerations and responsiveness in the mandate of land-related institutions, while also enhancing cross-sectoral coordination between land-use planning and management, and climate change;
- adjusting national land administration and spatial planning systems in order to have the resources, tools and data to adequately predict climate change risks, respond to (potential and estimated) climate impacts, and to report on climate change adaptation and mitigation actions;
- using new digital technologies and resilient land and geospatial information systems (e.g. electronic land records to enhance tenure security in face of hazards and disasters), and reducing related threats to paper records; and targeting land registration efforts to disaster prone areas;
- applying a climate lens analysis to the landscape level to clarify how tenure regimes are affected by climate change and enable holistic approaches in response;
- promoting interlinked sustainable land management and climate change adaptation and mitigation actions (e.g. removing barriers to freedom of crop choice by farmers, and promoting resilient crop alternatives, which can enhance adaptation and resilience);
- identifying approaches to address socio-economic dimensions of climate change regarding land rights and access, such as tenure rights of displaced people, and the



gender gap in tenure rights and access, which further aggravates the impacts of climate change on women; and

- ensuring that mitigation actions do not threaten tenure security: for example, the growing interest in “nature-based solutions” in the land sector, in view of the Paris Agreement’s emissions neutrality target, might mean more opportunities for sustainable land and natural resources management, while potentially leading to challenges such as increased land value and pressures on tenure security (see Borras *et al.*, 2020 for a broader discussion of this issue).

Building on the elements outlined above, this brief aims to analyze the potential climate risks to rural tenure rights in Myanmar, and to assess the national legal framework’s preparedness to cope with such changes, risks and opportunities for adaptation and mitigation actions. Of note, this policy brief refers to the context of the country before 1 February 2021.



2. Climate change and tenure in Myanmar

2.1 Climate change risks and challenges in Myanmar

The Asia and Pacific region is home to one-quarter of the global population – including China, Cambodia, Lao People’s Democratic Republic, Myanmar and Viet Nam. This region has the highest proportion of weather-related disasters worldwide, experiencing more than 70 percent of all storms and half of all floods globally. Such climate change-related vulnerabilities pose significant threats to agriculture and food security, including drier conditions, higher temperatures, flooding and sea level rise, and make adaptation a high priority (Saghir *et al.*, 2020). In this already challenging context, Myanmar is considered the second most vulnerable country to extreme weather events related to climate change globally (GermanWatch 2020). Due to its geographic location, Myanmar is exposed to cyclones, floods, droughts and extreme temperatures, which are becoming more frequent and more severe with climate change. These risks are especially concerning because Myanmar’s economy and society are highly dependent on its environment, natural resources, climatic conditions and the health of its ecosystems. An important example of the impacts that such events can cause is Cyclone Nargis, which heavily struck Myanmar in 2008 and is considered the deadliest disaster in the country’s recent history, responsible for an estimated loss of 140 000 lives, and affecting the lives and property of approximately 2.4 million people and causing economic damage worth USD 4 billion (GermanWatch, 2020).

Myanmar’s agricultural sector is particularly vulnerable. Temperature rise, floods and

extreme weather events are expected to have major negative impacts on agricultural production and food security. Major risks identified include a decline in animal health and productivity, a reduction in the yields of key crops (e.g. rice, wheat, maize, soybean and groundnut), increased weed and pest proliferation, increased likelihood of short-term crop failures, and long-term production declines. Regions such as the Ayeyarwaddy/Yangon Delta and low-lying coastal rice and local crop cultivation areas are likely to not only be exposed to increased temperatures, erratic rainfall, droughts, floods and intense rains, but also to increased salinity, coastal erosion, and inundation as a result of sea level rise, with significant impacts on local communities and low-income rural populations that depend on traditional agricultural systems or on marginal lands (Word Bank, 2021). As another example of recent events, floods caused by monsoon rains exacerbated by Cyclone Komen in 2015 affected over 9 million people in 12 states, seriously impacting the agriculture sector, damaging more than 527 000 hectares of crops, harming almost 30 000 hectares of fish and shrimp ponds, and seriously disrupting agribusinesses due to rapid increases in the price of agricultural products, as well as the destruction of roads and bridges (ILO, 2017).

These risks become even more significant not only because more than two-thirds of the country's population and 70 percent of its poor live in rural areas, but also the livelihoods of Myanmar's poorest depend primarily on agriculture, which employs about two-thirds of the total labour force. According to official national estimates for 2010, Myanmar's agriculture sector employed 52 percent of its workforce, mostly comprising small landholders, and generated almost 37 percent of its GDP. Paddy rice production occupied 22.87 million acres in 2010, and about 5 million households were engaged in the agricultural

sector (FAO, MoALI and LIFT, 2016). Accordingly, the Myanmar Climate Change Strategy and Action Plan (2018–2030) recognizes the sector's high vulnerability to climate change, while being responsible for about 18 percent of the country's total GHG emissions, a trend that is increasing with more agricultural land and fertilizer use, including from livestock (responsible for about 13 percent of GHG emissions).

2.2. Myanmar's regulatory framework

The following subsections provide an overview of Myanmar's legal and policy framework related to land tenure and climate change, highlighting some gaps and challenges related to its effectiveness.

2.2.1 Legal and policy framework on land and forests

Myanmar's land governance is complex, especially as the country does not have a comprehensive piece of legislation that regulates overall land planning, management and use, and land rights. Land is currently classified into several different categories and managed under the umbrellas of different laws (in particular according to different land types and uses, such as forests, agriculture and mining). This leads to several challenges in practice, including: 1) institutional fragmentation, as different government authorities have the mandate to regulate different types of land, which often leads to overlapping or even competing management; 2) lack of overall spatial planning that might consider issues such as the impacts of climate change and more sustainable land management practices; and 3) other implementation challenges, including the fact that a vast amount of land is under customary tenure systems, which still face challenges of proper legal protection, and for which classifications on paper often do not match actual land uses in practice.

The 2016 National Land Use Policy (NLUP) addresses many of the pressing land tenure

and governance issues, including a mandate to strengthen land tenure security and to improve the land governance framework. Addressing the impacts of climate change features among the basic principles of the NLUP (Part 8), which mandates the development of a National Land Law, and indicates that NLUP provisions should guide the harmonization of existing land-related laws in the country (para. 77).

Climate change is also highlighted as one of the priority areas for technical, financial and infrastructure support to be provided in order to protect land tenure security and agricultural practices of ethnic groups (para. 71) in the context of promoting the recognition of customary land tenure systems within the National Land Law.

The first important piece of legislation to consider is the 2012 Farmland Law (and its 2020 revision), which created a framework for the management of farmland, to be led by the Ministry of Agriculture, Livestock and Irrigation (MoALI). A point of attention is the fact that the law defines “farmland” in a very strict sense (art. 3), consisting of low land (paddy land), upland (*ya*), silty land (*kaing kyun*), hillside cultivation land (*taungyar*), perennial crops land, nipa palm land (*dhani*), garden land, horticultural land, alluvial land (land seasonally submerged under water, which causes alterations on soil texture and structure), and shifting cultivation land. Two important points should be highlighted in this definition. It excludes the use of land for other important agriculture uses, such as aquaculture, and agroforestry systems that combine different cultivation techniques and integrated crops-livestock-fisheries systems, also recognized as climate-smart agricultural practices.

Further, the Farmland Law creates a system of recognition of land-use rights to farmland, defined (art. 3) as a right to cultivate and use the land by keeping it in possession in order to improve agricultural production (excluding the right for extraction of natural resources such as gems, minerals, petroleum

and gas). It does not contain further definitions of what improving agricultural production means (e.g. increasing productivity, environmental protection requirements), except for provisions related to the need for authorizing a change in seasonal crops (e.g. from paddy on farmland into other cultivations) (art. 28), or for the use farmland for other purposes in the public's interest (art. 30).

As such, the Farmland Law does not secure tenure over land that is not legally classified as farmland. This includes cultivation methods with great potential to contribute to climate change adaptation, mitigation and food security, such as integrated crop-livestock systems, fishponds and grazing areas. Farmers can request the conversion of annual cropping land to these uses, but procedures are considered complex and decisions are made by a central committee with little understanding of the farmer's situation on the ground. It is also noted that conversions from annual to perennial crops are equally subject to stringent procedures of law in which the outcome cannot always be predicted (De Wit and Noack, 2019). Moreover, although the Farmland Law recognizes shifting cultivation systems, the security of tenure of such lands is weak, even if it represents one of the most important agricultural practices of many ethnic nationalities, and one that is increasingly considered sustainable and climate-smart. Consequently, the Farmland Law has major limitations for securing land tenure, especially for agricultural practices that are considered to increase adaptation and resilience to climate change while reducing GHG emissions, thereby contradicting the 2016 NLUP. This will be increasingly problematic as farming conditions might change due to changes in climate zones, natural disasters and displacement, as outlined above. Further, with insecure land tenure, especially for vulnerable groups who cannot afford to lose their land, food producers might avoid

the risk of investing in technology and innovation and change their agricultural practices to different, more climate-resilient ones. In addition, with insecure tenure it is unlikely farmers would get access to collateral loans to improve land management and agricultural practices.

Similar problematics to enable a climate resilient transition are found with regard to the forestry sector, under the 1992 Forest Law amended in 2018, which includes climate change among its objectives (art. 3). The management of forestland is the responsibility of MoNREC's Forest Department. MoNREC, with input from the Nay Pyi Taw Council, State or Regional Cabinet and with approval from the Government, has authority to constitute "reserved forests" (for sustainable use purposes) and "public protected forests" (arts. 4–6). The law specifies that inquiries should be made on how this might affect the rights of local communities. Further, the Forest Law gives broad authority to change classifications of existing forestlands, including to convert forestlands to other uses, but does not contain a specific procedure with determined criteria, or environmental and social safeguards. This poses a challenge as it allows for conversion of forestlands to other land uses, therefore risking further deforestation and jeopardizing the successful implementation of climate change related targets, against the policy aims outlined above.

At the same time, the 2018 amendment of the Forest Law introduces a novelty with regards to community-based forest management in its article 7, which gives the MoNREC the ability to recognize community-based forest management. This is important because not only community forestry and customary tenure rights are outlined as a policy goal in the Forest Policy and the Nationally Determined Contribution (discussed below), and also often cited as a climate change strategy as mentioned above, but also as this is the

first time the law recognizes such rights. These rules are later complemented by the 2019 Community Forestry Instructions, previously endorsed by MoNREC and that makes them applicable to all relevant Government ministries and institutions. However, despite these legal developments, few customarily-used areas are protected and have been formalized, and customary tenure rights are still insecure in practice (MRLG, 2019). This should be carefully addressed in the National Land Law, as securing customary tenure rights of forest land users, allowing them to manage forest and forest resources sustainably, can be an important incentive for programmes to mitigate climate change such as "payment for ecosystem services" (which might include carbon sequestration) and REDD+.

Another important novelty of the 2018 Forest Law is that it now permits, with authorization from MoNREC, the ownership of teak and other restricted trees in areas where community forestry has been established (World Bank, 2019). This can have important implications for climate change mitigation strategies, as well as potential future mechanisms that would recognize the value of the carbon stored in such trees (FAO, 2020). Also, with regards to land tenure and climate change mitigation, the 2018 Conservation of Biodiversity and Protected Areas Law permits community co-management of protected areas.

2.2.2 Legal and policy framework on climate change

Land issues also feature in climate change-related policies and strategies. Myanmar's 2015 Nationally Determined Contribution (NDC) identifies mitigation actions and policies, primarily in areas of forestry and energy. The NDC seeks to: 1) increase forestland areas, in line with the Myanmar Forest Policy (1995, updated in 2000), which created a 30-year target of protecting 10 percent of total land area under protected areas; 2) expand the area known as the Permanent Forest Estate to

30 percent of the country's total land area; and 3) allocate 919 000 ha of forestland to forest user groups by 2030. The NDC also outlines adaptation actions, listing among the priorities to build resilience in the agriculture sector through climate-smart agriculture and by developing early warning systems, forest preservation measures, and coastal zone protection. The 2015 Climate Smart Agriculture Strategy further specifies that Myanmar aims to achieve "food security and nutrition and climate resiliency, with a globally competitive agriculture sector attaining high productivity through climate-smart good agricultural practices".

The 2019 Climate Change Policy outlines a vision for Myanmar to be a climate-resilient and low-carbon society. The policy provides direction and guidance on: 1) taking and promoting climate change action on adaptation and mitigation; 2) integrating climate change adaptation and mitigation considerations into national priorities and across all levels and sectors in an iterative and progressive manner; and 3) making decisions that create and maximize opportunities for sustainable, low-carbon and climate-resilient development. Of particular note for this brief, priorities identified in the policy include ensuring that national, subnational, and local policies and plans on urban and rural settlements, townships and local development plans and land-use plans, integrate climate change adaptation and mitigation considerations, and are complementary to and/or support actions under the policy, and that territorial spatial planning at the regional, district, city, township and village level fully address current and future climate-related risks and opportunities. This mandate for climate change integration across development and land-use plans, which is currently absent in the fragmented land legal framework, should therefore be carefully considered in the development of the National Land Law.

The 2019 Climate Change Policy is complemented by the 2018 Climate Change Strategy and Action Plan (CCSAP, 2018–2030), which presents a roadmap to guide strategic responses and actions to climate-related risks and opportunities. Two separate, but connected, objectives are to: 1) increase the adaptive capacity of vulnerable communities and sectors to be resilient to the impacts of climate change; and 2) create opportunities for potential sectors to follow a low-carbon development pathway, ensuring development benefits to households and all economic sectors. Further, the CCSAP identifies as its first priority the delivery of climate-smart agriculture, in the subsectors of crops, fisheries and livestock, while maintaining food and livelihood security, economic growth and social development. The Myanmar Climate Change Master Plan (2018–2030) was formulated and adopted by the Environmental Conservation Department of the Ministry of Natural Resources Management and Environmental Conservation (MoNREC) in 2019 to operationalize the CCSAP.

These policy instruments provide guidance for mainstreaming relevant land management considerations into climate change instruments and vice versa, showing awareness and intention on the part of the government to act accordingly. These policy documents also support the land-related targets of the NDC, mentioned above. In this regard, the challenge is to: 1) identify pathways to achieve such objectives within the existing legal and institutional framework, including to understand whether the current rules on land tenure enable or block the achievement of such goals; and 2) provide insights and recommendations on how these issues could be framed in the ongoing process of legal reform in the land sector.

3. Challenges and opportunities

The legislative framework in Myanmar offers relevant legal avenues that can be pursued to secure and protect tenure rights in the face of climate change. With regard to the impacts of natural disasters, the 2013 Natural Disaster Management Law has the objective of implementing natural disaster management programmes to reduce risks posed by disasters, complemented by the Natural Disaster Management Rules in 2015, and the Myanmar Action Plan on Disaster Risk Reduction 2017. The 2013 Natural Disaster Management Law creates the National Natural Disaster Management Committee, and contains provisions related to disaster management and response. In order to reduce damages and losses, the law provides preventive measures such as

improving early warning systems, identifying areas prone to disasters, and the preparation of risk assessment and emergency planning, and preparatory measures for post-disaster relief (arts. 14–15). Further, post-disaster rehabilitation and reconstruction activities are envisioned, including reconstruction of buildings and houses damaged by natural disasters as disaster-resilient buildings in an appropriate area and rehabilitation to restore agriculture and livelihoods of victims (art. 18). The Natural Disaster Management Law also creates a Natural Disaster Management Fund. Little information has been found on the implementation of this law, although its provisions offer important legal avenues to promote climate change adaptation and resilience. However, it is reported that the National Natural Disaster Management Committee has mainly conducted post-disaster activities to date, taking a reactive disaster management approach rather than proactively conducting disaster prevention, preparedness and mitigation (ILO, 2017). Further, support for relocations following



natural disasters also faces limitation such as insufficient availability of land for resettlement and support for home and livelihood restoration of populations affected by disasters (Refugees International, 2016).

Resettlement and displacement are major issues related to climate change. Together with the disaster management framework outlined above, the 2019 Land Acquisition, Resettlement and Rehabilitation Law includes provisions on resettlement and rehabilitation (arts. 46–50), which were absent in the original 1894 Land Acquisition Act. Further, the law gives the Union Government powers to undertake urgent acquisition of land in cases where there is need for relocation of populations in the event of actual or potential natural disasters (art. 51). These provisions could be implemented to benefit populations at risk of displacement due to climate-induced risks. Further, the 2012 Vacant, Fallow, and Virgin Lands Management Law (amended in 2018) might be of relevance in this regard. The Law establishes (art. 3) the Central Committee for the Management of Vacant, Fallow and Virgin Lands, chaired by MoALI, and creates a mechanism to allocate “virgin, fallow and vacant” land for agriculture, livestock farming, aquaculture, mining and “other possible uses allowable in line with the law”. While this law has been criticized as a mechanism to unjustly allocate land to large commercial operations, to the detriment of populations living under customary tenure or other arrangements, it could also be used in conjunction with the Land Acquisition, Resettlement and Rehabilitation Law and the National Disasters Management Law (in the absence of a broader instrument of land-use planning) to identify suitable land in case of relocation of populations due to the impacts of climate change.

The primary aim of the 2013 Law of the Protection of the Farmers Rights and Enhancement of is to protect farmers and provide incentives such as technical and financial assistance, as well as market support and aid, in case of loss and damage caused

by natural disasters (art. 3). This law creates the Leading Body for Protection of Farmers Rights (art. 4), and is led by MoALI. The Leading Body is mandated to: 1) carry out tasks that are relevant to supporting adaptation actions, while reducing GHG emissions and increasing livelihoods, such as assisting farmers with producing and selling profitable crops freely; 2) educate farmers in the choice of crops according to regional characteristics (which can be supportive of climate change adaptation needs); 3) assist farmers with becoming familiar with insurance systems for agriculture, and techniques for appropriate storage (which might also be supportive of climate adaptation and disaster-risk reduction goals); and 4) act as a coordination body with other ministries and civil society on these matters (art. 5); support farmers in protecting their rights, including the right to choose crops, to form associations, get reasonable prices for produce, and to protect farmers from unfair land acquisitions, which violate land rights (arts. 8–9). This law is relatively unknown to the external public, and little information can be found on its implementation, but these provisions can provide strategic support for the undertaking of climate change initiatives, especially those relevant for adaptation and resilience, based on the mandate described above.

Women’s land tenure rights are also a relevant topic with regards to climate change. Women’s tenure rights tend to be insecure in Myanmar and this may be exacerbated due to increasing climate risks as women are often in a situation of increased vulnerability. As an example, many of the poorest households living in informal settlements worldwide are women-headed households, and the vulnerability of women who become single heads of households is accentuated and highlighted by natural disasters (Mitchell, 2011). While women have equal rights under the 2008 Constitution to enter into land tenure contracts and to administer property, there is no guidance on how women can,

in practice, uphold their rights in case of divorce or death of their husband. In addition, customary laws that govern issues related to succession, inheritance and marriage often do not give women equal access to, or control over, land. As an example, the 2020 revision of the Farmland Law requires that land be registered in the name of the head of the household rather than explicitly requiring dual registration (i.e. registration in the name of husband and wife), and it does not explicitly recognize the equal rights of women to register and inherit land or be granted land-use rights for vacant, fallow and virgin land.

Another topic of concern is the need to proactively upgrade the national land administration system to face climate change impacts and risks. Two major aspects are relevant in this regard: 1) access to data on climate change and the likely impacts, as a basis for improved decision-making; and 2) the existence of an accurate and reliable land information system, including transitioning into digital systems of land records to avoid risks posed to physical records by the increasing occurrence of natural disasters (Land Portal, 2020). Both issues are directly applicable to Myanmar. These are based on two major problematics. First, the country lacks a unified and comprehensive land record and cadastral maps, leading to often outdated or conflicting information on land uses and tenure rights. In addition, vast amounts of land are still not registered, noting that customary rights should be recognized and related land duly registered. Second, land records are in poor condition, especially land-use certificates that often contain incorrect information and inconsistencies with other land records. The conversion of paper records to a digitized format – and the updating of maps and registers – is recommended in order to update the Myanmar's land administration system (World Bank, 2018). Integrated land information systems become even more relevant in the context of preventing and managing climate risks as well as

implementing, monitoring and reporting adaptation and mitigation actions. The same is true with regards to forestry inventories, GHG inventories and reporting under the Enhanced Transparency Framework of the Paris Agreement, under the Sustainable Development Goals, and the Sendai Framework on Disaster Risk Reduction. Furthermore, linking integrated land information systems with climate services can enable managing risks of climate variability and climate change, managing food systems and resources, advancing payment for environmental services and risk transfer mechanisms, and contributing to food security information and emergency response. The NLUP process provides an opportunity to address these issues in the new legal framework to be anchored in the new National Land Law.

In terms of the way forward, the development of a National Land Law, as mandated by the NLUP, and the creation of the National Land Use Council in January 2018, are fundamental steps to strengthen the enabling legal environment to enhance land tenure security, and would also reinforce legal provisions in the face of climate change. NLUP article 77 and following, give relevant indications for the National Land Law process. Additionally, NLUP provisions should be used to guide the harmonization of existing land-related laws in the country, particularly the Farmland, Forest and Amended Vacant, Fallow, and Virgin Lands Management Laws. This is significant in the sense that the NLUP includes relevant VGGT principles and other important elements that are missing in the existing laws. Other elements can be highlighted from a legal perspective in the NLUP:

- Includes a classification of land types (para. 13) that simplifies the many existing land categories into agricultural land (which significantly includes land for aquaculture, and agriculture land that is temporarily fallow as recognized agriculture land categories); forest land (including those lands intended to be included in

the Permanent Forest Estate); and other lands (that do not fit into the previous two categories).

- Determines accurate delineation of land and recording of tenure rights (paras. 15–17), including of legitimate tenure rights of communities (individual or communal) that are currently not registered (which addresses challenges such as lack of recognition of land tenure rights related to shifting cultivation practices and community forests).
- Creates a procedure for land-use planning at the district level, including for land-use change (para. 25), that consults all levels of decision-making and is approved in a participatory and consultative way (which addresses the arbitrary way land-use change can be done under current laws); includes also social and environmental safeguards, such as procedures to protect existing legitimate tenure rights when land-use change applications are submitted.
- Expressly determines that the National Land Law shall recognize customary land tenure systems and management practices of ethnic groups, whether or not the existing land uses are registered (paras. 64–70), including in forest and “virgin, fallow and vacant” lands and *taungya*; and gender equality on land tenure issues (paras. 75–76);
- Gives special attention to vulnerable groups, such as customary land holders whose rights are not recognized under current land legislation; women, especially married women who practice land-based agrarian activities as part of the household’s livelihood; smallholder farmers whose rights have not yet been recognized and registered, including those who engage in farming systems that are not registered under the Farmland Law; ethnic nationalities, and internally displaced people, including principles of fair compensation, rehabilitation, restitution and reclaiming their tenure rights.

4. Recommendations

In view of the above analysis, the following cross-cutting recommendations are made to enhance the protection of land tenure rights in the face of climate change risks and challenges:

- Strengthen tenure security for all legitimate tenure rights, including those of smallholder farmers practicing farming in customary tenure systems such as communities in forest lands, and practicing shifting cultivation. This topic continues to be an important challenge affecting a big part of the population, and aggravated by climate change. Even where tenure rights are statutory, depending on which type of land, they might be insecure or fragile. The lack of tenure security means, on the one hand, a disincentive for land users to access loans, invest in land use changes that can contribute to adaptation and mitigation to climate change; on the other hand, in the face of potential displacements due to climate disasters, as well as of changing climatic patterns and resulting possible land uses, such insecure tenure rights leave land users unprotected.
- Enhance the recognition and protection of land tenure rights of vulnerable groups, such as displaced people, Indigenous Peoples, youth and women in land-related laws, as climate change exacerbates the already existing challenges faced by them with relation to tenure insecurity.
- Integrate climate change considerations in the drafting of the National Land Law, following the mandate of the NLUP, including issues such as spatial planning, adaptation planning, disaster risk management and reduction, resettlement and adaptability with regards to tenure security.
- In the face of risks posed by climate change, such as increased floods and storms,

creating a digital land registry would greatly reduce chances of land-use rights records being lost. Further, enhancing integrated land and geospatial information systems would provide much more accurate information on land uses, which can be instrumental both for tenure security and for spatial planning that integrates actions for climate change resilience adaptation, and mitigation.

- Simplify and reduce the procedures related to securing tenure rights, particularly with regards to changes of land use in farmland, to enhance adaptability to changing climate conditions (Myanmar Centre for Responsible Business, 2020).

In order to ensure tenure rights are respected when implementing climate change mitigation and adaptation measures discussed above, recommendations include:

- Fully implementing legal provisions that allow for community-based and customary forest management, as indicated in the Forest Law, Forest Policy and the NDC.
- Clarifying questions related to tree tenure and carbon rights, which might arise in the context of carbon offsetting projects related to forest carbon stocks and REDD+.
- Allowing freedom of crop choice and implementation of climate-resilient modalities, such as crop diversification, rotation, cover crops, agroforestry and integrated systems, in particular land uses that combine paddy rice and fish harvesting.
- Appropriately consider the need to secure tenure rights for Indigenous Peoples and ethnic nationalities when implementing climate change adaptation and mitigation measures.

In addition, in order to safeguard tenure rights from the risks posed by the threats of climate change:

- Ensure a broader classification of agricultural land and greater flexibility in its use, to avoid loss of land tenure rights (e.g. land-use certificates in farmlands) taking in

consideration the importance of integrated systems for climate resilience and that changing weather conditions also lead to changes in crop suitability to specific crops in the different areas of the country.

- Make use of the legal provisions of the Natural Disasters Law and the Farmer's Protection Laws to address the risks and impacts arising from climate change to tenure rights of the rural population. In particular, a more proactive approach to disaster risk prevention and reduction, and the relocation and livelihood restoration of populations in areas that have been the worst affected by disasters, including increased support for the implementation of the Myanmar National Recovery Framework.
- Ensure resettlement plans are implemented for those displaced by climatic disasters; in absence of the National Land Law with an overall mandate over these issues, consider using existing mechanisms such as vacant, fallow and virgin land through the Vacant, Fallow and Virgin Lands Management Law to allocate land for this purpose;¹
- Include climate-sensitive land-use planning and integrate climate change adaptation and mitigation in the drafting of the new land legal framework (whether in an umbrella land law, or in specific provisions of a land use or spatial planning focused law).
- Ensure the different impacts that climate change has on groups in a vulnerable position, such as women, Indigenous Peoples, youth, small-scale food producers and elderly are appropriately addressed.
- Allow for integrated planning at the landscape level; currently, the fragmented governance of land, including institutional mandates, and strict land classifications prevent such measures, instead focusing on more specific outcomes such as forest conservation or increased agriculture production outputs.

¹ Similar recommendations to make use of the Vacant, Fallow and Virgin Lands Management Law to improve land access to poor and marginal groups, farmers with small land holdings, and landless households have been made by World Bank (2018).



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