AQUACULTURE, LAND OWNERSHIP, LAND MARKETS AND TENURE SECURITY IN MYANMAR

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INTRODUCTION[i]

The Myanmar Aquaculture-Agriculture Survey 2016 (MAAS) was conducted with the aim of comparing the impacts of: i) aquaculture and agriculture, and ii) small and large fish farms, on the rural economy of four townships in Myanmar's Ayeyarwady delta (Kayan, Twantay, Maubin and Nyaungdon). This brief presents survey findings on land use and land tenure security in the surveyed areas, and examines two pieces of conventional wisdom with respect to land: first, that aquaculture in Myanmar is dominated by large farms and; second, that legal restrictions prevent the conversion of paddy land into fish ponds. The survey also attempted to shed light on the dynamics of land markets, and the interplay between land tenure security, land markets, and land use change.

LAND OWNERSHIP

Levels of landlessness are high in the communities surveyed. Well over half of all households (58%) were landless. As expected, levels of landlessness were highest among the poorest households; three out of four households in the bottom expenditure quintile (the poorest 20% of households) did not have access to any agricultural land, as compared to one in three households in the wealthiest quintile. Rates of participation in aquaculture were low: even in areas with highest concentrations of fish ponds, only 12% of households farmed fish.

There are many more smallholders in aquaculture than is generally recognized, particularly operating nurseries, yet in terms of acreage the sector is dominated by very large farms. Focus group discussions (FGDs) conducted in all the surveyed communities indicated that fish farms under 10 acres made up 49% of farm numbers, but accounted for a meager 4% for pond area (Figure 1). In contrast, farms sized 500 acres and above made up 1% of all farms, but covered 32% of all land under aquaculture, and fish farms sized 100 acres and above accounted for 60% of total pond area.

Farms sized under 10 acres were overwhelmingly operated by residents of the village tracts where they were located (95% of farms), whereas larger farms tend to be operated by absentee owners and companies (e.g. 44% of farms larger than 500 acres were operated by absentee owners, and 48% by companies) (Figure 2).

Figure 1. Share of pond farms (frequency and area), by farm size category

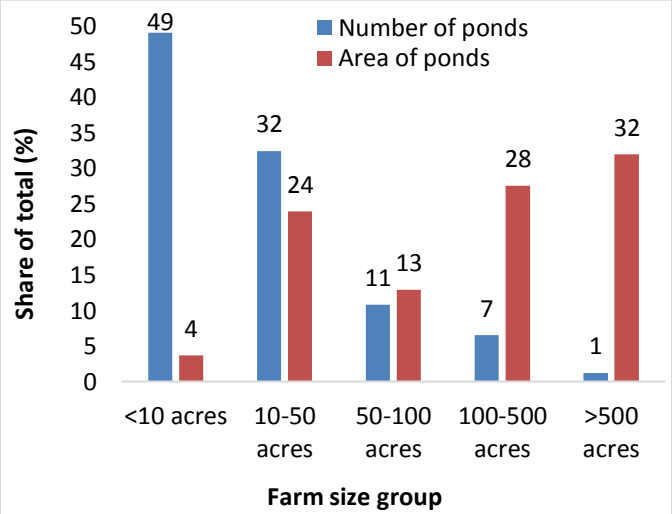
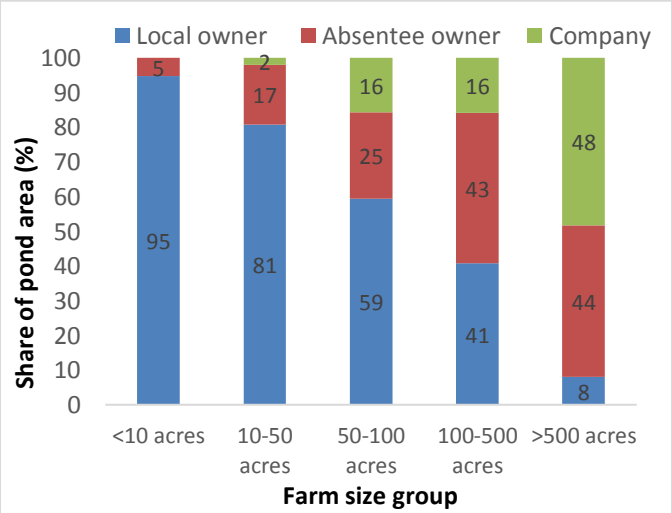


Figure 2 Share of pond area by farm size category and ownership type



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Farms operated by companies and absentee owners were excluded from the household survey sample. Nevertheless, the average size of fish farms operated by residents of the communities surveyed was double that of paddy holdings (16.9 acres vs. 8.4 acres). However, the median size of fish farms was actually lower than that of paddy farms (3 acres vs. 5 acres). This is because 45% of fish farms in the sample were specialized commercial nurseries (producing fish seed for sale to growout farms, and not engaging in food fish production), with an average operated area size of just 3.6 acres, as compared to an average of 27.7 acres for growout farms. These results indicate that nursing seed offers the main point of entry into aquaculture for small landholders in Myanmar. This is not widely recognized.

LAND MARKETS

Land rental markets are extremely limited. The market for sales of agricultural land in Myanmar is well established, albeit operating informally until 2012. The vast majority of farms surveyed operate on their own land (98% of paddy farms and 96% of fish farms). About half of all paddy parcels and 63% of all ponds were obtained through purchase, and over a third of all paddy parcels and a quarter of ponds were inherited. Very few households sharecropped in land for agriculture, and only 3% of paddy farms and 7% of fish farms leased in land from private owners. Leases of land for aquaculture were concentrated among a handful of big fish farms, each renting in around 60 acres of land on average.

Land appears to be becoming increasingly scarce. Real (inflation adjusted) prices for parcels of land under both paddy and ponds increased sharply over the 20 years from 1997 to 2016. According to informants in FGDs, the average price per acre of fish ponds with access to a road or canal and in possession of La Na 39 stood at MMK 10 million per acre in 2016; twice as expensive as an acre of best quality paddy land with road or canal access, and 20% more than similar land without La Na 39, indicating secure tenure status confers economic value. Household survey data suggests that the average price of fish ponds has increased at a slightly faster pace than that of paddy land. Between 1997 and 2016, the real average price of fish ponds increased 269%, as compared to 254% for paddy land. Historically, prices for land under ponds have been more volatile than those of land under paddy. In particular, pond prices jumped steeply in 2001, coinciding with a major period of private land appropriation and pond construction (see below). Another more modest jump in pond prices occurred in 2008-09, and again in 2013-14. The latter increase coincided with a major period of nursery construction (Figure 3). During the period 1997-2016, the average real annual rental price for an acre of ponds was consistently higher than that for an acre of paddy land (MMK 200,000 vs. MMK 70,000), reflecting the higher profitability of fish farming.

Pond construction has occurred in several 'waves'. The first major period began in 1990, peaking in 1996, following the 1989 Aquaculture Law (No. 24/89), which allowed for conversion of "wasteland" into fish ponds. A second flurry of pond construction took place in 2000-2001, following the completion of a water control scheme in Maubin and Nyaungdon townships in late the 1990s. The scheme was intended to facilitate intensification of rice cultivation in areas previously subject to heavy flooding but, in doing so, simultaneously improved conditions for aquaculture. Pond construction also jumped steeply again in 2006. Although the area under growout ponds operated by residents of the village tracts surveyed (more than 21,000 acres by 2016) far exceeded that under nurseries (6,400 acres), the last five years have seen nursery pond construction outpacing that of growout ponds in order to meet demand from the latter for fingerlings. There are presently three times more nursery ponds in operation than there are growout ponds. Of more than 6,000 nursery ponds operated in 2016 by residents of the village tracts surveyed, slightly over half belong to specialized commercial nursery operations, while the remainder are 'non-commercial' nursery ponds, integrated into growout farming operations to provide seed for their own use.

Figure 1. Growout, commercial- and non-commercial nursery ponds constructed, compounded no. 1957-2016

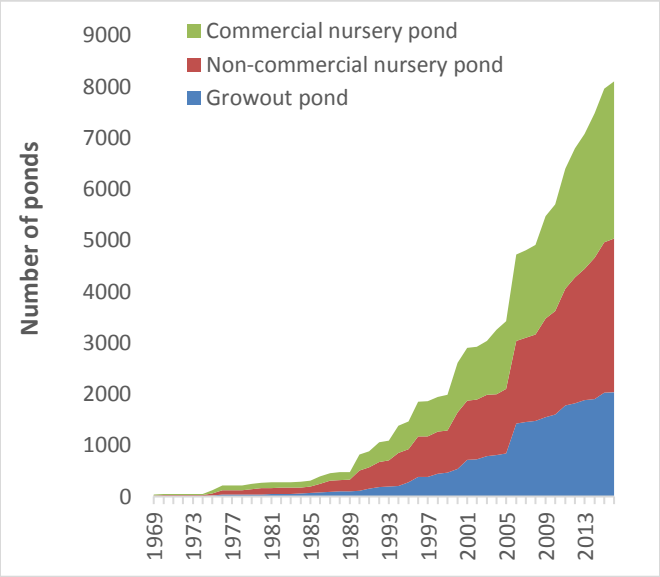
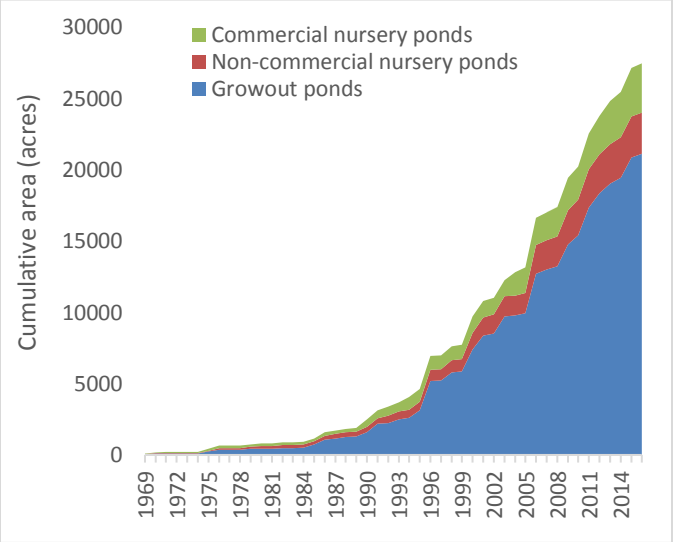


Figure 2. Growout, commercial- and non-commercial nursery ponds constructed, compounded acre 1957-2016

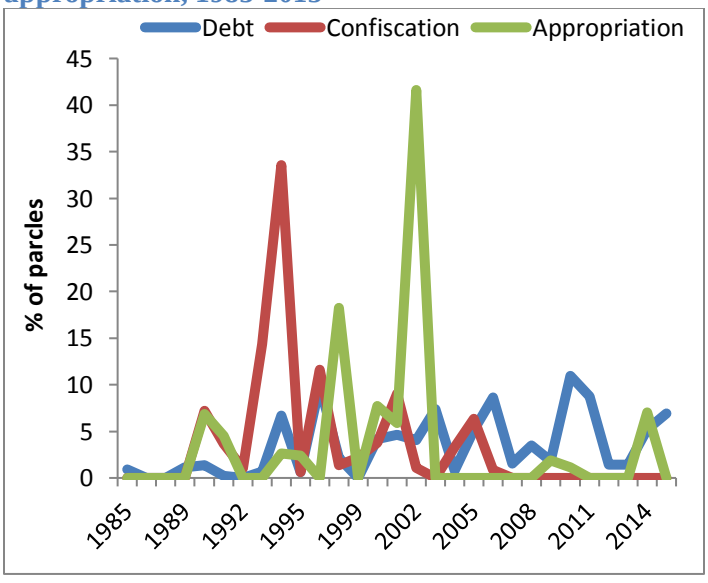


TENURE SECURITY

The tenure of land used for paddy cultivation tends to be more secure than that of ponds. Three quarters of all paddy parcels and just over half of all pond parcels had some form of documentation indicating use rights and/or tenure (i.e. Form 7, Form 105, La Na 39, a tax receipt or a contract). Out of all paddy parcels with some form of documentation, 85% possessed formal use rights (Form 7 or Form 105). Only 35% of ponds possessing any kind of documentation (18% of all ponds) were reported to have La Na 39, the title document that permits conversion of land from agricultural to non-agricultural uses (including aquaculture). This finding runs contrary to the conventional wisdom, which holds that strict enforcement of this regulation renders pond construction on agricultural land all but impossible. Applying for La Na 39 is a lengthy and costly process however. The average application period was reported to be 1 year and 5 months, and the average cost per acre over MMK 340,000. Among ponds that had been issued La Na 39, the largest share (20%) obtained it during the period 1990-1991 (coinciding with the passage of the 1989 Aquaculture Law). The second largest share (18%) was obtained during 2010-2011, conterminous with the return of civilian rule to Myanmar.

Patterns of land disposal and land use change are closely linked to tenure security. One fifth of all households had sold, given away or lost a parcel of land within the last 30 years. Debt was most common reason reported for the loss/disposal of a parcel of land (43% of households that disposed of a parcel had done so for this reason). The second and third most frequent reasons were confiscation by the authorities (28%) and appropriation by private individuals (15%).

Figure 5. Land disposals due to debt, confiscation and appropriation, 1985-2015



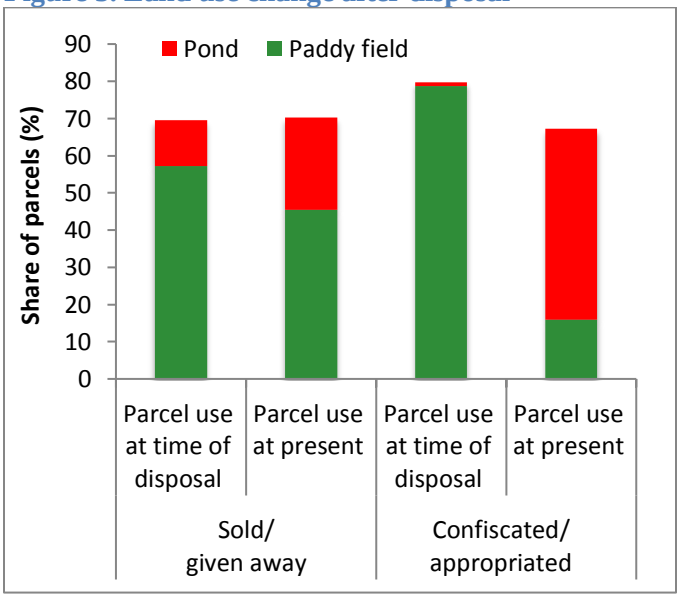
Considered together, confiscation by the authorities and private appropriation were the predominant causes of land disposal in village tracts with high concentrations of aquaculture, accounting for 33% and 18% of disposed parcels respectively. In village tracts with little aquaculture, only 4% and 2% of households having disposed of land reported doing so for this reason. Debt was the primary driver of land losses among these households, accounting for 71% of all parcel disposals. Parcel disposal due to debt was a common phenomenon throughout the 30-year recall period. Land confiscation by authorities, on the other hand, took place mainly in the early 1990s during the state-led push for aquaculture development, peaking in 1994. A second wave of land appropriation, this time by private individuals, occurred during the late 1990s and early 2000s, peaking in 2002, following the completion of flood control schemes (see above). Few cases of land confiscation by state institutions were reported from 2006 onwards.

Among the parcels of land confiscated or appropriated, almost all possessed either weak tenure status (i.e. tax receipt or contract only), or no documentation at all. Whereas 34% of land parcels exchanged in market transactions had a formal land use document, less than 1% of parcels confiscated or appropriated did so. The majority of recipients of land sold or given away are either relatives (40%) or private individuals residing in the same village (40%). In contrast, the three most common recipients of land confiscated or appropriated were local officials (35%), companies (21%) and state institutions (14%). Thus, ownership of the majority of parcels of land sold or given away remained within the communities where the land was located, whereas land was confiscated or appropriated largely by non-residents. Financial compensation was reported to have been received in less than 5% of all cases in which parcels were confiscated or appropriated.

The consequences of losing land were severe, particularly for households who had done so for extra-economic reasons: 98% of respondents who lost land due to confiscation or appropriation reported that their primary response was to give up agriculture all together, as compared to 70% of respondents who had sold or given away land. 55% of households whose land was confiscated/appropriated stated that their secondary coping-strategy was to become dependent on agricultural wage labor, compared to 29% of those who had sold/given land parcels. A further 43% reported migration to city or other rural area by one or more household members as a secondary outcome of land confiscation/appropriation, as compared to 21% of households who had sold or given away land.

Aquaculture was a major driver of agricultural land confiscation, appropriation and land use conversion. At the time when they were confiscated or appropriated, 79% of parcels were utilized for paddy cultivation and only 1% as ponds. In 2016, only 16% of these parcels retained their original use, while 51% were reported to have been converted to ponds. In contrast, while the share of parcels sold or given away and utilized for aquaculture increased from 12% to 24%, most continued to be used for agriculture (Figure 5).

Figure 3. Land use change after disposal



CONCLUSION

High levels of landlessness exist in the sites surveyed, and levels of direct participation in aquaculture are relatively limited, even among landed households. Land rental markets are extremely poorly developed, and those that exist

primarily serve big fish farms. Our findings confirm the commonly held belief that aquaculture in Myanmar is dominated by large farms. However, they also reveal the existence of numerous small fish farms, particularly commercial nurseries, which serve as an important entry point into aquaculture for smaller landholders. In addition, although conventional wisdom suggests that conversion of agricultural land to ponds is constrained by stringent regulations, our research demonstrates that conversion of paddy land into ponds has taken place, driven by both market- and, disproportionally, non-market forces. Weak tenure security has played a critical role in enabling the conversion of land from paddy to aquaculture. In this context, several corrective policy options are desirable. These include:

i) Relaxation of policy constraints on agricultural land use, including the simplification of agricultural land categorizations. Currently, aquaculture is not officially considered to be a form of agriculture. Thus, land conversion from agriculture to aquaculture is usually costly, or possible only for farms with favorable relationships with local the authorities, limiting the potential for smallholders to participate and benefit. Simplifying agricultural land categorizations by reclassifying aquaculture as a form of agriculture would reduce thus risks and support farmer choice. Such a policy shift could support increased smallholder participation in aquaculture, transforming the sector's current structure into a more inclusive one.

ii) Strengthening existing tenure by extending the coverage of legal documentation in accordance with the Farmland Law 2012. As the research shows, strong land entitlements protect farmers against the confiscation and appropriation of land and increase its value. Coupled with support for greater farmer choice, strengthening tenure for ambiguously titled lands operated by smallholders would also improve land market fluidity, encouraging farmers to exchange and lease land, resulting in its more efficient land allocation. The deepening of land rental markets also has the potential to improve access to productive land among small landowners.

iii) Strengthening dispute arbitration mechanisms and speeding up their implementation is required in order to ensure swift and equitable solutions to previous cases of land confiscation/appropriation, and to forestall the possibility of future incidents occurring.

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