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# Regional variations and trends in the composition and vulnerability of rural livelihoods

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# **1. INTRODUCTION**

The regional context in which rural livelihoods in Myanmar are embedded varies widely, in terms of physical geography, climate and agroecology, local resource base, agrarian structure, infrastructure provision, proximity to urban areas and neighboring countries, social networks, institutions, and ethnicities. The composition of livelihoods in each administrative and geographical zone of the country reflects these diverse contexts. Marked variations in patterns of livelihoods are evident at multiple scales, from the zone or region, down to township, and village level, so that the composition of livelihoods in villages close to one another sometimes varies widely (Phyo, 2022).

Despite a high level of place-based specificity, many broad similarities and common trends also shape the composition of livelihoods at sub-national and national levels. These include: Generally low levels of agricultural productivity relative to other countries in the region, in terms of both land and labor (World Bank 2016); High rates of landlessness and legacies of land confiscation and unresolved struggles over land rights and access (Mark and Belton 2020); Generally poor, though - prior to 2020 - rapidly improving, public infrastructure and services, including electricity, roads, schools, health services, and rural credit (Belton et al. 2017; Lambrecht and Belton 2018); Relatively low levels of diversification and capital in the rural non-farm economy; High rates of international and domestic outmigration (World Bank and LIFT 2016; CHIME 2019); Histories of ethno-political conflict and insecurity (South 2009).

This working paper synthesizes analyses from four large household surveys, each covering a major agro-ecological zone, to evaluate inter-regional variations in the composition of livelihoods and the rural economy. The four zones examined are the Delta (Ayeyarwady and Yangon), the Dry Zone (Mandalay, Magway, Sagaing), the hills (represented by Shan South), and the coasts (represented by Mon State). We also synthesize recent secondary sources that offer additional context and insights on regional livelihood dynamics from these and other areas of Myanmar, including the impacts of the 'triple crisis' (covid, coup, and price inflation) beginning in 2020.

The paper is organized as follows: In Section 2 we examine and compare across the four zones: (1) The status of infrastructure and public services; (2) The composition of rural livelihood activities and incomes. More details on the geography of these zones, and the surveys deployed in each can be found in Belton et al. (2021). In Section 3, we supplement primary data from surveys with a synthesis of contemporary research on livelihoods and the rural economy in Myanmar, with respect to two key areas in this literature: (1) agricultural commercialization; (2) non-farm employment and migration. In Section 4, we evaluate changes in livelihood vulnerability and resilience occurring since the triple crisis beginning in 2020. The final section synthesizes these findings and discusses possible future trajectories.

# 2. SYNTHESIS OF RESULTS FROM LIVELIHOODS SURVEYS

In this section, we present a comparative summary of key trends across zones, based on surveys conducted in a total 839 communities between 2015 and 2018, with respect to: (1) Recent changes in access to infrastructure, transport, and public services; (2) The composition of livelihood activities; (3) The composition of rural incomes.

#### 2.1 Infrastructure and services

Provision of most infrastructure and services is uneven across zones, reflecting variations in physical geography and legacies of settlement and conflict (Table 1)<sup>1</sup>. Access to surfaced roads is lowest in southern Shan (54 percent of villages), perhaps reflecting the hilly terrain and history of conflict in some areas, followed by the Delta (59 percent), where water-based transport is still the primary means of access to many villages. Mon has the highest rate of access by paved road (95 percent). Partly as a result, Mon has the shortest transport times to nearby urban areas among the four zones, with implications for the ease with which individuals can commute for non-farm work, access inputs, or sell products. Travel times in the monsoon season are roughly 20 to 40 percent longer than in the dry season across zones, indicating that even surfaced roads may be poorly constructed.

Village characteristic	Mon 2015	Delta 2016	Dry Zone 2017	Shan 2018
With paved road, %	95	59	80	54
Accessible by car in monsoon, %	87	32	99	79
Dry season travel time to closest urban center, avg. minutes	33	47	46	51
Monsoon travel time to closest urban center, avg. minutes	40	57	66	60
Primary school, %	80	-	79	80
Post-primary school, %	37	-	31	15
Public electricity supply, %	51	12	34	25
Access to at least one cell phone provider, %	97	-	-	97
Number of communities surveyed	143	73	300	323

Table 1.	Community	level access	to	infrastructure	and	public	services,	by	zone
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Source: Authors' analyses of survey datasets.

Primary schools are the public service with the highest levels of provision and access and are present in about 80 percent of villages in all surveyed zones (Table 1). No data was collected on this indicator in the Delta. The share of villages with a post-primary school is lower and much more variable across zones, being lowest in southern Shan and highest in Mon. Nevertheless, access to post-primary education improved significantly during the decade to 2020 in some areas. For example, the share of 17-year-olds in the Dry Zone having completed Grade 8 jumped from 35 percent in 2010 to 60 percent in 2017 (Belton and Filipski 2019).

Access to publicly provided electricity connections is also variable across regions but generally low, with the highest levels of provision in Mon (51 percent), and the least in the Delta, with just 12 percent. Many villages access electricity through private transformers, often purchased with pooled community resources. However, even in villages with public electricity supply, not all households are able to afford an electricity connection and power outages are frequent in some areas. For example, in Shan only three out of four households in villages with access to publicly provided electricity are connected to the network, and these households reported facing power cuts lasting an average of five hours about two times per week. Solar cells are now a widely used source of power, mainly for charging mobile phones and lighting. Access to mobile phone providers became almost universal following the extremely rapid expansion of services that started in 2014, although mobile internet access has been partially hampered following the coup in 2021.

Although often starting from a low baseline, the rapid acceleration of infrastructure provision and geographical diffusion of public and private services were key features of the reform period from

<sup>&</sup>lt;sup>1</sup> Surveys conducted in these four zones were representative of subsets of townships or village tracts, not the entire zone, except for Mon, where the survey represented the entire rural population of the state. See Belton et al. (2021) for details.

2011-2020. The construction of rural roads and post-primary schools and the establishment of public electricity supply and, to a lesser extent, health services, increased sharply during this time across all the zones surveyed. This dynamic is illustrated in Figure 1, which shows the cumulative share of primary and lower secondary schools, roads, and electricity connections established in surveyed villages in the Dry Zone by year over the past century. Road construction and provision of electricity connections and post-primary schools accelerated dramatically from 2011.





Source: Authors' analysis of survey dataset.

Collectively, these changes in access to infrastructure and services had extremely significant implications for livelihood opportunities. In combination with the liberalization of vehicle imports and financial services, these changes contributed to improvements in mobility and communication, with sharp reductions in costs and time required. For example, in Shan, average transport times from surveyed villages to the nearest urban area fell by around 40 percent between 2013 and 2018, an average reduction of 38 minutes, while motorbikes became the most common mode of transport in 87 percent of villages, up from 41 percent in 2013.

Greater mobility has expanded the economic opportunities available to many rural inhabitants. For example, having access to a wide choice of buyers means that markets for agricultural products, such as maize in Shan, tend to be competitive (Cho and Belton 2019). Ease of mobility has also increased the variety of employment that villagers might pursue. For instance, in the Delta, 44 percent of those who reported being engaged in salaried employment commuted to nearby urban areas or to other townships or regions for their work (Htoo and Zu 2016).

#### 2.2 Livelihood composition

In this and the following section, we review livelihood profiles by zone, in terms of the share of households participating in a range of farm and non-farm livelihood activities (Section 2.2), and the shares of household income derived from these activities (Section 2.3).

Agriculture is the major livelihood activity in terms of number of households participating directly in all four survey zones, except for the Delta, where a higher proportion of surveyed households engaged in wage labor than in crop farming (56 vs. 42 percent), reflecting very high levels of landlessness there. However, even among farm households, complete dependence on agriculture is relatively uncommon. Most households and individuals pursue diversified livelihoods that combine multiple forms of employment and sources of income. High levels of diversification into off-farm activities reflect the uneven distribution and low average size of agricultural landholdings in all zones

(see Lambrecht et al., 2022), and relatively low productivity and profitability of most crops . These factors mean that many farm households would be unable to meet their subsistence needs through farming alone. For instance, among the wealthiest 20 percent of the population in the Delta, only 29 percent of households depended exclusively on agriculture for income in 2015. Among the poorest 20 percent, this figure was just 8 percent (Htun 2016).

Uneven distribution of land makes off-farm employment important for all households but those with the largest landholdings. However, most casual wage employment remains closely linked to agriculture, with agricultural day labor remaining the most important source of income for landless households and operators of marginal farms in all zones except Mon (Table 2). Agricultural wage work is fairly gender-balanced in terms of levels of participation, though often with significant levels of gender differentiation by task, and significant gender wage gaps. Casual non-farm work skews heavily male and is composed largely of manual work, such as construction, carpentry, and hauling loads, and employment in non-farm enterprises.

	Mon 2015	Delta 2016	Dry Zone 2017	Shan 2018
Share of households engage	ged in activity, p	ercent		
Crop production	51	42	57	82
Wage labour, of which:	42	56	55	61
Agriculture	22	42	48	53
Non-agriculture	28	17	14	20
Salaried work	8	6	8	7
Own non-farm business	29	21	21	16
Remittances	33	15	31	14
Livestock sales	25	22	21	52
Aquaculture	0	6	0	0
Natural resources	10	6	3	5
Share of total household in	come from activ	ity, percent		
Crop production	24	20	37	47
Wage labour, of which:	15	15	21	12
Agriculture	6	11	16	7
Non-agriculture	9	4	5	5
Salaried work	5	3	5	8
Own non-farm business	18	34	18	13
Remittances	25	3	13	8
Livestock sales	1	1	5	10
Aquaculture	0	19	0	0
Natural resources	12	6	1	1

#### Table 2. Livelihoods and income composition, by zone

Source: Authors' analyses of survey datasets.

Self-employment in own non-farm enterprises is common across the survey zones. Numbers of non-farm businesses grew rapidly over the decade to 2020 (Paudel et. al., 2022), reflecting factors such as increasing levels of mobility, rising real incomes, and reduced credit constraints. Levels of self-employment in non-farm businesses are lowest in Shan (16 percent of households) and highest in Mon (29 percent), reflecting regional differences in the degree of transformation of the rural economy (Table 2).

Men and women operate non-farm businesses in equal numbers, but men tend be more likely to own more remunerative businesses with higher capital costs, such as machinery rental services, whereas women are more heavily represented as owners of smaller businesses, such as food retail (Aung et al. 2019). The likelihood of a household operating a non-farm enterprise is not closely correlated with landownership, although the type and scale of a business may be linked to the resource base of the household. Most rural non-farm enterprises are very small and operate using only family labor. For instance, only 21 percent of such businesses surveyed in the Dry Zone reported hiring labor (Zu et al. 2017).

Remittances from migrant household members are a significant source of income in Mon and the Dry Zone, received by more than 30 percent of households. Remittances are less common in southern Shan and the Delta, where smaller shares of households have migrant members. Salaried employment provides work for a similar share of households across zones at around 7 percent, with a gender balance that skews towards women. Women account for a large majority of schoolteachers, which is by far the largest category of salaried employment for rural households. The importance of raising and selling livestock is highest in Shan, where 52 percent of households raise animals for sale, and a little over 20 percent in the other three zones.

Finally, participation in natural resource extraction, such as collecting firewood, cutting bamboo, harvesting non-timber forest products, or fishing, is quite common, except in the Dry Zone. However, these activities are practiced mainly for home use, with few households doing so commercially. The major exception to this is Mon, where 11 percent of households are involved in marine fishing on a commercial basis (Table 2).<sup>2</sup> Most people involved in commercial natural resource extraction are men – for example, 72 percent in the Dry Zone (Zu et al. 2017).

#### 2.3 Income composition and wages

The composition and size of rural incomes vary widely by zone, reflecting geographical differences in access to agricultural land, agricultural potential, the degree of development of the rural non-farm economy, and the extent of migration. In very broad terms, Shan is the zone that is most highly agrarian and Mon the least – crop farming accounts for about twice the share of rural income (46 percent) in surveyed areas of southern Shan that it makes up in Mon (24 percent). The share of crop farming incomes falls between these figures in the Dry Zone (35 percent). The share of crop income in total income reported in the Delta is just 20 percent. This reflects both high levels of landlessness and the deliberate inclusion of village tracts with high concentrations of fish farming in the survey sample frame. As a result, aquaculture accounts for 19 percent of rural income in the sampled village tracts in the Delta, but this figure is not representative of the entire Delta.

Conversely, the combined share of remittances and self-employment in non-farm enterprises is relatively low in Shan (totaling 21 percent), but high in Mon (totaling 43 percent), and is also substantial in the Dry Zone (31 percent). The contribution of agricultural wage labor to income is largest in the Delta and the Dry Zone, where there are high levels of landlessness relative to Shan, but fewer lucrative non-farm opportunities, such as international migration, than in Mon.

# Table 3. Mean and median total crop and non-crop rural incomes in Shan and the Dry Zone, MMK/capita

	Shan		Dry Zo	one
Item	Mean	Median	Mean	Median
Total income	441,862	260,037	608,771	406,667
Crop income	205,445 (46%)	69,646	213,133 (35%)	11,250
Non-crop income	236,417 (54%)	97,500	395,637 (65%)	262,064

Source: Authors' analyses of survey datasets.

Note: Unconditional averages, i.e., including all households whether or not earning crop or non-crop income.

<sup>&</sup>lt;sup>2</sup> Our survey in the Delta did not include any coastal areas, and thus likely underrepresents the importance of commercial fishing in the zone as a whole.

The extent of participation in non-farm activities, including migration, accounts for significant differences in average incomes across zones. For example, mean income from crop farming is similar in southern Shan and in the Dry Zone. However, average earnings from non-crop sources in the Dry Zone are 67 percent higher than in southern Shan, resulting in average Dry Zone incomes per capita being 38 percent higher than in southern Shan (Table 3).

High levels of participation in off-farm work mean that rural wage rates play an important role in determining incomes, particularly for members of landless and land-poor households who are particularly dependent on casual employment. Wage rates are also important in relation to the profitability of agriculture, as wages account for a significant share of production costs. Our surveys show that real rural wages (adjusted for inflation) jumped sharply in post-2010 economic reform period, rising by 39 and 37 percent, respectively, between 2011/12 and 2016 in the Delta and Dry Zone (Figure 2). Wages in Shan were higher in 2012 than in either the Delta or the Dry Zone, but changed little until 2017, when they rose 9 percent to reach a level similar to that in the Dry Zone.





Source: Authors' analyses of survey datasets.

Note: \*Delta and Dry Zone calculated at constant 2016 prices for all seasons, Shan at constant 2017 prices, for monsoon season.

Significant increases in real rural wages from 2011 to 2020 were linked to accelerating outmigration over the same period. This trend drove labor shortages around periods of peak local demand for agricultural workers. Expansion of post-primary education likely also played a role, by delaying entry into the workforce and producing a more educated workforce with higher wageearning potential (c.f. Lui et al. 2020, for Vietnam).

Rising wage rates appear to have contributed to rapid agricultural mechanization prior to 2020 (Win et al. 2018). However, mechanization in the Dry Zone has not generated sufficient savings to fully offset the costs to farm households of rising agricultural wages. Belton and Filipski (2019) suggest that this implies a shift in the underlying 'terms of trade' between agriculture and non-farm segments of the economy, consistent with a process of structural transformation under which the competitiveness of agriculture is eroding relative to more productive sectors. The authors argue that this pattern of development resulted in a partial shift in the relative economic status of landholders and the landless, favoring the latter.

This outcome, while seemingly troubling from the point of view of the future viability of agriculture, is positive to the extent that it suggests improvements in the relative economic status and mobility of at least some households with limited resources. Thus, the median income of landless households

is only 13 percent less than the all-household average for the rural Dry Zone (Belton and Filipski 2019). Similarly, in southern Shan, average per capita incomes of rural non-farm households are only 16 percent lower than those of households farming maize. Both these findings suggest that rural income earning potential has become partially delinked from ownership of land.

However, in all zones there is a significant gender wage gap in agriculture. In Shan, women farmworkers hired for cultivation of maize and pigeon pea earn on average 89 percent of the male daily wage. In the Dry Zone, the gap is larger still. Women can expect to earn only 81 percent of what men earn for agricultural wage work of equivalent duration. The reasons for these differences are not clear, though part of the explanation appears to relate to the gender division of labor across farming tasks, which vary from crop to crop. This gender gap appears persistent, having changed little even as men's and women's real wages have increased rapidly.

# **3. META-CONDITIONERS OF LIVELIHOOD TRENDS**

In this section, we draw on secondary sources to further assess regional differences and trends in livelihoods during the decade to 2020. We expand on the implications of, and relationships between; (1) agricultural commercialization, and (2) non-farm employment and migration, for the composition and outcomes of livelihoods in Myanmar. Both sets of processes accelerated in response to policy reforms during this period that contributed to greater economic openness and growth.

### 3.1 Agricultural commercialization

In this sub-section, we evaluate evidence for the effects of agricultural commercialization (commodification) on the composition and outcomes of livelihoods in Myanmar. Evidence across studies is mixed, reflecting differences in the cases evaluated, as well as the research perspectives and methodologies applied.

Woods (2020) and Borras et al. (2020) contend that agricultural commercialization associated with introduction of hybrid maize to upland Shan State by the Thai agro-industrial company Charoen Pokphand, and the crop's subsequent widespread uptake by smallholders, has been almost exclusively negative in its impacts on rural livelihoods. These authors frame hybrid maize as undermining customary systems of shifting cultivation and subsistence food production, resulting in smallholder farmers' indebtedness to maize traders, leading to rapid and widespread differentiation and dispossession.

However, Belton and Fang (2022) find these claims to be exaggerated, based on detailed surveybased research on the impacts of hybrid maize on farmer livelihoods in Southern Shan. They contend that the widespread adoption of hybrid maize reflects its low risk profile relative to other cash crops, and the generally positive contributions that maize makes to farm incomes in a rural setting where earning cash income is increasingly imperative to pay for expenses such as schooling, and consumer goods. They also found no evidence that growing maize for sale reduces subsistence food production, in part because nearly all rural households purchase the bulk of the food they consume, irrespective of whether they grow maize (c.f. Pritchard et al. 2019).

Belton and Fang (2022) do find some evidence to support Woods' (2020) conclusion that the smallest farmers benefit less from planting hybrid maize than cultivators with more resources, however. This tendency is similar to the pattern documented by Okamoto (2008, p199) as resulting from the widespread uptake of green gram cultivation for export in the 1990s by famers close to Yangon where, "farmers of all sorts adopted the new crop, and since green gram provided a higher income per acre than paddy, it increased their incomes significantly". She concluded that, "It may be true that income disparities among farmers increased when green gram was cultivated to the fullest

extent, but this change was not entirely negative, since it improved the economic circumstances of all classes of farmer".

In other settings, agricultural commercialization has been driven by external investors, rather than smallholders. Investments in the Central Dry Zone by Chinese citizens and wealthy Myanmar farmers growing watermelon - a capital-intensive commercial crop grown for export to China - have been facilitated by short-term leasing of land from smallholder farmers. These leases provide stable incomes to smallholders at rates above those typically earned from crop cultivation, but leave soil degraded following heavy application of agrochemicals and polluted with plastic residues from mulching film (Kubo et al. 2021).

Similar tendencies are reported in association with cross-border investments in banana cultivation in Kachin State, where Chinese companies and investors have leased cumulatively large areas of land to establish banana plantations for export to China. Intensive use of fertilizers and pesticides on these plantations has been linked to soil degradation, chemical runoff, and biodiversity loss. Some smallholders benefit by earning rental income, but some rental agreements have been obtained through coercion or deception, and many smallholders have lost land, particularly that left fallow by internally displaced persons (Hayward et al., 2020).

Myanmar has a long history of land confiscation by the military and allied companies and individuals, for reallocation to agricultural concessions established with the stated intent of modernizing agriculture to increase productivity and raise export revenues. Thein et al. (2018) estimated that only 15 percent of 3,875,964 acres of land granted to agricultural concessions in Myanmar has been cultivated, with the remainder left idle, often after having been cleared of valuable timber. Nomura et al. (2019) found similar results for oil palm concessions in Southern Myanmar, using remote sensing techniques.

Land confiscation has displaced very large numbers of former smallholder farmers throughout Myanmar, with often devastating impacts for their livelihoods and welfare. For instance, in the Delta, reallocation of large tracts of paddy land formerly cultivated by smallholders and wetlands used for fishing to industrial scale rice farming and aquaculture concessions led to dramatic reductions in the welfare of affected households. These impacts included much lower incomes, high levels of food insecurity, withdrawal of children from school, and the permanent migration of entire households to Yangon (Mark and Belton, 2020).

Thus, 'top down' forms of agricultural commercialization, whether imposed in response to policy decisions or initiated spontaneously in response to emerging economic opportunities have tended to result in impacts on livelihoods that range from mixed at best, to highly negative at worst. 'Bottom up' forms of agricultural commercialization instituted by smallholders themselves, often in response to market opportunities for new crops offering potential for higher earnings than traditional ones, have also resulted in varied livelihood outcomes, but with a general tendency toward more positive results than 'top down' forms of commercialization.

Even so, participation in the non-farm economy may prove more decisive in determining household welfare for smallholders than agricultural commercialization. We expand on this point in the following sub-section.

#### 3.2 Non-farm employment & migration

Returning to the case of maize cultivation in Shan, Belton and Fang (2020) found that participation in some forms of non-farm work by maize cultivators – particularly own non-farm enterprises and salaried work – were much more strongly associated with higher household incomes than crop farming, and had the potential to modify trajectories of differentiation linked to the performance of agriculture. Similarly, Vicol et al. (2018) found that a small boom in export-led production of the crop

elephant yam in upland Chin State resulted in relatively minor changes to the overall status livelihoods, with economic benefits accruing primarily to better-off households. Migration played a much more significant role in determining livelihood trajectories than participation in yam cultivation. Kmoch et al. (2018) also found that households in Chin engaging in remittance and wage-oriented livelihood strategies realized higher incomes than those primarily involved in activities linked to agriculture and natural resources.

In some cases, participation in non-farm work and migration may facilitate investments in that improve agricultural productivity and support agricultural commercialization. For instance, Faxon's (2020) detailed study of land and livelihoods in Kalay – a lowland district in Sagaing region, bordering Chin State – found that "For many Chin families and a rising number of Burmans, labor migration provided an essential way to earn money that was reinvested in transforming the agrarian landscape" (p64). This transformation included investments in commercially managed fishponds constructed on former rice paddy, as well as in rearing pigs and poultry, using remittances received from abroad. Remittances also supported the purchase and rental of agricultural machinery which reduced demand for labor in a context of increasing labor scarcity precipitated by migration (Faxon, 2020).

Land ownership (and, thereby, participation in agriculture) and welfare outcomes are increasingly becoming delinked in Myanmar. This tendency reflects high levels of participation in non-farm activities by both landless and smallholder households, and the difficulty of generating substantial returns from small areas of land. As noted above, Belton and Filipski (2020) found that in the Dry Zone, average incomes earned by landless households are only marginally lower than those with small landholdings. Pritchard et al. (2019), return similar results with respect to the relationship between land ownership, non-farm employment, and food security – a key indicator of welfare – based on surveys in the Delta and Dry Zone. Although they found that landowning households were more likely to be food secure and have higher dietary diversity than landless households, crucially, they found no statistically significant relationship between landownership and food security and diet diversity for households with landholdings less than 5 acres – around the median landholding for farms in both zones (MAPSA, 2022).

Moreover, the same authors found that households participating in the non-farm economy exhibited superior food and nutrition security outcomes to those dependent exclusively on farming or agricultural labor, regardless of whether they were landed or landless (Pritchard et al. 2019). Hence, while access to land remains an important factor in shaping food security, household participation in the non-farm economy appears to be of greater importance. This is in large part because, as Pritchard et al. show, most food consumed by rural households is purchased, not self-produced. They also observe that the highly seasonal character of much agricultural work means that connections to the non-farm economy become particularly important for household welfare during 'lean periods' when little agricultural work or produce is available.

Considering the implications of the skewed distribution of land ownership for the composition of livelihoods in the Delta, Vicol et al. (2020) contend that strategies to address rural poverty and food insecurity that hinge on fostering smallholder-led agricultural development, productivity improvements, and commercialization are unlikely to catalyze significant change. The Delta's agrarian history has led to extremely high levels of landlessness, exceeding 50 percent and rising to 80 percent in some villages, and the distribution of land is highly unequal even among those who own it (Vicol et al., 2020). This scenario, they argue, means that "policies that prioritize smallholder-led market development will not generate the type of pro-poor outcomes required to address the Delta's pervasive rates of food insecurity and poverty" (p1). Instead, they contend that effective policy must recognize that rural livelihoods are increasingly characterized by hybridity, diversity, and mobility, and be designed accordingly.

However, in the regional context of highly conflict affected Kachin State, Forsyth & Springate-Baginsky (2022) argue that neither agricultural commercialization or livelihood diversification into non-farm work currently offers significant opportunities to smallholders or the landless. They argue that the main beneficiaries of agricultural commercialization in Kachin State to date have been local landowners with access to large areas for forest land customarily used for shifting cultivation that can be converted into cropland or plantations, and outside investors leasing-in land or granted agricultural concessions. Similarly, they contend that the non-farm economy in Kachin offers few employment opportunities beyond dangerous work in jade or gold mining, and that potentially lucrative non-farm occupations such as trading and fishing are controlled mainly by inward migrants with strong ethnic and social ties. These observations underline the regional specificity of livelihoods, reflecting the influence of historical path dependence, as well as the present-day incidence of constraining factors including conflict.

Climate change also generates regionally specific shocks and stresses to livelihoods that may also induce income diversification. In the Central Dry Zone - a region subject to very high climate risk – Phyo (2022) finds that farm households have adapted to climate change by altering their agricultural practices and by diversifying their livelihoods through non-farm employment and migration. However, although climate change is an important factor influencing famers' decision making, other factors such as crop price instability and non-farm business and employment opportunities are often prioritized over climate risks. Phyo concludes that "in many cases, although farmers may be aware of the effects of climate change, their livelihood adaptations are motivated by a wider array of concerns, which mitigate or even subvert their capacities to respond to climate challenges" (p.v).

# 4. VULNERABILITY AND RESILIENCE SINCE 2020

In this section we draw on a mix of sources to evaluate trends in livelihood vulnerability and resilience since the onset of the triple crisis in 2020. Ferreira et al. (2021) used regional analysis of poverty dynamics in Myanmar during the period 2015-2017 to infer likely impacts on welfare in the wake of the COVID-19 crisis. Analyzing nationally representative household survey datasets (MLCS 2015 and MPLCS 2017), they found that poorer households were less integrated into the formal economy, and more likely to be working solely in agriculture. The total number of poor people in rural areas was 6.7 times higher than in urban areas (10.2 million versus 1.5 million), and rural poverty rates remained higher than urban ones (30 percent versus 11 percent) in 2017 (Ferreira et al., 2021).

There was significant movement out of poverty in the period between the two surveys, indicative of the high level of economic dynamism of this period. The probability that people who were poor in 2015 would exit poverty in 2017 was high, at above 40 percent, while the chance that individuals who were non-poor in 2015 would become poor in 2017 was low, at about 6 percent. Only 20 percent of the population were poor in both 2015 and 2017, whereas more than 60 percent were non-poor in both years. However, a large part of the population remained close to the poverty line in 2017: 14 percent of the population remained within 20 percent of the poverty line, and 30 percent of the population remained within 50 percent of the poverty line. A large share of the population thus remained highly vulnerable to shocks, despite the rapid improvements in welfare that occurred during the reform period (Ferreira et al., 2021).

Consequently, the triple crisis of COVID-19, the coup, and subsequent price spikes have had devastating effects, rapidly reversing more than a decade's worth of gains in living standards. The economy contracted by 18 percent in 2021, following very weak growth in 2020, making the economy around 30 percent smaller than it would have been in the absence of COVID-19 and the coup (World Bank, 2021). The estimated national poverty rate increased to about 50 percent (IFPRI, 2022; Diao

and Mahrt, 2020); double that in 2017, and similar to 2005 levels. Headey et al. (2022) reported even larger estimated increases in poverty rates, with two-thirds of sampled rural households, and just under two-thirds of sampled urban households estimated to fall below the poverty line by September/October 2020, whereas only 8 percent of sampled urban households had been so in January 2020. Over 80 percent of households surveyed in September/October 2020 reported a drop in income since the beginning of the year (Headey et al. 2022). Loss of employment was one of the main channels of impact, with households relying on informal jobs and on remittances most heavily impacted (Diao and Mahrt, 2020).

Prior to the onset of COVID-19, migration offered a means for migrants and their households to manage shocks and risks, and seek upward mobility (Okamoto, 2020), but the crisis rendered households heavily dependent on remittances especially vulnerable to losses of income. The pandemic severely curtailed the ability of domestic and international migrants to send remittances due to reductions in or loss of work. Job losses were very common, with the informal nature of most migrant work meaning that few migrants had access to any employment protection or safety nets (Suhardiman et al, 2021). IOM (2020) reported that, 43 percent of women and 47 percent of men returnee migrants in Myanmar during the COVID-19 pandemic had lost their jobs prior to returning, with significant impacts experienced in all sectors of work populated by migrants. Eighty-three percent of returned internal migrants and 67 percent of returned international migrants reported that they had no savings, and 50 percent reported being in debt, compounding economic challenges for their households. Nevertheless, more than half of returnees (55 percent) planned to re-migrate, with most of these intending to do so as soon as possible (IOM, 2020).

Internal and international migration – both forced for political and security reasons, and voluntary for economic ones – has accelerated sharply since the coup (Tun, 2022). This new pattern of migration reflects how the economic shock associated with COVID-19 has been compounded by the even more profound shock of widespread political repression and conflict.

Conflict increased across Myanmar throughout 2022, affecting states and regions including Sagaing, Mandalay, Magway, Chin, Bago, Kayah, Kayin, and Rakhine (Figure 3). The most heavily conflict affected states and region (Chin, Kachin, Kayah, Kayin, and Sagaing) sit on Myanmar's periphery, and are also among those least touched by the economic dynamism of the decade preceding the crisis. Households in these four states and one region were considerably more likely to remain poor during the period 2015-2017 than households in other areas of the country, and correspondingly remained more vulnerable to falling below the poverty line (Ferreira et al. 2021). Thus, the most conflict affected areas of Myanmar at present, are also those with the most persistent poverty and highest levels of vulnerability. They were also among those with the most limited access to infrastructure and services and the most limited scope for livelihood diversification prior to the crisis (Vicol, 2018; Forsyth and Springate-Baginsky, 2022), underlining how histories of conflict have compounded and entrenched regional inequalities.

#### Figure 3. Number of violent events, April to August 2022



# **5. CONCLUSIONS**

The period since 2010 has seen Myanmar undergo two political and economic sea changes in quick succession, with the negative effects of the latter compounded by the global COVID-19 pandemic and inflationary crises. These changes have given rise to an extremely tumultuous period, during which rapid but uneven growth, development, and rural transformation were followed by a violent reversal of fortunes than elevated poverty rates and intensified underlying vulnerabilities. These upheavals are reflected in the shifting livelihood patterns described above, with many rural households benefitting from new possibilities and economic opportunities to varying degrees, only to face acute challenges and correspondingly large declines in welfare.

The trends outlined above suggest that longstanding historical geographical inequalities of opportunity and welfare will continue to widen over at least the medium term in the face of conflict and repression, driving further migration due to internal displacement and in response to economic imperatives. This scenario will leave the rural economy much diminished in comparison to the precrisis period, and increase the importance of migration, but will also leave households heavily reliant on migrant remittances vulnerable to any future shocks that curtail the movement of people, or their ability to find work.

Prior to the triple crisis, the non-farm economy was a major driver of growth in rural incomes and key to lowering poverty. Households with both agricultural and non-farm income were generally less poor and more food secure than households dependent solely on farm income. The economic contraction outlined above is likely to have narrowed this advantage, as many households that benefitted from non-farm business activities or employment pre-crisis have experienced substantially reduced income earning opportunities.

As the non-farm economy falters in response to depressed demand for goods and services, agriculture will likely continue to provide levels of food and income for most smallholders that are inadequate for their subsistence, but may attain greater significance in livelihood strategies than in the recent past given the paucity of other options. Nevertheless, the agricultural sector appears likely to remain more resilient during the current crises than the rural non-farm economy, despite the constraints that farming households face, and thus worthy of continued attention and support to help maintain its role in underpinning rural livelihoods.

Moreover, as difficult as the present situation in Myanmar currently is, evidence from the dynamic period prior to 2020 indicates that many rural people have the capacity to respond to new opportunities where these arise, whether on-farm or off-farm, with both sectors critical to current survival, and offering a basis for future recovery if political circumstances improve.

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