

LAND TENURE IN RURAL LOWLAND MYANMAR

From historical perspectives to contemporary realities
in the Dry zone and the Delta

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Of Lives and Land Myanmar research series

The Of Lives and Land series emanates from in-depth socio-anthropological research on land and livelihoods dynamics. Through various thematic focuses – urban, peri-urban and rural land issues, migration, conflict and resettlement – the series presents a rigorous analysis of how people from various regions of Myanmar shape land relations in a rapidly changing social, economic and political context. From the exploration of grounded realities, the series aims to address some of the challenges that Myanmar people, the state and other stakeholders are facing in managing land and associated resources and seeks to provide insights to inform policy dialogue and law formulation processes. The series is peer reviewed by a committee of professionals and academics.

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Acronyms

ARDC	Agriculture and Rural Development Corporation
CNRS	Centre National de Recherche Scientifique (France)
CSO	Civil Society Organization
DALMS	DALMS Department of Agricultural Land Management and Statistics (former SLRD)
DoA	Department of Agriculture
DZGD	Dry Zone Greening Department
FAB	Farmland Administration Body
FAO	Food and Agriculture Organization of the United Nations
FD	Forest Department
GAD	General Administration Department
GDP	Gross Domestic Product
HH	Household
HHH	Household Head/ Head of Household
IFAD	International Fund for Agricultural Development
INGO	International Non-Governmental Organisation
IRRI	International Rice Research Institute
LIFT	Livelihoods and Food Security Trust Fund
LUC	Land Use Certificate
MADB	Myanmar Agricultural Development Bank
MAS	Myanmar Agricultural Service (former DoA)
MFI	Micro Finance Institution
MMK	Myanmar Kyat
MOAI	Ministry of Agriculture and Irrigation (former name before May 2016)
MOALI	Ministry of Agriculture, Livestock and Irrigation (name after May 2016)
MOECAF	Ministry of Environmental Conservation and Forestry
MONREC	Ministry of Natural Resources and Environmental Conservation
NGO	Non-Governmental Organization
NLD	National League for Democracy
NLUP	National Land Use Policy
PRF	Protected Public Forest
RF	Reserve Forest
SEE	State Economic Enterprise

SHG	Self Help Group
SLORC	State Law and Order Restoration Council
SLRD	Settlement and Land Records Department
SPDC	State Peace and Development Council
USDP	Union Solidarity and Development Party
UN	United Nations
UNCCD	United Nations Convention to Combat Desertification
UNDP	United Nations Development Programme
VFV	Virgin, Fallow and Vacant
VTFMC	Village Tract Farmland Management Committee
VT	Village Tract
VTA	Village Tract Administrator
WRUD	Water Resource Utilisation Department

Burmese terminology terms

The Burmese words are rendered in this report using the conventional transcription with raised comma tones as in Okell, 1971 (Okell, John. 1971, *A guide to the romanisation of Burmese*, Royal Asiatic Society of Great Britain and Ireland: London.)

Correct transliteration	Definition
<i>amwei</i>	Inheritance
<i>a-nu-gan-myei</i>	See <i>le-pyan-ngwei-pyan</i>
<i>apyin pyis-si''</i>	'Outside property' (inheritance): includes money, gold, gems
<i>atwin pys-si''</i>	'Inside property' (inheritance): includes farmlands, cattle, farm tools
<i>athis</i>	Freemen
<i>bauk-thama'</i>	As opposed to <i>le-thama'</i> , general worker
<i>bei gya lei</i>	Variety of monsoon paddy
<i>bo''bapaing</i>	Land transferred through generation, generally after being reclaimed through clearing (see <i>dama-u-gya</i>)
<i>da''ma'-u-khja</i>	'first (to) wield the machete', designates the right of the first person clearing a piece of land to put under cultivation / a term applied to land which has become the property of the owner, by right of his having been the first to clear it of jungle, or by right of his having cleared it of jungle after its owner had deserted it. (Judson dic: p. 518)
<i>dokkhita</i>	Destituted' people exempted from the <i>Thathameda</i> tax under King Mindon (1853-1878)
<i>eim khyan</i>	Home garden
<i>kaing-kjun''</i>	Alluvial land
<i>khayaing-wun</i>	District officer (pre-colonial Burma)
<i>kwat</i>	Unit for measuring cultivation plots, equal to 1.25 acres
<i>kwat-pyat</i>	Task based arrangement between a landowner and a worker (based on the number of kwat to be worked)
<i>kwet-pyauk</i>	Plots escaping cadastral maps

<i>kwin</i>	Field, cadastral unit
<i>kyauk-lok</i>	Stonewalls built across water ways in Dry Zone to transform hill slopes into arable lands
<i>kyei"zu"shin</i>	Master of gratitude
<i>kjun</i>	Slave, servant-tenant
<i>le</i>	Paddy land
<i>le-pyan-ngwei-pya</i>	Mortgage (<i>litt.</i> the paddy land against the money)
<i>le-thama'</i>	Farmer
<i>le-ya-myei lok-paing-khwin</i>	Right to cultivate the land
<i>lon-khji"</i>	The Burmese sarong
<i>lu-kyi"</i>	Important / respectable person / authorities
<i>lu-mu-yei"</i>	Social (practice)
<i>lwe-pyaung"</i>	To transfer
<i>mahalwari</i>	(Hindi) a village based system in which village bodies which jointly owned the village were responsible for the land revenue
<i>myo'</i>	Town
<i>myosa</i>	Town's governor (pre-colonial times)
<i>myo'-thukyi"</i>	Town's administrator
<i>nga"pi</i>	Shrimp/fish paste
<i>ok-thukyi"</i>	Person in charge of cooking the meal during social events, donations
<i>paing sain-tho</i>	Ownership
<i>Patta (system)</i>	(Hindi) system, aimed at encouraging cultivators to cultivate state land that had previously not been under cultivation. This system granted tenure before the cultivator cleared the land without collecting revenue during a period varying according to the difficulty to transform the land into productive farmland. Such land could not be mortgaged and cultivators had to show sufficient means to cultivate the land without resorting to money-lenders
<i>phaya taka"</i>	Lay individual actively involved (including financially supporting) in monastery's activities

<i>ryotwari</i>	(Hindi) an individual based system where revenue settlement was fixed directly with individuals (colonial period)
<i>shin-pyu'</i>	Buddhist novice
<i>taik</i>	Pre-colonial administration unit corresponding to a grouping of villages
<i>tawak-sa''</i>	'eat half', name of a sharecropping arrangement
<i>thanaka</i>	Perennial tree (<i>Limonia acidissima</i>)
<i>thathameda</i>	Tax introduced under King Mindon (1853-1878), of tenth of the household's income and replacing all other existing taxes and fees as known under previous monarchs.
<i>Thi''-sa''-khja'</i>	Sharecropping
<i>thon''-su'-thasu'</i>	'1 measure-3 measures (of crop)'; name of a sharecropping arrangement:
<i>thu-kyi''</i>	Headman
<i>u-yin</i>	Garden/orchard land
<i>u-paing</i>	Individual landholding
<i>ya</i>	Dry land
<i>ya-eim-hmu</i>	100 households' leader, himself referring to the village tract administrator
<i>yap-mi'-yap-pha'</i>	'traditional' elders
<i>ye''-mye'' shin</i>	Lord of water and earth'
<i>ywa myay</i>	Village land
<i>ywa-thukyi''</i>	Village headman
<i>zamindari</i>	(Hindi) the landlord based system (<i>zamindari</i>) where landlords established the tax to be collected for themselves, from which they would pay the requested amount to the British administration
<i>zin''gama'' myei</i>	Temporary alluvial areas that are created in river beds through the accumulation of alluviums during rainy seasons, managed communally by the village

Short guidance note for interpretation of tables (cross-tabulations)

The quantitative analysis used a French software, Modalisa®, for interpreting the relationship between different modalities. This program has been created in the objective of reuniting both quantitative and qualitative statistical tools in a single software.

Throughout the report, the reader will come across cross-tabulations tables consisting in confronting the different modalities of two variables in a single table. Modalisa® offers a graphical reading of the ties existing between the modalities of 2 variables, based on the calculation of PEM (percentage from maximum deviation), that is an index of ties between modalities of a contingency table.

The local PEM allows the relevant cross-tabulations to be filtered according to whether they have at least one box with a significant local PEM. For a PEM to be chosen the number must be sufficient and the Chi-Square must be significant. For the PEM to be considered significant it is necessary that the test of Chi-Square over the whole table is greater than 90% (value of p less than or equal to 0.1).

The colorimetric index reflects the strength of ties between modalities (the darker the stronger): positive ties are shown in green and negative ties in blue. As shown in the table below, the “Capitalized family farmers” category is positively correlated to the fact of having enough rice throughout the year (dark green) and negatively correlated to having not enough rice (dark blue). The “Agri-specialized small farmers” category is positively correlated, yet with a less stronger tie (light green), of lacking rice throughout the year.

Table 59: Distribution of households declaring lacking rice at least once in the year, among the 3 farmers categories (Dry Zone)

	Capitalised family farmers		Multi-active farmers		Farm-specialised small farmers		Total	
	Nb HH	%C	Nb HH	%C	Nb HH	%C	Nb HH	%C
Not enough rice	2	1.8	17	15.3	22	17.2	41	11.6
Enough rice	112	98.2	94	84.7	106	82.8	312	88.4
Total	114	100.0	111	100.0	128	100.0	353	100.0

Chi-Square=16.1 dof=2 p=0.001 (Very significant) Cramer's V=0.214

Effectives in each cell can be shown as per the number of households concerned (eff. (or Nb HH)), in percentage of a column (%C) and percentage of a row (%R).

Dof designated the Degree of Freedom which refers to the number of random variables that can not be determined or fixed by the statistical test.

For more details see: <https://www.modalisa.com/pdf/CiboisPEM.pdf>

Conversion of Units

AREA

Unit	Square feet	Kwat	Hectare
1 Acre (standard)	43,551	0.8	0.4046

VOLUMES AND WEIGHTS

Standardized measurements in Myanmar:

Government basket (GB)	Imperial Gallon	Pound (lbs)	Kilogram (Kg)	Item
1	9	46	20.861	Paddy

(Source: Bernot, 1974)

1 GB = 16 pyi = 128 condensed milk cans (128 x 11.25 fluid ounce = 9 imp gal)

Units	KG	Viss
1 GB =	20.86*	
1 Kg =	1	0.612
1 Viss =	1.633	1

*For paddy

(Source: Bernot, 1974)

PADDY YIELDS

GB / Acre	KG/hectare	KG/hectare
10	209	522.5
20	418	1,045 ~ 1 ton
40	836	2,090 ~ 2 tons
50	1,045	2,612.5
60	1,254	3,135 ~ 3 tons
100	2,090	5,225 ~ 5 tons

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Land tenure in rural lowland Myanmar

From historical perspectives to contemporary realities in the Dry zone and the Delta Maxime Boutry, Celine Allaverdian, Marie Mellac, Stephen Huard, U San Thein, Tin Myo Win, Pyae Sone **GRET – Myanmar / Land tenure research** May 2017

Executive summary

During the critical years following the 2012 land reforms undertaken in the midst of Myanmar's political transition, Gret conducted an in-depth study combining qualitative and quantitative surveys in nine villages of Bogale and Mawlamyinegyun townships (Delta) and nine villages in Monywa and Yinmabin townships (Dry Zone). The full report and the synthesis are the result of more than two years in-depth research and 13 months of fieldwork that involved an inter-disciplinary team of 11 international and Myanmar researchers. It provides a better understanding of land dynamics at the local level and proposes a new reading of issues faced by rural households in these days of reform.

■ A historical perspective on land policies in Myanmar

In precolonial times, farmers were in fact highly integrated in a relationship to local patrons (headmen, crown officers) that would ensure their protection both in social and economic terms. In contrast to the supposed British goal, the last 150 years have actually been about undoing patron-client ties for diverse reasons, the first and foremost being systemizing the collection of taxes for the State on an individual basis. What was long established as hereditary rights on land was transformed into individual claims on land, and land turned into a commodity. The country's administrative division into village tracts marked the rise of the village headman who became a local elite backed by the colonial administration. The integration of rice production into international markets and its subsequent monetization and value chain integration contributed to a fragmentation of former comprehensive patron-client relationships. As a whole, rural society changed with landlords and money-lenders overturning legitimate headmen and patrons. The 1948 nationalization act and subsequent policies (Land Nationalization Act 1953; Tenancy Act and Rules 1964) aimed at reversing this situation to create a body of peasant-proprietors rather than tenants. But the Burmese agrarian society had already been uprooted from its sociocultural framework¹, and the closing of the agrarian frontier together with the 1930s Great Depression left many

1. Dry Zone farmers better resisted the impact of such change thanks to a greater historical depth than the Delta society that was principally developed through the British colonization.

peasants without the financial capacity to undertake cultivation. Not only was the redistribution of land under the Land Nationalization Act poorly implemented (with only 17% of all cultivated lands nationalized), but harmful policies such as the compulsory procurement of a fixed quota of harvested crop – particularly for paddy – (at a fixed low prices) also severely affected small holders while benefitting the bigger farmers.

■ The 2012 land reforms and their challenges

In 2012, the new Land Law, a reform “in the interest of the entire people”², came to sanction the pre-existing system based on individual land rights by distributing Land Use Certificates (LUCs) and legalize transfers of land use rights. This reform did not much change the on-the-ground reality of land tenure and land dynamics, since farmers did not wait for formal reform to sell, rent, or mortgage their land (despite the legal ban on such transfers prior to 2012). LUCs are supposedly bringing more security by legalizing these transfers, yet many practical barriers remain, notably when it comes to dividing an LUC over a plot of land into two or more pieces. But most of all, the precariousness of land tenure in Burmese lowlands lies in the system itself rather than the modalities of its implementation.

Although the division of land through inheritance did not bring many issues under the 2012 reform, previous arrangements on land use rights that were often done on an oral basis were challenged by formalization. The distribution of LUCs rekindled old conflicts (such as land transfers forced by farmers’ incapacity to deliver the compulsory paddy quota to the government) and created new ones (notably between parties involved in mortgage arrangements). In other words, both British and 2012 reforms brought into light the complexity of formalizing – allegedly in order to secure – land tenure with top-down policies, especially when little is done to understand local realities. Farmers in Burmese lowlands were not lacking documents formalizing their claims. Yet, farmers have always been at threat of arbitrary land confiscations by the State. In that sense, LUCs do not seem to provide more security than the previous documents. However, it will surely lead to more insecurity to the farmers who have not received LUCs. Key recommendations are to conduct a review of the 2012 land registration process in order to identify gaps and prioritize how those gaps will be addressed so that public confidence can be improved. Also, accessible and affordable deed registration procedures need to be set in place in order to record land transfers and update land records properly. A proper land taxation system may also improve land administration. Capacity building of authorities involved in land governance is also crucial in the process.

2. According to a speech by Vice President Dr Sai Mauk Kham (2011-2015) introducing the land reform in May 2012.

There are many discrepancies between the actual use of lands and their official classification under the legal land categories. The lack of coordination between the different institutions in charge of, respectively, farmlands, forestlands, and vacant, virgin, and fallow lands is evidently part of the issue. This issue highlights the need for more systematic land use planning processes and to move from a system in which each government agency is perceived as the “owner” of respective land categories to a custodianship model in which there would be a single land-agency for administration of lands³.

In addition, farmers’ needs and agricultural practices do not match with the legal restrictions on land use which have remained with the 2012 land reform, highlighting the contradiction between the broadening of land use rights, on one hand, and the government’s enduring tendency to control land on paddy production (the staple crop constituting Myanmar’s national identity) on the other. In many cases, these discrepancies hinder farm productivity and farmers’ resilience to shocks. It also generates land insecurity and opportunities for local corruption and abuse of power towards non-compliant farmers. It is urgent that farmers be given full disposal rights on the choice of crops and review restrictions on fallows as farmers are the best suited to make optimal decisions to enhance their livelihoods and land productivity, and respond to market dynamics. This also entails extending the land use categories over which tenure can be secured by simplifying the land use classification system and integrating into the farmland category uses such as agroforestry and aquaculture. Legal procedures for land use changes and transfers must be affordable and accessible through simplified and decentralized processes. Finally, sanctions in case of non-compliance with restrictions of land use should not result in livelihood insecurity (eg: in case of heavy sanctions such as land confiscations and high fine amounts).

During the past decades, land governance has been highly concentrated in the hands of Village tract headmen, who were acting as political brokers⁴ between government and villagers. In the absence of checks and balances, corrupt practices have prevailed at the expenses of the weakest and dispute arbitration decisions were often done in favor of the “highest bidder”. This generated a lack of trust within the community towards the Village tract administrator and the members of the diverse forms of local land committees that have existed through time. In addition, the social capital at the village level has often been crippled in the past decades and informal institutions lack capacity to deal with land conflict. Finally, there is a lack of independent conflict resolution mechanisms. To handle these major issues, the government needs to enact a close review of the Farmland Management Body –

3. This does not exclude the involvement of concerned line ministries in land use related issues.

4. Bierschenk & al. 2000.

particularly its Village tract level representation – in order to address its very limited capacity in resolving intra-villages conflicts. Despite the recommendations of the Commission for the Assessment of Legal Affairs and Special Issues, it is suggested to maintain and promote the establishment of independent monitoring bodies- as proposed in the National Land Use policy, with participation of all stakeholders, and by appointing monitors that have no direct interest, to observe settlement of land disputes. Sound processes for selection of community representatives need to be defined as part of this. These conflict resolution mechanisms need to take into account lands' history and trajectories. Concrete mechanisms for transparency and accountability of the actors in charge of translating the legal framework into practice on the ground and promote legal awareness capacity building at local level, both for communities and authorities.

From a gender perspective, it is necessary to encourage women's representation in land administration bodies and provide gender sensitive information about the current land framework at ground level. Measures should be taken to reduce vulnerability of women in case of divorce or separation or death of the husband, something that can be accomplished whether through joint registration of spouses on LUCs or through other complementary laws relating to family and social protection issues.

■ [Building a conducive context for securing agricultural livelihoods](#)

Policies to support agriculture and rural livelihoods in a broader sense need a comprehensive cross-sectoral approach that obviously goes far beyond the land question. Transport and water management infrastructure, rural finance, access to markets, research, agricultural education and extension services, and structuring of farmers' organizations are crucial issues to address. In addition, further strategic thinking is needed to formulate consistent trade policies on agricultural products.

■ [Improving rural finance](#)

Rural finance is a crucial key for rural development. While the MADB's loan scheme seems to be the most effective at the moment in terms of high geographic coverage and very low interest rates, the poor quality of services, limited human resource capacity, and issues in relaying MADB policies at the village level hinder much of its potential benefits. A deep reform of MADB is needed to improve the quality of services: adapt the timing of loans (disbursement, repayments, etc.) so they appropriately align with crop cycles and farmers' cash flow constraints, increase MADB loan amounts, especially for non-paddy crops, train and appoint professional MADB staff employees at the village tract level to facilitate application,

management, disbursement, and reimbursement of loans. As indebtedness is still a strong driver of land exclusion, it is also recommended to reduce rural cultivators' dependency on private money-lenders by promoting access to affordable credit schemes, simultaneously with financial education aiming at improving households' financial management skills so as to reduce indebtedness. In this process, it is also important to ensure coordination among the publicly funded initiatives⁵ and microfinance institutions to avoid indebtedness of those who contract multiple loans.

■ Investing in sustainable agriculture and promoting resilience

Dry zone rainfed land crop systems are rather extensive in order to cope with the scarce and unpredictable rainfall while in the Delta, agriculture is highly specialised in paddy. Despite these differences, state-led investment in irrigation and water management is crucial, combined with the promotion of context-specific sustainable agricultural practices, in both those areas. This requires adapted extension services to provide technical knowledge on crops (investment, profitability, suitability according to agro-ecological regions) for farmers so that they can make efficient choices.

Rural livelihoods' sustainability also relies on households' capacity to absorb shocks. Land insecurity is often an impact of such shocks. Resilience of rural households could be strengthened through social protection schemes, notably to cover health expenses. Sustainability of such schemes may be achieved through their structuring beyond the village level. Interesting initiatives through the federation of village groups have been conducted in Myanmar that would be important to build on. Exploring options to cover crop-related risks through national level crop insurance schemes would be useful.

■ The issue of farm labor

Small scale agriculture is a huge source of employment. The majority of Delta and Dry Zone farming households (over 80%) must employ agricultural labor to work on their farms. 42% of households have at least one member of the family earning some income as an agricultural wage laborer. As a consequence, pushing mechanization through large farm machines⁶, such as big combined harvesters, needs very careful thought to avoid driving away families depending on farm labor, keeping in mind that options for other livelihoods and jobs in urban areas

5. There are multiple publicly funded initiatives, namely from MADB, Cooperative Department (*Tha Ma*), Rural development department (*Mya Sein Yaung*), and some other smaller scale initiatives.

6. Access to small scale machinery (such as power tillers for paddy lands) is however essential.

are still relatively limited. This risk may be particularly strong for those in the Delta, where working as a farm laborer is very specific to the landless and to very small landowners (owning less than three acres)⁷. On the other hand, the qualitative study found that in the Delta, finding farm laborers during peak periods (such as for transplanting and harvesting) can prove to be very challenging and partly explains why many farmers are unable to cultivate the entirety of their lands in summer. However this constraint allows temporary access to lands to landless or very small farmers in summer. As such, the recourse to farm laborers can somewhat be interpreted as a wealth redistribution mechanism, not only by the fact that it provides jobs but also because constraints promote temporary land access to the landless. New forms of win-win arrangements between laborers and farmers need to be experimented.

■ [Taking into account the diversity of rural households for effective targeting of policy and action](#)

Policies and rural livelihood support actions need to take into consideration the fact that “smallholders” are not one uniform category. Indeed, based on the life cycle, landholding size and livelihood strategies, different types of smallholders can be distinguished. For example, “farm-specialized small farmers” rely mostly on agriculture (and on-farm labor) while “multi-active small farmers” are much more diversified in their activities, including in the off-farm sector. The former are generally more precarious in terms of livelihood security than the latter regardless of the cultivated surfaces.

Likewise, a closer look at landless households’ livelihoods can provide with more nuanced features regarding the precariousness of land access in the studied regions. Indeed, the “landless” categories covers a wide range of households who have very different levels of dependency to agriculture-related activities: from the “farming landless” who cultivate lands accessed through temporary arrangements (rent, sharecropping...), those depending heavily on farm wage labor, those characterized by multi-activity to those depending exclusively on off-farm activities outside of the primary sector.

The household’s life cycle is recognized as one of the major factors differentiating whether a given household has access to agricultural land. The study shows that landlessness can often be a temporary state for younger households who will inherit and are saving to buy land, while landlessness becomes a permanent form of land exclusion for households headed by a person over 40-50 years old. Policies and livelihood support actions should address the specific needs of different age

7. In the Dry Zone this activity is more evenly practiced by different landholding categories.

groups. “Young” small holders and landless households need to get priority for specific support for their farming projects, such as for example access to cattle for “young” Dry Zone households and access to vacant lands through temporary arrangements, for “young” smallholders and landless households of the delta.

The occurrence of landlessness has much to do with historical and agricultural features of the studied zones. For instance, the Dry Zone is the cradle of Burmese society, with long-established villages and stronger social organization, while the Delta is a frontier society and has been more impacted by predatory policies such as the ‘Compulsory Paddy Quota’. For these reasons, landlessness rates are often higher in the Delta than in Dry Zone villages. In addition, there are strong disparities between villages of the same region, highlighting the complexity and intertwinement of different factors – such as agro-ecological conditions and the importance of power relations at the local level – for determining land access. These disparities demonstrate that large scale surveys and uniform “one size fits all” solutions on land tenure bear risks as they are not able to effectively address local and context-specific problems. Land redistribution projects should for instance prioritize older agrarian landless households (whose head is more than 40 years old) and landless households relying mainly on farm-labor.

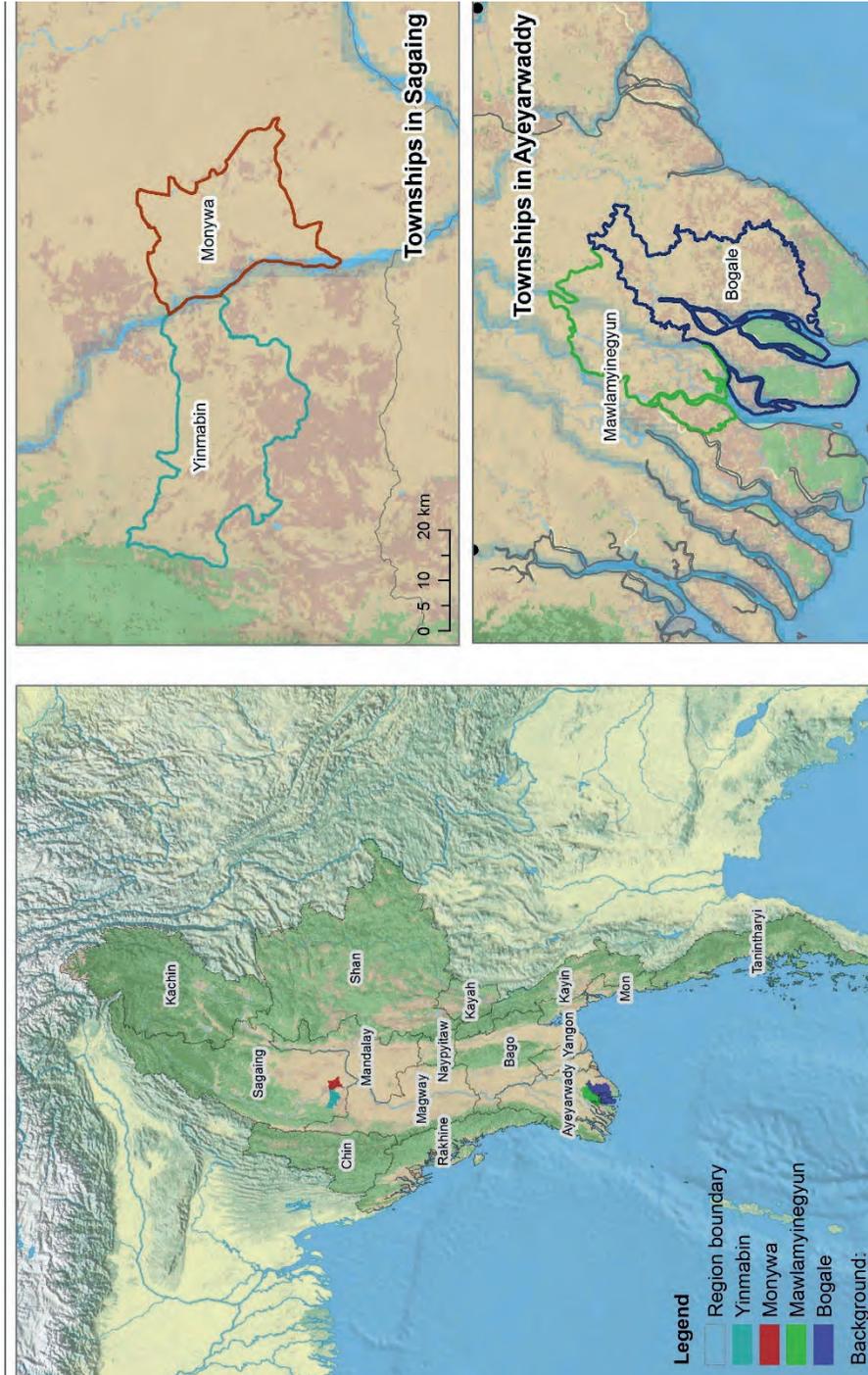


Figure 1: Maps of the study areas in Myanmar

I. Introduction

1. Towards a new land framework

Myanmar has an area of 670,000 square kilometers and a population of almost 51,486,253⁸. The large majority of the population (70%) is rural⁹ and the average household size is 4.4 persons. Myanmar is a low-income country with a high poverty rate. Accounting for 36% of GDP, the agriculture sector (including livestock and fisheries) is considered to be the backbone of the economy. More than two thirds of the labor force is engaged in agriculture or depends to a great extent on agriculture for income¹⁰. Rice is the most important crop, accounting for about 60 per cent of the net sown area and 80 per cent of the value of agricultural production. Despite its potential for growth, the agriculture sector has suffered from poor and sometimes predatory state policies, deficient infrastructure, insufficient extension services, as well as financing and value chain constraints.

Myanmar's rural society is characterized by landlessness rates (46% of landless households in average¹¹) that are the highest in the whole Mekong region. Indeed, in Cambodia, landless farmers now make up 28% of the rural population (Phann *et al.*, 2015) while in Vietnam, landlessness rates among rural households are estimated at 12%¹². Among the reforms engaged by the new quasi-civilian government, the return of lands confiscated under the military regime retains most of attention from observers (UN, NGOs, and CSOs). Yet, despite millions of acres¹³ implicated in these past – and in some cases, very recent¹⁴ – exactions, landlessness in the country cannot be solely explained and resolved by tackling direct land-grab cases. Socio-economic features of Myanmar lowland societies, specific exclusion processes, and livelihoods dynamics are often overlooked factors shaping the current agrarian landscape that require specific attention.

Myanmar inherited in great part its contemporary land tenure framework from British colonial legacies. While the British system put emphasis on individual holdings (*u-paing* in Burmese), distributed in *kwin* (the basic territorial division),

8. *Myanmar population and housing census, 2014*: The population figure includes 1,206,353 persons estimated not to have been counted during the census in parts of Rakhine State, Kachin State and Kayin State.

9. *Myanmar population and housing census, 2014*.

10. IFAD, 2010: 1.

11. LIFT, 2012.

12. Mellac and Castellanet, 2015.

13. There is no precise figures on the extent of land which has been confiscated under the previous government. Yet, by 2001, more than one million acres of large scale agricultural concessions had been allocated to nearly 100 Burmese private companies, and surface doubled by 2011 (Woods, 2013: 15).

14. See for example Htusan, 2013.

but where agriculturists receive land use rights, the state remaining the ultimate owner of all lands. With the 1953 Land Nationalization Act and a series of land reforms through the 1960s, the post-colonial Myanmar government sought to break up the landowner-tenant relationship, granting agriculturists land use rights while retaining for the state the ultimate ownership of all lands. The objective here was both to create a government/owner-cultivator relationship and, at the same time, to strengthen government control over farmers.

However, the situation in the first half of the twentieth century – with a growing class of absentee landowners and tenants being impoverished by high rents – could still be observed in the latter post-1953 days. In these very days of political transition toward more democratic governance, the success and failures of such reforms still need to be analysed so as to improve access to land and land security for Myanmar farmers. Issues may not only lie in weak governance or abusive practices, but also in more deeply rooted socio-cultural features, such as inter-individual, hierarchized (vertical), relationships often prevailing over intra-class (horizontal) ties.

The latest series of reforms came into force on 31st August 2012¹⁵ under the Farmland Law 2012, followed by the Vacant, Fallow and Virgin Lands Management Law, both of which took a view to developing business opportunities and the country's economy through the improved utilization of these lands. These two laws represent the most substantial change to the legal framework for land since the early 1960s. The main impacts have been a massive delivery of land use certificates to farmers¹⁶ and the reintroduction of the concept of private property with land use rights that can be sold, mortgaged, rented, pawned, and inherited. These changes may however be more formal than substantive. While the new land framework brings greater freedom and visibility for farmers to dispose of their land use rights, not only does the state still remain the sole landowner, but we must not ignore the development of practices among farmers and local authorities that have over the past decades effectively circumvented restrictions.

Reforming Myanmar's agricultural sector and rural economy was a strong component in the agenda of the first quasi-civilian government under President Thein Sein and is probably one of the major stakes for the newly elected NLD¹⁷ government. If such reforms were undertaken *"in the interest of the entire people, not in the interest of a handful of people"*, as Dr Sai Mauk Kham, Vice President of

15. For more details on the different laws enacted on land tenure in the country since the British rule, see **Chapter III**.

16. Strong disparities seem to exist between Myanmar low lands and the ethnic states where LUC delivery rates have been much lower.

17. National League for Democracy.

Myanmar (2011-2015), put it in May 2012, this entails addressing important issues such as land tenure security, landlessness, and repairing the scars of the abusive actions (such as arbitrary confiscations) that have been implemented by the past military regimes. A vibrant and diverse civil society is also bringing these issues to the front lines, so that they can be taken into account by future policies – for instance the recently promulgated National Land Use Policy that has become the over-arching framework that is supposed to shape land and natural resource governance for the years to come. Hence, in this decisive moment of change, the necessity to understand land tenure and land governance issues in Myanmar in their complexity (including historical, economic, social, and political dimensions) is highly critical.

2. A study to improve understanding on land issues

Despite a variety of studies that have recently been produced on Myanmar tenure and governance of land-based resources, there remains a strong need for studies which document social processes leading to land insecurity, and those leading to investment and sustainable use of lands by rural populations. Land markets and their impact on equity, the dynamic of landlessness, the interplay between state intervention and local authorities in current regulations regarding land tenure in different social and socioeconomic contexts, access to natural resources as a base for livelihoods, etc. are issues that have to be analysed. Indeed, addressing land insecurity in general does not enable a full understanding of the key issues and challenges to be examined, nor the actions and policies to implement. This emphasizes again on the importance to provide in-depth studies that characterize the diversity of situations, and that enable the formulation of accurate projects, policy and legislation, for effective and efficient support for the country's rural population.

The final purpose of the study is to improve understanding on how land tenure links with livelihood security for enhanced and comprehensive policy dialogue. Its objective is to provide accurate and documented material on land dynamics, focusing on two issues: access to land and land tenure security. It documents forms of land access, land markets, land tenure insecurity and processes of securing land tenure. It also analyses interrelations of such aspects with farming practices, natural resources harvesting, and livelihoods security.

Indeed, relations between land and livelihoods security are complex as they simultaneously embrace cultural, social, economic, legal, and political realities.

There are clear cause and effect links between food security, livelihoods, and land, the latter of which is an essential productive asset for rural households. Access to land can enable food production. The area of cultivated land per household is often a key factor determining a household's food security and its socioeconomic status. Land tenure security encourages sustainable farming practices and long term agricultural investments (such as trees, irrigation canals, drains...) which can enhance productivity. Securing land rights may also facilitate access to credit, which can help secure improved production means (inputs, tools, etc.), which in turn can lead to increased productivity. Beyond these general observations and 'mechanical' links, situations are sometimes more complex than they may appear and need in depth research for proper understanding.

However, this study does not intend to be representative of the country, nor of the entire Delta and Dry Zone regions. Its methodology – focused on in-depth studies of 18 villages across the Delta (Bogale and Mawlamyinegyun townships) and Dry Zone (Monywa and Yinmabin townships), was not designed as such. However, it provides detailed information on daily issues and key dynamics that are currently occurring at the local level in lowland Myanmar. It also provides useful insights into rural households' livelihood trajectories. These encompass forms of access to land as well as paths to losing or accumulating land over the past decades. Finally, it explores the links between livelihood security and land in Myanmar's specific political-economic context.

3. Brief overview of the contents

The three first chapters are introductory chapters which are critical for the readers' understanding:

- **I. Chapter One** introduces the study's background, its objectives, and the overall structure of the report.
- **II. Chapter Two** presents the study's methodology in detail in all of its 3 different phases. It also provides some key concepts concerning the study's conceptual framework. Finally, it also sheds light on the study's limitations and the constraints faced.
- **III. Chapter Three** links the introductory chapters and the following ones – which are essentially the study's own 'first hand' research findings. Essentially based on an extensive bibliographic review in light of the study's own findings, chapter three provides in-depth analysis of the historical events that have

shaped Myanmar's current land governance system. As such, it provides keys to understanding the findings of the following chapters. It sheds light on the fact that despite major changes in socio-political context, the main issues concerning land governance and livelihoods security have remained very much the same.

The following chapters (four to nine) are based on the analysis and combination of both qualitative findings (based on more than one year of field research) and quantitative survey results (based on surveys with 1,129 households).

- **IV. Chapter Four** provides a general overview of the 2 study areas, including the environmental context, historical background, main livelihoods, land use, and demography. The latter part on demography is based on the study survey results.
- **V. Chapter Five** presents the diversity and varying intensities of land transactions and transfers of land-use rights that exist in the study areas. It analyses inheritance patterns as well as features of land sales, particularly in the informal market preceding the 2012 land law. It also highlights the prevalence of the diverse agrarian arrangements, which allow different actors (from local to foreign, landless to investors) to access lands through temporary contracts. Finally, it provides a detailed analysis of the diversity of documents (both informal and formal) that have been used to 'formalize' rights on land, and whether these documents have operated within or outside of the legal frameworks of the last decades.
- **VI. Chapter Six** focuses on the implementation of the 2012 land law. It looks into the land registration process (which took place during the study) and its most recent impacts. It presents the different forms of land conflicts and contestations that currently exist, from individual claims on specific land use rights to collective contestations on a broader dimension – such as past state actions which are perceived as illegitimate by rural communities. It sheds light on the complexity of the current context and the challenges for effective conflict resolution at the local level.
- **VII. Chapter Seven** presents the main findings concerning livelihoods. It describes households' main features and provides a detailed analysis of the main livelihoods sources, such as on-farm and off-farm activities. Taking household and livelihoods features together, the chapter proposes a typology of households, outlining how livelihood and household features are associated with land access and landownership, and how in turn those patterns can

predict levels of social mobility. Finally, it explores the over-used and unspecific concept of landlessness, which obscures different levels of vulnerability and opportunities. As such, it aims to drill down on the landlessness issue to reveal the critical points that should urgently be addressed by policies.

- **VIII. Chapter Eight** presents key findings on the process of 'intimate exclusion', that is the processes through which social intimates, neighbors and kin, exclude each other from access to agricultural land. To bring up these issues, we proceed by analysing first how class division between large landholders and landless or smallholders shapes exclusion at the village level. The second entry point is access to credit, that is how the power of the market – yet one highly connected to regulation and force – shapes exclusion again at the village level. We conclude by analysing more particularly the role of the headman in land management, both in history and during this era of reform, as a particularly important stakeholder at the village level, a figure who concentrates most of the powers at work in exclusion processes: regulation, force, market access, and legitimation (these notions are expanded in **Chapter III**).
- **IX. Chapter Nine** is the conclusion. It provides a synthesis of the most important findings and recommendations for land-related and agriculture-related policies and laws, in order to improve land governance and create a more conducive context for smallholder farmers.

II. Methodology

1. Analytical framework and starting assumptions

Land as a research field encompasses different disciplines. Obviously, the most visible in Myanmar has been agricultural sciences, pushed by every successive Myanmar government so as to improve agricultural production for this predominantly rural country. However, land tenure also highly relates to social sciences. In this latter field, political ecology and political economy studies are by far the most developed approaches in studying land issues in Myanmar¹⁸. Yet, these studies often remain at a macro-level, and focus on interventions of agro-companies, large investors, and government policies. Far from undervaluing such studies and their contribution to understanding factors impacting farmers' livelihoods (land grabbing issues, agricultural policies, non-pro-poor investment policies, etc.), ethnographic descriptions of land tenure and land rights at the village level can provide critical insights that macro studies neglect. And yet, these are still lacking in the contemporary literature on land tenure in Myanmar¹⁹. With **land tenure** being defined as *"the full range of relationships between humans with regard to access to and control over land and natural resource management"* (Lavigne, 2008), the study had an anthropological focus. An ethnographic approach was used to understand land rights – how they are defined, enforced, negotiated, contested, transformed, and transferred – as well as the power relations that condition these processes. Social scientists have addressed land tenure issues through various entry points: conflicts, agrarian arrangements, exclusion, etc. These conceptual entry points have also been mobilized in this study whenever relevant. The study also drew upon expertise and concepts from other disciplines such as geography and agrarian studies. By doing so, it has adopted a pluri-disciplinary and system approach which enables to address complex issues such as agrarian change by considering the different components that constitute a system and how changes in one component can affect the other components and the whole system. Here below are some of the key concepts that have been considered:

- **Land security:** Despite the overall consensus of the importance of land tenure security in land policy debates, the lack of clarity on the terms of 'land security' and 'land insecurity' reveals divergent views and perceptions on what is land insecurity, what are its causes, and what possible solutions may address it. As such, the conceptual framework produced by Philippe Lavigne

18. Among the most recent, see for example, Woods 2013, TNI working papers.

19. Some ethnographical studies have been done earlier, like for example Thawngghmung, 2001.

Delville²⁰ helps clarify these notions: *“Land tenure security should not be confused with private ownership, nor should the nature of the rights (e.g. formal or informal, permanent or temporary) be confused with the notion of whether or not these are secure. Land tenure security signifies that legitimately held rights, whatever their contents, will not be questioned without foundation, and if questioned, will be settled with sound dispute settlement mechanisms”*. As such, Lavigne distinguishes the term of ‘land insecurity’ from ‘land precariousness’ which is defined as a household’s lack of certainty over short, medium, and long terms regarding its land use rights (eg: a farm tenant who does not know whether his/her tenancy contract will be renewed).

- **Livelihoods security** refers to adequate and sustainable access to income and resources to meet basic needs, including adequate access to food, potable water, health facilities, educational opportunities, housing, time for community participation, and social integration (Frankenberger, 1996). A livelihood *“comprizes the capabilities, assets (stores, resources, claims, and access) and activities required for a means of living; a livelihood is sustainable which can cope with and recover from stress and shocks, maintain or enhance its capabilities and assets, and provide sustainable livelihood opportunities for the next generation.”* (Chambers and Conway, 1992).
- **Land conflicts:** Each society has its own kinds of conflicts and its own ways to resolve them²¹. While a conflict can be generally defined as an open clash between at least two groups, the term also expresses the way politico-legal institutions and new stakes and interests negotiate divergent goals or objectives²². Furthermore, conflicts stand at the articulation between illegal or/and illegitimate mechanisms for access to land rights and mechanisms defined by law, custom, or convention. Conflicts bring together multiples actors, including a ‘third’ party, and participate in the framing of everyday land governance systems²³. Conflict arbitrations are processes that can reconfigure, reproduce, and/or recognize rights, rules, and positions. As such, conflicts can produce legitimacy.
- **Land transfers** are complex and must be understood as land rights transfer. This does not only concern private landownership (with its full set of rights including the right to sell), but also with various forms of delegation of ‘derived rights’ such as, for instance, the right of access to the land or the

20. Lavigne Delville, Ph. 2006. A conceptual framework for land tenure security, insecurity and securement. Land reform 2006/2. FAO.

21. Chauveau and Mathieu, 1998: 243.

22. Lavigne-Delville and Hochet, 2005: 102.

23. Le Meur and Lund, 2001.

right to use the land. Derived rights are mainly granted on a non-permanent basis and delegation can take the form of 'agrarian contracts' (i.e institutional arrangements between actors involving various political-legal authorities) or 'agrarian arrangements' which are informal contracts between actors (for example landlords and landless) made in order to cultivate a plot of land or to value a resource (trees, cattle...) (Sokha, Lemeur *et al.*, 2007)

- **Land exclusion:** *"Exclusion is not a random process, nor does it occur on a level playing field. It is structured by power relations. Across rural Southeast Asia and elsewhere, exclusion from land can be understood in terms of the interaction between regulation, force, the market and legitimation."* (Hall *et al.*, 2011). In *"Powers of exclusion, Land Dilemmas in Southeast Asia"*²⁴, the authors identify different forms of exclusion which exist at different levels: *"Regulation, often but not exclusively associated with the state and legal instruments, sets the rules regarding access to land and conditions of use. Force excludes by violence or the threat of violence, and is brought to bear by both state and non-state actors. The market is a power of exclusion as it limits access through price and through the creation of incentives to lay more individualized claims to land. Legitimation establishes the moral basis for exclusive claims, and indeed for entrenching regulation, the market and force as politically and socially acceptable bases for exclusion."*

Finally, the methodology took into account the following assumptions:

- Land tenure is an evolving system that, despite reforms and successive policies, presents forms of continuity, especially at the local level. From this point of view, historical review of the regions concerned for this study has explanatory power for understanding land dynamics in their present form.
- Sociocultural features of Myanmar lowland societies also shape land tenure. The Dry Zone, a historical location in which former Burmese kingdoms reigned, may have more stable socioeconomic categories than the Delta, which was put into cultivation only under the British colonial occupation of the country (1824-1947). Moreover, the recent devastation wrought by Cyclone Nargis (May 2008) may have kept Delta society in (or even driven it back to) a more 'pioneering' frontier context than in the established settlements of the Dry Zone.
- In most situations, the village level is the most relevant scale through which to understand the links between land and livelihoods and to gain deeper understanding of the way policies and laws implemented throughout history have shaped on-the-ground realities.

24. Derek Hall, Philip Hirsch and Tania Murray Li, 2011.

- Land transfers under their various forms – inheritance, sales, and agrarian arrangements of derived rights (rent, sharecropping...) – are an essential entry point to understand modalities of access to land, and the processes leading to land accumulation or land exclusion.
- Another important entry point for understanding land dynamics are land conflicts and their resolution mechanisms. Especially during a transition period, land conflicts can better reveal the relationships to land of each category of stakeholders, both at local and national levels, and what influence new policies have on these relationships.
- Villagers, regardless of whether they have access to land or not, are not passive. On the contrary, they actively shape the land tenure framework at the local level in its social, economic, and even legal dimensions. Indeed, they actively circumvent legal restrictions and find extralegal arrangements as per their livelihoods needs.
- There is not one single category of farming households. Not all socioeconomic categories of farmers have the same relationship to land, to livelihoods, or to assets. We may be able to disaggregate different livelihood strategies, as well as different strategies regarding either pursuing access to land or securing this access.
- Finally, the term ‘landless’ encompasses a wide diversity of situations. As such, it needs to be considered with much care, as it does not necessarily find an equivalent term in the Burmese conception of access to farmland. In addition, not all landless households may aspire to work farmland, nor are all landless households ‘condemned’ to remain in this category. As for farmers, different livelihood and land-access strategies may be deciphered through a careful study.

2. Site selection

The study has been implemented in the Ayeyarwaddy Delta (Bogale and Mawlamyinegyun townships), and in the Dry Zone (Monywa and Yinmabin townships). The areas were selected through the following criteria. Prior knowledge of the area was a key criteria. Existing grassroots links with farmers, local organizations, and authorities were important conditions for successful implementation of the study, as it addressed highly sensitive issues²⁵. However, while the existing development projects constituted a useful entry point for implementing research, the study also selected villages out of GRET’s intervention villages, in order to take into account potential biases. In addition, the research study targeted

25. Especially in Dry Zone due to the proximity of Wun Paung Copper mining project at Let Pa Daung Hill (Salin Gyi township).

Myanmar lowlands areas, essentially populated by *Bamars* and that have been the closest to state interventions. They are in the country's most rural states²⁶, and the Dry Zone and Ayeyarwaddy constitute an important part of the territory. Sagaing and Ayeyarwaddy regions account for more than 43% of the country's population. In addition, as the study explores linkages between food security and land tenure, it appeared relevant to select the country's main rice bowl areas.

Furthermore, these two areas offer a diachronic perspective. Burmese kingdoms created their states in Upper Myanmar (the Dry Zone) and flourished by mastering irrigation and cultivating paddy – but leaving the southern Burma of the Ayeyarwaddy Delta mostly ungoverned. The British colonial administration annexed these two areas at different times (Lower Burma in 1952 and Upper Burma in 1886) and governed *Upper Burma* and *Lower Burma* in different ways, transforming the latter into Myanmar's rice granary. Hence, exploring land tenure in these two zones that share a common history, yet have been affected by different policies, aims to offer a deeper understanding of what 'land' means in Burmese society and how the Burmese relationship to land shaped and continues to shape the agricultural landscapes of lowland Myanmar in these days of reform. In each area, nine villages were selected so as to cover a high range of agro-ecological characteristics and the key land tenure issues that were identified during initial exploratory missions. Part of the survey also focused on the village tracts²⁷ (VT) level to understand spatial and social dynamics of settlements.

In the Delta area, nine villages distributed across four VTs have been chosen to cover: a wide range of situations along a north/south ecological gradient as per water salinity (freshwater, brackish water and salt water areas); various types of land categories (farmland and forestland); and village accessibility/remoteness from the closest towns of Bogale and Mawlamyinegyun.

In the Dry Zone, nine villages in seven VTs have been studied. They were chosen to cover a diversity of agro-ecological conditions (mainly soil and access to water for irrigation), accessibility/remoteness from Monywa and Yinmabin, and key land issues (disputes, land use, and transactions dynamics).

26. Ayeyarwaddy (total pop: 12 million) and Sagaing (total pol: 10.3 million) have the lowest urbanization rates (14% and 17% respectively). 2014 Census.

27. The village tract unit has been introduced by the British as the lowest minimum unit of administration, with the primary objective of levying taxes (see **Chapter History III.1.1**). It is generally constituted of several villages.

3. Architecture of the study and data collection methods

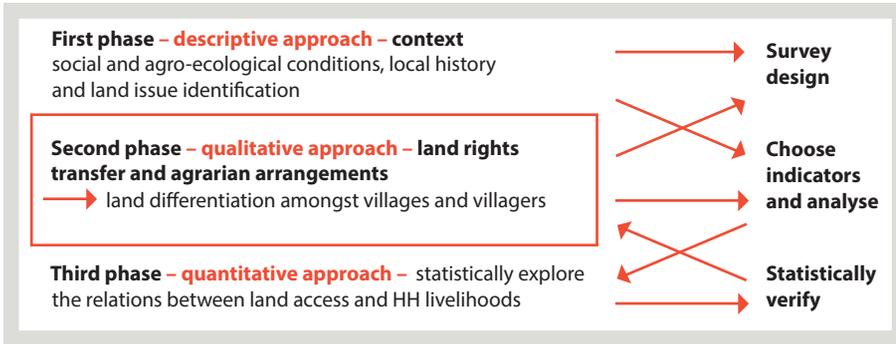


Figure 2: The three key phases of the study

As presented in the **Figure 2** above, the study’s architecture was structured around three phases. The survey used both qualitative and quantitative approaches in order to produce ‘meaningful data’ (information). These approaches were implemented in separate phases so the quantitative survey could be designed in the light of the qualitative data collected in the first place. The qualitative approach was central to the survey as it allowed building meaningful indicators and hypotheses that would be statistically described and confirmed (or not) by the following quantitative survey. The quantitative data were analysed in the light of findings from the first descriptive phase and the second in-depth qualitative one.

3.1 Phase 1: Descriptive approach

The first phase was designed to produce a base set of information necessary for the design of the two following phases. It was based on open interviews of key informants (mainly local stakeholders involved in land governance and administration, and persons such as elders and former local officials with significant knowledge of local land tenure issues), focus group discussions, as well as individual household semi-structured interviews (six to nine per village).

The key indicators used for interviews with these informants and for focus group discussions addressed the following aspects:

- **Context:** history of settlement, agri-ecological constraints and zoning, main sources of income, and key holders of power positions
- **Social organization:** local history of land tenure and policy, identifying local and external stakeholder groups with interests in land issues (including landless groups), formal and informal politico-legal institutions involved in land issues and conflict-resolution, indebtedness processes, and stakeholders involved in land transactions.

- **Land dynamics and transactions:** cases of land conflicts, land use certificate allocation process, modalities of access to land and resources, main public interventions affecting land tenure, processes concerning land sales and purchases, and other types of temporary or permanent land transfers.

The household semi-structured interviews documented the main characteristics of the household (including social status of its members), land patrimony and other assets, and on-farm and off-farm activities.

Table 1: Selected villages for the survey phase 1

Zone	Township	Village tract	Village
Delta	Bogale	Magu	Magu
	Bogale	Magu	Poe Laung
	Bogale	Magu	Pay Chaung Lay
	Bogale	Mya Thein Tan	Aye
	Bogale	Tha Byu Gone VT	Tha Byu Gone
	Mawlamyinegyun	Kyet Shar	Pay Chaung
	Mawlamyinegyun	Pyar Mut Shaw Chaung	Ah Lel Chaung
	Mawlamyinegyun	Kyar Hone	Tet Tet Ku
	Mawlamyinegyun	Kyar Hone	Kyar Hone
Dry Zone	Monywa	In Taing	Hnaw Pin
	Monywa	Kha Tet Kan North	Nyaung Pin Thar
	Monywa	Kha Tet Kan South	Farmland
	Monywa	Khoe Than	Khoe Than
	Monywa	Myin Mee Laung	Gaw Gyi
	Yinmabin	Min Zu	Min Zu
	Yinmabin	Si Laung	Aung Chan Thar
	Yinmabin	Si Laung	Si Laung
	Yinmabin	Zee Phyu Pin	Zee Phyu Pin

3.2 Phase 2: Qualitative approach

The second qualitative phase focused on land rights transfer and agrarian arrangements in a long term perspective with the final objective to understand the process of land and resource access differentiation amongst villages and villagers. Due to the in-depth nature of the qualitative phase, only three villages in each zone were selected for exhaustive household interviews; selection was based on their

representativeness (in terms of agro-ecological features, settlement processes, conflicts, etc.).

The interviews were actually implemented in several sessions, due to their exhaustive nature. They addressed the household’s history, patrimony, and livelihoods, and included an in-depth description of recent land rights transfers and arrangements. It enabled us to draw each family’s trajectory. In Delta, 40 household interviews were conducted, while in the Dry Zone, 44 interviews were performed. In addition, numerous key informant interviews were done in each zone.

Table 2: Selected villages for the survey phase 2

Township	Village tract	Village
Bogale	Mya Thein Tan	Aye
Mawlamyinegyun	Kyet Shar	Pay Chaung
Mawlamyinegyun	Kyar Hone	Tet Tet Ku
Monywa	Kha Tet Kan South	Farmland
Monywa	Khoe Than	Khoe Than
Monywa	Myin Mee Laung	Gaw Gyi
Yinmabin	Zee Phyu Pin	Zee Phyu Pin

3.3 Phase 3: Quantitative approach

Finally, the third phase was a quantitative approach aiming at statistically exploring the hypothesis on relations between land access and households livelihoods. The key hypothesis used to build the quantitative survey concerned trends in household trajectories, based on specific household demographic, social and technico-economic features and strategies for land access. Through a quasi-exhaustive village-based survey covering nine villages and a total of 1,128 households (531 in Delta and 598 in Dry Zone) were interviewed following a questionnaire which was first tested twice (through a pre-pilot and a pilot) in other villages.

The choice made to conduct an exhaustive village-based survey (100% of households living in the targeted villages) was based on the following reasons:

- **The lack of statistical data available at both national and local – township – levels:** Without statistical data and a current census (the 2014 national census was on-going at the time), it was impossible to construct any representative

sample of any mother population. It is also difficult to determine the limits of the mother population to be described.

- **The lack of understanding of relations between land dynamics and livelihoods security:** Such relations are still poorly described in Myanmar and it is difficult to identify the critical determinants. Thus, the sample could not be constructed on any existing reliable and verified hypotheses.
- **The ‘qualitative’ dimension of the survey** (even for data to be collected during phase 3). In this survey, households are not to be considered only as ‘rational’ and autonomous economic decision makers but also as part of social groups and networks which are important for what they are both able (in terms of position) and capable (in terms of capacity) of doing. Villages – which constitute the social basic unit in Burmese society – are then the most relevant, evident, and easy unit to study. As verified in the two first phases, the village is a social unit where most land-based social interactions take place. Most of the land transfers (including agrarian contracts) involve people from the same village. The village is thus the key unit for land allocation and land conflict resolution.

It is then logical:

- To choose surveyed villages according to their qualitative representativeness within the two areas.
- To survey the whole population in the village, so to avoid constructing a non-representative sample and to better understand land-based social relations within the social unit where those are more intense and potentially more significant.

Due to differences in the size of villages between Delta (generally smaller) and Dry Zone, the same number of villages in both zones could not provide equivalent samples of population. For this reason – added to the expected difficulties in covering all 100% households in Dry Zone villages²⁸ – five villages were surveyed in Delta and four in Dry Zone, altogether producing 1,129 entries corresponding to 1,129 households, for a total of 4,887 individuals.

28. These expectations were based on the highly sensitive nature of land tenure issues in the region (close the Lapetdaung copper mine) rendering this kind of systematic interviews delicate and subject to confusions in the midst of the national census implemented in 2014.

Table 3: Number of interviews and quantitative survey coverage per village

Delta						
Villages	Pay Chaung	Aye Ywar	Tet Tet Ku	Tha Byu Gone	Magu	TOTAL
Surveyed HH	55	78	113	127	158	531
Total POP (HH)	55	85	148	150	166	604
% Surveyed HH /total Pop	100%	92%	76%	85%	95%	88%

Dry Zone					
Villages	Hledar	Zee Phyu Pin	Khoe Than	Gaw Gyi	TOTAL
Surveyed HH	130	138	210	120	598
Total POP (HH)	143	167	250	122	682
% Surveyed HH /total Pop	91%	83%	84%	98%	88%

Design of the questionnaire

On the basis of the hypothesis defined under phase 1 and phase 2, the survey questions were listed and organized in five main sections:

- **General household information:** demographic information on household members, and settlement history
- **Land patrimony:** landownership, land use, status of lands, land transactions and transfers since 1988, perceptions on land registration
- **Agrarian activities:** crops, income and costs incurred for each crop, details on other agrarian activities such as livestock raising, fishing, and agricultural wage labor
- **Other activities and income:** details on off-farm activities, remittances, current savings and loans, household main sources of income, and expenditures
- **Food security and wealth:** nutrition indicators, empirical wealth indicators.

The questionnaire was translated into Myanmar and was first tested twice (through a pre-pilot and a pilot) in other villages and adapted after each of the two pilots. Each questionnaire contained more than a 1,000 entries. Data entry was then ensured by the enumerators, with a data checking system. Data processing and analysis was then performed with statistics software by the research coordination team, supported by the external land tenure expert and senior statistician.

4. Limitations of the research

Similarly, the ethnographic approach is far from being well understood in Myanmar (let alone academic ethnographic studies), thus gathering and training apprentice ethnographers remains a challenge. We tried and mostly succeeded in recruiting and training local social science researchers for this study, though a few limitations remained.

The first limitation was in terms of reporting and in terms of translating a mass of information, impressions, and hunches into written, documented, analysed findings. Qualitative data takes time to collect. However, it takes even more time to analyse it and to write findings. Going beyond a list of facts and anecdotes to formulate new questions and hypotheses, to identify inter-relations between issues, to define trends and typologies requires very specific skills. Here again, there were disparities within the field survey team but overall, the difficulties in analysis, writing (especially in English language, but not only) and reporting on a regular basis the information collected, led to some data loss.

Another issue, this time faced by local researchers themselves, was the reliability of the information they collected. Indeed, land issues may rapidly become sensitive ones, especially if one is enquiring into land acquisition processes while talking to a farmer who owns hundreds of acres.

At such a moment, looking for the truth can turn into something akin to a criminal investigation. Although the team practiced triangulation techniques in order to cross-check information, it proved difficult for the team to account for the informative value of people's discourses over the 'facts' they attempt to display. Clearly, the interpretation of discourses remained an important challenge during the survey work. Quantitative research would prove also to be full of pitfalls. The first one was the research coordination team's desire to test 'everything'. This was also aggravated by the necessity to take into account the specificities of each of two very different contexts (Delta and Dry Zone) in one single questionnaire.

As a result, the questionnaire was too detailed and too long (up to two and a half hours needed to complete the questionnaire for large landowners). The excessive precision of some questions led to difficulties in data processing and analysis, and in some instances having figures too small to be properly analysed and/or to be statistically significant. In addition, the quantitative survey did not allow to collect the information necessary to analyse properly farm's agricultural labor constraints, nor did it allow to assess fluctuations of income and farm production across years.

Then, enumerators' understanding of the questionnaire, despite intensive trainings and multiple pilots before implementing the study, retained bias in some cases. Finally, some information was doomed to be approximate, exemplified by income and expense related questions, whether because rural households most often don't record incomes and expenditures throughout the year, or because of differences in units (some farmers measuring surfaces in *kwat*, others in *acres* for example), and sometimes simply by indolence (yet understandable when summarising with the interviewee during a two hour interview).

We should nonetheless conclude that high quality information was gathered during this study, and the team worked hard and developed unique skills, which altogether led to producing what we believe is a critical work on land tenure in lowland Myanmar.

III. The making of contemporary land tenure in lowland Myanmar

1. The making of modern land tenure (1800s to 1948)

1.1 From subjects to tenants

An important part of contemporary Myanmar land tenure framework derives from the British colonial period (1824 to 1948²⁹). But before the British, land was already central in supporting the crown's administration (Lieberman, 1980), though taxation and tenure were shaped to fit governance based on people's allegiances to powerful individuals (including the 'charismatic monarch'³⁰), rather than decentralized administration. Basically, lands were divided into two categories: crown lands and private lands.

- Crown lands were situated within the royal sphere of influence and generally composed of the best irrigated and more fertile lands of the Dry Zone (Aung Thwin, 1984: 224). Islands and alluvial formations on rivers, that is, land liable to periodic change due to the action of the river, were also royal land (Siok Hwa, 1965a: 106). These crown lands were administered by temporary and permanent clients of the king in return for certain rights and privileges (*appanages*).
- Private lands encompassed communal and ancestral lands worked by individuals non-bonded to the king. While produce from crown lands supplied royal granaries, individuals working 'private land' were taxed per capita based on their wealth (including lands) (Aung Thwin, 1984: 224). Rights on such lands were acquired by clearing and cultivating plots (*dama-u-gya* – 'the first clearing (of land) by knife'). These lands then became the property of the cultivator (*u-paing*), including the right to mortgage, sell or pass them to their descendants (Siok Hwa, 1965a: 107).

Between the annexation of Lower Burma (1852) and Upper Burma (1885-1886), the taxation system faced a profound reform under King Mindon (1853-1878). The new system intended to compensate the loss of revenue coming from *appanages* in Lower Burma which had passed under British administration. For

29. The first Anglo-Burmese war (1824-1826), led to the annexation of Assam, Manipur, and Arakan. The British also took the region of Tenasserim. The second Anglo-Burmese war (1852) led to the annexation of Pegu Province (later renamed Lower Burma and including the Ayeyarwaddy Delta), before annexing Upper Burma in 1885-56 after the third Anglo-Burmese war, leading the last Burmese king, Thibaw (1859-1916), to exile.

30. Leach, 1960.

this reason, King Mindon introduced the *thathameda* tax, theoretically collected from each household, supposedly at a tenth of their income. This system was supposed to replace all other existing taxes and fees as known under previous monarchs³¹. However, in practice it was much more a property tax, which local patrons were expected to collect, based on the number of households they took charge of. Revenue was collected in kind or in cash within villages, based mainly on the property wealth of the particular household. Under this system, destitute households or individuals were not expected to pay any tax (Than Myint-U, 2004: 122). Despite the reform, it seems that the previous social organization and associated feudal-like tax system endured until the British annexation of Upper Burma in 1885-1886 (*ibid.*: 34).

Despite careful thoughts on the most appropriate taxation system (at least on land and agricultural taxes) the new rulers would apply first on the annexed territories (Furnivall, 1939), the British had only little time to learn carefully about the practices already in place prior to their coming to administer the country. The colonial administration believed they inherited the *thathameda* tax as an effective one, which was only partly true, as other taxes and fees collected by local village heads and 'governors' (*myo-thu-gyi*, *myo-sa*) tended to remain and overlap with the *thathameda*. British rulers decided after several years of discussions that this 'household' tax would remain and its amount would vary according to the wealth of the area, but not to the same extent as under Burmese rule:

"Local community leaders would actively participate in ascribing individual household shares. Once the annual thathameda for a given township was decided (normally at ten rupees per household), rates on individual households would depend on income, ranging from just one rupee to over fifteen. This was another departure from the Burmese method, in which assessment was based on wealth or property rather than income. Some exemptions were allowed. But the system whereby an entire 'destitute' class of people (dokkhita) was recognized and exempted, was not continued." (Than Myint-U, 2004: 229)

Consequently, prior to the British rule, Burmese subjects already knew about 'household' tax, as they knew about 'private tenure' of the land (Furnivall, 1939: 102, Lieberman, 2003: 148, 185, 298, 421) under the practice of *dama-u-gya*. Under *dama-u-gya*, customary rights were acquired through clearing and cultivating any vacant land, after which the cultivator could sell, mortgage, or pass to his descendants. The main difference actually introduced by the British regarding land tenure and the whole governance of the region was that the taxation system would

31. That is an appanage system based on royal let allocation, tax collection on crown land and taxes payable in kind and in cash for people non-bounded to the king.

no longer be based on individuals (hence on social groups organized along vertical patron-client relationships), but on territorial boundaries and, for our purpose, on agricultural land size. This territorialization process was efficiently implemented through the new administrative concept of village tract, borrowed from British administration in India. Charles Crosthwaithe, Chief Commissioner of Upper Burma, would finalize the transition to the village tract administration by introducing the figure of the village headman (*ywa-thugyi*) through the Village Act (1887). This Village Act was implemented in order to break former administrative structures (such as those based on *myo* and *taik*) as well as counter Burmese resistance in the first years of British rule, “*thus further enhancing the role of new-style township and placing greater responsibilities on the village headman*” (Taylor, 2009: 82).

In planning land tenure in colonized Burma, colonial rulers would have logically drawn on their previous experiences in British-India. There, three main systems dominated: a) the landlord based system (*zamindari*) where landlords established the tax to be collected for themselves, from which they would pay the requested amount to the British administration; b) a village based system (*mahalwari*) in which village bodies which jointly owned the village were responsible for the land revenue; and c) an individual based system (*ryotwari*) where revenue settlement was fixed directly with individuals (Banerjee and Lyer, 2005: 1193-1194). The fact that different systems coexisted throughout British India derived from the same rationale: sustaining maximum land revenue for the British administration. In some situations, landlords – able to invest more – served this purpose; in others, individuals – having more incentives than landlords to improve their own productivity – delivered better outcomes. In Burma, local commissioners (such as Maingy in Tenasserim region), would argue for years with the British-Indian government about the most appropriate system to apply to Burma. The arguments that would lead to the implementation of an individual based – *ryotwari* – system in Burma were that since “*there was not a well-established landed group in Lower Burma, it appeared possible to develop a rural economy in which the small proprietor received the profits of his labors and the rent surplus went to the state rather than to intermediaries*” (Adas, 2011: 32). This vision was grounded in the political-ecological realities of administering Lower Burma, ones not prevailing in Upper Burma where the best-irrigated tracks of land were already cultivated and where “*easily cleared and fertile land was very difficult to get*” (Siok Hwa, 1965a: 120). Indeed, this very situation had already led to massive migration (mostly from Upper Burma) toward the newly opened grounds of the Delta. By 1881, “*more than 300,000 people living in Lower Burma were recorded as having been born outside of the region, the vast majority being cultivators from the Ava kingdom*” (Thant Myint-U, 2004: 107).

Various land tenure systems were introduced under British rule, all relying on the same rationale: developing land as quickly as possible “*to help defray the costs of*

*administration and, at the same time, to establish a body of peasant proprietors” (Siok Hwa, 1965a: 107). As noted earlier, Burmese were already familiar with individual use rights. In 1889, the Upper Burma Land and Revenue Regulation would appropriate the former land categorization of ‘crown’ or ‘private’ dividing land into ‘state’ and ‘non-state’ respectively (Thant Myint-U, 2004: 228). Another major change was that under royal administration, “there was very little if any direct taxation on agricultural production other than rent on land constituting crown estates” (ibid: 37). Most taxes were in the form of fees for judicial and other services performed, licenses, local tariffs on trade, transport and virtually every kind of economic activity. Colonial authorities, on the other hand, decided to impose a tax on ‘non-state’ land in addition to the rent on ‘state land’ and the *thathameda*. This was made “in line with the long-standing British Indian concept of the state being the ultimate owner of the land or was justified in part by citing the Burmese notion of the king as the ‘lord of water and earth’ (ye“-mye” shin). Thus, what had been an abstract Burmese theory of government, never practiced, in this way became a codified and enforced reality under the British administration” (ibid.: 230).*

Implementation of this *ryotwari* system would require costly and time consuming surveys to record individual holdings. Moreover, the classification of land between ‘state’ and ‘non-state’ would prove a source of conflicts and tensions between the British government and the Burmese cultivators from Upper Burma, where a long tradition of tenure under the crown already existed (Mizuno, 2000: 122). Indeed, occupants of ‘state land’ had to pay a tax on land, besides the already collected *thathameda* tax. For this reason, some British officers were tempted to declare as much land as possible as ‘state land’, while farmers tended to “conceal so far as possible the customs relating to tenures (to British officers), lest any information might be used against them as an argument for demanding rent”³² (Furnivall, 1931: 89). Due to many difficulties in determining whether a parcel would fall into ‘state’ or ‘non-state’ classification, as well as the gradual ‘privatization’ of land through increasing claims brought to courts by individuals, the entire distinction was abandoned by the end of the 19th century so that all land were finally considered equally taxable under the land revenue tax.

■ 1.2 Dispossession: from state’s tenants to the state of tenancy

The state experimented with several land tenure policies in order to secure land revenue collection and foster land development, especially in Lower Burma. During the decades of rapid expansion of cultivated lands, two coexisting tenure systems dominated:

32. To establish if a land should fall into one or the other category, officers would notably look at tenure rights: occupants of ‘crown-land’ (classified as state land by the British) didn’t have the right to transfer, mortgage or sell the land.

- The squatter system resembled the traditional *dama-u-gya*, in which any person was able to clear and settle on any vacant land. By paying land revenue tax continuously over a 12 years period, the cultivator received a permanent, inheritable, and transferable right of use and occupancy of the land provided he continued to pay the tax regularly. Before this period, the cultivator was liable to eviction if he failed to pay the annual land revenue. This system prevailed in more-established areas (i.e. Dry Zone and upper part of Delta) where cultivators were expanding their long-settled holdings by clearing adjacent land (Siok Hwa, 1965a: 107-108).
- The second system was the *patta* (i.e. a small piece of land) system, aimed at encouraging cultivators to cultivate state land that had previously not been under cultivation. This system granted tenure before the cultivator cleared the land without collecting revenue during a period varying according to the difficulty to transform the land into productive farmland. Such land could not be mortgaged and cultivators had to show sufficient means to cultivate the land without resorting to money-lenders (*ibid.*: 108).

In both systems, however, money-lenders became crucial stakeholders in expanding land under British rule, particularly in Lower Burma. Indeed, it was found that even the *patta* system could not prevent landholders from mortgaging or exchanging land to money-lenders, traders and landlords as collateral. By 1900, the *patta* system was found to be inefficient in constituting a large body of peasant-proprietors and was abandoned. Other systems would be introduced, such as a lease of state land for five to ten-year periods with the possibility for cultivators to cultivate any adjacent vacant land without paying extra revenue, and a grant system through which the government offered large tracts of land to investors, hoping these would bring laborers to work their estate. However, it appeared that most of the successful investors in these schemes were chiefly speculators, administrative officers, etc., rather than proper cultivators (*ibid.*: 110).

Following the implementation of these systems, especially the squatter and *patta* ones, the results appeared to be contrary to the putative British objectives of creating a large body of peasant proprietors (more exactly, landholders). By 1930, one third of the total cultivated land had fallen into the hands of non-agriculturists and one quarter was held by absentee non-agriculturists (*ibid.*: 112). This marked a significant difference from the numbers found in the 1891 census, which “listed 1.8 per cent of the population as landlords, 64 per cent as landowning cultivators, 26 per cent as tenants and 8 per cent as agricultural laborers” (Than Myint-U, 2004: 235). This increasing state of tenancy among cultivators under British rule and until the Land Nationalization Act of 1948 (see *infra*) can be explained by two main factors

during this period: the entry of Burmese rice on the international market, and the introduction of a new – village tract-based – governance system. The British, as briefly mentioned above, aimed at extracting as much revenue as possible from its Burma annexation, and land was a profitable post for levying taxes. Besides, the opening of Burma to the international market, especially for rice exportation purposes, changed peasants' lifestyles in the course of the late 19th and beginning of 20th centuries through the monetization of rural economy and introduction of imported goods. Under Burmese monarchs of the Konbaung dynasty, exporting rice outside the empire was forbidden.

Accordingly, surplus rice produced in the country and notably in Lower Burma was stored and redistributed to areas where there were food shortages. As a result, the limited domestic market was regulated and stabilized by the great quantities of rice held by the government. The price of rice was therefore quite low during this period and the *"low return which the cultivator received for the extra labor required to produce a surplus provided little incentive for him to harvest more than he needed for food, seed and taxes"* (Adas, 1972: 187). There were therefore few reasons for farmers to bring new areas under cultivation – maybe except for assisting children who had married and were establishing separate households. Besides, *"there were many sumptuary laws in Konbaung society (so the) type and size of a man's house, the domestic implements he was permitted to use, his clothing and jewellery were all rigidly regulated by his position and social standing. The cultivator was low on the social scale and thus his options as a consumer were very limited."* (*ibid.*: 187) By entering international trade under the British rule, surplus-production became necessary (at least for the British) and the money earned through this production offered access to a number of goods long inaccessible to the cultivators under Burmese monarchs.

However, even once this incentive was introduced, clearing new lands, especially in the malaria-infested Delta, and turning them into productive rice fields, necessitated massive labor and investments, increasing the need for cultivators to rely on money-lenders. The farmers' relationship to these money-lenders may have resembled the more 'traditional' patron-client relationship structuring most vertical bonds between farmers and elites under Burmese rule. In that system, resorting to the law and administration was barely achievable outside the dynastic power center. Hence, local patrons had to rely on locally acquired legitimacy rather than outside support. To win the loyalty of his clients, the master's duty is to redistribute part of his wealth within his social group, either in collective ritual ceremonies or by lending some money to his clients for extra-professional needs such as weddings, burials, or Buddhist initiation ceremonies (*shin-pyu'*). This relationship is well

conveyed by the bonds one has with his *kyei"zu"shin*³³ (Boutry, 2015).

However, the change in governance, exemplified by the village tract based administration ramifying deep into the countryside, altered this system – both for the farmer and for the patron. First, it hindered the farmers' bargaining power. As Scott puts it, *"the growth of colonial administration increased the peasant need for protection and influence, while providing the legal and coercive backing that allowed local elites to ignore local opinion and become more exploitive"* (1972: 7). On the other hand, the integration of rice production into international markets and its subsequent monetization also contributed to the fragmentation of the formerly comprehensive patron-client relationships, (which normally encompass the economic frame and project themselves into the social one). But social differentiation tended to multiply interlocutors for borrowing money, for buying inputs, etc., hence multiplying dependency bonds. Farmers' relationships to upper socioeconomic classes was therefore divided into different sectors and their bargaining power reduced. Coupled with the relative closure of the rice frontier at the turn of the 20th century and the 1930s financial crisis, the colonial era achieved the transformation of a pre-colonial body of (majority) peasant-proprietors, into a body of peasant-tenants. While it is known that foreign money-lenders (especially Chettians) aimed at making money rather than acquiring land, the impossibility of Burmese peasants to repay their own loans ended in the concentration of land into the hands of money-lenders and landlords, among whom a great part were absentees. The land accumulation in Delta by the Chettians is explained by Turnell as follows:

"The combination of the collapse of paddy prices in the Great depression, the Chettians' insistence on land as collateral, and the imposition of British land title land did bring a substantial transfer of Burmans' cultivable land into their hands." (2009: 13)

Indebtedness already affected farmers during the booming phase of the Delta's agricultural expansion. In the 1880s and 1890s, it was estimated that over 70% of agricultural debts could be repaid at the end of the crop season, while desperate cases of debt with farmers at risk of losing their land were estimated at 3.7 to 5.4% of borrowers. In the 1900s and 1910s, the percentage of borrowers able to repay their loans within a crop season decreased to 60%, while serious indebtedness cases had increased to 9.5% (Adas, 1974b: 68). That being said, indebtedness was

33. This literally means the 'master of one's good deeds', which could be translated in a Buddhist context as 'the master of one's life', given the rebirth cycle tying every living being to this world and the good deeds needed to acquire merits in order to free oneself from this cycle. There are three principal *kyei"zu"shin* in one's life: Buddha, one's parents and teachers. See Schober, 1989.

still much lower than in the following decades during which the agricultural crisis, aggravated by the Great Depression, led to the deterioration of living conditions of farmers (*ibid.*).

The main cause of land dispossession during the British colonial period is that cultivators generally contracted debts beyond their capacity of repayment. Historian Siok Hwa's summary of the central causes of indebtedness warrants extensive quotation:

"(...) indebtedness (could be attributed) to the inexperience and ignorance of borrowers caught in the rapid change from a subsistence to a cash economy; vicissitudes befalling the borrower like drought, flood, pests, illness and cattle disease; the use of loans for unproductive purposes such as elaborate ceremonies in connection with marriages, funerals, the entry of boys into the monastic novitiate and ear-borings for girls; the use of loans for speculative ventures which failed, and the unfavorable conditions under which loans were made such as the excessively high interest rates charged; the lack of differentiation of treatment for long term and short term loans and the practice of money-lenders to allow and even encourage borrowers to borrow amounts up to the limit of the value of the collateral offered rather than the amount which would make their loan most profitable. A less important cause of let alienation by agriculturists lies in the Buddhist inheritance customs. This operated less evidently in Lower than in Upper Burma where holdings tended to be smaller and where property was often divided among the children." (Siok Hwa, 1965a: 155-6)

We should note that most of the factors remained throughout preceding periods and continue to characterize rural lowland societies in Myanmar, especially in Delta.

■ 1.3 Ayeyarwaddy Delta: the rice frontier

The British, by annexing Lower Burma (including the Delta from 1852 onwards), transformed large tracts of wastelands into the rice granary of the British-India Empire, making the country a leader in worldwide international paddy trade until Ne Win's military coup in 1962. It has long been asserted that Lower Burma and the Ayeyarwaddy Delta were ravaged by unsuccessful Mon uprisings against ethnic Burmans in the 18th century, reducing a once fertile and productive region into a scarcely populated and cultivated one (Harvey, 1967: 236, Siok Hwa, 1965b: 69). It is however more likely that the lower part of the Delta, in the absence of embankments, had always been perennially flooded during the annual monsoon and hence unsuited for settlement (South 2003: 21). It seems that paddy cultivation in the Delta was *"concentrated around the towns of Bassein (Pathein), Myaungmya*

and Ngathainggyaung in the western portion of the Ayeyarwaddy Delta; near the town of Myaunaung, north west of Henzada (Hinthada) and between Prome (Pyay) and Thayetmyo on the upper Ayeyarwaddy; and near Pyapon, Dallah, Danubyu and Toungoo in the central and east portions of Lower Burma” (Adas, 1972: 186). Yet, even these regions were not intensively cultivated until the late 18th century, following the conquest of Lower Burma by Ava in the 1750s and the arrival of migrants coming from Upper Burma (*ibid.*: 181). Still, it was only with the British annexation of Lower Burma that the ‘rice frontier’ (Adas, 2011) would appear, moving constantly south to the lowest part of the Delta.

This intensive colonization of the Ayeyarwaddy Delta happened in three stages from 1858 to 1941: i) spectacular agricultural growth (1852-1901), ii) the gradual closing of the agricultural frontier (1901-1929), and iii) the major agricultural crisis period following the Great Depression.

During the first stage, the rice economy of Lower Burma rapidly extended owing to the cultivation of large areas of virgin land. The amount of rice exported from Lower Burma rose from 162,000 tons in 1855 to two million tons in 1905-06 while rice prices tripled³⁴. Paddy cultivation area went from 600,000 acres in 1852-53, to 6.7 million acres in 1902-03 and 8.9 million acres in 1922-23 (Mya Than, 2001: 7). This agricultural boom was linked with spectacular population growth: one million people in 1852 became more than four million by 1901 (Adas, 1974: 58). This was fueled by massive migration that came south from Upper Burma via the Ayeyarwaddy River³⁵. Migrants were mostly poor farmers, and migration waves were strongly correlated to droughts and food shortages occurring in Upper Burma. Afterwards came the Indians and, to a lesser extent, foreign Asians, mainly Chinese. The role of these diasporas, and particularly the money-lending class of Chettiars (originating from South India), was of the utmost importance in developing the rice frontier from the 1880s until independence. Yet, as underlined by Adas (1974b: 390), the rice production growth of the first three decades after Lower Burma’s annexation indicates that the advance of the rice frontier³⁶ could have been achieved, though at a slower pace, with indigenous money-lenders – principally successful agriculturists and rice brokers. Yet, thanks to the large scale transactions they executed, Chettiars were also practicing fairer interest rates than most local money-lenders (*ibid.*: 389). Actually, the main role of non-European immigrants in colonization processes throughout the globe was to link ‘subsistence economies’ and ‘global commercial networks’, by conducting

34. Cheng, *Rice Industry in Burma*, in Adas, 1974: 58.

35. 93% (in 1881) and 87% (in 1901) of migrants arriving to Delta originated from Dry Zone (*ibid.*, 44).

36. During the first three decades after annexation of Lower Burma, areas under cultivation increased by nearly two millions and exports rose from virtually zero to 850,000 tons (Adas 1974: 390).

activities Europeans were reluctant or did not have the manpower to engage (*ibid.*: 385). Hence, “perhaps the major reason for the limited involvement of the Chettiars in Lower Burma in the early decades of British rule was the low level of the demand for agricultural credit” (Adas, 1974b: 390). After 1869 and the opening of the Suez Canal, coupled with a growing demand for rice on the European market increasingly dependent on Asian production and a workforce relying more and more on imported goods (Adas, 1974b: 390, Siok Hwa, 1965b: 79-80), need for investments and credits grew enough to overwhelm indigenous money-lenders’ capacities. Therefore, by the 1880s, the Chettiars were actively involved in Delta rice economy. At that time, the *ryotwari* system of tenure that defined peasants as primary holders (the government being the ultimate owner) also made it possible for cultivators to use land as collateral for loans obtained from money-lenders and other sources. By 1930, Chettiars were providing 60% of the crop loans³⁷ in Lower Burma districts. Adas attributes the extent of Chettiar involvement in the Lower Burma rice economy to the connections developed with Western banks – such as the Imperial Bank of India and the Indian Overseas Bank – as well as their corporate organization (Adas, 1974: 393, 395-6). Despite attempts by the colonial government to provide loans through agricultural funds and cooperatives, Chettiar and other private money-lender loans were more accessible, were available with fewer delays, were of a greater amount, and came with fewer penalties in case of delay in repaying creditors than those obtained from governmental institutions (*ibid.*:397).

Yet, once again, it is important to underline here the exceptional extent of loans provided by Burmese money-lenders compared to other indigenous money-lending communities elsewhere in the colonies. There seemed to be a division of clientele between Chettiars and Burmese money-lenders, the latter providing loans to less secure individuals and at higher interest rates. Besides, Burmese money-lenders were able by the end of the nineteenth century to borrow from Chettiars, who progressively supplied most of indigenous money-lenders’ capital (*ibid.*:398).

This feature of the Delta Burmese society, in which private money-lenders play a crucial role in credit provision has remained throughout successive governments and policies until today. Indeed, as we will see later (**Chapter VIII.2.2**), even with agricultural loan reforms undertaken by 2011’s quasi-civil government – with a sharp increase of loan amounts and reduced interest rates for farmers – private money-lenders remained key players in the Delta economy. We will also see that the Land Nationalization Act of 1948 that repossessed land held by foreigners (mainly Chettiars and Chinese), in theory for the benefit of Burmese citizens, ultimately benefited large Burmese landholders and money-lenders (see **Chapter III.1.6**).

37. In number of loans.

Progressively, starting from 1900, the rapid economic growth of the Delta rice industry slowed as new fertile lands gradually became rare and the ‘frontier’ disappeared. Consequently land prices increased while production tended to decrease due to lower land fertility, generating more and more debts among peasants. The closing of the rice frontier also left many tenants and gangs of laborers jobless. The economic crisis of the early 1930s, linked to the Great Depression and the collapse of the international paddy market would act as a final blow, leaving most landholders so indebted they had to transfer their lands to money-lenders. Despite the fact that Chettiars were not interested in holding land, the conditions described above made it such that many small and large holders alike were unable to repay their debts, and with Chettiars’ financial capacity being likewise affected by the crisis, they had little choice but to foreclose on mortgaged lands. Hence, by the late 1930s, Chettiars controlled 25% of the total cultivated land in Lower Burma and 50% of the let alienated to non-agriculturists (Adas, 1974: 400).

■ 1.4 Upper Burma: the rise of a land owning class

Contrary to the large tracts of newly conquered land in Lower Burma, much of Upper Burma’s land suited to agriculture was already cultivated and under customary tenure. Yet, British officers, when drafting the 1889 Upper Burma Land and Revenue Regulation, still had little knowledge of prior tenure conditions, apart that the *“primary Burmese tax was the thathameda household tax and that there existed ‘royal lands’ which paid rent to the state”* (Than Myint-U, 2004: 228). Through the enforcement of land revenue based on a division of ‘state’ and ‘non-state’ land, British policy-makers were pushing even further the prior reforms of the Konbaung era, *“creating for the first time a structure of genuinely private ownership, entirely free of gentry or aristocratic control or involvement”* (*ibid.*: 231). As already underlined, the annexation of Upper Burma also came with a new governance system emphasizing the village territorial unit and the figure of village headman or *thu-gyi*, while dispossessing most former individuals linked to the crown of their privileges (notably prebendal land). Hence, there was increasing competition among Upper Burma cultivators to claim ownership of lands that were previously held by hereditary officials under the crown (such as *myo-thugyi*, *khayaing-wun* and other noblemen). Besides, it has been noted that gathering enough evidence to classify land (whether ‘state’ or ‘non-state’) was far from easy, such that Burmese individuals started to fight to register land as private wherever doubt existed. Hence, during the first years after annexation of Upper Burma, the amount of litigation brought to British courts raised steadily³⁸, declining only by 1895 (Than Myint-U 2004: 232). These litigations could be sorted into two main types. The first one was comprised of suits seeking the division among heirs of ancestral private land (*bobabaing*) that had risen in value in many areas – such as the Lower Chindwin (where Monywa

38. 7,000 in 1889 and over 9,000 in 1890, the majority being for breach of contract and over land.

and present-day Yinmabin lie), where recent improvements in irrigation and transportation had led to economic growth and where much of the land had become classified as privately owned. The second type concerned suits for the redemption of land which had been mortgaged. Interestingly enough, these two types of land disputes also dominate today in village-level conflicts surrounding the Farmland Law 2012, as we will see in **Chapter VI**.

While, for the British officers (*ibid.*: 232), this litigiousness tended to denote that Burmese villagers lacked a sense of communal spirit, these disputes in the years following annexation of Upper Burma surely underlined the changes happening in the social organization of the region. Notably by cancelling most of privileges acquired by Burmese officers (once benefiting from the revenue of large tracts of land), British rule favored the rise of traders, money-lenders, and other outsiders linked to the royal court (*ibid.*: 234). Actually, former reforms engaged by King Mindon – theoretically replacing all prebendal estates and the system of *appanages* with cash revenues and salaries – already favored traders and money-lenders. By the early 1880s, “*large scale selling and mortgaging of state lands and the growing prominence of non-local traders and money-lenders throughout the country-side*” were already affecting Upper Burma (*ibid.*: 179). However, the British pushed the reform much further than under Mindon’s rule where the form of the organization of power prevented strict control of territories far from Mandalay.

However, colonial reforms were not uniformly implemented. For example, some local hereditary office-holders and their relatives were treated much more generously in some places than in others. The *myothugyi* of Monywa was given private ownership of over 3,000 acres. Similarly, along the Lower Chindwin most of the large landowners were found to be former or current *thugyi* (*ibid.*: 237). Than Myint-U summarizes three different types of social change in Upper Burma until the 1900s, “*based on geographical distance from Mandalay, and the local variant in early modern social organization: the area around the capital where hereditary office-holders had largely disappeared and the economy was the most heavily commercialized and outsider dominated; the Salin area, geographically the furthest irrigated area, where the gentry had turned into a powerful landowning class; and the poorer middle area which had experienced only moderate commercialization and where some local gentry had come to benefit*” (*ibid.*: 239-240). Most of the villages surveyed in the Dry Zone for this study would fall into the second category in which the gentry turned into a powerful landowning class.

By the 1930s, the problem of let alienation of non-agriculturists was less acute in Upper Burma than in Lower Burma. Apart from state land – non-alienable and non-transferable – this difference greatly lies in the fact that cultivators “*were on*

the whole more concerned about the loss of land as they had a greater degree of sentimental attachment to the land which had often been handed down through many generations and therefore were more cautious in their application for and use of land mortgage loans” (Siok Hwa, 1965a: 120). This feature of Dry Zone as a long-settled area is still an important component in the dynamics of land tenure through these days, as we will see.

■ 1.5 Impacts of colonization on landlordism

The pre-colonial period did not provide any favorable ground for landlordism. Indeed, the dominant rural stratum in Upper Burma from the fourteenth through sixteenth centuries was composed of hereditary headmen ruling self-sufficient agricultural communities of freemen known as *athis*. They appear to have exercised a proprietary right over all the lands in their jurisdiction, while collecting taxes and disposing of military force subject only to sporadic supervision from the royal court, since loyalties to the center were often tenuous. *Athi* land was organized on a communal basis and access to such lands had been subject to close headman supervision (Lieberman, 1991: 27). Besides, the great availability of land and the generally loose control that central power could achieve meant that farmers had little reason to pay high rents and were most often able to flee toward the forest frontier to find new land to clear and cultivate when necessary. During the Restored Toungoo and early Konbaung periods, however, headmen gradually became involved in a web of contracts and commercial relations that substantially curtailed their economic self-sufficiency. From this period onward, some *athi* land became progressively privatized and private tenures appeared on the frontier outside the old communal system. Hence the reform engaged during the Restored Toungoo and through the Konbaung dynasties (the last before British annexation) paved the rise of a new landowning class in Burma.

“Although headmen in many instances became the largest private landowners, the fragmentation of communal holdings removed some cultivators from effective headman control, while providing wealthy officials from outside the locality with unprecedented access to local land. The crown’s creation of new service lands, and their eventual partial privatization, had much the same effect. At the same time the expanding involvement of many headmen in agricultural commodity production, money-lending, land speculation, and mortgaging – all attested by a proliferation of (private commercial) contracts in the eighteenth and nineteenth centuries – rendered them more vulnerable to market fluctuations and to pressures from wealthy traders and courtiers from whom they themselves sought to obtain credit. If wider commercial outlets enriched many headmen, the unprecedented sale and mortgaging of local offices showed that risks were also involved.” (Lieberman, 1991: 27-28)

Yet, as we already underlined, the British census of 1891 in Upper Burma listed only 1.8 per cent of the population as landlords (while 64 per cent were landowning cultivators, 26 per cent tenants and 8 per cent agricultural laborers). This picture nevertheless varied from one region to another and the introduction of British governance – and the quasi abolishment of distinction between crown service and non-service – resulted in different trends. Some aristocrats managed to hold on to their new estates under colonial rule with then full and recognized rights of private property, notably on lands closer to the former capital of Mandalay (Thant Myint-U, 2004: 236-7).

However, British rule had a different impact on land tenure and landlordism in Upper and Lower Burma, first of all because Lower Burma lacked the historical and socio-cultural foundations to reproduce the model of Burmese society that existed in Upper Burma. With regards to Lower Burma with which British gained the longest acquaintance, administrators tended to consider Burmese as little attached to their land. *“Cultivators in this country,’ writes Mr. Blundell, ‘are not so much attached to the occupation, but that they frequently give it up to engage in some other which they deem more profitable”* (Furnivall, 1939: 113). For these very reasons, British administrators attempted to ‘fix’ cultivators on their lands through the different tenure systems explained previously.

However, in Upper Burma the situation was much different, with customary tenure either linking peasants to the land through their overlord (in the case of ‘bonded’ individuals, *kyun*) or directly through a system of private property giving peasants the right to sell, mortgage or pass it to their heirs (in the case of ‘non-bonded’ individuals, *athis*). Land revenue was of importance for the states’ finance, and despite the usufruct rights cultivators theoretically benefited from, various orders and edicts were issued to confine the cultivator to his land. Besides, the lowest segments of Upper Burma’s society had little chance at social mobility so that *“rather than the peasant controlling the use of his land, the state used the land to control the peasant”* (Taylor, 2009: 40). In other terms, pre-colonial and colonial states’ strategies regarding the necessity to ‘fix’ cultivators on their lands were quite similar in substance. Nevertheless, the means of governance and social organization were conceived from nearly opposite perspectives. In the pre-colonial period social organization (and subsequently governance) was structured along vertical relationships within different segments of the society (crownsmen, *athis*, and religious order), resembling patron-client networks. British administration, on the contrary, sought to collect land revenues by administrating a body of ‘peasant-proprietors’ on a geographical, horizontal basis, where the *“village headman was no longer a leader with popular authority (but) a village administrator responsible for police, taxes, public works, and agricultural improvements in his area”* (Stanton, 2014:

9). To suit appropriate village size – i.e. “to ensure that revenues from these areas provided neither too much nor too little remuneration for (the headman)” (*ibid.*: 9) – boundaries were redrawn and some villages displaced or grouped with others.

Therefore, pre-colonial customary laws and social organization were shaped by two major reforms: administrative rules replaced “*personal and authoritative judgments of traditional Burmese law*” (*ibid.*: 9) and the transformation of a quasi-exclusive ‘domestic’ agriculture into a commercial, export-oriented one. These two reforms, by interacting with each other, would profoundly affect the agrarian landscape in Myanmar, and the Delta perhaps primarily, as it became heavily dependent on export-oriented paddy cultivation. While patron-client networks would not create landlordism in the context of a ‘domestic’ oriented agricultural economy, they tended to favor landlordism in the context of a rapid transition to a commercial agriculture system defined by ‘eroding’ patron-client relationships (Scott, 1972) in favor of a territorialized conception of resources and access to resources.

2. The post-independence Burmese agrarian society: State policies as a factor of land insecurity (1949 onwards)

U Nu, the first prime minister of independent Burma, sought to overturn the colonial legacy to win people’s trust – and outflank his communist rivals³⁹. Given the catastrophic tenure situation bequeathed by the British – with a high percentage of lands in the hands of absentee landowners, among whom were foreigners and especially Chettiers – the new government aimed at taking back control of its natural resources and especially agricultural lands. The constitution (1947) provided the following provisions regarding land tenure (latter implemented in the form of the Land Nationalization Act 1948):

“(1) The State is the ultimate owner of all lands.

(2) Subject to the provisions of this Constitution, the State shall have the right to regulate, alter or abolish land tenures or resume possession of any land and distribute the same for collective or co-operative farming or to agricultural tenants.

(3) There can be no large landholdings on any basis whatsoever. The maximum size of private landholding shall, as soon as circumstances permit, be determined by law.” (GuB, 1948: 7, quoted in Turnell 2009: 174)

The Land Nationalization Act 1948 (amended in 1953) aimed at taking back land owned by non-national owners and landlords (holding more than 50 acres) in order to redistribute it to farmers holding surfaces deemed too small to be profitable, to

39. Brown, 2013: 96.

tenants, and to the households the most recently made landless (Brown, 2013: 96). This act was poorly provisioned – no compensation scheme was established for holders whose land was forcibly retaken – and was implemented only in Syriam district. The latter Nationalization Act 1953 would be implemented nationally (and included compensation⁴⁰). However, by 1958, when the government halted the implementation of the act, only 17% of all cultivated lands had been nationalized. *“Assuming most of the 3,557,000 acres eventually nationalized was paddy land, this represented about 25 per cent of this category of land”* (Taylor, 2009: 280). The nationalization process can be considered as a failure given that in 1965, tenants were still paying rents to 350,000 landlords, one third of whom were foreigners (mostly Indian and Chinese). Besides, some studies suggest that the program eventually benefited better-off farmers more than poorer ones. Tenants who had been landowners were more likely to be granted land than were previously landless laborers, as farmers needed to possess the means to cultivate the land in order to be eligible (*ibid.*: 280, Mya Than, 2001: 10). Let us underline however that it did benefit tenants in some places, as in one of the Dry Zone villages under study. Current landholders from Khoe Than Village Actually benefited from a convergence of circumstances. Indeed, wealthy farmers from the village left to Monywa during the civil war, entrusting smaller farmers with their land to work as tenants. However, in the midst of the nationalization process, landlordism and tenancy were abolished, thus transforming small farmers into middle and large holders.

From the Land Nationalization Act of 1948 until the new Farmland Law of 2012, land use policy followed the rules and regulation as stated in the Land Nationalization Act 1953, Tenancy Act and Rules 1964, and Procedures Conferring the Rights to Cultivate Land 1964. Under these policies, all land belonged to the state but farmers were given land use or tillage rights on their holdings, which could not be – at least in theory⁴¹ – transferred, mortgaged, or taken in lieu of loan repayments. However, land rights were legally inheritable by family members who remained farmers and tilled the land by themselves. Tenancy and absentee ownership was illegal.

Despite these ‘socialist’ measures, government policies throughout independence and until today would prove a major factor in land accumulation for the benefit of wealthier farmers while curbing the socioeconomic differentiation in rural Myanmar and even worsening the socioeconomic situation of smallholders (under five acres) and landless households, themselves representing the bulk of

40. Chettiar landlords actually lost most of their capital. The compensation was set through the Nationalization Act 1953 at “3%, non-negotiable, non-transferable government bonds of little genuine value unless used for investment in Burma” (Taylor, 2009: 280).

41. Mya Than (1987: 64), following up on Pfanner’s study (1962) in Mayin village (Bago Division), found in the year 1980 that 10 tenants were working land despite the legal ban on tenancy since 1965.

cultivators (Myat Thein and Maung Maung Soe, 1998: 21). A few positive outcomes came from the short-lived period of democratically elected government (ending in 1962 with Ne Win's military coup), including a period of 4 to 6% economic growth, as well as new banking and credit institutions among which at least the State Agricultural Bank proved quite successful⁴². However, uprisings and political crises shortly after independence clearly undermined the government's efforts, and the implementation of land reform had to stop in 1958-59 due to dissatisfaction among the peasantry since the land reform did not benefit the poor small farmers as expected.

"As a result, the socio-politico-economic position in the rural sector was not strong as in the colonial days. (...) Technology was almost the same as in pre-war days and agriculture production was achieved through land expansion. The system benefited mostly the urban and rural bourgeoisie." (Mya Than, 2001: 10-11)

For the rural population, one of the most palpable consequences of the Japanese invasion and the nationalistic post-independence transition was probably the departure of the money-lending Chettiar community. Between 1945 and 1965, the total credit provided by the government amount for around 900 million Kyats (and probably even less), while the country's *seasonal* needs were estimated between 100 and 200 million Kyats (Turnell, 2009: 192-193) – that is between 2 and 4 billion Kyats over a 20 years' period. Hence at least 70% of farming households⁴³ had to rely on local money-lenders, whose interest rates were as high as in the colonial period (between 50% and 60% per year). It was also found that already during this period, wealthier farmers ('credit-worthy') tended to benefit from government credit schemes, often turning the government loans into private, high-interest, ones (*ibid.*: 196). This overall lack of affordable credit for smallholders also had repercussions on agricultural practices. The almost complete disappearance of broadcasting technique under the colonial rule – replaced by transplanting – was revived, as farmers did not have the resources to pay the necessary labor for transplanting. Despite the better yields obtained, interest rates practiced by money-lenders wiped out any advantage of using the transplanting method (*ibid.*: 194). Despite much agricultural extension efforts provided by INGOs in the post-Nargis recovery period, this situation still prevails in the Lower Delta.

Under the socialist republic – military-led 'socialist' – government (1962-1988), government intervention and controls were introduced to cover almost all activities of food grain production, procurement, distribution, milling, storage,

42. The then State Agricultural Bank was the sole successful institution with almost 99% repayment rates between 1949 and 1962 (Turnell, 2009: 195).

43. Turnell 2009: 201.

transportation, domestic wholesale, retail trade, etc. The 1974 Constitution maintained the state as the ultimate owner of lands, but the slogan of the agrarian reform changed from 'land to the tiller' to 'right to cultivate to the tiller' (Mya Than, 1984: 741-761). With the change in property rights, food grain growers became obligated to sell a fixed quota of their food grains, the 'Compulsory Delivery Quota', to the government at a fixed price. The socialist government emphasized consumer welfare with extensive use of food subsidies, and private marketing was prohibited.

The government subsidized the sale of rice to consumers and distributed rice through the state economic enterprise (SEE) system (Young et al., 1998: 19). As a measure for fostering rice productivity, compulsory procurement of crops was practiced from 1964 until 2003. This policy, despite being applied nationally, was particularly enforced in the Delta, aiming at restoring the paddy production and retransforming the region into the 'rice bowl of Asia'. Despite this policy, production decreased. A widespread sense of crisis forced the government to take measures such as the exclusion of rice from marketing liberalization in 1988 and the introduction of a summer paddy program, initiated in 1992/93 (see **Box 1**), for boosting rice production (Fujita and Okamoto, 2006: 8). The paddy procurement system was revived.

However, the state's take was reduced by 2/3 (down to 10-12 baskets per acre from 30-40) and surplus paddy could be sold freely on the market. The entry of marketing agents (traders and rice millers) was practically free. It is hence more appropriate to say that rice was only partly liberalized (*ibid.*). Lasting until 2003, this compulsory procurement policy severely affected farmers' livelihoods by forcing them to sell at lower prices than those set by the market, fixed quota of paddy which was calculated based on the cultivated area (12 baskets per acre after 1988, and double to triple prior to this date), and independently from yields and variations due to weather conditions, rodents, and other pests. Upon failure to comply with any of these requirements, the land use right would be withdrawn from the farmers and the local Authorized Land Committee would re-assign the land use right to prioritized candidates who met the set criteria. In practice, farmers developed different strategies in order to resist this policy (as will be described in **Chapters IV.1** and **VIII.1.2**).

3. A brief overview of institutions involved in current land management

Myanmar's current land administration is characterized by overlapping laws and multiple agencies with similar responsibilities (Shivakumar *et al.*, 2015). The General Administration Department (GAD) of the Ministry of Home Affairs plays a critical role in subnational governance in Myanmar. It is in charge of managing the country public structures, which are hierarchically and geographically defined from Union level, down to State/Region, District, Township and Village Tract⁴⁴ level. Land management is part of its historical core function. The GAD is particularly responsible for town lands and village lands. The GAD can issue grants, leases, and licenses for residential, industrial, and commercial purposes. It also secures the acquisition of lands for the public interest, such as for building schools, roads, etc.

With the 2012 farmland land law, farmland management bodies have also been instated at the district, township, and village tract levels. However, the Farmland Law did not define the precise roles and responsibilities of Farmland Administrative Bodies⁴⁵ (FABs) at the lower levels (Shivakumar *et al.*, 2015). In theory, its mandate is to manage and solve farmland disputes. However, in practice, these bodies act as a 'mailbox' to refer local land conflicts to the higher administrative levels but do not play a significant role in conflict arbitration. The Settlement and Land Records Department (SLRD) plays a major role in all levels of non-forestland administration. The SLRD was first the Revenue and Survey Department as created by the British to map land and tax farmers accordingly. The SLRD has since been renamed DALMS (Department of Agricultural Land Management and Statistics), in May 2015. It falls under the current Ministry of Agriculture and Irrigation (MOAI), formerly the Ministry of Agriculture, Livestock and Irrigation (MOALI). It is officially in charge of land administration through surveys and records (including the cadastral – *kwin* – maps) and has a central role in the issuance of formal documentation concerning land use rights over farmlands. The former Ministry of Environment, Conservation and Forestry (MoECAf) – now called Ministry of Natural Resources and Environmental Conservation (MONREC) since the new NLD government was instated, assumes primary responsibility in areas designated as forests. The Forest Department is responsible for protecting the land under its jurisdiction from encroachment and squatting and ensuring adherence to prescribed land use.

44. Village tract has been introduced by the British as the lowest minimum unit of administration, with the primary objective of levying taxes (see Chapter History III.1.1). It is generally constituted of several villages.

45. Farmland Administrative Bodies have been formed under the 2012 Farmland Law to provide guidelines for issuance of Land Use Certificates (LUCs) for farmland areas and to oversee implementation as well as guiding and supervizing in respect of registration and conversion of farmland to other use. FABs operate at each administrative level (Central/ Naypyitaw, region/state, district, township, village tract/Ward).

IV. Overview of the areas under study: History, policies and land

1. Ayeyarwaddy Delta (Bogale and Mawlamyinegyun townships): a world of water and paddy, and a changing agricultural frontier

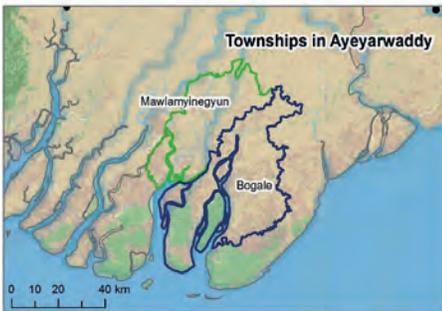


Figure 3: Location of the studied townships in Ayeyarwaddy

“The Ayeyarwaddy Delta of southern Myanmar is a fragile and intricate ecosystem of mangrove swamps and tidal estuaries. Non saline arable areas are limited and becoming scarce due to the erosion of riverbanks, saltwater intrusion, and increasing soil salinity. Poor water control and drainage works contribute to periodic flooding and crop losses. Most

poor households cultivate a single crop of traditional monsoon paddy. Better-off farmers able to grow early maturing, high-yielding varieties of paddy benefit from an additional winter crop such as groundnuts or soybeans. In the very few areas where irrigation facilities are available, summer paddy is grown. Marginal farm households cannot afford to use chemical fertilizer or manure and suffer from declining crop yields. In some townships such as Laputta, Bogale and Mawlamyaingyun, it is estimated that more than half of the population is landless. Many marginal farmers engage in fishing and crabbing. Those who fish typically do not own fishing gear or boats and depend on fish traders for such resources. Some households raise pigs, chickens, or ducks. Others crop during the slack growing season by borrowing from more well-off farmers; loans are paid back through labor or through a portion of paddy crop. The effective interest rate charged by fish traders, rice traders and others in these loan arrangements typically amount to 10 per cent a month.”

This is how a 1999 World Bank report (in Mya Than 2006) depicted the Delta. Despite some major changes such as the generalization of summer paddy production (see **Box 1**) – at the expense of pulses – and of the use of fertilizers (see **Chapter VII.2.1**), it could very much fit the present condition of Delta. The climate is tropical humid with annual precipitations of three to four meters per year. The large majority of these rains fall during monsoon season (between May and October). The dry season (from November to February) is slightly cooler, while temperatures soar from March up to the monsoon rains.

BOX 1: INTRODUCTION OF SUMMER PADDY

Rising anxieties about rice prices led the government to exclude rice from the market liberalization of 1988. After decades of declining agricultural production, the government took measures to boost rice production with the introduction of the summer paddy program initiated in 1992/93. As described by Fujita⁴⁶, it was “*essentially an irrigation development program*” with construction of sluice gates, draining channels, and farmers’ private investment in water pumps. As an incentive to farmers, summer paddy was exempt from the procurement obligation (see **Box 2**).

Myanmar agricultural services also vigorously promoted the cultivation of summer paddy varieties. In just three years, the acreage under summer paddy countrywide had increased from 0.82 million in 1992/93 to nearly 4 million in 1995/96 (Myat Thein, 1997), but then followed a very sluggish phase where the declining rice price was outstripped by the additional costs of diesel for pump irrigation (Fujita and Okamoto, 2006). The authors even state that “*it becomes clearly apparent that pulses generally yield a higher profit than summer paddy*” and conclude that “*agricultural policies in Myanmar have a strong inclination towards production increases for their own sakes while paying rather less attention to farmers’ income and welfare*”.

As summer paddy required costs double of those of monsoon and access to farm machinery (power tillers, motor pump), the introduction of this cropping pattern may have accelerated land exclusion and land accumulation processes, and increased disparities in agricultural incomes. This hypothesis is put forward by Myat Thein (1997: 127-128) who analysed the impact on the introduction of summer paddy in Pya Phone district. He provides examples of households accumulating lands:

“(…) There were also those who either obtained land-use rights through purchase or through the land distribution program. One farm family, for example, had 23 acres in 1992/93. This farm family now has 45 acres and is planning to buy 10 more acres in the coming year. Another farm family had just 5 acres in 1992/93. Now this family has nearly 25 acres.

“On the other hand, there were also farm families who had to sell some or all of their land-use rights as they could not afford the cost of cultivating both monsoon and summer paddy. For example, one family of three cultivating 10 acres of monsoon paddy before 1992/1993 now only has 5 acres. As this small family could not afford the cost of cultivating 10 acres of summer paddy the family sold half of its land-use rights on an understanding, rather than forfeiting it (for not cultivating) to the land distribution committee.”

Unfortunately, Myat Thein does not clearly analyse what are the critical factors determining who are the losers and the winners. However, our study findings seem to indicate that the **exclusion process is strongly linked to the ability of mobilizing labor or/and the ability to access machinery (tiller, thresher, and, more recently, reapers).**

46. Fujita and Okamoto, 2006, Fujita, 2003.

Paddy is by far the main crop grown, at both summer and monsoon seasons. In other Delta townships, pulse and groundnut are also grown in the dry season. The spatial organization of Delta livelihoods is strongly linked to the salinity of water resources. During the dry season, salinity levels progressively increase and water becomes salty further North (see **Figure 4**). The possibility of growing summer paddy is mainly determined by the availability of irrigation water, and therefore by the salinity of surrounding creeks and rivers.

Figure 5 (on Mawlamyinegyun, and which is valid for Bogale as well) shows the predominance of double paddy cropping in the northern areas of the township, and of single paddy cropping in the southern areas, and the once abundant but now marginal areas of pulses crops. Roughly, a north-south gradient applies, confining more or less summer season paddy to the north of Magu and Pa Da Mya Gone village tracts in Bogale and from Kywe Chan Kyon La Mu village tract to the north in Mawlamyinegyun township (see **Figure 3**).

In freshwater areas, farmers can farm all year round, while in salt-water areas (further south towards the Andaman sea), only rainfed crops in monsoon season are possible. In between, there is a gradient with brackish water areas, where summer crops are more or less possible, but often with lower yields. Summer paddy crops are grown with total reliance on irrigation: water from the rivers and creeks can be withdrawn by gravity during high tides or by motor pumps.

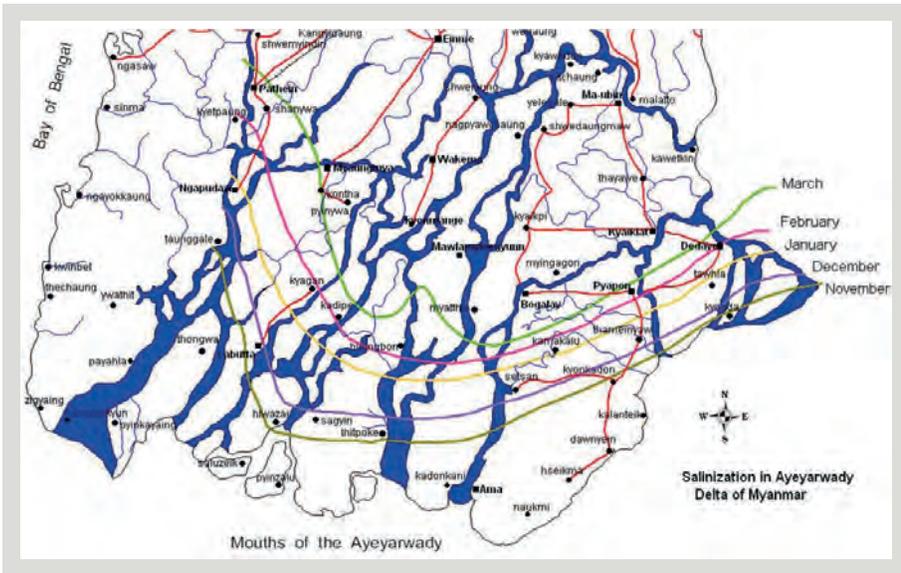


Figure 4: Iso salinity map of Delta (source: unknown)

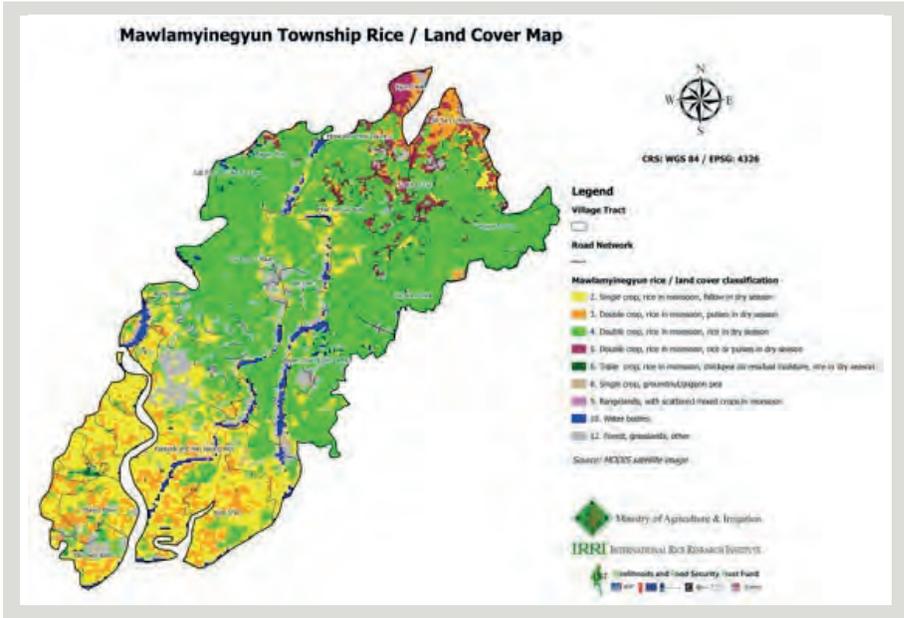


Figure 5: Land cover map of Mawlamyinegyun township (source: IRRRI, 2013)

On 2 and 3 May 2008, Cyclone Nargis struck Myanmar, making landfall in Ayeyarwaddy Division, crossing through the Ayeyarwaddy Delta from southwest to northeast, and directly hitting the country’s largest city, Yangon. Major damage was reported in the affected areas, particularly in the low-lying agricultural Delta region where the cyclone’s impact was compounded by a storm surge. Buildings, infrastructure, and communications were severely damaged, and flooding was widespread. Given the devastation of homes and infrastructure, loss of agricultural land, and loss of access to fishing grounds due to persistent flooding and the shifting of sands, many people were displaced. The estimated number of people affected is as high as 2.4 million.

The official death toll on the 1st of June 2008 stands at 77,738 with 55,917 missing. Unofficial estimates are considerably higher (often around 150,000). Overall, it is estimated that almost 2 million acres of paddy fields were submerged by the cyclone, i.e. 63% of paddy land in a total of 19 townships of the two main affected Divisions, plus Bago East and Mon State (FAO, 2008: 13). In Bogale, 51% of large ruminants, and in Mawlamyinegyun 70% of draught animals, were killed (*ibid.*: 14, 25). Beyond the direct damages from the cyclone on crop production, the salinization of cultivable lands continues to impact agriculture in the region and even indefinitely prevented paddy cultivation in some areas – such as in Kyun Hteik village tract (Bogale township).

In townships such as Laputta, Bogale, and Mawlamyinegyun, it is estimated that more than half of the population is landless, with that rate rising as high as 70% of the households in some village tracts (Dapice, 2009: 5).

The massive migration waves during the Delta rapid expansion at the British colonial period, led Adas (1974:105) to describe the Burma Delta as a plural society, with economic actors from various cultural groups (mainly Burmese, European, Indians, Chinese) organized into “*corporate sections or segments whose boundaries demarcate distinct communities and systems of social action*”. Nowadays, in the area of the study, the population is essentially Bamar, with Karen minorities. The nine villages under study are distributed in Bogale and Mawlamyinegyun townships over five different village tracts (see **Table 4**).

Table 4: Key information of Delta surveyed villages (source: village statistics)

Township – village tract	Village	Total Population	Total Households	Monsoon acres	Summer acres	Landless HH	% landless
Bogale – Magu	Poe Laung Chaung Twin	555	138	315	301	61	44
Bogale – Magu	Pay Chaung Lay	435	105	390	390	69	66
Bogale – Magu	Magu	681	166	564	564	91	55
Bogale – Mya Thein Tan	Aye Ywar	326	85	330	150	50	59
Bogale – Tha Byu Gone	Tha Byu Gone	667	150	212	211	96	64
Maw Gyun – Kyar Hone	Kyar Hone	472	114	449	410	75	66
Maw Gyun – Kyet Shar	Pay Chaung	274	54	175		46	85
Maw Gyun – Pyar Mut Shaw Chaung	Ah Lel Chaung	272	58	157	157	34	59
Maw Gyun – Kyar Hone	Tet Tet Ku	300	148	523	327	100	68

Selected villages encompass the agrarian diversity of the north-south salinity gradient, as well as represent the diversity of settlements, which follows more or less the same pattern: more recent settlements toward the south. Finally, they convey the diversity of land statuses – farmlands and cultivated forestlands. Except from Pay Chaung in Kyet Shar village tract (Mawlamyinegyun township), all villages include lands where two seasons of paddy can be cultivated. Within the same villages, this may vary depending on the lands' proximity to creeks and rivers. For example in Tet Tet Ku, inner lands can be cultivated two seasons while those situated by the river (hence vulnerable to saline water intrusion) can only be cultivated during monsoon.

As in other parts of the Delta, paddy cultivation is by far the main source of income for local communities. However, in villages that are close to local towns such as Bogale and Mawlamyinegyun, gardening activities (betel, flowers, vegetables, banana) are also common and procure a significant additional income for the household's livelihoods. Fishing and duck raising (mainly for egg production) are also important sources of income in the Delta. Among the nine survey villages, the oldest ones (Tha Byu Gone, Aye Ywar, A Lel Chaung) all find their origins with the migration of farmers from the Dry Zone (see **Chapter III.1.3**). This migration already induced in pre-colonial times, was boosted under British colonial rule. The history of more recent villages such as Pay Chaung or Magu illustrates the north-south agricultural frontier, motivated by the need to find new land to cultivate: for newly settled couples, for farmers having lost their land at the hands of money-lenders, and even for those trying to escape debts. Most recent villages also bear the consequences of post-independence government policies to populate areas in the Delta where anti-governmental groups (communist groups, Karen armed groups) were operating (see **Box 2**).

The livelihoods' sequence in the creation of these settlements follows the same pattern: starting with firewood and charcoal exploitation (to supply the expanding populations of towns), followed by a systematic clearing of lands that would then be transformed into irrigable paddy fields. The history of the agricultural frontier is reflected in the features of villages. In general, the most recent villages (farther south, deeper into forestlands) have higher landlessness rates, higher land concentration, and more mobility (both in terms of household mobility and in terms of intensity of land transfers) than in older settlements where land is more evenly distributed and social organization and horizontal linkages between villagers are stronger. As a matter of fact, as per the villages' data, landless households among the nine villages under study represent an average 65%⁴⁷, with higher inequality rates in the most recently settled southern villages (eg: 85% of landless in Pay Chaung village).

47. See updated figures as per the quantitative study's findings in **Chapter VII** showing slightly lower landlessness rates.

BOX 2: BOGALE AND MAWLAMYINEGYUN THROUGH THE 'COMPULSORY DELIVERY QUOTA'

In the agitated period following independence, Bogale and Mawlamyinegyun were considered a 'dark zone'. Local people suffered from the conflicts between the central government and anti-government organizations. Since 1962, U Ne Win's military regime aimed to clear the Delta region of rebels, notably by encouraging forest clearing and the production of firewood and charcoal. Under the Cooperative Department, groups of laborers were dispersed in order to clear forests as in Pay Chaung, one of the villages under study. According to interviews, these laborers were the first settlers to work land once the forests were cleared some 40 years ago. The unstable situation in the Delta had consequences on farmers' ability to access government credit as well. Indeed, only villages free from insurgent activity (Turnell 2009: 197) had the right to establish a village bank. Farmers had to pay different 'taxes' to each armed group (including government forces), in form of paddy, food, etc. The high diversity of rebel organizations gave its name to the 'colored rebels' (*yaun sone tha bon*) era. Among the insurgents armed organizations were notably the Burma Communist Party (Red flag party), White Soldier rebels, and the KNDO (Karen rebels, now known as KNU). In the same period, a considerable number of Karen ethnic people found refuge in the Delta (Thawngmung, 2013: 112), leading to the current landscape dominated by Burmese and Karen villages, the former mainly involved in paddy cultivation and the latter in both paddy and gardening activities.

Perceived as a refuge for anti-government rebels and Myanmar's main rice bowl, the government tightly controlled the Delta. The post 1962 policies and particularly the 'Compulsory Delivery Quota' strongly impacted farmers. In all studied villages⁴⁸, this policy has been an important driver of farmland transfers. In theory, farmers unable to supply prescribed paddy quotas risked to have their land confiscated by the let allocation committee which had the prerogative to reallocate the land use rights to other households recorded on a 'waiting list' (*tan-si sa-yin*⁴⁸). In practice, according to our interviews, it was more common for cultivators to arrange their own informal transfers of land use rights before having their lands formally confiscated by the let allocation committee. Farmers unable to provide paddy quotas in full, as far as they could anticipate, would sell part or all of their lands to another farmer (generally from the same village) and then disguise the transfer through the land distribution committee involving local SLRD officers and the village tract headman.

For example, a person owning three acres of paddy land had to procure 36 baskets of paddy (12 baskets per acre). The first year, the person procures 25 baskets, remaining with a debt to the government of 11 baskets. Fortunately, the government previously gave three years to the farmers to fulfil their obligation from the first failure to procure the due quota. The second year, the same farmer thus owes 47 baskets (36 for three

48. Except from Pay Chaung village in which land is all registered as forestland. While they had to deliver paddy quotas to the village committee, being in forestland made it so they could quite easily underreport cultivated areas. For this reason, to our knowledge none of Pay Chaung household lost land because of this policy.

acres plus the past year's debt). However, the farmer is only able to procure 30 baskets, remaining with 17 baskets as debt. The third year, despite a good harvest, the farmer is able to procure only 40 baskets and is left with a debt of 13 baskets to the government. Whenever a farmer was not able to fulfil the prescribed quantity of baskets, government broker teams would inspect all places in which paddy could potentially be hidden. If they found some paddy stored in granaries, it would be confiscated. The farmer in this case was sent to jail for some months, in addition to losing his paddy lands.

For 'minor' gaps, cultivators would borrow money or paddy to fill the quota. However, the rice market price was higher than the government price, exacerbating a farmer's indebtedness. It is unsurprising that cultivators were sometimes unable to repay and lost part of their holdings. This policy also impacted on-going arrangements, as in the case of one Aye Ywar villager, 'U K K'⁴⁹ who, prior to 1964, mortgaged 13 acres in order to cover the cost of his grandmother's funeral. According to the *le pyan ngwe pyan* practice, land is given to the individual lending money for a certain period. The money-lender receives the right to use and benefit from all products of the land until the borrower is able to repay the loan (see **Chapter VI**). Before U K K was able to repay the loan, the quota policy had been introduced so he did not even care to take back his land. As noted by Myat Thein (1997: 131), prior to the liberalization of the paddy market after 1988, farmers had no incentive to cultivate. They even lacked incentives to retrieve mortgaged lands due to the prohibitive quota (24 baskets per acre prior to 1988). In 1971-72, when the free market price of paddy rose, farm laborers were even *"better-off than small owner-cultivators because agricultural workers were usually paid in kind"* (Myat Than 2001: 11). Exceptions may have occurred on cultivated forestlands, as recalled by one villager of Pay Chaung: eluding the direct control of SLRD, they would underreport their cultivated acreage so as to be required to supply less to the government, and hence profit more from the parallel market (prior to 1988) or private traders (after 1988).

However, land confiscation and reallocation varied depending on the village tract land committee – composed of the village headman and appointed elders – and a given farmer's relationship with the committee. Good relations with the committee provided easier access to seized lands – i.e. a better position on the waiting list. Similarly, while the farmer described above lost his lands for a debt of 14 baskets, other individuals closer to the committee had no or smaller sanctions despite greater debts to the government. The waiting lists, theoretically dedicated to landless farmers, actually included large landowners. The village tract committee would indeed find justification for transferring lands to farmers (rather than the landless), generally based on their greater financial and technical capacity to successfully undertake land cultivation. Evidence from the qualitative part of the study shows that land transfers through the waiting lists under the forced procurement era served mainly land accumulation for the benefit of a narrow class of big landholders.

49. All names of individuals interviewed during the study have been modified in order to protect their anonymity.

Pay Chaung shows higher land concentrations (63% of farmers own more than 10 acres) than in older settlements where land is better distributed (Aye Ywar, Ah Lel Chaung and Tha Byu Gone). Hence, a stronger process of land concentration is to be found in the south, which is linked with more extensive processes of mobility. This can be imputed to late exploitation of these lands, driven by government policies such as compulsory rice procurement which affected many small farmers unable to absorb the shocks linked to health issues or 'bad' harvests (rodent infestations, high tides, bad weather, and Cyclone Nargis) or to manage lower yields of paddy in the southern parts of the Delta.

During both colonial and postcolonial times, some issues have remained constant in Delta, such as farmers' indebtedness (see **VIII.2.3**), and the strong presence of the state due to its focus on paddy production. The forced paddy procurement system, which was a major burden for Delta farmers has been a key driver of exclusion for some and of accumulation for others (see **Box 2**).

Throughout the previous military governments up to now, the village headman (nowadays the village administrator) and the local Settlement and Land Records Department (SLRD) officer remained the key stakeholders in land management and in defining the 'losers and winners' of the implemented policies (see **VIII.3**). All these issues have fueled the progress of the agricultural frontier, as farmers unable to repay their loans or to fulfil the procurement quotas generally lost their lands and moved south to clear forestlands and formed new settlements. Until 2014, these lands were still registered as forestlands (see this **Chapter 3.2**). One hypothesis to be explored further in the study is explaining the current differences in land distribution between older and recent settlements by their level of social organization and horizontal linkages – presumably stronger in older ones, thus impacting on the relative power of local authorities (village headman and SLRD officer).

2. Dry Zone (Monywa and Yinmabin townships): a diversified and resilient agriculture, in the cradle of Burmese culture

The Dry Zone⁵⁰ is characterized by two main features: i) annual precipitations are less than 1000 mm⁵¹ (40"), and ii) the occurrence of water deficits due to the excess of annual evapo-transpiration over annual precipitation. The rainfall pattern in the Dry Zone area is bimodal: although the rainfed crop growing season in the country is normally determined by monsoon onset in May and its termination in

50. The Dry Zone is a generic term for the dry areas of the regions of Sagaing, Magway and Mandalay.

51. The average annual rainfall is of 717 mm and 845 mm in Monywa and Yinmabin respectively.

October, this Dry Zone area encounters a dry spell in July (often referred to as 'July drought') and higher rainfall for better crop growth occurs from August to October. The unpredictability of rainfall and frequency of droughts has led local inhabitants to increase their resilience by diversifying their crops and sources of incomes through livestock raising (cattle, sheep, goats, chicken), weaving, and other off-farm activities.

BOX 3: MONYWA, CRADLE OF BURMESE CULTURE?

The Monywa and Yinmabin area lies in the cradle of Burmese culture. As per one of the local legends, the name of Monywa derived from the name of the tree species⁵² which were erected as poles during monarchical era regatta festivals on the Chindwin River. During the Bagan and Ava periods of Myanmar dynastic history, Monywa was a small village. It became a large and prosperous village in the early Konbaung Period. On the other hand, Yinmabin was only a subsidiary village during monarchical times. The name of the village was derived from the *Yin Ma* tree (Chittagong wood tree, *Chukrassia tabularis*). During the period from 1714 to 1752, the monarchical administration was weak, the country was in turmoil and villages encountered dacoits, looters, and cattle theft (Dr. Yi Yi, 1973). The west bank area of the Chindwin River was bounded by north and south Yama streams and was designated as the ninety-nine villages of the Ba Gyi Taik. All of them were under the charge of Hsa-Lin-Gyi Headman as appointed by King Badon in 1802. British colonial rule in Upper Burma started in 1885-6, 33 years later than in Lower Burma. In 1887 during the colonial period the Headquarters of the Deputy Commissioner was shifted from Ahlon to Monywa. Thus Monywa developed and grew as a district town.

52. Mon Taing/ Mon pin: *Lophopetalum wallichii* Kurz.



Figure 6: Location of studied townships in Sagaing

Unlike the Delta, the Dry Zone area and the situation of surveyed villages are very heterogeneous, and cannot be explained by a single variable. Differences are the result of variations in the physical environment, access to water and infrastructure, farming systems, proximity to greater towns, etc. The area displays a strong agrarian structure based on dry land agriculture – with the exception of prosperous irrigated areas near the Chindwin River and various streams. Dry land farming is characterized by highly diversified cropping, high risks for rainfed crops (‘normal yields’ are achieved with about 30% probability), declining soil fertility and prevailing soil erosion on slopes, and fragile soils. Major crops grown are pulses such as pigeon pea, chickpea, green gram, lima bean. Also, sesame, sorghum, sunflower, and wheat to a lesser extent are commonly grown. Tomato, onions, and chilli are grown as profitable cash crops on the most fertile soils. Cotton may also be found. *Thanaka* and betel also provide additional agricultural income. Access to water for irrigation (mainly through pumped irrigation systems moving surface water or groundwater) is a critical determinant of the options available to farmers, including whether they can get secure harvests of monsoon crops or cultivate a second crop in the dry season.

Table 5: Key information of Dry Zone surveyed villages (village statistics)

Category	Aung Chan Thar	Zee Phyu Pin	Min Zu	Si Laung	Hnaw Pin
1. Population					
Male	505	367	661	922	220
Female	577	376	730	1042	340
Households	218	167	291	372	121
Landowners	116	136	157	160	64
Landless HHs	102	31	134	212	57

Category	Gaw Gyi	Hledar	Khoe Than	Nyaung Pin Thar
1. Population				
Male		326		202
Female		327		212
Households	122	143	250	85
Landowners	53	79	117	45
Landless HHs	69	64	133	40

BOX 4: GOVERNMENT IRRIGATION PROJECTS, SAGAING REGION

Irrigation development in Dry Zone took place essentially in the 1990s under the government's nation-wide irrigation development program which aimed to boost paddy production. The widespread use of groundwater for irrigation in Myanmar began in 1989, with pilot trials funded by UNDP and IDA at Monywa. The success of these trials resulted in the development of large groundwater projects in Monywa (141 wells serving 8,094 ha in the 1980s and 1990s, funded by the World Bank) and the 99 Ponds project in Yinmabin (440 wells irrigating 3,300 ha), which draws from artesian wells.

Department of Water Resources and Utilization (WRUD), Ministry of Agriculture and Irrigation, had launched the tank irrigation project in Yinmabin in 1994. The project was completed in 1995 and additional tanks were made in 2000, for a total cost of about 80 million MMK. About 8,200 acres are irrigated presently. Double cropping altogether with summer rice amounted to 13,361 acres of total cropping within this 99 tank irrigated area (Report of the District Office of WRUD, June 2011, Monywa).

Governmental efforts to improve access to irrigation in the Dry Zone were principally driven by the prospect of enhancing paddy production in this region (Thawngmung 2003: 303). The state's persistent inclination towards paddy and production increases, even in areas such as the Dry Zone, was justified by the rationale that food security would be obtained by reaching paddy self-sufficiency. It indeed gave too little attention to comparative advantages of other crops which could provide more resilience and better incomes to farmers. Sticking to the socialist land tenure system, the government compelled farmers to grow the mandate crop – paddy – wherever irrigation water was made accessible. Cultivation of other staple or cash crops in the designated 'paddy' lands was prohibited. Even in sandy field plots which were not favorable to paddy, farmers were obliged to switch from dry land crops to grow paddy after the irrigation channels were constructed beside river banks.

Among the surveyed villages, Zee Hpyu Pin falls under the irrigation project's coverage. However, some villagers such as in Thet Kei Pu reported having lost access to prior underground water after the establishment of nearby tanks, which may have exhausted their water resource. Examination of the water discharge rate over nearly two decades revealed the dwindling flow of water from the artesian wells. Due to the decreasing water discharge from the existing wells, the administrative departments of Monywa district notified in the early 2010s that no new wells were to be drilled in those areas.

Apart from farm activities, weaving is a primary livelihood for daily workers in many villages (such as Khoe Than, Hnaw Pin, and Gaw Gyi). Once flourishing around Monywa under the socialist government, from 2004 onwards the indigenous weaving industry was challenged by more affordable and better quality Chinese blankets, resulting in its ultimate collapse around 2008. Workers from the village-based

handloom business started to migrate to Manipura, India border sites. Recently, the weaving industry resumed thanks to tourism and the renewed popularity of the *longyi* traditionally woven in the area. Most of the surveyed villages in Yinmabin township were founded recently, soon after the imposition of British rule. Some households moved out from local densely populated and 'saturated' villages and settled in new hamlets in Yinmabin's periphery areas, which were then consolidated and established as villages under the Village Act of the colonial government. Some settlements also moved due to scarcity of water or landslides. Contrary to the Delta, the areas under study in Dry Zone have not been a strategic area for paddy production, and as such, farmers have been less affected by government policies, both during colonial and postcolonial times. The irrigation development policies that formed part of the summer paddy program and the greening projects are probably the most important initiatives that have affected farmers.

3. Land uses

In Myanmar land tenure is defined in relation to specific land use categories. From a legal point of view, there are nine main categories⁵³ of land use: Agricultural Land, Garden Land, Grazing Land, Fallow Land and Waste Land, Forestland, Town Land, Village Land, Cantonments, and Religious Land. Various laws define the extent of the rights the users may enjoy under each category.

From a most practical 'non-legalist' picture, the most important land use categories as observed in surveyed villages have been defined as follows: 1) village lands, 2) forestlands, 3) other types of lands under communal use, 4) farmlands (including paddy lands and garden lands). For this latter category, more information is provided under **Chapter VI** and **Chapter VIII.2**.

3.1 Village lands

Village lands (*ywa myay*) fall under 'Urban and Rural lands' category. In Delta, settlement areas are mainly linearly arranged along the banks of waterways. Behind the village areas lay first a fringe of garden lands (*u yin*) and further inland the paddy lands (see **Figure 7**). In the Dry Zone, settlement areas are more 'classical', growing from the oldest settlement in a more or less concentric expansion, progressively encroaching on farmlands cultivated around the village's periphery (see **Figure 8**). In theory, official transfer of farmland into village land requires approval at the Union level for paddy lands and approval at the regional government level for other farmland categories.

53. Actually, if sub-categories are also counted, there are even up to 22 different land use categories.



Figure 7: Map of Aye Ywar, a 'typical' Delta village

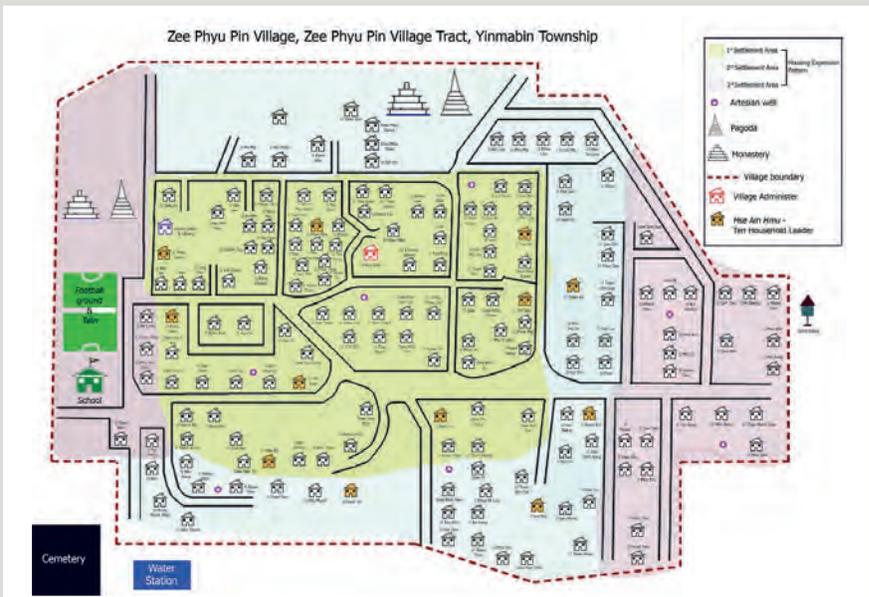


Figure 8: Example of the concentric pattern of village expansion in Dry Zone (Zee Phyu Pin village)

However, in practice, such land use transfers and village lands are never registered as such and village settlement areas increase informally with the increase of inhabitants, encroaching on farmlands. Therefore, there is no register of, and no revenue collection from, such lands. However informally, switching land use from farming to housing is requested to the village head. In the Delta, an intermediate strategy to extend village land is often to convert adjacent paddy land into garden land, plant trees, and build a shelter for animals, before requesting to build a house.

House compounds can often include additional surrounding space for storage, livestock shelters, ponds, latrines, and home gardens. However, the poorest households, particularly in the salt-water areas, may often only have a very basic shelter, with no adjacent space. Home gardens (*ein chan*) are two times more frequent among farmland owning households (40%) than among landless households (21.6%). In the Delta, 39% of respondents have a home garden, out of which 70% exclusively produce for home consumption. In the Dry Zone, home gardens are less common, notably due to water scarcity. 23.6% of surveyed households have a home garden, out of which 87% exclusively produce for food.

■ 3.2 Forestlands

Both the Delta and the Dry Zone have forestlands. In the Delta, the forests are mainly natural mangrove forests along water ways. In the studied villages of the Dry Zone, forests mainly consist of planted watershed protection forests and Eucalyptus plantations in protected forest areas, the latter being the result of 'greening' projects mostly implemented in the late 1970s and 1980s (for more information on Dry Zone greening projects, see **Box 5**).

In both areas, significant acreage of cultivated land happens to be in areas which are officially designated as 'forestlands'. In the Delta, this is mainly due to progressive encroachment into forests by landless people in search of lands along the agricultural frontier. In fact, in many 'southern' villages in brackish and salt water areas (such as Tet Tet Ku and Pay Chaung), a large proportion of cultivated lands were still under forestland status. Cultivators pay annual fines to the forest department and even have '*u paing*' registration, but cannot access MADB loans, as this requires formal farmland ownership.

In the Dry Zone, forest areas and protected areas have often been demarcated in a very top-down manner in areas which were already cultivated and occupied by farmers. Indeed, boundaries of protected forest areas and tree plantations were extended into cultivated areas. In some cases (e.g. Minzu village), farmers were forced to give up their lands, while in other cases farmers are only allowed to cultivate these lands by performing alley-cropping between the planted trees.

BOX 5: GOVERNMENT GREENING PROJECTS IN THE DRY ZONE

Land degradation issues in the Dry Zone were identified as early as the 1950s, when a Dry Zone rehabilitation project was initiated by the Agriculture and Rural Development Corporation (ARDC) with the Forest Department (FD). This comprised tree planting on degraded lands. Under the UNDP HDI program, watershed management programs were instituted in the 1990s (Community Multi-purpose fuelwood woodlots and Watershed Management) to attempt to reduce deforestation and related erosion and degradation of land and water resources (Cools, 1995). In 1995, Myanmar set a Forest Policy objective to increase the area of Reserved Forest (RF) and Protected Public Forest (PPF) to 30% of total land area by 2010. In 1994, the FD implemented a special 'Greening Project' for nine districts of the Dry Zone. In 1997, the Dry Zone Greening Department (DZGD) was instituted to establish forest plantations on degraded land, conserve the remaining natural forests, promote fuelwood substitutes, and develop water resources (UNCCD 2005).

The greening policies and the creation of protected forest areas under these different greening projects affected farmers' land use practices in many villages. Indeed, grazing, agriculture, and the extraction of fuelwood and rocks are prohibited in these areas, some of which were previously cultivated. In addition, because these projects were implemented in a top down manner, with little information provided to farmers, tensions between authorities and communities emerged. In Hledar, about half of the cultivated lands fell into the protected forest area. In Kyauk Kwe, most farmlands fell in the protected area. Often, the affected villagers had cultivated these lands for a significant amount of time (eg: more than 5 or 10 years) before they were designated as protected forestland.

To cope with these greening projects, villagers adopted different strategies, including special arrangements with forest authorities. In some cases, the FD allowed farmers to continue farming in the protected forest area but restricted expansion of farm size. If the land was ever left fallow, the greening project would take the land to plant trees. Farmers thus plowed their fields every year to prove the land was cultivated and hence prevent land confiscation by the FD. In other cases, farmers were allowed to perform alley cropping between the rows of planted trees. This led to a new 'agro-forestry' system, with Eucalyptus trees combined with crops. It seems that the yields gradually declined in these plots. As such, the motto "*You can grow crops as long as you don't hurt the Eucalyptus trees*" became the consensus between farmers and the Dry Zone Greening Project.

Similar arrangements also occurred on lands which were encroached upon after being designated as protected forest areas. Villagers developed new farmland there during times of weak governance. Farmlands which were outside of the forest area were registered with *u' paing*, while those inside were not. But exceptions are found with farming households who managed to obtain *u' paing* titles for plots which fell within protected forest. Yet *kwet-pyauk* (scattered plots which escaped from cadastral mapping) were not included in the registration process.

A clear indicator of perceived land insecurity is the fact farmers avoid fallows to prevent any potential claims from authorities, although fallows could be helpful to renew soil fertility and improve land productivity. SLRD staff register these lands as *u paing*. In forest protected areas, local inhabitants may collect fuelwood from the areas, despite the official regulation against this practice.

In the Delta, these major discrepancies between registered farmland and forestland areas have been recently addressed by the government. In a nationwide initiative announced in early 2013 through a Presidential instruction, it was decided that land would be reclassified in order to reflect current realities on the ground. The main objective has been to collect accurate village and household data on those who have illegally settled in reserved areas and public forests for a certain length of years, so as to designate new villages for them. The pre-instructions which took effect in April 2013 include key actions such as: i) a permission mechanism by which reserved and public forestland areas where groups of villages and houses with a number of houses greater than 50 have settled for a long length of years are to be reclassified as new villages, ii) conducting allocations and designations of land as farmland for the people there. Through this policy, the Forestry Department has said that 1,681,667.62 acres have been converted to farmlands.

In 2014, such lands in the surveyed Delta villages seem to have been regazetted from forestland to farmland category, with formal administration transferred from the Department of Forestry to the Settlement and Land Records Department. In the concerned surveyed villages, forest department officers (forest ranger of Nyi Naung forest reserve and the usual fine collector) visited the villages and collected data on ownership of plots in July 2014. They also updated the names on fine receipts, taking into account land transfers. Following this, SLRD officers visited the villages in November 2014 to collect information on landowners and holdings, and to collect fees in ways that were not consistent across the villages⁵⁴.

Although SLRD had promised farmers the delivery of LUCs in 2015, so that they would also be able to access 2015 monsoon MADB agricultural loans, the process has been slow and farmers had not yet received official documents, nor had accessed the loans in July 2015.

■ 3.3 Communal lands

In both the Delta and the Dry Zone, communal grazing lands used to exist in the past but have largely been absorbed by village expansion. Only very small

54. In one of the village, SRLD also checked with adjacent landowners and took pictures of landowners standing in their plots. Also the fee collected for the registration was of 5,000 MMK per farmers. In the other village, SRLD only listed the landowners and their holdings, but collected 5,000 MMK/acre for the concerned cultivated areas.

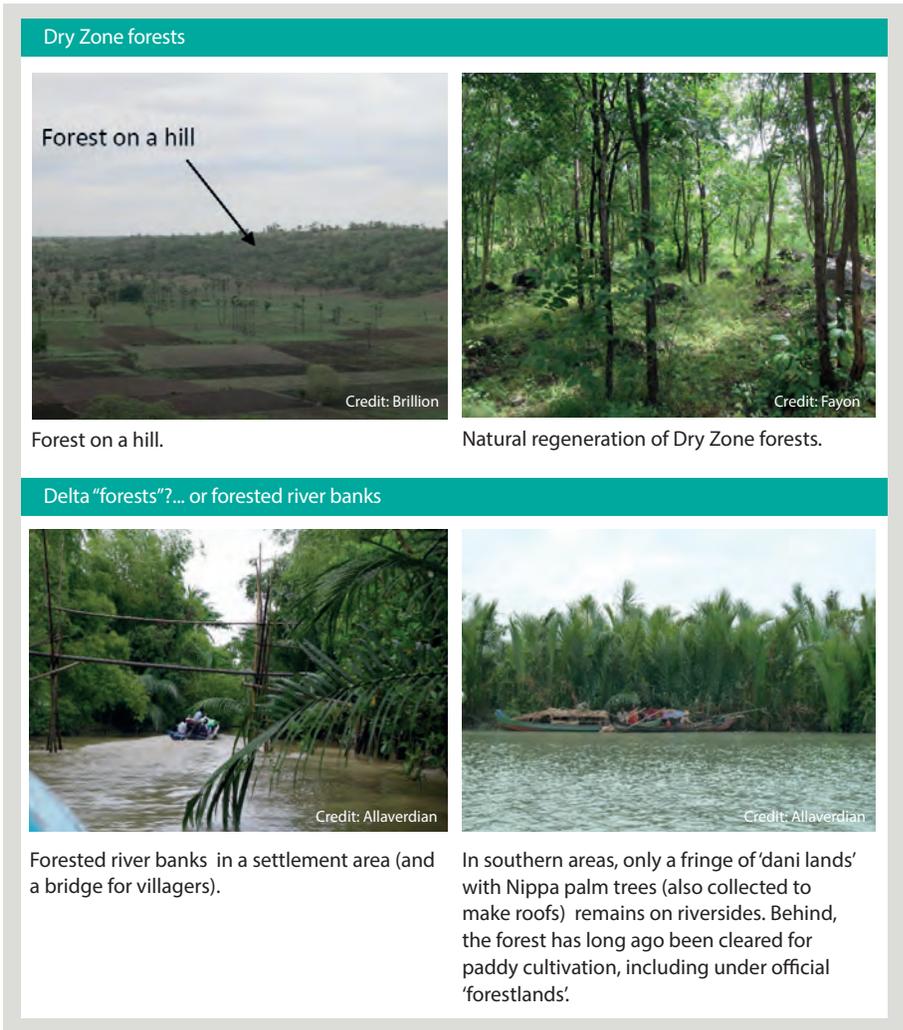


Figure 9: Delta and Dry Zone forestlands

communal areas remain, such as communal threshing floors. In the Dry Zone, other land resources that fall under communal management are the *zin ga ma myae*, which are temporary alluvial areas that are created in river beds through the accumulation of alluviums during rainy seasons. They mostly occur along the Chindwin River, Yama River (Yinmabin), and Mu River. The alluvial islands appear annually during the dry season but their location changes from year to year. These fertile lands are excellent for growing counter-season high value vegetables such as onion, garlic, chilli, etc. The lands are managed by the village head and village elders and more or less equally shared among farming households, including the landless, so everyone can produce these highly profitable cash crops during

the dry season. The communal arrangements focus on equality in let allocation: land division is carefully made by demarcating plots with bamboo poles and lands are allotted to applying villagers through a lottery system. Inter-village land conflicts may arise, however, when these lands are formed in areas that overlap often vaguely defined inter-village or inter-township boundaries. In the surveyed villages in the Delta, there are no communal lands. Even riverbanks and their resources such as *Nipa* palm (commonly used for making roofs) and other trees fall under the ownership of the adjacent paddy lands or housing compounds. If it is not the case, those riverbanks fall under forestlands. However, there are cases of village-managed farmlands. For example, in one of the surveyed villages, lands that were seized under the forced paddy procurement system are rented out and the generated income is used for community investments for the school, the monastery, etc.

3.4 Farmlands

Farmlands in Delta

In Delta, farming systems are highly specialized in paddy. The majority of farmlands are paddy lands (*le*) (97.8% among the total 1,914 acres cultivated in the surveyed villages). *U yin* ('garden lands') is a much more limited category (see **Chapter VII.3**) and barely exist in saltwater areas (see **Figure 10**).

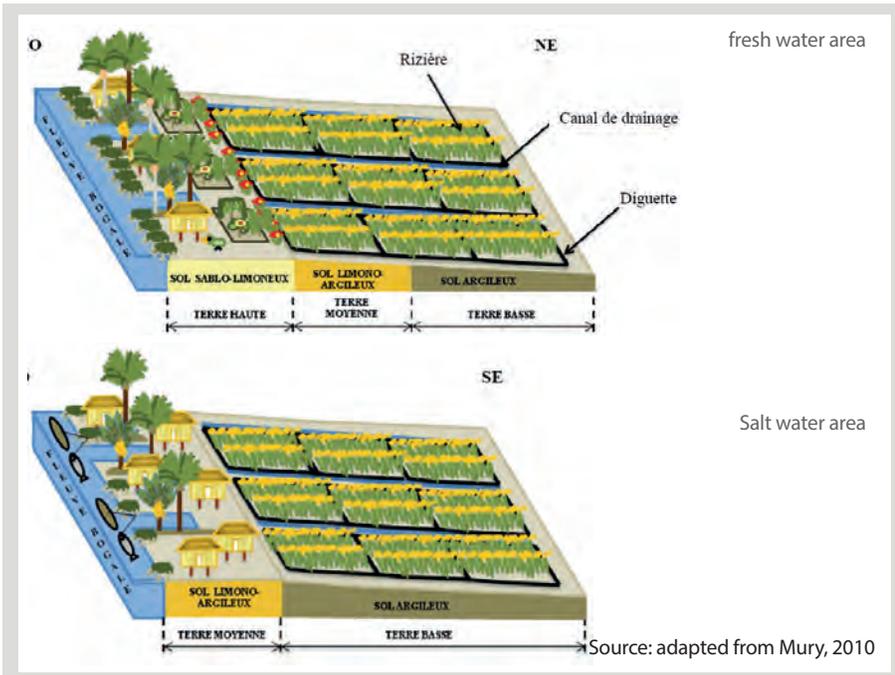
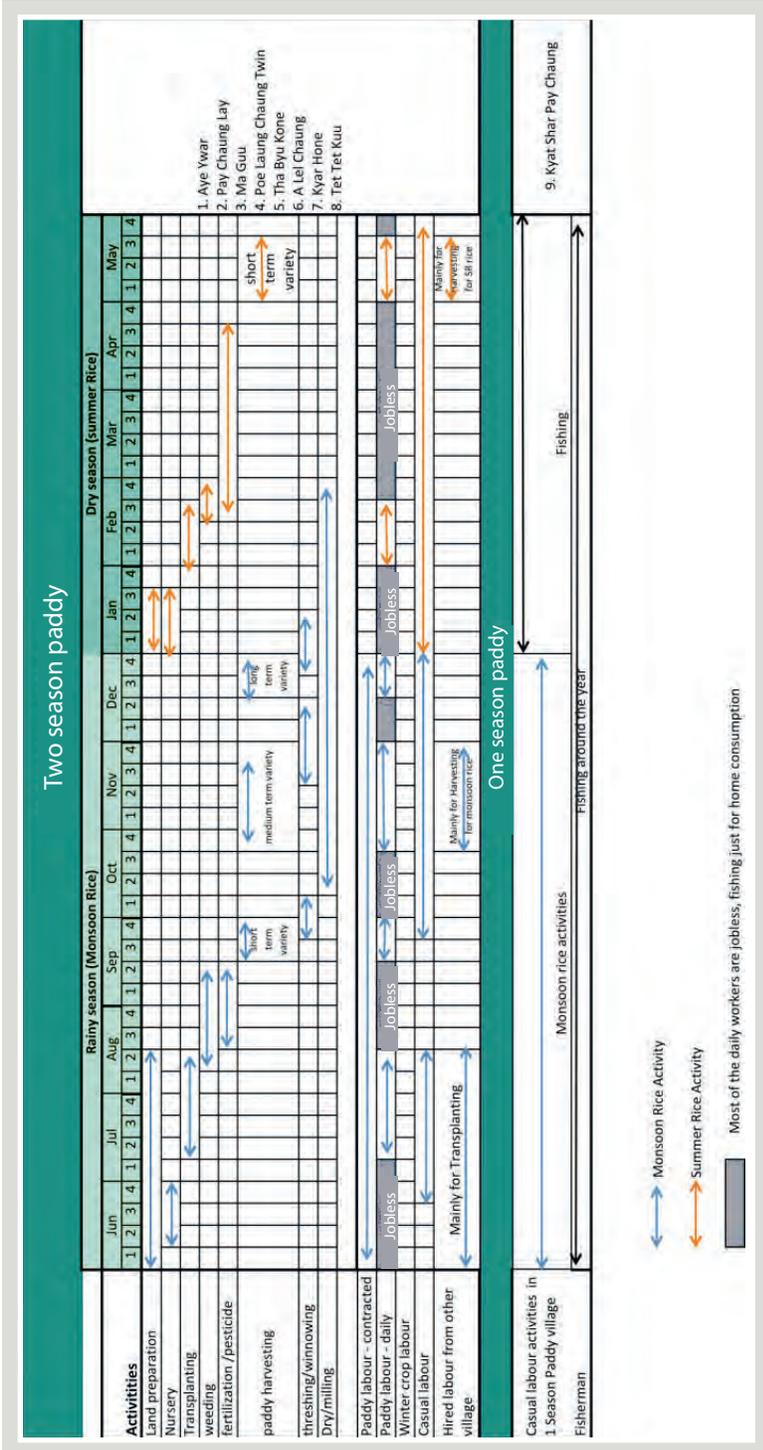


Figure 10: Transect diagrams of Delta villages in fresh water and salt water areas



89 **Figure 11:** Delta seasonal calendar in 2 seasons-paddy areas

- **Garden lands:** this category mostly designates alluvial areas which are favorable for horticultural cash crops. They are mostly found in freshwater and brackish areas and quite rare in saltwater areas. They are also often located near the local towns (Bogale, Mawlamyinegyun) where marketing is easier. These have very limited acreage but can bring considerable income with cash crops such as betel leaves, vegetables, and flowers. Only 8.5% of surveyed households cultivate such lands.
- **Paddy lands:** In freshwater areas and some brackish water areas, these lands have been under the double cropping system since the introduction of summer paddy in 1992. During monsoon (June to October), all paddy varieties can be grown, for grain and seed production. However in summer paddy season (December to April), only short cycle and non-photo-periodic varieties can be grown. These are mainly high yielding varieties that have been introduced through the agricultural extension services provided by MAS, DoA, and various NGOs. The introduction of paddy double cropping in the 1990s came at the expense of leguminous plants⁵⁵ in the rotation, and has resulted both in a major increase in the use of chemical fertilizers and a gradual decline in soil fertility and yields.
- **Perennial crops** such as banana or other fruit trees or betel vines are cultivated by only 10.5% of respondents (17.7% of landowners and 5.7% of landless) in Delta. It represents a marginal source of income.

In the Delta, irrigation is only practiced in the summer season, essentially for paddy production through private-owned motor pumps withdrawing water from the waterways and canals. In the Dry Zone, irrigation may be practiced throughout the year, on a wide variety of crops, including paddy and horticultural cash crops.

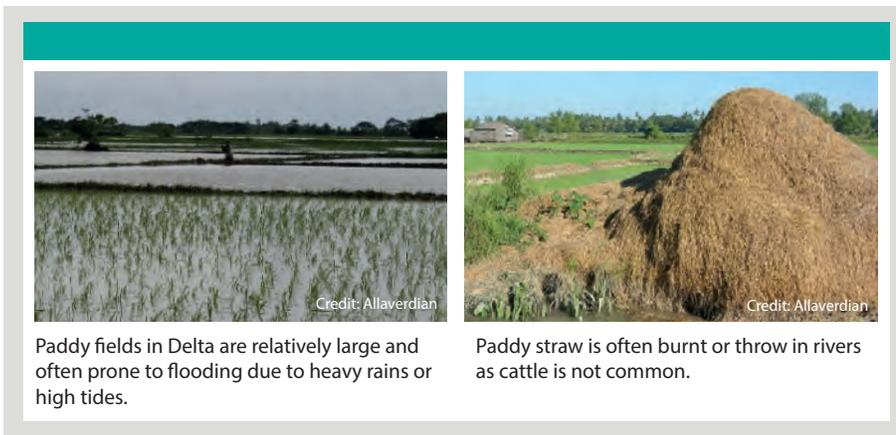


Figure 12.1: Delta main farmland uses – paddy lands

55. Which contributed to soil fertility by fixing nitrogen from the atmosphere and through crop residues incorporated as a green manure into the soil.



Fertile alluvial soils allow intensive gardening for local urban markets.

Landless or very smallholders generate extra income on small plots of lands for small scale commercial horticulture.

Figure 12.2: Delta main farmland uses – garden lands

Farmlands in Dry Zone

In the Dry Zone, the main farmland categories are by far *ya* (dry or non-paddy) lands, followed by *le* (paddy lands) (see **Figure 14: Dry Zone major farmland uses**).

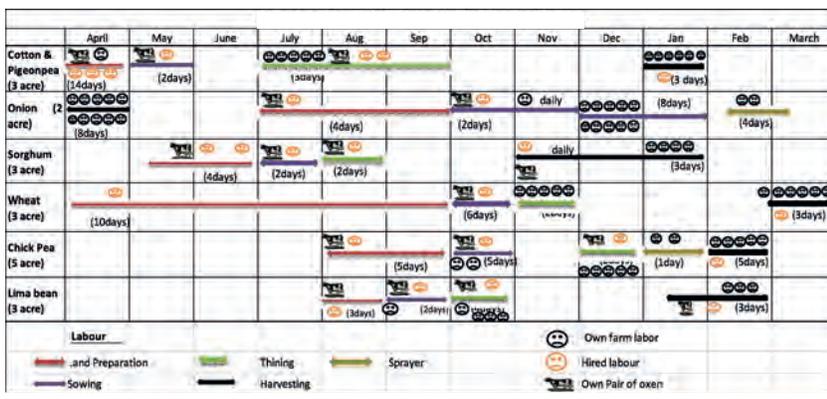
Paddy lands (*le*) for heavy clay soils are located in flat lower areas where irrigation is possible. Both monsoon and summer paddy are cultivated (or another crop in the dry season, such as oilseeds and pulses). Irrigation is required in both seasons as rainfall is insufficient. Some paddy lands may be rainfed by monsoon (see **Figure 12.1**).

Table 6: Paddy cultivation in studied villages in Dry Zone⁵⁶

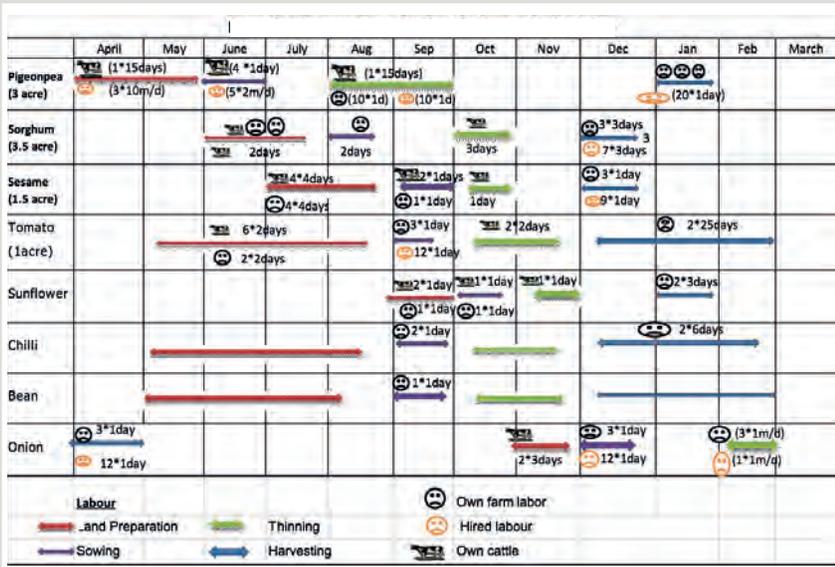
Dry Zone paddy land crops	Total cultivated acres	% irrigated land/total land	% of total cultivators	Average acreage/HH
Monsoon paddy	410	100%	30%	3.83
Summer paddy	170	100%	22%	2.21

56. Data from quantitative study: 351 respondents who are cultivators out of 598 total respondents.

Cropping calendar of a farmer in Khoe Than, Monywa



Example of a cropping calendar of a farmer in Yinmabin



Source: Gret Monywa MAFF team (Myat Myat Swe)

Figure 13: Dry Zone farmers' cropping calendars, Monywa and Yinmabin townships

Dry lands (*ya*) designate open fields, without dikes or bunds, otherwise unsuitable for paddy cultivation. With or without access to irrigation, 'ya' lands cover a more diverse types of soils, from alluvial soils, sandy soils, and rich black cotton soils. *Ya* lands allow for significantly diversified cropping systems. The main crops are summarized in **Table 7**.

Table 7: Cultivated areas of main Dry Zone crops (*ya* lands) in study villages⁵⁷

Dry Zone main 'Ya' land crops	Total cultivated acres	% irrigated land/total land	% rainfed land/total land	% of total cultivators	Average acreage/HH
Chickpea	618	26%	74%	46%	3.84
Pigeon pea	416	0%	100%	53%	2.25
Sesame	359	4%	96%	37%	2.78
Sorghum	319	0%	100%	53%	1.72
Sunflower	256	5%	95%	23%	3.16
Lima bean	236	0%	100%	44%	1.53
Onion	203	99%	1%	23%	2.57
Tomato	38	93%	7%	19%	0.55

Alluvial lands (*kaing-kyung*) designate land on riverbanks which are flooded during the rainy season but are cropped during the dry seasons. These soils are generally very fertile and highly conducive for growing counter-season horticultural crops. In the Dry Zone, a key criterion for the value and quality of lands is its level of access to irrigation.

The main source of irrigation is underground water, essentially artesian wells (public or private) and tube wells (mainly private-owned). Some of these infrastructures have been built with the support of the ministry of agriculture (in the 1990s) or the World Bank (in the 1970s) (see **Box 4**). Most tube wells are generally built for individual purposes and require the use of motor pumps. Other irrigation sources include diversion of water from perennial water streams and use of rainwater harvesting reservoir tanks. As opposed to the Delta, Dry Zone farming systems are extremely diversified. Farmers adopt resilience strategies, with plots combining different crops, at different planting periods (see **Chapter VII.3** and **Figure 13**).

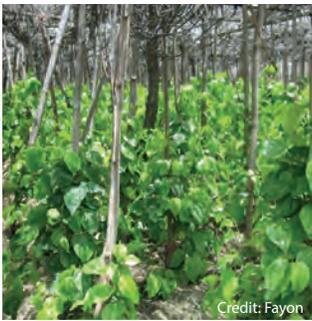
57. Data from quantitative study: 351 respondents who are cultivators out of 598 total respondents

14.1 Dry Zone 'ya' lands



'Ya' land with sesame (under harvest) and young sorghum.

14.2 Dry Zone garden lands



Commercial betel leaf garden.



Thanaka tree garden.



Tomato growing in a commercial garden.

Figure 14: Dry Zone major farmland uses

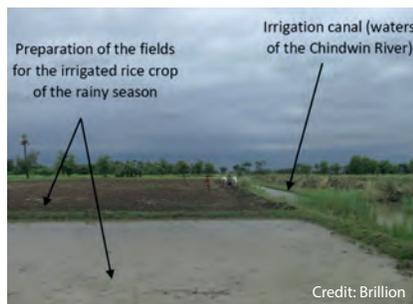


Figure 15: Dry Zone paddy lands

4. Delta and Dry Zone households' demographic and social profile

The 'average'⁵⁸ surveyed household is headed by a 47-year-old Burmese (99.6%) male (85.7%) who was born in the same village or village tract (81%) in which he now resides. The household comprises in average 4.33 members. 76% are 'adults' (14 years old or more)⁵⁹ with an average age of 29.6 years. 68.3% of households have a maximum of one member who received higher education level⁶⁰, and 14% of all members have attained this level of education (62.3% of household members have a primary education level).

4.1 Household life cycle

Data analysis shows that household composition and social profile vary mainly according to the household life cycle. Amongst households, the youngest and oldest ones have very characterized profiles in both study areas. Household size logically varies according to the age of household head (w). Household size gradually increases as the household head goes from 20 to 50 years of age (as children are born), and decreases after age 50 when children get married or leave. As a result, households of more than five members are relatively concentrated in those whose head is aged between 40 to 50 years (**Table 1 in Annex 1**). Among this latter age category, 31% of households are composed of five and six members, and 37.5% of seven or more members. Only 28 households are singled-membered (designated hereafter as 'single-member household'). These mainly concern widows or widowers. Young households are formed when household heads are approximately 25 years old and get married. Below 30 years (9.2% of households), household heads are only male (except for one case) (**Table 2 in Annex 1**) and their households are composed of two or three members who are not working outside the village tract (more than 50%). Between ages 30 and 40, household heads are still mainly males (96%), households' size increases to four members, and inactive members are relatively more numerous because there are more young children in the household. Adults still barely work outside the village tract and still have no social position within the village or village tract.

The younger the household head is, the less he has a chance to know somebody in the Village Tract Farmland Management Committee (16.5% of under-30-year-olds know somebody in the committee compared with 22.2% for all households). And yet, the younger they are, the more frequently household heads have reached a high education level (**Table 3 in Annex 1**), which tends to show that the average educational level has increased in the two areas over the two past generations.

58. Throughout the report, the term 'average' designates the mean.

59. Amongst the 4887 individuals, 3707 are 14 years-old or more, 1180 are younger than 14.

60. Higher education level comprises high school and university.

There are two different types of households headed by 'elderly' people (aged 50 and above):

- One type corresponds to a household headed by a man of 60 or more, who has attained a social position within the village or VT, mainly in the administration sector⁶¹, and who knows somebody in the VTFMC. Their households are composed of more than five members (often seven or more) amongst whom more than a third has a higher education level. These households are often made of three generations.
- The second type is a household headed by a woman of 50 and more, with only one or two members. The household head has a low education level (none or primary) and household members rarely accessed higher education. Household members are rarely in socially advantageous positions.

Age structures – in line with household size – are very similar in the two areas. It can be noted that the population is a little bit older in Dry Zone with an average household head age of 48.5 years against only 45 years in the Delta, and with higher rates of household heads above 60 in the Dry Zone and of household heads under 30 years in the Delta. This can be linked to the fact that a higher proportion of household heads were born outside of their current village tract in the Delta than in the Dry Zone (see point below).

■ 4.2 Migration

According to the data, permanent in-migration to the studied areas since 1988 is very limited: 81% of household heads were born in the same Village tract⁶² and an additional 13.6% were born in the same township. Among the 213 in-migrant households (whose head was born outside the VT), the great majority (64.3%) is found in the Delta, and in particularly in the two most recently-settled villages⁶³ – the ones further south and/or in brackish water areas. This characterizes the lasting characteristic of the Delta as a frontier area, from north to south. The Dry Zone in comparison is much more stable in terms of inter-village mobility, and the rates of in-migration tend mostly to reflect village size (with more in-migration to the biggest villages of Zee Phyu Pin and Gaw Gyi).

Amongst the 213 in-migrating households, 28% arrived in the last 10 years. Half of them declared that they migrated to get married, a third came to find work. Yet, according to qualitative interviews, these two answers cannot be significantly

61. The term 'administrative position' designates positions such as village head, village tract head, village clerk (chief assistant), land management committee member, village administration committee member, etc...

62. There is no important difference between men and women: women household heads are 84% to be born in the same VT.

63. Pay Chaung (22.5%) and Tet Tet Ku (17.8%)

distinguished from one another as they generally overlap through the following continuum: individuals move for work, then find a mate, and finally decide to settle in their spouse's village. Respondents tend to differentiate their answers in the following way: most household heads who migrated more than 10 years ago said they did so to get married, while most of those who migrated more recently said they did so for work.

In line with this fact, household heads who settled in the last 50 years migrated to get married. But it must be noted that for the households who settled in the village a very long time ago (more than 100 years), representatives declared that their 'first coming elder' migrated in search for work. This corresponds mainly to work migration in the Delta. Information concerning these oldest migrations is not precise: 60% of informants declared that their elders came from the same township and 30% did not know where they came from.

Current out-migration among households' members concerns about one quarter of households⁶⁴ (**Table 4** in **Annex 1**). Work migrations increase rapidly when household heads reach 40 years old, reach their peak when they are between 40 and 50 years old, and slowly decrease after. This corresponds to the period when households' members need money to pay for their education, marriage, novitiate, etc. and the household has more workforce available. As we will see in **Chapter VII 2**, it also corresponds to the period when many households buy land.

64. 24% of total households have at least one member working outside the VT more than 50% of the year.

V. Transfers of land use rights

1. Land use rights transfers and papers

1.1 The ban on land use right transfers

The colonial period had a deep influence on land governance as it established the territorial basis for land and population administration, in both the Delta and the Dry Zone. This colonial framework has been used since then by the Burmese government. The independent government nationalized all land and resources with the 1948 Land Nationalization Act. This policy aimed at fighting landlordism i.e. to redistribute land held by foreigner and indigenous landlords to the tenants who cultivated it. The government then declared itself as the ultimate owner of all land and resources. This orientation changed the state's conception of its role regarding resource governance, at least in principle. From a legal point of view, farmers became the 'state's tenants'. This shift became even more real with the 1962 military coup and the 1964 Tenancy Act enacted by the Revolutionary Council. From 1962 onwards, land was legally transferable for the sake of continuing cultivation on it. In other words, arable lands left vacant should be (re-) allocated by, and solely by, the Village Tract Farmland Management Committees. Accordingly, definitive land use transfers such as sales or temporary arrangements (mortgage, rent, etc.) were all forbidden by the state, with the only exception being inheritance. However, it has been demonstrated in comparative contexts that banning such transfers tended to foster a black market for land rather than eliminating it (Lavigne Delvigne *et al.*, 2002: 105). In Myanmar as well, it is not surprising to observe that transfers of land use rights existed prior to 2012 and were also quite dynamic (see *infra*). Indeed, banning land transfers under the previous governments was thought to be consistent with the 'land to the tiller' reform pursued in the 1950s, supposedly sustaining more equitable access to land for all. However, facing an ineffective land reform⁶⁵, individuals had to respond by 'recreating' a land tenure framework that would respond to their needs for accessing land, through the permanent transfer of land use rights or through 'derived rights'. While permanent transfers essentially cover inheritance and land sales, derived rights cover all the procedures in which the rights to cultivate retained by an individual (or family) are delegated to a third party on a temporary basis and according to specific rules. The main types of 'derived rights' encountered in Delta and Dry Zone during this study – renting, sharecropping, and mortgage – are described below. We shall see hereafter that derived rights are often a starting point for smallholders and the landless to get access to land.

65. We may recall here that by 1958, when the government halted the implementation of the Land Nationalization Act, only 17% of all cultivated lands had been nationalized.

Farmers had to develop different strategies to get around the legal ban on land transfers. The multiplicity of ‘papers’ related to land use in Myanmar illustrates quite well these strategies and the blurry framework in-between customary norms and statutory laws. ‘Papers’ are defined here as all the sorts of written paper documents used in land arrangements at the local level. These include farmer booklets (see below) and land sale contracts (see **Chapter V.3** and **Box 12**).

Record list for “tenant” (tee-za - သီးစား)									
No	“Kwin” number” ကျွန်နံပါတ်	“u’-paing number” ဦးပိုင်	Kind of land	Area in Acre	Area cultivate on a yearly basis	Area of cultivate land	Area not used for cultivation by the tenant	Changes	Signature of Officer
875	66		R2	2.86					
		65		7					
875	69/2		Y2	0.67					
TOTAL				(10.53)					

[p. 3]

[p. 5]

Rules for the Cultivation of Land

- (1) The person who is working on land has the “authority/right to cultivate it” (*lei ya-myei* - လယ်ယာမြေ - *lok-paing-hkwin* = လုပ်ပိုင်ခွင့်).
- (2) Land cannot be kept “vacant” (*myei-lat* - မြေလပ်) without sufficient reason.
- (3) Land cannot be “mortgaged” (*paing-nan-chin* - ပေါင်နံခြင်း), “sold” (*yaung* “*cha’chin*” - ရောင်းချခြင်း), “transferred” (*hwe-pyaung* “*chin*” - လွှဲပြောင်းခြင်း), “divided into a parts” (*khwe-sei chin* - ခွဲစိတ်ခြင်း).
- (4) Change from seasonal crop to perennial crops without permission is forbidden.
- (5) Farmland cannot be used in other ways like housing, industry, or baking of brick without permission.
- (6) Do not cultivate banana tree except in the garden.
- (7) “Land tax” (*myei-khuan* - မြေခွန်) and other taxes are to be paid as levied by the Ministry.
- (8) The cultivation of crops must follow the government plan. If land is cultivated without following government project or rules, the land will be taken back by the government according to 1963 law 11(8) and allocate to other “tenants” by turns.
- (9) Farmers have to sale the quantity of crops order by township specifications. If not, the land will be taken back by the government according to 1963 law 11(8) and gave to other “tenant” by turns.
- (10) According to the directive order announcement 4/78, tenants have to follow the order of the Ministry of Agriculture and Forestry.

[X] Township Council

Figure 16: Translated extract from a farmer booklet (produced in 2005) collected in a village in Dry Zone in 2013

1.2 Farmer booklets

While the farmer booklet is, with the tax receipt (see **Figure 17**) another document produced by the government for farmland management. While it dates

back also to the colonial period, its purpose and composition were redefined under socialist-military rule, principally in order to provide a local record to assess 1) what each farmer must grow on each plot according to government policies, i.e. how they can contribute to the procurement system; and 2) what are the family livelihood needs, i.e. how the cooperatives can provide for each household (e.g. for rice distribution). These farmer booklets had previously defined land use. These also defined land tax payments and forced procurement quotas. Finally these documents forbade any kind of transfer and thus defined farmers as tenants receiving only the 'authority/right to cultivate the land' (*lei ya-myei lok-paing-hkwin*). This simple legal framework ruled (in principle) land relations from 1962 to 2012.

1.3 Tax receipts

Annual tax receipts were provided to farmers on farmlands by the SRLD officers upon payment of the land tax (which was set to 6 Kyats per acre in the British times and has never been increased since, despite inflation). This enabled SLRD to match holdings with individual names. Surprisingly, Forest department officers provided similar tax receipts to farmers unofficially cultivating farmlands on forestlands. Although the tax rates were considerably higher than those of official farmlands, it enabled farmers to 'legalize' their occupation of such lands, as their land use rights and transfers on these lands were recognized by local authorities. See as well **Figure 16, Chapter VI.1.4** and **Box 12: Tax receipts: the ultimate 'proof' of land use?**

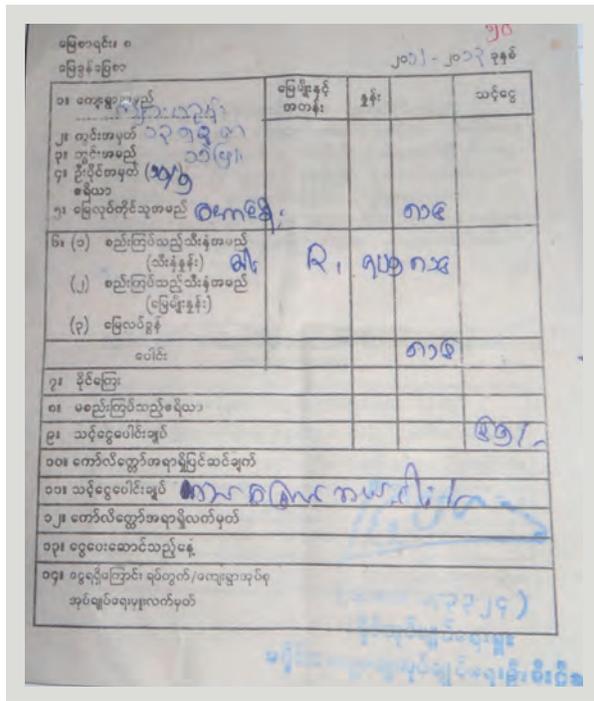


Figure 17: Tax receipt

farmers to 'legalize' their occupation of such lands, as their land use rights and transfers on these lands were recognized by local authorities. See as well **Figure 16, Chapter VI.1.4** and **Box 12: Tax receipts: the ultimate 'proof' of land use?**

2. Inheritance and land fragmentation

Land inheritance (since 1988⁶⁶) concerns more than 43% of landowning households in the Delta for an average inherited area of 6.89 acres (among those who have inherited lands), and 51% of landowning households in Dry Zone for an average inherited area of 6.11 acres (among those who have inherited lands). In both areas, the average area inherited per household decreased – by 20% in Delta and by 32% in Dry Zone (see **Table 8**) – which may be explained by land fragmentation. It also should be noted that inheritance is not a guarantee for permanent landownership, particularly in Delta where 14% of those who inherited lands later lost their lands in some way or another.

Table 8: Land inheritance in Delta and Dry Zone since 1988

		Delta	Dry Zone
Inherited lands after 2003	Nb HH	42	59
	Average area inherited (acres)	5.86	4.26
	% of Land-owning HH	19%	17%
Inherited lands from 88-2003	Nb HH	68	142
	Average area inherited (acres)	7.32	6.27
	% of Land-owning HH	25%	39%
Inherited lands 88 up to now	Nb HH	108	187
	Average area inherited (acres)	6.89	6.11
	% of Land-owning HH	43%	51%
	% who have become landless since	14%	3%

2.1 Customary principles of farm succession (Dry Zone)

All surveyed villages in the Dry Zone have been established over the last century. All arable lands are occupied. Different patterns of land inheritance exist in Monywa and Yinmabin townships. Despite some differences in practices between villages, there are many common points:

- Every sibling in a farm family is entitled to inherit parents' properties. There is no gender bias in succession of properties including farmlands. Women can inherit farmlands in the same way as men.
- These assets are distinguished in 2 types: 'inside' properties (*atwin pyis si*) –

66. The survey did not enquire about inheritance before 1988 so the rate of households who inherited lands might be higher, particularly in the older age categories.

money, gold, gems – and ‘outside’ properties (*apyin pyis si*) – farmlands, cattle, farm tools. The parent’s house and its compound are excluded from both groups and are intended to be transferred to the child which has remained with the parents until they passed away.

- Inheritance of assets is guided by the principle of equal distribution among siblings. The inheritance equity is balanced between ‘inside’ and ‘outside’ property. Those who receive no land may in compensation receive gold or money, etc. For lands, the principle of equitable distribution also takes into account the soil fertility of the different holdings. When landholdings are too small, they are not equally divided among siblings but adjustments are made with the other types of assets (money, gold, etc.). This allows an equal sharing of inheritance and at the same time helps keep landholdings a viable farm size. Draught animals are generally also transferred to those who inherit the lands.

In the Dry Zone’s surveyed villages, parents of the farming households let their children access the lands at marriage. Parents may allot some plots of their farm to sons or daughters to work as sharecroppers, which then pay one third of the farm’s harvest. After parents die, the ownership of the farm is transferred to the son or daughter who cultivated it.

BOX 6: A PROBLEMATIC LAND INHERITANCE CASE FOR A YOUNG WIDOW IN MINBU TOWNSHIP (DRY ZONE)

A young couple got married and the parents of the boy gave the couple farmlands as inheritance. Three years later, the young husband died. It happened at the time of land use registration for Form No. 7. The widow applied for the allotted land to be registered in the Form No.7 with her name. The parents of the dead son did not want to transfer the land to the widow because they thought that as she was young and attractive, she would get married again to another man within a few months. The parents came to SLRD to object to the transfer of the entitlement of their land to the widow. The SLRD office staff wished to leave the farmland to the widow. But in order to avoid dealing with this social issue, the SLRD office said that the case resolution was only within the jurisdiction of the civil court. The case was thus referred to the civil court and was not yet solved at the time of the study.

When farmlands are distributed equally among siblings, those who can afford to accumulate the plots ‘buy out’ their siblings’ shares. When farmlands are distributed in unequal shares among siblings, those who inherited more farmlands may purchase the small plots from others. Purchase or sale is not the rule but it is possible when the sibling agrees to sell his or her share. Generally, purchase or sale of inherited plots is made between siblings because they do not want to sell their

parents' land to non-family members. It is a preference but not a rule as such. When farm size is too small to share among siblings, the elder siblings or the wealthier siblings may leave their shares to the weaker ones.

The sibling who gets married before both parents pass away sometimes has the opportunity to access farmland through his or her marital partner. In such cases, he or she may be less favored to inherit farmland from his/her own parents. In that case and especially if the person is a man, his wife will not be satisfied with such an arrangement, as bride-price ideally requires some land provided by the husband as a basis to establish a new household. In cases where one sibling gets married before the parents pass away and if the newlywed couple has no farmland, parents from either one or both sides may provide them some plots of farmland as part of the marriage arrangement. The provision of farmland in that case remains informal, as long as parents are alive; only at their death should the landowner's name be changed in official registers. The newlywed couple may live together in one of the parents' houses and work together with parents and other siblings. It does not need to bear food costs, and can save money from the sale of crops produced from their farm plots. When they have saved enough money to buy a house, they separate from their parents. It may take several years for newlywed couples to get enough savings to establish their own home.

Traditionally, succession of parental properties is made on the day of 'yak le' (the third or fifth day following burial of the last parent), a commemoration ceremony to which all relatives come to gather. The elders amongst the relatives usually manage the division and distribution of the properties to the siblings. The village chief does not interfere in this process. Local authorities (e.g. Village Tract Farmland Management Committee) only interfere to mediate in cases of complaints and conflicts (see **V.2.3**).

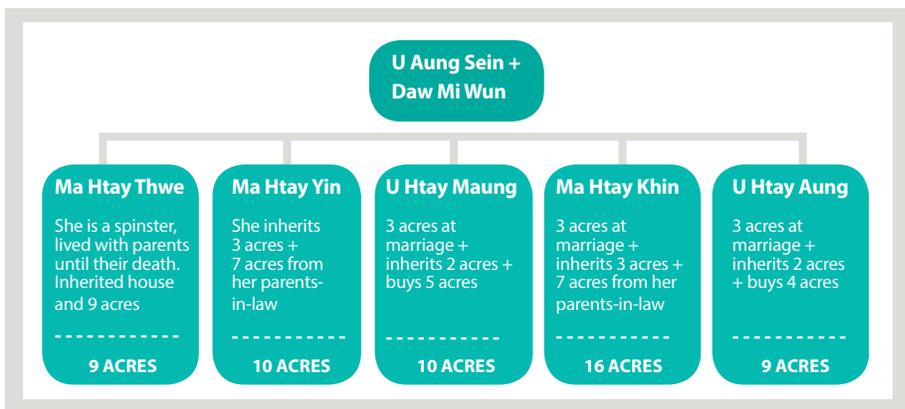


Figure 18: Example of succession in Dry Zone

Figure 18 shows that land inheritance can take place in 2 steps: one part of the lands may be accessed through informal land arrangements by children before the death of the parents, in the event of marriage (especially when no lands are accessed via the spouse's side), and another part will be inherited after death of parents. It also shows that lands are equally divided, except for the child who stayed with the parents until their death who has special inheritance rights (house and more farmlands). Finally, as lands are inherited by both males and females, married couples may inherit lands from both sides.

In the majority of villages of the Dry Zone, toddy palm trees have been planted on farmlands. In the sharing of lands among heirs, it may occur that some members inherit the land but not the toddy trees and vice versa. It leads to the overlap of different operational rights (cultivation use right for one, toddy collection right for the other) owned by different siblings, over the same plot. Such rights are not recognized in the current legal framework, yet they are still socially legitimate rights in the eyes of the villagers and are still applied locally.

■ 2.2 Delta: more unequal inheritance patterns among siblings

In Delta, the same general principles apply regarding inheritance as in the Dry Zone. However, qualitative interviews tend to indicate more unequal patterns of inheritance in the Delta compared to the Dry Zone, as illustrated in **Figure 18** and **Figure 19**. One explanation is that inheritance patterns were disrupted by harmful policies such as the state's compulsory paddy procurement policy. Another factor impacting inheritance is the agricultural frontier, which closed recently in Delta. Fragmenting family land into small plots had not been a relevant concern given the opportunities to clear new lands by moving further south. Lastly, with less historicity than in Dry Zone, land patrimony has less value, financially in terms of generational investments, and symbolically due to the high mobility characterizing farming households in this region. This lack of 'patrimonial value' may also have a positive, strategic, counterpart. Indeed, in the highly unstable context for agriculture in the post-socialist period in the Delta, land transfers done through inheritance may have served to secure beneficial alliances between families, instead of securing consolidated (contiguous) areas as Dry Zone households were aiming to. In the Delta, transferring land to more distant (geographically and socially) families may have served to extend households' social capital; an asset whose importance we already underlined for accessing land.

Figure 19 illustrates the relatively unequal inheritance patterns in the Delta as well as the fact that inheritance may skip a generation, with lands transferred to grandchildren. The first family (U Tin Maung and Daw Nyein) cleared 20 acres along the agricultural frontier. They transferred 15 acres to their eldest daughter

who remained with them until their death. The second child (U Khin Soe) received 5 acres while the last son was not allocated any land as he had married with Daw Khin Hla, who was to inherit 10 acres from her parents. In the last generation (children of U Aung Cho and Daw Khin Hla), two children remain landless, while one son received all of the parents' lands and the last son received (5 acres) lands from the grandparents U Tin Maung and Daw Nyein.

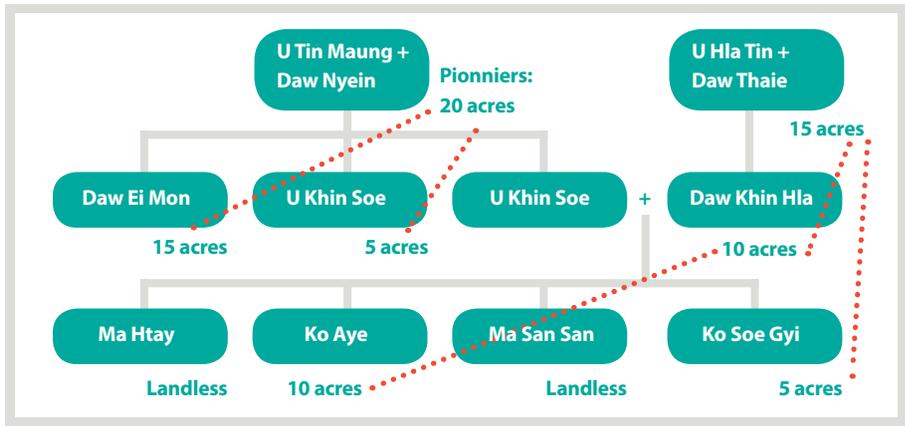


Figure 19: A case of unequal inheritance in the Delta

2.3 Current issues concerning land inheritance

Impacts of the 2012 land law on inheritance patterns

The impact of the 2012 farmland policy could be seen as a driver for changes in land inheritance patterns among siblings. Before the 2012 land law, a sibling who was not engaged in farming was not entitled to land inheritance. If he or she appealed to inherit land, the Village Tract Farmland Management Committee would prioritize siblings who have continued working as farmers. If there was conflict in inheritance among siblings, most of those employed in the formal sector (such as civil servants) who worked outside the village and could not cultivate their parents' farmland had to surrender their claim to land inheritance. After the 2012 Farmland Law enactment, there is no such prohibition and each sibling is entitled to his or her land inheritance right. This study took place too early to observe consequences of the new Farmland Law. It has been said that traditionally, land given to the newlywed couple may fall under the name of the inheriting son or daughter after the death of his/her parents. However, the land titling process which took place after the 2012 Farmland Law may create some conflicts concerning who, at the very moment of the registration, is to be entitled. Finally, under the new land law, farming families deploy strategies to increase the loan amounts they can access from the MADB, especially for paddy land. Though these loans are based on farm size (100,000 MMK/acre for paddy), MADB applies a maximum threshold of 10 acres

per farmer. The distribution of Land Use Certificates (Form 7) with the new land law thus hastened the fragmentation of familial estates amongst different family members. In other words, many pieces of land of 10 (or under) acres have been distributed (as a kind of advanced inheritance), so that every single acre of land be entitled to MADB loans. Whether this will interfere with more 'opportunistic' inheritance patterns common in the Delta and/or bring new types of conflicts remains to be observed.

■ 2.4 Land fragmentation

As seen in previous chapters, land fragmentation is occurring in both regions of Dry Zone and Delta. However, the phenomenon is particularly pronounced in the Dry Zone where the closing of the agricultural frontier and land saturation occurred much earlier. This is confirmed by the decrease of the average area inherited per household (see **V.2.1**), which is greater in the Dry Zone than in the Delta. As such, it is an increasing challenge for young households who have inherited smallholdings to create viable farms.

In the Dry Zone, lack of land tenure security is associated with lack of draught cattle. It is observed that getting access to farm let alone is not enough for a young farmer. An equally important asset is the draught cattle. Better-off farmers prefer to have a cow in addition to their pair of draught cattle so that its calves can be one-by-one assigned to each child as the calf's caregiver (see **Chapter VII.3.1**). Giving heirs access to both farmland and draught cattle is convenient and easy for better-off farmers but it is very difficult for small ones.

3. Land sales since 1988

As shown in **Table 9**, land sales (done after 1988⁶⁷) concern more than one third of households: 36% of households from the Delta (with an average 9.02 acres bought among households who have bought lands), and from the Dry Zone (with an average 6.05 acres bought among households who have bought lands). The average amount of land bought among those who bought land is considerably higher in the Delta. Another interesting trend is that throughout the two periods (1988-2003 and 2003 to now), the average plot size bought among those who bought has increased by 6% in the Delta while it has decreased by 24% in the Dry Zone. This suggests a land accumulation trend in Delta and a land fragmentation trend in Dry Zone. In addition, frequency of land sales among landowning households significantly decreased (by 43%) in the Delta in the two periods, while it is stable in Dry Zone: this can be explained by the end of the

67. The survey did not enquire about land sales before 1988.

forced paddy procurement policy which was a strong driver of land sales in Delta (see below) and land loss (eg: 6% of those who bought lands lost it later and became landless).

Table 9: Some figures on land sales in Delta and Dry Zone

		Delta	Dry Zone
Bought lands after 2003	Nb HH	30	73
	Average area bought (acres)	9.03	4.59
	% of Land-owning HH	13%	21%
Bought lands from 88-2003	Nb HH	55	72
	Average area bought (acres)	8.52	6.04
	% of Land-owning HH	24%	20%
Bought lands 88 up to now	Nb HH	82	128
	Average area bought (acres)	9.02	6.02
	% of Land-owning HH	36%	36%
	% who have become landless since	6%	0%

3.1 Government policies as a driver of land use rights transfers (Delta)

To summarize what has been explained in **Chapter III**, much of previous Myanmar governments' efforts focused on controlling paddy production for the state's interests, often against those of farmers. Therefore, Delta villages were much more affected than Dry Zone villages by these policies, among which the Compulsory Quota policy was probably the main cause of land sales and purchases (despite the legal ban on such transfers) conducted in the Delta between 1964 and 2003. In the Dry Zone, land sales and purchases were therefore mostly linked to farmers' own economic and household characteristics, rather than being driven by state policies.

In the Delta, the Compulsory Quota Policy (which ceased in 2003) created an artificial market. Indeed, most households who were about to lose their land because they were unable to provide the due quota to the government would try to sell it all or part of it before having it confiscated. The transaction generally consisted in finding a better-off farmer ready to buy the right to cultivate the land, with the price of the paddy quota due deducted from the land price. In order to get around the ban of land use rights transfers, farmers managed with the help of the Village Tract Farmland Management Committee (chaired by the appointed village tract headman) and the village tract SLRD staff to retroactively put the name of the purchaser on the farmers' waiting list – which in theory was designed to prioritize

small scale farmers and landless tenants. This reflects the reality of the procurement quota policy's impacts on the ground: instead of benefiting smallholder farmers and tenants in need of lands in the region, the lands given up because of this policy were mostly sold by farmers ahead of being lost so they could at least retrieve some money for their land. The majority of these lands ended up in the hands of farmers financially able to buy them as well as connected enough (to the local authorities) to overcome the constraints brought by this policy⁶⁸. As explained by Taylor (2009: 352), it seems that during the procurement policy period, farmers who held fewer than 16 acres were often forced to buy paddy on the open market in order to meet their quota obligation and have food and seeds for themselves.

"However, for farmers with 16 or more acres of land, there is a surplus left over which can be sold at the free market price; the income of these families is significantly greater than those of their neighbors. Thus, having access to land is the key to wealth in the village" (ibid).

Interestingly, during the quantitative survey, farmers never opted for the answer 'land lost because of the Compulsory Quota Policy?'; but would rather talk of 'buying' and 'selling' land despite the ban on such transfers until 2012. The qualitative study and land 'trajectories' however leave no doubt about the significant role of the Compulsory Quota Policy in motivating these transfers. Moreover, the quantitative study indicates that the sale of land use rights in Delta was more active than in Dry Zone (see **Chapter VII.6.2**).

■ 3.2 Contracting a land sale before 2012

Villagers have recourse to both verbal and written forms of contracts to sell land use rights. Verbal agreements are generally made between close relatives. However, and especially after 1988, most transactions were done through written contracts, which can take various forms. The contract considered as the most secure may directly involve the village administrator as a signing witness. However, it is frequent that the village administrator will only be present during the agreement, without affixing his signature on the paper. However, whether affixing his signature or not, the finality of a land use right sale agreement necessitated changing the name attached to a holding (*u' paing*). That means changing information in the local SLRD register, and that must involve the village administrator as well as the local SLRD staff, and those services are not free. First, people are supposed to pay the village administrator to acknowledge the transfer, as part of 'social practice' (*lu-mu-yei'*). The validity of the transfer, if checked and ensured by the administrator, is ratified by combining governmental and local land tenure norms and practices – a form of legal pluralism

68. Well-connected farmers were generally able to negotiate the quota in quantity and quality with land committees, SLRD officers and government millers.



Figure 20: Diversity of land sale contracts

(see **Box 7**). When the transfer's legitimacy is acknowledged, the two contracting parties have to wait for the SLRD agent to come and record the transfer. He too has to be paid; the rate is stabilized in some areas and largely variable in others.

The paper bearing the agreement may vary from plain paper, school book pages, or proper contract templates produced by the Ministry of Internal Revenue, known as 5 Kyats (or 10 or 25 Kyats) Stamped Contracts. While some contracts are carefully designed to secure the land use right transfer despite the legal ban (see after), others only put the agreement on paper without even mentioning the area or the *kwin* number (see **Figure 20**, **Table 10** and **Table 11**).

BOX 7: ANALYSING A CONTRACT'S TERMINOLOGY: PLAYING WITH PLURALISM

The form of the contract illustrates well the strategy developed by villagers at the crossroads between administrative and local levels, to accomplish land transfers according to customary rules while navigating around the legal ban on transfers. Most contracts indeed gather all the data necessary to set up a legal act: an official form (with governmental stamp), dated, where people are named and located, the land situated, witnesses' presence often testified by their signature, and most importantly, where the headman affixed stamp and signature. Second, the document directly invokes a sense of 'ownership' (*paing sain-tho*) on the land and the transfer (*lwe-pyaung*) of these rights to other people. The document is thus fundamentally in contradiction with the legal framework.

However, the purpose of the transfer – to provide land as a means for daily subsistence – is here legitimating the transfer by fitting into the only legal justification for transferring land: that land must be kept under cultivation. Papers, mediating regulations that exist at village and government levels, are thus adapted to solve the tension local versus legal. Also, they identify legality as an intermittent rule and question the state's capacity to enforce it.

Interestingly, securing land transfers through contracts written at village level involve representatives of domains both legal (SLRD representative, administrator) and customary (witnesses, often 'elders' – *yap-mi'-yap-pha'* – and again the headman). In fact, the village headman, nominated until 2011 by the military government, acted as the state's 'political broker' at the village level and the conveyor of customs within the legal framework. But at the same time, the administrator puts himself into illegality by acknowledging transfers banned by the government. And for this reason, this headman figure (across all successive Burmese governments, including the current one) combines the different forms of power (legal and customary) to provide access to and distribute resources at the local level, due in most part to his knowledge of the laws and ways to bypass them.

For more analysis on the village administrator's role, see **Chapter VIII.3**. Let us stress that whatever the degree of (in)formality of the sale transaction – with name changed in the SLRD records or not, with the administrator signing or not – we did not encounter any conflicts related to land sale transactions during the study. Of course, it must be said that land sales in studied villages occur mostly within the village community or with households from nearby villages.

■ 3.3 Is there a 'land market'?

While we have noted that land use rights were sold and purchased under the previous land framework, we can hardly speak of a land market in which land is considered a commodity. Naturally, having access to land means having better chances in securing a family's livelihood (see **Chapter VII.6**), and would also mean access to credit (see **Chapter VIII.2**). However, in the studied areas, which remain profoundly rural if not to say remote, land has never – or rarely – been subject to speculation. In the villages under study, the main exceptions are for the Delta areas close to Bogale or Mawlamyinegyun towns affected by the on-going road construction projects. In the Dry Zone, the main exception observed was Khoe Than village, for its proximity to Monywa (see **Table 10**), where the few tracts situated along the road to Monywa have recently been coveted by real estate projects and gasoline stations. Even in Aye Ywar (Bogale township), where some lands are situated by the new road coming from Bogale, the most expensive plots (taking into account accessibility, fertility, and irrigation) were priced at a maximum of 1,200,000 MMK/acre in 2014.

Table 10: Examples of land transactions⁶⁹ recorded in Khoe Tan, village close to Monywa town (Dry Zone)

Year	Total area (acres)	Price/acre (MMK)	Type of agreement
1997	0.87	115,000	Sheet from school book, one witness involved
1997	1.11	122,000	10MMK stamp paper
1998	0.55	127,000	6 MMK stamp paper
2010-11	1.13	620,000	10 MMK stamped paper; 2 witness involved
2013 (after Farmland Law)	2.09 (close to Poultry Zone of Monywa)	3,350,000	Contract (in the name of land use right for watermelon. In reality, residential land)

69. The survey measured "current prices". We have not been able to calculate the 'constant prices' prices taking into account inflation as no data was found on inflation rates from 1988 to 2003.

Table 11: Examples of land transactions⁶² recorded in Pay Chaung, isolated village in saltwater area (Delta)

Year	Total area (acres)	Price/acre (MMK)	Type of agreement
1988	12	1,000	Verbally
1997	6	35,000	Contract (village administrator as witness)
1998	15	50,000	Contract (two villagers as witness), done in presence of village administrator

4. Land arrangements and 'derived rights'

4.1 Different types of agrarian contracts

Four main temporary land arrangements exist for accessing derived rights of cultivation: free land loan, rent (in crop or money), sharecropping (*thi"-sa"-khja*), and mortgage (*le-pyan-ngwei-pyan* or *a-nu-gan-myei*). There can be oral and written contracts, made between one person which contracts in the concerned plot of lands (for free, against cash or in kind payments, or in exchange for a loan) and another person who provides and contracts out the lands.

As observed in **Table 12**, 'Contracting in' households represent 18.5% of Delta surveyed households and 9% of Dry Zone households. This is mainly due to the much higher frequency of sharecropping arrangements in the Delta (9.6% of all surveyed households in Delta access lands with sharecropping arrangements, against only 1.2% in the Dry Zone). In the Dry Zone, the most common arrangement is 'free loan', while sharecropping is the predominant arrangement in the Delta. Only 3% of the 'contracting-in' households cumulate more than one type of arrangements (more quantitative data in following pages). As for land sales, the average size of lands contracted in for cultivation is almost two times greater in Delta (4.3 acres/contract) than in Dry Zone.

Table 12: Number of households, % of total households contracting in (over total households), and average acreage of lands for cultivation by households on non-owned lands, in Delta and Dry Zone

Area	TOTAL contracted in lands			Free loan		Rent in		<i>Thi''-sa''-kh-ja''</i> /Share-cropping in		Mortgage in	
	Nb HH	%	Average acres	Nb HH	%	Nb HH	%	Nb HH	%	Nb HH	%
Dry Zone	54	9.0	2.0	22	3.7	15	2.5	7	1.2	11	1.8
Delta	98	18.5	4.3	27	5.1	6	1.1	54	10.2	14	2.6
Total	152	13.5		49	4.3	21	1.9	61	5.4	25	2.2

Free land loan

Lands may be lent for free for a season. This arrangement is mainly done among close relatives and through oral agreement. It is slightly more common in the Delta and for summer paddy cultivation, which can be explained by the higher costs required to cultivate summer paddy (more inputs, irrigation, and motor pumps, etc.). When lacking the financial capacity to put all land under summer paddy, a household may lend the remaining land for free to close relatives.

Thi''-sa''-khja'': sharecropping or rent?

The Burmese term *thi''-sa''-khja''* can be ambiguous as it encompasses different kind of arrangements, some purely sharecropping ones (i.e. a fixed proportion of the harvest is due to the land owner) and others more looking like rent, that is a fixed quantity of harvest (independently from the harvested quantity) against the right to cultivate the land. We however stick to the Burmese terminology here in recounting the diversity of practices covered by this term literally meaning 'fruit-eat-lay-down'. Hence, the term essentially reflects a temporary arrangement from which payment is made in kind (harvest).

In some regions (such as the Dry Zone), this term is used for different sharecropping arrangements. The fixed rent payment in crop applies predominates in the Delta, especially to paddy cultivation. The difference between the two zones can be explained by the history of contracting practices between landowners and tenants. As to be expected, payment in the form of a fixed amount of crop is preferred by contracting out households. Competition among potential tenants (which has always been high in the Delta due to the high rate of landlessness) for access to lands strengthened the bargaining power of landowners and led to the

deterioration of tenancy conditions. The scarcity of available let allows landowners to set the rent's conditions and choose the most beneficial arrangements for them.

The difference between the Delta and the Dry Zone can also be understood in terms of agricultural conditions and the risks pertaining to different contexts. While paddy cultivation in Delta can be considered relatively secure in terms of production (if we omit pests and natural disasters), much of Dry Zone's agriculture (including paddy in the studied area), can be considered highly risky since it depends on unpredictable rainfalls and often on non-irrigated lands (which constitute the majority of its arable lands). In 'stable' conditions – the Delta – those accessing land through temporary arrangements are more likely to contract rent-in-crop arrangements (with a fixed amount of crop), while the higher risk in the Dry Zone means most arrangements are done with different sharecropping principles (see below).

Sharecropping arrangements are made on a seasonal or annual basis. The annual arrangement is preferred in areas where double paddy cropping is possible. This agrarian contract is much more common in the Delta and is renewable without limit if each of the contract parties wishes and has fulfilled his or her part of the contract. In the Delta the in-kind payment can vary from 20 to 30 baskets of paddy per acre (and per season)⁷⁰. If the tenant works with his/her own cattle, the rent is around 20 baskets per acre. If the owner provides the tenant with cattle, the rent increases to 25 baskets per acre. If the owner wishes to obtain the rent *ex ante*, he will receive only half of it.

The quantity of baskets due also depends on the relationship between the two contractors. Close relatives may set a rate sometimes as low as 15 baskets per acre. In some villages, sharecropping arrangements can include additional duties for tenants, such as feeding and taking care of the landowners' buffaloes (in the Delta), etc. Most agreements are oral except for large farmers that have several tenants which may even use a special register with a list of tenants (this is also more common in the Delta). In many cases, access to the entitled MADB loans is also transferred to the tenants.

In the past, it seems that sharecropping contracts were mostly done between landowners while they are now more often made between landowners and landless tenants, some of whom reside outside of the village. The quantitative survey indicates that 73% of sharecropping contracts are made with landless people.

70. Average yields vary generally from 40 to 100 baskets depending on soil type, season, water salinity, and farming practices. The landowners' take in sharecropping arrangement represents generally around half to one third of total production.

**BOX 8: DESCRIPTION OF MULTIPLE ARRANGEMENTS TO ACCESS LANDS:
A CASE OF *THI'' - SA'' - KHJA'* AND MORTGAGE IN BOGALE TOWNSHIP, DELTA**

In 2014, Daw S. was cultivating about 10 acres under a *thi''-sa''-khja'* arrangement. The land use rights on this land were owned by U M. H., an absentee landowner living in Mawlamyinegyun. Daw S. used to give 300 baskets (30 baskets per acre) – of which 150 baskets were good quality and 150 baskets were low quality paddy – back to U M. H., by sending the paddy directly to the miller located in Mawlamyinegyun. They did not have any written contract for this arrangement, but needed to sign in U M. H.'s record book. When U M. H. passed away in 2014, Daw S. continued the arrangement with his relatives and got the opportunity to renegotiate the contract. The rate is still fixed at 30 baskets per acre, but the quantity is now divided into 100 baskets of good quality paddy and 200 baskets of low quality paddy.

Since Daw S. does not have any direct land use right on land, she is struggling to save money and plans to buy land of her own one day. In the meantime, she contracted five more acres under mortgage (see *Le pyan ngwe pyan* below) to a relative, for 2,500,000 MMK on a four-year period. These five acres are cultivated by her son (who is married and living in a separate household), to whom she will give 100 baskets of paddy to him as labor cost.

In the Dry Zone, sharecropping is often named after the distributive principle organizing the agreement, such as '3 measures-1 measure (of crop)' (*thon''-su'-tasu'*) – which means one third – or 'eat half' (*tawak-sa''*), depending if the arrangement delivers a third or half of the harvest to the landlord. In principle, the *thon''-su'-tasu'* arrangement pertains to a situation where someone has use rights to a plot of land but is lacking tools or cattle to work it entirely. This person will ask another to do all the work and use his own inputs. The person working the land will then have freedom to act on it, choosing crops and seed periods, tillage, etc. In the 'typical' case of *thon''-su'-tasu'*, the one giving out the land cannot intervene in the agricultural activity but must be informed. A governing principle of this agreement is that nothing apart from seasonal agriculture can be done on the land: the one who obtain derived rights on the land cannot grow any perennial crops or build anything on the land – except perhaps a shelter to watch fields if it seems necessary. The agreement on the duration is not fixed and can be extended by mutual agreement.

The *tawak-sa''* agreement is most often done between distant relatives. In this arrangement, the two contractors share the costs for seeds, plantation, weeding, and pesticides, while the one having obtained derived rights on the land should contribute all of the labor. This form of sharecropping is viewed by farming households as a way to extend their farms.

***Le pyan ngwe pyan* ('give back the paddy land, give back the money'):**

Le pyan ngwe pyan defines a credit arrangement in which the creditor gets a temporary land use right (they can cultivate the lands and dispose of the harvest as they wish) against a loan of a fixed cash amount to the landowner, usually corresponding to half up to two thirds of the land's market price. This arrangement is for a duration of several years (three years is the most common basis⁷¹). It may be renewed if the creditor agrees to extend the loan. The amount is to be repaid within the fixed period. If not, and in absence of a renegotiation of the arrangement, land falls to the hands of the lender. Most arrangements are oral and witnessed by adjacent neighbors and the village headman, except when dealing with outsiders from the village, in which case written contracts tend to be more common. It is mostly used by landowners as an immediate source of cash. It is equally common in Delta and Dry Zone (contracting in households are 2.2% of total households).

Creditors can be landowners seeking to acquire land or landless entrepreneurs, who despite being unable to buy land at high prices can invest in temporary land use rights. For the landless creditor, the 'interest' from this kind of loan derives from working the land (now in the creditor's hands) before the borrowed amount is paid back. *le pyan ngwe pyan* agreements are often done between a small landowner in need of liquidity and a landless person in search of land. Tenants under *le pyan ngwe pyan* agreements are often previous landowners who became landless.

For the landowner creditor (for example in Pay Chaung in the Delta), often large landowners bet on the fact that debtors will not be able to repay the loan, perceiving these arrangements as an accumulation strategy. The loss of land by its original owner seems to be quite rare when the contract was signed between relatives or friends, probably due to its sensitivity and social proximity between the contractors. However, qualitative interviews also show that mortgage is a recurrent factor in land loss, especially when embedded in a more vertical relationship between different 'social classes': i.e. between larger and smaller landholders (see **Chapter VIII.1** and **VIII.2.4**). It is also a source of contestation under the registration process started under the new land law.

71. While some contracts last five years, there is the risk that the creditor, working the land under this contract, can claim ownership after this period, under the Act 1/64, stipulating that a land cultivated by a tenant for more than five years consecutively may go to the tenant. This does not apply to sharecropping arrangements which are generally contracted on a seasonal basis.

BOX 9: A CASE OF MORTGAGE IN DELTA, BETWEEN FRIENDS

Daw Myint lent 2.5 lakhs to her friend Daw Tin in 2012 and obtained the right to use Daw Tin's two acres since. Daw Tin mortgaged her land to compensate for the loss of her crops due to pests in 2012. Her son was still in school at that time and she had to pay the registration fees. She was also ill and did not have enough to pay for her health expenses. She opted for mortgaging her land rather than seeking informal credit from other villagers because she was afraid to take on more debt since local interest rates are high – between 10 and 20%.

Initially she agreed with Daw Myint to repay the loan after two years to recover her 2 acres but she failed to raise enough capital for it. Daw Myint agreed to then extend the contract for an additional year and continue to cultivate the land. Daw Tin and her daughter now live on the proceeds from their small store and from their wages as laborers during the agricultural season. They also get money regularly from the younger son who went to work in a factory in Yangon. They are also thinking about breeding a pig to repay their debt and reclaim their land.

Daw Myint and her husband do not have land, they also work in other farmers' fields as wage laborers. Daw Myint also started, with her sister, a mobile shopping activity. They also make meals and soap that they then sell in their village and neighboring ones. Daw Myint's family used to 'own' land in the past but it was confiscated during the Compulsory Paddy Procurement system. Daw Myint needs cash today because she is indebted to her in-laws and waits for Daw Tin's refund. They have not established any written contract, nor requested the presence of a third party to testify to their agreements since, as they say: *'we're friends, just like sisters so it is arranged between us.'*

Rent

Land rents may be seasonal or annual, with cash payment. These arrangements are not common in the Delta. In the Dry Zone, most of the contracts are negotiated in March/April for early monsoon crops. In the Dry Zone also, land rents with Chinese businessmen for watermelon production are common. Contrary to the other arrangements, which are mostly contracted directly between households, these are made through brokers. Watermelon plantations initiated by Chinese investors and meant for the Chinese market have developed in the Dry Zone region in areas including Sagaing, Tada Oo, Myithar, Mandalay, Chaung Oo, and the east side of Monywa townships. These businessmen have never made direct contact with local farmers, but operate through technicians who travel in search of irrigable lands. Then, the technicians proceed through a local broker and a Chinese broker to rent lands from the farmers through the local village tract chief. Translators from northern Shan State may be hired for arranging the deal with local people.

Rental periods tend to be five to six months. The rate of compensation for the rented land is about 250,000 to 300,000 MMK per acre. Despite the fact that it provides significant income to contracting-out farmers, this type of contract farming also has negative impacts on both land use (land availability and fertility) and labor. These plantations employ intensive production methods, with high quantities of fertilizers and pesticides. Farmers who lease their land to Chinese businessmen must observe contractual terms: *i. Must not grow watermelon, ii. Must not visit the farm, iii. Must not use the well, if it was dug, etc.* The crops are produced in a secretive manner: farmers are not allowed to know what type of fertilizer the Chinese businessmen use, and the pesticide labels are burnt after use. Farmers say that in the season following the contracted watermelon cycle, they have observed degradation of soil quality as well as reduction of yields and increased resistance of insects to pesticides. According to some farmers, the intensive use of water in these fields also contributes to the drying up of the wells (Brillon, 2015: 56).

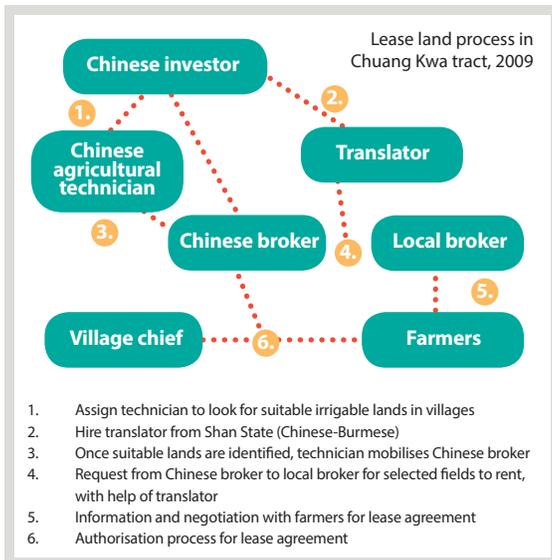


Figure 21: Stakeholders involved in ‘Chinese watermelon’ rental contracts

2500 MMK for female workers are marginally higher than those achieved by local farmers. This seems to contribute also to labor shortages that many farmers face in the Dry Zone (Brillon, 2015: 55).

Despite the environmental downturns, the land rental rate is quite attractive for the farmers. The role of village chiefs is neither clear nor transparent but obviously they are involved in the process (see **Chapter VIII.3**). As part of this contract farming scheme, farm laborers are employed from the Dry Zone through middlemen. These middlemen entice migrants to come from far off villages; they remain on the plantations during the whole cultivation period of about 4 months. Rates of 3,000 MMK per day for male workers, and

This practice needs to be addressed as it is in contradiction with Section 14 of Farmland Law 2012 prescribing that “the person who has the right to use the

farmland shall not sell, mortgage, lease, exchange or give on the whole or part of the right to use the farmland without permission of the Government to any foreigner or any organization in which the foreigner is included."

4.2 Qualitative and quantitative analysis on contracting in

Among the total 1,129 surveyed households, 13.5% (152 households) cultivated lands that they do not own. As observed in the **Table 15** and **Table 17**, in the Delta, the large majority (74.5%) of these households are landless, while it is the opposite in the Dry Zone (70.4% are landowners). This suggests that the prevalent strategy in the Delta for contracting in is primarily to access farmland, while in the Dry Zone, it is to increase the farm size. Almost a third of Delta landless and 11% of Dry Zone landowners contract lands in (see **Chapter VII.6** and **7**). This is confirmed by the **Table 13** and **Table 14**.

Table 13: Distribution of Delta households cultivating land they do not own, among categories of landownership categories (area in acres)

	HH contracting land in			Not contracting lands in			Total		
	Nb HH	%C	%R	Nb HH	%C	%R	Nb HH	%C	%R
Landless	73	74.5	23.1	243	56.1	76.9	316	59.5	100.0
0.3-2.5	7	7.1	24.1	22	5.1	75.9	29	5.5	100.0
2.5-5	3	3.1	6.5	43	9.9	93.5	46	8.7	100.0
5-10	6	6.1	9.1	60	13.9	90.9	66	12.4	100.0
10-15	6	6.1	14.3	36	8.3	85.7	42	7.9	100.0
>15	3	3.1	9.4	29	6.7	90.6	32	6.0	100.0
Total	98	100.0	18.5	433	100.0	81.5	531	100.0	100.0

Chi-Square=15.6 dof=5 p=0.008 (very significant) Cramer's V=0.171

Table 14: Distribution of households in Dry Zone cultivating land they do not own among categories of landownership categories (area in acres)

Landless	Yes			No			Total		
	Nb HH	%C	%R	Nb HH	%C	%R	Nb HH	%C	%R
0.3-2.5	16	29.6	6.5	229	42.1	93.5	245	41.0	100.0
2.5-5	12	22.2	23.5	39	7.2	76.5	51	8.5	100.0
5-10	7	13.0	11.7	53	9.7	88.3	60	10.0	100.0
10-15	15	27.8	11.5	115	21.1	88.5	130	21.7	100.0
>15	3	5.6	5.2	55	10.1	94.8	58	9.7	100.0
Total	1	1.9	1.9	53	9.7	98.1	54	9.0	100.0
	54	100.0	9.0	544	100.0	91.0	598	100.0	100.0

Chi-Square=17.8 dof=5 p=0.003 (Val. théoriques < 5 = 2) Cramer's V=0.173

Contracting in, in the Delta: a strategy to access lands for landless households

In the Delta, rent arrangements are seasonal (for summer paddy) and sharecropping arrangements are annual. In areas of the Delta where double cropping is possible, temporary arrangements (whether free loan, rent) are often provided for summer paddy by households⁷² that do not have enough resources to cultivate all the lands they own. This occurs more frequently between relatives (mainly with free land loans). Seasonal contracting in is done exclusively by landless while annual contracting-in is practiced more or less evenly by both landless and landowners.

In the Delta, these agrarian contracts are four times more frequent (24.1% of households) in villages of brackish areas than those of freshwater areas (5.5% of households). It is linked to higher landlessness rates as well as to the villages' past history, including the occurrence of quasi-feudal systems such as in Tet Tet Ku with an absentee landlord and a class of landless tenants working for him. According to the qualitative study, it seems that free land loan is the most common form of temporary land arrangement between relatives in the Delta but mainly for summer paddy, while sharecropping is preferred for year round arrangements. This is supported by the fact that among households owning no land but cultivating some through rent arrangement (36 households in total in the Delta) most occur in Aye Ywar (15 households – 41.8% of the village's landless). Aye

72. Out of 97 households contracting in lands, 56 cultivate both seasons- out of which 22 are landowners, 34 are landless, 33 cultivate exclusively during summer season. These latter households are all 100% landless. 8 cultivate only in monsoon season.

Ywar is indeed a long-settled village which developed progressively on calling in relatives from the Upper Delta and whose land availability has saturated quickly in history.

As a whole, temporary arrangements in the Delta benefit household owning no land at all in the first place (73.5% of households engaged in such arrangements, see **Table 15**). The fact of having access or not to land for 'landless' households (especially in the Delta) seems to be a major feature in terms of livelihood security (as discussed in section **V.6** and **V.7**). Among landowners, those holding less than 2.5 acres are the first category to contract temporary land use arrangements (34.6% of landowners cultivating land they do not own) in the Delta.

Sharecropping is practiced by 36 landless households in the Delta among whom 14 live in Tet Tet Ku and 18 live in Magu. Regarding Tet Tet Ku, such arrangements are done mostly with an absentee landlord owning 118 acres in Tet Tet Ku kwin (while the total acres cultivated under sharecropping in the village amount to only 163 acres). In Magu, these arrangements are done mostly through summer paddy cultivation for households having no means to invest in the cultivation of all their land. As confirmed in **Table 16**, these land arrangements are a way for 'younger' households (with the age of the household head less than 50) to access lands. When household heads reach over 50 years of age, contracting in lands drastically drops. It is to be linked with the increased access to lands with the maturity of the household: we have already seen previously that many households access lands (through inheritance or for other reasons) when they are in their 40s/50s.

Contracting in lands in the Dry zone: a strategy for small landowners to expand their farms

A feature common to both the Delta and the Dry Zone is that rent arrangements (whether free or paid) are preferably practiced among inhabitants of the same village. In the Dry Zone, in contrast with the Delta, a majority of households cultivating land they do not own are landowners (70.4%) rather than landless households. Among the former, small landowners (less than 2.5 acres) are again the main category (34.2%) engaged in temporary land use arrangements (see **Table 17**).

Table 15: Share of Delta households (landless or landowner) cultivating land they do not own

	Yes		No		Total	
	Nb HH	%C	Nb HH	%C	Nb HH	%C
Landowners	26	26.5	190	43.9	216	40.7
Landless	72	73.5	243	56.1	315	59.3
Total	98	100.0	433	100.0	531	100.0

Chi-Square=9.29 dof=1 p=0.002 (Very significant) Cramer's V=0.132

Table 16: Distribution of Delta households cultivating land they do not own by household head age category

Age of household	Contracting in lands for cultivation			NO Contract in lands for cultivation			Total		
	Nb HH	%C	%R	Nb HH	%C	%R	Nb HH	%C	%R
Less than 30	22	22.4	33.8	43	9.9	66.2	65	12.2	100.0
30 to <40	34	34.7	24.3	106	24.5	75.7	140	26.4	100.0
40 to <50	31	31.6	21.8	111	25.6	78.2	142	26.7	100.0
50 to <60	8	8.2	8.2	89	20.6	91.8	97	18.3	100.0
60 and above	3	3.1	3.4	84	19.4	96.6	87	16.4	100.0
Total	98	100.0	18.5	433	100.0	81.5	531	100.0	100.0

Chi-Square=34.2 dof=4 p=0.001 (very significant) Cramer's V=0.254

Table 17: Share of Dry Zone households (landless or landowner) cultivating land they do not own

	Yes		No		Total	
	Nb HH	%C	Nb HH	%C	Nb HH	%C
Landowners	38	70.4	315	57.9	353	59.0
Landless	16	29.6	229	42.1	245	41.0
Total	54	100.0	544	100.0	598	100.0

Chi-Square=2.68 dof=1 p=0.097 (very significant) Cramer's V=0.067

As seen above, sharecropping is not widely practiced in the surveyed villages with only five arrangements in Zee Phyu Pin and two others in Gaw Gyi. In direct contrast with what has been observed in the Delta, it seems that in the Dry Zone those households engaged in sharecropping are often relatives. Sharecropping is practiced between parents and their relatives, either for children to work some land before they get married and receive their share of land through inheritance or to supplement land for newly created households. In the former case, children generally contribute one third of the crop produced to their parents. Among more distant relatives, the practice of *'tawak-sa'* is common: the landowner contributes the land and the sharecropper contributes the labor while all other farm inputs are shared equally, as is the harvest yield. In Khoe Than for example (20 households renting-in land among a total of 37) the rent fee is estimated at 400,000 MMK per acre for growing early monsoon crops. In that case, the landowner has to bear the responsibility to plow the land. In case the landowner did not plow the land, rent is decreased to 300,000 MMK.

Key findings of household strategies for contracting in lands

The prevalent strategy in the Delta for contracting in is primarily to access farmland, while in Dry Zone, it is to increase farm size. Although it is difficult to draw overall conclusions on land arrangement trends as each village has its own specificities in this regard, it still appears that in both the Dry Zone and the Delta villages that where land productivity is the highest, such arrangements are less frequent. In addition, in the Dry Zone, temporary land arrangements are more frequent in villages where landlessness rates are low and where average landholding sizes are the smallest. This clearly indicates the important role of temporary arrangements for accessing farmland areas large enough to be economically viable, especially during the transition period for young adults of working age who still lack capacity either to buy or receive a plot through inheritance.

According to qualitative surveys in the Delta, about 10% of landless households in Aye Ywar and Pay Chaung (despite being much different ecologically) managed to obtain derived land use rights (whether through mortgage or rent/sharecropping) upon which they later managed to secure permanent access to land.

4.3 Making numbers meaningful: how discrepancies between in and out temporary arrangements shed light on an insecure land tenure framework

In both areas where the main social and administrative unit is the village, the first striking result is the extraordinarily low rate of landowners temporarily contracting out land to others, compared to the number of households working land they do not own through such arrangements. As shown in **Table 18** and

Table 19, only 70 owners declared that they contracted land to others against 156 households declaring that they accessing land through temporary arrangements.

Table 18: Numerical gaps between households contracting in and contracting out lands

	Contract in		Contract out	
	Nb HH	% over total HH	Nb HH	% over total HH
Delta	98	18.5%	22	4.1%
Dry Zone	54	9.0%	50	8.4%
Total	152	13.5%	72	6.4%

Table 19: Number of households engaged in different types of temporary land arrangements (in and out) in Delta and Dry Zone

	Mortgage		Sharecropping		Rent		Total	
	In	Out	In	Out	In	Out	In	Out
Delta	14	3	51	17	36	2	98	22
Dry Zone	11	7	7	5	37	38	54	50
Total	25	10	58	22	73	40	152	72

In the Delta, 4.1% of households rent out, while 18.5% rent in. In the Dry Zone, 9% rent in while 8.4% rent out. Higher number of renting out in Dry Zone is due to Chinese investors (who are not part of the surveyed households). If we take into account this particular point, there are similar discrepancies in the Dry Zone and the Delta – the number of contracting out households are much less than contracting in households. Scrutinizing in and out temporary arrangements at the village level confirms this (i.e. the villages reporting high number of rent-out contracts are not those reporting higher rates of renting in land). The first plausible explanation that arises is that one landowner may contract out lands to more than one household. Yet, the figures on surface areas subject to contracting out and contracting in also reflect the same discrepancies. The second possible explanation is that contracting out landowners do not live in the surveyed villages (and thus have not been surveyed). These could concern absentee landowners. This is indeed the case in Tet Tet Ku village where 118 acres of land are owned by an absentee landowner living in Mawlamyinegyun. Yet, the other studied villages do not have absentee landowners. It could also be 'normal' households cultivating land owned by individuals from other non-surveyed villages. However, the contrary

should be true as well, hence generally balancing the rate of in and out temporary arrangements. Finally, these discrepancies are too consistent through villages and the two zones to be solely attributed to possible survey biases.

One hypothesis therefore proposed is that landowners tend to underreport land actually worked by others through temporary arrangements. This hypothesis relies on the fact that they might not have considered land arrangements with their children – prior to inheritance – as contracting out while their children may report the lands as contracted in. A second hypothesis concerns the insecure framework under which these arrangements have been contracted. On the one hand, until the Farmland Law 2012, such arrangements were illegal – despite being widely practiced. On the other, such temporary arrangements became a site of conflict during the land registration process⁷³. In fact, landowners interviewed for this study in the middle of the titling process may have logically only reported arrangements they felt ‘secure’ about, notably those done with contracts or done with ‘reliable’ individuals. This is the case for example about Dry Zone landowners renting their lands to Chinese investors, which is done with contracts signed with the village tract administrator most of the time. The smaller gap in out arrangements in Dry Zone would also confirm this hypothesis given that villages in this region have been longer settled and are more stable than in Delta, hence providing a locally more secure tenure framework.

■ 4.4 Quantitative analysis on contracting out

Bearing in mind that landowners tended to underreport temporary arrangements to have their land (or part of it) cultivated by others, characteristics of such arrangements may remain valid.

Table 20: Summary data on contract out households for Delta and Dry Zone

	Households that contract out lands		
	Nb HH	% over Landowning HH	Average acreage
Delta	22	10.2%	6.31
Dry Zone	50	14.2%	3.44

As seen above, households accessing land through temporary arrangements are mostly ‘younger’ households (whether they are landless or already holding some land) working rented land while waiting for the opportunity to access more

73. Some tenants claimed ownership on land they had worked since a long time or reversely former owner attempted to reclaim land lost through such arrangements, principally mortgage (see Chapter V.4).

stable land arrangements. For landowners contracting land to others, it is the contrary, as shown in **Annex 2, Table 1**: households whose head is aged more than 60 are the most frequent (18.2%) to practice such arrangements.

Given the fact that women headed households are overrepresented in the age classes over 50 years old, the fact of contracting land out is logically linked to the fact of being a female headed household (see **Annex 2, Table 2**). The frequency of contracting out lands is double for female household heads, compared to male household heads across all age groups. This is also consistent with the fact that such households generally lack the workforce to cultivate land by themselves. More information on this issue is to be found in **Chapter VII.2.5**). There is also a link between landholding size and the share of land cultivated by the household itself. The more land people have, the less they cultivate themselves, as a general tendency (see **Annex 2, Table 3**).

VI. The new land framework: impact, issues and land disputes

A new Farmland Law came into force on 31st August 2012 under the administration of President Thein Sein, shortly followed by a 'Vacant, Fallow and Virgin lands management law'. Both were designed with a view to developing business opportunities and the country's economy through the improved utilization of these lands. These two laws represent the most substantial change to the legal framework for land since the early 1960s.

The key principles are the following: 1) the state remains the ultimate owner of all land and the government can nationalize lands if it deems it necessary. Farmers have land tenure rights for cultivation granted by Land Use Certificates (LUC), but only in accordance with the government's prescriptions; 2) the concept of private ownership – of land use rights – is officially reintroduced: land use rights can now be sold, mortgaged, and inherited; 3) a Central Farmland Management Body is in charge of ensuring compliance with the new regulations and can transfer or revoke the right to work farmland, and provide land evaluation for various purposes.

The research fieldwork was executed during the land registration process and as such the team was able to witness the speediness of its implementation in the field and the dynamics it created. The study team had the opportunity to observe single SLRD officers undertaking the huge task of registering lands within a whole village tract, with a very tight time frame and much political pressure to achieve their targets. The 2012 Farmland Law is an important step toward a redefinition of agrarian policies. It aims at delivering transferable land use certificates (LUC) to introduce and secure private property through a state-based system of holding records. The government body in charge of this process, the Farmland Administration Bodies (FAB), largely relies on local actors in order to implement the reform.

In terms of how this process was executed, farmers had to wait for the SLRD agent to come to their villages to collect the ticket claim of 500 MMK for each holding (however, as for the payment required to actually get the LUC, many discrepancies have been noted, see next point). Once this is done, the SLRD sends several forms (105, 107) filled with farmer land claims and village headman ratifications to the FAB in Nay Pyi Taw. This administrative process is done under close SLRD scrutiny for the areas mapped and updated. There are much more difficulties when an update is necessary and harmonization between current use and state categories (e.g. when forestlands are cultivated). Village Tract Farmland Management Committees were

created at the village level in order to regulate the land titling process, i.e. clarifying claims and resolving conflicts (on this point, see below).

1. The hasty land registration process

The delivery of land use certificates has been done extremely quickly, relying on the existing SLRD records without conducting updated surveys of plot boundaries. Indeed, the verification process for land titling is based on the (i) cadastral map, (ii) receipt of the land revenue collection, and (iii) the list of the farmers' owner book called Document 2.

1.1 Disparities in LUC delivery rates

The quantitative survey was conducted from August to early November 2014. The data indicates that while in the Dry Zone almost 80% of landowners got a Land Use Certificate (LUC, also called Form 7), only 71% received it in the Delta. This difference is due to the fact that there are more lands cultivated under forestland status (which are not eligible for an LUC) in the Delta (464.8 acres for 34 households) than in the Dry Zone (46.2 acres for 10 households).

Regarding the households owning farmlands officially registered as such, the LUC delivery rate is thus 96.4% in the Delta (with variations between villages from 91 to 100% of villagers attaining LUC). The higher overall LUC delivery rate in the Delta, compared to the Dry Zone, reveals stronger state intervention in the Delta and greater coverage by the SLRD (which is linked, as has been mentioned throughout the report, to the important focus that was given to paddy in various policies – from the procurement quotas to the MADB agri loans...).

The LUC delivery rates (to farmland owners) have been much lower in some villages of the Dry Zone (22% in Hledar and 77.6% in Gaw Gyi). The main problem (which occurred in both villages) was the loss of the cadastral maps, mainly due to improper handover of documents from SRLD out-going staff to new ones. Without the maps, the township SLRD office could not verify the existence of the farmers' holdings (*u' paing*) on the ground. After several months of repeated requests from the farmers, the SLRD finally came to the village and attempted to survey all the farm boundaries. However, the task was not completed and the SLRD staff have not returned since. The same thing is true for Gaw Gyi village.

Excluding these problematic villages, the quasi totality of farmland owners (97.4%) declared to have received the LUC in the Dry Zone. For both Dry Zone and Delta villagers, and excluding these two problematic village cases, 96.8% of

farmland owners confirm having received an LUC, leaving a mysterious 3.2% of farmland owners affirming they have not received an LUC, which most probably reveals potential exclusion and lack of social capital or underlying disputes. This is confirmed by the fact that the large majority of these cases concern very small landowners (less than 3 acres), none of whom provided answers to the survey questionnaire concerning their opinion on the land registration. Furthermore, we must also take into account survey bias which is particularly strong on issues concerning land disputes: some households might have confirmed having received the LUC even though they did not actually receive it, so as to conceal dispute claims.

■ 1.2 Top down process and exclusion of the smallest farming households

By all means, the land registration was implemented quite hastily and in a very top down manner, as the quantitative survey figures demonstrate: among the households which have received an LUC, only one third confirmed to have themselves applied to land registration, less than half (42.5%) said that a public list (Form 2) was posted in the village, and only 37.6% were aware of who were members of their Village Tract Farmland Management Committee. There was little or no farmer participation in most cases. In some Dry Zone villages, newly issued LUC had already arrived since the first week of the program in the village head's house but no farmer came to collect his/her title.

One issue remaining, as always in Myanmar, is the two-tier administrative process in which those who are able to pay actually had their plot measured and received their LUC before those who did not pay. We already noted that the let allocation process is not known and 'represented' by different households in the same way, according to the farmland holdings they own. It also varies according to the area of land they own. Amongst landowners, smallholders more frequently declared that they don't know if the land registration process had started or not, while large ones more frequently declared it had started. Amongst the 153 landowners who voluntarily applied for registration, large holders more frequently applied than the smaller ones. This is explained by their stronger interest in formal registration, their financial capacities, and also to their closer relationships with authorities, including the local Land Management Committee members (see **Chapter VIII.3**).

BOX 10: DIFFERENT VERSIONS OF THE LAND REGISTRATION PROCESS AMONG STAKEHOLDERS

The local SRLD version

There are 10 standardized Forms by which farmers could start applying to the SLRD until Form 7 is granted. Form 1, available from the village tract (VT) office, is completed and submitted through the Village Tract Farmland Management Committee (VTFMC) to the township SLRD. The township SLRD staff lists the applicants in Form 2 and post the list at the village General Administration Department office, calling for potential counter-claims within 30 days from any who object to any of the applicants. After those 30 days, the SLRD township staff scrutinize the eligibility of the applicants for the land title registration with respect to the set criteria included in section 6 of the Farmland Law. After verifying the validity of the applicant information in Form 3 through 6, the case is submitted to the District Farmland Management Committee and is finally approved. Township Committee then issues the Form 7 to respective farmers. The whole process theoretically takes 65 days from application to the issuance of certificate.

The village head's version

In one of the villages under study (Delta), the land registration process was first described by the headman as follows: *After organizing the VTFMC, the village tract leader, with the help of village headmen ('100 household leaders'), called all the farmers in the village to come to register their farmland holdings with their annual land tax receipts (see box below). These papers mention the name of the owner, the holding number, the plot number, and the area of the used land in acres. After collecting these data, the SLRD officer came to the village to measure the concerned land plot areas. He documented the land profile by drawing a map and asking the farmers working on adjacent plots to witness and provide their approval. After finishing the measuring process, the VTFMC disclosed a list of landholdings and their respective holders in the village. The list was publicly displayed on a board in the village public space so that anyone could object to a land use holder or to a holding's area. Any objection of the displayed land titles could be raised within 30 days.*

The villagers' version

In the same village, another version of the process was given by farmers. First, farmers complained about the money they had to pay to SLRD staff – 1,500 to 5,000 MMK per acre depending on their 'proximity' with the latter. If failing to pay, their turn was postponed and measuring was not done carefully. The larger the *u'paing* area, the more money one had to pay. In the SLRD officers' defense, the daily 1,500 MMK travel allowance they receive is barely enough to cover the travel expenses from one village to another, pay the extra food charges, and compensate them for the hard work they undertook. Hence, these expenses had to be shouldered by the villages. And depending on who would pay for these expenses (the village head alone or all the villagers contributing a little), delivery rates between villagers may differ as Burmese culture invites guests to honor their hosts and vice versa...

1.3 Errors in LUCs and objections

The quality of the titles received – in terms of consistency between actual landholders and those receiving the titles, and in terms of registered surface area – remains an issue. Indeed, giving the very tight time frame imparted to perform this vast operation (and under much pressure from the central level), SLRD officers did not have time to survey and re-measure all field plots, nor to check all *kwin* boundaries, nor to take note of all changing conditions. In many cases, they used old maps which were surveyed and drawn in the colonial times (around 1889, 1890) and updated in the 1960s. They copied the individual *u'paing* plots from these old maps and put that information in the Form 105 (defining the *u'paing* on the cadastral map). SLRD staff in most places actually worked relentlessly to reach their targets and the shortcuts described in the process were taken only so they could try to attain

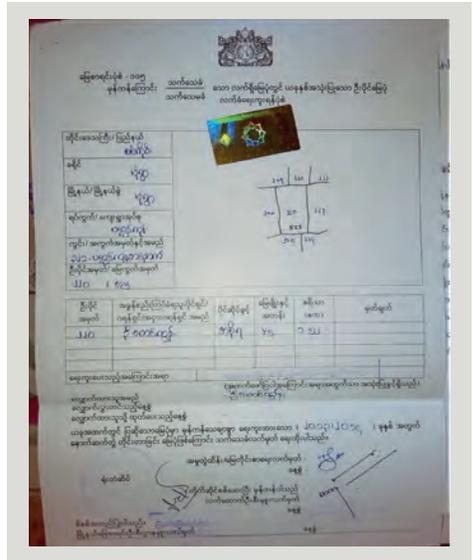


Figure 22: Form 105 (attached to Form 7)



Figure 23: Land use certificate (LUC), commonly called 'Form 7'

the target. Many errors in designating the holder's name and field plots' area and shape have to be expected. Though the mission achieved its political objective, it remains incomplete at the technical level, and a series of follow up adjustments and corrections would be much needed. Among other cases, in Zhi Phyu Pin village of Yinmabin township, SLRD issued the Form 7 to two different farmers for the same farm plot of *u' paing*. In some cases, Form 7 was granted to the wrong person.

In similar rates in both Delta and Dry Zone, an average 7% of farmland owning households (excluding cultivated forestland 'owners') have contested some points of the LUC. Land objections are twice more frequent in households which have not received the LUCs. The qualitative survey indicates through many case studies that there are actually more cases of contestation, but the fact that they were not identified as such is due again to the survey bias, which is particularly strong on issues concerning land disputes. It is too early, and the question remains sensitive, to be able to say how much the discrepancies between LUCs and actual holdings are affecting the regions under study. However, farmers have already complained that through the LUC process they lost in some cases more than three acres. Inequities emerging within the land titling process were also recorded in other non-surveyed areas of the Delta, with farmers complaining of losing up to 70% of the landholdings in some cases through the process. Hence, overlooking the titling process – which is easily done given the pace of land reform insisted upon by the current government, and notably the great attention paid to the National Land Use Policy – may prove to undermine the whole reform process and may represent a potential source of conflict if nothing is done to redress the discrepancies.

■ 1.4 The land registration process on the ground

From one village to the next, descriptions of the land registration process differ greatly. From interviews and observations, modalities of the land registration process – whether villagers had to pay the SLRD or not, whether plots were actually measured or not, the time the process took – seemed to depend much upon the commitment of the SLRD staff in charge, his relationship with the village administrator and other influential individuals, as well as the degree of interest vested by the state in the village – i.e. pretty low in remote villages of the Dry Zone such as Hledar where the cadastral map has been lost, and pretty high in Delta villages producing double season paddy. Disparities were also observed in the same village (see **Box 11**) depending on whether the owner could afford paying several thousands of MMK to the SLRD in order to have his plot properly measured.

In the prescribed process, SLRD with the Village Tract Farmland Management Committee (VTFMC) members shall verify the land claim by consulting the neighboring farm plot users. However, in many villages (especially in the Dry

Zone), the SLRD and VTFMC members relied on the village administrator alone and avoided going to the field. Further, even if the village administrator himself cared to go to the fields, he alone could not have the knowledge about who owns land use rights on which parcel of which land. In the old days, village elders or chief always accompanied the SLRD surveyor in the field examination for revenue assessment and they knew pretty well the owner of each parcel. But given that there has been no field examination for revenue assessment for several years, a visit at this particular moment by the village administrator would not have allowed him to garner with any assurance the true facts on the ground.

As we have seen, long before 2012 there had been transfers of farm plots among farmers in most villages. In many instances, farmers did not approach the SLRD surveyor in order to change the name on registers, so as to avoid extra cost. In other cases, the SLRD surveyor may have not changed the name of the titleholder, even though he would be aware of the transfer and names of the parties involved. Hence, at the time of land registration in 2012, Form 7 was granted to the former owner. The new one then had to rush to the SLRD officer and give extra payment to change the name of the title holder.

BOX 11: TAX RECEIPTS: THE ULTIMATE “PROOF” OF LAND USE?

The tax receipt, like the farmer booklet (see **Chapter V.1.2**) dates back to colonial times. While it once contained a great amount of information, nowadays tax receipts in their simplest form contain: the *kwin* number (basic territorial division); the *u' paing* number (holding); the kind of land; its size; the tax amount; the name of the person cultivating the land; its village and village tract location. Hence, along with settlement surveys, cadastral mapping, and issuance of tax receipts mainly aimed at affirming the state's territorial control and categorizing agricultural land in two dimensions – quality and size – for its benefit. To do so, the Revenue and Survey Department (later renamed the Survey and Land Record Department – SLRD) frames the territory in order to make it legible and assessable. In most cases, the tax receipt is nowadays perceived as somewhat useless by farmers, as the tax amount was fixed decades ago and given inflation does not constitute anything but a nominal sum. The document – which links farmers and SLRD – became a simple follow-up register. The production of this document was monopolized by the SLRD as a database to match holdings with individual names where *kwin* and *u' paing* were settled. However, tax receipts found some special significance during the 2012 land titling process, and have been often used by farmers to prove their seniority as users of landholdings (*u' paing*) in case of a dispute between two (or more) potential landholders. However, in the absence of other types of documents, many having been lost in the aftermath of cyclone Nargis, the legitimacy of such papers is questionable, especially when many interviews indicate the possibility to bribe an SLRD agent to issue new 'fake old' tax receipts.

■ 1.5 Gender and land registration

Being a woman or a man headed household doesn't impact on Form 7 allocation, indicating that land registration has been done systematically and with no visible gender discrimination of household heads. For the LUC, lands are systematically registered under the husband's name for couple-headed households. Even though the LUC designates an individual holder, the land use rights are clearly perceived as held collectively by the household (particularly both spouses). For example, the qualitative survey has not identified any cases of husband's selling off land without the wife's consent. However, the fact that the final LUC (Form 7) is only in the name of the husband may raise problems upon a couple's separation or divorce. Although each case may be quite different, depending on the context, the reasons of separation, and the social pressure imposed by relatives and villagers, women are undeniably more at risk of losing access to lands than men in divorce/separation cases. As mentioned in **Chapter V.2**, inheritance of land from parents to children in Burmese society in the surveyed low land areas is not problematic with regard to gender. There can be more discreet forms of discrimination, which nevertheless remain marginal (see **Chapter V.2.3**). This may be exacerbated in critical times such as the recent land registration period, as seen in **Chapter V.2.3**. At least one conflict was recorded with a young widow regarding the titling of land her household received at her marriage from the husband's parents; as the husband died, his parents are contesting the land registration that was done in the name of their widowed daughter-in-law. Before delivery of Form 7, all the family member names and their respective relations to the household head are recorded officially. Indeed, all names of each farm household family members are recorded in Form No. 1, the first form submitted to SLRD to obtain the LUC. Besides, all documents of Form 7 issued to the farmers are recorded and summarized in Form No. 5 which takes record of all names of the family member for each Form 7 issued.

It has to be underlined here that the MADB's credit scheme that provides loans for a maximum 10 acres (see **Chapter VIII.2.2**) has an unintentional consequence on gender and registration. This is because when farmers own land use rights on more than 10 acres, those would often register 10 acres in their own name and the remaining amount in their wife's name at the moment of the registration, so as to access loans for more than 10 acres which is the official threshold. More information on gender and land can be found in **Chapter VII.2.5**.

2. Land Use Certificates: new opportunities or more problems to come?

■ 2.1 New opportunities, for whom?

LUCs as collateral

A positive point of LUCs, as perceived by farmers, is that they allow farmers to be able to mortgage land, instead of using the more traditional pawning system

(*le pyan ngwe pyan*), where the full land use right is given to the money-lender for a determined period, leaving the farmer with a debt and less (or no) land to work. With LUCs, farmers can borrow money, using land as a collateral, and at the same time continue working and enjoying the fructus of the mortgaged land.

But, in reality, the conditions of the land use disposal rights will not legally allow farmers to capitalize on this new 'right'. Indeed, the law stipulates that mortgages can only be done with government banks or authorized banks. Yet, existing formal credit providers – even the government banks (MABD, MFIs...) in those areas do not use land as collateral and farmers have no access to such banks. But this may be a rising practice of money-lenders. Mortgage foreclosures in these cases may be concealed and formalized in the form of land sales.

Formalization of land use rights transfers

Each farmland management level (from village tract, township, district, regional up to Union), can be involved in the scrutinizing process concerning the change of name of the *u' paing's* holder that results from transfers such as inheritance, sale, mortgage closure, gift, etc. The time and costs required to formalize land transfers and land use changes, as per the procedures defined by the Farmland Law, exceed the means of smallholder farmers. They only seem fit for larger farms and bigger transactions where administrative economies of scale are found to pursue the legal process.

BOX 12: MINISTRIES RESPONSIBLE FOR LAND ADMINISTRATION

“Administering land and its uses mainly falls under the purview of three ministries — Ministry of Home Affairs/GAD, MoAI/SLRD, and MoECAFF/ Forest Department (FD). These administrators are also responsible for protecting the land under their jurisdiction from encroachment and squatting and ensuring adherence to prescribed land use. Any transfer of tenancy rights (all farmers being tenants) and any request for change in land use must be initiated at the village tract or ward level and must go through successive tiers in the structure to be eventually endorsed/approved at the state level, after going through factual verification by the SLRD branch at the township and district levels. The township-level GAD branch is responsible for processing such applications. Thus, land-rights transfer or land-use change is a lengthy process, requiring considerable time and frequent visits to various offices.”

Source: Shivakumar Srinivas and U Saw Hlaing, 2015: 8

What should be the proper community-level decision making processes in land use planning and land administration? What are the strengths and weaknesses of communities in dealing with such land issues that also can support state level mandates? Addressing these questions could help identify the ways and means for community capacity building in land use management.

As a whole, the lack of institutional representation and the very limited capacity of the farmland management body at the village tract level (all requests have to go through the township, district, and region/state level) represent a serious limitation to the new law's implementation. Though farmers now have the possibility to legally register land transfers, some transfers might very well remain informal (as in the times where land transfers were illegal) if the administrative processes remain as complex as they currently are. If this is the case, land records will be outdated within a few years. Legal restrictions may become an instrument for locally powerful individuals. In practical terms, farmers engage with the Village Tract Farmland Management Committee, and its Village Administrator as the Chairman, with all issues concerning land use disposal rights. The village chief may abuse of his powers at the expense of farmers, particularly the most vulnerable ones. The farmland administration processes would need to be simplified so as to become both accessible and affordable for smallholders, to strengthen the land tenure security of smallholder farmers, and avoid creating legal gaps that authorities may take advantage of for corrupt practices.

■ 2.2 The continued issue of restrictions over land use rights

Before the land reform of 2012, the Tenancy Act (1963) already vested the state with the mandate to prescribe which types of crops should be grown on agricultural lands, and in case of breaches to such conditions, gave the state the freedom to confiscate the land from farmers. Unfortunately, the 2012 Farmland Law did not resolve this issue of restrictions concerning land use rights. As observed in **Figure 23**, many of the conditions mentioned in Form 7 are inadequate and will probably create power imbalances and corruption from village leaders and village tract authorities towards 'non-compliant' farmers. They will also generate land insecurity. In addition, some of the conditions are inapplicable in terms of transactions costs (e.g. high costs to submit crop change requests up to the Union level), further increasing opportunities for corrupt practices.

The new Farmland Law, section 12, specifies that the permission for change from seasonal crops to perennial crops needs to be requested up to the Union level, through the township, district, region/state levels for Scrutinizing by the different land management committees. The present Farmland Law clearly restricts the farmer for the disposal right in his/her farmlands. For failure to comply with

conditions as prescribed in Section 12 and repeated failure to follow Section 19 of the Farmland Law as directed by the farmland management committee, the convicted farmers could be punished with fines and imprisonment from six months minimum to two years maximum (Section 35).

The former restrictions on land use rights actually remain, highlighting the contradiction between the progressive opening of the land tenure framework, and the broadening of land use rights, and the government's enduring focus on paddy – the staple crop constituting Myanmar's national identity – and its tendency to control land use for paddy production.

This is a serious constraint, undermining farmers' capacity to make decisions and to choose the most suitable crops according to the economical context (market prices, household's cash flow), environmental conditions (weather, access to irrigation), and household situation (availability of labor). This is particularly important for the Dry Zone (where agricultural production options are wider) but is relevant for everywhere in Myanmar. While land prices tend to increase, prices of most Dry Zone key seasonal crops (except from high value cash crops such as onions, whose price nonetheless is highly variable) have been falling year after year. Assuming that a farming household wants to grow *thanakha* (*Limonia acidissima*) trees in a plot which initially produced sorghum, peas, or sesame, it has to apply for permission following the protocol stated above. It is interesting to observe that there is a perceived sense of land tenure insecurity about this issue. Indeed, in the quantitative survey, very few farmers have declared growing *thanaka* crops while the field observation and the qualitative survey clearly indicates that it is a very common crop in the Dry Zone. No farmers are applying for such permission for 'growing perennial crops'. Particularly with recurrent droughts there are clear advantages of *thanaka* in terms of resilience, income generation, limited labor, and water and input requirements; an increasing number of farmers are growing these trees. In this regard and beyond the example of *thanaka*, it is urgent that farmers be given full disposal rights on the choice of crops. They are the most suited to make the best decisions to enhance their livelihoods and land productivity.

Another issue is how contracts with foreigners are structured. In the current context of massive Chinese investments particularly in watermelon production in the Dry Zone, the impossibility for farmers to change to perennial crops pushes them to contract their lands for attractive rents when they face decreasing crop prices, but under highly restrictive conditions dictated by the Chinese investors (see rents in V.4.). This is also an issue that may generate land tenure insecurity and abuse of powers (see below).

Form No. 7
Farmland Work Permit Certificate

Region – XXX
 District- XXX
 Township- XXX
 Name of Farmer – XXX
 National Registration Number – XXX
 Kwin No. –
 Kwin Name –
 Oo Paing No. –
 Land type (paddy land/ Ya land, etc.) –
 Area (Acre) -
 Permit No. –
 Permit date –

As long as there is no breach of the stipulated terms and conditions as prescribed in Farmland Law Section 6,7,8, this work permit is granted.

Sd. XXX Secretary
 Township Farmland management Committee

The Form No. 7 is attached with a hologram. The back cover is written with the following statement ((from Farmland Law, section 12).

CONDITIONS IN RESPECT OF THE RIGHT TO WORK FARMLAND
 Section (12). The following conditions shall be complied with in respect of the right to work farmland: -

- (1) any person shall work farmland in accordance with the provisions of this law;
- (2) land-tax and other taxes in respect of farmland assessed by the Ministry shall be paid;
- (3) It is needed to register at related department with fee when the process such as selling, pawning, lending, and donation of right to work farmland is carried out, and the prescribed stamped-duty and registration of deed fees shall be paid;
- (4) Whenever inheriting of completely handing over of lands is carried out in accordance with existing law, It is needed to register at related department in accord with prescribed conditions;
- (5) "pawning" is permitted to acquire investment for agricultural production only, by means of pawning the farmland with a government bank (or) authorized bank;
- (6) farmland shall not be worked without the permission of the relevant farm management body;
- (7) farmland is prohibited using for non-agriculture purpose without permission;
- (8) farmland is prohibited to change perennial crop growing from regular seasonal crop growing without permission;
- (9) farmland shall not be fallow without a sound reason;
- (10) during the period of before getting the right for farming or disputing the right for farming, selling, pawning, lending, exchange or donation of right for farming farmland is prohibited;
11. After this Law enacted, whenever land dispute happens, registered farmland at the department can do official solution.
12. A person who has the permission of right for farming should not be sold, pawned, leased, exchanged or donated to any foreigner or organization containing foreigner without the permission of State Government

Figure 24: Translation of contents of Form 7 (LUC) and conditions of land use rights

■ 2.3 What improvements brought by the LUCs?

Discussions about the virtues and downsides of formalizing land rights have taken place since the 1990s, with a great variety of views on the question. In the case of Myanmar, the strong political drive for private landownership and the systematic land titling of farmlands (eight million LUCs titles delivered) throughout the country in a very short time frame can be explained by the government’s will to show to the international community some concrete outcomes of the country’s opening and modernization process.

The first question may then be: are LUCs improving land tenure security in the case of potential land grabbing? As related previously in this report, farmers in Burmese lowlands were not totally lacking papers formalizing their rights. Among the two main documents normally held by the farmers were the farmer booklet, and the Form 105, which is still attached to the LUC and sets the plot's boundaries, plot number, *kwin*, type of land use, and the holder's name. We also saw that in absence of one or the other, tax receipts could be used to legitimate a right of a user to a defined plot. Yet despite having these documents, farmers have always been under threat of arbitrary land confiscations by the state throughout the previous regimes – whether it was in the name of national projects of public interest or more often for the interests of the powerful elites (for pure speculation or business). In that sense, LUCs do not seem to provide more security than the already existing documents. The source of land insecurity was not the lack of documents but rather the absence of rule of law to pre-empt or address potential abuses of power.

In addition, though land titling may aim to strengthen land security, it actually generates vulnerabilities for those who do not get access to land titles. It is what Hirsch defines as a central conundrum (Hirsch, 2011:15):

“(While) most farmers and other landholders are pleased to obtain formal title over plots of land that they hold individually under more weakly demarcated and state recognized arrangements, the process of land titling in some areas can weaken security in others and can entrench, sharpen and exacerbate existing inequalities in access to land.”

The issuance of land titles may be of more interest in upland areas where many agricultural lands are not registered as such. The problem remains that in many upland areas land tenure follows customary principles, not recognized by the 2012 land law⁷⁴ (Ewers Anderson 2015, GRET, forthcoming). Moreover, shifting cultivation, while still practiced in many parts of the country, is not recognized by the government. Finally, LUCs are not designed to be applied collectively, while in upland areas it is frequent to find communal lands or collective management of land use, such as in Chin, for example. There is however one context where the deliverance of LUCs could improve farmers' land tenure security: for the agricultural lands which are still classified as forestlands. We indeed saw that some farmers in Delta (Pay Chaung and part of Tet Tet Ku village) were farming on land still under the jurisdiction of the Forest Department. As such, their land tenure is insecure as the Department could reclaim such lands, notably under the provision

74. The National Land Use Policy approved early 2016 finally takes into account the concept of 'customary tenure' and mentions its recognition. However, much is still needed to put in place in order to protect customary land tenure in upland areas from a legal point of view.

of the Vacant, Fallow and Virgin Management Law – yet this did not happen in the villages under study. Following the registration process, a presidential instruction for the reclassification of lands was enacted. Part of forestland cultivated in Delta was degazetted into farmlands and acknowledged as arable land by the Central Farmland Management Body. Following this decision, SLRD staffs came to measure farmers' plots in Tet Tet Ku and Pay Chaung, although at the time of writing this report, farmers did not receive yet LUCs. It seems the degazetting process of cultivated forestlands to farmlands has suffered some institutional complications and remained stuck.

Then, what do the new land law and LUCs provide, compared to the previous framework? We have observed that restrictions on land use rights are still in force, and that the possibility to access credit by using the LUC as collateral is too restricted to benefit small landholders.

The main addition brought by the new land framework is to finally acknowledge long-existing practices of land transactions, since farmers can now legally sell, rent, or pawn their land use rights. However, land transactions before 2012 were admittedly illegal yet formalized in many ways as we have seen: through contracts, involving witnesses, and even with the support of state representatives such as the village administrator and SLRD staff. Now that these transactions are legal, they still need to be formalized through procedures which – we saw – are lengthy and costly. These procedures are thus not applied, meaning that the same 'black market' practices apply and the whole land registration will be outdated within a few years.

As summarized in a document by the 'Land Tenure and Development' Technical Committee⁷⁵ (2015: 33) on the formalization of land rights, "*written titles can help secure tenure if:*

- *the formalization procedure makes sense in relation to the reality of land rights, responds effectively to the problems encountered by different land users, and enables the State to recognize their legitimate rights or authenticate their agreements;*
- *the formalization procedure is accessible and effective, and is part of an institutional environment that is sufficiently interconnected and reliable to deal effectively with the plurality of norms and authorities;*
- *land information is kept up to date, so that people benefit from using the legal mechanisms, and the institutions responsible for administering rights fulfil their responsibilities."*

75. Forum for multi-disciplinary debate and sharing among researchers, decision makers, civil society stakeholders and operators of the land sector, under the auspices of the French Cooperation.

Concerning Burmese lowland areas, LUCs match in some aspects the reality of tenure and land rights – especially through the legalization of land transactions – while it does not necessarily answer farmers’ problems – e.g. access to credit, freedom to choose the specific use of land. As for upland areas, the reality of land tenure practiced in these regions is for the most part out of reach of the current land framework (in regard, for instance, recognition of communal lands).

When it comes to the formalization of land transactions under the current framework, it is too early to show significant evidence deriving from the updating of LUCs. However, the points above all indicate that cadastral maps may soon be out of date, as is the case in Cambodia where the cost of procedures is deterring farmers from undertaking the process of changing names in land records (Diepart and Sem, 2015: 56).

Another important stance adopted by the Myanmar government is that, like Thailand and Cambodia before, it decided not to redistribute land before titling, thereby crystallizing existing inequalities between landholders and the landless, who are particularly numerous in Burmese lowlands (see **Chapter VII.7**).

Finally, another rationale for formalizing land rights through written titles is that it should help reduce conflicts and resolve land disputes. The main issue is that land disputes are often the result of the plurality of norms regulating land transfers, especially a set of stacked laws⁷⁶ creating “*gaps in institutional frameworks that are unable (or unwilling) to accommodate this plurality*” (“Land Tenure and Development’ Technical Committee 2015:35). In that sense, the new land framework is one more law stacked on the others, and we should see in the following sections that the land registration process revived many conflicts, while the capacity of conflict resolution bodies seems very limited.

76. Siu Sue Mark, 2015. The concept of stacked laws was defined by Roquas (2002).

3. Land use disputes under the 2012 land reform

Myanmar's successive regimes' land policies have resulted in creating 'stacked laws', with multiple layers of laws existing simultaneously, creating conflicts and many legal contradictions. As such, conflicts can merely be the result of those pluralisms and contradictions, rather than an absence of rule. The context is made even more complex by decades of abusive power and intrusive agricultural and land policies.

They have left significant scars and grievances and provide ground to new claims and collective contestations over past abuses of power and actions perceived as unjust and/or illegitimate (see section below 3.2). Finally, this is all aggravated by the fact that in the past decades, at the local level, land governance has been highly concentrated in the hands of government appointed village headmen, who were acting as political brokers⁷⁷ between government and villagers (see VIII.3). In the absence of checks and balances, corruption practices have prevailed at the expense of the weakest. The section thus explores how the recent land registration process revived different conflicts and grudges, and presents some challenges faced in conflict resolution (see 3.3).

3.1 The result of legal pluralism and stacked laws

There is a stabilized set of customary norms concerning property transfer inside the family and for extrafamilial arrangements. For instance, conflicts about inheritance (*a-mwey*) can express a number of tensions, including: the fact that every child may not be able to enjoy an equal share of parents' property, how properties are classified, the actual state of family relationships, and children's lives (for example concerning the degree of involvement in supporting parents and the associated share of inheritance for that labor).

Conflicts regarding extrafamilial agreements often emerge from the plurality of norms and stacked laws. For instance, if one rents a piece of land for more than 5 years following a customary form of land arrangement, he or she may be legally entitled to claim that land according to government rules (Act 64/1). In other words, the context of stacked laws can facilitate appropriation claims against fluid and practical local norms. Conflicts that have reached the jurisdiction of a village headman can express the strategic use of a diverse set of norms (local and governmental) in actual situations.

In a village's everyday life, a myriad of conflicts take place and they are voiced in different places – inside a house, at the ten households' leader's house, at *yap-mi'*

77. Bierschenk *et al.*, 2000.

yap-pha's, and at village headman's house, and nowadays during a land committee meeting. Bigger cases can involve institutions outside the village like courts or the township chairman. Thus they enter more formal processes for conflict resolution. *Le pyan ngwe pyan* (mortgage) used to be the main cause of land disputes at village level (i.e. outside of confiscation cases by the state or cronies). The land registration process (LUC) perceived as an opportunity to renegotiate land use rights, has revived such claims. A land dispute which has been occurring in a village of Monywa township (Dry Zone) during this study illustrates well the situation found in many parts of Myanmar lowlands (see **Box 15**).

■ [3.2 Land reforms and the creation of a new arena: the case of Tet Tet Ku plowing contestation](#)

The political and land reform frameworks offered a space for new stakeholders in the land tenure arena. It provided the opportunity for farmers to collectively express their resentment over past abuses and draw attention to unresolved land issues. Indeed, on the ground, the farmers still find it difficult to write proper objections letters and to be informed on the objection procedure in order to get these objections validated. Besides, as reported by some farmers, 'the VTLMC did not want to accept objection letters, they just wanted to finish the registration process quickly and successfully'. This is where the new stakeholders intervened.

The enactment of the 2012 land law led to many political actions in the Delta involving local civil society organization and farmers, including protests for those who perceived the law would only benefit wealthier individuals. Many activists also gave speeches to farmers about the new 2012 Farmland Law. Several associations, such as the Myanmar Farmers Development Party (*Taung Thu Lei Tha Mar Toe Tet Yay Party* in Myanmar), Farmer Network Association (*Taung Thu Lei Tha Mar Kun Yet* in Myanmar), but also political parties such as local NLD branches in the Delta, for example, acted in order to stand with the 'oppressed farmers' and 'speak for the farmers' rights'.

Through these actions, many former landholders (now generally landless) became more aware of the new land law and, above all, received support to claim their 'right' to land and perceived the opportunity to renegotiate the land use rights they had lost. Yet, as underlined earlier, the 'rights' to objecting to others' land claims under the 2012 land law remain ill-defined. Among the contesting stakeholders were farmers who lost their land during the forced procurement period, whose lands were confiscated under the military government; those who had lands grabbed for government projects without any compensation; and finally also some who had lost their lands through land mortgages and *le pyan ngwe pyan*.

BOX 13: LAND DISPUTE CASE STUDY WITH *LE PYAN NGE PYAN* ARRANGEMENTS

The case originated a decade ago. Eleven farmers from the village tract transferred at different times⁷⁸ one plot of their lands to U WT living in D. K. B. village. The agreement was similar each time: *le pyan nge pyan*.

The loan amount is usually about half of the land's market price. In this case, the agreements were formalized with contracts signed by each party and the village tract headman. Loan amounts were rated according to the current land prices at transfer time. As land prices rose, the farmers wanted to get back their holding by repaying their debt to U WT. But the latter refused and claimed the lands as his own because he had been cultivating them for more than five years. Indeed, one of the agrarian reforms implemented during the military-socialist era was to 'give back' the land to the tiller (rather than the original clearer of the land).

One of the rules enacted by the government in 1964 (Act 1/64) was that the person who cultivates a piece of land for five years consecutively for the benefit of an absentee landholder becomes the one who has the 'authority to cultivate the land' (*lei ya-myei lok-paing-hkwin*)⁷⁹. U WT asked the SLRD agent to change the name of the *u' paing* holdings in question but the latter did not accede to this request and U WT only received a new farmer booklet granting the temporary use right. The farmers then went to the village headman to complain about the situation but the latter did not accede to solve the case and referred it to the village tract headman who had signed the agreement.

At the same time, rumours spread that contracts might have been falsified by U WT and signed by the village tract headman. The farmers could not rely on the village tract headman, accused of forgery, and who also refused to solve the case.

Furthermore, the contracts had not been renewed since the first agreements. After these first complaints, U WT gave back plots to six out of eleven farmers – holdings of the poorest quality – and kept the five more productive plots. The five remaining farmers expected the successive headmen to handle the case but no one did until the new Farmland Law of 2012 was enacted. Indeed, one former headman, three terms of office ago, is directly involved in the case; the headman after him has an uncle involved in the case; the headman succeeding him did not last long; and the current headman has just been nominated. Two years ago, the five farmers called upon the township chairman but he, again, referred the case to the village tract headman arguing that the village tract headman was the one who knew the case well. In 2013, the implementation of the Farmland Law has opened an opportunity for the farmers to claim their land by applying for a LUC. Because five holdings are double claimed, the case entered a new process for its resolution. The SLRD who delivers the LUC asked the current headman and the newly created VTFMC to solve the case. But on the ground, it is the village tract headman who has to solve the conflict first.

78. The agreements took place along two cropping seasons.

79. However, to our knowledge no mention is made in legal texts about the 5 years.

Plowing protests (*Hton Tone Tike Pwe*)

In May 2013, a movement of landless farmers emerged in Tet Tet Ku village (Mawlamyinegyun township). Those landless farmers, being led by the new stakeholders described above, forcibly plowed in the paddy fields which they had owned in the past, now held by a landlord living in the main town of the township. In early 2013, farmers heard about plowing protests happening in the other places in the Delta. As their interest rose, they went to seek the support of local farmers associations and political parties. The latter indeed encouraged them to conduct the plowing protests, and guaranteed their help in case problems occurred. With the help of these organizations, seven villagers, five men and two women, young and old, organized a plowing protest. They had lost their lands because of the forced paddy procurement policy and through mortgage (*le pyan ngwe pyan*). They first sent notice letters to the village tract headman and the township police station to inform them about the protest and to specify the date and location of the paddy fields they would plow. Informed about the issue, a descendant of the landlord came to the village to negotiate with the villagers. He proposed to give them half of the paddy lands that they had owned in the past, with a legal transfer in their name. All the villagers were urged to go to Mawlamyinegyun town to sign before a lawyer. The villagers did go to Mawlamyinegyun town after a few days, but came back to Tet Tet Ku as soon as they arrived in Mawlamyinegyun. They feared the landlord was trying to trick them. Hence, the farmers proceeded with their plan.

On the seventh of June 2013, a group of villagers under the banner of the Myanmar Social Development Network used power tillers to start to plow the landlord's fields – fields that were then being used by other tenant farmers under rent. A crowd of the villagers accompanied by many other villagers who were associated or familiar with the actors marched to the targeted paddy fields. The plowing contestation was video recorded and documented. The first day, the village tract headman came and warned the people to stop plowing and to return to their homes. He also said to the people in the paddy fields that if they continued, all would be sued by law and sentenced to jail. Nevertheless, the farmers continued to plow quite happily. The next day, farmers continued to plow, hoping the authorities would come and finally decide their case. But no one came. With growing concerns, they nevertheless started to sow, investing in 22 baskets of paddy seeds. As the days passed, the fields slowly turned green, and the farmers felt satisfied. But fifteen days after they had planted the paddy, a group of men commanded by the landlord came to the paddy fields destroyed all the crops. Police came after and all farmers involved in the case were summoned to go to the Mawlamyinegyun Police station with a court order. After the case hearing at the court, the seven farmers were sentenced to jail for two months. They were accused of destroying private property (Act No.427) and trespassing on private area (Act

No. 447). They were sent to the Myaung Mya Jail. At the prison, they met with many farmers who had been sentenced to jail in similar ways. They hoped they would get support from both political and civil societies, yet they were told by the supporting associations that “they could continue the plowing protest once released.” Nobody in Tet Tet Ku resumed the plowing protests in 2014. The lack of clear directives to decide on such land disputes, the weak bargaining power of local associations, and the general uncertainty in which villagers live the reform once again threatens to undermine the potential positive outcomes of the reform.

■ 3.3 The limited capacities of local institutions in conflict resolution

The problem remains that the formal institutions (SLRD, VTLMC) operating locally in the Delta and the Dry Zone are not in the position to effectively adjudicate land disputes. In other words, it is either not their mandate (SRLD), or their members (VTLMC) do not want to take the responsibility of resolving land conflicts under a new legal framework that doesn’t provide conflict resolution mechanisms for such cases. Hence, in most case, VTLMCs generally refer to the village tract headman or to the township LMC. Yet, the latter functions more like a mailbox, forwarding the dispute cases to the district level committee with its appraisal note.

The district committee has more scope in the decision making process, though, to our knowledge of the surveyed villages, no dispute cases have yet been resolved at the time of this report’s writing. According to our observations on the ground, no objecting household has got its land back. Despite the law’s lack of clarity for objection cases such as those linked to forced procurement, it seems more or less defined in the collective psyche that ‘the most recent owner is the legitimate one’ (see **Chapter VI.4**).

Local newly created bodies are not yet able to resolve the contradictions brought by a complex legal framework. The new land law and the land titling process also created space to contest some land transfers (especially *le pyan ngwe pyan*, but also sales and inheritance transfers) creating disputes within families and among siblings. And as a matter of fact, *le pyan ngwe pyan* generally stopped in 2013 (only 1.6% of the landowners surveyed mortgaged some lands, while 2.2% of the total population cultivates mortgaged lands), most farmers fearing that, by engaging in mortgage, their land would be claimed by their creditor taking the opportunity of land registration to obtain a LUC for the holdings they pawned.

In the absence of checks and balances, corrupt practices prevail in conflict resolution processes, at the expense of the weakest. When the dispute settlement is done by the village tract headman (even through the VTLMC), decisions are often done for the benefit of wealthier individuals – for instance the creditors in the *le*

pyan ngwe pyan arrangement. The qualitative survey has also provided ample number of cases where dispute arbitration decisions are done towards the 'highest bidder' (meaning the one who provides the largest bribe). This generates a lack of trust within the community towards the village headman and the VTLMC.

In addition, the social capital at village level has often been crippled in the past decades (see **Chapter VIII.3**). Most local community leaders are not neutral as they have been involved as village tract/village headmen or in one way or another in the local land committees that have existed through history. Religious authorities do not play an important role in resolving land disputes and in general informal institutions lack capacity to deal with land conflicts. This is particularly true in the Delta, which is characterized by more mobility, strong patron-client relationships, and weak horizontal links, even among households of the same 'class'. In addition, there are stronger competing claims between farmers, tenants, and the landless. It impacts on intra-village and intra-familial land disputes occurring under the land registration process. Finally, one key issue is the independence of conflict resolution mechanisms.

VII. Land tenure and livelihood security

This chapter draws on the findings from the quantitative study made on a sample of 1,129 households, analysed and explained in the light of qualitative information gathered during the two first phases of the research. The main objective of this section is to describe and analyse household livelihoods, and their links with production factors (land, capital, labor, livestock), and other key demographic and basic social characteristics. Details can be found in **Annex 1**.

1. Landownership in Dry Zone and Delta

Landlessness is initially defined here in a wide sense, as the fact of owning no lands. Such 'landless' include both households that access lands through temporary arrangements and those who are not engaged in any farming or farm labor activities. The percentage of landless households (households that do not own any agricultural land) is considerably higher in the Delta (59.5%) compared to the Dry Zone (41%). A specific discussion in section **VII.7** will shed light on the different types of landless.

Considering only landowners, the distribution of land (in terms of the statistical distribution of the size of respective 'landholdings') is quite similar in the two areas. If simplified into two classes (above and under five acres), the Dry Zone shows a relative concentration of large landholdings with 70% of owners having more than five acres versus only 62% in the Delta. However, the average landholding size (among farmland owners) is slightly smaller in Dry Zone (8.73 acres per household for a total of 3083 acres in the survey sample) than in Delta area (8.9 acres per household for a total of 1915 acres in the survey sample). However the largest landholding recorded in the Dry Zone is 65 acres, while in the Delta, the largest landholdings reaches 110 acres for the biggest (and this does not take into account the hundreds of acres owned by an absentee landowner of Mawlamyinegyun, whose land is partly cultivated in tenancy by Tet Tet Ku and Pay Chaung villagers). Finally, if taking into account the whole population (landowners and landless households), landholding sizes are on average much bigger in the Dry Zone with 5.2 acres per household versus in the Delta, with 3.6 acres per household.

Table 21: Distribution of owned acreages and number of landowners in Delta and Dry Zone

	Delta	Dry Zone
Total owned acreage	1915	3083
Total nb of landowners	215	353
% of landowners over total HH	40.5%	59%
Average landholding/HH (acres)	8.9	8.7

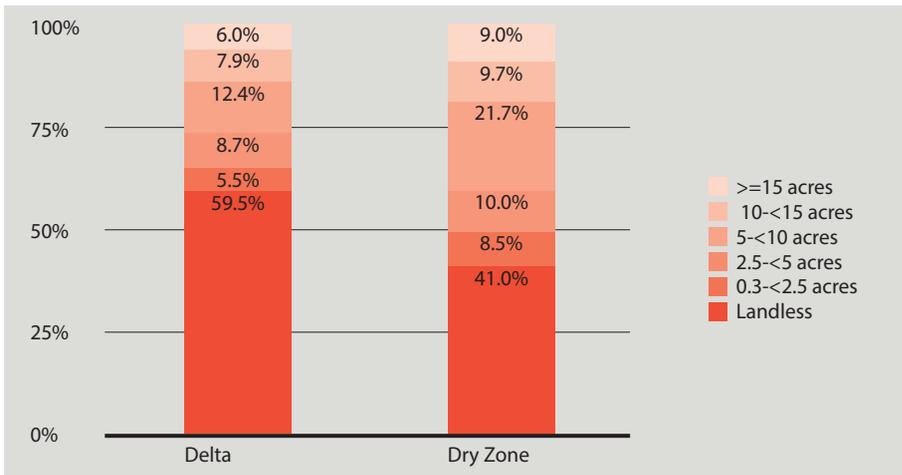


Figure 25: Distribution of landownership and landholding size among households (in % of households) in the two areas

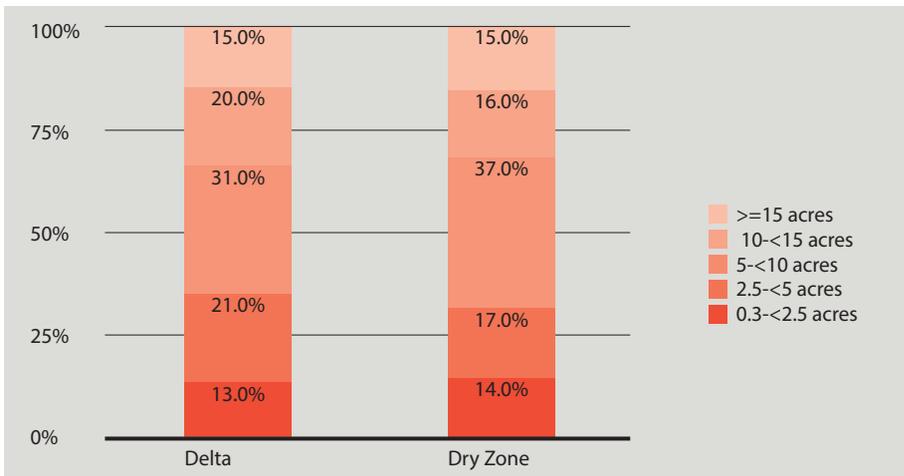


Figure 26: Distribution of farmland holding sizes among land owning households in Dry Zone and Delta

■ 1.1 Historical roots of landlessness

The important difference in landlessness rates between the Delta and the Dry Zone can be first explained by their different agrarian histories. The Dry Zone is the cradle of Burmese society, with long established villages (except from Hledar) and stronger social organization, which made the impact of colonial rule and further governmental policies less intense than in the Delta. The Delta, as we already saw, was mainly developed through British colonization and as the country's main rice bowl received greater 'interest' from post-independence national governments. Hence, it has been more significantly impacted by predatory policies such as the 'Compulsory Quota Delivery'. Besides, land concentration in the hands of money-lenders (whether alien or indigenous) under colonial rule happened to a lesser extent in the Dry Zone, for the reasons that many lands classified as 'private' (as opposed to 'crown', in the pre-colonial categorization system) were for generations cultivated within the same family, and hence cultivators already gave greater 'sentimental value' to their land (Siok Hwa 1965a: 120), representing generations of investment in, and knowledge of, the lands. This is contrary to the Delta where moving toward the south to find new lands remained the main strategy of cultivators – whether for fleeing debts, seeking more fertile lands, establishing a new household – until the closing of the 'rice frontier'. Hence these cultivators developing limited bonds with their agricultural holdings. These trajectories also explain the slightly smaller average surfaces held by cultivators in the Dry Zone where, in the absence of a land frontier, land fragmentation along generations (through inheritance) is more acute than in Delta (*ibid*: 116).

It is interesting to note the – somewhat logical – relationship between increasing landholdings sizes and the higher proportion of landless households, as larger tracts of land necessitate more farm labor and logically exclude a greater share of households from having access to land. Also, the fact that fertile lands are generally occupied earlier than others – here again a logical process – is a common feature shared by both the Dry Zone and the Delta. Yet, in the Dry Zone, the less fertile lands have been occupied most recently, by households which now have small holding sizes, due to the unavailability of lands. These lands were cleared last as they required much greater labor to be prepared for cultivation. The situation observed in Delta is different: less fertile lands are more frequent for large landholdings, due to the fact that land was still available in the southern frontier and that water salinity (resulting from lands at lower elevations) implies to cultivate larger surfaces in order to be economically viable (as only one crop per year is possible).

1.2 Major disparities among villages in each area

Differences can be observed among villages within each zone as well. This example highlights the complexity and intertwinement of the different factors determining land access, agro ecological conditions and the importance of power relations at the local level. The importance of differences between regions but also among villages in the same region shows that large scale surveys and uniform 'one size fits all' solutions on land tenure bear risks as they are not able to address effectively the local and context-specific problems.

Dry Zone: diversity of village contexts

In the Dry Zone, there is a strong variability regarding landlessness rates between villages. While Hledar and Zee Phyu Pin present a very low landlessness rate (only 16.8%), Khoe Tan and Gaw Gyi have a much higher one (60.6%). Here again, this variability is partly due to historical events. As seen earlier⁸⁰, Khoe Than farmers in the post-independence period benefited from the land nationalization process in retrieving large tracts of lands they were working as tenants in the midst of the civil war. As mentioned above in the history chapter, the nationalization process generally did not benefit all farmers and even less to the landless, as lands were mainly distributed to better-off farmers who had 'the capacity to invest and cultivate'. This explains the higher rate of large landowners (over 15 acres) in Khoe Than village⁸¹, and the more limited access to land for others. In addition, together with Gaw Gyi, these two villages revived the activity of weaving which – after collapsing in the 1960s due to Chinese competition and the unsecure context of the civil war – became again a primary source of income for landless households in the villages. Zee Phyu Pin is a more 'typical' Dry Zone village, where lands have been cultivated since the pre-colonization period and registered as *bobapaing* and *dama-u-gya* lands – that is private land transferred from generation to generation. As a consequence, land being fully occupied – the last virgin lands were turned into farmland about 40 years ago – and fragmented along generations, smallholdings occupy a larger share in the village's cultivated lands. Smaller surfaces hence need fewer farm laborers, while the few landless households in the village provide year-round labor for larger landholders. In contrast, Hledar is a quite recently settled village (founded in 1938 according to the villagers) created toward the end of the British rule. The primary livelihood of villagers at the time of the village settlement was woodcutting and manufacturing wood slippers. Only later did the villagers start cultivating land to the east of the village, and progressively transformed the hill slopes into arable lands by constructing stone walls across the waterways (*kyauk-loke*) in order to collect alluvial soil during rainy season. These new alluvial farmlands are quite small, yet very fertile, allowing high crop yields and cultivation

80. See chapter II.2.

81. In Khoe Tan, landowners holding more than 15 acres represent more than 25% of land-owning households.

of high value vegetable crops. Many households cultivate these lands with very intensive manner (much labor invested to cultivate small areas and productivity per acre is high). This explains the smaller average lands holding size (five acres) in this village. In addition, off-farm work opportunities being scarce in this remote village, there is no significant in-migration apart from those marrying an individual from Hledar.

Delta: access to lands, big men, and intra-village dynamics of exclusion and accumulation.

Table 22 sheds light on the fact that there are important differences in terms of power structures and resource distribution among villages, including within the same region and township. This leads to significant differences at different levels, including in terms of resource and land distribution.

For example in the Delta, on one hand, we may observe villages which still have quasi-feudal systems such as Tet Tet Ku with an absentee landlord and a class of landless tenants working for him. In the case of Pay Chaung, the strong disparities are mainly explained by the presence of a ‘big man’ who has accumulated lands and now owns more than 110 acres in a village where most households are very poor landless fishermen/laborers. In these two cases, landlessness rates and the standard deviation in landholding size are high. In contrast, villages such as Magu, Tha Byu Gone, and Aye Ywar, which have not been marked by such powerful actors, resources are more evenly distributed among households and landlessness rates lower.

Table 22: Land tenure disparities among Delta villages

Villages	Average landholding size/ HH (including landless=0)	Standard deviation in landholding size (including landless=0)	% Landless/total HH
Aye Ywar	3.48	6.6	55
Magu	3.70	5.1	54
Pay Chaung	4.47	16.4	80
Tha Byu Gone	2.93	5.0	55
Tet Tet Ku	3.90	9.3	66

2. Other key differentiation factors in access to farmlands

In this section, we will shed light on the main factors affecting landownership and landholding sizes, other than the historical background and social contexts of villages that have been presented above.

2.1 Age and the household life cycle

The household life cycle is recognized to be one of the major factors of change for households. In many agrarian societies, access to land is linked to the age, size, and needs of households. Landless households are represented in all age classes and their share in the class progressively decreases from young household heads to old ones for both Delta and Dry Zone (see **Figure 27**).

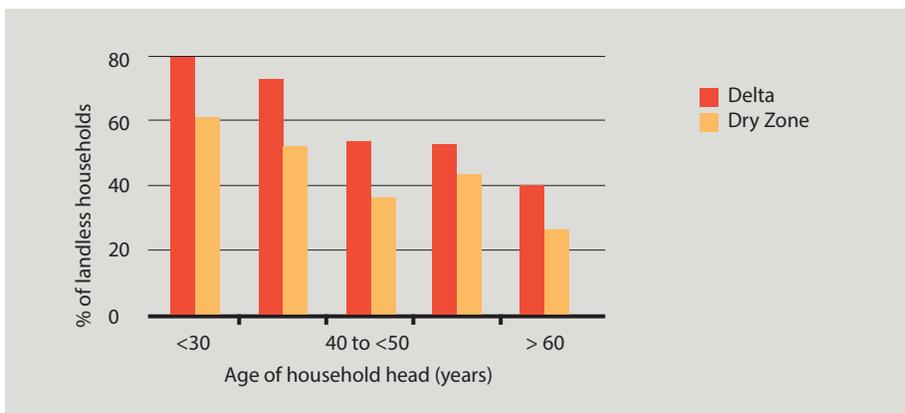


Figure 27: Landlessness rates among household head age categories in Delta and Dry Zone

Landlessness rates are of 80% in the Delta and 61.5% in the Dry Zone among households with household heads under age 30, and only 40% in the Delta and 27% in the Dry Zone among household heads above age 60. Landlessness rates sharply decrease for households with household heads around age 40. This can be explained mainly by inheritance of farmlands following death of parents or spouse's parents.

Indeed, in both the Delta and the Dry Zone, the average acreage of owned farmland gradually increases with household head age. The logic of land accumulation with increasing household head age exists in both areas. Yet it is stronger in the Dry Zone: there is indeed more variation in landholding size between age categories: Dry Zone landowners of under age 30 own less than four acres in average while those over 50 own almost 12 acres. In the Delta, the variation

in average per age category is less significant (six acres for the youngest; almost 10 acres for those over 40). Landholding fragmentation is affecting the younger households.

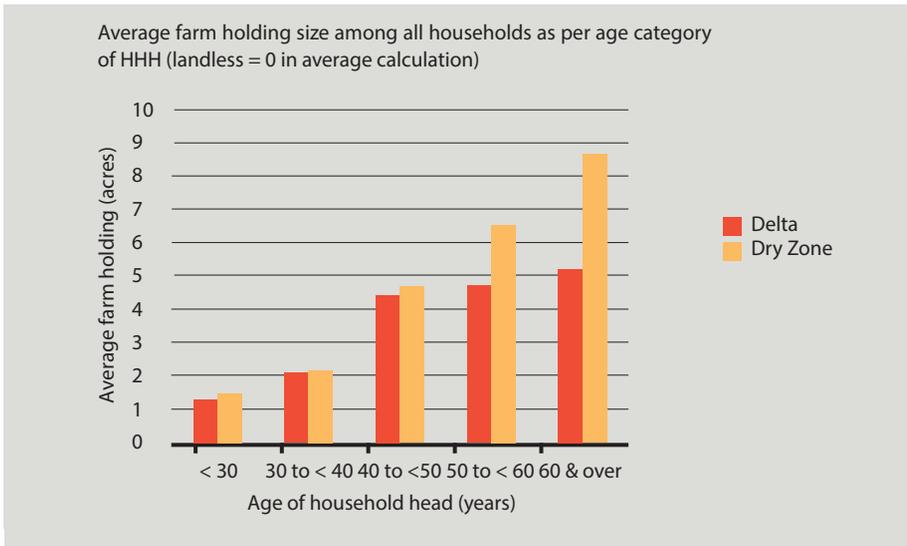
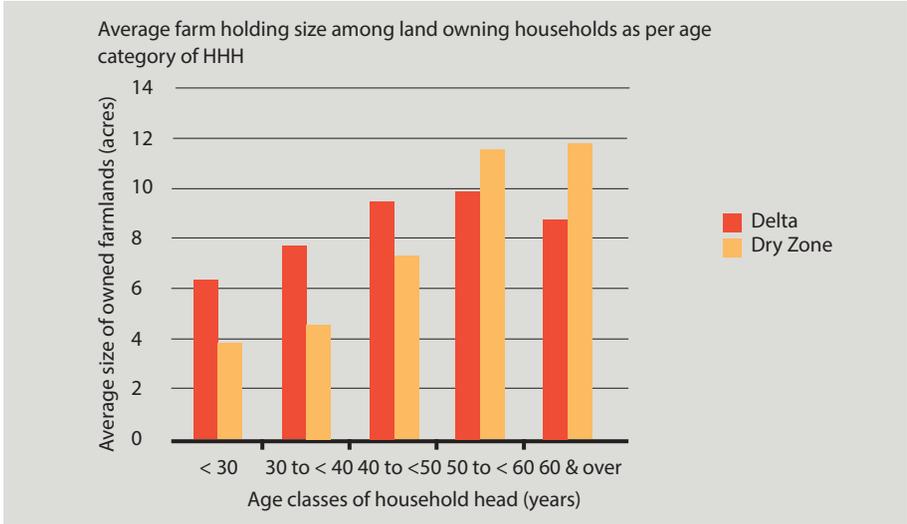


Figure 28: Two tables showing average landholding size among household head age categories in Delta and Dry Zone

However, **Figure 28** demonstrates that among farmland owners, there is a inflection point at age 50 where average landholding size stabilizes at around 10 acres in the Delta, and at 12 acres in the Dry Zone. In the Delta, it even decreases, suggesting that parts of lands are transferred to children before death more frequently there than in the Dry Zone. The second graphic in **Figure 28** represents both landless and landowners. Average land acreage increases steadily in the Dry Zone, suggesting that many landless households access lands at around age 40 to 50, while such access to land seems much more limited in Delta for those age classes, with a breaking point at age 40-50, where average farm holding size tends to stabilize at an average of 5.2 acres.

Access to land does not have the same meaning for households at different stages of their life cycle. Indeed, the qualitative survey reveals that for a household head aged around 40 or 50, landlessness is often rather a permanent form of land exclusion, while it can be only a temporary state for younger ones (see **Figure 27**). Households are able to acquire land (mainly by inheritance and purchase) as they get older. In addition, young households are also more prone to migrate, if necessary, or to link with other labor market opportunities.

It is important to keep in mind also that the context is changing. Land is getting relatively scarcer with time (under demographic pressure and the closing of agricultural frontier) and that this may increase the difficulty for current young households to access land, compared to the young ones of the past decades. This may increase the disparities between young and old households. Data also indicates that households tend to keep control on their lands as they grow older, which means that inheritance may occur relatively late (around 40-50) which is coherent with collected data. It also must be said that land scarcity may increase the age of inheritance.

■ 2.2 Household size and link with landholding size

A family's active labor force is a critical factor in determining a household's agricultural livelihoods. In the Dry Zone, there is a strongly significant statistical link between owned farm size and number of active members within the household, while this trend does not appear for the Delta. This may be explained by the fact that Dry Zone farms depend essentially on the family's own labor for most agricultural operations, while in the Delta, farms use laborers much more consistently. Unfortunately, this remains only a hypothesis as the quantitative data missed out about the household members' labor contribution on their own farms.

Table 23: Dry Zone labor force in households and owned farmland size

Owned farmland (acres)	Nb HH	%										
landless	42	17.1	107	43.7	48	19.6	35	14.3	13	5.3	245	100.0
0.3-2.5	3	5.9	31	60.8	10	19.6	5	9.8	2	3.9	51	100.0
2.5-5	9	15.0	21	35.0	16	26.7	8	13.3	6	10.0	60	100.0
5-10	8	6.2	40	30.8	40	30.8	21	16.2	21	16.2	130	100.0
10-15	2	3.4	15	25.9	14	24.1	11	19.0	16	27.6	58	100.0
>15	4	7.4	7	13.0	14	25.9	16	29.6	13	24.1	54	100.0
Total	68	11.4	221	37.0	142	23.7	96	16.1	71	11.9	598	100.0

Chi-Square=85.2 dof=20 p=0.001 (very significant) Cramer's V=0.189

2.3 Landlessness and recent migration

It appears that recent migration is driven by landlessness, particularly in the Delta. Indeed, landlessness rates are higher among households whose household head was born in another village tract than the one of current residence⁸². This tendency is exaggerated in the Delta where 32% of the landless are newcomers while only 16.7% of landowners are newcomers. 73.7% of household heads born outside the VT, against 54.6 % of household heads born within the VT are landless (see **Table 5** in **Annex 1**). This clearly confirms the relative attraction of the young work force (who lack access to land) to seek lands or/and labor opportunities in the Delta, which in turn increases the pressure on land.

Among the Dry Zone landowning households with heads born outside the VT, a significant proportion (67%) have settled more than 20 years ago. Such significant statistical links have not been found in the Delta. However among landowners of the two categories, there are no significant differences in terms of landholding sizes, neither in the Delta nor in the Dry Zone.

On the contrary, out migrations are not apparently linked to households' landholding sizes. The frequency of household members working outside VT more than 50% of the year is similar among landless (24.8%) and landowners (23.4%), and is not significantly affected by the size of landholding. However, qualitative interviews indicate two different strategies for smallholders (less than three acres) and landless on the one hand, and medium scale and large scale holders on the other. For the first category, finding work outside the VT is generally a strategy to cope with lack of available lands and the low diversity of off-farm work

⁸². The village tract is a grouping of adjacent villages. It constitutes the lowest unit in state administration.

opportunities which are not directly related to the cultivation of land; while for larger landholders, out-migration is not a function of exclusion but rather linked to higher opportunity costs in cities, in a context of land fragmentation⁸³. This strategy is facilitated by a higher level of education and by subsequent better jobs opportunities. It represents a combined strategy not to divide land and to give an opportunity for some of the children to quit agriculture.

■ 2.4 Access to land and social position⁸⁴

Unsurprisingly, data analysis also shows that there is a statistical link between landholding size and social position within the village. The two basic indicators available in the database ('knowing somebody in the VTFMC' and 'having a position within the village'⁸⁵) are strongly linked to each other and each of them is statistically linked with household head age and landholding area. For instance, 50% of households having at least one member occupying an administrative position in the village own more than 10 acres, which is true for only 33% of the whole population. The statistical significance is the greatest in the lowest and highest landholding size categories of landowners.

Having an administrative position is of greater impact than having a social unofficial activity (SOR – see previous footnote). On the contrary, households having at least one member being an NGO informant are poorly represented in households with landholdings above 10 acres, probably because NGOs avoid working with the richest and vice versa.

In conclusion, as age increases, households tend to have more access to land, to be more secure, and to access better social position within the village and village tracts. But the context is changing and these trends might not continue in the same fashion. We note the existence of young landless migrating from outside the village tract of their birth, indicating that land access and land accumulation along the life cycle in this area will probably be more difficult in the coming years given the increasing pressure on lands.

■ 2.5 Gender, access to land and land security

Women represent 51% (2,492 individuals) amongst the total 4,887 individuals

83. If in theory all siblings receive the same share of inheritance, practice proves that some are often favored above others notably for the reason that dividing land equally would lead to surfaces too small for viable farms.

84. Social position is defined here with a restricted scope. In the survey, social position was defined by having family members in key official administrative positions and a role in key social affairs.

85. Position/status within the village corresponds to 3 categories: 'administrative position' gathers village head (*ya-eim-hmu*) and VT administrators, village clerk (chief assistant), members of land committee, members of village administration committee; 'NGO informant/community mobilizer, etc.:' 'Social Organizations and Religious activities (SOR)' comprises leaders of young men and women groups, cooks for village events (*ok tha-gyi*), active religious donors (*phaya taka*).

of the surveyed sample, consistent with the national score of 51.7% of women recorded in the 2014 national census (2014 census results). Whatever the age of the household head and household size, the proportion of women within the household does not change significantly. In contrast, being headed by a woman is linked with household head age and household size. In the survey sample, women only represent 14% of household head. Frequency of women as household head decreases with the household's size: 75% of households of one member are headed by a woman, while only 35% of households of two members are women-headed. Frequency of women as household head increases with household head age: they are 30% for household heads aged more than 60 which is twice as frequent as the whole household head population average⁸⁶. In accordance with that, women household heads are older than men: their average age is 57.7 years while men are only 45 years in average. In summary, women household heads are old and lead a small household. As already mentioned, this type of household is very different from households headed by old men, which are larger and composed of well-educated people, having social position within village.

There are differences in the respective relationships between household head sex and landlessness in the Delta and the Dry Zone. Indeed, in the Delta, the gender of household heads has limited statistical link with landlessness or landownership. In contrast, the figures in the Dry Zone (**Table 25**) reveal a significant difference in the frequency of female household heads: the rate is almost two times higher in landless households. In addition, there is a significantly higher proportion of women household heads in the Dry Zone (18%) compared to the Delta (10%). Actually, women headed households in the Delta tend to remarry more often than in the Dry Zone. This can again be explained by the more dynamic nature of Delta communities – with more mobile men between villages – while in Dry Zone opportunities to remarry are fewer. These facts relate to the different socioeconomic organization between the two zones (pioneer and mobile in Delta, long-settled and more sedentary in Dry Zone).

86. This can be explained at least partly by the fact that women generally have a longer life-expectancy than men.

Table 24: Delta statistical relationship between household head sex and landownership

	Male HHH			Female HHH			Total		
	Nb HH	% Column	% Row	Nb HH	% Column	% Row	Nb HH	% Column	% Row
Land owner	188	39.4	87.4	27	50.9	12.6	215	40.6	100.0
Landless	289	60.6	91.7	26	49.1	8.3	315	59.4	100.0
Total	477	100.0	90.0	53	100.0	10.0	530	100.0	100.0

Chi-Square=2,20 dof=1 p=0,134 (Not significant) Cramer's V=0,064

Table 25: Dry Zone statistical relationship between household head sex and landownership

	Male HHH			Female HHH			Total		
	Nb HH	% Column	% Row	Nb HH	% Column	% Row	Nb HH	% Column	% Row
Land owners	304	62.0	86.1	49	45.4	13.9	353	59.0	100.0
Landless	186	38.0	75.9	59	54.6	24.1	245	41.0	100.0
Total	490	100.0	81.9	108	100.0	18.1	598	100.0	100.0

Chi-Square=9,47 dof=1 p=0,002 (Very significant) Cramer's V=0,126

As per evidence of the qualitative study (see **Chapter VI.1.5**), inheritance in the studied Myanmar lowlands favors men and women equally. Inheritance is generally more a matter of available lands, opportunities to get access to land through marriage (if the spouse can bring some land into the newly established household), and the willingness and capacity of the children to pursue or undertake agricultural work. For landowners with less than five acres, there is also no statistical difference between male and female household heads in term of access to land. However, the proportion of male household heads having large holdings (above 10 acres) is significantly higher (35%) than for women household heads (20%).

As a consequence of being underrepresented in households owning larger holdings, women household heads are proportionally more represented in medium size holdings category (5-10 acres). There is effectively a ceiling (maximum holding size) at around 10 acres, above which women-headed households rarely

go beyond. However, such figures have limited meaning without qualitative analysis of the situation. Indeed, women headed households are overrepresented in the upper age class (above 50 years), due partly to the fact that men die earlier than women, and partly because women who lost their husband (whether being a widow or divorced) often do not remarry.

In addition, the qualitative study shows that woman-headed households which are lacking the workforce of their husband – but also, as stated by some of them, ‘lacking the capacity to manage their land⁸⁷’ – generally transfer the land to their children either permanently (hence changing the landholding registration name) or temporarily through land arrangements (such as free loans, sharecropping, or rental) before transferring it for good. As such, large landholdings are often dismantled for children to access land when women become household heads as they get older and lose their husbands. In this case, they will still remain in the household production and consumption units.

To conclude, reflection on gender and land is particularly tricky, due to the fact that women form an integral part of the household by completing different functions – including making decisions on resource and income utilization – even when they are not the official household head. Due to the fact that land inheritance patterns are quite equal in terms of gender equity, there are little significant differences between men and women access to land. Yet, there remain some key differences, summarized as follows:

- A significant part of these women household heads are elderly and widowed, living either alone or with one or two other household members living with them.
- Women household heads seem unable to access more than 10 acres. This is often because they cannot mobilize an adequate labor force after the death of spouses.
- Women household heads are still vulnerable as they are not socially influential and have weaker relationships with authorities.
- Due to the facts above and labor constraints, women headed household may transfer their lands to their children earlier than male-headed households.

87. The qualitative study indicates that the ‘lack of capacity to manage the farm’ stated by women household heads is not only a labor issue. It is also strongly linked to their reduced ‘access’ to authorities.

There are no major land insecurity issues linked to gender. For example, the study has not observed any cases of land sales without wives' consent, nor cases of widows being dispossessed by their children. However, as described previously (see **chapter VI.1.5** and **V.2.3**) the study has observed one conflict between a young widow and her parents-in law over the registration of land use rights of farmland plots donated by the husband's parent at marriage. In addition, upon a couple's separation and divorce, the sharing of lands does not follow systematic rules to allocate lands to both spouses. Although each case may be quite different depending on the context, reasons of separation, and the social pressure imposed by relatives and villagers, women may often be at risk of losing lands in such cases.

3. Farming capital and household labor

This section will examine farm capital (other than land) such as livestock, equipment, and access to credit and how this capital links with land access and livelihoods.

3.1 Livestock

The majority of households in both Delta (63.5%) and Dry Zone (68.1%) areas practice animal husbandry. Livestock has the following main functions: to generate income, to use as a saving asset, to provide a safety net. Consumption is a more marginal use, and only for small animals. The number of ruminant livestock (cattle, sheep, and goats) and the frequency of ruminant livestock ownership is much higher in the Dry Zone compared to the Delta. One important explanation is that cyclone Nargis decimated the majority of animals and deeply changed use practices of draught animals such as buffaloes⁸⁸. Compared to Dry Zone, pigs are twice as common in the Delta and ducks are extremely common. These animals are indeed quite compatible with rice farming as they feed on crop residues such as rice bran and broken rice.

This may also be an impact of Nargis, as the disappearance of cattle gradually led households to raise other types of livestock to ensure savings and safety net functions. The greater importance of livestock in the Dry Zone must also be correlated to the higher agricultural risks linked to this region's farming conditions which necessitates reliance on livestock to increase resilience.

88. 51% of large ruminants, and in Mawlamyinegyun 70% of draught animals (FAO 2008).



Credit: Muvar Aye

Pig raising is most often a very small scale activity.



Credit: Muvar Aye

Duck raising in Delta.



Credit: Fayon

Goat "herding" in Dry Zone.



Credit: Masse

Duck "herding" in Delta paddy lands and marshes.



Credit: Fayon

Cattle and bullock carts are essential assets of Dry Zone farms.



Credit: Allaverdian

Plowing with buffalo became less common after the mass introduction of power tillers after cyclone Nargis.

Figure 29.1: Pictures of key livestock in Delta and Dry Zone



Figure 29.2: Pictures of livestock feed in Delta and Dry Zone

Looking at the Dry Zone data on livestock ownership and trend lines for each type of livestock, two main patterns are highlighted: 1) some animals (pigs, chicken, and to a lesser extent small ruminants) are used as complementary sources of income for landless and small landowners, while cattle is used for building the farm's capital and patrimony. Small livestock such as pigs, goats, sheep, and chickens are found among all different landholding categories, including landless. It thus appears to be an income generating activity that is compatible with landlessness. However, small livestock such as pigs and chicken are mostly owned by small landowners. There seems to be a breaking point at around five acres, at which point farmers can afford to invest in cattle and hence substitute away from small livestock.

Indeed, cattle ownership and the number of cattle owned (generally between one to five) is very strongly linked with landownership and landholding size. The very significant link between the age of the household head and cattle ownership confirms that this needs to be understood as linked to the household's 'life cycle'. It can also be explained by increased agricultural needs for animal draught power, in line with landholding size. For example, in the Dry Zone, a typical landowning farming household head usually assigns a young calf to each of his children: each child starts taking care of his/her assigned calf and both 'grow up' together. When the child takes independence from the household, he/she may leave with the assigned cattle, which provides a good start of his/her farming life. Interestingly, lack of land tenure security is often perceived as associated with lack of cattle, and cattle and their carts are seen as integral components of the farming system. Carts are critical tools in Dry Zone used for the transport of people, water, inputs, harvests, and animal fodder.

Table 26: Animal husbandry in Dry Zone and Delta

	Dry Zone		Delta	
	Total Nb	Average per HH	Total Nb	Average per HH
Ducks	24	0.0	9817	18.5
Chicken	2160	3.6	1783	3.4
Pigs	175	0.3	309	0.6
Goats	264	0.4	17	0.0
Sheep	677	1.1	0	0.0
Cattle	1060	1.8	237	0.4

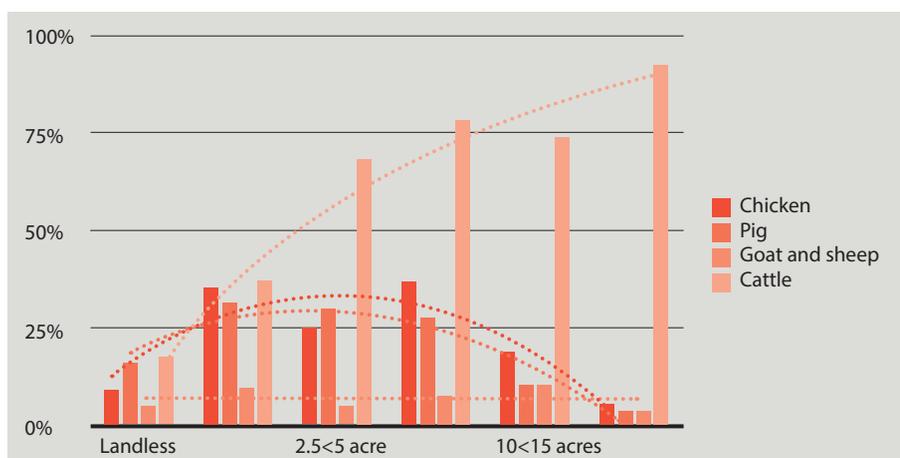


Figure 30: Frequency of livestock ownership among different landholding categories (in Dry Zone)

Similar trends on cattle exist in the Delta, but with cyclone Nargis, draught animals such as buffaloes have rapidly been replaced by power tillers. This process was accelerated through the massive aid provided by emergency and post-recovery operations. This has eroded the symbolic importance of cattle in Delta. Pigs and chicken are raised in similar frequency by all categories of cultivators, including the landless. They are raised at very small scale, feeding on food scraps, and are essentially a savings device and a way to diversify sources of protein. Duck breeding (mainly for eggs) however is mostly a commercial activity, based on intensive breeding practices. It is practiced twice more frequently by landowners than by landless, as it requires large quantities of paddy crop residues. In addition, the size of duck herds tends to increase with landholding size⁸⁹. However, unlike cattle, there is no ‘life cycle’ effect

89. 29.4% of small landowners (less than 3 acres) have 1 to 30 ducks. 14.3% of medium landowners (3 to 9 acres) have 30 to 110 ducks while large landowners (17.7%) tend to own more than 110 ducks.

and no significant links with the age of the household head. As seen in the **tables 1 and 2 in Annex 3**, better-off households are more frequently involved in animal husbandry activities compared to those of the lowest income category, suggesting the important role of livestock breeding in generating incomes and in mobilizing savings. In all income categories, the majority of households (in similar proportions – average is 67%) do not earn more than 10,000 MMK from livestock, confirming again that the main function of livestock is savings/constitution of capital. 69.5% of landless peasants earn less than 10,000 MMK out of livestock. This suggests that for the landless, livestock mainly plays a role as a saving asset or as a ‘safety net’ (in case of health problems, funerals, etc).

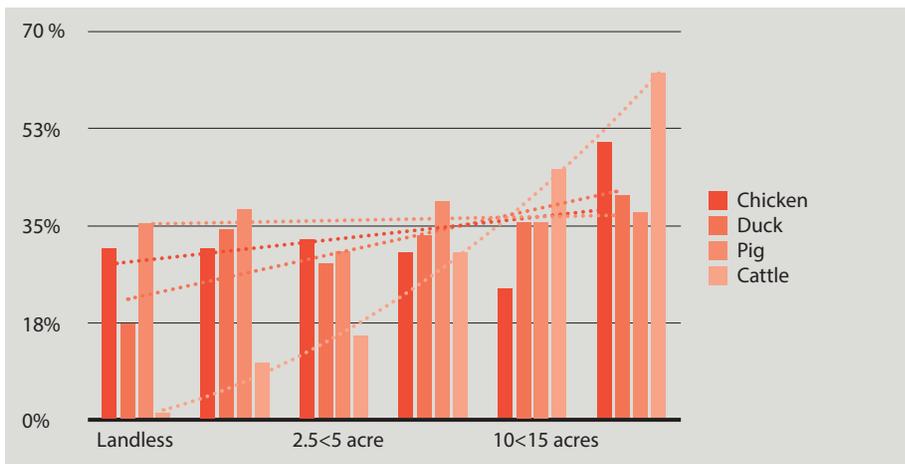


Figure 31: Frequency of livestock ownership among different landholding categories (in Delta)

Small landowners (less than three acres) are the most frequent category to earn 1 to 3.5 lakhs from livestock per year. Indeed, their very limited landholding size requires them to supplement agriculture activities with substantial livestock income generating activities. For the higher wealth categories (total annual income (TI) over 1.5 million), 18% earn more than 3.5 lakhs out of livestock (against 5% of the lower incomes categories with a total annual income under 1.5 million). This is mainly due to their higher investment capacities to purchase large quantities of animals and to engage in more intensive livestock-breeding systems. However, in contrast to Delta, Dry Zone where farms of over 15 acres are less inclined that other landholding size categories to generate income from livestock (see **Table 3** and **Table 4 in Annex 3**).

There is no significant link between women household heads and ownership of different types of livestock.



Paddy land preparation is mostly done through power tillers in Delta.



In Delta, reapers have been recently introduced for harvests. Combined harvesters are emerging in the Delta but still very rare in study areas.



Engine pump used for irrigation.



Paddy thresher.

Figure 32: Farm equipment

3.2 Farm equipment

As seen in **Table 27**, farm equipment in the Delta is intrinsically linked with paddy production, and is dominated by machines such as power tillers and threshers. Unsurprisingly, larger landowners own these machines more frequently. The vast majority of landowners with holdings bigger than 15 acres own their own machines. Between five to 10 acres, only one third own such machines, ownership becomes extremely rare among smaller landholding categories; instead, these farmers have to rent machines from the owners after the latter have tilled their own lands. Farming can become particular challenging in this situation, as delays in tilling due to unavailability of power tillers can affect crop yields.

Table 27: Frequency of ownership of farm equipment among landholding size categories in Delta

	Power tiller	Threshing machine	Water pump	total HH
0.3-<2.5 acres	3.4%	3.4%	0.0%	29
2.5-<5 acres	6.5%	4.3%	8.7%	46
5-<10 acres	31.8%	33.3%	19.7%	66
10-<15 acres	54.8%	45.2%	40.5%	42
>=15 acres	90.6%	59.4%	71.9%	32

Farm equipment ownership is more unequal in the Dry Zone: it does not necessarily reflect the investment capacity but the fact of owning irrigated lands or not. However, carts are an integral part of farms, particularly over farms of over 5 acres.

Table 28: Frequency of ownership of farm equipment among land holding size categories in Dry Zone

	Water pump	Cart	Fodder chopping machine	Power tiller	Total Nb HH
0.3-<2.5 acres	19.6%	27.5%	3.9%	2.0%	51
2.5-<5 acres	20.0%	58.3%	1.7%	0.0%	60
5-<10 acres	33.1%	83.1%	12.3%	5.4%	130
10-<15 acres	41.4%	91.4%	13.8%	15.5%	58
>=15 acres	57.4%	100.0%	57.4%	51.9%	54

3.3 Agricultural credit

As observed in the table below, agricultural credit is taken by the vast majority of landowners in Delta (from 82.8% of those with the smallest holdings up to 90.6% for the largest), as well by 11.4% of landless (who access small lands under temporary arrangements). In the Dry Zone, credit is much more unequally accessed, varying from 37.3% of the smallest holdings up to 93.1% among landowners with the largest holdings, while only 2.4% of landless attain credit for agriculture. In the Delta, this is essentially due to the higher credit needs generated by paddy production, the stronger presence of government-subsidized agricultural loans (MADB) and the larger loan size (100,000 MMK per acre of paddy lands) aiming at supporting paddy production. In the Dry Zone, MADB loans also exist but amounts

are much smaller for non-paddy crops, which can explain why farmers may be less interested in facing the red tape and challenges linked to the MADB loan application procedures.

Table 29: Frequency of households taking loans for agriculture among landholding categories in the Delta and the Dry Zone

	Delta				Dry Zone			
	Loans for agriculture		No loans for agriculture		Loans for agriculture		No loans for agriculture	
	Nb HH	% L	Nb HH	% L	Nb HH	% L	Nb HH	% L
Landless	36	11.4%	280	88.6%	6	2.4%	239	97.6%
0.3-<2.5 acres	24	82.8%	5	17.2%	19	37.3%	32	62.7%
2.5-<5 acres	39	84.8%	7	15.2%	37	61.7%	23	38.3%
5-<10 acres	59	89.4%	7	10.6%	108	83.1%	22	16.9%
10-<15 acres	38	90.5%	4	9.5%	54	93.1%	4	6.9%
>=15 acres	29	90.6%	3	9.4%	44	81.5%	10	18.5%
total	225	42.4%	306	57.6%	268	44.8%	330	55.2%

A specific sub-section is dedicated to credit in section **VIII** analysing the MADB loans, other formal and informal credit services, loan amounts, number of loans, main sources of credit, and main reasons for borrowing.

3.4 Labor

The majority of Delta and Dry Zone farming households (over 80%) must employ agricultural labor to work on their farms (**Table 30**). In the Delta, labor is essential for paddy field preparation, transplanting, and harvesting. There is a very significant statistical link between hired labor with those who cultivate more than three acres, while those who cultivate less than three acres work with their own family labor (**Table 31**). In the Dry Zone there is a very significant statistical link between hired labor for those who cultivate more than six acres of lands, while those who cultivate less than three acres than to work with their own family labor (**Table 32**).

Table 30: Recourse to hired farm labor among households with farming activities

	Delta		Dry Zone	
	Nb HH	% C	Nb HH	% C
Hire labor	244	82.7%	279	79.5%
No labor	51	17.3%	72	20.5%
total	295	100%	351	100%

Table 31: Recourse to farm labor and its association with cultivated land area in Delta

Cultivated area (acres)	Hire farm labor		Don't hire farm labor		Total	
	Nb HH	%R	Nb HH	%R	Nb HH	%R
under 3	36	57.1	27	42.9	63	100.0
3 < 6	70	94.6	4	5.4	74	100.0
6 < 11	74	100.0			74	100.0
11 and over	57	100.0			57	100.0
Total	237	88.4	31	11.6	268	100.0

Chi-Square=80.2 dof=3 p=0.001 (Very significant) Cramer's V=0.547

Table 32: Recourse to farm labor and relation with cultivated land area in Dry Zone

Cultivated area (acres)	Hire farm labor		Don't hire farm labor		Total	
	Nb HH	%R	Nb HH	%R	Nb HH	%R
under 3	47	67.1	23	32.9	70	100.0
3 < 6	69	69.7	30	30.3	99	100.0
6 < 11	84	84.0	16	16.0	100	100.0
11 and over	83	95.4	4	4.6	87	100.0
Total	283	79.5	73	20.5	356	100.0

Chi-Square=27.1 dof=3 p=0.001 (Very significant) Cramer's V=0.276

4. Farming systems and agricultural income

In both zones, there is a significant relation between owning more than 12 acres and having agriculture as the main source of income. This suggests that with smaller landholdings, households need complementary sources of income or that they invest less in agriculture since they have other sources of income (see **Chapter V.6.4** for an in-depth discussion on multi-activity). There is an obvious and very significant link between the income from agriculture and the area owned: most households farm the land they own and none of the farm categories are subsistence-oriented, despite the fact they also provide much food for self-consumption. In fact, in both areas, farms are clearly market-oriented, even for the smallest landholdings.

4.1 The Delta farming systems: high level of specialization in paddy

Delta's agriculture is highly specialized in paddy: 97.8% of cultivated lands are paddy lands and 96.2% of those who have access to agricultural lands (ownership or temporary contracts)⁹⁰ are engaged in paddy cultivation. However, 8.5% of Delta households practice small scale commercial gardening (betel, vegetable, flowers, etc.), without any statistically significant differences according to landownership and landholding size. It is mainly practiced as a secondary source of income. 100% of 'commercial gardeners' who own land have no income from farm wage labor. For the landless commercial growers, these are actually not genuine 'landless' since they cultivate intensively on very small surfaces on their own garden plots around their houses. These do not access lands through temporary land arrangements.

Table 33: Delta paddy crops: average area per household and frequency of crops

Delta	Double cropping areas *267 respondents: paddy cultivators in non-salt water areas		Single cropping areas *12 respondents: paddy cultivators in salt water areas (Pay Chaung village only)	
	Average Area / HH (acres)	% of paddy cultivators from this area	Average Area / HH (acres)	% of paddy cultivators from this area
Monsoon paddy	7.94/HH (total 1810 acres)	85.4%	25.08	100%
Summer paddy	5.87/HH (total 1526 acres)	97.4%	0	0%

90. 277 over 288 households having access to land : 205 over 215 landowners, 72 over 73 landless cultivators.



Figure 33: Paddy transplanting represents a peak period for farm labor needs

In the Delta, the quantitative survey (**Table 33**) indicates that summer paddy is practiced by a higher rate of paddy cultivators (97.4% of paddy cultivators of areas where summer cultivation is possible) than monsoon paddy. The difference in household count (32) matches with the number of landless that contract in lands exclusively for summer paddy. The average cultivated area per household is considerably smaller than in monsoon season. Even within landowners (putting aside the landless that contract lands exclusively for summer cropping), the same trend is found (9.2 acres in monsoon, against 6.82 acres in summer). Monsoon paddy has much lower requirements in terms of inputs. Currently, the common monsoon varieties (for instance, the varietal *bay gyar lay*) have much higher prices⁹¹ than the short cycle summer varieties, despite lower yields. Monsoon paddy has higher labor requirements (stick transplanting, hand-transplanting) and higher risks in terms of harvest loss due to climatic and flooding accidents. Summer paddy produces higher yields but generates greater input costs (fertilizers, herbicides). Detailed profit and

91. *Bay Gyar Lay* variety is very appreciated by Myanmar consumers. As a consequence, with the stable and growing internal market, farmers have benefited from the steady increase of its price in the last years (in 2016, up to 10,000 MMK/basket), while short cycle summer varieties are often more for export market such as China and have suffered more from market price fluctuations.

Table 34: Average paddy yields in Delta different agroecological zones

	Monsoon Paddy		Summer Paddy	
	Yield (baskets)/ acre	Respondants	Yield (baskets)/ acre	Respondants
Saltwater area	66.5	12		
Brackish area	43.6	170	64.4	199
Freshwater area	45.3	58	96	61

Table 35: Basic data on paddy yields and prices for main varieties in the Delta

Variety	Main season	Price(mmk) /bsk in 2014-15			Price (mmk)/bsk in 2015-16		
		Dec-14	May-15	Jul-15	Dec-15	May-16	Jul-16
Bar Gyar Lay	Monsoon	5,500	6,790	7,600	6,500		8,800
Khun Ni	Monsoon	5,200	5,825	7,300	6,200		8,500
Nan Karr	Monsoon	3,800	4,200	4,150	3,800		4,100
Htee Htut Yin	Summer		3,880	4,080		4,000	4,600

Variety	Main season	Average price	Average yield (baskets) /acre	Average Productivity/acre in MMK
Bar Gyar Lay	Monsoon	7,038	55	387,090
Khun Ni	Monsoon	6,605	70	462,350
Nan Karr	Monsoon	4,010	70	280,700
Htee Htut Yin	Summer	4,140	100	414,000

Source: Gret Bogale

See **Annex 4**: Farm gate paddy prices at Bogale-Mawlamyinegyun area – for 4 different varieties (2012-2014) **Annex 5**: Profit and loss statement of paddy production (monsoon and summer) in Delta

loss analysis in 2014 on paddy crops led to the conclusion that monsoon paddy is more profitable than summer paddy cultivators from this area⁹². Moreover, all in all, landowners will prefer to cultivate a greater part of their lands during the monsoon and a smaller surface in summer, the latter tactic enabling temporary access to the uncultivated lands for their landless relatives.

Table 36: Key information on average cultivated acreage and yields in Delta brackish and fresh water areas where double cropping is possible

Double crop areas	Monsoon paddy			
	Average cultivated acreage/HH (among those who access lands)	Average yield (baskets/acre)	Average yield (ton/acre)	Nb of respondents
Landless	6.50	43.04	0.90	37
0.3 < 2.5	1.88	54.02	1.13	26
2.5 < 5	3.68	45.07	0.94	41
5 < 10 acres	6.35	46.28	0.97	58
10 < 15 acres	10.89	42.21	0.88	37
> = 15 acres	20.66	42.83	0.89	29
Double crop areas	Summer paddy			
	Average cultivated acreage/HH (among those who access lands)	Average yield (baskets/acre)	Average yield (ton/acre)	Nb of respondents
Landless	3.23	57.56	1.20	69
0.3 < 2.5	1.89	72.31	1.51	28
2.5 < 5	3.48	70.26	1.47	41
5 < 10 acres	5.60	71.65	1.49	59
10 < 15 acres	10.17	70.18	1.46	36
> = 15 acres	14.88	80.87	1.69	28

92. Strong links with the chosen paddy variety since there are significant prices differences between varieties

Land productivity in the Delta

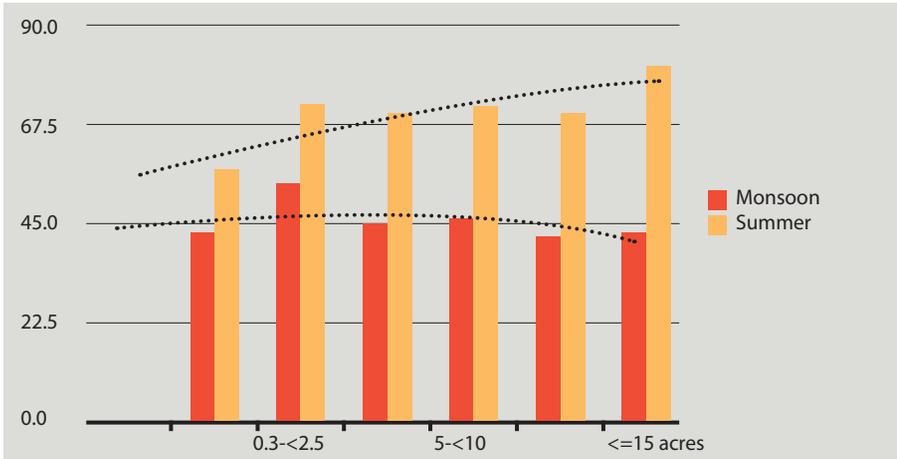


Figure 34: Average yield per acre (baskets) according to farmland holding classes in Delta areas where double cropping is possible

In the Delta, land productivity is quite simple to assess as farming systems are specialized in paddy. It is thus essentially assessed here through the yields per acre.

The main factor affecting land productivity in the Delta is linked to agro-ecological conditions and water salinity. As it can be noted in **Table 34**, monsoon paddy yields are, surprisingly, highest in salt water areas where farmers can only produce 1 cycle per year. This can be explained by this land’s better soil fertility (due to long fallow period where buffaloes graze on lands). It may also be assumed that more care is provided to crops as it is the only paddy production season and labor is available (as there are high landless rates in these areas).

However, in summer, such land produces the opposite outcome. While summer paddy is impossible to cultivate in saltwater areas, yields in brackish areas are considerably lower than in freshwater areas (64.4 baskets/acre against 96 baskets/acre). This can be explained for the most part by the low quality of the irrigation water and the slight salinity, both of which affect paddy yields.

As observed in **Figure 34** and **Table 36**, there are no major differences in productivity and yields in the Delta according to farmland holding size. However, we can observe two different trends for monsoon paddy and summer paddy. For monsoon, yields are quite constant for different landholding classes with higher yields among smaller landholdings, while for summer paddy, there is a trend with highest yields among the largest landholdings (of over 15 acres) and the lowest yields for the landless who access lands. This landless sub-category concerns those who access lands under temporary arrangements.

This is logical as summer paddy requires important input costs that larger farmers can afford more easily. In addition to the investment constraints, the lower yields can be explained by the fact the lands which are ‘contracted’ out to others are those of least interest (in terms of fertility, proximity to the village, etc.) for the landowners. Finally, almost half of the landless who access land through temporary arrangements cultivate only in the summer season and not year round. As such, these landless invest less in fertilization as they will not benefit from the fertilizers’ residue effects over the monsoon season, thus impacting yields.

■ 4.2 Dry Zone: a diversified and resilient agriculture

The quantitative survey results indicate a strong link between the increase in sizes of land owned, agricultural incomes, and level of crop diversity. This is to be linked with the households’ main source of income being agriculture. This is an interesting finding as it contradicts the trend in the global context towards specialization and larger landholdings. This highlights the specificity of the Dry Zone in terms of farmers’ resilience and risk management strategies. 43% of Dry Zone farmers cultivate at least four crops in ya lands, in addition to potential paddy crops. Farmers adopt resilience strategies, with plots combining different crops, at different planting periods, and using crop associations and relay crops⁹³.

Irrigation forms part of farmers’ strategy to increase resilience and to diversify types of crops and cropping patterns and timing. 52% of surveyed landowning households have access to irrigation. 8.7% cultivate less than one acre⁹⁴ of irrigated lands, 14% cultivate between one to four acres of irrigated land while 8.2 % farmers cultivate more than four acres of irrigated lands. Households are not specialized in irrigation. Indeed, among households with irrigation, households tend to have both irrigated lands and rainfed lands, and this in similar proportions.

Table 37: Acreage and number of cultivating households per season – Dry Zone

Ya land cultivation	Total cultivated acreage	Nb of cultivating HH	Average acreage/ HH	Main crops grown
Summer	253.1	69	3.7	Irrigated sesame. marginal for pigeon pea, sorghum, sunflower
Winter	981.2	197	5.0	Onion, chickpea. More marginally: sesame
Monsoon	1450.6	298	4.9	Lima beans, pigeon pea, sorghum, sunflower, sesame, tomato

93. Relay cropping is the fact of cultivated different crops on the same plot of lands. The second crop is planted (eg sorghum) even before the first crop (eg sesame) is harvested.

94. The mentioned acreage is a sum of acres cultivated for each season in the whole year.

In the Dry Zone, the crops that generate the most income appear to be onion, followed by tomato, and far below come pulses such as chickpea and pigeon pea (see **Table 38**). More marginal crops such as wheat and cotton seem also to generate substantial income on good soils. Oil crops such as sesame and sunflower seem, on the contrary, to be much less profitable, due to current low market prices.

Table 38: Average income⁹⁵ per acre (for sale) for main Dry Zone crops

Crops	Average income (from sale) per acre (MMK)
Chickpea	116,140
Pigeon pea	129,314
Sesame	64,704
Sorghum	34,165
Sunflower	23,559
Lima bean	88,808
Onion	1,315,198
Tomato	824,197
Wheat	132,575
Green gram	106,596
Cotton	162,094

High value crops such as onion are much more frequently produced by larger and diversified farmers (owning over nine acres). Tomato cropping is more specific to smaller farmers (owning less than six acres). Those who cultivate one to three crops only are more frequently very small paddy cultivators (less than three acres). Other minor crops include wheat, groundnut, green gram, maize, chilli, etc. Perennial crops such as sugar palm trees (24.7% of households), cotton (around 12% of households, for an average 1.35 acre), and *thanaka* trees⁹⁶ can also be found. Other fast-growing tree species are grown as natural fences around fields and house compounds, and used for fuel wood.

95. It is to be noted that this is just an indication for 2014. Some crops such as onions and vegetables, and export pulses are particularly prone to high price variations with strong impacts on household incomes.

96. However the actual surfaces cultivated with perennial crops, especially trees such as *thanaka*, are most probably underreported as most farmers are cultivating on lands designated for seasonal crops, a change that theoretically should be approved at the Union Level. In practice, most farmers don't go through this time and money consuming process (see **Chapter VII.3.1**), hence growing perennial crops 'illegally'.

Land productivity in the Dry Zone

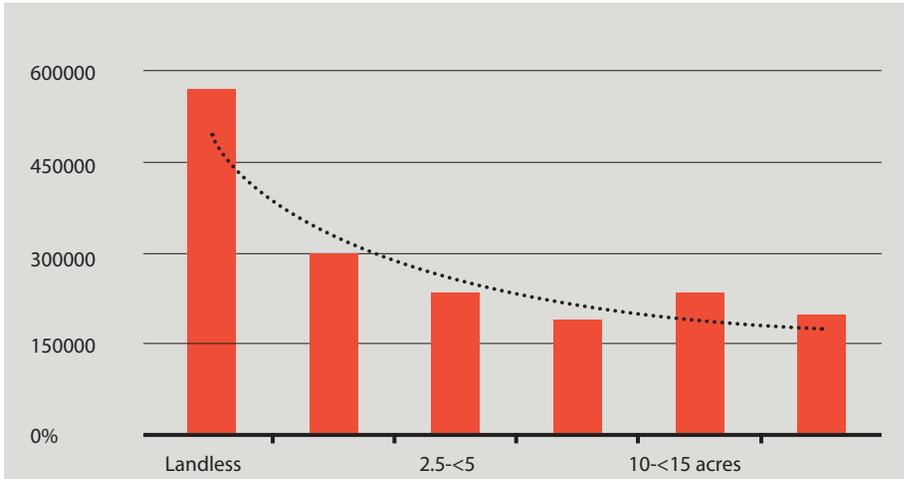


Figure 35: Dry Zone land productivity (MMK/acre) according to farmland holding classes

The main crops grown in the Dry Zone are cash crops (pigeon pea, chickpea, sesame, sunflower, onion, etc). As the crop diversity in Dry Zone farms is very high, and because self-consumption represents only a limited share of the total yield, land productivity will be calculated here over the value of the sold crops⁹⁷.

Table 39: Dry Zone key information on average cultivated acreage and land productivity

	Average cultivated acreage/HH (acres)	Average income(MMK)/acre	Nb respondents
Landless	1.32	569,773	16
0.3-<2.5	1.87	298,511	51
2.5-<5	3.37	233,158	60
5-<10 acres	6.35	190,590	130
10-<15 acres	10.65	234,330	58
>=15 acres	21.89	197,641	54

97. For the Dry Zone, land productivity has thus been calculated by dividing total agricultural profit by the number of cultivated acres. The profit has been calculated from the income from sales and by deducting all production costs (labor, inputs, machinery rent). For the quantitative survey, some questions had to be simplified. The depreciation of farming equipment and the costs of agricultural loans (interest rates...) has not been integrated in the costs. Furthermore, it unfortunately does not take into account the value of what has been consumed by the household, but this remains marginal for non-paddy crops.

As observed in **Table 39** and **Figure 35**, land productivity in Dry Zone is highest among those who cultivate less than two acres. This corresponds to the landless class which cultivates 1.32 acres in average among those who access land through temporary arrangements – this does not include those landless who do not cultivate and the 0.3-2.5 acres landholding class which cultivate 1.87 acres on average). In such cases, cultivators work their lands more intensively when they can access irrigation. In addition, the particularly high land productivity among landless is here explained by the fact that a significant proportion cultivate high value-added crops such as onion. Land productivity in the Dry Zone varies greatly between villages according to two main factors: access to irrigation and fertility of soils.

4.3 Comparing land productivity in Delta and Dry Zone

It is a bit tricky to compare land productivity between the two regions because of significant inter-regional and intra-regional (among villages within the region) variations. In addition, as mentioned above, for the Dry Zone, the majority of crops are cash crops, so land productivity has thus been calculated by dividing total agricultural profit per acre. In the Delta, in order to take into account the significant proportion of agricultural production which is not sold but dedicated to self consumption, land productivity is calculated by assessing average paddy yields per acre. In the Delta, the productivity of paddy lands is overall higher than in Dry Zone, as can be observed in **Table 40**. It is mainly explained by better water access conditions. Income from paddy cultivation is also higher in Delta due to higher prices of Delta varieties.

Table 40: Average paddy yields in Delta and Dry Zone

Paddy	Delta		Dry Zone	
	Yield (baskets)/ acre	Respondents	Yield (baskets)/ acre	Respondents
Monsoon	47.1	240	45.2	107
Summer/ pre-monsoon	71.6	261	55.3	77

In terms of comparison between the two zones, it is interesting to note that in the Delta, lands with very low productivity rates (under one lakh/acre) account only for 1.5% of households (four out of 259 Delta farming households) while in the Dry Zone, such lands account for almost 36% of households (122 out of 340 Dry Zone farming households). This trend may be even stronger since the land productivity calculation here does not take into account the part of production which is for family self-consumption (higher for the Delta). Yet, such figures should not be misinterpreted – economic conditions are not unequivocally better in the Delta.

Table 41: Percentage of households with members engaged in agricultural labor per landholdings categories and per area

Landholding	Delta HH engaged in farm labor		Dry Zone HH engaged in farm labor	
	Nb HH	% of HH	Nb HH	% of HH
Landless	209	66.1%	122	49.8%
<3 acres	17	54.8%	30	50.8%
3-6 acres	7	11.1%	39	41.1%
6-9 acres	4	9.5%	26	34.2%
9-12 acres	1	2.9%	9	22.0%
12-15 acres	1	8.3%	3	10.7%
> 15 acres		0.0%	4	7.4%
Total	239	45%	233	39%

Chi-Square=42.3 dof=5 p=0.001 (very significant) Cramer's V=0.282

This is because paddy cultivation necessitates greater investments than do most seasonal crops grown on *ya* lands: farmers in the Delta generally manage greater amounts of money than in Dry Zone, a situation leading also to more financial risks, especially in relation to loan repayment (see **Chapter IX.2.1**).

The study has not been able to demonstrate any significant correlation between family labor (meaning the number of household members providing labor on their own farm) and land productivity. This is not necessarily a finding and may be attributed to the survey design issues. In addition, the quality of survey responses concerning agricultural labor is not sufficient for the proper analysis of labor productivity.

5. Income diversification

5.1 On-farm wage labor

41.8% of Dry Zone and Delta households have at least one member earning some income as an agricultural laborer. This proportion is slightly lower in the Delta (45%) than in the Dry Zone (39%). Among these agricultural laborers, 87.4% are landless in the Delta against 52.4% in the Dry Zone. **Table 41** shows that in the Delta, working as a farm laborer is very specific to the landless and very small landowners (less than three acres) while in the Dry Zone this activity is more evenly practiced (see 5.3 below on off-farm activities). Even among households with larger landholdings (6 acres-15 acres), 26.2% of them have family members engaged as agricultural laborers, against 6.7% in the Delta.

This trend is also reflected in the level of specialization of households engaged in agricultural labor: the rate of active members engaged in agricultural labor in households is higher in the Delta than in the Dry Zone (see **Table 1** in **Annex 6**). In the Delta, 43.4% of landless households and 32.3% of very small landowners (under three acres) are specialized with more than 75% of their active members engaged in agricultural labor. In the Dry Zone, though, landless are less specialized in farm labor. Agricultural labor is an additional – but not primary – source of income for many types of households in the Dry Zone, while in the Delta, it is restricted to the lower income categories as part of the most important sources of income. This is due to the fact that a considerable part of Dry Zone ‘landless’ households are not engaged in farming but in off-farm activities that are more profitable than agricultural labor (see 5.3 below on off-farm activities).

Labor arrangements

In Delta, by far the most common form of labor arrangements are ‘task-specific’ arrangements: laborers are paid in cash for specific operations (plowing, transplanting, harvesting) over one area unit (*kwat* – 1.25 acres) and not per day. Larger farmers (especially in salt-water areas) also take on seasonal labor contracts, mostly with in-kind paddy payments. However, 58.6% of Delta households combine labor arrangements with daily contracts. In the Dry Zone, 97.4% of households that provide agricultural labor are engaged in daily contracts (daily work, for daily payment in cash). In the Delta, only 11.7% of laborers are organized in ‘labor groups’ for which group leaders make arrangements and negotiate directly with farmers that need labor, against 40.8% in the Dry Zone (see **Table 42**).

The above figures reflect the two different situations between the Delta and the Dry Zone in terms of labor organization between landowners and laborers as well as in terms of social organization. It underlines the greater horizontal ties

between landowners and land laborers in the Dry Zone, often from the same family, while in the Delta vertical ties dominate landowner-laborer relationships, dividing the social landscape of Delta villages into two quite distinct categories – “*lethama*”/“*baukthama*” – i.e. the latter being mainly landless households.

Table 42: Labor arrangements among households providing agricultural labor

HH with farm labor income	Daily basis	Task- basis or seasonal basis	Details
Delta	24.30%	90.0%	Monsoon and summer seasons for paddy
Dry Zone	97.40%	0.90%	Year round for <i>ya</i> land crops, winter season for onion

These vertical ties translate into individual relationships between a landowner and a few laborers, and hence laborers here, contrary to the Dry Zone, tend less often to be organized in groups. In the Dry Zone, farm opportunities are more spread out throughout the year than in the Delta – explained by associated crop diversification strategies – hence the greater need for farm laborers to be organized in groups. The seasonal calendar’s variability in the same village also gives more incentives to laborers to ask payments to be done on a daily basis while, in the meantime, they have more bargaining power given the lack of workforce available in villages (due to lower rates of landless households and greater income opportunities in other sectors). In contrast, in Delta, landowners prefer contracting work on a task-basis as laborers have lesser bargaining power. However, labor shortage are recurrent in Delta, driving farmers to propose better conditions for laborers (free meals, advance wage payment...).

Table 43: Average income per household and per area for farm-work

	Delta (239 HH)	Dry Zone (233 HH)
Average income per household that provide agricultural labor (MMK)	287,667	385,008
Average nb of persons engaged in farm labor in the HH	1.90	1.52
Average yearly income per farm laborer (MMK)	147,961	260,671

As a result, the average income per household from agricultural labor (see **Table 43**) is 34% higher in the Dry Zone than in the Delta, despite fewer household members engaged in farm labor (1.9 person/household in the Delta against 1.52 person/household in the Dry Zone). This seems to indicate that on average, Dry Zone laborers may work more time as farm laborers than in the Delta. In the Delta, paddy cultivation necessitates a greater labor force concentrated over short periods (land preparation, weeding, harvesting), while in the Dry Zone farm labor tasks are more diversified over the year and require less intensive labor at specific defined periods.

As seen in **Table 42**, 97.4% of farm labor in the Dry Zone is done as daily wage work. The daily salary can vary from 1,500 to 3,000 MMK/day from village to village, depending on specific peak period premiums, different tasks, and with the laborer's sex. Depending on the village, wages can be 30% lower for women than for men.

5.2 Fishing: an essential Delta activity

Fishing is pursued by more than 58% of landless and 30% of landowners. Interestingly, this is no significant link between practicing fishing and farm-size (**Table 44**). It is practiced in relatively similar frequency by different land owning categories, from 38% for the smallest category (0.3-3 acres) down to 22% for the largest (over 15 acres). These statistics confirm that fishing is a complementary activity for farming households, enabling them to mobilize their labor force during the slack season. However, there is a very significant link with the age of the household head. Indeed, among landowners, fishing is more frequent among those under age 40. (see **Table 2** in **Annex 6**)

Table 44: Relation between practicing fishing and landownership in Delta

Landholdings (acres)	Fishing			No fishing			Total		
	Nb HH	%C	%R	Nb HH	%C	%R	Nb HH	%C	%R
landless	183	73.8	57.9	133	47.0	42.1	316	59.5	100.0
0.3-2.5	11	4.4	37.9	18	6.4	62.1	29	5.5	100.0
2.5-5	11	4.4	23.9	35	12.4	76.1	46	8.7	100.0
5-10	23	9.3	34.8	43	15.2	65.2	66	12.4	100.0
10-15	13	5.2	31.0	29	10.2	69.0	42	7.9	100.0
>15	7	2.8	21.9	25	8.8	78.1	32	6.0	100.0
Total	248	100.0	46.7	283	100.0	53.3	531	100.0	100.0

Chi-Square=42.3 dof=5 p=0.001 (very significant) Cramer's V=0.282

BOX 14: ON-FARM LABOR: SUPPLY AND DEMAND IN DELTA

In the Delta, laws of supply and demand for farm labor⁹⁸ can vary greatly from one village to another. To illustrate the different factors impacting supply and demand, let us take the example of two different villages in terms of agro-ecological zoning and labor: Aye Ywar (brackish waters, two seasons of paddy, 55% landless households) and Pay Chaung (salt water, one season paddy only, 80% landless households). In Aye Ywar, almost all farm laborers find employment in the village during the two seasons of paddy, while in Pay Chaung, half of them have to go find work in other villages.

Different factors impacting supply and demand for farm labor can be identified. In Pay Chaung, harvesting can be performed for a longer period, between December and February. In Aye Ywar, monsoon paddy has to be harvested over a shorter period (November-December), so that in late December land can be used again as soon as possible to launch the summer paddy season. Landowners therefore calculate their labor needs, taking into account the fact that all their lands must be harvested within a very short period, more or less simultaneously. The calculation of labor needs in Aye Ywar is based on the ratio 'one laborer per three acres', while in Pay Chaung the ratio is closer to 'one laborer per six acres'. This calculation also varies with the seasons. While one seasonal worker and five daily workers are enough to work about 20 acres of monsoon paddy, summer paddy will mobilize one seasonal worker and 10 daily workers for the same surface.

In Pay Chaung, landowners can hire a small team of workers over several weeks or months and harvest one plot after the other. The presence of rice stores in most Pay Chaung landowners' houses also facilitates the spread of the harvesting period, while the fear of rains push Aye Ywar's farmers to harvest as soon as possible to avoid losing the paddy in the fields before it is sold. However in Aye Ywar, laborers are only employed for a short time – the average area per farmer being relatively small, daily laborers or those working on a *kwat pyat* basis may end their assignment within a week or two. They must therefore frequently change employers, in their village or others. By contrast, in Pay Chaung laborers are employed for relatively long periods. The two biggest Pay Chaung's landowners even employ 30 laborers permanently.

98. "On-farm labor: supply and demand in Delta" adapted from Laurie Bellevillaire's master thesis, 2014.



Credit: Allaverdian

A fisher with a push net.



Credit: Muiyar Aye

A child after school collects eel traps in paddy field.



Credit: Allaverdian

A fisher installing crab traps in the river.



Credit: Allaverdian

Fishing nets of varied sizes are commonly used.

Figure 36: The high diversity of technologies used for fishing in Delta, an adaptation to the varied species fished and scale of fishing

As can be observed in **Table 3 in Annex 6**, 79% of households of the category which generates the highest incomes from fishing (over 3.65 lacs) are landless households. As a matter of fact, farmers who lost their land have then turned to fishing or to other non-farm activities to ensure better living conditions to their offspring. In Pay Chaung, Daw TN who lives mainly from fishing (as do all her brothers and sisters) explains: *“At the time of our parents, lands were not worth much and there were quotas on harvests for farmers. Our parents preferred to be fishermen but today agriculture is much more profitable than fishing so if I could, I'd be a farmer”*. Land owning households practice fishing, but for 70% of them the income they earn is in general marginal (less than 70,000 MMK). It is thus mostly for their own consumption. 64.6% of those earning over 350,000 MMK from fishing own a boat.

5.3 Off-farm activities

Off-farm activities here exclude all activities of the primary sector⁹⁹: agriculture, farm wage labor, livestock breeding, and fishing activities. The survey has considered three types of off-farm income: 1) self-employed off-farm income, 2) employee/wage off-farm income, 3) other off-farm income such as pension, tool renting, compensations, etc.

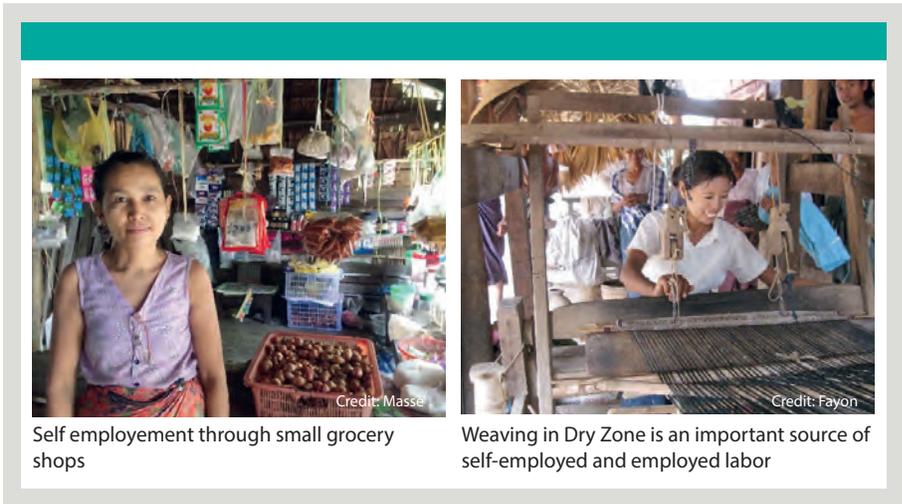


Figure 37: Off-farm activities

Table 45: Distribution of households in each zone per type of off-farm activity

	Delta		Dry Zone	
	Nb of HH	% of HH over total HH surveyed (531)	Nb of HH	% of HH over total HH surveyed (598)
All off-Farm activities	188	35.4%	298	49.8%
Self-employed off farm activities	126	23.7%	148	24.7%
Employed off-farm activities	46	8.7%	187	31.3%
Other type of income (pension, compensation, etc.)	29	5.5%	10	1.7%

99. The primary sector of the economy regroups all activities making direct use of natural resources.

Off-farm activities are widely practiced in both areas but more common in the Dry Zone: it concerns half of Dry Zone households, against only one third of Delta households (see **Table 45**). Furthermore, average yearly incomes from off-farm activities in the Dry Zone are 35% higher than in the Delta. (6.4 lakhs in the Delta against 9.9 lakhs in the Dry Zone).

In the Dry Zone, self-employment in off-farm activities essentially concerns weaving (**Table 4 in Annex 6**), while in the Delta, the most common self-employed off-farm activities are small businesses such as small grocery shops, money-lending, paddy trade, etc.

While self-employed activities have a similar frequency in both the Delta and the Dry Zone (around 24%), employed off-farm activities are three times more common in the Dry Zone (31.3% of all households) than in the Delta (8.7%). Among the main sectors offering employed/wage off-farm work are weaving (especially Khoe Than and Gaw Gyi villages) and construction work for villages closer to Monywa and Yinmabin towns (Gaw Gyi, Zee Phyu Pin). Indeed, almost one quarter (23.7%) of surveyed households in the Dry Zone are engaged in construction wage labor (**Table 5 in Annex 6**).

In addition, off-farm activities in the Delta are practiced by all income-categories in similar proportions, from 28% of households among the lowest income category, up to 39% for the higher income category (see **Table 6 in Annex 6**). These are engaged mainly for additional income, rather than as 'full time' jobs. This is in line with the fact that average income from off-farm activities in the Delta is 35% less than in Dry Zone (6.4 laks in Delta against 9.9 laks in Dry Zone) and that the rate of households declaring off-farm activities as first source of income is much higher in Dry Zone (123 households, 42% of households declaring having off farm work activities), compared to Delta (27 households, 14% of households declaring off-farm activities). Out of these 123 households individuals from the Dry Zone, the two thirds declare 'off-farm worker' as main source of income (not small business, nor trade) mostly pursue construction and weaving works in villages nearer to towns (where average off-farm income is from 7.5 to 8.5 lakhs MMK). The large majority of these households have no lands and have no agricultural nor animal husbandry activities. In the Dry Zone, off-farm activities are thus more frequently practiced in a specialized manner and as full time jobs. In the Dry Zone, there is a very significant link between the level of income from off-farm activities and the total household income (see **Table 8 in Annex 6**).

The survey analysis for the Dry Zone shows that every village has its own characteristics regarding off-farm activities. For example weaving dominates

off-farm activities in Khoe Than and Gaw Gyi, while households involved in construction work are more often found in Zee Phyu Pin and Gaw Gyi, given these villages' proximity with the towns of Yinmabin and Monywa.

6. Discussion: Land distribution, access and livelihood strategies

6.1 Categorizing farmers

Following the thorough methodological process described in **Annex 8** based on Factorial Analysis of Correspondences (FAC) of the selected quantitative data, land-owning households have been categorized as follows:

- **'capitalized farmers'** having direct land use rights on surfaces above 10 acres and characterized by their ownership of all necessary assets for agricultural production (cattle, power-tillers, water-pumps, carts). Their incomes come mainly and often totally from agriculture¹⁰⁰, exceeding two million Kyats per year.
- **'Agri-specialized small farmers'**, owning between five and 10 acres. Their incomes come mainly from farm activities, first through the cultivation of their own lands, but also from other primary sector activities (animal husbandry, daily farm-work...). They generally do not own agricultural assets and therefore rely on arrangements with capitalized family farmers for these.
- **'multi-active small farmers'**, composed of households which have land use rights on small surfaces (less than five acres) and whose incomes come mainly from other activities, whether from daily farm work, animal husbandry or small businesses such as village grocery shops. Those are therefore highly multi-active and their profit from agriculture arrives generally in second position.

Despite the fundamental differences in agricultural practices, environmental conditions (notably access to water), and livelihood opportunities between the Delta and the Dry Zone, it still seemed relevant to operate the same FAC but specifically for each zone, in order to verify if the groups did not hide different strategies related to local conditions. The distinction has been made as well with the idea of reflecting the earlier enunciated hypothesis that the Dry Zone, as a historical settlement, features greater socioeconomic stability and horizontal ties between and among stakeholders (landowners, agricultural workers, for example) than the Delta which, as a recently closed land front, presents most of the features of a 'frontier society' (Boutry 2013) characterized by vertical relationships and greater socioeconomic insecurity for most layers of the society; and explore the consequences of such different socioeconomic conditions on livelihood security.

100. Order of income among the following options: agriculture/cultivation, fishing, livestock, farm work, off-farm employed work, off-farm self employed work, remittances.

Doing so, the three groups still appear in both Delta and Dry Zone villages, but the livelihood strategies of each type of groups differ quite drastically from one area to the other. Interestingly, those whose strategies don't vary much from one zone to the other are the 'capitalized farmers', despite the very different agricultural practices found between the two zones.

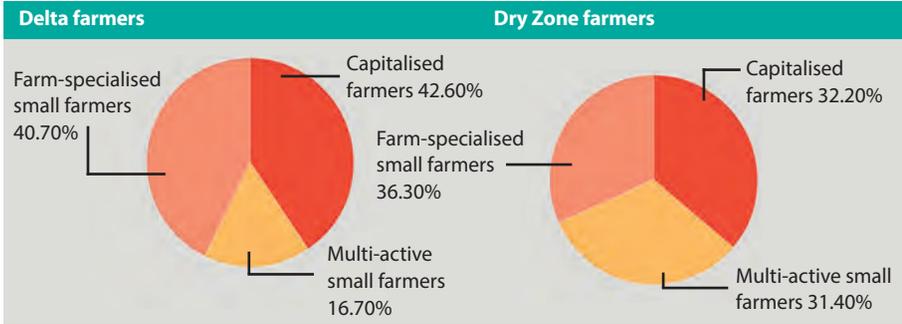


Figure 38: Distribution of main categories of farmers in Delta and Dry Zone

Delta farmers' typology

Table 46: Summary of key criteria of Delta farm typology

	Average landholding size (acres)	Average age of HH head	% of HH who own power tiller	Primary source of income (%of HH)			
				Cultivation	Live-stock	Farm labor/fishing	Off farm
Capitalized farmers	14.6	62	62	96.7%	0.0%	0.0%	3.3%
Agri-specialized small farmers	4.1	14.8	14.8	78.4%	0.0%	5.7%	15.9%
Multi-active small farmers	5.8	19.4	19.4	2.8%	44.4%	36.2%	16.6%

Table 47: Delta distribution of different farmers categories (%) according to land area owned (in acres)

Average land holding size (acres)	multi-active small farmers		capitalized farmers		Agri-specialized small farmers		Total	
	Nb HH	%C	Nb HH	%C	Nb HH	%C	Nb HH	%C
Under 2.5	15	41.7	1	1.1	13	14.9	29	13.5
2.5 to < 5	4	11.1	1	1.1	41	47.1	46	21.4
5 to < 10	8	22.2	25	27.2	33	37.9	66	30.7
10 to <15	7	19.4	35	38.0			42	19.5
15 and over	2	5.6	30	32.6			32	14.9
Total	36	100.0	92	100.0	87	100.0	215	100.0

Chi-Square=144.7 dof=8 p=0.001 (Val. théoriques < 5 = 1) Cramer's V=0.58

In the Delta, **capitalized farmers** present the following characteristics:

- More than 70% of households cultivate more than 10 acres in monsoon paddy and 58.5% cultivate more than 10 acres of dry-season paddy.
- 92% of this category's households earn more than two million Kyats a year from crops.
- They own agricultural assets (power tiller, thresher, motor pump, etc.).

The **Agri-specialized small farmers** are characterized by:

- 85% owning between 2.5 and 10 acres of arable lands.
- 85% don't own farming assets needed for paddy cultivation.
- However, 83% of households say they rely on cultivation as their main income.

The **multi-active small farmers** main features are that:

- Cultivation incomes come in the 2nd position (in its contribution to total household income). Doing many activities is thus this category's key criterion.
- Over 60% own less than five acres.
- 44.4% of them report getting their main income from animal husbandry (mostly duck and pig breeding and 30.6% of them as farm laborers). 16.6% may also have off-farm activities such as small grocery shop, etc. as their main income.

- The fact that most of them (86.1%) place incomes from crops in second position suggests that land access for agriculture, although not profitable enough to supply all their needs, represents a form of security for their livelihoods – this is confirmed by a clear distinction between landless households who have access to lands and other landless households (see **section 7**).

Note that in the Delta, none of these categories is correlated to a particular age group.

Dry Zone farmers’ typology

Table 48: Summary of key criteria of Dry Zone farm typology

	Average landholding size (acres)	Average age of HH head	% of HH who own power tiller	Primary source of income (%of HH)			
				Cultivation	Live-stock	Farm labor/fishing	Off farm
Capitalised farmers	55	15.9	91.2	89.5%	1.8%	0.0%	8.7%
Farm-specialised small farmers	51	6.3	82.8	87.5%	2.3%	1.6%	8.6%
Multi-active small farmers	45	4.2	48.6	11.7%	17.1%	27.0%	44.2%

Like in the Delta, Dry Zone **capitalized farmers** are above all characterized by the following:

- Owning more than 10 acres: 30.7% of households own between 10 and 15 acres and often more than 15 acres (45.6%).
- Owning key agricultural assets (cattle and carts¹⁰¹).
- The majority (56.8% in the Dry Zone) earn more than 2,000,000 Kyat per year from cultivation and 32.4% earn between 500,000 and 2,000,000 Kyats per year.

101. Only 37% of capitalized farmers report owning a power-tiller. As a matter of fact, the Dry Zone is less mechanized than the Delta, notably because of the nature of *ya* lands that are more suitable to work with cattle while the power-tiller is mostly used on irrigated paddy lands. 52.6% of them also report owning a motor pump, hence having access to irrigated cultivation, which makes a great difference in the Dry Zone in terms of the productivity and value of crops that can grow.

Table 49: Dry Zone distribution of different farmers' categories (%) according to land area owned (in acres)

Average land holding size (acres)	capitalised farmers		multi-active small farmers		farm-specialised small farmers		Total	
	Nb HH	%C	Nb HH	%C	Nb HH	%C	Nb HH	%C
Under 2.5	1	0.9	46	41.4	4	3.1	51	14.4
2.5 to < 5	4	3.5	25	22.5	31	24.2	60	17.0
5 to < 10	22	19.3	30	27.0	78	60.9	130	36.8
10 to < 15	35	30.7	9	8.1	14	10.9	58	16.4
15 and over	52	45.6	1	0.9	1	0.8	54	15.3
Total	114	100.0	111	100.0	128	100.0	353	100.0

Chi-Square=254.9 dof=8 p=0.001 (Very significant) Cramer's V=0.601

Agri-specialized small farmers are characterized by:

- Agriculture as a main source of income for the household.
- Owning less than 10 acres (60% between five and 10 acres and 27.3% below five acres).
- Their income from agriculture is between 500,000 and 2,000,000 Kyat per year for 47.4% of them and between 100,000 and 500,000 Kyats per year for 40.7% of them.

Multi-active small farmers in the Dry Zone have similar features as those in Delta:

- Regarding landholding categories they present similar distribution patterns as in the Delta. While most of them own less than five acres (66%), 35% own between five and 10 acres.
- The ranking of profit they get from their different activities is a little different from Delta multi-active small farmers, yet here again most of them don't get their main income from cultivation (88.7%). For 56% of them, cultivation comes in second position, and in 3rd position for 19% of the category's households. Given the more unpredictable nature of Dry Zone agriculture, it seems logical that it brings less security to these households involved in multiple activities than for the multi-active small farmers of the Delta.

- Diversification of activities includes on-farm wage labor as a main source of incomes (for 27% of this category's households), off-farm wage labor (18%), animal husbandry (principally goats) for 17% of them, weaving, and other activities (such as small businesses). The greater off-farm employment opportunities available in the Dry Zone villages studied explains the higher diversity of activities practiced by multi-active small farmers, compared to the Delta. 44.2% of Dry Zone multi-active small farmers have an off-farm activity (excluding farm work and livestock) as their main source of income.

Table 50: Distribution of the different farmer categories in age groups (age of the household head) in Dry Zone

Age of household head	capitalised farmers		multi-active small farmers		farm-specialised small farmers		Total	
	Nb HH	%C	Nb HH	%C	Nb HH	%C	Nb HH	%C
< 40	14	12.3	42	37.8	29	22.7	85	24.1
40 ≤ x < 50	27	23.7	35	31.5	35	27.3	97	27.5
50 ≤ x < 60	34	29.8	13	11.7	22	17.2	69	19.5
≥ 60	39	34.2	21	18.9	42	32.8	102	28.9
Total	114	100.0	111	100.0	128	100.0	353	100.0

Chi-Square=32.3 dof=6 p=0.001 (Very significant) Cramer's V=0.214

Finally, contrary to the Delta, there are statistical links between age of household head and these categories (see **Table 50**). There is a positive correlation between being a capitalized farmers household head and being aged more than 50, while multi-active small farmers households are more likely to be headed by a person aged less than 40 years old. Agri-specialized small farmers households are not linked to a particular age group.

6.2 Land access

Delta Agri-specialized small farmers inherited more in surfaces (1.2 acres/household) than multi-active small farmers (0.8 acres/household) before 2003, while after 2003 their average inherited land size are quite similar (0.8 against 0.9 acres/household for Agri-specialized small farmers and multi-active small farmers respectively). On the other hand, multi-active small farmers bought significantly more lands over the two periods (in average 2.5 acres/household) than Agri-specialized small farmers (in average 1 acre/household).



Figure 39: Bar chart representing land acquisition modalities (inheritance, purchase) for different types of farmers in Delta and Dry Zone

Agri-specialized small farmers’ lands have mainly been inherited (50% of lands owned have been inherited, against 30% for the other categories) – with a slow decrease after 2003. Delta multi-active small farmers and Agri-specialized small farmers inherited and bought land at a lesser rate than average for the whole landowners’ population. Capitalized farmers hence ‘monopolized’ access to resources both in terms of livelihood reproduction through inheritance and in terms of accumulation through the two periods.

Table 51: Average area (in acres) acquired through inheritance and purchase for each category of farmers before and after 2003

	Owned land	1988-2003		2003-2014		Total 1988-2014	
		Inherited 88-2008	Bought 88-2003	Inherited after 2003	Bought after 2003	TOT Inherited	TOT Bought
Delta	Total	Average /all	Average /all	Average /all	Average /all	Average /all	Average /all
Capitalized F (92)	14.6	3.0	3.4	1.5	2.2	4.5	5.6
Specialized SF (88)	4.1	1.2	0.9	0.8	0.3	2.0	1.2
Multi active SF (36)	5.8	0.8	1.5	0.9	1.0	1.7	2.5
						0.0	0.0
	Owned land	Inherited 88-2008	Bought 88-2003	Inherited after 2003	Bought after 2003	TOT Inherited	TOT Bought
Dry Zone	Total	Average /all	Average /all	Average /all	Average /all	Average /all	Average /all
Capitalized F (114)	15.9	4.7	2.5	1.1	2.1	5.7	4.6
Specialized SF (126)	6.3	1.3	0.6	0.5	0.5	1.7	1.1
Multi active SF (111)	4.2	1.3	0.6	0.6	0.4	1.9	1.0

In the Dry Zone, multi-active small farmers and Agri-specialized small farmers inherited and purchased lands in similar amounts although multi-active small farmers inherited in greater proportion (57% of households) than the two other categories. Given that Agri-specialized small farmers own overall larger surfaces than multi-active small farmers and that, on the other hand, multi-active small farmers inherited more recently (23% of households inherited after 2003 against 13-15% for the other categories), it suggests that the latter is a category of younger households yet to have sufficient financial capacity to buy land. This fact is confirmed by the positive correlation between multi-active small farmers households and the

Table 52: Proportion of households for each categories of farmers concerned by land inheritance and sales

	Inherited 88-2003	Bought 88-2003	Inherited after 2003	Bought after 2003	TOT Inherited	TOT Bought
Delta	% of HH	% of HH	% of HH	% of HH	% of HH	% of HH
Capitalized F (92)	29%	25%	17%	18%	47%	40%
Specialized SF (88)	23%	19%	22%	9%	43%	28%
Multi active SF (36)	19%	31%	17%	11%	33%	42%
	Inherited 88-2008	Bought 88-2003	Inherited after 2003	Bought after 2003	TOT Inherited	TOT Bought
Dry Zone	% of HH	% of HH	% of HH	% of HH	% of HH	% of HH
Capitalized F (114)	46%	25%	15%	32%	47%	48%
Specialized SF (126)	31%	16%	13%	14%	41%	30%
Multi active SF (111)	38%	16%	23%	17%	57%	31%

age of the households' heads, overrepresented in the 30 to 40 years-old category (while capitalized family farmers households' heads are correlated to the 50 to 60 years-old category). The greater frequency of access to an inherited plot for the multi-active small farmers category may indicate that access to land – even a small surface – in that case provides security to invest and diversify into other livelihoods.

The difference between capitalized farmers in the two zones and other categories regarding acreage of inherited and purchased lands is striking. Households belonging to the capitalized farmers category inherited and bought more lands (larger surfaces) than the average ones, in both zones. However, the different socioeconomic context in each zone impacts on the way these households accessed land. In the Delta, throughout both periods capitalized farmers bought larger surfaces than they inherited. It is likely these capitalized farmers profited from the market created in the period between 1988 and 2003 by the 'Compulsory Quota Policy'. However, as mentioned above, the quantitative survey does not provide reliable data regarding the true impact of this policy on land transfers. Buying hence constitutes the main access to land for this category

– a trend increasing after 2003. Capitalized farmers in the Dry Zone accessed lands primarily through inheritance before 2003 and continued to acquire land through purchase after 2003 in higher amounts and frequency than other categories, though purchased acreages (2.5 acres/household before 2003 vs 2.1 acres/household after 2003) are similar over the two periods. It seems a body of capitalized farmers constituted by older families transferred their land patrimony over generations by channeling land and associated resources (notably cattle) to maintain their dominance. This supports the positive correlation observed between increasing landholding surfaces, increasing age of the household head, and the number of associated cattle.

6.3 Farmers strategies and socioeconomic mobility

Multi-activity in the Delta: the resource of the poor?

As briefly underlined when describing the different categories of farmers in the two zones, none of the three categories in the Delta is correlated to one particular age group regarding the age of the household head. Hence, it is difficult to underline any patrimonial reproduction strategy, unlike the Dry Zone farmers. This tends to support the pioneer dimension of Delta society where the effect of life-cycle capitalization and inheritance is less prevalent than in the Dry Zone.

Table 53: Distribution of Delta farmers' categories per size of the household

House hold size	Capitalised family farmers		Multi-active farmers		Farm-specialised small farmers		Total	
	Nb HH	%C	Nb HH	%C	Nb HH	%C	Nb HH	%C
< 3 ind.	20	21.7	13	36.1	41	46.6	74	34.3
4 ind	22	23.9	9	25.0	19	21.6	50	23.1
> 5	50	54.3	14	38.9	28	31.8	92	42.6
Total	92	100.0	36	100.0	88	100.0	216	100.0

Chi-Square=13.8 dof=4 p=0.008 (Very significant) Cramer's V=0.179

In the Delta, the Agri-specialized small farmer and capitalized family farmer categories are, however, correlated to different sizes of the household. Agri-specialized small farmers are mainly composed (31.8%) of three-individual households, while being also overrepresented in the category of single-individual households (see **Table 53**). Capitalized family farmers are mainly represented in the category of households made of five to six individuals (40.2%). Multi-active small farmers are found without much distinction in all categories of household size.

Table 54: Correlation between Delta farmers' categories and total incomes (TI)

Total Income (MMK)	Capitalised family farmers		Multi-active farmers		Farm-specialised small farmers		Total	
	Nb HH	%C	Nb HH	%C	Nb HH	%C	Nb HH	%C
< 1.5 millions	2	2.2	15	41.7	35	39.8	52	24.1
1.5 to 3 millions	6	6.5	11	30.6	48	54.5	65	30.1
>3 millions	84	91.3	10	27.8	5	5.7	99	45.8
Total	92	100.0	36	100.0	88	100.0	216	100.0

Chi-Square=141.5 dof=4 p=0.001 (Very significant) Cramer's V=0.572

The sole relationship to the size of the household without any relationship with the age of the household head suggests that access to land and relative landholdings sizes determine in great part the range of profit for each category. Indeed, there is a linearly positive relationship between total incomes and the average holding sizes characterizing each category, with multi-active small farmers being significantly correlated to the lowest incomes category, Agri-specialized small farmers households being correlated to the two intermediate incomes categories, and finally capitalized family farmers households being correlated to the highest incomes category (see **Table 54**).

The share of profit from agriculture arrives in first position both for capitalized family farmers and Agri-specialized small farmers (respectively for 96.7% and 78.4% of households in each of these categories). The share of profit obtained from agricultural labor arrives in first position for almost a third of multi-active small farmers (30.6%), while only 4.5% of Agri-specialized small farmers put it in second position (none in first position), and none of the capitalized family farmers even consider it as a source of profit. Animal husbandry is positively correlated as being the first source of profit for multi-active small farmers (44% of household), the second source of profit for Agri-specialized small farmers and the third source for capitalized family farmers. The share of incomes obtained from livestock is thus negatively correlated to the size of landholdings. Indeed, while 70% of Delta households practice animal husbandry, multi-active small farmers are characterized by larger scale duck breeding activities, with 25% of them owning more than 110 ducks (compared to an average 10.6%). Pig breeding is another important livelihood activity for 75% of multi-active small farmers against an average 51.6% among the three categories.

All three categories practice fishing, however multi-active small farmers are the most involved in this activity (50% of households). Only an extremely low proportion of multi-active small farmers and Agri-specialized small farmers declare fishing to be their main source of profit. Actually, the only significant correlation appears with multi-active small farmers declaring fishing as their third source of profit (19.4% of households). Qualitative interviews show that small landholders cannot easily invest in large scale fishing equipment, and on the other hand, the fishing seasonal calendar conflicts with the agricultural one (especially during harvests, between December and until February in Pay Chung). A great majority of all categories (92.6% in average) do not consider off-farm work as a source of profit. Small business initiatives (small shops, groceries) are mainly a source of profit for Agri-specialized small farmers and capitalized family farmers, yet only for very small proportions of households in these categories (only around 9% in average).

This first overview of on-farm activities suggests that on-farm diversification of incomes is related to landholding sizes, i.e. the greater the size the lesser diversification is necessary. Off-farm activities (non-primary sector related) also show similar trends.

The analysis of income diversification in on-farm and off-farm activities helps to underline two important points. Firstly, as already stated, multi-activity tends to decrease with the increase in landholding sizes. Hence, multi-activity is mostly a strategy for small farms, especially regarding on-farm activities (agricultural labor, animal husbandry). In addition, off-farm activities (off-farm employed work, small business) are far from being an important source of profit for any of the categories. However, the fact that only Agri-specialized small farmers households declare (yet for only 7% of them) getting their main profit from small business points to the fact that accessing income diversification through non-farm activities is also a matter of resources, with multi-active small farmers being unable to invest in such activities.

These findings tend to show that in the Delta, access to land is the main factor distinguishing poorer from better-off farmers, and marks a difference with the Dry Zone where income diversification (whether on- or off-farm) is also a key factor in securing farmers' livelihoods. To conclude on Delta farmers' strategies in terms of livelihoods' security, 93.5% of capitalized farmers declare they have enough rice for the household's consumption all-year round, while only 25% of multi-active and Agri-specialized small farmers households can say the same.

Table 55: Correlation between Delta farmers categories and the fact of lacking rice (Food Insecure) or not

	Capitalized family farmers		Multi-active farmers		Agri-specialized small farmers		Total	
	Nb HH	%C	Nb HH	%C	Nb HH	%C	Nb HH	%C
Food Insecure	6	6.5	9	25.0	22	25.0	37	17.1
Food Secure	86	93.5	27	75.0	66	75.0	179	82.9
Total	92	100.0	36	100.0	88	100.0	216	100.0

Chi-Square=12.7 dof=2 p=0.002 (Very significant) Cramer's V=0.243

Table 56: Food consumption score* for each farmers category in Delta

	Capitalized family farmers		Multi-active farmers		Agri-specialized small farmers		Total	
	Nb HH	%C	Nb HH	%C	Nb HH	%C	Nb HH	%C
Less than 42	36	39.1	10	27.8	46	52.3	92	42.6
More than 42	56	60.9	26	72.2	42	47.7	124	57.4
Total	92	100.0	36	100.0	88	100.0	216	100.0

Chi-Square=7.05 dof=2 p=0.029 (Significant) Cramer's V=0.181

* Calculated on the consumption's frequency of different food items over the week preceding the survey.

Despite the fact that the percentage of households being food insecure is the same in both multi-active and Agri-specialized categories, statistical analysis correlates Agri-specialized small farmers to the fact of being food insecure (see **Table 55**). The food consumption score reinforces the difference between multi-active and Agri-specialized small farmers (**Table 56**). Multi-active small farmers are characterized (at 72.2%) by the fact of being in the highest rank of food diversity while Agri-specialized small farmers are at 51.1% in the middle bracket.

Dry Zone patrimonial reproduction strategies

In the Dry Zone, multi-active households are generally young and small, while capitalized family farmers households are on the contrary older and bigger. This suggests that in the Dry Zone young households who haven't fully inherited land yet work only small pieces of lands acquired through marriage, such as the bride-price and/or lands transferred early to the newly married couple by the family in order to make a living. We may recall here the fact that Dry Zone farmers aim at accumulating at least one cattle for each of their children to assist the children when the time comes for them to start their own farm (see **V.2**). Then young multi-active households would work the land, work others' land as employed workers¹⁰², do some animal husbandry as an income generating activity¹⁰³, and engage in other activities such as small businesses and factory work in towns. If successful and/or after inheriting the totality of their lands from the parents, they may be able to accumulate more lands and work fully as farmers, i.e. gradually becoming 'capitalized farmers'.

The buying capacity of capitalized farm households is linked as well to diversification of income generating activities. Indeed, capitalized farm households, like multi-active small farm ones, are positively correlated to the fact of having at least one member involved in off-farm work¹⁰⁴ and 11.4% of them put 'small business' as the second main source of profit (note that 10.8% of multi-active small farmers households put 'small business' as their first source of income). This shared characteristic between capitalized family farmers and multi-active small farmers tends to reinforce the link between these two categories, that at least part of multi-active small farmers are on the way to become capitalized family farmers ones. Along the same lines, this trajectory from multi-active to capitalized family farmers households implies breeding livestock is an income generating activity for the former while it becomes capital – i.e. cattle – for the latter. Finally, multi-active small farmers households are, among the three categories, those most involved in temporary arrangements to cultivate others' land¹⁰⁵. Such arrangements are often done within their family¹⁰⁶, suggesting again that newly settled households (rather

102. Multi-active micro farmers are overrepresented in the category of households engaged in off-farm activities (45% of them against an average 30.9% of households involved in off-farm activities for all categories).

103. While multi-active micro farmers households are less frequently involved in animal husbandry than capitalized family farmers or multi-active micro farmers households, they are nonetheless positively correlated with the highest income category (over 350,000 MMK/year for 17% of them) compared to the 2 other categories of farming households.

104. 37.7% of capitalized family farmers households and 45% of multi-active micro farmers households have at least one member involved in off-farm work, against an average 30.9% for all three categories.

105. 16.2% (18 households) of the multi-active micro farmers are involved in temporary arrangements, against an average 10.8% for all three categories.

106. This trend of inter-familial arrangements is mostly underlined through the qualitative study. The quantitative study design could not allow us to discriminate between familial and external arrangements on land use rights.

multi-active small farmers) will work part of familial land (from capitalized family farmers households) under these arrangements (whether renting or sharecropping) before getting definitive land use rights on these lands. It may serve to underline that access to land is a dynamic process and that the categories defined for the purpose of these discussions have to be considered cautiously, having in mind that this quantitative survey is a snapshot of possibly transitory states of land tenure and livelihoods.

Agri-specialized small farmers' strategies are more difficult to analyse than the two other categories. As seen above, they are mostly characterized by the fact of getting their primary source of income from agriculture, and the majority does not get access to large land sizes¹⁰⁷. They are also not considered capitalized because they generally own only a limited number of cattle (between one and three mainly) and do not possess other equipment such as a power tiller (97% of households don't own one, contrary to capitalized family farmers, 32.5% of whom own one). Agri-specialized small farmers don't grow any valuable cash crop, except for tomato. Half of the households live in Hledar (see **Chapter V.2.1**) and cultivate on small land plots established over temporary streams by retaining alluvial soils with embankments. Apart from these lands (once again quite small in size), it seems that the Agri-specialized small farmers category is characterized by having access only to low quality *ya* lands that do not allow cultivation of high value cash crops. Finally, what characterizes them the most, contrary of the other two categories, is the fact they are almost exclusively doing agriculture, and nothing else. Finally, looking at modalities of accessing land, we saw that a lower rate of Agri-specialized small farmers inherited land than did multi-active small farmers, yet those who inherited acquired larger sized plots through inheritance. This may constitute a fundamental difference, as access to a small plot of land through inheritance at the beginning of the household's life cycle seems to provide more financial capacity to invest in other livelihoods activities. Conversely, the lack of land for a newly settled household may hinder investment capacity of farmers. Therefore, it underlines the reciprocal relationship between access to land and investment capacity and the role of off-farm livelihoods for increasing on-farm production (investing in cash crops).

Multi-activity and income diversification: the 'real' security in Dry Zone?

As underlined above, multi-activity in the Dry Zone is not the privilege of multi-active small farmers but also concerns capitalized farmers households. This is actually something that distinguishes these two categories from the Agri-specialized small farmers one. Nevertheless, the same strategies are not for everybody. For instance, it appears that multi-active small farmers are significantly correlated to the fact of

107. 80% of Agri-specialized small farmers households cultivate between 2.5 and 10 acres.

having at least one member working outside the township. Agri-specialized small farmers, however, are more likely not to migrate and migration has no significant link with the capitalized farmers category. It suggests that migration is a strategy in itself especially for multi-active small farm households. 25% of capitalized family farmers also have a member migrating for work. This again reinforces the link put forward between younger multi-active small farmers heading in their lifetime to become capitalized family farmers. It indicates that when individuals do not yet have access to land – young individuals from capitalized farmers and multi-active small farmers households – are more likely to look for employment around and abroad before reinvesting earnings from this labor locally (and if possible, in land resources). On the other hand, Agri-specialized small farmers are correlated to the fact of having no members working outside the region or country (**Table 57**), suggesting that this category of farmers is caught in an almost exclusive agriculture-based livelihood with few options for additional incomes apart from daily farm labor. Given the small frequency of inheritance and their low capacity to buy land, we may even consider the hypothesis that households – barely able to reproduce themselves especially in the absence of a land front and an increasing land fragmentation over time – are fuelling the growing body of landless households.

When looking at incomes (see **Table 58**), Dry Zone multi-active small farmers are correlated to two different brackets: 29.7% of households are earning less than 750,000 MMK a year, while 41.4% of households are situated in the 1,500,000 to 3,000,000 MMK bracket.

Table 57: Frequency of households having at least one member working outside the township among the 3 farmer categories (Dry Zone)

	Capitalized family farmers		Multi-active farmers		Agri-specialized small farmers		Total	
	Nb HH	%C	Nb HH	%C	Nb HH	%C	Nb HH	%C
None	85	74.6	74	66.7	107	83.6	266	75.4
1 or more	29	25.4	37	33.3	21	16.4	87	24.6
Total	114	100.0	111	100.0	128	100.0	353	100.0

Chi-Square=9.23 dof=2 p=0.01 (Very significant) Cramer's V=0.162

Multi-active small farmers households in the upper category of incomes are in majority households with four persons¹⁰⁸ and more (39.1% between five and six

108. 32.6% of the 46 households earning between 1.5 and 3 million MMK a year.

Table 58: Total incomes (in MMK) of the different farm categories (Dry Zone)

Total income (MMK)	Capitalized family farmers		Multi-active farmers		Agri-specialized small farmers		Total	
	Nb HH	%C	Nb HH	%C	Nb HH	%C	Nb HH	%C
< 750,000	1	0.9	33	29.7	50	39.1	84	23.8
0.75 to < 1,5 millions	6	5.3	28	25.2	50	39.1	84	23.8
1,5 to < 3 millions	33	28.9	46	41.4	27	21.1	106	30.0
3 millions and more	74	64.9	4	3.6	1	0.8	79	22.4
Total	114	100.0	111	100.0	128	100.0	353	100.0

Chi-Square=213.0 dof=6 p=0.001 (very significant) Cramer's V=0.549

persons, 13% with six to 12 individuals). A greater number of working individuals in the household are likely to make significant contributions to yearly incomes compared to the other multi-active households. Nonetheless, it also suggests a kind of 'specialization' in multi-activity, as these households are generally long established within the village tract¹⁰⁹ and a great proportion (74%) is more than 40 years old¹¹⁰. It means that these households are already well-established ones, which 'specialized' in multi-activity and specific economic niches (itinerant trading of items between villages, weaving, work in town, etc.), at least while not having access to larger tracts of land. The part of the Multi-active small farming households represented in the lower income category are younger and smaller. This is likely that part of these households will become Capitalized farmers in later stage of their life cycle, a fact reinforced by the shared propensity for multi-activity in these two categories.

In the Dry Zone, the distribution of non-farm incomes among the three categories follows a 'U' shape described in Niehof (2004: 326, referring to Ellis 2000) regarding the significance of diversification for rural households. Here the non-farm income share is relatively high for small farmers – for instance our multi-active category – and for larger farm-sizes (our capitalized family farmers) while it declines in the middle-income farm size – the Agri-specialized small farmers described in this chapter. According to Niehof, this "situation occurs in rural areas where the poor are landless, the better-off have access to land from which they derive most of their income,

109. 91.3% of these 46 households' heads were born within the village tract.

110. Against an average 62.2% for the multi-active micro farmers category in Dry Zone.

and the rich are large landowners with different sources of income” (ibid.: 326). The same study by Ellis (2000), proposed two other patterns regarding the relationship between income diversification and poverty. The first one is a linear negative relationship where the share of non-farm incomes decreases with the landholding size. This pattern is observed in many parts of Asia and Latin America where access to agricultural land is the main factor distinguishing poor and rich households. The inverse relationship is found in rural Africa where livestock and human capital are the key resources differentiating the poor from the better-off households. Hence, as far as Dry Zone farmers are concerned, it is possible to draw on these three patterns to emphasize both access to land and access to livestock and human capital as key resources differentiating better-off and poorer households, while neither one nor the other are enough as a sole resource to secure a household’s livelihood. Apart from incomes (to which we saw that multi-active small farmers were correlated partly in the lowest and partly in the 2nd highest categories), the fact of lacking rice (for the household’s consumption) at least once in the year can be considered as a good indicator of their financial status and security. Looking at this variable, it appears that multi-active small farmers are characterized neither by the fact of being ‘food secure’ or ‘food insecure’ (see **Table 59**). However, Agri-specialized small farmers – the category relying mostly on agricultural incomes – are linked to the fact of being ‘food insecure’. On the other hand, capitalized family farmers are significantly correlated to the fact of being ‘food secure’, with 98.2% of the households.

Table 59: Distribution of households declaring lacking rice at least once in the year, among the 3 farmers categories (Dry Zone)

	Capitalised family farmers		Multi-active farmers		Farm-specialised small farmers		Total	
	Nb HH	%C	Nb HH	%C	Nb HH	%C	Nb HH	%C
Not enough rice	2	1.8	17	15.3	22	17.2	41	11.6
Enough rice	112	98.2	94	84.7	106	82.8	312	88.4
Total	114	100.0	111	100.0	128	100.0	353	100.0

Chi-Square=16.1 dof=2 p=0.001 (Very significant) Cramer’s V=0.214

■ 6.4 Discussion on the two zones

When comparing Delta and Dry Zone farmers' livelihood strategies and security, we may emphasize two features on which can be drawn different oppositions between the two areas. The first differentiating factor lies in the different histories of these two areas. As seen in **Chapter IV**, most Dry Zone villages under study have been developed from the pre-colonial Burmese monarchies through colonial times. These villages have been developed over a long time-span, based on customary social organization such as the pre-colonial divide between land owning individuals and their servants-tenants (*kyun*). Without denying the impacts of colonial rule on the Dry Zone (e.g. the restructuring of village-based administration), such villages nevertheless have a stronger capacity for 'resilience' regarding their own social organization in comparison with newly created ones. One remarkably significant observation is the existence of greater horizontal ties within each stratum of the society (large landowners, agricultural laborers, off-farm workers), which supplements the existence of vertical ties between landowners with their laborers, for example.

In the Delta, on the other hand, for recent villages that were studied here, British colonial rule was much more than a disruption; it was a foundational act. Pushed by the opening of a new land front in the Delta, hundreds of thousands of Burmese migrants coming from the Dry Zone and other Upper Burma regions came to clear new lands, continuously extending cultivated areas toward the south. Not only were new villages composed of people coming from different areas and of different 'backgrounds' (yet most of them were royal servants or freemen), but they were constantly being re-modeled by households moving with the land front, others coming in to settle, etc. As a consequence, in most Delta villages vertical ties (or patron-client relationships) long dominated social organization at the expense of horizontal ones. The different histories of the two areas translate into – as far as livelihoods and land tenure are concerned – a greater economic differentiation among Dry Zone villages, coming with stronger reproduction mechanisms. In other words, Dry Zone landowners as a whole have higher probability of remaining land-owning households through generations, which is also true for landless laborers and other socioeconomic categories, who also have a higher probability of remaining within their own category. Hence, from the landowners' perspective it can be translated as greater livelihoods' security, while poorer strata of the population lack access to land as capitalized farmers capture most resources as they work to reproduce their own livelihoods.

Conversely, in the Delta, socioeconomic mobility is higher and often operated along patronal ties. The patron-client relationship is based in great part on the access patrons get over two main kinds of resources: capital (land and financial capital) and social resources (through strategic relationships with people having

control over direct resources and over the local political landscape) (Geffray 1996: 156). Such relationships are even more salient when access to extra-village resources (markets, but also authorities) are difficult, which is a central characteristic of Delta villages compared to the Dry Zone where roads allow greater mobility¹¹¹. This organization is well illustrated by the importance of being connected with administrative authorities to be able to accumulate lands. While such relationship based on social capital cannot be measured easily through quantitative surveys, qualitative interviews show well this relationship (see **Chapter VII.4.1**). Yet, the relationship between different classes of landholdings and having a household member knowing somebody from local administrative bodies (village administrator, clerk, VTFMC) can support this assertion. In the Dry Zone, as seen in **Table 60**, the fact of knowing somebody from local administrative bodies is significantly correlated with the fact of having more than 10 acres of arable land (and conversely for landless households who are generally not connected).

This is somewhat logical in an agrarian society, as larger landowners are generally able to access positions within integrating administrative bodies. Interestingly, in the Delta both households owning between zero and five acres and those owning more than 10 acres are significantly correlated with the fact of having one member in local administrative bodies (**Table 61**). This tends to show that access to social capital in Delta is important in accessing land but does not guarantee alone land accumulation, again underlining the greater socioeconomic mobility characterizing this region. This gives a sense of the preponderance of social capital in getting access to land, as it is not only related to the landholdings' surfaces.

Table 60: Relationship with landholdings (acres) and the fact of having a household member in local administrative bodies in Dry Zone

	Landless		0-5		5-10		> 10		Total	
	Nb HH	%C	Nb HH	%C	Nb HH	%C	Nb HH	%C	Nb HH	%C
None	235	95.9	100	96.2	123	91.8	95	82.6	553	92.5
One & more	10	4.1	4	3.8	11	8.2	20	17.4	45	7.5
Total	245	100.0	104	100.0	134	100.0	115	100.0	598	100.0

Chi-Square=22.4 dof=3 p=0.001 (Very significant) Cramer's V=0.193

111. In the Delta this also creates a differential between villages closer to Bogale (Aye Ywar for example) and more remote ones (such as Pay Chang).

Table 61: Relationship with landholdings (acres) and the fact of knowing persons from local administrative bodies in Delta

	Landless		0-5		5-10		> 10		Total	
	Nb HH	%C	Nb HH	%C	Nb HH	%C	Nb HH	%C	Nb HH	%C
None	304	96.5	69	85.2	57	90.5	58	80.6	488	91.9
One & more	11	3.5	12	14.8	6	9.5	14	19.4	43	8.1
Total	315	100.0	81	100.0	63	100.0	72	100.0	531	100.0

Chi-Square=26.5 dof=3 p=0.001 (Very significant) Cramer's V=0.223

We must add here that the situation observed in Delta, evincing features of a pioneer society (which was the case in the 19th and early 20th centuries), may also be linked to the impact of Cyclone Nargis in May 2008. Apart from the huge human death toll and the salinization of lands, most of all it inflicted a huge loss of capital (both financial and cattle) for all categories of households. Therefore, Cyclone Nargis probably affected the life cycle and the 'typical' trajectories of Delta households (which would gradually increase their livelihood security as household heads got older).

The second set of oppositions between farmers' livelihood strategies in the Dry Zone and in the Delta relates to the different agricultural characteristics of the two areas. The fact that Delta villages are almost exclusively centered on paddy cultivation and that in the Dry Zone agriculture is much more diversified has different consequences. First, from a historical and political perspective, it greatly influenced the past governments' policies and their impact locally. To summarize what has been explained in **Chapter IV**, much of previous Myanmar governments' efforts focused on controlling paddy production for the state's interests, often against farmers' ones. Therefore, Delta villages were much more affected than in Dry Zone by these policies, among which the Compulsory Quota policy was probably the main vector of land sales and purchases (despite the legal ban on such transfers) executed in the Delta between 1964 and 2003. In the Dry Zone, this Compulsory Quota policy, despite being applied also to pulses, was somehow not profitable enough to justify policy enforcement. In the Dry Zone, most land sales and purchases were therefore linked to farmers' own economic and familial characteristics, rather than driven by state policies.

The major difference in agricultural practices has also a direct impact on the level of specialization farmers must engage. Paddy cultivation necessitates more

investments than most of other crops (with exception of onion in the Dry Zone). For smallholders, such investments are hard to mobilize, even with the support of the Myanmar Agricultural Development Bank's (MADB) low-interest loans, notably due to the untimely schedule on which these loans are delivered (see **Chapter IX.2.2**). This explains at least partly that 40.3% of landowners in the Delta rely on private loans against only 21.8% in the Dry Zone. The greater investments needed for paddy cultivation are integrated in the MADB loans' policy which provides 100,000MMK per acre up to ten acres for paddy cultivation, while *ya* crops are supported by a 20,000MMK loan per acre (up to ten acres as well). While more than 60% of Delta farmers borrowed (all loans aggregated) more than 600,000MMK per year, 84% of Dry Zone farmers borrow less than 600,000MMK per year, with 33% only borrowing between 150 to 300,000MMK per year. Though the extent of profits made over paddy and other crops could not be precisely compared between the two zones through the quantitative study, some indicators show that as a whole Dry Zone farmers are more food secure than Delta farmers. As per **Table 62**, the rate of households having enough rice throughout the whole year is higher for Dry Zone (88.4%) than in the Delta (82.9%). The fact of having to borrow money for health expenses (an acknowledged cause of indebtedness and vulnerability throughout Myanmar¹¹²) shows the same opposition (**Table 63**).

Table 62: Share of landowners declaring having (or not) enough rice throughout the year for their own consumption in Delta and Dry Zone

	Delta		Dry Zone		Total	
	Nb HH	%C	Nb HH	%C	Nb HH	%C
Not enough rice	37	17.1	41	11.6	78	13.7
Enough rice	179	82.9	312	88.4	491	86.3
Total	216	100.0	353	100.0	569	100.0

Chi-Square=3.45 dof=2 p=0.176 Cramer's V=0.078

We must also elaborate on an *a priori* contradicting result: comparing landowners in the Dry Zone and the Delta having to borrow money in order to buy food significantly points at Dry Zone landowners as resorting to food related loans. However, with paddy as the staple food of lowlands Myanmar, paddy producers can keep part of their production for their own consumption, while few farmers produce paddy in the Dry Zone. On the other hand, more detailed scrutiny on Dry

112. See for example Inn Kynn Khaing *et al.*, 2015.

Zone villages shows that the village of Hledar is in great part causing this effect with 63% of landowners in this village reporting contracting loans for food expenses. This high rate is linked with the general poorer status of landowners in this village, where lands are of worse quality than in other villagers and where a great part of landowners are relying on small scale tomato cultivation, which is profitable yet quite limited in terms of surfaces and very localized in time.

Table 63: Share of landowners having to borrow (or not) money for health purposes in Delta and Dry Zone

	Delta		Dry Zone		Total	
	Nb HH	%C	Nb HH	%C	Nb HH	%C
Borrowing for health	67	32.8	54	19.1	121	24.9
Not borrowing for health	137	67.2	228	80.9	365	75.1
Total	204	100.0	282	100.0	486	100.0

Chi-Square=11.1 dof=1 p=0.001 (Very significant) Cramer's V=0.151

Hence, paddy production, and particularly double paddy cropping requires farmers to 'specialize' in agriculture¹¹³ notably due to its greater labor requirements and greater investments demanded. Farmers thus have to manage time and greater flows of money, having to move between different loan sources (MADB, private money-lenders) which brings greater risks of becoming over-indebted in case of crop failure. *Ya* crops necessitate on the contrary fewer investments, hence contain fewer risks in case of crop failure. However, due to weather's unpredictability, we have seen that incomes' diversification, notably in off-farm sectors but also by capitalizing on cattle, is a much-needed safety net for Dry Zone farmers independently from the surfaces they hold.

7. Who are the rural landless households? Discussing the concepts of landlessness and 'land-exclusion'

Rural landless households are defined here as those households who do not have permanent land use rights on farmland. This definition however encompasses a wide range of socioeconomic situations, from potential traders, business owners,

113. This is true for Delta and Dry Zone. In Dry Zone, among the 77 households practicing double paddy cropping, 73 have no other activities.

to daily farm laborers. While all these households are technically ‘farmlandless’ households, not all are engaged in farm work or may be seeking to become farmers. Moreover, we already looked quickly into the fact that landlessness (as defined here) does not mean the same thing for younger and older households, since the share of landless households decreases regularly with the age of the household’s head see section VII 2.1). This relationship at least shows that frequency of access to land increases with the age of the household (i.e. through inheritance and accumulation of financial and social capitals).

Before trying to categorize rural landless households, a first look at incomes generated by these households helps underline their diversity. As shown in **Table 64**, 74.3% of landless households (among both zones) are in the two lowest income categories, while 61.4% of landowners are situated in the two highest income brackets. Hence, it seems at first sight that rural landlessness means economic vulnerability for the great majority. Yet, disaggregating between the two zones, it appears that rural landless households’ economic situation is quite different in the Delta and the Dry Zone. In the Dry Zone, landless households are overrepresented in the intermediate upper income category (1.5 million to three million MMK per year): 26.1% of Dry Zone landless are against 14.9% among Delta landless. On the other hand, in the Delta, 46.3% of landless households are in the lowest income category, and only 28% among Dry Zone landless households (**Table 65**).

Table 64: Distribution of landowning and landless households according to annual total incomes in Delta and Dry Zone

Total income (MMK)	Landowners		Landless		Total	
	Nb HH	%C	Nb HH	%C	Nb HH	%C
TI <750,000	95	16.7	215	38.4	310	27.5
TI 750,000 to 1,500,000	125	22.0	201	35.9	326	28.9
TI 1,500,000 to 3,000,000	171	30.1	111	19.8	282	25.0
TI >3,000,000	178	31.3	33	5.9	211	18.7
Total	569	100.0	560	100.0	1,129	100.0

Chi-Square=176.5 dof=3 p=0.001 (Very significant) Cramer’s V=0.395

Table 65: Distribution of landless households per annual total incomes and per area in Delta and Dry Zone

Total income (MMK)	Delta		Dry Zone		Total	
	Nb HH	%C	Nb HH	%C	Nb HH	%C
TI <750,000	146	46.3	69	28.2	215	38.4
TI 750,000 to 1,500,000	108	34.3	93	38.0	201	35.9
TI 1,500,000 to 3,000,000	47	14.9	64	26.1	111	19.8
TI >3,000,000	14	4.4	19	7.8	33	5.9
Total	315	100.0	245	100.0	560	100.0

Chi-Square=23.7 dof=3 p=0.001 (Very significant) Cramer's V=0.206

Figure 40 shows that Delta landless much more frequently access lands through temporary arrangements (27% against only 6% in the Dry Zone). Delta landless are also much more dependent on on-farm activities and the primary sector (90% of Delta households against only 56% in Dry Zone). These differences have to be linked with the greater diversity and greater wealth opportunities of income generating activities accessible by rural landless households in the Dry Zone compared to the Delta (see section **VII.5** on income diversification), as well as greater labor mobility. When doing Factorial Analysis of Components (see **Annex 8** for the details), two groups can be distinguished based on their respective zone (Delta and Dry Zone) and associated activities (respectively fishing and weaving) on the one hand, and on the other a third group emerges based on the fact of accessing paddy lands under temporary arrangements. This third group is closely associated with the fact of breeding a large number of ducks (above 110 animals). Based on these two factors, it is logical that these farmers are mostly found in Delta.

It is noteworthy that the 'Delta landless' group is closely associated with the fact of being involved in on-farm wage labor and the 'Dry Zone landless' group with the fact of being involved in off-farm wage labor. This supports the idea developed when discussing farmers' livelihood strategies, that multi-activity in Delta is principally confined to on-farm livelihoods' diversification while in Dry Zone more employment opportunities are available in the off-farm sector.

Therefore, it already tends to confirm the assertion made earlier that in the Delta, more than in the Dry Zone, access to land is a highly differentiating factor among households, an idea which is explored further below.

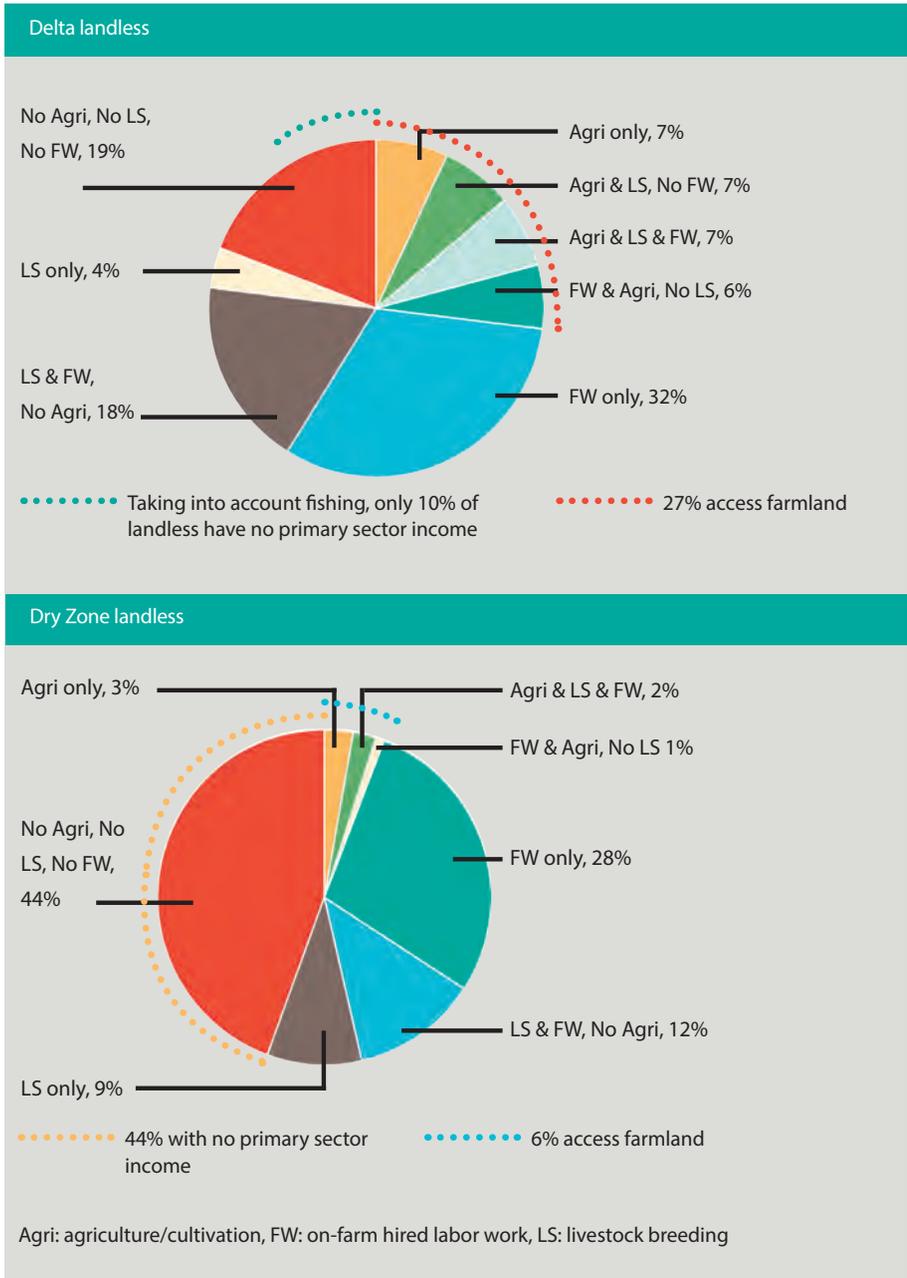


Figure 40: Delta and Dry Zone landless' involvement in the primary sector

7.1 Landlessness in the Delta

Following a FAC specific to the Delta (see **Annex 8**), landless households are distributed into three groups:

- The first one is highly characterized by households having access to temporary land use rights (hereafter '**Farming Landless**'), representing 72 households (among which 71 practice agriculture);
- The second one is mainly composed of on-farm wage laborers and fishermen (hereafter '**Farm laborer and Fishing Landless**'), representing 148 households;
- The third one is mainly composed of off-farm wage laborers and households having small businesses (grocery shops mainly), hereafter called '**Off-Farm landless**', composed of 95 households.

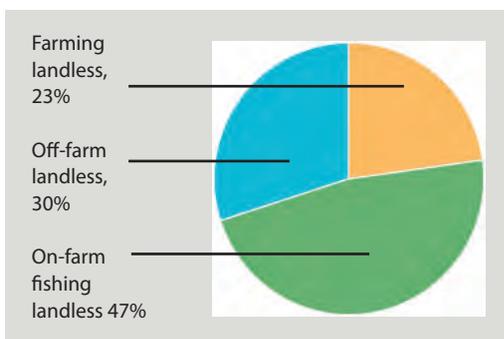


Figure 41: Distribution of different types of landless in Delta¹¹⁴

and Fishing Landless are in average headed by slightly older individuals (37.2% of them are in the 30 to 40 years old category) and finally, Off-Farm landless are in average headed by older individuals (46.3% are aged more than 50).

Temporary land use arrangements for landless: securing permanent access to land?

If we stick to the idea that at least part of landless households seek to become farmers with permanent land use rights (a somewhat logical ambition in any agrarian society), the relationship between each landless category and their respective age bracket is unlikely to point to a lifetime livelihood trajectory leading young Farming Landless households to become Farm laborer and Fishing Landless and then Off-Farm landless. It rather points at young Farming Landless households

114. We observe a slight variation with the graphic above (Figure 30) – 23% of Farming Landless against 27% of landless accessing land through arrangements – due to the fact that some of landless households accessing land fall in the two other categories (Off-Farm and On-Farm fishing Landless).

on the eve of becoming farmers, most probably through inheritance as we have already seen that children inherit when they are in their 40s/50s.

Table 66: Distribution of Delta landless households in each category according to the age of the household head

Age	Farming Landless		On-Farm Fishing Landless		Off-Farm landless		Total	
	Nb HH	%C	Nb HH	%C	Nb HH	%C	Nb HH	%C
< 30	18	25.0	24	16.2	10	10.5	52	16.5
30 to < 40	28	38.9	55	37.2	18	18.9	101	32.1
40 to < 50	15	20.8	38	25.7	23	24.2	76	24.1
50 to < 60	9	12.5	21	14.2	21	22.1	51	16.2
≥ 60	2	2.8	10	6.8	23	24.2	35	11.1
Total	72	100.0	148	100.0	95	100.0	315	100.0

Chi-Square=37.7 dof=8 p=0.001 (Very significant) Cramer's V=0.245

Looking closer at Farming Landless, 32 households are renting land from others and 36 households are cultivating land under sharecropping arrangements. Interestingly, the 32 households renting land only cultivate summer paddy, through free arrangements. As per qualitative interviews, these free arrangements are made among relatives. By contrast, 32 out of the 36 landless households cultivating land under sharecropping arrangements are doing so over the two seasons of paddy. Once again, as per qualitative interviews, although sharecropping arrangements are also widespread among families (such as in the case of parents temporarily giving lands under sharecropping to their children, before the latter receive them on a permanent basis, through inheritance), sharecropping arrangements are also done among 'strangers' – as in the case of Tet Tet Ku (14 out of the 36) which are contracted with an absentee landowner. Among the 36 households involved in sharecropping, 17 are cultivating more than five acres.

Renting arrangements concern only small surfaces (mainly under three acres) of summer paddy. In the case of renting out land for summer paddy, qualitative interviews rather point at landowners lacking the financial capacity to put all their lands under cultivation – which is much more expensive than for monsoon paddy – and therefore providing the opportunity to close landless households (whether being relatives or inscribed into their client networks) to work a plot of land as

an additional source of income. Therefore, among the group of Farming Landless households, about one-third of them (the familial sharecropping agreements) may be considered as potentially securing land use rights over the land they cultivate through inheritance in a latter stage. Returning to the three landless households categories, a comparison in terms of annual incomes shows the following trend: farming landless and Off-Farm landless are well distributed among the three incomes categories (see below), yet are correlated to the upper class of incomes (> 1.5 million MMK/year); Farm laborer and Fishing Landless are hardly found in the upper class of incomes and rather are statistically correlated to the lowest one (< 750,000 MMK/year).

Table 67: Distribution of Delta landless categories per total annual incomes

Total income (MMK)	Farming Landless		On-Farm Fishing Landless		Off-Farm landless		Total	
	Nb HH	%C	Nb HH	%C	Nb HH	%C	Nb HH	%C
TI <750,000	26	36.1	87	58.8	33	34.7	146	46.3
TI 0.75 to 1.5 millions	19	26.4	59	39.9	30	31.6	108	34.3
> 1.5 millions	27	37.5	2	1.4	32	33.7	61	19.4
Total	72	100	148	100	95	100	315	100.0

Chi-Square=59.3 dof=4 p=0.001 (very significant) Cramer's V=0.307

The fact that a quarter of landless farming households report they are able to save money would support the idea that accessing land through temporary arrangements may be a strategy to later purchase permanent land use rights. Looking at Delta landowners who bought land after 2003 (29 households), 12 households (41%) did so between the ages of 30 and 40, once again supporting the idea that older households purchase land after having accumulated enough money. Finally, this category is also statistically correlated to the fact of declaring livestock as a main source of profit (which is the case for 16.7% of landless farming households).

The landless farming household category reminds us of the multi-active small farmers in the Dry Zone discussed above, who diversify their agricultural incomes (relatively low as they generally own small plots) through animal husbandry to constitute financial capital as part of their patrimonial reproduction strategy. This constitutes one more indicator of the fact that landless households contracting

temporary land use arrangements in the Delta are heading toward the status of farmers. As we have seen in the previous discussion of Delta farmers, socioeconomic mobility remains high and land tenure security low, especially for those owning small surfaces (under 10 acres).

An attempt to disaggregate 'land-excluded' and 'non-farm' landless households

Motivated by the desire to attain a more precise picture of landless households' diversity, and also trying to better characterize processes of exclusion over access to land resources, an overview of the two remaining categories may help this endeavor.

As explained above, Off-Farm landless household heads are correlated with the fact of being aged more than 50. The share of older households suggests a kind of specialization in off-farm work, with 21% of households putting off-farm employed work derived profits in first position in terms of contribution to the household income and 13% small-business derived profits as main source of household income. Note that fishing is not an activity characterizing this category compared to on-farmlandless fishers, though 17% of Off-Farm landless declare fishing as their main source of profit. For these Off-Farm landless fishing households, total incomes suggest these households are composed of full-time fishermen rather than seasonal – small scale – ones (by contrast with farm laborer/fishing landless). One last characteristic is that 35.8% of these households benefit from migrant remittances, which is significantly higher than the average (18.7%) of Delta landless households. Given that people migrating for work are generally younger individuals, and on the other hand the average age of an Off-Farm landless household head is greater than for other categories, we can make the hypothesis that young individuals from these households are more likely to look for work outside the local sphere (and most probably in urban areas). Based on these observations, we may even say that landlessness for this category is not (anymore) a default state while waiting for the opportunity to access land, but is (or has become) a strategy to reduce their dependence on land for their livelihood.

Finally, the farm laborer/fishing landless category (aspiring to become farmers as well – see **Chapter V.4**), who represent almost half of Delta landless households, may be the most affected by local exclusion processes regarding land access, on which they however highly depend as on-farm wage laborers. Fishing arrives in first position for 37.8% of them (and in second position for 28.4%) but on-farm wage labor is their primary source of income with 42.1% of them declaring this activity as their first source of profit, and 31.1% as their second main source of profit.

Therefore, when talking about landlessness in the Delta, we could tentatively conclude that about one half of rural landless households are in need of attaining access to farmlands in order to secure their livelihood. This is somewhat confirmed by Farm laborer/fishing landless households being the sole category linked (even if with little statistical significance) with the fact of lacking rice at least once over the year (44.6% compared to an average 39% for Delta landless households).

Yet, considering the age-effect already observed on the ratio landless/landowners, we could go further discussing an 'appropriate' definition of landlessness in the Delta, with regard to the need to access farmland. It has been said that being aged 40 to 50 years old was a critical point in households' agricultural trajectories, marking the time of inheritance. Figures in section VII 2.1 well illustrates this point: the proportion of landless households decreases continuously with older household head age categories, and stabilizes for the 40-50 year age category. Based on this and above analysis of Delta landless households, we could propose the following calculations (while bearing in mind that such lifetime trajectories may change over the next generations, a point discussed in VII.2.1).

As explained above, about half (148 households) of the total 315 households may be considered here as 'genuine' agrarian landless. Besides, the ratio landless/landowners in the Delta shows that landless households decrease by 27% between the 30 to 40 years old and the 40 to 50 years old categories. Therefore, we could consider that about a third of the landless households surveyed in Delta (that is 20% of the total 531 surveyed households) have no prospect of accessing land through their lifetimes.

Of course, this is only an attempt to disaggregate the different categories of landless households in Delta and we are well aware of the limitations of such extrapolations based on past agricultural trajectories that may not necessarily remain the same over time (see Section 7.3 on this point). Besides, it does not take into account local discrepancies – e.g., in villages such as Pay Chaung or Tet Tet Ku the 'genuine landless' proportion is much higher than in Aye Ywar or Thabyugon for example.

■ 7.2 Landlessness in Dry Zone

In order to situate landlessness in the Dry Zone against landlessness in the Delta, we must underline the fact that in the Dry Zone only 6.5% of the landless households cultivate land under temporary arrangements, which is considerably lower than the 23% of Delta landless households involved in such arrangements. Hence, the fact of cultivating others' land could not be used as a differentiating factor. On the other hand, given the greater opportunities for income diversification

in the Dry Zone, the FAC performed on landless households took mainly into account the different on-farm and off-farm activities and their rating in terms of profit sources (see **Annex 8**). Based on this FAC, Dry Zone landless households have been disaggregated into 3 groups:

- The first one, which includes 51 households, is characterized by being almost exclusively composed of on-farm wage laborers (94% of these households), an activity from which they get their main source of income (72.5% of these households). They are hereafter called **'Farm Laborer Landless'**.
- The second one, made of 74 households, is characterized by being actively involved in livestock breeding (93% of these households), including cattle (46%). Livestock breeding represents the first source of income for almost 34% of households. Nonetheless, 55% of these households also practice on-farm wage labor – yet this activity is ranked first source of income for only 9.5% of these households – and 90% have some members involved in off-farm wage labor (36.5% of households in the category report this activity as their main source of profit). For these reasons, they are hereafter called **'Multi-Active Landless'**.
- Finally, a third group of 120 households is characterized by being mainly involved in off-farm activities¹¹⁵ (99% of these households) and are statistically correlated with the fact of not being involved in on-farm wage labor (only 27.5% have members doing on-farm wage labor) from which 64% of households are getting their main source of income. They are hereafter called **'Off-Farm landless'**.

Given there is a statistical correlation between these categories and neither the age of the household head nor the average age of the household members, it is impossible to discuss possible lifetime trajectories, as done for Dry Zone farmers and Delta landless households. Therefore, we should discuss these categories mainly in terms of livelihood security, specialization, and in comparison with Delta landless households.

A genuine Off-Farm landless category?

Interestingly enough, while the bulk of Delta landless households fall in the most vulnerable category, so-called on-farmlandless fishers, in the Dry Zone most landless households (49%) fall in the Off-Farm landless one (i.e. non agrarian). As its name indicates, these Off-Farm landless households are characterized by performing mostly (almost exclusively) off-farm livelihood activities. In order to reinforce their off-farm specialization, we can notice that very few (19 households) are involved in home gardening, even fewer (only three households) in animal husbandry, none possess

115. Here defined as excluding animal husbandry as well.

cattle, while only 33 households count members involved in on-farm wage labor.

As a matter of fact, these landless households have put a great distance from agricultural livelihoods. In this regard, Off-Farm landless household heads are significantly correlated with being more literate (see **Table 68**). Indeed, government staff (teachers, administrative staff) are present. Furthermore, they show a

stronger interest in investing in education for their family members, as seen in **Table 69**. The link with the Off-Farm landless category and the percentage of household members reaching higher education is even more significant, as almost 52% of households are composed of three or fewer individuals. Such correlation cannot be found in any other categorization (whether on farmers or landless in both zones). Hence, marking a difference with the Delta, the Dry Zone seems to feature a significant number (at least half of all landless households) of genuine Off-Farm landless households, who have little concern or interest in agrarian livelihoods. This supports the idea that access to land-based resources is less important in shaping Dry Zone communities' livelihoods than in the Delta. This may also be the result of a higher degree of land fragmentation compared to the Delta, and less socioeconomic mobility for landless households (between off-farm and agrarian livelihoods) leading a fringe of Dry Zone society to connect with more 'urban' livelihoods.

Agrarian landless: strength in numbers?

Among the three categories introduced above, two can be characterized by the total yearly incomes they generate. Quite in line with what has been underlined for Dry Zone farmers, it seems that multi-activity (both on-farm and off-farm) is also profiting landless households. Indeed, the multi-active landless are significantly correlated with earning more than 1.5 millions MMK/year (**Table 70**). Yet, before concluding too hastily of the existence of a livelihood-secure, agrarian landless category, we must first notice that such important incomes are consistent with the over-representation of these households in larger families. Indeed, the multi-active landless are quite significantly correlated with households counting more than five individuals (which is the case for 42% of households, compared to an average 28.6% among all Dry Zone landless).

Performing a quick analysis on the relationship between households' size and

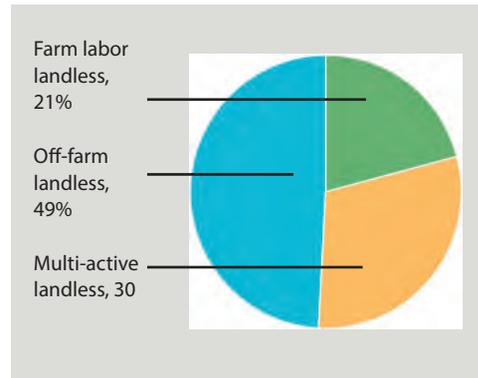


Figure 42: Distribution of different types of landless in the Dry Zone

Table 68: Household heads' level of education in the different landless categories in the Dry Zone

	Farm Laborer Landless		Multi-Active Landless		Off-Farm landless		Total	
	Nb HH	%C	Nb HH	%C	Nb HH	%C	Nb HH	%C
A: Primary and under	46	90.2	70	94.6	97	80.8	213	86.9
B: Middle school and more	5	9.8	4	5.4	23	19.2	32	13.1
Total	51	100.0	74	100.0	120	100.0	245	100.0

Chi-Square=8.24 dof=2 p=0.016 (Significant) Cramer's V=0.183

Table 69: Share of household's members attending higher education per landless categories in the Dry Zone

	Farm Laborer Landless		Multi-Active Landless		Off-Farm landless		Total	
	Nb HH	%C	Nb HH	%C	Nb HH	%C	Nb HH	%C
Less than one third	47	92.2	63	85.1	89	74.2	199	81.2
One third and more	4	7.8	11	14.9	31	25.8	46	18.8
Total	51	100.0	74	100.0	120	100.0	245	100.0

Chi-Square=8.66 dof=2 p=0.013 (Very significant) Cramer's V=0.188

the fact of lacking rice or not at least once in the year shows that 68% of landless households (all categories included) with four individuals and more are lacking rice once in the year, against only 51% for households counting three or fewer individuals. However, with regard to the livelihood security indicators available for this study, there is little evidence suggesting multi-active landless are more or less secure than farm laborer landless households.

Table 70: Distribution of Dry Zone landless households per categories and total yearly incomes

Total income (MMK)	Farm Laborer Landless		Multi-Active Landless		Off-Farm landless		Total	
	Nb HH	%C	Nb HH	%C	Nb HH	%C	Nb HH	%C
TI <750,000	23	45.1	7	9.5	39	32.5	69	28.2
TI 0.75 to 1.5 millions	23	45.1	24	32.4	46	38.3	93	38.0
> 1.5 millions	5	9.8	43	58.1	35	29.2	83	33.9
Total	51	100.0	74	100.0	120	100.0	245	100.0

Chi-Square=38.8 dof=4 p=0.001 (Very significant) Cramer's V=0.281

Given that Off-Farm landless households have been clearly established as a non-agrarian category, and in absence of relationship between multi-active and farm laborer landless categories and the age of the household, we may consider that these two agrarian categories constitute a reservoir of rural landless who, as they grow older, will either become farmers or remain landless (whether agrarian or off-farm ones). Indeed, as explained in the beginning of this discussion on landlessness, the share of landless households decreases with the age of the household. Taking into account the age-effect on the landlessness rate, and the difficulty to distinguish among households from the two agrarian landless categories between who are heading towards farmer status and who may remain landless, we may propose the following interpretation:

Much like in Delta, if we exclude the off-farm landless category from agrarian landless households, it leads to about half of the landless households (120 out of 245) being in need of farmlands.

The landless/landowner ratio in the Dry Zone shows that landless households decrease by 31% between the 30-40 years old to the 40-50 years old category (see Figure 26). Here again, we could project that one third of the total landless (that is about 14% of the total surveyed households) are at risk of perpetually being in economically vulnerable situations due to exclusion from land-based resources.

■ 7.3 A changing agrarian landscape?

While we presented a 'genuine' category of non-agrarian landless in Dry Zone, the existence of such category in the Delta is far less obvious. Together with qualitative interviews, the quantitative study suggests that Dry Zone Off-Farm landless households are definitively not relying anymore on agricultural livelihoods. In the Delta, the same category rather points at households in the process of putting some distance between themselves and agrarian livelihoods, that is adopting non-agricultural activities and especially migrating to other places in search of new income opportunities. Although the quantitative study could not cover the full extent of migrations, qualitative interviews indicate that resorting to remittances from family members who work in urban wage jobs (principally in Yangon) is an increasing trend, one that intensified after Nargis as confirmed also by Thiesmeyer (2012:7). Besides, the quantitative study shows that the overall proportion of households reporting benefiting from remittances is higher in Delta (17%) than in Dry Zone (11.5%).

The second fact is that in the Delta, remittances are received essentially by landless and smallest land-owning (less than 2.5 acres) households. In the Dry Zone, it is the opposite and the highest frequency of those receiving remittances are found in the larger landownership categories: 5 to 10 acres (17.7% of households) and 10-15 acres (15.5% of households). Therefore, this all indicates that migrations in the Dry Zone are a farmers' strategy to improve their financial capital to be reinvested locally (though not necessarily in farm livelihoods, but also children's education, etc.), while in the Delta migrations tend to drive landless households outside the Delta's agrarian sphere. Even in the absence of figures relating to households definitely leaving the region, studies dealing with Yangon peri-urban growth show that the majority of households settling in townships such as Hlaing Tha Yar come from the Ayeyarwaddy Delta (Boutry, forthcoming).

Government policies on paddy had a great impact of land trajectories for Delta households. However, the differences observed between Off-Farm landless in the two zones suggest other impacting factors. First, the devastating effects of Cyclone Nargis on southern Delta townships surely come into play. Indeed, much infrastructure and assets but also savings (cash, seeds, and crops) were destroyed, land often standing as the only remaining asset (though some tracts of lands disappeared with the cyclone and increasing salinity affected others, especially in the most southern part of the Delta). Following this reasoning, any genuine Off-Farm landless category would have been greatly affected. The recent disappearance of the land frontier in the Delta may also be affecting the landless situation. Indeed, new land was still available to be put under cultivation no less

than 20 years ago. Hence, geographical mobility remained high, especially for households having no access to land in their former place. In the Dry Zone, where the land frontier disappeared long ago in most villages, demographic pressure and land fragmentation over generations implies a greater necessity for part of the population to opt for non-agrarian livelihoods.

Reflecting on the last point, it is highly probable that land fragmentation will curb the trend observed in increasing land access along with increasing age of the household, particularly for the Dry Zone. For the Delta, the lift of predatory policies such as the compulsory procurement of paddy to the government (stopped in 2003), will probably mean greater land tenure security for farming households. We could even expect Delta households following life-cycles closer to the Dry Zone in coming generations, with also a smaller rate of landless households than in the past, while in the Dry Zone landless households would proportionally increase. **Figure 43** shows that the deviation between landless/landowners' ratio among the two zones is, interestingly, decreasing with the age of households, meaning that access to land over time increases in greater proportion for Delta households than for Dry Zone ones. This may be explained by the higher frequency and larger plot areas purchased in the Delta after 2003 compared to the Dry Zone, here again suggesting less demographic pressure on land resources in the Delta than in the Dry Zone.

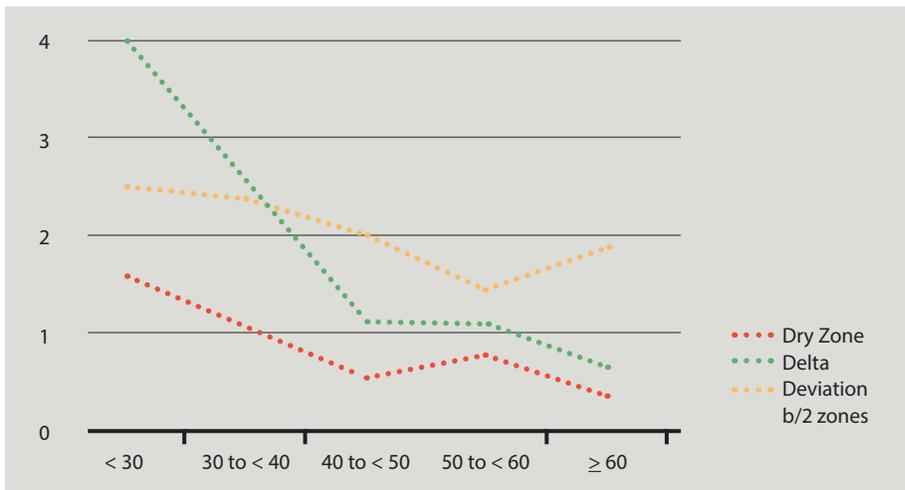


Figure 43: Ratio of landless households/landowners' households according to the age of household head, in each zone and deviation between the two zones

We have essentially spoken in this section about access to land but it is also useful to reflect on the proportion of landless who used to own land and have lost such access to land. In the Delta, an average of 9% of surveyed landless households had accessed landownership (through clearing, buying, inheritance, etc.) between 1988 and 2014, three times more than in the Dry Zone. The following section will further explore exclusion processes.

VIII. Landlessness as a result of intimate exclusion

In *Powers of Exclusion: Land Dilemmas in Southeast Asia*¹¹⁶, the authors provide an innovative, practical, and useful framework for understanding the profound transformations affecting land use and social relations around land since the 1980s, by focusing on the notion of ‘exclusion’, arguing “that all land use and access requires exclusion of some kind” (Hall et al., 2011: 4).

Exclusion is not a random process, nor does it occur on a level playing field. It is structured by power relations. Across rural Southeast Asia and elsewhere, exclusion from land can be understood in terms of the interaction between regulation, force, the market and legitimation... Regulation, often but not exclusively associated with the state and legal instruments, sets the rules regarding access to land and conditions of use. Force excludes by violence or the threat of violence, and is brought to bear by both state and non-state actors. The market is a power of exclusion as it limits access through price and through the creation of incentives to lay more individualized claims to land. Legitimation establishes the moral basis for exclusive claims, and indeed for entrenching regulation, the market and force as politically and socially acceptable bases for exclusion.

(Hall et al. 2011: 4)

All these forces may operate at different scales – from local and village-based, to national and global – and the way land exclusion processes are effected may be the result of these powers interacting between different scales as well. To illustrate this point, the Myanmar government’s Compulsory Procurement of Paddy policy is surely a matter of policy designed at the national level – where the state’s discourse on national autonomy in paddy production triggers powers of legitimation and regulation – while the different ways it impacted landholders is more the result of village-based power relationships: how legitimation and market forces operate through socioeconomic relationships explains the dispossession of one farmer for the benefit of another in the name of the same policy; or how force is employed by local authorities either to maneuver around the policy so as to benefit one farmer or on the contrary to enforce the policy. Legitimation also operated in the land reallocation procedures at the village level. Indeed, as mentioned previously, the lands seized from undutiful farmers would most often be allocated to better-off farmers rather than to smaller or landless farmers in the village. Such decisions were

116. 2011, Derek Hall, Philip Hirsch and Tania Murray Li.

justified by the narrative that the lands would be more productive – and hence the nation would benefit more – if cultivated by farmers who had the capacity to invest.

In this section, we go back to the research hypothesis, that is that high rates of landlessness observed in Burmese lowlands (between 40% and 70% of the rural population¹¹⁷) cannot be solely attributed to the dimension of large scale land grabs and evictions as often brought to the foreground by most reports dealing with land issues in Myanmar. As a matter of fact, none of the studied villages was impacted by land grabbing, yet landlessness rates are high. This problematic leads us to the dimension of village-based intimate exclusion, that is exclusion as the result of agrarian class formation, face-to-face relationships between villagers, and more largely the processes through which social intimates – neighbors and kin – exclude each other from access to agricultural land. To bring up these issues, we proceed by analysing first how ‘class division’ between large landholders and landless or smallholders shapes exclusion at the village level. The second entry point is access to credit – that is how the power of ‘market’ (yet highly connected to regulation and force) shapes exclusion at the village level. We conclude this part by analysing more particularly the role of the headman in land management in history and through the reform, as a particularly important stakeholder at the village level, concentrating most of the powers at work in exclusion processes: regulation, force, market and legitimation.

1. Village-based class division and exclusion

1.1 Dry Zone: intimate exclusion through power of legitimation

Land exclusion – both in the ways in which already-existing access to land is maintained by the exclusion of other potential users and the ways in which people who lack access are prevented from getting it – is found in Dry Zone villages. Because of villagers’ greater social and economic stability – as opposed to mobility – the issue is often a matter of how people legitimize their exclusive claims on land, and how class divisions find support in this legitimation, and vice versa. Forms of marriage endogamous to class – individuals from landless households marrying landless, large landholders marrying within the same class – are part of this legitimacy of exclusive claims. The rationale from this legitimation is largely supported by the *dama-u-gya* practice – that is, rights acquired through clearing and cultivating any vacant land transforms it into the property of the cultivator. Since in the Dry Zone the agricultural frontier closed much earlier than in the

117. Compared to most of surrounding Southeast Asian countries. In Cambodia, landless farmers now make up 28% of the rural population (Phann *et al.*, 2015) while in Vietnam, landlessness rates among rural households are estimated at 12%. (Mellac and Castellanet, 2015).

Delta, retaining legitimate claims to land by pioneer families increasingly became a matter of excluding others seeking access to land, especially when inheritance and demographic growth led to land fragmentation. The strategies developed to retain access to sustainable landholdings – the bigger the better – even involve exclusion processes within the same family. As such, the following case of 'U Shwe', a villager from Gaw Gyi (Monywa township), is informative.

BOX 15: RETAINING ACCESS TO LAND OVER GENERATIONS

U Shwe inherited 15 acres from his parents, who had a family of 6 children. Two of them passed away very early. Among his remaining three siblings, two are unmarried women who have lived together with him since they were young. His elder brother who had no children also got 15 acres and handed over those lands to U Shwe. U Shwe's wife inherited 10 acres from her parents. Hence he came to hold 40 acres of land.

U Shwe has six sons and three daughters. The eldest is 49 years old and the youngest is 23 years old. Four of them are married and left the parents' household. U Shwe lives together with two sons and two daughters who remain unmarried. All except two have graduated from University. Only two sons and two daughters pursue farming, succeeding to their parents, and the others are serving as government employees and private school teachers.

The case of U Shwe illustrates well the intra-class endogamy found in Dry Zone villages. While he inherited 15 acres from his parents, he married someone who could also bring in significant holdings (as his wife brought 10 more to the household's landholding.) Second, the effort developed by U Shwe and his wife to offer a proper education to his children underlines another kind of strategy: even with 40 acres as a whole, dividing those equally among nine children would mean the end of the family's belonging to a 'large landholder' class.

This issue is then addressed by keeping only four children in farming livelihoods while the others are provided with an 'equivalent' high status – and livelihood security – as government employees and school teachers. This may not hide attempts of socioeconomic mobility by other individuals in Dry Zone villages. The present study also recorded many successful cases of individuals who managed to access land and climb the socioeconomic ladder. However, the following case, recorded in Si Laung village (Yinmabin township), illustrates well the difficulties faced by those undertaking this ascent.

The case of U Thein's family exemplifies the difficulties faced by landless and small scale farming families to retain access to land and eventually try to expand their

farm holdings. It also provides a mirror image of how capitalized family farmers exclude others from accessing land by capturing both legitimation (or social regulation) – land is kept among this class through endogamy and inheritance – and market powers – as capitalized farmers they are the one able to buy more land, and also able to invest in production tools, etc. Farmers in Dry Zone villages who lack both the benefits of inheritance and capitalizing (and purchasing) power, find it difficult to access and retain land. When talking about the power of market here, we must keep in mind that it is also highly linked with access to social capital.

BOX 16: THE STRUGGLE OF A SMALL-SCALE FARMING FAMILY TO MAINTAIN ACCESS TO LAND

U Thein was formerly a porter working in a broker house in Monywa. He lived in the outskirts of Monywa and saved money to buy a small house. Since his parents, living in Si Laung village, had eight children, U Thein's share of inheritance from the parents was only one acre of farmland. U Thein nevertheless wished to be a farmer, so he went to Monywa and worked hard to save money and later on sold his house and went back to Si Laung. With his savings, U Thein bought farmlands.

U Thein cultivated 13 acres with his wife. They have four children. In the family farm succession cycle, the parents allocated two acres to the elder son, three acres to Maung Gyi and two acres to Maung Nge (twin brothers). The daughter is unmarried, living together with the parents and cultivates the parents' farmland together with them.

The elder son married a woman who inherited four acres from her parents. He raised a young calf before he departed from the parents' house. After marriage, the parents-in-law gave an additional cattle, so the couple could cultivate their farm independently with a pair of cattle. They purchased afterwards four acres and recovered some virgin land by their own effort not far away from their village.

Maung Gyi got married but his wife received no land in inheritance, and as the family was poor, it had to sell off two acres of farmland. The father, U Thein gave them another acre. They had no cattle and could not cultivate the land properly. Maung Gyi finally sold all the land to buy a herd of goats. The couple now lives on goat breeding.

Maung Nge also married a woman who received no land in inheritance. They cleared virgin land to make a field of half an acre near a nearby mountain. They bought an additional acre and they now have a total of 3.5 acres. Their livelihood is just subsistence-based. His sister helps the family in cultivation. They pooled the farmlands to work together and share the farm's produce.

As rightly underlined by the authors of Powers of Exclusion, *“there is often a ‘market price’ for the bribe that will induce guards to look the other way as fishers use an off-limits breach, or the pay-off that will convince a city council to rezone a piece of land for conversion”* (Hall et al. 2011: 18). But in many cases having the money may not be enough without knowing the right authorities to bribe, and this relies on the individual’s social capital. In some instances, this social capital cum market power may act counter to or together with legitimation depending on the scale where these apply. Before unpacking this idea, we should go through the following land dispute case.

BOX 17: LEGITIMATION VS. MARKET? CONTRADICTION CLAIMS OVER LAND

A pair of siblings moved from one of the villages under study to Mandalay, leaving the farmland they had received in inheritance to remaining villagers for continued cultivation. About 20 years went by.

At the time of land registration (2013), the villagers who were cultivating the land were seeking to apply for Form 7. The Mandalay-based absentee landowners protested against this action. The Village Tract Farmland Management Committee wanted to assign the land to the villagers currently cultivating the land. But due to continued objection, the case was sent up to the township administrator. The absentee landowners paid a large sum of money to the authority and were finally granted Form 7.

This land dispute shows that the market force in this situation – i.e. the price to bribe a government officer – goes against village-based legitimation of access to land by operating at a higher level, the township. The point made here is that the socioeconomic structuration of Dry Zone villages often gives more weight to ‘customary’ norms of legitimation than other types of powers when operating at the village level – so that other powers may be applied at higher levels to overcome these norms. This contrasts Dry Zone from Delta villages, where exclusion through legitimate claims is often minimized at the profit of individuals with greater social capital, playing with the powers of force, market, and regulations. To support this idea, the qualitative study indicates that while in the Dry Zone, village founders often retained their access to land, in the Delta, pioneers often lost their access, leading them either to move to other areas or to become landless households.

■ 1.2 Delta: intimate exclusion through force and market

In the Delta, village-based norms of legitimation are weak compared to the Dry Zone, and this surely has to do with the high socioeconomic mobility which operated through the development of the region’s agricultural frontier into the rice bowl of Myanmar. We could say conversely that impacts of government policies

were less mitigated by local social norms than in the Dry Zone. Yet, both the way individuals put to work the powers of force and market to get access to land, and the way they play with these policies, have to do mostly with intimate exclusion. Here we may recall the fact that according to our analysis in **Chapter VII.6.3**, capitalized-family farmers in the Delta are more characterized by their purchasing power than the opportunity they got from inheriting land. On the other hand, we also stressed that much of the land market in the Delta was linked to the Compulsory Paddy Procurement policy and that one's capacity to access this market was much a matter of having connections with relevant men of power and authority. The study case below is very enlightening in this regard. Farmers adopted many coping strategies when they were unable to fulfil the paddy quotas. Among other strategies to avoid prison and totally losing their lands, farmers would ask a better-off farmer to pay the needed quota of paddy baskets on their behalf. In return, the better-off farmer would receive the land use rights on the plot of land and keep the farmer working as a casual laborer or as a sharecropper. However, it is not a rule. One landlord would strategically avoid having the same farmer continuously cultivating his former paddy field as the landlord feared the former landowner would one day claim back his lands. On the contrary, this landlord preferred distributing derived land use rights (such as sharecropping) to other farmers, preferably farmers which had recently migrated from other villages.

BOX 18: STUDY CASES: LAND ACCUMULATION AND CONTESTED RIGHTS IN DELTA

U Kyaw Lin was a member of his village administration (*Ya Wa Ta*) in 1995 for three and a half years. From 2006 to 2010, he served also as village tract leader for four years. Since then, he has not been involved in village administration affairs. After getting married in 1992, he worked as a boat manager and paddy broker for eight years. Since 1996, U Kyaw Lin gradually acquired lands and currently owns 30 acres. During the land registration process, the land tenure rights over 28 of these 30 acres were contested by four different persons. Below are the details of the lands U Kyaw Lin gradually acquired:

The first 10 acres: U Kyaw Lin first acquired 10 acres from Daw Shwe, another villager. Daw Shwe and her daughters together used to cultivate these 10 acres. In 1995, Daw Shwe and her family couldn't provide the forced procurement paddy baskets to government for 10 acres. So the next cultivation season, the village tract land committee put her lands on the waiting list. The two daughters of Daw Shwe requested to the land committee to transfer the confiscated 10 acres back to them in their name, instead of transferring the lands to other villagers. One of the two daughters, Daw Tin living with her mother, then got the permission to work five of the 10 seized acres under her name. The other daughter, Daw Khin received the remaining five acres under the name of her husband, himself the brother of U Kyaw Lin. In 1997,

Daw Tin couldn't deliver the 60 baskets due to the government, so the five acres were transferred to another villager. The latter sold his lands to U Kyaw Lin for the price of 20,000 MMK/acre. At that time, as farmers were not allowed to sell, buy, or mortgage lands, the two parties did not make any official contract. To overcome the legal ban on land transfers, the seller officially handed over the five acres to the village tract leader (part of the village tract land committee) with the pretext of his not being able to cultivate them. Then the village tract leader transferred the lands to U Kyaw Lin. U Kyaw Lin's brother and his wife cultivated their five acres for two years.

After two years, in 1997 they couldn't transfer the due paddy to the government. U Kyaw Lin then transferred on their behalf the due 60 baskets of paddy to the government. In addition, the brother was already indebted to U Kyaw Lin for 10,000 Kyats, 40 baskets of seeds, and renting charges for one buffalo (30 baskets of paddy). As he was unable to repay his debts, the brother agreed to transfer his land to U Kyaw Lin.

Under the recent land registration process, Daw Tin contested the five acres first transferred to another villager and then sold to U Kyaw Lin. However, the other sister Daw Khin didn't want to contest the five acres transferred to U Kyaw Lin, being his sister-in-law. As a result, Daw Tin ultimately objected to the transfer of the land rights of the 10 acres previously held by her mother, but which are now held by U Kyaw Lin.

+ 5 acres: In 1992, U Ngwe bought five acres from U Htun. Two years later, U Ngwe obtained a bad paddy harvest (only 40 baskets for five acres!) due to a serious pest infestation. U Htun, the former owner, had informed U Ngwe that he wanted to buy those five acres back, in case U Ngwe would need to sell them. U Htun however lacked the financial capacity to do so. U Ngwe finally sold those five acres to U Kyaw Lin for 10,000 Kyat/acre. Yet, under the recent land registration process, U Htun has contested the land tenure rights of these five acres, now in the hands of U Kyaw Lin.

+ 7 acres: In 1991, U Maung accessed seven acres from Daw Hla, by way of the 'paddy procurement' waiting list. In 1994, as he was unable to transfer the due paddy to the government, U Maung had to sell his lands to U Kyaw Lin. After selling his lands, U Maung decided to migrate to another village to cultivate 50 acres under the status of forestlands. Under the land registration process, Daw Hla contests the land tenure rights of the seven acres now owned by U Kyaw Lin.

+ 6 acres: In 1998, U Kyaw Lin bought six acres from U Than at 20,000 Kyats/acre. The previous owners of those six acres were the parents-in-law of U Than. U Sinn, brother-in-law of U Than, did not consent at that time to sell his parent's lands to U Kyaw Lin. Therefore, under the land registration process, U Sinn contested the land tenure rights of these six acres of U Kyaw Lin's, arguing that those lands should have been part of his inheritance.

+ the last 2 acres: U Kyaw Lin finally bought two acres from Daw Moe after 2003 (when the forced paddy procurement system had already ended). Those two acres are free from objection. Currently U Kyaw Lin still cultivates the 30 acres, although according to the 2012 land law, he is not allowed to do so for the 28 contested acres.

Many details of the story have obviously been lost, concealed and too 'indirectly' expressed. But this case study sheds light on the collective dimension of land contestation. Indeed, the multiple contestations against the same person (who was previously a village administrator) not only reveal a series of unjust household situations but also a collective contestation against persons who might have abused of their power in the past. This power, which at first glance seems to be the ability to pay the price of land – including the price of the paddy procurement quota – is not so much related to market as it is to the individual's power to exert force. It is not a coincidence that U Kyaw Lin acquired his first 10 acres through the compulsory procurement system at a time when he was part of the village administration. Being in such a position, he could capture the effects of the paddy procurement to the state for his own benefit and at the expense of other farmers who found themselves excluded. The power operating here is partly regulation – the state policy – but much more the claim made by force (even if implicit) by the village authorities. Finally, the multiple contestations also highlight that the land registration process is clearly perceived as an opportunity to renegotiate rights over lands, even for lands that were lost during the forced paddy procurement system decades ago. Locally produced social norms offer a rationale for legitimization of claims over land, and the way legitimization operates is above all subjected to the powers of force and market put in place through the successive government policies.

2. Credit, indebtedness, and intimate exclusion

Access to finance is crucial for farmers because of the farm investment needs and the seasonal expenses necessary to undertake agricultural work (inputs, labor, equipment...). Yet, access to affordable and adapted financial services remains a constraint for farmers. Our assumptions are that the lack of appropriate credit systems has been a key driver in intimate exclusion in the Myanmar lowlands and that the power relations involved with access to credit have been critical in this process. These power relations exist at different levels and call on the four dimensions of regulation, force, the market, and legitimization. (Hall *et al.*, 2011).

A first dimension in which power relations concerning rural credit emerge is in the issue of access to the government's agricultural loans. Access to credit is, in part, a matter of markets: credit has a price, and people who can pay the price can access credit. But what we find, in practice, is that the price of credit is not determined by market powers alone. It is mediated by access to powerful individuals – village authorities – who can enhance access for some actors, and exclude others through

their exclusive knowledge of regulations. The MADB village tract representative is key in this process. Social relations and the capacity to pay bribes are essential in determining wider and timely access to the MADB loans.

A second dimension involves the power relations between money-lenders (who are often farmers themselves) and other borrowing farmers. As mentioned above, the case of the Delta is particularly relevant, as money-lending practices are built upon strong patron-client relationships. These relations include an element of force, as clients are coerced to mortgage their land and suffer foreclosure, or be compelled to sell land to cover loans (see part 2.4).

A third dimension which will not be developed here (due to insufficient information at this stage) is the emergence of interventions of larger market actors such as town-based rice millers or agri-input companies which are offering new forms of arrangements (such as indirect contract farming arrangements) to farmers via brokers at village level. This generates a new domain of power relations.

■ 2.1 Credit and dispossession, a historical constant: the example of the Delta

The link between indebtedness and dispossession is not a new phenomenon in Myanmar. As briefly explained above, British colonial economic policies focusing on surplus production for exporting rice had a deep impact on Delta society. These policies were responsible for *“systematically (undermining) the comprehensiveness of exchange and the relative bargaining position of peasant clients – particularly in lowland areas most affected by colonial administration and market agriculture”* (Scott, 1972: 7). In order to achieve this surplus production, farmers had to rely on credit for investing, a phenomenon which brought with it the rise of the money-lending class of Indian Chettiars (from the south part of the Indian continent) which rapidly became the main provider of capital to Burmese cultivators. The imposition of British land-title laws enabled farmers to pledge land as collateral, and although the Chettiars had no interest in agricultural lands, they insisted on taking land as collateral.

With the closing of the agricultural frontier, the degradation of production conditions, and the incapacity of the administration to adopt measures to address these issues, an agricultural crisis emerged in the first decades of the 1900s. It was dramatically aggravated by the Great Depression and consequent crash of paddy prices, which led a massive number of farmers to insolvency (Adas, 1974b). It finally contributed to massive mortgage closures and land accumulation in the hands of an absentee landowner class that lived in the main towns instead of villages, developing high dependency relationships with tenants or sharecroppers. While most of these Chettiars returned to India following the independence of the

country, a few remained and even managed to reconstitute large holdings through the post independence period, as in Tet Tet Ku (see **Chapter IV.2**).

Despite the Land Nationalization Act promulgated in 1953 (accompanied by a redistribution of lands to small farmers), the dependency of farmers on money-lenders was also reinforced by government policies – especially compulsory rice procurement – combined to ensure a surplus production to supply governmental staffs, the army, and the urban masses. Provoking high indebtedness patterns, it led again to the concentration of landownership into the hands of few individuals as we saw in the first part of this chapter (1.2). We may also recall that this pattern was reinforced by village headmen acting as enforcers, who either directly benefited by this exclusion process and attained land, or who accessed indirect – financial – benefits by authorizing some persons to access land while excluding others.

■ 2.2 MADB, credit and indebtedness

Background information on MABD

In 1973, rural credit institutions (village banks) were dismantled in favor of a state-led ‘advance purchase’ system. The compulsory crop procurement was the vehicle of credit distribution. As such, the state provided advance payments on the paddy quotas to be provided by farmers. Although no interest was charged on the advance payments, the scheme represented a significant financial burden for farmers due to the low purchase prices set by the state, the fact that only part of the quota’s value was paid to farmers, and the important share collected by the state on the production.

The MADB was created in 1990 and replaced the Myanmar Agricultural Bank (MAB). It became the main source of short term and seasonal loans for agriculture. The re-emergence of MADB was linked with the reduction by two thirds of the state’s take in the compulsory paddy procurement in 1989 (from 30-40 baskets per acre, down to 10 to 12 baskets). According to the MADB law (1990), the aim of MADB is *“to effectively support development of agricultural, livestock and rural socioeconomic enterprises in the country by providing banking services”*. As such, with 11,200 village banks, it was given a wide mandate to provide bank loans to state-owned agriculture and livestock organizations, co-operatives, private persons and entrepreneurs in simple procedures. However, due to insufficient capital, it only provides seasonal loans to farmers. In 1993, the government closed the village banks, leaving only township branch banks. Since then, MADB’s outreach is very limited. Farmers must travel to the town or rely on the MABD village tract representatives who are not employed professionals but appointed villagers.

In 2012/2013, the MADB disbursed Kyat 557,846 million in agricultural loans to 2.26 million of farmers (average loan per farmer Kyat 246,835). 30% of the total loan amount was for the Ayeyarwaddy region, and nearly 90% of the total loan amount disbursed was for paddy, in line with the government's historical fixation on this crop. It has 220 branch banks all over the country and nearly 3,000 staff¹¹⁸.

MADB loans have very low interest rates (0.42% to 0.45%/month) compared to other formal and informal credit operators. Loan duration is of 4 to 7 months according to the season. Two seasonal disbursements take place per year in the studied regions.

- Only official farmland owners are eligible for the MADB loans. The loan amount is based on landownership:
- 100,000 MMK per acre of paddy lands, up to 10 acres (maximum loan size of 1 million MMK)
- 20,000 MMK per acre of *ya* lands, up to 10 acres (maximum loan size of 200,000 MMK). It is planned to increase to 50,000 MMK/acre in 2015.

Constraints of MABD credit at village level

Currently, according to this study's quantitative survey, MADB provides loans to 84.5% of surveyed landholders: 79.3% in the Delta, 88.3 % in the Dry Zone. The lower rate in the Delta is explained by the fact that two out of the five sample villages of the quantitative survey are settlements in 'forestlands' and therefore farmers are not eligible to MADB loans on such lands.

In the Delta, paddy farmers usually take loans from village money-lenders with high interest rates, ranging from 5% to 15% per month depending on the relationship between borrowers and money-lenders¹¹⁹. Even the formal credit sector (through MFIs) provides much higher interest rates (ranging from 2 to 5% per month as the price may include additional 'fees' and costs). For these reasons, we must acknowledge the government's initiative to provide loans to all landowners at very low rates through the MADB as representing a real effort to finance agriculture. However, loan management process between the township MADB branches and farmers suffers many shortcomings.

The first – already mentioned – weakness of the governmental credit scheme is the inadequate time frame in which MADB loans are disbursed to the farmers. It is not adapted to farmers' cash flow constraints and cropping calendars. For monsoon

118. MADB country report 2013.

119. Desperate loans (mostly contracted by the most vulnerable for the family's daily food needs) can even go up to 20% per day.

paddy, farmers in the Delta need to invest before or in the beginning of the monsoon period (last week of May, early June) to prepare the land cultivation for paddy. But MADB cannot manage to disburse the loans in time for all the farmers, notably because of lack of human resources. Hence, farmers usually take loans from village-based private money-lenders with high interest rates to make the necessary urgent farm expenses. As soon as they receive the MADB loan, usually between late June and August for monsoon paddy, they repay their debts to the private money-lenders. At that time, a very small amount of money is left in the farmers' hands. MADB loans have to be repaid in March of the next year. When the due date is passed, farmers are fined. MADB loans can be obtained two times a year in the Delta (i.e. for monsoon and summer paddy seasons). Summer planting season loans can be taken in December and should be repaid in May of the next year. Some farmers settle partially their monsoon loan (at least one third to two thirds) with the money from summer loan in December. While this issue seems to be just an administrative failure – late payment – it actually feeds into a market process (more expensive credit) and ends up enriching a category of landholders – the money-lenders – who themselves access large MADB loans and wield coercive market powers.

The second issue for the farmers regarding access to the MADB loans relates to the disbursement's conditions. As no collateral is pledged, farmers have to form Self Help Groups (SHG – *Wynn Gyee Choke Sa Nint* in Burmese) composed of ten individuals. If one farmer among the SHG fails to repay his credit in time, the remaining nine farmers are responsible for reimbursing the loan. In case they fail to do so, they cannot get a loan from the bank the following year¹²⁰. This generally results in a late payment of the loan in the next year. Thankfully, MABD rules changed in 2015: if one fails to repay in time, the others are not penalized. The late payer is given until March of the following year to repay. If he/she fails at that time, the other group members must repay the loan.

Finally, as in many cases regarding the law in general (in addition to the land policy framework), farmers have very limited (if not nonexistent) knowledge of *de jure* processes. For this reason, they remain dependent on local powerful individuals (village head, village clerk, for example), and the MADB's village tract representative. While the principle is that the MADB representative is elected by the local authorities (including the village tract headman, the 100 households leaders, and the elders) to represent the interests of the farmers and the bank, he is often appointed directly by the village tract headman. Indeed, the position is potentially lucrative and therefore envied. One of the MADB representative's tasks is to help the farmers fill the forms for obtaining the loan.

120. In 2012, this group size was reduced to 5 farmers but in 2015, it was reinstated back to 10 members. Repayment conditions and sanctions toward default groups are currently being revised by MADB to allow more flexibility.

This first process already includes an element of corruption: farmers who pay to obtain the representative's 'help' will receive the loan before those who cannot afford to bribe. In addition, as the representative is the only individual to link the township MADB with farmers at the village level, he is the focal person of the township MADB network of farmers, money-lenders, and brokers. For example, while the MADB provides loans of 1 lakh¹²¹ per acre up to a maximum of 10 acres per farmer, the MADB representative helps farmers owning more than 10 acres to artificially divide their holdings into different individual properties (generally distributed to the farmer's close family, wife, and children). This may have created distortions in the land registration process as well, with holdings artificially divided in the name of family members.

Another key role of the MADB representative is to ensure timely loan repayment. However, as explained above, most small and Agri-specialized small farmers (generally under 10 acres in the Delta) cannot avoid taking high interest rate loans from local money-lenders to compensate for the late disbursement of the MADB loans. Hence, part of the MADB loan is used in order to repay the high interest private loans. Consequently, and when coupled with unexpected low production rates (due to bad weather, rodents, pests), farmers may be unable to repay the MADB loan. In order not to be fined by the bank for the late payment, farmers either have to borrow money from private money-lenders (around 10% interest rate/month) or to seek the MADB representative's help. The latter finds arrangements with private money-lenders on big amounts of money with smaller interest rates (7%/month) to repay the bank in time. According to our interviews, in 2013, loans in one village of Mawlamyinegyun township borrowed from the MADB representative summed up to 40 million Kyats. 'Logically', part of the interest goes back to the MADB representative. Therefore, the money made available by the MADB at small interest finally benefits farmers little, as it is injected in a high interest rate loan system, hardly improving the farmers' financial situation (if not worsening it) but benefiting mostly the same wealthier local individuals. The powers at play in this process combine various factors, and at different stages of the loan cycle. One which concerns the whole loan cycle relates to regulation and the loan modalities (such as timing of disbursements and repayment, procedures and rules in loan application, the official role given to the MADB representative) which – we have seen above – favor the better-off farmers. In addition, the market also plays a crucial role, at different moments of the loan cycle. First, at the loan application stage: although there is no difference in market prices (the official MADB loan interest rates are the same for all households), the payment of bribes to the MADB representative to have priority access to the loans operates as a differentiation factor. Market and regulation are interlinked in the name of legitimation: it is moral

121. One lakh equals 100,000 MMK.

and even a question of honor to be a good borrower, and to repay loans in time. Indeed, late loan disbursements (due to the incapacity to provide incentives in order to access MADB loans first) fuels the risks of non-compliance to MADB loan conditions (such as untimely repayment over the previous season's loans).

This fuels a market of informal high interest loans, which benefits some households who managed to access the MADB loans and act as informal money-lenders. Force also enters the picture in case of repayment problems, where the village headman and the police may be requested to play a role to put pressure upon the defaulter to pay back.

■ 2.3 Delta: a stronger dependency on loans

The data below come from the quantitative survey of 1,129 households. Below, the term 'loan' may refer to both informal and formal loans. Over the total surveyed population, 65.7% of households have declared taking loans in the last 12 months. This rate is slightly higher in Delta (69.5%) than in Dry Zone (62.4%).

The majority (65%) of borrowers are landholders (having direct access rights), suggesting both that agriculture production requires credit and that landowners have better access to credit. This is confirmed also by the fact that loan amounts are correlated with landholding size, particularly in the Dry Zone.

In the Delta, frequency of loans is similar among landholding size categories with little variation, while there are very significant differences and links in the Dry Zone: only half of farmers owning less than 2.5 acres take loans. Frequency of borrowing gradually increases with landholding sizes, up to a maximum of 93% among farmers owning 10 to 15 acres. Beyond 15 acres, the loan frequency among households decreases.

In both study areas, there is a very significant link as well between loan amounts and total household income.

The frequency of loans taken in Delta is much higher for both landowners and landless.

- 94% of landowning households take loans in the Delta, against 80% in the Dry Zone. This can be explained by the fact that Delta landowners are mostly paddy growers. As such, they have more financing needs, since paddy requires more investment than most *ya* land crops, and they must manage tight time schedules for double cropping, which generates significant cash flow constraints.

- 53% of the Delta landless take loans, against 37% in the Dry Zone. This can be explained by the stronger cash flow constraints linked to Delta landless livelihoods (mainly dependent of season farm labor and fishing), by the patron client relationships between landless laborers and farmers (for whom landless work) which facilitates access to credit, and finally by the presence of MFIs/ NGOs which provide credit services.

Table 71: Frequency of borrowing of landowners and landless in Delta and Dry Zone¹²²

	Landowners				
	LOAN		No LOAN		Total
	Nb. HH	%	Nb. HH	%	Nb. HH
Delta	203	94.4	12	5.6	215
Dry Zone	282	79.9	71	20.1	353
Total	485	85.4	83	14.6	568

	Landless				
	LOAN		No LOAN		Total
	Nb.	%	Nb. HH	%	Nb.
Delta	166	52.5	150	47.5	316
Dry Zone	91	37.1	154	62.9	245
Total	257	45.8	304	54.2	561

Among the Delta landless who take no loans, the majority (57%) are from the poorest income category (less than 750,000 per year). Frequency of borrowing increases with the household income. In the Dry Zone, landowners who do not take loans (71 households) are mostly non-paddy farmers who own all key farm equipment assets (cart, pump, cattle...) and a motorcycle. A significant proportion (almost half, 31 households) also own less than three acres. As Dry Zone landless are more diverse according to specific villages conditions, it is difficult to characterize those who do not take loans.

122. All tables presented in this part are drawn from the quantitative study of this research.

Table 72: Dry Zone landowners households contracting loans (formal and informal) with regard to landholding size⁵

	LOAN			No LOAN			Total		
	Nb.	%	%	Nb.	%	%	Nb.	%	%
0.3-2.5	27	9.6	52.9	24	33.8	47.1	51	14.4	100.0
2.5-5	43	15.2	71.7	17	23.9	28.3	60	17.0	100.0
5-10	113	40.1	86.9	17	23.9	13.1	130	36.8	100.0
10-15	54	19.1	93.1	4	5.6	6.9	58	16.4	100.0
>15	45	16.0	83.3	9	12.7	16.7	54	15.3	100.0
Total	282	100.0	79.9	71	100.0	20.1	353	100.0	100.0

Chi-Square=36.3 dof=4 p=0.001 (Very significant) Cramer's V=0.321

Table 73: Distribution of households contracting loans per loans' amount and total annual incomes (TI) in Dry Zone and Delta

Total income (MMK)	Loan < 150,000	Loan 150,000 to 300,000	Loan 300,000 to 600,000	Loan > 600,000	Total
TI < 750,000	69	47	27	7	150
TI 750,000 to 1,500,000	51	81	60	18	210
TI 1,500,000 to 3,000,000	38	34	65	66	203
TI > 3,000,000	15	25	33	106	179
Total	173	187	185	197	742

Chi-Square=222.4 dof=9 p=0.001 (Very significant) Cramer's V=0.316

Loans amounts and number of loans

The following data are to be taken carefully, as bias may have been significant due to the sensitive nature of indebtedness.

Over households taking loans, 65% have declared taking one single loan, 30% two loans, 5% three or more loans, without major differences between the Delta and the Dry Zone. However, borrowed amounts are much higher in the Delta for both landowners and landless (700,000 MMK in average – 9.6 lakhs for landowners, 3 lakhs for landless) than in the Dry Zone (300,000 MMK in average – 3.6 lakhs for landowners, 1.6 lakhs for landless) – which can be attributed to the high number of paddy loans in the Delta.

Landless households' indebtedness has to be linked with the greater frequency of landless cultivators in the Delta (27% of landless) than in the Dry Zone (only 6%). For the Delta landless, borrowing is more frequent (63%) among those who practice farming, and there is a very significant link with the highest loan amounts and the fact of cultivating non owned lands. Indeed, 71% of landless who borrow more than six lakhs (21 households), have access to lands through temporary arrangements, suggesting that MADB loans are transferred under such arrangements to the tenants (as seen in **Chapter V.2**).

Table 74: Distribution of Dry Zone households per loans' amounts and landholding sizes

Landholding (acres)	Non réponse	L< 150,000	L 150,000 to 300,000	L 300,000 to 600,000	L> 600,000	Total
0.3-2.5	24	14	5	6	2	51
2.5-5	17	12	22	7	2	60
5-10	17	23	44	37	9	130
10-15	4	5	9	22	18	58
>15	9	1	13	17	14	54
Total	71	55	93	89	45	353

Chi-Square=102.7 dof=16 p=0.001 (Very significant) Cramer's V=0.27

The main sources of credit:

Table 75 shows that in the Delta the main sources of credit for landowners are MADB (79% of borrowers), followed by money-lenders (42%) and NGOs/MFIs (33%). Other sources of credit, even from relatives, are extremely marginal.

Table 75: Delta: Main sources of credit (both formal and informal) for landowning and landless borrowers in Delta

Delta credit sources	Overall borrowers		Landowners borrowers		Landless borrowers	
	Nb HH	% of HH	Nb HH	% of HH	Nb HH	% of HH
MADB	165	45%	161	79%	4	2%
Cooperative Bank	1	0%		0%	1	1%
Relatives	12	3%	3	1%	9	5%
NGO/MFI	141	38%	68	33%	73	44%
Brokers/millers	3	1%	2	1%	1	1%
Local money-lenders	191	52%	86	42%	105	63%
Total	369		203		166	

For landless households, money-lenders are the most frequent sources of loans (63% of borrowers) followed by NGO/MFIs (44%), then relatives (5% only). Other sources of credit are extremely marginal. In the Dry Zone, the main sources of credit for landowners are: MABD (88% of borrowers, 9% more than in the Delta¹²³), followed by money-lenders (27%), cooperative loans (23%), and relatives (15%). For landless households, the main sources of credit are money-lenders (42%), followed by relatives (28%), NGOs (14%), and cooperative loans (12%). Surprisingly, 8% have declared taking MADB loans, a fact that unfortunately cannot be explained by the study (see **Table 76**).

Overall, in terms of coverage and number of borrowers, money-lenders appear to be the main loan providers in the Delta (52% of borrowers), followed by MABD (45%) and MFIs/NGOs (38%). In the Dry Zone, MADB is the main provider, followed by money-lenders (32%), cooperative banks (21%), and relatives (18%). For Delta and Dry Zone landowners, MADB and money-lenders both rate as the main sources of credit, while for the landless, money-lenders are the main source of credit. This

123. As mentioned before, this difference is due to the fact that some farmers in Delta own forestlands that are not eligible to MADB loans.

shows once again the challenges faced by the credit sector to address the needs of this population. The quantitative survey cannot estimate the volume of credit provided by these different providers to evaluate their ranking but, for the Delta, MADB is clearly the main provider for landowners in terms of loan amount.

Table 76: Dry Zone's main sources of credit (formal and informal) for borrowers

Delta credit sources	Overall borrowers		Landowners borrowers		Landless borrowers	
	Nb HH	% of HH	Nb HH	% of HH	Nb HH	% of HH
MADB	256	69%	249	88%	7	8%
Cooperative Bank	78	21%	66	23%	12	13%
Relatives	69	18%	41	15%	28	31%
NGO/MFI	15	4%	2	1%	13	14%
Brokers/millers	1	0%	1	0%		0%
Local money-lenders	119	32%	77	27%	42	46%
total*	373	100%	282	100%	91	100%

There are important differences between the Dry Zone and the Delta. The recourse to money-lenders is much more frequent in the Delta (52% of Delta borrowers versus 32% of Dry Zone borrowers) while the frequency of borrowers taking loans from relatives is also much higher in Dry Zone. These findings confirm the already mentioned trend of stronger vertical links in Delta (patron/client, money-lender/borrower) and the stronger horizontal links in Dry Zone (more 'solidarity' among relatives).

In addition, the penetration rate of other credit services provided (NGOs and MFIs) in the Dry Zone (4% of borrowers) is much lower than in the Delta (38% of borrowers), where NGOs and large MFIs are more represented and have provided financial services in many villages for a longer time. This may have led Dry Zone villagers to turn to cooperative loans to compensate the needs.

The main reasons for borrowing

Overall, the most frequent reasons for taking loans for landowners in Delta and Dry Zone are the same: agriculture comes first (45%), followed by purchase of food (21%), the need to cover health costs (12%), and education costs (11%) (see **Table 77** and **Table 78**). Loans for the purchase of equipment and social events

are significantly more frequent in the Delta in both landless and landowning categories. As such, these reasons seem secondary compared to other urgent needs and suggest that Delta households take loans more 'systematically' (as part of the stronger patron-client system) and not necessarily for serious emergency cases.

Among landowners, the reason for taking loans for agriculture, loan repayment, health, or education costs have similar frequency between the two areas. Major differences are in frequency of taking loans for purchase of food, which is almost double in the Dry Zone (26%) than in the Delta (14%). This may be explained by the lower food self-sufficiency of Dry Zone farmers and thus higher expenditures for food (compared to Delta farmers who can often provide most of the paddy for the household's consumption needs).

Among the landless, the main reasons for taking loans are for buying food (39%), purchase of equipment (21%), and also agriculture (17%), which corresponds to those who have derived access rights to land. Here again, loans for buying food is more frequent in the Dry Zone (50% of the loans versus 33% in the Delta.). Loan repayment, health, or education costs have similar frequency between the two areas.

The major differences between landless and landowners are logical: frequency of purchase of food is twice more frequent for the landless (39% against 21% of landowners), while loans for agriculture are much less frequent among the landless. Another difference is the much higher frequency of loans for purchase of equipment among the landless. It may be assumed that the equipment may be bought for income generating purchases, but the qualitative survey indicates that this category can also include secondary items such as mobile phones which are needed in the case of migration. Another important difference is the fact that taking loans for health costs is extremely low (1%) among landless compared to landowners (12%). This shows that access to credit is a burden on one hand (because of inappropriate credit systems) but a 'privilege' on the other, as landless households are generally not considered as soluble by private money-lenders for loans covering high medical treatment's costs, or only at very high interest rates (above 20% per month).

Table 77: Purpose of contracting loans (formal and informal) among Delta households

Loan purpose	Total		Landowners		Landless	
	Nb HH	% of loans	Nb HH	% of loans	Nb HH	% of loans
Pay back a loan	23	4%	14	4%	9	5%
Buy food	110	21%	45	14%	65	33%
Agriculture	165	32%	136	42%	29	15%
Education	60	12%	34	11%	26	13%
Health	49	10%	48	15%	1	1%
Social Event	32	6%	17	5%	14	7%
Buy equipment	78	15%	27	8%	51	26%
Total Nb of loans	516	100%	320	100%	196	100%

Table 78: Purpose of contracting loans (formal and informal) among Dry Zone households

Loan purpose	Total		Landowners		Landless	
	Nb HH	% of loans	Nb HH	% of loans	Nb HH	% of loans
Pay back a loan	19	4%	13	3%	6	6%
Buy food	162	31%	112	26%	51	50%
Agriculture	221	42%	200	47%	21	20%
Education	55	10%	46	11%	9	9%
Health	45	8%	41	10%	3	3%
Social Event	5	1%	4	1%	1	1%
Buy equipment	20	4%	9	2%	11	10%
Total Nb of loans	527	100%	425	100%	102	100%

2.4 Land exclusion due to indebtedness

In both areas, 5.1% (Delta) and 5.4% (Dry Zone) of surveyed households claim having lost lands due to indebtedness, either by mortgage foreclosure, or by selling their lands to urgently repay loans. Although those rates are similar between the two regions, **Table 79** indicates that indebtedness is a stronger driver of complete land exclusion in the Delta than in the Dry Zone. Indeed, in the Delta, a large proportion (63%) of these households have become landless while in the Dry Zone, the majority (87.5%) are still landowners.

Table 79: Landlessness among those who lost lands due to indebtedness in Delta and Dry Zone

	Delta			Dry Zone		
	Nb HH	%C	%R	Nb HH	%C	%R
Still landowners	10	37.0	26.3	28	87.5	73.7
Became landless	17	63.0	81.0	4	12.5	19.0
Total	27	100.0	45.8	32	100.0	54.2

Chi-Square=14.1 dof=1 $p=0.001$ (Very significant) Cramer's V=0.489

The fact that in the Delta most money-lenders are large landholders makes credit a major factor of exclusion (see box below). Along this process, large landholders are able to accumulate even greater land plots, as seen in **Chapter VIII.7.3**.

BOX 19: GOVERNMENTAL LOANS, MORTGAGE, AND EXCLUSION (AYE YWAR, DELTA)

In 2010, UK who lives in Aye Ywar took six acres from Daw H in mortgage for the sum of 700,000 MMK, initially for a four-year period. Daw H needed that money for redeeming the previous MADB loan (300,000MMK in total at 50,000MMK/acre) of monsoon paddy and other expenses.

In 2013, after four years, Daw H could not afford to reimburse UK. They subsequently negotiated the sale of land use rights over two of the acres, at 450,000MMK/acre. UK paid 200,000MMK to Daw H: the total for the two acres less the mortgage amount. The agreement was made in front of the SLRD village tract officer.

Before contracting this mortgage, UK already had some experience lending money and foreclosing on land. In 2002, UK lent 70,000MMK to another villager, with a 50% interest rate on one paddy season, plus 35 paddy baskets. This villager needed the borrowed money and paddy baskets to pay back a government loan and fulfil the compulsory paddy procurement. After four years, this villager could not afford to pay back the loan to UK, so the agreement was to transfer over two acres of his land to UK.

As a whole, UK now owns land use rights, titled under Form 7, for 15 acres (including those from Daw H). In the midst of the titling process, Daw H tried to apply for LUC on all six of her former acres. However, the SLRD officer only issued the LUC for four acres, as he was aware of the mortgage issue, as well as a close friend of UK.

3. The village headman, cornerstone of exclusion processes?

Credit may appear to be a market matter, but as demonstrated in the sections above, it is underpinned by regulation, legitimation, and force. In all these dimensions, the village tract headman plays a crucial role. Under the current framework, the village administrator has taken on a new, informal power: the privilege of nominating the MADB representative. This extends his connectedness to the main source of credit available for farmers (and especially paddy cultivators – see **Chapters VIII.2.2 and 2.3**).

Indeed, since the British colonial times (whether we call this character *thugyi* or village tract administrator), the village tract administrator stands as the last state's representative at the local level. Furthermore, in many places and especially in the Delta, the following observation made by Myat Than about a village in Bago region in 1980, first studied by Pfanner (1962), could be taken almost word for word as reflecting our findings in the study:

“Mayin (village) has borne witness to three consecutive governments since 1960. (...) Although the administration system has changed three times, the leadership representing the village elite has not changed significantly. The president of the village (People's Council) in 1978 was the son of the former headman and the president of the People's Council in 1980 was his cousin. The leaders live in relatively better houses, possess better education, have contact with township leaders and they are able to devote time to village affairs by often traveling to town to attend meetings.” (Mya Than, 1987: 80-81)

Indeed, after five consecutive governments, among the villages studied in both the Dry Zone and the Delta, most of village headmen are sons or cousins of the previous ones, and that their 'connectedness' remains much the same.

■ 3.1 The village headman in pre-2012 land management

While the village headman's history and the continuity of the village headman should be traced back to the colonial rule (as we already have seen in previous chapters), we mainly refer here to 1988 onward, which witnessed the creation of Village Councils (Law and Order Restoration Council and later Peace and Development Councils), whose chair at the village level – i.e. the village headman – acted as the most local representative of the state. It was also under this period that the General Administration Department (GAD), with which the village headman has a close relationship, was created, with only few changes through different governments, including the current NLD one (Kyι Pyar Chit Saw and Arnold, 2014: 11). Nevertheless, as just highlighted, village leadership presented more or less the

same features from long before and after 1988. In the SPDC period (1997-2010), three main institutions were responsible of the implementation of agricultural policies at the village level (adapted from Thawngmung, 2003: 303-304).

- The township People Development Council (PDC): the most powerful body, appointed with military staff, which directly supervised the civilian village PDCs' chairman.
- The Myanmar Agricultural Services (MAS), a department of the Ministry of Agriculture and Irrigation: theoretically responsible of providing extension services through subsidized agricultural inputs, it served mostly as a policy-implementing body (for example defining the quota to be sold to the government for townships and villages).
- SLRD: another department of the Ministry of Agriculture and Irrigation, SLRD officers' main duties are collecting agricultural statistics, assessing land revenue and land rent, registering deeds, and dealing with other land administration duties.
- The Irrigation Department: the responsibilities of this department grew especially after 1990 and the introduction of the summer paddy policy, supported by various irrigation programs, notably in the Dry Zone.
- The Myanmar Agricultural and Rural Development Bank (MADB): serving as an instrument for rural savings and loan disbursement

Although each of these departments had extension workers to supervise their different tasks at the village level, those staffs would actually delegate most of their responsibilities to the village tract headman, from whom they would record only the information needed to report to their superiors (ibid: 312). On the other hand, the headman, who was not receiving any salary at that time, besides being involved in his full-time livelihood as a farmer, would bear the burden of receiving agricultural extension workers, providing them with lunch, etc. This peculiar situation, as the state's political broker, laid the ground for some headmen (yet not all) to find all possible ways of taking advantage of their position:

"Village chairmen may earn money from imposing fines on law breakers, charging fees on land contracts, and on visitors' registration. He may supplement his income by taking bribes from his villagers in return for covering up their activities that are considered illegal from the central authorities (one example would be under-reporting cultivated acres when it comes to selling the procurement quota). He could also recover his expenses by passing on the costs to his villagers. He may also get subsidized consumer products or agricultural implements and inputs with the permission of the township ruling authorities. (Ibid: 309)



Figure 44: Roles (informal in green, official in orange) of village headman in land management under procurement policy

Hence, village headmen – still depending on their own personality – could be tempted to take full advantage of their position, not only to earn revenues, but also to get access to local resources, including land – as seen in the case of one village headman who managed to accumulate large tracts of land through the procurement policy (Chapter VIII.4.1). This power can be explained by the central role of the village headman in organizing land management: by liaizing with the different departments, and by transforming informal practices (such as land transfers as seen in VIII.1.3) into formal ones (such as changing

the name in SLRD's registers) through different arrangements. This central role is illustrated in the figure below. The village head played a role in supporting the enforcement of the paddy procurement. In the event of farmers unable to fulfil the required quotas, the village head as chair of the village tract land committee would facilitate land sales, disguised in the form of let allocations to persons under the 'waiting list'.

3.2 The village headman in the midst of land reform

Through the constitutional reform of 2008, tasks and responsibilities of the village tract headman (now officially called the village tract administrator) suffered little changes. It even seems that his central position has been reinforced, yet with a few changes regarding his status. Indeed, technically the village headman is still not a government employee, as he receives only subsidies from the Ministry of Home affairs through GAD (Kyi Pyar Chit Saw and Arnold, 2014: 34).

On the other hand, *"village tract administrators are the anchor of the GAD's vertical role in public administration, and they effectively act as an extension of the GAD's township administrator, who supervizes them"* (Ibid: 34). Yet, the same feeling of being 'caught in the middle' of the state administration on the one hand, and local legitimacy on the other, may remain even blurrier since GAD village tract clerks (direct employees of the GAD who can putatively ascend the administrative scale) act as the secretary of non-employed-village tract administrators.

Finally, the headman is the chairperson of all village tract committees (Ibid: 34). Among those committees, the Village Tract Farmland Management Body (VLMB) created after releasing the new Farmland Law 2012, is in charge of regulating land use, land transfers, registration, land use rights and related conflicts, and Scrutinizing requests for changing from prescribed crops to another, among other responsibilities (see insert below). In other words, the VLMB is in now in charge of all farmland management related matters.

Hence, when it comes to the most visible impact on local land reform, that is the titling process and the issuance of Land Use Certificates (LUCs), the role of the headman is even further enhanced. Indeed, as seen earlier, the headman had a crucial role in facilitating transfers of land use rights at a time when these transfers (apart from inheritance) were illegal. The headman was the main stakeholder linking village-based land tenure with relevant authorities, especially the SLRD. We have seen that such arrangements generated a lot of conflicts through the land registration process.

Yet, as shown in **Figure 45**, those supposed to record and redress land conflicts (notably arising from ‘informal-legal’ land arrangements) and those involved at the origins of those conflicts are the same people, namely the village tract administrator, the GAD clerk, and the SLRD staff. By trying to overcome challenges brought by land and agricultural policies, village headmen would provide convenient arrangements to the farmers (with the caveat that the headman had to have his interest served in such arrangements as well), but these would often turn against farmers at one point (Thawngmung, 2003: 311).

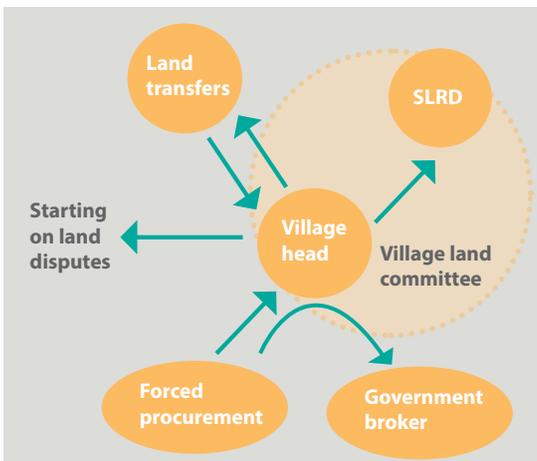


Figure 45: Continuity: the role of the Village Headman under the new land framework, against historical background

What is problematic is that the same story continues today. For instance, when it comes to farmland rental agreements done with Chinese investors in the Dry Zone, interviews show that the headman is often acting as an agent to negotiate the rental agreements, and legitimizing these transfers in the eyes of the community. Yet, the new land law states that “A person who has the permission

BOX 20: COMPOSITION AND TASKS OF THE WARD/VILLAGE TRACT FARMLAND MANAGEMENT BODY *

Composition

1. Ward/Village Tract Administrator	Chairperson
2. Ward/Village Tract	Clerk Secretary
3. Settlement and Land Record Department	Clerk Member
4. Elected farmer representative	Member
5. Elected influential elders <i>yat-mi-yat-pha</i>	representative Member

Roles and Responsibilities:

1. Recommendation and application of land use right to the Township Settlement and Land Record Department within 30 days after acceptance;
2. Farmland sale, mortgage, rent, exchange and transfer has to be contracted with the evidence of village farmland management body;
3. Recording of users who have received land use rights permission and save the documents of land use right registration form (Form-11);
4. Monitor land use right users to follow the rules of land use rights and submission of reports to Township Farmland Management Body to take action;
5. Investigate and decision making of land disputes;
6. Supervise to follow the decision of Farmland Management Body decision making during farmland dispute;
7. Supervise not to transfer the land from land use right users to foreigners or foreign organizations and if found out, submit the case to Township Farmland Management Body for taking action;
8. Filtering and submission of cases which applied to change seasonal crops to perennial crops;
9. Filtering and submission of cases which applied to use farmland for other purposes;
10. Manage not to destroy pastures and common land;
11. Submission of cases of virgin land which is closest to the village to the Township Farmland Management Body;
12. Investigation and coordination of virgin land dispute with Farmland Management Body; and
13. Implement the activities assigned by Central, Nay Pyi Taw Council, State/Region, District and Township Farmland Management Body.

* Reproduced from Kyi Pyar Chit Saw and Arnold, 2014:52

of right for farming should not sold, pawn, lease, exchange or donate his/her land to any foreigner or organization involving foreigner(s) without the permission of the State/region Government". The proposed land rental prices are high and farmers are quite tempted by such an easy source of income. Once again, village tract headmen, by finding arrangements for the 'sake' of farmers' livelihoods (power of legitimation), and for the sake of their own economic interest as brokers (power of market) put the farmers in direct threat of being prosecuted for not complying with the law. The same principle applies for village tract administrators closing their eyes on land use changes from seasonal to perennial crops (for *Thanakha* trees in Dry Zone for instance), another infringement to the new land law.

■ 3.3 Linking the different dimensions of exclusion

We may conclude this chapter by showing how, under the new land law, village tract administrators are more than ever installed at the crossroads of the 'powers of exclusion'.

In conclusion, local land issues show that whatever the reforms may be promulgated (even as part of a democratization effort), few changes will happen in practice without greater attention to local governance. It is critical for the reforms to be effectively implemented on the ground. The figure of the headman is central in acting as an interface between customary and statutory systems – but also in using his privileges to provide access to lands through his networks rather than in a fair manner.

Furthermore, the involvement of the same members of the village elite (i.e. elders known as *lugyi* and *yet-mi-yet-pha*) in committees directly challenges the adequacy of government structures put in place to administrate – including but not limited to – land issues. Indeed, such committees created to support President Thein Sein's 'people-centered development'¹²⁴, are merely deferring to the authority of the village leader, the GAD clerk, or the SLRD officer, pointing to the administrative irrelevance of formal state structures, regardless of the government in power.

In short, if the government is genuinely seeking change and aiming at improving land governance and land tenure security, it should address this critical issue of local governance. The power of the headman would need to be regulated through mechanisms allowing checks and balances.

Accountability to citizens by authorities in charge of land administration is not a spontaneous process. Impact at the local level will remain a critical issue if

124. U Thein Sein, 26 December 2012. Speech in Nay Pyi Taw.

concrete mechanisms for transparency and accountability of the actors who will be in charge of translating the legal framework into practices on the ground are not clearly defined in the new legal framework. Such measures would not only protect the least politically represented stakeholders, but would provide fertile ground for restoring citizens' faith in the state on the ground.

IX. Conclusions and recommendations

1. A century and a half of uprooting Burmese agrarian society... for its own interest?

Since the annexation of Lower Burma by the British in 1852, the reforms that affected Burmese agrarian society seem to share a common rationale: helping farmers shift from tenancy to ownership. This seems paradoxical as at the beginning of British administration of the country, the 1891 census recorded that the bulk of the population was already landowning cultivators (64%), with only 1% landlords, 26% tenants, and 8% landless agricultural laborers. Indeed, in the pre-colonial period, the dominant rural stratum in Upper Burma was composed of hereditary headmen who appear to have exercised a proprietary right over all the lands in their jurisdiction and who ruled self-sufficient agricultural communities of freemen known as *athis*. Land was organized on a communal basis and access to such lands had been subject to close headman supervision (Lieberman 1991: 27). Whether freemen or bondsmen (working on royal or religious land), farmers were in fact highly integrated in a relationship to local patrons (headmen, crown officers) that would ensure their protection both in social and economic terms.

And so, in contrast to the putative British goal, the last 150 years has actually been about undoing patron-client ties for diverse reasons, the first and foremost being systemizing the collection of taxes for the state on an individual basis. What was long established as hereditary rights on land through the concept of *dama-u-gya* was interpreted and transformed into individual claims on land, and land turned into a commodity (or at least something that can be used as a collateral for loans), beginning with the British-introduced *ryotwari* system¹²⁵. The country's administrative division into village tracts marked the rise of the village headman who became a local elite backed by the colonial administration. The integration of rice production into international markets and its subsequent monetization and value chain integration contributed to a fragmentation of former comprehensive patron-client relationships. As a whole, the social value of being an agriculturist faded at the profit of the economical one, with landlords and money-lenders overturning legitimate headmen and patrons. As a result, by 1930 one third of the total cultivated land had fallen into the hands of non-agriculturists and one quarter held by absentee non-agriculturists.

125. An individual based system where revenue settlement was fixed directly with individuals.

The 1948 nationalization act and subsequent policies (Land Nationalization Act 1953; Tenancy Act and Rules 1964) aimed at reversing this situation to create a body of peasant-proprietors rather than tenants. But the Burmese agrarian society had already been uprooted from its sociocultural framework¹²⁶, and the closing of the agrarian frontier (the most fertile land being already cleared and cultivated) together with the 1930s Great Depression had left many peasants without the financial capacity to undertake cultivation and cope with occasional crisis (pests, weather). Not only was the redistribution of land under the Land Nationalization Act poorly implemented (with only 17% of all cultivated lands nationalized), but harmful policies such as the compulsory procurement of a fixed quota of harvested crop – particularly paddy – (at a fixed price) also weakened small and middle farmers (under 16 acres for paddy cultivation) while benefiting bigger ones. In the studied villages, tenancy is actually low: an average 16% of landless households of both zones work land through temporary arrangements, amounting to 13.5% of total farming households (households with permanent land use rights and landless working land through temporary arrangements). More worrisome, however, is the average rate of landless households: it reaches almost 50% among the two zones (with rates as high as 80% in Pay Chaung village, Kyet Shar village tract of the southern Delta). In 150 years, if we draw on the British census of 1891, the body of landless laborers jumped from 8% to 50% of the total population¹²⁷.

In 2012, the new Land Law, a reform *“in the interest of the entire people”*¹²⁸, came to sanction the pre-existing system based on individual land rights by distributing Land Use Certificates (LUCs) and legalize transfers of land use rights. This reform did not much change the on-the-ground reality of land tenure and land dynamics, since farmers did not wait for formal reform to sell, rent, or mortgage their land (despite the legal ban on such transfers prior to 2012). LUCs are supposedly bringing more security by legalizing these transfers, yet many practical barriers remain, notably when it comes to divide an LUC over a plot of land into two or more pieces. But most of all, the precariousness of land tenure in Burmese lowlands lies in the system itself rather than the modalities of its implementation.

From the misconception of the British regarding the organization of Burmese agrarian society, to Burmese governance whose *“policies (were) inclined toward production increase for their own sakes while paying rather less attention to farmers’ income and welfare”* (Fujita and Okamoto 2006), the common point is the top-down

126. Dry Zone farmers better resisted the impact of such change thanks to a greater historical depth than the Delta society that was principally developed through the British colonization.

127. 46% nation-wide according to LIFT (2012). However this takes into account ethnic upland areas under customary land tenure where landlessness is much lower (and sometimes nonexistent) than in Burmese lowlands.

128. According to a speech by Vice President Dr Sai Mauk Kham (2011-2015) introducing the land reform in May 2012.

nature of reforms caring about production over welfare.. It is striking to read that intra-village land conflicts after the advent of British rule were of two main types: the division of land among heirs and redemption of mortgaged land (Than Myint-U 2004: 232)... In 2014, following distribution of LUCs, conflicts observed during this study were of the same nature. Although the division of land through inheritance did not bring that many issues under the 2012 reform, previous arrangements on land use rights that were often done on an oral basis were challenged by formalization. The distribution of LUCs indeed rekindled old conflicts (such as land transfers forced by farmers' incapacity to deliver the compulsory quota of crop to the government) and created new ones (notably between parties involved in mortgage arrangements). In other words, both British and 2012 reforms brought into light the complexity of formalizing – allegedly in order to secure – land tenure with top-down policies, especially when little is done to understand local realities. In fact, one may question the actual contribution of LUCs to land security. Farmers in Burmese lowlands were not lacking documents formalizing their claims. Yet, farmers have always been at threat of arbitrary land confiscations by the state. In that sense, LUCs do not seem to provide more security than the previous documents. However, it will surely lead to more insecurity to the farmers who have not received LUCs. Hence the very purpose of this study: to provide a better understanding of land dynamics at the local level and propose, on this basis, a new reading of issues faced by agrarian households (farmers and landless) in these days of reform.

2. Land access and livelihoods' security: does the problem lie in land tenure?

As explained above, Burmese agrarian society sustained a radical change through 150 years of 'battle against tenancy' that ultimately produced a large body of landless households (46% nationally¹²⁹; 62% among Delta studied villages, 41% in Dry Zone villages). Tenancy is often considered a precarious state of land tenure, to which permanent individual ownership, and later on land titles, are often opposed as the paramount of land tenure security. However, Lavigne-Delville (2006) warns us against confusing land tenure security and private ownership, or against thinking that the nature of the rights (e.g. formal or informal, permanent or temporary) defines land security. Land tenure security means that legitimately held rights on land cannot be questioned without a sound rationale and proper conflict resolution mechanism. If this definition is accepted, then land tenure precariousness relates to whether households having claims on land have fear that those rights will not be sustained in the long term. Based on this, what does the current study tell us?

129. LIFT 2012.

■ 2.1 Access to land and livelihoods security: a different relationship in Delta and Dry Zone

In both the Delta and the Dry Zone, agriculture and access to land are a crucial part of most rural livelihoods. However the study reveals that strategies and trajectories over land access are different between the two areas.

Building on the discussions in **Chapter VII.6** and **VII.7**, the overall picture tends to show that access to land in the Delta is a basic requirement to secure households' livelihoods. This is well illustrated, on the one hand, by those households having permanent land use rights on small surfaces (less than 10 acres and more often between 2.5 and 5 acres) that do not rely on agriculture for their primary income but for whom land acts as capital (and a guarantee in the perspective of contracting loans) enabling them to diversify, notably into animal husbandry. On the other, there is a clear distinction in terms of incomes and savings between landless farming households (27% of surveyed landless households in the Delta) accessing land through temporary arrangements and the rest of landless households. In other words, access to land, even through temporary arrangements (sharecropping, rent) is a way to foster mobility towards the upper stairs of the Delta's socioeconomic ladder.

In the Dry Zone, socioeconomic mobility is much rarer, with those in the well-established farming households category owning large surfaces (over 10 acres) when reaching the age of 40 to 50 years old – although the study indicates that they start their agricultural trajectory with small holdings (around 5 acres) that they expand with capital derived from income diversification (notably in off-farm activities). The most vulnerable are those struggling to make the best out of low quality lands (less fertile, no access to irrigation). Interestingly, landless households accessing farmlands through temporary arrangements represent only 6% of the total surveyed landless households (against 27% in Delta).

This first shows that the situation regarding access to land and livelihoods security in the two areas is not the same. In the Delta, temporary arrangements (a form of tenancy) are an important way to secure later access to permanent land use rights¹³⁰. Besides, the study also tells that farmers not able to cultivate their entire paddy lands in summer contract closely-linked landless households to work part of their land. Hence in the case of the Delta, temporary arrangements that are often considered 'insecure' are actually an important component of an agricultural trajectory towards access to permanent land use and in a wider sense to livelihoods security. In the Dry Zone, the situation tends to support the fact that access to permanent land use rights is a *sine qua non* condition to secure land access. Yet, the quality of land is a major factor in terms of livelihoods security.

130. This is especially true for landless households working land under familial sharecropping arrangements.

Therefore, in all cases, the land tenure framework seems to be effective in securing one's land use rights, even derived rights (temporary arrangements), at least at the village level (and for intra-village arrangements). Land tenure insecurity over the past 60 years mostly pertains to other fields than land tenure itself. In the Delta, the continuous control exerted by the government on rice production, accompanied by predatory policies such as compulsory rice procurement, created a highly unstable situation in terms of tenure. A great part of the land market was created by smallholders opting to sell their land when they anticipated foreclosure due to the fact they were unable to procure the fixed quota of rice. According to the quantitative survey, an average 9% of current landless households once had access to permanent land use rights that they lost over the last 25 years in the Delta, against 3% in the Dry Zone. The Dry Zone seems to suffer from livelihoods' insecurity with causes that are not related to land tenure insecurity. Indeed, the high unpredictability of rainfalls leads farmers to diversify while 'bidding on weather' (*ya thi u thu laung kasa*) notably thanks to intercropping and relay cropping: such that in the case of expected rainfalls, high value cash-crops bring extra incomes, while part of their land devoted to lower-value yet resistant crops such as sesame or sorghum guarantee a minimum income and/or contribution to self-consumption needs from their land. The low availability of fertile lands and uneven access to irrigation – and where irrigation is available, poor maintenance of systems and over-exploitation of available water sources dominates – contribute to undermining the potential of the region's agriculture. On the other hand, demographic pressure in the absence of an agricultural frontier seems to be leading to land fragmentation and shrinking landholdings.

■ 2.2 The need for deeper reforms for improved access to land?

If land use rights – in lowland areas at least – are considered secure under the current land framework, then land access is probably the main cause of concern for many households. Discussion in **Chapter VII.6** reveals a struggle between different socioeconomic classes for accessing and retaining access to land. Exclusion processes among the two zones are again different. In the Dry Zone, stronger social organization implies that farmers have long developed strategies to keep and reproduce their socioeconomic situations, including intra-class marriages, differential inheritance patterns directed at reducing land fragmentation¹³¹, and the tendency to secure non-farm livelihoods for part of their children. In the Delta, the capacity to access and accumulate land mostly pertains to the households' connectedness with authorities (village tract headman, Farmland Management Committee, or SLRD officer) although socioeconomic mobility (the capacity to make one's path to permanent land use right ownership and to, conversely, lose

131. Inheritance involves a differential distribution among siblings of the families' capital between agricultural and non-agricultural assets, rather than an equitable repartition of land between heirs (see **Chapter VIII.1.1**).

such ownership) is overall higher than in the Dry Zone, a fact reinforced by a past of predatory policies. However, not all agricultural landless households are in a precarious livelihoods situation, and not all are necessarily excluded from accessing land. According to the analysis and with the precautions stated in **Chapter VII.7**, we may consider that about 27% of total households surveyed in the Delta need to access agricultural land, against 18% in the Dry Zone. These figures take into account the households' life trajectory (the fact that currently young landless households may access land later¹³²) and that not all landless households rely on on-farm work for securing their livelihoods.

Yet, how to provide land for those households excluded from accessing agricultural land? The current reform already provides for the restitution of land unjustly confiscated under previous governments. However, the redistribution process itself is proving cumbersome, since confiscated land is often currently being cultivated by other farmers who have made contracts with current landholders. Indeed, several transactions may have happened between the first case of confiscation and current land users, so determining the rightful owner or beneficiary would necessarily be difficult and conflict-ridden without a broader and robust compensation scheme. Providing landless households with vacant lands classified under VFV is an option, theoretically. However, in the Delta, those are generally areas with less productive lands (deep water paddy areas, salt water in dry season, prone to flooding, etc.) and their actual vacancy may also be questionable in many cases: in other words, what appears on a map as VFV in reality is land on which people are currently living and working. Therefore, an agrarian reform including that places a ceiling on agricultural holdings determined for each land type and associated potential productivity may be the only way to even the situation regarding land access. However, this seems unlikely to be feasible without building strong public consensus on wealth redistribution and without reforming land governance institutions down to the village level.

3. Improving the current land reform

In regards to Myanmar's lowland areas¹³³, the current Farmland Law (enacted in 2012) comes with two major changes which are, on the one hand, the right to sell, exchange, mortgage, and lease the land and, on the other, the provision of – supposedly – updated Land Use Certificates (LUCs). The rationale underlying this reform is thus deeply grounded in the perceived necessity to formalize land use rights under an individual property framework so as to secure individual land use

132. See this chapter, part 5.3.

133. The current Farmland

rights. To support the reform's implementation, different administrative bodies have been put in place in order to regulate the land titling process, i.e. by clarifying claims and resolving conflicts. Although the overall idea of securing land use rights is highly welcomed, many shortfalls lie in the process, beginning with the very idea of formalizing. Many debates at international level already long taken place surrounding the idea that land tenure security can and must be secured through the formalization of land use rights. In this regards, a very well-grounded study warns us against the fact that *"there is no mechanical link between formalizing land rights, security of tenure, economic development and social peace"* ('Land Tenure and Development' Technical Committee, 2015: 12). In addition, if land tenure is to be secured through formalization of land use rights, then some key principles should be followed:

Written titles can help secure tenure if:

KEY PRINCIPLES FOR SOUND FORMALISATION OF LAND RIGHTS

1. The formalization procedure matches with the reality of land rights,
2. Responds effectively to the problems and needs encountered by different land users,
3. Enables the state to recognize land users' legitimate rights or authenticate their agreements,
4. The formalization procedure is accessible and effective,
5. Is part of an institutional environment that is sufficiently interconnected and reliable to deal effectively with the plurality of norms and authorities,
6. Land information is kept up to date, so that people benefit from using the legal mechanisms,
7. And the institutions responsible for administering rights fulfil their responsibilities.

Source: 'Land Tenure and Development' Technical Committee (2015: 33)

Bearing these principles in mind, discussion and recommendations are provided below for improving the current land reform.

3.1 A formalization process adapted to the reality of land rights

Approximately nine million LUCs were delivered throughout Myanmar within a very short time frame. This pace of implementation was only made possible because the land registration was done based on existing land administration documents such as land tax receipts, farmers' booklets, Form 105, and cadastral maps which were not necessarily updated. The haste of the process led to some breaches in the procedure and very limited field surveying and verification. Consistency between actual landholders and those receiving the titles, and registered surface areas

remains an issue. In addition, the study shows that papers are often less important than the legitimacy acquired by the testifying local 'authorities' (headman, elders, and sometimes only relatives or neighbors of the same village). Arrangements made at the local level, according to a proto-customary land tenure system (where local arrangements with local representatives of the authority significantly bypass the legal system), generally run smoothly.

Most conflicts happen due to individuals who take advantage of the existing discrepancies between the law and local, informal practices for their own benefit¹³⁴. This is well illustrated by the LUC issuance process, which, performed hastily, created a new arena for people to revive old grudges created by past policies, but also gave room for many intra-village conflicts. Conflicts arose notably over local arrangements (*le pyan ngwe pyan* for example) caught in the middle of 'stacked' contradicting laws: LUCs now legalize temporary arrangements (such as mortgage or sharecropping) although Act 64/1 still provides a cultivator with a claim on land if the latter has been working that land for more than five consecutive years. As shown throughout this report, land transfers were already actively taking place despite the legal ban under the previous land framework. That said, the LUCs issuance process, which proved particularly challenging to implement within the set time frame, may be considered as a snapshot of an on-going process of land consolidation and fragmentation processes. Although the current law states that any changes in the status of a land use right, such as when it is encumbered with debt, transferred, or inherited, must be properly registered, evidences on the ground indicate that the cadastral maps may be already greatly outdated. Access to land administration bodies in charge of formalizing land use rights transfers are not accessible for most farmers who, besides, have a very limited knowledge of the legal framework.

■ Recommendations

One general and essential recommendation is to conduct a review of existing laws in order to identify contradictions potentially weakening security of land use rights in order to produce a comprehensive and consistent land framework. This review should not only be a desk based legal review but should include fieldwork to compare with the actual practices on the ground. This would then enable to provide the insights to formulate an umbrella land law.

More specifically on land administration issues, it is proposed to:

- Conduct a review of the 2012 land registration process in order to identify gaps and prioritize how those gaps will be addressed so that public confidence can be improved.

134. See for example the case of 'Chinese watermelon' rental contracts, arranged by the village administrator but putting farmers directly in illegality (see VI.3.1).

- Accessible and affordable deed registration procedures need to be set in place in order to record land transfers and update land records properly. This means simplifying modalities for registering land use rights transfers. A single administration body accessible at the village level should endorse the process of registering land use rights transfers, land use rights subdivision and consolidation, and land use change, with a set process and non-prohibitive fees.
- A land taxation system (including annual tax, transfer tax, betterment tax¹³⁵) is probably the most efficient way to secure land rights, have updated registers, and reduce speculation while raising revenue to sustain sound land administration services.
- Capacity building of government institutions that are involved with land at local levels (DALMS, DoF/MONREC and GAD) is also necessary so as to improve their understanding of land-related laws.
- Provide farmers with knowledge and clear messages (rights and duties) about the Farmland Law. Land registration needs to be accompanied with legal awareness information campaigns in order to improve communities' understanding of land laws and related procedures.
- Set a clear procedure for subdivision (and consolidation) of land use rights.

3.2 Mapping and zoning: reflecting land use practices on the ground

There are many discrepancies between the actual use of lands and their official classification under the legal land categories. Much cultivated land in lowland areas – not to mention upland *taungya* and shifting cultivation areas – remains classified as other land uses, often as forestland or fallow, vacant, and virgin (VFV) land. In many cases, this is not due to recent illegal encroachment. In the case of the Delta, non-registered farmlands were cleared along the agricultural front at latest 10 to 20 years ago and are currently cultivated by long-established farmers. In the case of the Dry Zone, greening projects led to classifying previously cultivated lands as forestlands. In both cases, farmers have often managed to maintain their use rights informally through various arrangements.

135. Annual tax on land could be defined so as to discourage speculation, while not being a burden for smallholders. However, it still needs to be an amount sufficient enough to encourage previous owners to declare their transfers so to avoid paying the taxes. Annual taxes on farmland are still derived from the British colonial framework with a set 6 MMK/acre tax. In many instances, GAD clerks prefer to pay tax themselves rather than bearing the cost of traveling to collect taxes. Transfer tax for permanent transfers (inheritance, sale) is to be small so as to encourage people to register their deeds. Finally, betterment tax is a tax on the added value from the sale of lands would need to be relatively high. This would help to mobilize revenue from speculative actions.

The previous government launched a nationwide initiative announced in early 2013 through a Presidential instruction to reclassify land in order to reflect current realities on the ground. The main objective has been to collect accurate data of villages and households that have settled and occupied reserved and public forest areas for a certain length of years and designating them as new villages. Through this policy, the forestry department has said that 1,681,667 acres have been converted into farmland. Despite these announced measures, concerned farmers have not received LUCs yet and many households in the Delta and the Dry Zone still cultivate land classified under forests and are therefore facing land tenure insecurity. The lack of coordination between the different institutions in charge of, respectively, farmlands, forestlands, and vacant, virgin, and fallow lands is evidently part of the issue. This issue highlights the need to move from a system in which each government agency is perceived as the 'owner' of respective land categories to a custodianship model in which there would be a single land-agency for administration of lands¹³⁶.

■ Recommendations

- Establish a clear mechanism for reclassifying areas of land to match with their actual uses and protect existing land tenure claims of rural farmers.
- Explore options for a nationwide system of land classification/zoning based on participatory land use planning at national, state/regional, district, and township levels, and more importantly at the Ward/village tract level.
- Explore the option of establishing a single land agency for the administration of lands so as to reduce duplication and to improve efficiency of land administration and management.

■ 3.3 Empowering land users through full disposal rights

As shown throughout the report, there are several discrepancies between farmers' needs, their practices, and the legal restrictions on land use. In many cases, these discrepancies hinder farm productivity and farmers' resilience to shocks. The former restrictions on land use rights actually remain, highlighting the contradiction between the progressive opening of the land tenure framework and the broadening of land use rights, on one hand, and the government's enduring focus on paddy – the staple crop constituting Myanmar's national identity – and its tendency to control land use for paddy production, on the other.

As such, crop choice is still highly hindered in Myanmar by the current Farmland Law, constraining farmers' disposal land use rights. Some of the prescriptions on land use mentioned in the LUC (Form 7) are inadequate and

136. This does not exclude the involvement of concerned line ministries in land use related issues.

lead farmers to unenthusiastically but deliberately 'break the law'. For example, while many Dry Zone smallholders are highly interested to diversify with drought resistant cash crops such as *Thanaka* trees, they must officially request authorization to central level for planting perennials on *ya* and paddy lands, as per the law. In addition, restrictions on fallow periods¹³⁷ are not always relevant. For example, in the Dry Zone, improved fallow systems with multi-purpose trees could help increase soil fertility and agriculture productivity while delivering other benefits (soil and water conservation, production of fire wood, income generation through commercial species etc.). If farmers follow these legal restrictions they negatively impact their livelihoods; but if they violate them, opportunities for corruption and abuse of power from village leaders and village tract authorities towards the 'incompliant' farmers emerge. In addition, some of the adherence conditions are prohibitive in terms of transactions costs (such as the high costs attending the requirement to submit crop change requests to Union level), further increasing opportunities for corrupt practices. Finally, the sanctions for non-compliance of these restrictions may generate land insecurity as some (fines, prison sentences) are excessive and can even result in loss of lands.

■ Recommendations

- It is urgent that farmers be given full disposal rights on the choice of crops, including for perennial crops. They are the most suited to make optimal decisions to enhance their livelihoods and land productivity, and respond to market dynamics.
- Extend the land use categories over which tenure can be secured by simplifying the land use classification system and integrating into the farmland category uses such as agroforestry and aquaculture.
- Ensure accessibility and affordability of legal procedures through simplified and decentralized processes for changing land use, in case some restrictions do remain in place.
- Review sanctions in case of non-compliance of restrictions of land use such that they do not result in livelihood insecurity.

■ 3.4 Land conflict resolution

Land tenure security requires the provision of effective conflict resolution mechanisms. However, during the past decades, land governance has been highly concentrated in the hands of village tract headmen, who were acting as political brokers¹³⁸ between government and villagers. In the absence of checks and balances, corrupt practices have prevailed at the expenses of the weakest. The study provided ample number of cases where dispute arbitration decisions were done

137. In the latest Farmland Law mentions that 'land shall not be fallow without a sound reason'.

138. Bierschenk *et al.*, 2000.

in favor of the 'highest bidder' in terms of bribes. The involvement of traditional village elites (i.e. the village tract headman, GAD clerks, village tract SLRD officers, elders known as *lugyi* and *yet-mi-yet-pha*) in Village Tract Farmland Management Committees directly questions the adequacy of government structures put in place to administrate – for instance, but not only – land issues. The multiplicity of legal and customary systems that dominated land tenure in the lowlands over the past 50 years is also a consequence of the wider distrust of villagers towards the state and its predatory policies. It created a conducive ground for defying legal justice and, taking advantage of the opportunity of the recent change in governance, for seeking social justice: in similar rates in both the Delta and the Dry Zone, an average of 7% of farmland owning households (excluding cultivated forestland 'owners') have contested some points of the LUC. Land objections are twice more frequent in households which have not received the LUCs. The qualitative survey's many case studies indicate that there are actually more cases, but the low report rate in the quantitative survey is due again to a particularly strong survey bias against reporting issues concerning land disputes.

The impact of the state on local elites, incentivizing them or threatening them to effectively become state's brokers, generates a lack of trust within the community towards the village tract administrator and the diverse forms of local land committees that have existed through time. In addition, the social capital at the village level has often been crippled in the past decades. Most local community leaders are not neutral as they have been involved as village tract/village headmen or in one way or another in the different local land committees that have existed through history. Informal institutions lack capacity to deal with land conflicts. This is particularly strong in the Delta, which is characterized by more mobility, strong patron-client relationships and weak horizontal links, even among households of the same 'class'. In addition, there are strong competing claims between farmers, tenants, and landless households in the Delta. Finally, there is a lack of independent conflict resolution mechanisms. These are particularly needed in the case of conflicts pitting powerful actors against the socially marginalized. When reviewing the experience of the first 'Parliamentary Land Investigation Commission in relation to confiscation of farmland and other land' (created under President Thein Sein) and observing the current 'Review committees on confiscated land and other lands' (newly formed under the NLD government), one can conclude that both attempts face the same governance shortfalls: at the lower level bodies at village tract and township levels, members are the same stakeholders who have concentrated power over land and natural resources in the past.

To address this, the National Land Use Policy (NLUP) proposes relevant actions such as establishing independent monitoring bodies with participation

of all stakeholders, and appointing monitors that have no direct interest, to observe settlement of land disputes. It also proposes to establish an independent tripartite arbitration process to settle land disputes, comprised of government departments, organizations, farmers, and the private sector. In order to improve access to justice, it proposed to allow civil society to provide legal aid and acquire necessary information for use in land disputes. It also mentions establishing clear procedural processes to improve easy access to, and use of, independent arbitration tribunals, courts and other dispute resolution mechanisms by farmers and other land users. However, the Commission for the Assessment of Legal Affairs and Special Issues wrote a memo in November 2016 to the President Office suggesting some elements of the NLUP to be deleted, notably provisions for new special courts and independent arbitration mechanisms for land disputes¹³⁹.

■ Recommendations

- The government needs to enact a close review of the Farmland Management Body – particularly its village tract level representation – in order to address its very limited capacity in resolving intra-villages conflicts.
- Maintain and promote the establishment of independent monitoring bodies with participation of all stakeholders, and by appointing monitors that have no direct interest, to observe settlement of land disputes. Sound processes for selection of community representatives need to be defined as part of this.
- Promote conflict resolution mechanisms which are able to take into account lands' history and trajectories.
- Implement concrete mechanisms for transparency and accountability of the actors in charge of translating the legal framework into practice on the ground.
- Promote legal awareness capacity building at local level, both for communities and authorities.

■ 3.5 LUCs: individualized (and gendered) vs. familial land management

Although 'individual property' (*u' paing*) was set as the dominant framework for administering land in lowlands since the time of the British, individualization of land management did not necessarily accompany this framework. The often-used term of *bobapaing myay* (ancestral land) covers a trans-generational and familial dimension of managing land. Yet under the current titling process, relationship to land management may undergo some changes. In the first place, while the

139. Extract from unofficial translation: "In part (6) it is mentioned to form special courts and use of independent tripartite arbitration process for land dispute resolution. The land use rights and tenure have been managed and resolved by respective departments and the landownership and heritage have been resolved by the court. Therefore, these special courts and independent tripartite arbitration processes should not be included."

new land law is gender-neutral, distribution of land titles is based on household heads – who are generally male. As noted in Shivakumar Srinivas and U Saw Hlaing (2015: 36), *“little information was provided to women on the option of joint titling (registering land parcels collectively under the names of husbands and wives)”*. Beyond gender issues in failing to provide women equitable access to land use rights, it poses the question of the appropriateness of entrusting LUCs to one individual for land that is in most cases managed by the household. As shown in this study, decisions regarding land use are made at least by the leading couple, and often in consultation with children.

The fact that LUCs were provided as the only legitimate document to prove one’s land use rights already creates discrepancies between official land registers and the reality of land use on the ground. This process could even entail deeper changes in terms of land management. One indication is the fact that LUCs must be presented for obtaining loans from the government Agricultural Bank (MADB) and that loans are provided for a maximum of 10 acres. To bypass this limitation, many families divided their land at the time of titling into 10-acre holdings amongst different members of the household, often children. As these are intra-familial arrangements, in most cases the land is still worked by the household – as long as the children are not married and continue to live within their parents. In that case, the registered number of farming households (a list kept by village tract administrators), which is based on the number of LUCs within the village tract, is inflated compared to the reality. This obviously creates an issue for ground-based policymaking or development projects, as the figures on the number of farming households in village tracts are becoming unreliable¹⁴⁰.

■ Recommendations

- Encourage women’s representation in land administration bodies.
- Provide gender sensitive information and sharing places about the current land framework.
- Centralize information in the hands of a single land administration body at the village tract level and consolidate lists to reduce discrepancies between LUCs and farming households.
- Measures should be taken to reduce vulnerability of women in case of divorce or separation or death of the husband, something that can be accomplished whether through joint registration of spouses on LUCs or through other complementary laws relating to family and social protection issues.

140. As an example, GRET Myanmar recently undertook a quantitative study on land dynamics in lowlands and faced the situation where the reported number of farming households obtained at the village tract level (for sampling purpose) was largely inflated compared to the actual situation on the ground.

4. Building a conducive context for securing agricultural livelihoods

Livelihoods' security for farmers means the ability to reproduce (and possibly improve) their livelihoods while meeting basic household's needs (food, potable water, health facilities, educational opportunities, housing, community participation, and social integration). It also means the ability to cope with and recover from stress and shocks. Apart from a conducive legal framework, already discussed above, securing agricultural livelihoods depends on many other factors (i.e. on those not directly linked to the land tenure framework).

Policies to support agriculture and rural livelihoods in a broader sense need a comprehensive cross-sectoral approach that obviously goes far beyond the land question. Transport and water management infrastructure, rural finance, access to markets, research, agricultural education and extension services, and structuring of farmers' organizations are crucial issues to address. In addition, further strategic thinking is needed to formulate consistent trade policies on agricultural products. It is still missing from the latest draft of the Agricultural development strategy despite this being a powerful lever on markets and prices.

4.1 Improving access to institutional credit schemes

As stated in the introduction of this chapter, indebtedness is still a strong driver of land exclusion. 5.1% of Delta and 5.4% of Dry Zone households surveyed claim having lost lands due to indebtedness, either by mortgage closure, or by selling their lands to urgently repay loans. The reality of exclusion because of indebtedness may be even higher, since quantitative studies can only provide limited information on such a complex, and sensitive, issue (see **Chapter VIII.2**).

Whether in the Delta or the Dry Zone, access to credit is available through a great diversity of stakeholders. While the MADB's loan scheme seems to be the most effective at the moment in terms of coverage and interest rates (which are much lower than those proposed by any other stakeholder), the low quality of services (inadequate loan amounts and timing of disbursements and repayments), limited human resource capacity, and issues in relaying MADB policies at the village level (see **Chapter VIII.2**) hinder much of its potential benefits. Loan amounts are too low for non-paddy lands. Untimely disbursement of loans often requires farmers to fill the gap between the period of investment and the time of delivery by relying on private, high interest, loans.

Further, the MADB scheme's effectiveness is hampered by weak regulations and power struggles at the village level. Indeed, MADB village tract representatives

– normally elected by the village tract administrator together with 10 Households leaders – are in practice directly appointed by the village tract administrator. **Chapter VIII.2.2** shows that these representatives operate at different levels to differentiate access to MADB loans, from the application process to the repayment time. Eventually, farmers failing to reimburse the MADB loan in time may fall either into the hands of money-lenders (higher interests, 10%/month) or into informal borrowing arrangements organized by the MADB representative (lower interest, 7%/month), hardly improving the farmers' financial situation (if not worsening it) but benefiting mostly the same wealthier local individuals. And yet, despite the multiplication of micro-finance institutions and cash transfer projects (especially in the Delta), the study shows that those arrive only in third position in loans' frequency and amount, after MADB and private money-lenders. MADB, because of its ability to provide credit subsidized at below market price, allows it to remain the most sought after credit source, despite its clear shortfalls.

■ Recommendations

- A deep reform of MADB is needed to improve the quality of services. Below are some of the proposed measures:
- Improve the timing of loans (disbursement, repayments, etc.) so they appropriately align with crop cycles and farmers' cash flow constraints.
- Increase MADB loan amounts, especially for non-paddy crops
- Train and appoint professional MADB staff employees at the village tract level to facilitate application, management, disbursement, and reimbursement of loans.
- Reduce rural cultivator dependency on private money-lenders through micro-finance. Supporting rural finance should also allow the development of new financial products such as inventory credit and support for farm equipment hire or purchase.
- Improving access to affordable credit needs to take place simultaneously with financial education aiming at improving households' financial management skills so as to reduce indebtedness.
- Ensure coordination among these publicly funded initiatives¹⁴¹ and with microfinance institutions to avoid indebtedness of those who contract multiple loans.

■ 4.2 Increasing sustainable intensification, diversification and resilience

Improving rural livelihoods and land access can be partly achieved by improving agricultural productivity. Increasing demographic pressure and the disappearance of agricultural frontiers (at least for fertile lands) worsens land fragmentation,

141. There are multiple publicly funded initiatives, namely from MADB, Cooperative Department (*Tha Ma*), Rural development department (*Mya Sein Yaung*), and some other smaller scale initiatives.

which is particularly damaging given the ramifications of economies of scale. Indeed, contrary to many studies showing that economies of scale do not exist in agriculture (Johnson and Ruttan 1994), a recent report by the World Bank indicates its existence in rice production in Myanmar:

“Profits tend to increase along with increased farm size. Small farms had higher yields but failed to translate higher yields into higher profits. Economies of scale allowed large farms to adopt more modern technologies and save on costs.”

(World Bank 2016: xviii)

However, some studies show that demographic pressure is not necessarily an undermining factor, as farmers often find viable alternatives such as agricultural intensification, changes in crop patterns, as well as more systematic investments in agricultural and non-agricultural practices (see for example Boserup 1965, Tiffen *et al.*, 1994).

This is illustrated by the off-farm diversification of Dry Zone farmers, even for those having large surfaces, and by the existence of a non-agrarian landless category, which relies only little (if not at all) on agriculture for their livelihood. Changes in crop patterns can be noticed as part of this adaptation, such as the switch to perennial crops, especially *Thanakha*. The above cited report also highlights that paddy is less profitable than other crops, especially in some regions including Ayeyarwaddy and Sagaing (where green grams are most profitable) (World Bank 2016).

Rural livelihoods’ sustainability also relies on households’ capacity to absorb shocks. The study shows that borrowing for health accounts for an average of 9% of contracted loans. Moreover, farmers are highly vulnerable to pests and climatic accidents. There is therefore a need to improve rural households’ resilience. Protection against these risks has to be designed and implemented beyond the village level notably because of the lack of horizontal bonds and the dominance of vertical (patron-client like) relationships.

■ Recommendations

Dry Zone rainfed land crop systems are rather extensive in order to cope with the scarce and unpredictable rainfall. Irrigation is thus a key opportunity for the intensification of agriculture, in a context of land fragmentation. But large scale pump-irrigation schemes would have a negative impact on underground water sources and on soil salinization. Hence:

- Promoting rainwater harvesting and storage, combined with soil and water conservation, may be a more sustainable option. Government-

supported construction of water tanks could provide consequent water to complement irrigation for established crops and provide new opportunities during the winter season to cultivate higher value crops. Complementing this, extension services promoting afforestation or reforestation, water and soil conservation, agro ecological modern techniques and access to good planting materials from MoALI and DoA services could have significant impact on agriculture in this challenging agro-ecological zone.

- In the Delta, agriculture is highly specialized in paddy. Options exist there for sustainable intensification:
- Promote modern agro-ecological practices using local resources to simultaneously boost yields and reduce on-farm expenses and dependency on inputs.
- Diversification of crops with pulses and other seasonal crops in suitable areas could be an option to increase income, could reduce farm constraints on labor at paddy-peak labor period, and may also improve soil management.
- Government investments in water management infrastructure (dikes, drainage) would be crucial in the Delta to improve farming conditions and strongly reduce recurrent crop losses due to regular floods.
- In summary, in both areas, state-led investment in irrigation and water management is crucial, combined with the promotion of context-specific agricultural practices. This requires adapted extension services to provide technical knowledge on crops (investment, profitability, suitability according to agro-ecological regions) for farmers so that they can make efficient choices.
- Resilience of rural households could be strengthened through social protection schemes, notably to cover health expenses. Sustainability of such schemes may be achieved through their structuring beyond the village level. Interesting initiatives¹⁴² through the federation of village groups have been conducted in Myanmar.
- It would be worthwhile to explore options to cover crop-related risks through national level crop insurance schemes.

■ 4.3 Mechanization versus farm labor opportunities

Farm labor is a very important source of income for many rural households. The study shows that 41.8% of Dry Zone and Delta households have at least one member of the family earning some income as an agricultural laborer. Among these agricultural laborers, 87.4% are landless in the Delta against 52.4% in the Dry

142. See for example the work of Welt Hunger Hilfe (WHH) in Htantabin township (Yangon region).

Zone. As a consequence, pushing mechanization through large farm machines¹⁴³, such as big combined harvesters, needs very careful thought to avoid driving away families depending on farm labor, keeping in mind that options for other livelihoods and jobs in urban areas are still relatively limited (Boutry *et al.*, 2015). This risk may be particularly strong for those in the Delta, where working as a farm laborer is very specific to the landless and to very small landowners (owning less than three acres¹⁴⁴). On the other hand, the qualitative study found that in the Delta, finding farm laborers during peak periods (such as for transplanting and harvesting) can prove to be very challenging and partly explains why many farmers are unable to cultivate the entirety of their lands in summer. However this constraint allows temporary access to lands to landless or very small farmers in summer. As such, the recourse to farm laborers can somewhat be interpreted as a wealth redistribution mechanism, not only by the fact that it provides jobs but also because constraints promote temporary land access to the landless.

Interestingly, discussions addressing the labor shortage in Bogale have led farmers to spontaneously recommend arrangements with laborers, such as temporarily providing a plot of lands in exchange for the guarantee that the laborers would provide farm labor.

5. Taking into account the diversity of rural households for effective targeting of policy and action

There are different types of farming households – in terms of life cycle, landholding size, as well as in terms of multi-activity (on-farm, off farm activities) – and each type has their own constraints and specificities. This section aims to look into how policies and rural livelihood support actions can better take into consideration the fact that ‘smallholders’ are not one uniform category.

■ 5.1 Smallholders are not one uniform category

Putting this more specifically in the context of the study findings, it means creating and/or enforcing a context where those accessing land are not at risk of losing it because of foreclosure, and where those having no access to land yet may observe improved possibilities to do so. It also means improving access to non-farm livelihoods, both for farming and non-farming households. Indeed, the study shows that in the Delta, apart from the ‘Capitalized farmers’ who are largely specialized in agriculture, small farmers (under 5 acres) are generally more secure in terms of livelihoods by relying on other activities such as husbandry or fishing

143. Access to small scale machinery (such as power tillers for paddy lands) is however essential.

144. In the Dry Zone this activity is more evenly practiced by different landholding categories.

as their primary or secondary source of income. Agri-specialized small farmers who rely mostly on agriculture (and on-farm labor) are more precarious than other categories, regardless of the surface they cultivate (between 2.5 and 10 acres). In the Dry Zone, the high variability and unpredictability of rainfall make access to irrigation a crucial differentiating factor amongst farming households, but overall, they all need to rely on other – generally off-farm – activities. In both regions, the households specialized in small farming are the most at threat of food scarcity and livelihood precariousness.

Access to land for smallholders and young households – even those destined to become capitalized farming households (cf. **Chapter VII.6**) – is highly linked to the fact of having some capital that one can dispose of, meaning that even for those households benefiting from inherited land, available capital (money, cattle, laborers, but also social capital) will have an impact on their capacity to retain their farming livelihoods and possibly capitalize on land during their lifetime. For smallholders often starting with little investments, temporary arrangements (sharecropping, rent) on land (especially in the Delta) and off-farm activities (Dry Zone mainly) are important means of generating capital to secure permanent land use rights and productivity in the long term. Capital can also be accessed through credit, beginning with the main institutional source of loans for farmers, the Myanmar Agricultural Development Bank (MADB). Conversely, credit can also be a strong driver of exclusion. Foreclosure on land for failing to repay debts finds a strong echo in Myanmar lowlands' history, especially at the beginning of the 20th century when large tracts of land ended up in the hands of money-lenders, such as the Indian Chettiars. But exclusion due to credit is still at work, even if at a more discrete scale, at the village level. This pertains both to institutional weaknesses (untimely delivery of MADB loans to farmers, limited loans for non-paddy crops, lack of follow-up) and resource capture to the benefit of village level elites.

In all these dimensions of rural livelihoods (multi-activity, access to capital and institutional credit schemes, and distribution of resources) there is room for improvement. Nonetheless, in front of such a huge enterprise, there is a need for prioritizing. Fortunately, a closer look at farmers' 'trajectories' (access to, accumulation of, and loss of land) helps to distinguish categories of farmers more in need of support than others. Likewise, a closer look at landless households' livelihoods can provide with more nuanced features regarding the precariousness of land access in the studied regions.

■ [5.2 Targeting 'young' households: life cycle and land patrimony's trajectories](#)

The household's life cycle is recognized as one of the major factors differentiating whether a given household has access to agricultural land. The study shows that

access to land does not have the same meaning for households at different stages of their respective lives (**Chapter VII**). Indeed, it can often be a temporary state for younger households who will inherit and are saving to buy land, while landlessness becomes a permanent form of land exclusion for households headed by a person over 40-50 years old. Landlessness rates are 80% in the Delta and 61.5% in the Dry Zone among households whose head is aged under 30, while only 40% in the Delta and 27% in the Dry Zone among household heads above 60 years old. This can be explained mainly by inheritance of farmlands from parents or spouse's parents. In the Dry Zone especially, access to a small plot of land through inheritance at the beginning of the household's life cycle seems to provide financial capacity to invest in other livelihood activities. Also in the Dry Zone, land security is highly associated with cattle ownership. In the Delta, by contrast, the study shows that livestock mainly serves as a saving asset or as a 'safety net' (in case of health problems, funerals, etc.), especially for small landowners.

In addition, young households are also more prone to initiate changes and to migrate, if necessary or in link with opportunities. It is important to keep in mind also that the context is changing. Land is getting relatively scarcer with time (under demographic pressure and the closing of the agricultural frontier) and this may increase the difficulty for current young households to access land, compared to the young ones of the past decades. This may increase the disparities between young and old households.

■ Recommendations

- It is crucial to understand and to take into account households' life cycles to formulate policies and livelihood support actions that respond to the specific needs of different age groups.
- Prioritize 'young' smallholders and landless households – whose head is aged under 30 – for specific support for their farming projects
- Support 'young' Dry Zone households to access cattle.
- In the Delta, promote the use of temporarily vacant lands (especially under summer paddy) through temporary arrangements, especially for 'young' smallholders and landless households.

■ 5.3 Better understand and tackle the issue of 'landlessness'

First and foremost, the occurrence of landlessness has much to do with historical and agricultural features of the studied zones. For instance, the Dry Zone is the cradle of Burmese society, with long-established villages and stronger social organization, while the Delta is a frontier society and has been more impacted by predatory policies such as the 'Compulsory Paddy Quota'. For these reasons, landlessness rates are often higher in the Delta than in Dry Zone villages. In addition, there are strong

disparities between villages of the same region, highlighting the complexity and intertwinement of different factors – such as agro-ecological conditions and the importance of power relations at the local level – for determining land access. The importance of differences between regions but also among villages of the same region shows that large scale surveys and uniform ‘one size fits all’ solutions on land tenure bear risks as they are not able to effectively address local and context-specific problems.

We already underlined in the section above the link between the age of the household head and access to land. **Chapter VII.7** shows that careful analysis taking into account a household’s livelihood trajectory, livelihood diversity (on-farm and off-farm oriented households, migrations, etc.), and a household’s life cycles can help determine those households to be prioritized when considering creating access to land – in other words, which of Myanmar’s landless households are in most dire need of accessing land.

■ Recommendations

- Undertake more systematic field research to ground analysis of landlessness and disaggregate agrarian landless from remaining categories.
- In any land redistribution project, prioritize the most vulnerable agrarian landless households:
Households whose head is over 40 years-old who will not inherit land
Delta specific: farm labor cum fishing households.
Dry Zone specific: farm labor households.

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XI. Annexes

1. Basic demography data (Delta and Dry Zone combined)

Table 1: Number of household members (HH mb) according to the age category of the household head

	Under 30		30 <40		40 < 50		50 < 60		60 and over		Total	
	Nb HH	%R	Nb HH	%R	Nb HH	%R	Nb HH	%R	Nb HH	%R	Nb HH	%R
1	33	16.6	51	25.6	37	18.6	22	11.1	56	28.1	199	100.0
2	68	15.2	181	40.5	93	20.8	55	12.3	50	11.2	447	100.0
3	2	0.9	39	17.7	73	33.2	47	21.4	59	26.8	220	100.0
4			13	8.1	59	36.9	54	33.8	34	21.3	160	100.0
5 and over			2	2.0	32	31.7	41	40.6	26	25.7	101	100.0
Total	103	9.1	286	25.4	294	26.1	219	19.4	225	20.0	1,127	100.0

Chi-Square=268.2 dof=16 p=0.001 (Very significant) Cramer's V=0.244

Table 2: Sex of household head according to age category of household head

Sex of HHH	Male		Female		Total	
	Nb HH	%R	Nb HH	%R	Nb HH	%R
AGE CATEGORY of HHH						
Less than 30	103	99.0	1	1.0	104	100.0
30 to under 40	274	95.8	12	4.2	286	100.0
40 to under 50	262	89.4	31	10.6	293	100.0
50 to under 60	173	79.0	46	21.0	219	100.0
60 and above	155	68.6	71	31.4	226	100.0
Total	967	85.7	161	14.3	1,128	100.0

Chi-Square=104.5 dof=4 p=0.001 (Very significant) Cramer's V=0.304

Table 3: Age category of Household head and HHH education level

AGE CATEGORY of HHH	Primary school		Middle school		High school and university		None		Total	
	Nb HH	%R	Nb HH	%R	Nb HH	%R	Nb HH	%R	Nb HH	%R
Less than 30										
30 to under 40	56	53.8	31	29.8	11	10.6	6	5.8	104	100.0
40 to under 50	205	71.7	48	16.8	23	8.0	10	3.5	286	100.0
50 to under 60	239	81.3	46	15.6	8	2.7	1	0.3	294	100.0
60 and above	179	81.7	30	13.7	2	0.9	8	3.7	219	100.0
Total	188	83.2	18	8.0	4	1.8	16	7.1	226	100.0
	867	76.8	173	15.3	48	4.3	41	3.6	1,129	100.0

Chi-Square=78.5 dof=12 p=0.001 (Val. théoriques < 5 = 2) Cramer's V=0.152

Table 4: HHH age/ number of HH members working outside of the village tract

AGE CATEGORY of HHH	None		1 or more		Total	
	Nb HH	%R	Nb HH	%R	Nb HH	%R
Less than 30	92	88.5	12	11.5	104	100.0
30 to under 40	235	82.2	51	17.8	286	100.0
40 to under 50	201	68.4	93	31.6	294	100.0
50 to under 60	158	72.1	61	27.9	219	100.0
60 and above	171	75.7	55	24.3	226	100.0
Total	857	75.9	272	24.1	1,129	100.0

Chi-Square=25.9 dof=4 p=0.001 (Very significant) Cramer's V=0.152

Table 5 : Delta landownership and internal migration

	HHH Born inside V or VT		HHH born outside V or VT		Total	
	Nb HH	%R	Nb HH	%R	Nb HH	%R
Landowners	179	83.3	36	16.7	215	100.0
Landless	215	68.0	101	32.0	316	100.0
Total	394	74.2	137	25.8	531	100.0

Chi-Square=14.7 dof=1 p=0.001 (Very significant) Cramer's V=0.167

2. Key figures on contracting out lands for farming by others

Table 1: land-owning households having land cultivated by others (yes) through temporary arrangements, by age class (in Delta and Dry Zone)¹⁴⁵

AGE category of HHH	Yes			No			Total		
	Nb HH	%C	%R	Nb HH	%C	%R	Nb HH	%C	%R
Less than 30	3	4.2	10.7	25	5.0	89.3	28	4.9	100.0
30 to < 40	9	12.5	8.3	99	20.0	91.7	108	19.0	100.0
40 to < 50	16	22.2	9.8	147	29.6	90.2	163	28.7	100.0
50 to < 60	16	22.2	13.9	99	20.0	86.1	115	20.2	100.0
60 and more	28	38.9	18.2	126	25.4	81.8	154	27.1	100.0
Total	72	100.0	12.7	496	100.0	87.3	568	100.0	100.0

Chi-Square=7.43 dof=4 p=0.113 (Val. théoriques < 5 = 1) Cramer's V=0.114

Table 2: distribution of land owning households involved in land temporary arrangements (contracting out) by sex of the household head (in Delta and Dry Zone)¹⁴⁶

	Contracting out			No contracting out			Total		
	Nb HH	%C	%R	Nb HH	%C	%R	Nb HH	%C	%R
Male									
Female	56	77.8	11.4	436	87.9	88.6	492	86.6	100.0
Total	16	22.2	21.1	60	12.1	78.9	76	13.4	100.0
	72	100.0	12.7	496	100.0	87.3	568	100.0	100.0

Chi-Square=5.56 dof=2 p=0.06 (Val. théoriques < 5 = 2) Cramer's V=0.099

145. Data is presented in aggregated form for Dry Zone and Delta together as both zones have similar trends.

146. Data is presented in aggregated form for Dry Zone and Delta together as both zones have similar trends.

Table 3: Ratio Land cultivated by the household itself / owned landholding size¹⁴⁷

Land owned	0% not cultivated by HH		Above 0%<50% cultivated by HH		50% to<100% cultivated by HH		100% and over cultivated by HH		Total	
	Nb HH	%R	Nb HH	%R	Nb HH	%R	Nb HH	%R	Nb HH	%R
0.3<2.5	8	10.1	1	1.3	1	1.3	69	87.3	79	100.0
2.5<5	8	7.6	2	1.9	11	10.5	84	80.0	105	100.0
5<10	9	4.6	7	3.6	23	11.7	157	80.1	196	100.0
10<15	4	4.0	4	4.0	17	17.0	75	75.0	100	100.0
15 and above	3	3.5	1	1.2	23	26.7	59	68.6	86	100.0
Total	32	5.7	15	2.7	75	13.3	444	78.4	566	100.0

Chi-Square=29.8 dof=15 p=0.013 (Val. théoriques < 5 = 10) Cramer's V=0.133

147. Data is presented in aggregated form for Dry Zone and Delta together as both zones have similar trends although contracting out is more widespread among large farm owners (>15 acres) in Dry Zone (28% of these contract out in Dry Zone against only 16% in Delta).

3. Livestock

Table 1: Distribution of households practicing animal husbandry among the different classes of Total Income (TI) in Delta

	AniH		NoAniH		Total	
	Nb HH	%R	Nb HH	%R	Nb HH	%R
TI <750,000	84	53.5	73	46.5	157	100.0
TI 750,000 to 1,500,000	95	63.8	54	36.2	149	100.0
TI 1,500,000 to 3,000,000	76	67.9	36	32.1	112	100.0
TI >3,000,000	82	72.6	31	27.4	113	100.0
Total	337	63.5	194	36.5	531	100.0

Chi-Square=11.7 dof=3 p=0.009 (Very significant) Cramer's V=0.148

Table 2: Distribution of households practicing animal husbandry among the different classes of Total Income (TI) in Dry Zone

	AniH		NoAniH		Total	
	Nb HH	%R	Nb HH	%R	Nb HH	%R
TI <750,000	82	60.3	54	39.7	136	100.0
TI 750,000 to 1,500,000	107	62.9	63	37.1	170	100.0
TI 1,500,000 to 3,000,000	115	69.7	50	30.3	165	100.0
TI >3,000,000	83	85.6	14	14.4	97	100.0
Total	387	68.1	181	31.9	568	100.0

Chi-Square=19.7 dof=3 p=0.001 (Very significant) Cramer's V=0.186

Table 3: Distribution of livestock income HH categories among landownership categories in Delta.

	AH<10		AH 10-100		AH 100-350		AH>350		Total	
	Nb HH	%R	Nb HH	%R	Nb HH	%R	Nb HH	%R	Nb HH	%R
Landless	208	65.8	59	18.7	28	8.9	21	6.6	316	100.0
0.3-2.5	17	58.6	4	13.8	7	24.1	1	3.4	29	100.0
2.5-5	26	56.5	8	17.4	8	17.4	4	8.7	46	100.0
5-10	36	54.5	13	19.7	9	13.6	8	12.1	66	100.0
10-15	20	47.6	6	14.3	11	26.2	5	11.9	42	100.0
>15	17	53.1	3	9.4	5	15.6	7	21.9	32	100.0
Total	324	61.0	93	17.5	68	12.8	46	8.7	531	100.0

Chi-Square=25.2 dof=15 p=0.047 (Val. théoriques < 5 = 6) Cramer's V=0.126

Table 4: Distribution of livestock income HH categories among landownership categories in Dry Zone

	AH<10		AH 10-100		AH 100-350		AH>350		Total	
	Nb HH	%R	Nb HH	%R	Nb HH	%R	Nb HH	%R	Nb HH	%R
Landless	182	74.3	15	6.1	19	7.8	29	11.8	245	100.0
0.3-2.5	25	49.0	13	25.5	6	11.8	7	13.7	51	100.0
2.5-5	34	56.7	12	20.0	7	11.7	7	11.7	60	100.0
5-10	76	58.5	32	24.6	14	10.8	8	6.2	130	100.0
10-15	41	70.7	6	10.3	4	6.9	7	12.1	58	100.0
>15	43	79.6	1	1.9	3	5.6	7	13.0	54	100.0
Total	401	67.1	79	13.2	53	8.9	65	10.9	598	100.0

Chi-Square=49.7 dof=15 p=0.001 (Val. théoriques < 5 = 2) Cramer's V=0.166

4. Farm gate paddy prices at Bogale-Mawlamyinegyun area – for 4 different varieties (2012-14)

Table 1: Average monthly farm gate paddy price of *Bay Gyar Lay* variety from March 2012-to May 2014

	Jan	Feb	Mar	Apr	May	Jun
2012			6,155	6,033	6,125	6,009
2013	4,577	4,700	4,680	4,800	5,485	5,700
2014	6,138	6,096	6,025	6,417	6,790	

	Jul	Aug	Sept	Oct	Nov	Dec
2012	6,105	6,242	6,661	6,195	4,667	4,330
2013	5,937	6,125	6,118	6,055	5,793	5,478
2014						

Table 2: Average monthly farm gate paddy price of *Khun Ni* variety from March 2012-to May 2014

	Jan	Feb	Mar	Apr	May	Jun
2012			4,781	4,675	4,636	4,669
2013	4,244	4,291	4,338	4,400	4,956	5,094
2014	5,071	5,100	4,900	5,800	5,822	

	Jul	Aug	Sept	Oct	Nov	Dec
2012	4,714	5,052	5,800	5,300	4,488	4,000
2013	5,163	5,534	5,600	5,525	5,525	5,100
2014						

Table 3: Average monthly farm gate paddy price of *Hnan Karr* variety from March 2012-to May 2014

	Jan	Feb	Mar	Apr	May	Jun
2012			3,388	3,125	3,370	3,386
2013	3,488	3,817	3,855	3,825	4,167	4,207
2014	4,060	4,178	4,200	4,200	4,200	

	Jul	Aug	Sept	Oct	Nov	Dec
2012	3,808				3,629	3,573
2013	4,267				4,000	4,000
2014						

Table 4: Average monthly farm gate paddy price of *Htee Htut Yin* variety from March 2012-to May 2014

	Jan	Feb	Mar	Apr	May	Jun
2012			3,063	2,692	2,818	3,150
2013			3,544	3,458	3,850	4,211
2014			3,925	3,800	3,880	

	Jul	Aug	Sept	Oct	Nov	Dec
2012	3,761	3,968	4,378	4,238	4,180	4,180
2013	4,168	4,690	4,858	4,748	4,640	
2014						

5. Profit and loss statement of paddy production (monsoon and summer) in Delta

Table 1: Average costs of paddy per acre, Monsoon paddy (Transplanting), 2013

	Monsoon paddy (Transplanting), 2013			
		Total work hour	Cost/hour	Total Cost
Labor charges				84,625
Nursery preparation and seed sowing		12	375	4,500
Seed Sowing /Broadcasting		-00	-00	-00
Transplanting		90	375	33,750
Fertilizer Application		10	375	3,750
Harvesting (hand)		40	625	25,000
Assistant labor for Threshing Machine		5	375	1,875
Transporting of paddy pile (from field to house)		20	600	12,000
Freight (from boat to Miller)		3	1,500	3,750
Machinery cost				24,750
Hired Machinery (land preparation)		10	375	3,750
Thresher Machine		5	4,200	21,000
	Amount	Unit	Unit price	Total
Materials cost				53,760
Seeds	6	Pyi	500	3,000
Urea	34	kg	400	13,600
T-super	25	kg	440	11,000
Potash	25	kg	560	14,000
Fuel for land preparation and Threshing	20	bottle	608	12,160
Fuel for Irrigation	0	-00	-00	-00
Hired pump for Irrigation	0	-00	-00	-00
TOTAL per acre				163,135

Table 2: Average costs of paddy per acre, Monsoon Paddy (Broadcasting), 2013

	Monsoon Paddy (Broadcasting), 2013			
		Total work hour	Cost/hour	Total Cost
Labor charges				84,625
Nursery preparation and seed sowing		-00	-00	4,500
Seed Sowing /Broadcasting		4	375	-00
Transplanting		30	375	33,750
Fertilizer Application		3	375	3,750
Harvesting (hand)		40	625	25,000
Assistant labor for Threshing Machine		5	375	1,875
Transporting of paddy pile (from field to house)		20	600	12,000
Freight (from boat to Miller)		3	1,500	3,750
Machinery cost				30,375
Hired Machinery (land preparation)		25	375	9,375
Thresher Machine		5	4,200	21,000
	Amt	Unit	Unit price	Total
Materials cost				64,600
Seeds	20	pyi	500	10,000
Urea	34	kg	400	13,600
T-super	25	kg	440	11,000
Potash	25	kg	560	14,000
Fuel for land preparation and Threshing	20	bottle	800	16,000
Fuel for Irrigation	-00	-00	-00	-00
Hired pump for Irrigation	-00	-00	-00	-00
TOTAL per acre				151,475

Table 3: Average costs of paddy per acre, Summer Paddy (Broadcasting), 2014

	Summer paddy (Broadcasting), 2014			
		Total work hour	Cost/hour	Total Cost
Labor charges				47,375
Nursery preparation and seed sowing		-00	-00	-00
Seed Sowing /Broadcasting		4	500	2,000
Transplanting		-00	-00	-00
Fertilizer Application		15	500	7,500
Harvesting (hand)		35	600	21,000
Assistant labor for Threshing Machine		5	375	1,875
Transporting of paddy pile (from field to house)		20	600	12,000
Freight (from boat to Miller)		2	1,500	3,000
Machinery cost				36,600
Hired Machinery (land preparation)		19	600	11,400
Thresher Machine		6	4,200	25,200
	Amt	Unit	Unit price	Total
Materials cost				103,880
Seeds	20	pyi	500	10,000
Urea	100	kg	520	52,000
T-super	25	kg	460	11,500
Potash	13	kg	560	7,280
Fuel for land preparation and Threshing	16	bottle	600	9,600
Fuel for Irrigation	5	bottle	700	3,500
Hired pump for Irrigation	10	hour	1,000	10,000
TOTAL per acre				187,855

6. Supporting data for income generation (on farm wage labor, fishing, off farm activities)

Table 1: Ratio number of working HH members engaged as farm laborer/ total number of working HH members

	Delta			Dry Zone			Total		
	Nb HH	%C	%R	Nb HH	%C	%R	Nb HH	%C	%R
de >=0.01 à 0.25	1	0.4	14.3	6	2.6	85.7	7	1.5	100.0
de >=0.25 à 0.5	26	11.0	28.9	64	27.7	71.1	90	19.2	100.0
de >=0.5 à 0.75	58	24.5	38.7	92	39.8	61.3	150	32.1	100.0
de >=0.75 à 4.001	152	64.1	68.8	69	29.9	31.2	221	47.2	100.0
Total	237	100.0	50.6	231	100.0	49.4	468	100.0	100.0

Chi-Square=57.2 dof=3 p=0.001 (Val. théoriques < 5 = 2) Cramer's V=0.349

Table 2: Relationship between fishing and household head age in Delta

Age category of HHH	Fish		No fish		Total	
	Nb HH	%R	Nb HH	%R	Nb HH	%R
< 30	41	63.1	24	36.9	65	100.0
30 < 40	82	58.6	58	41.4	140	100.0
40 < 50	65	45.8	77	54.2	142	100.0
50<60	40	41.2	57	58.8	97	100.0
60 and over	20	23.0	67	77.0	87	100.0
Total	248	46.7	283	53.3	531	100.0

Chi-Square=35.8 dof=4 p=0.001 (Very significant) Cramer's V=0.26

Table 3: Relationship between fishing income and landholding size in Delta

ACRES	< 70000 MMK/ year		70000 <365000 MMK/year		365000 MMK/ per year and above		Total	
	Nb HH	%R	Nb HH	%R	Nb HH	%R	Nb HH	%R
Landless	46	25.1	72	39.3	65	35.5	183	100.0
0.3-2.5	4	36.4	4	36.4	3	27.3	11	100.0
2.5-5	6	54.5	2	18.2	3	27.3	11	100.0
5-10	13	56.5	5	21.7	5	21.7	23	100.0
10-15	8	61.5	1	7.7	4	30.8	13	100.0
>15	5	71.4			2	28.6	7	100.0
Total	82	33.1	84	33.9	82	33.1	248	100.0

Chi-Square=20.3 dof=10 p=0.026 (Val. théoriques < 5 = 12) Cramer's V=0.202

Table 4: Distribution of households engaged in different types of self-employed activities, for Delta and Dry Zone

	Delta % of HH over total HH surveyed in Delta (531)		Dry Zone % of HH over total HH surveyed in Dry Zone (598)	
	Nb of HH	% of total HH Delta (531)	Nb of HH	% of total HH (598)
Construction	15	2.8%	7	1.2%
Weaving	0	0.0%	101	16.9%
Arts and crafts	15	2.8%	9	1.5%
Food processing	15	2.8%	9	1.5%
Small shop	39	7.3%	20	3.3%
Services (transport, health, education)	32	6.0%	7	1.2%
Broker, money-lending	32	6.0%	8	1.3%
Other services	6	1.1%	13	2.2%
Total HH self employed OF	126	23.7%	148	24.7%
Average off-farm income per HH (MMK)	674,099		743,422	

Table 5: Distribution of households having at least one member employed in off-farm activities, for Delta and Dry Zone

	Delta (531 HH)		Dry Zone (598 HH)	
	% of HH over total HH surveyed in Delta (531)		% of HH over total HH surveyed in Dry Zone (598)	
	Nb HH	% of HH	Nb HH	% HH
Construction	10	1.9%	142	23.7%
Weaving	0	0.0%	44	7.4%
Arts and crafts	10	1.9%	3	0.5%
Food processing, shop keeping, mining)	10	1.9%	25	4.2%
Services	16	3.0%	6	1.0%
Total HH with wage income	46	8.7%	187	31.3%
Average off-farm income per HH (MMK)	630,457		973,571	

Table 6: Distribution of households having off-farm activities among total annual household income categories in Delta

	OFact			No. OFact			Total		
	Nb HH	%C	%R	Nb HH	%C	%R	%R	%C	%R
TI <750,000									
TI 750,000 to 1,500,000	44	23.4	28.0	113	32.9	72.0	72.0	29.6	100.0
TI 1,500,000 to 3,000,000	58	30.9	38.9	91	26.5	61.1	61.1	28.1	100.0
TI >3,000,000	42	22.3	37.5	70	20.4	62.5	62.5	21.1	100.0
Total	44	23.4	38.9	69	20.1	61.1	61.1	21.3	100.0
	188	100.0	35.4	343	100.0	64.6	64.6	100.0	100.0

Chi-Square=5.38 dof=3 p=0.144 (Peu significant) Cramer's V=0.101

Table 7: Distribution of households having off-farm activities among total annual household income categories in Dry Zone

TOTAL INCOME (TI)	OFact			No.OFact			Total		
	Nb HH	%C	%R	Nb HH	%C	%R	Nb HH	%C	%R
TI <750,000	59	19.9	38.6	94	31.1	61.4	153	25.6	100.0
TI 750,000 to 1,500,000	87	29.4	49.2	90	29.8	50.8	177	29.6	100.0
TI 1500000 to 3000000	103	34.8	60.6	67	22.2	39.4	170	28.4	100.0
TI >3,000,000	47	15.9	48.0	51	16.9	52.0	98	16.4	100.0
Total	296	100.0	49.5	302	100.0	50.5	598	100.0	100.0

Chi-Square=15.8 dof=3 p=0.001 (Very significant) Cramer's V=0.162

Table 8: Relation between off-farm income and total household income in Delta

Total Income (TI)	Under 50,000		from 50,000 to under 250,000		from 250,000 to under 700,000		from 700,000 to under 1,250,000		More than 1,250,000		Total	
	Nb HH	%R	Nb HH	%R	Nb HH	%R	Nb HH	%R	Nb HH	%R	Nb HH	%R
TI <750,000	120	76.4	21	13.4	15	9.6	1	0.6			157	100.0
TI 750,000 to 1,500,000	94	63.1	20	13.4	19	12.8	15	10.1	1	0.7	149	100.0
TI 1,500,000 to 3000000	75	67.0	8	7.1	10	8.9	11	9.8	8	7.1	112	100.0
TI >3,000,000	72	63.7	7	6.2	8	7.1	12	10.6	14	12.4	113	100.0
Total	361	68.0	56	10.5	52	9.8	39	7.3	23	4.3	531	100.0

Chi-Square=50.5 dof=12 p=0.001 (Val. théoriques < 5 = 2) Cramer's V=0.178

Table 9: Relation between off-farm income and total household income in Dry Zone

Total Income (TI)	Under 50,000		from 50,000 to under 250,000		from 250,000 to under 700,000		from 700,000 to under 1,250,000		More than 1,250,000		Total	
	Nb HH	%R	Nb HH	%R	Nb HH	%R	Nb HH	%R	Nb HH	%R	Nb HH	%R
TI <750,000	101	66.0	23	15.0	28	18.3	1	0.7			153	100.0
TI 750,000 to 1,500,000	91	51.4	9	5.1	18	10.2	43	24.3	16	9.0	177	100.0
TI 1,500,000 to 3,000,000	68	40.0	12	7.1	16	9.4	22	12.9	52	30.6	170	100.0
TI >3,000,000	52	53.1	4	4.1	8	8.2	9	9.2	25	25.5	98	100.0
Total	312	52.2	48	8.0	70	11.7	75	12.5	93	15.6	598	100.0

Chi-Square=128.9 dof=12 p=0.001 (Very significant) Cramer's V=0.268

7. Total income per farmers categories

Table 1: Total income categories and categories of farmers in Delta

	multi-active small farmers		capitalized farmers		Agri-specialized small farmers		Total	
	Nb HH	%C	Nb HH	%C	Nb HH	%C	Nb HH	%C
Less than 750,000	6	16.7	1	1.1	4	4.5	11	5.1
From 750,000 to less than 1,500,000	9	25.0	1	1.1	31	35.2	41	19.0
From 1,500,000 to less than 3,000,000	11	30.6	6	6.5	48	54.5	65	30.1
More than 3,000,000	10	27.8	84	91.3	5	5.7	99	45.8
Total	36	100.0	92	100.0	88	100.0	216	100.0

Chi-Square=146.1 dof=6 p=0.001 (Val. théoriques < 5 = 3) Cramer's V=0.582

Table 2: Total income categories and categories of farmers in Dry Zone

	Multi-active small farmers		Capitalized farmers		Agri-specialized small farmers		Total	
	Nb HH	%C	Nb HH	%C	Nb HH	%C	Nb HH	%C
Less than 750,000	1	0.9	33	29.7	50	39.1	84	23.8
From 750,000 to less than 1,500,000	6	5.3	28	25.2	50	39.1	84	23.8
From 1,500,000 to less than 3,000,000	33	28.9	46	41.4	27	21.1	106	30.0
More than 3,000,000	74	64.9	4	3.6	1	0.8	79	22.4
Total	114	100.0	111	100.0	128	100.0	353	100.0

Chi-Square=213.0 dof=6 p=0.001 (Very significant) Cramer's V=0.549

8. Methodology for quantitative survey

Categorization for farmers

The farmers categories analysed here have been built with a Factorial Analysis of Correspondences (FAC) done on households currently having long term land use rights (landowners, in short). Trying to go further in categorizing the Delta and Dry Zone rural societies (in terms of social and economical mobility as well as regarding 'livelihood security') surveyed for this research, several FAC have been performed, taking into account different variables. After conducting flat sorting and cross sorting, variables (on demography, agricultural practices and wealth...) have been selected among all the survey questions, according to their significance in differentiating different 'groups' in a meaningful way. These variables have then been used to conduct different FACs.

As a matter of fact, treating in a same batch landless households – those not owning any land use right – with landowners systematically results in, more or less, two categories with landless on the one hand and landowners on the other (this even for FAC relying only on non-agricultural variables such as loans contracted for health, food, access to remittances, etc.). This observation speaks in itself on the crucial role that access to land plays on households' economic conditions and social status. To bypass the weight of this variable (landless vs. landowner), FACs have been performed for each of these two groups. The current FAC is based on surfaces cultivated by the farmers, profit order of different activities (agriculture, off-farm work, small business, fishing) and the total incomes households get each year. This FAC was first done on the two zones indistinctly, and then for each of them. The first FAC (without regards to location) resulted in 3 groups, quite distinct, which can be characterized in regards of the different variables available from the survey.

Table 3: Variables introduced in farmers FAC

Variable	Modalities
Total Area of farmland	Total Area of farmland
Total annual incomes (million MMK)	Total annual incomes (million MMK)
Weaving	Weaving
Fishing	Fishing
Profit order from livestock	Profit order from livestock
Profit order from agriculture	Profit order from agriculture
Profit order from on-farm wage labor	Profit order from on-farm wage labor
Profit order from off-farm wage labor	Profit order from off-farm wage labor
Profit order from business	Profit order from business

Categorizing landless households

The differentiation between the 2 zones is predominant when performing a Factorial Analysis of Correspondences (FAC), grouping most of landless households from Dry Zone together and Delta households together. Yet, a third category can be distinguished among them. The FAC on both zones took into account the different possible activities as seen in **Table 4**.

Table 4: Variables introduced in the landless households FAC (both zones)

Variable	Modalities
Area	Dry Zone; Delta
Cultivated land under temporary arrangements	Yes; No
Rented land	Yes; No
Paddy Cultivation	Yes; No
Home gardening	Yes; No
Fishing	Yes; No
Weaving	Yes; No
Animal breeding	Yes; No
Nb of ducks (breeding)	< 30; 30 < 110; ≥ 100
Owning cattle	Yes; No
On-farm wage labor	Yes; No
Practicing agriculture	Yes; No

Another FAC, taking into account incomes and activities (see **Table 5**) has been performed on Delta landless households.

Table 5: Variables introduced in the Delta's landless households FAC

Variable	Modalities
Practicing agriculture	Yes; No
Cultivated land under temporary arrangements	Yes; No
Paddy Cultivation	Yes; No
Fishing	Yes; No
Animal breeding	Yes; No
On-farm wage labor	Yes; No
Total incomes (million MMK)	< 0.75; 0.75 to < 1.5; 1.5 to < 3; ≥ 3

Table 6: Variables introduced in the Dry Zone's landless households FAC

Variable	Modalities
Home Gardening	Yes; No
Involved in off-farm activities	Yes; No
Benefiting from migrants' remittances	Yes; No
Weaving	Yes; No
Animal breeding	Yes
Owning cattle	No
Profit order of livestock	Yes; No
Profit order of on-farm wage labor	1; 2; 3
Profit order of off-farm wage labor	1; 2; 3
Profit order of small business	1; 2; 3
Total incomes (million MMK)	1; 2; 3 < 0.75; 0.75 to < 1.5; 1.5 to < 3; ≥ 3

Land tenure in rural lowland Myanmar

This study emerged out of an identified need to document social processes leading to land insecurity, and those leading to investment and sustainable use of lands by rural populations. Focusing on the Delta and Dry Zone, the main paddy producing regions of Myanmar, this analysis unravels the powers at play in shaping rural households' relationship to land. From British colonization to the 2012 reforms, many issues have remained relatively unchanged with regards to local dynamics of landlessness, exclusion processes, local power plays, restrictions in farmers' land rights and the State's excessive focus on rice. In the midst of a fast evolving legal context, this work provides a typology of farmers and the landless and argues that more attention needs to be paid to understand the diversity of rural households and forms of landlessness.

The Of Lives and Land series emanates from in-depth socio-anthropological research on land and livelihoods dynamics. Through various thematic focuses – urban, peri-urban and rural land issues, migration, conflict and resettlement – the series presents a rigorous analysis of how people from various regions of Myanmar shape land relations in a rapidly changing social, economic and political context. From the exploration of grounded realities, the series aims to address some of the challenges that Myanmar people, the state and other stakeholders are facing in managing land and associated resources and seeks to provide insights to inform policy dialogue and law formulation processes.

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