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FEED THE FUTURE
The U.S. Government's Global Hunger & Food Security Initiative

Food Security Policy Project Research Highlights
Myanmar

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AGRICULTURAL LAND IN MYANMAR'S DRY ZONE

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BACKGROUND

Myanmar has high levels of landlessness and an uneven distribution of land among landed households, despite an abundance of land per head of population relative to other countries in the region. Land is a central issue in the post-2016 policy landscape, and efforts to provide restitution for widespread land confiscations that occurred during the period of military rule forms a major pillar of the current government's governance agenda.

In this research highlight, we present analysis of agricultural land use, distribution, access, tenure, land markets, and historical patterns of ownership and disposal. Findings are derived from a representative survey of 1578 rural households in Myanmar's Central Dry Zone - the Rural Economy and Agriculture Dry Zone Survey (READZ). The READZ survey was conducted from April to May 2017 in four townships (Magway, Pwinbyu, Myittha, and Budalin) in Magway, Mandalay and Sagaing regions.

The main two farmland categories present in the areas surveyed are lowland (paddy land; le), and 'upland' (ya). Lowland can be subdivided into rain-fed and irrigated lowland, and is utilized primarily for paddy cultivation. Mainly non-paddy crops are cultivated on upland, which is primarily rainfed. Upland is dominant in terms of area, but generally less fertile than lowland.

Where appropriate, we disaggregate our analysis by agricultural landholding terciles. In order to derive terciles, farm households were ranked by size in ascending order and divided into three equal groups. Thus, landholding tercile 1 is the third of farms with the smallest agricultural holdings, tercile 3 the third with the largest holdings, and tercile 2 is intermediate.

RESULTS

Current landholding characteristics

Sixty percent of households in the townships surveyed own or operate agricultural land. We refer to these as landed households. The remaining 40% of households do not own nor operate agricultural land. We consider these to be landless.

Most agricultural parcels in the communities surveyed have secure land title. Ninety-one percent of lowland and 88% of upland parcels were reported to have a formal title document, and the majority of these parcels had the most secure form of title, Form 7 (89% of all lowland and 84% of all upland parcels). These figures compare favorably to other parts of the country. Twelve percent of agricultural parcels had no title document [Table 1].

Table 1: Documentation of user rights for agricultural parcels.

Document type	All parcels	Lowland	Upland
Form 7	84.8	88.8	83.9
None	11.7	8.4	12.2
Form 105	2.3	2.2	2.4
Contract	0.5	0.1	0.7
Tax receipt	0.4	0.1	0.4
Other	0.4	0.4	0.4

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The average area of land owned by landed households is 6.5 acres. The average size of operated landholding (land owned and operated, plus all land rented-, borrowed- or sharecropped-in) is 6.8 acres, suggesting a small rental market with limited redistributive effects.

Upland and lowland are the dominant categories of agricultural land; accounting for 59% and 36% of operated agricultural land, respectively. There is minimal diversification into other types of agricultural land use such as orchards and plantations.

Upland is superior in terms of average farm size. Nearly half of farms (45%) cultivate only upland. These average 8.3 acres in size. Just over one quarter of farms (27%) cultivate only lowland, operating an average of 4.2 acres. Twenty-one percent of farms operate both upland and lowland, averaging 8.6 acres in size.

Farm landholdings are unequally distributed. The average area operated by the largest third of farms (tercile 3) is 14.3 acres. This is more than 8 times greater that of the smallest farms (tercile 1), which operate on average only 1.7 acres [Figure 1].

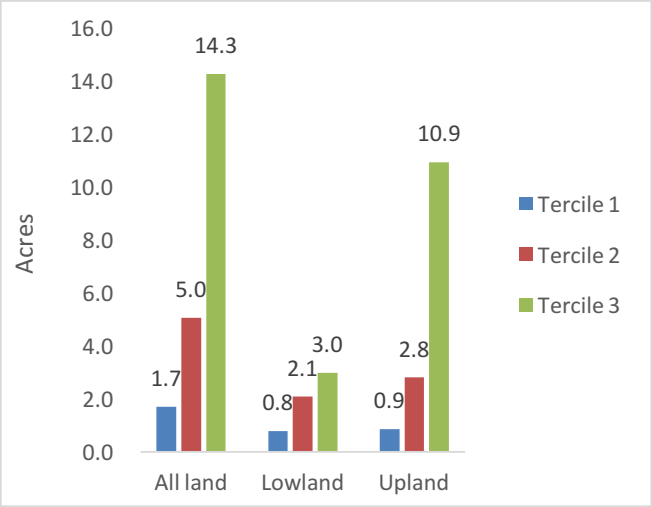

Figure 1: Mean operated agricultural landholding, by landholding tercile.

Upland is particularly unevenly distributed. The average holding of lowland farms in tercile 3 is approximately three time greater than the average holding of lowland farms in tercile 1 (0.8 acres, versus 3.0 acres). In contrast, the mean landholding of upland farms in tercile 3 is almost 10 times greater than that of those in tercile 1 (0.9 acres versus 10.9 acres) [Figure 1].

In fact, farms in tercile 1 operate just 4% of all agricultural land, while those in tercile 3 operate 81%. Hence, most lowland and upland is under the largest farms: 8% of lowland and 3% of upland belong to farms in tercile 1, as compared to 69% and 86% respectively for farms in tercile 3 [Figure 2].

Figure 2: Share of upland, lowland and all agricultural land operated, by landholding tercile

Land access, tenure security, and disposal

Most agricultural parcels are owner-operated: 88% of upland and 92% of lowland parcels. Among these parcels, 61% were acquired by inheritance, and 35% were acquired by purchase.

Other tenure arrangements are much less common [Figure 3]. Land rental markets are almost non-existent (only 0.6% of all parcels are leased in). This is unusual compared to other countries in the region. Historically, this may have been driven by the requirements of the quota system for paddy, strict controls on land transfers, and weak tenure security. However, formal tenure with exchangeable use rights is now well established (cf. Table 1). It therefore remains unclear why the land rental market remains so limited. One possible reason is that, despite the skewed distribution of agricultural land, there is no large landholding class with excess land to lease out. It may also be that crop yields (particularly on upland)

are so low or unpredictable that even larger farmers are unwilling to give up land or, conversely, that potential tenants are unwilling to risk advancing cash rents.

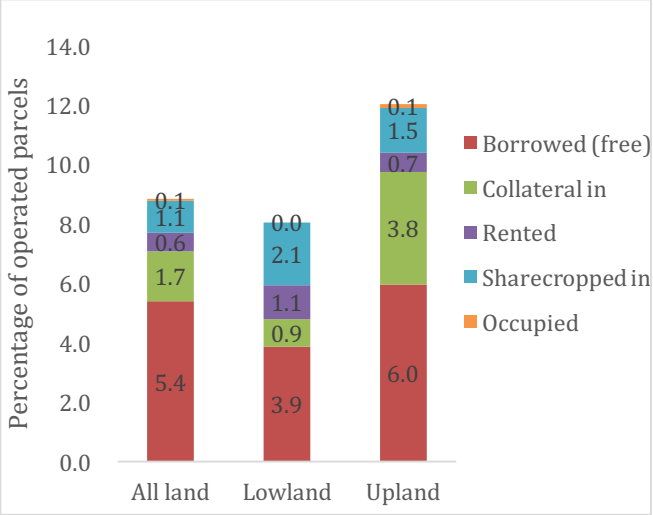

Figure 3: Share of operated parcels by tenure arrangements other than ownership.[2]

Differences in patterns of access to land between households in tercile 1 and tercile 3 are small, with farms in tercile 1 marginally more likely to rent in land, as compared to farms in tercile 3.

Historical change

Compared to their parents, the share of households that do not own any agricultural land increased by 10%, from 33% to 43%. As expected, downward intergenerational mobility between landowning and non-landowning households is more common than upward mobility. Eighteen percent of men and women grew up in a landowning household but currently live in a household that doesn't own land, whereas only 8% who grew up in a household without agricultural land now own farmland [Table 2].

Table 2: Landowning status of individuals and their parents

	Individuals' household owns any land (%)		
Parents owned any land (%)	*No*	*Yes*	*Total*
No	25	8	32
Yes	18	50	68
Total	43	58	100

[2] "Collateral in" means that the household has obtained the parcel as a pledge for a loan given to the owner of the land.

In addition, average farm sizes have declined over time. The previous generation of farm households (the parents of current household heads and their spouses) held 9.6 acres of land on average, which is 48% larger than the current 6.5 acres. Only 23% of men and women in farm households have farms larger than those of their parents, whereas 69% have smaller holdings.

Less than one in six (15 %) of all households (i.e. current landed and landless) had ever lost or disposed of a parcel of agricultural land. On average, these households disposed of 1.2 parcels, sized 3.6 acres each (median 2 acres). Overall, this amounts to about 20% of the total area of current landholdings of households in our sample.

The three most important reasons for disposing of land were to pay off debt (39%), land confiscations by the authorities (13%), and land losses due to erosion or landslides (9%) [Table 3]. Disposed parcels were mainly obtained by relatives (26%), by individuals from the same village (31%) or the same township (13%), or by local officials and state institutions (12%).

Table 3: Reasons for land disposal (1988–2016)

Reasons for land disposal	% of disposed parcels
Sold due to debt	38.8
Confiscated by authorities	13.3
Lost due to erosion/landslide	8.7
Sold to pay for medical care	7.3
Given to family member	6.6
Sold as insufficient labor to farm	3.9
Sold following inheritance	3.2
Sold to fund investment	3.2
Sold as land of poor quality	2.1
Grabbed by private individual	1.8
Religious donation	1.4
Sold to fund migration	0.7
Sold due to dispute	0.4
Other	8.7

Possession of legal documents appears to be related to a lower likelihood of land confiscation. Confiscated parcels were less likely to have legal documents and more often had no documents at all (44%) compared to parcels sold or otherwise disposed (36%) [table 4].

64% of households received financial compensation when they disposed of a parcel. The lowest rates of financial compensation occurred when households lost land due to confiscation or land grabbing by private individuals (26%), whereas 94% of those disposing of land to pay debt received financial compensation. Among parcels lost due to other reasons, 52% were financially compensated.

Table 4: Tenure status of parcels confiscated or disposed of (%)

Document type	All parcels disposed	Parcels confiscated	Parcels not confiscated
Form 7	40.6	23.3	43.6
None	37.4	44.2	36.2
Tax receipt	10.1	14.0	9.5
Contract	5.6	4.7	5.8
Form 105	5.2	9.3	4.5
La Na 39	0.7	2.3	0.4
Other	0.4	2.3	0.0

Among a maximum of three possible consequences of land disposal, the most commonly cited consequences were a reduction of agricultural income (75%), giving up agriculture (51%), dependence on agricultural labor (14%), migration (10%) or non-farm business (10%) for household income [Table 5].

Table 5: Consequence of disposal of parcel (%)

Consequence (1, 2 or 3)	% of disposed parcels
Reduction of agricultural income	75.2
Household gave up agriculture	50.7
Household became dependent on agricultural labor	13.6
Household member migrated	10.2
Household became dependent on non-farm business	10.0
Other	2.1
No negative effect	15.0

CONCLUSION

The following points stand out from the above analysis:

1. As anticipated, levels of landlessness in Myanmar's Central Dry Zone are high, at 40%. Moreover, even among landed households, a large cohort of farms operates extremely small farms, and the bottom 1/3 of farm households operate just 3% of all agricultural land, while the middle 1/3 possess only 15%. It is important to keep this distribution in mind when designing agricultural interventions or planning for rural development. Such plans should pay close attention to the specific needs of both non-farm households and those with very small agricultural landholdings.

2. Rainfed upland accounts for the majority of agricultural land in the surveyed communities. Irrigated lowlands suitable for paddy cultivation account for around one third of farmland in these townships, and other types of agricultural land are scarce. Rainfed non-paddy crops (oilseeds and pulses) with highly variable yields account for the majority of Dry Zone agricultural production. Finding ways to improve productivity and reduce risks associated with the production of these crops is thus a key priority for agricultural research.

3. Unlike in many other areas of the country, possession of formal land use certificates (Form 7) is the norm. Confiscation was the second most common reason cited for loss of land, accounting for 13% of disposed parcels, but possession of a formal land use certificate appeared to reduce the likelihood of land confiscation.

4. Indebtedness was the most common reason for the loss of agricultural land, being cited in 39% of cases. Further research is needed to understand how the relationship between debt and land ownership is changing over time.

5. Landlessness has increased intergenerationally, while average farm size declined. However, it is not clear on the basis of the survey what processes are driving this trend, whether it is resulting in greater concentration of land ownership over time, and whether the trend is accelerating or attenuating. These questions require further research.

6. Land access arrangements other than ownership are rare, with land shared-, leased- and mortgaged-in together accounting for just 3.4% of all agricultural parcels operated. Land rental markets in the Dry Zone are thus far less developed than is the norm in most other countries in the region. It is unclear whether this pattern reflects the influence of historical factors, or arises from the risky nature of rainfed agricultural production.

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