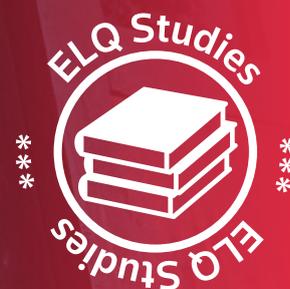


DECREASING VULNERABILITIES IN LIFT-SUPPORTED VILLAGES:

2014-2018

Dr. Mike Griffiths, Research Consultant
(Social Policy & Poverty Research Group)



Evaluation &
Learning Question
Studies



Livelihoods and Food Security Fund



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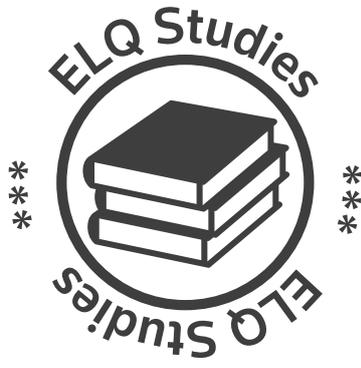
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EXECUTIVE SUMMARY

Introduction

The overall purpose of this study is to ‘measure changes in vulnerability levels in LIFT programme areas and determine their effect on overall resilience of LIFT households and communities’. The purpose is to enable both a quantitative and qualitative appraisal of the contribution of LIFT’s programme activities to changes in vulnerability and resilience in the rural areas served by LIFT-supported projects. This study draws from two sets of data: panel data of 2,249 households from the 2015 and 2017 household surveys, and detailed analysis of narrative interviews with over 150 households in 12 villages across six different regions in rural Myanmar, conducted in 2016 and 2018. Critical to interpreting the potential impact of LIFT-supported activities is an understanding of the wider context of rural development: what is happening in the ‘background’ where LIFT is working, and how do the effects of wider rural transformation and uncertainty intersect with LIFT’s own development processes?

Context

The background socio-economic conditions in rural areas are understood using two terms: precarity and post-peasant economics.

Precarity is a term increasingly used to describe situations of ‘produced’ risk, where new vulnerability arises because of more external factors such as global market volatility or economic policies.

The project relevance assessment focused primarily on relevance for the ultimate beneficiaries. Four sub-ELQs relate to the relevance of objectives, relevance of the design to achieve the objectives, adjustment of the project to keep it relevant during implementation, and actually addressing the needs of beneficiaries. The first three are critical and contribute strongly to the fourth sub-ELQs. Two other sub-questions focus on relevance to LIFT’s strategy and to government.

In their study of socio-economic changes in rural Nepal, Rigg et al (2016) discuss the contrast between vulnerability as “as a reflection of a pre-existing state of marginality or exposure” and precarity as “new, produced poverty” *resulting in the context of other development processes, which inadvertently produce new inequalities*” (Rigg et al., 2016, pp. 63-64). This ‘produced’ vulnerability arises from policies and processes, including **land dispossession** (and resettlement to less arable land), **market dependencies, unsustainable debt, rising inequalities, out-migration and erosion of the ‘community covenant’** (Rigg et al., 2016, p. 66).

Post-peasant economics describes the transition from agrarian livelihoods in an economy’s structural transformation. During this time, the rural economy often experiences considerable volatility. In those circumstances, vulnerability may be expected to increase, or at least not decrease. Both quantitative data, and numerous qualitative narratives from different locations describe the nature of agrarian livelihood change in rural locations in Myanmar, with the declining viability and importance of traditional agriculture accompanied by an increase in non-farm livelihoods, many of which are irregular in nature. The expected volatility of such a transition exposes households not only to the more expected vulnerabilities, but also to new risks associated with market instability and global economic trends. In keeping with this, our analysis of **shocks and stresses** showed a trend towards more **market-related stresses**. Climate change is also a major narrative.

LIFT Interventions

The household surveys (2015 and 2017) and qualitative studies (2016 and 2018) used in this study sampled to capture a wide range of different LIFT-supported interventions. For the purposes of analysis, these were categorised by the main focus of the activity, such as financial inclusion, nutrition, livelihoods and water & sanitation (WASH). The table below shows the proportion of households who were exposed to LIFT-supported interventions of different types, and the potential pathway by which the interventions could reduce household vulnerability.

Table 1.1 Exposure to LIFT-supported assistance and contributory pathway to reducing household (HH) vulnerability

Intervention Area	% of HHs exposed to intervention	Contributory pathway to reducing household vulnerability
Improved water & sanitation	22%	Reduction in time taken to get water frees up time for livelihoods. Beneficial in terms of improved health.
Improved nutrition/ MCCT	17%	Reduced food insecurity, better access to antenatal care.
Increased sustainable agriculture, farm-based and non-farm livelihoods	24%	In the context of better road access, and access to finance, provision of seed and new techniques enable diversification Provide viable alternative income for young people.
Financial inclusion	55%	Enabling less risky borrowing, income smoothing and financial literacy .

Findings

1. There was a **small, but statistically significant reduction in the proportions of households classified as vulnerable in LIFT's programme areas**, from 24.5 per cent in 2015 to 22.4 per cent in 2017. This was derived from the net difference of 371 households in the LIFT cohort whose status changed from vulnerable to non-vulnerable (those whose status improved), and 323 whose status changed from non-vulnerable to vulnerable (those who status got worse). Against the backdrop of de-agrarianisation and increasing rural precarity, the finding of reduced vulnerability should be considered a strong success. Exposure to shocks and stresses, which were reported by over one-third of households, was a key external driver for changes in vulnerability. Exposure to a shock of any kind was associated with a 1.4 times increase in the risk of worsening vulnerability status. However, LIFT assistance is clearly associated with prevention of worsening vulnerability, and conversely, increases the likelihood of improved vulnerability status among households exposed to shocks and stresses. Of households exposed to shocks and stresses who received LIFT interventions, 23 per cent were classified as vulnerable in 2017, compared to 36 per cent of those who had not received LIFT interventions, despite similar rates of vulnerability in 2015.
2. However, **the distribution of the changes in vulnerability** was not even. The Rakhine programme saw the proportion of households classified as vulnerable reduce from 34 per cent to 24 per cent, and likewise, there was a reduction from 22 per cent to 18 per cent of households classified as vulnerable in the Dry Zone (see Table 2.1). However, there was no statistically significant reduction in vulnerability in the Delta Programme area, and an increase in the percentage of households classified as vulnerable in the Upland areas. This was almost entirely due to increases in vulnerability in Shan State, linked to more negative trends in livelihood diversity. The positive changes seen in Rakhine State were mainly due to reductions in the proportions classified as vulnerable relating to assets, water, sanitation, income and livelihood diversity. The changes in vulnerability status in the Delta Programme were very small. While there were positive changes in indicators for asset- and dependency-related vulnerability, these were offset by negative changes (i.e. increased vulnerability) in debt and health.

Table. 1.2 Changes in proportions of households classified as vulnerable, by programme area

Region	Vulnerability at 2015	Vulnerability at 2015	% reduction	Significance
Delta	27.9%	27.18%	0.72%	Not significant
Dry Zone	22.15%	18.35%	3.8%	++
Uplands	18.38%	21.66	-3.28%	+
Rakhine	34.78%	23.91%	10.9%	+++
All	24.5%	22.41%	2.09%	++

NS = Not Significant + = >90% confidence ++ = >95% confidence +++ = >99% confidence

The largest reductions in vulnerability were among households considered more economically marginal, such as poorer households, landless households and households dependent on casual labour. These households were more likely to be classified as vulnerable in 2015, but the proportion classified as vulnerable decreased significantly by 2017. They were significantly more likely to be exposed to LIFT-supported assistance. However, vulnerability rates among **female-headed households** and **households with persons with disabilities (PwDs)** did not significantly change. In fact, the degree of inequality in vulnerability rates between male-headed and female-headed households, and households with and without PwDs, increased over the study period. The likelihood, and degree of, increases in annual income were also lower among female-headed households and households with persons with disabilities. **Analysis of exposure to LIFT-supported assistance showed that female-headed households were less likely than male-headed households, or households without PwDs, to receive LIFT-supported assistance.**

Table. 1.3 Vulnerability levels and profiles for different categories of household

	Exposure to LIFT-supported assistance	Vulnerability at 2015	Vulnerability at 2017	Significance
Landless	43.7%	36%	30%	+++
Casual labour dependent	47.6%	40%	31%	+++
Lowest income quintile at baseline	44%	51%	26%	+++
Female headed	38%	29.8%	29.3%	NS
PwD	39%	31.3%	30.7%	NS

NS = Not Significant + = >90% confidence ++ = >95% confidence +++ = >99% confidence

- Overall, this study showed a trend towards **improvements in resilience**, with indications of better coping by households exposed to shocks, and greater levels of investing money in livelihood activities, which when strengthened lead to stronger future resilience. This is likely due to the **increased availability of low-cost loans**, which appear to have stimulated more livelihood investment. However, although the overall trend is positive, the proportion of households reporting using loans from higher-interest, higher-risk sources to purchase food during short-term income gaps nearly doubled from 26.7 per cent to 47.8 per cent. Loans were still the most commonly reported coping strategy of those facing shocks and stresses, reported by nearly half of all respondents. **Resilience patterns were also strongly correlated with assistance.** Increases in resilience index scores from 2015 to 2017 indicate improvements to household resilience. Among households exposed to shocks and stresses, there were increases in scores in households who did and who did not receive assistance. However, the degree of improvement was twice as high for those receiving assistance. LIFT assistance was associated with positive change in the resilience index scores in 55 per cent of households that were exposed to shocks and received LIFT-supported assistance.

Table. 1.4 Changes in coping behaviour, vulnerability, income and resilience amongst households exposed to shocks and stresses

	Selling assets for coping	Reduced vulnerability	Improved income	Improved resilience
No LIFT assistance	32.6%	34.4%	40.7%	48.1%
LIFT assistance	28.5%	39.3%	50.3%	52.3%

4. Overall, analysis of the qualitative data in terms of **changes in economic well-being** did not show significant improvements, with the majority of respondents describing a 'holding pattern', except for respondents in Chin State. However, narratives of **resilient behaviour** showed a trend towards more positive coping, and more livelihood diversification options. The issue of problem debt remains a challenge. However, more sustainable coping methods were reported in 2017 than in 2015 suggesting a small, but significant trend towards better coping, probably aided by improved infrastructure, better access to low-cost finance, and more diversity in off-farm livelihood options. The absence of adequate social protection, particularly relating to health shocks, remained a prominently cited cause of more negative coping.
5. In general, there is a **trend towards more positive livelihood diversification**. While not all diversification contributes to a reduction in vulnerability, a more even spread of income sources was associated with a decreased likelihood of worsening vulnerability. Among households who reported an increased share of income from selling (e.g. vegetables, snacks, meat or fish), or from remittances, there was an increased likelihood of 'graduating' from being classified as vulnerable in 2015, to being classified as non-vulnerable in 2017. However, households who reported increased shares of income from casual labour, agriculture and fishing were more likely to have a negative change in vulnerability status, changing from being non-vulnerable in 2015 to vulnerable in 2017.
6. Of LIFT's programme interventions, there is strong evidence of the **positive contribution of WASH activities** in reducing vulnerability, particularly in Rakhine State. It should be noted that LIFT's WASH interventions are considerably smaller in scale than other interventions. This study focused on a WASH intervention in Rakhine State. Agricultural inputs were also strongly linked to positive trends in vulnerability and resilience, but the role of agricultural training was less easily demonstrated. **Financial inclusion assistance from LIFT was associated with reductions in vulnerability, but the picture is complex**, not only due to the high level of overlap in finance provision, but also due to the complex ecology of debt in rural communities.

While cheaper finance has enabled greater livelihood investment and more affordable options for income smoothing, there is considerable evidence of problem debt, in part fueled by pathways into unsustainable debt for which microfinance may be an entry point. **Analysis of nutrition-related activities, particularly the provision of maternal and child cash transfers (MCCT), was similarly complex:** while there are demonstrable reductions in vulnerability among recipients of nutritional assistance, qualitative analysis of the impact of MCCTs among beneficiaries from the Dry Zone was surprisingly underwhelming, demonstrating only the vital importance of nutritional education as a component of MCCT programmes.

7. The evidence suggests a growth in **problem debt** and this is cause for concern. The ubiquity of narratives of borrowing, credit and debt, and the quantitative and qualitative evidence of increasingly unsustainable debt at the household level warrants further study, particularly given the rapid expansion of access to financial services. The various indicators used to measure debt-related vulnerability in this study assume the positive utility of affordable credit, but at the same time capture descriptions and measures of debt that carry more risk and pose more threat to the medium-term and long-term sustainability of the household economy. This study highlights the complex ecology of debt, in which non-formal providers of high interest loans continue to thrive despite the availability of other forms of loans. A major factor in the loan ecology is the rising cost of health and education. The absence of social protection, particularly to enable access to basic health services at affordable cost, and without requiring huge debts, continues to undermine the viability of rural households.

Conclusions and recommendations

The following table shows a brief summary of the association between LIFT-supported assistance and changes in vulnerability. **The association between LIFT assistance and reductions in vulnerability and improvements in resilience is strongest among households exposed to shocks and stresses.**

Table. 1.5 Association between LIFT-supported assistance and changes to vulnerability, and resilience

	Any LIFT-supported assistance	LIFT-supported WASH	LIFT-supported financial inclusion
Reduced vulnerability (any households)	NS	+	+
Reduced vulnerability (households exposed to shock)	++	++	++
Increased resilience (any households)	N	N	N
Increased resilience (households exposed to shock)	++	++	N
Increased resilience (households exposed to shock)	N	N	N

NS = Not Significant + = >90% confidence ++ = >95% confidence +++ = >99% confidence

The quantitative and qualitative accounts present narratives showing a **shift towards better, less erosive coping**, which tends towards strengthening future coping capacity rather than undermining it.

WASH and financial inclusion are the LIFT-funded activities the evidence suggests have contributed most to reduced vulnerability and improved resilience. Microfinance provided together with financial inclusion training and support, such as savings and loans groups are particularly effective. As described in the study, by enabling a lower-risk, lower-cost process of income smoothing, and access to modest, but low-risk investment funds, financial inclusion programmes have contributed to a shift in expenditure patterns towards more investive behaviour, and away from more erosive forms of coping. The picture is not all rosy, however, as ample evidence also points to mounting problem debt, particularly in areas where multiple loan providers operate.

The **availability of loans** is a prominent element of coping narratives. Borrowing to cover periods when income is insufficient was common in 2015 and in 2017, but the evidence suggests borrowing became less risky. This was perhaps more so in areas where fewer MFIs operate, such as Rakhine and Chin States. A key lesson from the study is the need to better understand the place of microfinance in the ecology of debt and borrowing, and to strengthen the provision of financial literacy as part of MFI activities.

Targeted agricultural inputs were also strongly associated with more resilient behaviour, and again most prominently in Rakhine and Chine States. The context is key: provision of training in the absence of adequate finance, or market access, was in other areas noted to be less effective. This points to the complex inter-relationship between different development

tracks and contexts, highlighting the need for a co-ordinated, and integrated approach to development.

The contribution of MCCTs to resilience is not clear, perhaps mainly due to this study's limitations. Strangely, there was little overt enthusiasm for the benefits of the MCCT among villagers interviewed for the qualitative study. The cash transfers were seen as a nice, but fairly non-essential bonus. The provision of nutritional training alongside cash appears to be critical to achieving good nutrition outcomes. As suggested in other review papers, the benefits of MCCT are likely to emerge over time.

Conclusions are further elaborated from page 118

Recommendations

1. **Longitudinal studies capturing wider rural trends are invaluable for ongoing analysis of LIFT's work, and for wider stakeholders, and should be continued.** The value of this and other contributing studies extends well beyond an appraisal of the contribution of LIFT's programme to its goals of sustainable livelihoods and poverty reduction. These studies, by providing a longitudinal analysis similar to the QSEM series¹, enable a more comprehensive understanding of the trends in the socio-economic conditions of rural areas. An understanding of these trends can be used to better inform future policy developments as well as appraise LIFT's impact.
2. **A detailed study of rural debt should be conducted** to enable a more nuanced appreciation of the positive and negative contributions of microfinance to economic development and precarity in rural areas. The findings of this study highlight the worrying trend towards a greater indebtedness of people in the rural economy. While the increase in debt is in itself not necessarily alarming, the data from both the quantitative and qualitative studies suggests that the degree to which debt represents a threat to the economic sustainability of a sub-section of rural households is rising. The increased availability of cheaper loans may have resulted in increased borrowing and lower interest rates, but in a significant number of cases has, in the medium term, resulted in more, not less, problem debt. Debt is a complex ecology, and there is an urgent need to study the phenomenon of debt in rural Myanmar beyond a simple focus on credit provision, to enable a more detailed and comprehensive understanding of how and why people borrow, and what informs their choices of creditors.
3. **The delivery of LIFT-supported assistance needs to be more effectively inclusive of vulnerable households such as female-headed households and households with persons with disabilities.** As described in the previous section, analysis in this study points to persistent inequalities in people's access to assistance and improved outcomes. For female-headed households, issues relating to wider

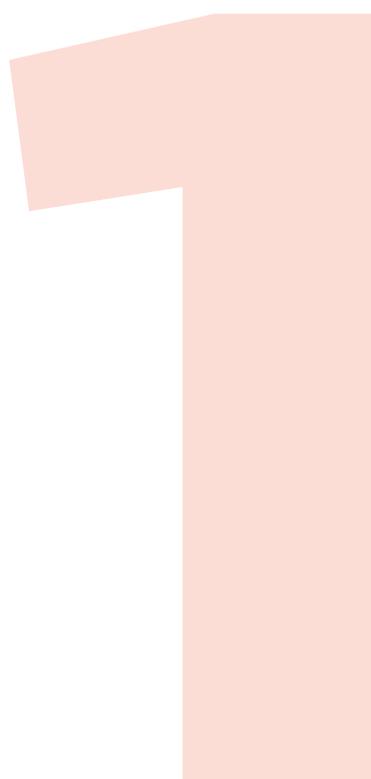
1. Qualitative Social and Economic Monitoring of Livelihoods in Myanmar (QSEM) – a six-round longitudinal panel study of rural life in Myanmar, funded by LIFT and conducted by the World Bank 2016-2012.

social inclusion (for example, the lack of social standing that can reduce the chance of being accepted into a loan group) may be significant. For persons with disabilities, a complex set of societal, physical, attitudinal and institutional barriers requires intentional programming to enable inclusion.

4. Related to the above point is the need for future LIFT programme design and Theory of Change to **more clearly incorporate social protection**, and particularly the strengthening of access to assistance for health shocks, as a critical cross-cutting component. The harmful effect of health shocks on vulnerability and resilience was strongly evidenced from this study. Likewise, the measurable impact of LIFT's programme work was arguably most demonstrable in the prevention of worsening vulnerability among households exposed to health shocks. However, this appears to be the case despite any clear pathways in LIFT's Theory of Change for social protection and social assistance. Incorporating social protection more explicitly in LIFT's Theory of Change would not only enhance the impact of LIFT's activities in reducing vulnerability, but also enable such impact to be more clearly demonstrated in future impact studies.

INTRODUCTION

1. INTRODUCTION TO THE VULNERABILITY OUTCOME STUDY



1. INTRODUCTION TO THE VULNERABILITY OUTCOME STUDY

As defined in the LIFT strategy 2014-2018 LIFT has a goal of sustainably reducing the number of people living in hunger and poverty. The purpose is to strengthen the resilience and sustainable livelihoods of the rural poor population in Myanmar. More specifically, LIFT aims to contribute to the following purpose-level outcomes:

1. Increased incomes of rural households
 2. Decreased vulnerability of poor rural households and communities to shocks, stresses, and adverse trends
 3. Improved nutrition for women and children
 4. Improved policies and effective public expenditure for pro-poor rural development
1. The strategy focuses on helping target beneficiary groups to adopt diverse livelihood strategies to cope with shocks and stresses, and, where possible, improve their circumstances. This may include, for example, at times grappling with basic survival, or exploiting market opportunities and securing new sources of income, whether through the participation in commodity markets or in labour markets. The key is acknowledging that households have different needs and capacities that require tailored and localised strategies. To this end, key elements of LIFT's Theory of Change² are:
 1. Improved nutrition, sanitation, and hygiene practices
 2. Improved market access and market terms for smallholder farmers
 3. Increased sustainable agricultural and farm-based production by smallholder farmers
 4. Increased and safe employment in non-farm activities for smallholders and landless
 5. Increased access to adequate and affordable financial services by smallholders and landless
 6. Safeguarded access to and sustainable use of natural resources for smallholder and landless
 7. Strengthened local capacity to support and promote food and livelihoods security
 8. Generation of policy relevant evidence regarding pro-poor development

The purpose of this outcome study is to capture changes and perspectives on vulnerability and resilience in villages receiving assistance from LIFT

2. The Theory of Change diagram is available in appendix 6

during the previous three years, between 2015 and 2017. Reflecting specifically on LIFT's Theory of Change, five questions are considered in this study:

1. What evidence is there of achievement at the high level, of contributing to the goal of sustainably reducing the number of people living in hunger and poverty in Myanmar?
2. Has there been a strengthening of resilience and sustainable livelihoods of poor people in Myanmar?
3. Has there been a decrease in vulnerability for poor households to shocks, stresses and adverse trends?
4. What have been the contribution of specific programme activities and outcomes to changes in vulnerability and resilience? This research will specifically analyse the potential contribution of agricultural and livelihood inputs, water & sanitation, financial inclusion and nutrition-related activities.
5. To what extent is there evidence of gender equity and social inclusion, not only in the delivery of assistance, but in specific outcomes indicating achievements of greater equity and inclusion?

This study utilises quantitative data from the Household Surveys, conducted in 2015 and 2017, and qualitative data collected specifically for this research in 2016 and 2018 from 150 households selected from across LIFT's implementation areas. The concept and indicators used in this study are based on an initial vulnerability assessment tool developed by LIFT in 2010, and since applied to study household vulnerabilities in studies of mainly rural populations, in several different countries. Some aspects of how vulnerability and resilience are measured, such as borrowing strategies and debt, relate to complex behavioural ecologies that are not easily reducible to quantifiable indicators. For this reason, this study has also utilised a qualitative element, to attempt to learn the nature of, and changes to, vulnerability and resilience from the narratives of rural households.

For clarity, findings are presented thematically. Quantitative and qualitative analysis is presented for each theme with qualitative analysis presented in box inserts. In keeping with the underlying epistemology and methodology of the quantitative and qualitative approaches used here, the quantitative analysis aims to provide a set of representative findings that can be generalised to the population, while the qualitative analysis aims to provide more in-depth understanding and insight, derived from the perspectives of rural households themselves.

Finally, a note on sequence: the main aim of this paper is to describe the changes in rural communities that have occurred during the study period, and to relate these to development assistance supported by LIFT.

Attribution is a tricky process, given the complexity of the rural economy, and the multitude of factors that influence change. It is essential, then, to include some analysis of the broader background changes that have occurred to provide the context for examining the potential impact of LIFT's development assistance. Also, given that LIFT works through other organisations that actually implement the projects, it is often difficult for respondents to identify if they are in LIFT-supported households or not. However, by the nature and scale of LIFT's activities and the survey's targeted sampling procedures, it is assumed that LIFT has contributed to the measured changes in significant ways. Thus, this report, after presenting a brief description of the methodology in Part 2, presents in Part 3 an analysis of the shocks and stresses experienced by rural households, with some analysis of the broader background conditions, before presenting findings on changes in vulnerability and resilience. Part 4 then considers the potential contribution of LIFT-funded assistance to these changes, before presenting conclusions and recommendations in Part 5. Statistics are reported either as confidence intervals, with indicators of degrees of confidence, or Odds ratios, together with the upper and lower figures for the 95 per cent confidence interval, marked as CI.

METHODOLOGY

2. METHODOLOGY AND ANALYTICAL FRAMEWORK

2.1 DEFINING AND MEASURING VULNERABILITY

2.2 DEFINING AND MEASURING RESILIENCE

2.3 MEASURING SHOCKS AND STRESSES

2.4 OVERVIEW OF THE QUANTITATIVE PANEL

2.5 LONGITUDINAL QUALITATIVE STUDY: METHODOLOGY



2. METHODOLOGY AND ANALYTICAL FRAMEWORK

This study draws on two main sources of data to analyse the contribution of LIFT's programme activities to changes in vulnerability and resilience in rural households. Firstly, quantitative data from the longitudinal Household Surveys (panel study) is used, comparing trends in vulnerability and resilience indicators measured in 2015, and again in 2017, in the same cohort of 2,249 households. The details of the indicators used are provided below in section 2.1 and 2.2. Secondly, a longitudinal qualitative survey was conducted, interviewing 150 households in 12 villages, from six different geographical areas in Myanmar, once in 2016, and again in 2018. Using a narrative methodology, this qualitative research delivered a more nuanced and detailed analysis of socio-economic trends in different communities, to both enrich, and to at times critique the quantitative analysis. A brief description of the qualitative methodology is provided in section 2.5, with the detailed methodology provided as Appendix 4.

2.1 Defining and measuring vulnerability

The terms vulnerability and resilience both have a wide range of definitions and applications (Manyena, 2006). Thus, the working definitions for both vulnerability and resilience need to be clarified based on their application. In this case, in a study of vulnerability and resilience among rural households, the following definitions are used, based on an extensive study in 2009 to develop a concept of vulnerability for LIFT (LIFT/UNOPS, 2009), and a subsequent study to develop contextually relevant definitions for resilience in rural communities (Griffiths, 2017a).

The definition of vulnerability follows Pasteur, as:

The degree to which a population or system is susceptible to, and unable to cope with, hazards and stresses (Pasteur, 2011).

This incorporates two elements: risk and capacity. The underlying factors contributing to vulnerability are multi-dimensional, including exposure to risk, access to resources, coping capacity and environmental enablers (such as governance). The measurement of capacities is captured using the 'umbrella' model, developed by LIFT in 2010 to measure vulnerability in Myanmar. This model collects data on 10 indicators (dependency, debt, expenditure, livelihood diversity, food security, water, sanitation, health, social capital and decision making) and calculates relative vulnerability for each of the 10 factors based on standard deviation from the population mean. Overall, vulnerability at the household level is based on having **three or more of the 10 factors classified as 'vulnerable'** – which is

defined for each factor as having a score less than one standard deviation below the population average for that factor/indicator. It is called the umbrella model because it utilises a user-friendly umbrella style radar plot to illustrate the relative degree of 'protection' that a household has against shocks and hazards, as well as to provide a localised 'shock/hazard' module by capturing information on common threats such as food insecurity and ill health. The tool draws on Moser's Asset Vulnerability Framework and is primarily capacity focused, assessing the relative capacity of households to respond to shocks. However, certain shocks, such as health and food insecurity, are also contributors to vulnerability and so are included in the model. The list of indicators is shown in Table 2.1 below, and the detailed methodology is included in Appendix 1.

Table.2.1 Indicators for vulnerability model

Factor	Contribution to vulnerability	Indicator	Source/ validation
Indebtedness	High levels of non-productive debt put livelihood assets at risk (collateral); repayments may reduce essential expenditure; high levels of existing debt can reduce ability to access additional credit	Proportion of debt owed to high-interest/ high risk sources; ratio of debt: income	World Bank 1997, adapted
Income	Low or negative income: expenditure ratio can lead to reduction in essential spending, increase risk of debt or negative coping responses. High proportion of income spent on non-productive items can lead to under-investment in livelihood, leading to higher risk	Proportion of income expended on non-productive items (food, health, rent, fines)	World Bank 1997, adapted
Assets	Ownership of livelihood assets, convertible assets or crucially, land (in the form of usage right) can provide short term protection against shocks.	Moser's asset vulnerability framework, adapted for survey by Myanmar Market Research Department (MMRD)	Moser (1998)
Food Security	Current and prior experience of food insecurity is strongly linked with increased vulnerability to future food insecurity. Likewise, food insecurity leading to malnutrition can affect human capital, and put livelihoods at risk.	Consumption index	UNDP, modified

Livelihood diversification	Income derived from a single source is more vulnerable to shocks. Multiple sources, or the potential to diversify, can increase protection against shocks affected main/key livelihoods	Livelihood diversity index= number of income generating activities in a household	Demographic Household Survey (DHS) (2006) modified
Health	Chronic or frequent illness in primary earner OR one requiring care threatens livelihood security and reduces income, as well as increasing health expenditure; unplanned health expenditure is a common cause of negative coping (e.g. conversion of livelihood assets to cash)	Income generating household member days per year lost work through illness	UNDP modified
Water and Sanitation	Water is an essential for health and many livelihoods; more time taken to draw water reduces time for other activities; unsafe water sources increase risk of ill health which reduce livelihood effectiveness; unreliable water supplies increase resource expenditure	Average time to collect water	DHS (2006)
Dependents	Household members not engaged in livelihoods	Household Dependency scale	The Leprosy Mission International (TLMI) adapted
Social Participation	Persons with higher levels of social participation build up social capital, which can increase the likelihood of relief and assistance in times of difficulty	Participation in village events	TLMI, adapted from p-scale (KIT)
Decision making	Persons with more influence in decision making can have stronger negotiating position for livelihood related factors such as fair pricing, land and asset use	Participation index	Social Policy & Poverty Research Group (SPPRG)

2.2 Defining and measuring resilience

LIFT defines resilience as “the increased capacity of individuals, households and communities to cope with (i.e. mitigate the negative impact of) and recover from (i.e. return to equal or better conditions after being affected by) various shocks and stresses arising from climate change and both macro- and micro- (lifecycle) economic pressures”. LIFT has commissioned studies to develop theoretical frameworks and indicators to measure resilience. A more detailed description of the conceptual basis for the indicators used to measure resilience are found in Appendix 2.

Models of resilience should be context-specific and need to take into

account threats/disturbances that are experienced or perceived locally³, as well as capacities and governing frameworks that are relevant to the context, in this case rural communities in Myanmar. Resilient households and communities would be expected to be able to undertake positive, rather than erosive coping mechanisms; to demonstrate adaptation that leads to future sustainability, and to show individual and collaborative efforts to achieve greater realisation of rights and governance, potentially enabling households and communities to address wider issues such as natural resource management that constitute threats to their sustainability. This study uses models for resilience that incorporate elements from empirically grounded models of resilience (M Griffiths, 2016d; Mercy Corps, 2016):

“The actualisation of behaviour which can be termed ‘non-erosive’ or ‘constructive’ coping, and is a function of the capacity to act, the will to act, and the ability to act, as influenced by governing frameworks, which may be enabling or constraining of the desired action (and which potentially leads to greater future resilience and addressing of causes of threats and risks).”

This study uses a composite index that measures the extent to which a household has resorted to consumptive/erosive actions as coping strategies, balanced out by the extent to which they have been able to enact investive strategies. Consumptive actions are measured by the use of high risk or high interest loans taken out to address food insecurity or acute needs (excluding livelihoods); investive actions are measured by the extent to which income has been used to invest in livelihoods, or savings. Put together, these can reflect a ‘portfolio’ of household coping strategies that includes responses and mitigation, which can then be developed into a ‘resilience index’. Using this index, we can identify factors that are associated with lower (worse) levels of household resilience, such as income inequalities, gender inequality, low income and scarce assets, and particular patterns of livelihood diversity. Capacity strengthening alone does not lead to resilience. An enabling environment with a positive governing framework is also required. Likewise, ultimately, the resilience that is sought is a stronger, better and more adaptive and empowered state, not simply passive survival. However, while we do not equate survival with resilience per se, nonetheless, ‘hanging in’ is a crucial step to building resilience, and being able to ‘hang in’ in ways that lead to more, not less, sustainable futures represents steps along a resilience continuum, as shown in Table 2.2.

3. Which may nonetheless have non-local, or global origins, such as climate change

Table 2.2 Resilient households and communities: a ‘coping ladder’

Type	Survival	Coping	Stepping up	Stabilising	Empowered
Description	Households or communities are able to ‘hang in’ despite severe impacts of shocks	Households or communities are able to undertake non-erosive coping to survive in more sustainable ways	Households or communities are able to take steps to build capacity and resilience (such as livelihood diversification)	Households or communities are able to enact behaviour for future mitigation, based on surplus income (e.g. savings, investing in education)	Households or communities are able to use knowledge and co-operative action to address issues which threaten their sustainability
Indicators	Food security, nutrition indicators, vulnerability	Coping strategies and problem debt, vulnerability	Livelihood investment and diversification, vulnerability	Savings, education investment, surplus income, vulnerability	Participation, evidence of applied learning/ adaptation and action for change

Thus, we would expect resilient households and communities to demonstrate behaviour that tends towards positive coping, investment and action for change (Schipper & Langston, 2015). In the case of rural households, the most straightforward indicators are around coping mechanisms: actions taken either to respond to, or to mitigate against, threats and risks. Broadly, these can be consumptive/erosive (meaning that they erode physical, economic and social capital) or investive (meaning that they build up physical, economic and social capital).

From the available data, a composite index can be constructed, which measures the extent to which a household has resorted to consumptive/erosive actions as coping strategies, balanced out by the extent to which they have been able to enact investive strategies, all over the previous 12 months.

- **Consumptive/erosive** actions are measured by the use of high risk/high interest loans taken out to address **food insecurity or acute needs** (excluding livelihoods)
- **Investive** actions are measured by the extent to which income has been used to invest in livelihoods, or savings.

Put together, these can reflect a 'portfolio' of household coping strategies, which include both responses and mitigation. This can be expressed as a formula:

Household resilience index = investive behaviour (% of income invested in savings and livelihoods) – **consumptive/erosive behaviour** (# of times high-interest/high risk loans taken for consumption; relative degree of debt burden from consumptive loans as % of debt and % of income). This produces a scale whereby a balance towards more consumptive than investive coping yields a negative score, and a balance of more investive than consumptive yields a positive score.

2.3 Measuring shocks and stresses

A significant new element to the LIFT Household Survey 2017 was the addition of a dedicated shock and stress module, which sought to capture three dimensions:

1. Exposure of the household to a range of shocks, estimating the relative severity of impact on the household
2. Help-seeking behaviours, or behaviours intended to ameliorate the effects of shocks, and an indication of the type and source of any assistance received
3. Self-reported, or self-assessed, changes in different household socio-economic factors, such as income, health, food security and debt. This also included a simple set of questions to ascertain, from the perspective of the household, what caused the changes (whether positive or negative), what they had done to improve their situation, and any help they may have received.

The shock and stress index, based on a combination of exposure and reported severity, could give an indication of the extent to which each household had been exposed to shocks, and this could then in turn be used as an analytical frame for looking at associations between exposure to shocks and stresses, receiving assistance, and outcomes in terms of changes in vulnerability status. The elements of the shock and stress module are included in Appendix 3.

2.4 Overview of the quantitative panel

The methodology and sampling used in the LIFT Household Surveys are described in detail in the Household Survey reports. The shock and stress module was applied to all of the 2017 sample. Vulnerability- and resilience-related indicators were collected from the entire 2015 and 2017 samples. However, a specific subset of households was selected to be included in both the surveys, enabling a comparison of the same households over time for a range of indicators. Thus, for analysis of changes in status of households, this study utilises data collected as part of the 2015 and 2017 studies as a panel set, with a final sample of 2,249 households.

Table 2.3 Sample of household survey panel

LIFT Programme area	Sampled households	Percentage of sample
Delta	666	30%
Dry Zone	790	35%
Uplands	517	23%
Rakhine	276	12%
All	2249	Dry

The final sample size was somewhat smaller than initially planned, due to complications with sampling. Comparison is made between households in LIFT programme areas that were exposed to assistance, and those that were not. More details of the sampling issues are included in the LIFT ELQ study, *Income and Assets in LIFT-supported Villages: An analysis of change 2015-2017*, which utilised the same data, experiencing the same limitations.

2.5 Longitudinal qualitative study: methodology

A qualitative study was conducted in 2016 and 2018 as part of a wider study on resilience and vulnerability to provide complementary depth to the quantitative studies. The qualitative study sought to deepen the understanding of changes to vulnerability and resilience, particularly with regard to pathways of change linked to development assistance. While the quantitative analysis provides indicators of overall changes in vulnerability and resilience, exposure to shocks and employment of different coping strategies, the qualitative analysis seeks firstly to verify quantitative findings, and secondly to explore in more depth and detail the processes behind the changes. Thus, this aspect of the study is designed to inform the quantitative elements (possibly even to act as a critique of the quantitatively-derived models) as well as to enrich and enhance the understandings of resilience, vulnerability and coping strategies in rural communities. The interviews explored disruptions and threats, coping mechanisms, adaptation and learning, and changes in status, using guiding questions to elicit narratives from the respondents' perspective. Interviews were conducted in 12 villages sampled from the four programme areas (Rakhine, Chin and Shan States from the Uplands programme; Magwe and Sagaing Regions from the Dry Zone, and Ayeyarwady Region from the Delta programme). The details of the methodology are included in Appendix 4, and descriptions of the locations where interviews were conducted are included in Appendix 5.

ANALYSIS AND FINDINGS

3. ANALYSIS AND FINDINGS

3.1 SHOCKS AND STRESSES

3.2 VULNERABILITY

3.3 SHOCKS, STRESSES AND VULNERABILITY

3.4 BORROWING, DEBT AND VULNERABILITY

3.5 VULNERABILITY AND GENDER, DISABILITY AND LANDLESSNESS

3.6 LIVELIHOOD DIVERSIFICATION

3.7 RESILIENCE

3.8 COPING: WHO IS COPING BETTER AND WHY?



3. ANALYSIS AND FINDINGS

3.1 Shocks and stresses

This section will describe the exposure of households to different shocks and stresses, and describe different coping mechanisms employed by households, as well as reporting the households' own assessment (self-reported) of the changes in their households' socio-economic status over the study period. Analysis of the impact of shocks on measured outcomes such as vulnerability and resilience will take place in the following sections on vulnerability and resilience respectively. Over half of all households reported exposure to some form of shock, and over one-third reported at least one form of shock that affected them 'somewhat (moderately)' or 'severely'. In terms of analysis, exposure to shocks that affected 'somewhat' or 'severely' were used as the main indicator for shock exposure. There was considerable variation in exposure, with the Delta and Rakhine being the most shock-prone areas. Health shocks were the most widely experienced of all types of shock (16.5 per cent). For more effective analysis, the shocks were grouped into six categories: crop failure, livestock, job or income loss, health or death, natural disaster and any shock or stress (see below). The incidence of these differed by LIFT Region (Table 3.1).

The more common narrative was one not of a single more extreme shock, such as a natural disaster, but the cumulative effect of a number of moderate shocks whose effects were at times enhanced or attenuated by other factors, such as development assistance, infrastructural integrity (such as functioning irrigation channels, roads and dykes) and alternative income sources. This is consistent with findings from the initial qualitative study on vulnerability and resilience conducted in 2015, which identified intersectional risks mainly relating to climate change and livelihoods (see Table 3.2).

Table 3.1: Exposure to shock by category, and by LIFT programme region

	reporting any	reporting impact as moderate/severe	Delta (moderate/severe)	Dry Zone (moderate/severe)	Uplands (moderate/severe)	Rakhine (moderate/severe)
Unexpected Crop failure	19.3%	9.8%	8.7%	11.1%	10.6%	7.4%
Unexpected death of major livestock	18.8%	7.9%	11%	4%	8%	10.2%
Lost regular Job/income source	11.8%	7.5%	9.9%	4.6%	7.7%	9.6%
Illness/death of household member	25.8%	16.5%	20.3%	13.6%	11.9%	24.3%
Natural disaster	13%	13%	9.6%	16.9%	9.6%	19.2%
Any Shock	56%	33.8%	37.9%	30.5%	30.2%	40.1%
Multiple shocks	24%	12.1%	13.6%	9.4%	11.4%	15.5%

Table 3.2 shows how the effects of climate change risks are potentially enhanced by other factors, such as markets or infrastructure developments, and how these intersect to influence risks to livelihoods. This in many ways forms the first main finding of this study: that a **significant proportion of households did experience at least one shock of moderate to severe effect, and the effects of these shocks were frequently detrimental to the household economy**. However, there were significant degrees of coping and coping capacity. Households did continue to report being able to find means, however tenuous and temporary, to maintain and/or improve household integrity, i.e. to 'hang in' in difficult circumstances. These themes were described in more detail in the narratives from 2018, with a trend towards market-related shocks and stresses, linked with climate change and with a risk of often intersecting (see Box 3.3 below).

Table 3.2 Intersectional risks in rural communities (2016 qualitative study)

	Climate change/risk	Risk 'enabler/enhancer'	Livelihood risk	Consequence
Chin State	Heavy rains leading to landslides	Deforestation for road building	Change from subsistence to cash crops	Roads blocked by landslides, resulting in wholesale crop loss
Shan State	Declining water table	Contamination of water from coal mine runoff	Over-use of artificial fertilizers	Health effects on residents, declining crop yields
Dry Zone	Less predictable rain/unseasonal rain	Commercialization of seed purchase, usually with credit	Have to buy seeds at higher price as 'out of season'	Increased debt, out-migration
Rakhine	Changing weather pattern and temperature	Broker managed market and fishing equipment owned by brokers not fishermen	Lack of land for alternative livelihoods due to commercial logging concessions	Cyclical debt, out-migration
Delta	Unpredictable weather, new pests	Scarcity of labour due to out-migration	Increased/unsustainable cost of agriculture	Stop farming, further out-migration
All	Illness	Increasingly available but expensive healthcare	Borrowing, asset liquidation	Out-migration, children out of school, risky work

Box 3.3 Climate change, market volatility and rising costs of living

Climate change. Climate variability was reported in all areas. It was experienced as extreme, unpredictable or irregular weather patterns. This may not directly correlate with climate change. However, the narrative of 'unfaithful weather' and the impact of extreme weather events was present in all of the communities sampled, ranging from unseasonal heavy rain in Fallam, flooding in Pyapon, Myepon and Yesagyo, and drought and water scarcity in Monywa.

"We lost a lot of crop through climate change." : 43 year old male, PwD family, Fallam

"Although there was no [big] storm this year, there was heavy rain and flooding, that made our work difficult." : 33 year old male, VDC chairman, Myepon

The effects of adverse weather tended to spiral, as crop damage results in rice price rises, which, while a positive benefit for those with crops to sell, represented a burden for households without paddy needing to buy rice for food. Likewise, damage to infrastructure not only affects the ability to sell goods, but also, in the case of day-labourers in Myepon, resulted in a loss of income as their days were spent repairing damaged water dykes, work for which they received no wages.

“We plant. Then it floods. Doesn’t grow. We lose money. We take a loan [to buy seed]. We can’t pay. That’s our cycle.” : 64 year old male, village head, Pyapon

Adverse weather conditions had a negative impact on other livelihoods, such as fishing in Myepon, mainly in terms of reducing the number of days on which fishing was possible and viable. Given that many operate on the basis of renting equipment and paying the rental fees with a proportion of the catch, the loss of days for fishing represents a significant financial loss. In the background, in both Pyapon and Myepon, is the legacy of previous disasters, Cyclones Nargis and Giri respectively. In both cases, respondents alluded to the long-term impact, describing how long it took to recover from such massive disasters. In Pyapon, respondents talked of their frustration that finally, 10 years after Nargis, they were approaching their pre-Nargis conditions in terms of crop yields on land previously affected by salt-water contamination, only to be afflicted with new infestations of destructive pests such as the snail.

Crop failures. Adverse weather was a commonly reported cause of crop damage, but other hazards, such as drought and infestations were reported, particularly in Pyapon and Pindaya. The golden snail infestation, affecting large swathes of the paddy crop, was reported in one village in Pyapon in 2015, but not the other. However, in 2017, the effect of the infestation was weakening in the first village, but had fully taken hold in the second.

“This snail infestation started five years ago. It affected 90 per cent of the paddy. We did all kinds of things, we tried to clear by hand. We drained the water and replaced it. We have used pesticides. We have to try and find out about it.” : 71 year old male, Pyapon

The impact of changes in weather, coupled with the failure of non-local varieties to grow adequately, also led to a decline in the profitability of growing key crops, such as potato and corn, in Pindaya. The difficulties with ‘foreign varieties’- called ‘Myo Dukkha’ by respondents in Pindaya, related to how newer, imported varieties of potato, and cauliflower, would not ‘keep’ well. In the case of potatoes, local varieties could be kept for months, to be used as seed the following year. This is described in more detail in **Box 4.14 Myo Dukkha and the slow pace of change.**

Market volatility. A large number of respondents across the six townships reported market volatility as a key stress or threat. This took three forms: low prices at times of

crop selling, compounded by higher prices at times of either buying seed or food, and a lack of predictability in prices.

“The problem is the market. From the farmer side, it grows fine, but when you go and sell, nobody wants to buy it. The price isn’t good. Take tomatoes for example, now, when we want to eat them, we pay 800 to 1,000 [MMK]. But when we’re selling them, we only get 80-100 [MMK]. Honestly, I lost a lot from that.” : 45 year old loan officer, Monywa

“I had some crops, but this year the price really dropped, it wasn’t good.” : 35 year old woman, Fallam

“I did potato planting. The crop was good, but the price was low. So we lost a lot. I had to take loans [from the company] to get seeds and fertilisers. We’re supposed to pay back at harvest. But the price isn’t good. So we have to sell cows to pay back. We can also try and borrow from some other companies. It was worse this year.” : 21 year old woman, Pindaya

Most would sell through brokers, with very little control over the sale of produce such as rice, vegetables or fish. Changes in market trends could also have major effects on the price of products, such as that experienced by potato growers in Pindaya. Demand for native varieties appeared to have plummeted in the face of a surge in imported potatoes from China, and although farmers had good yields the crops could not be sold. The increasing connectivity with global markets, while opening access for sales (particularly to China), also exposes farmers to greater volatility. In the Dry Zone, the experiences of 2015 and 2016, when whole crops of cucumbers were left to rot after Chinese demand suddenly dropped, were described in similar terms.

The combination of rising livelihoods costs, and the fluctuation of the prices of staples such as rice, resulted in a rise in the cost of living for a significant number of respondents. Again, a key factor in this is whether or not the household was relying on purchased rice for food and seed, or whether they were benefiting from higher prices when paddy was sold. This tends to favour the ‘peasant’ farmer who is producing rice, and results in more difficulties for those engaging in waged labour, or non-rice-based livelihoods such as fishing.

“The rice price (to buy) went up, but the selling price of our fish didn’t go up. So our expense is more than our income. That means we have more debt, we have to take more loans to survive.” : 35 year old female, Myepon

“It’s harder than before, mainly due to the increase in cost of living.” : 40 year old female, Myepon

“I don’t plant paddy, so I have to buy rice. It’s OK for those with paddy, they can sell rice [at the higher price] But I have to buy at the higher prices, so it’s not OK.” : 40 year old female, Myepon

There is again a somewhat dissonant picture here, with a number of goods, such as electronics items, motorcycles and home improvements like tin roofing becoming more affordable and accessible. Does the more widespread ownership of such goods illustrate surplus income, or that goods have become more affordable, more accessible, and that greater access to credit has enabled more people to purchase them? Self-reported asset ownership from these townships showed that apart from Myepon, there was a trend towards reporting an increase in asset ownership. But narratives pointed mainly to this being driven by easier purchase of phones and motorcycles at lower prices, and with credit, often in an environment where peer pressure encourages the purchase of consumer goods.

“I’ll tell you what’s happening. Everyone is competing. Some people, their business isn’t good, they can’t afford to buy, but they do anyway. ‘If they bought a motorcycle, I’ll buy a motorcycle’. Some, they don’t have [money] but buy anyway. They borrow to buy. So some people, they’ll buy a phone, say for 100,000 Kyat. The interest would be 8,000. Some will compete with others, it has become more now that the road connection is better (31 year old woman, Pyapon).

More than one-third of households reported that their income was worse than the previous year, and the main causes cited were loss of job (21 per cent), less produce (17 per cent) and natural disaster (9 per cent). Nearly one-quarter of households reported worse health than previously, and more than 12 per cent of households reported food security as worse than the previous year, mainly attributed to income deficiency.

Table 3.4 Changes to self-reported status indicators, by LIFT region

Self-reported status changes	reported (all)	Delta	Dry Zone	Uplands	Rakhine	Causes
Decreased income	34.7%	34.7%	28.6%	31.3%	50.7%	Lost job (21%) Less produce (17%) Natural disaster (9%)
Decreased non-agricultural income	25.1%	26.1%	17.5%	23.1%	38.7%	Natural disaster (9%) Less income sources (9%)
Decreased crop profit	27.7%	23.4%	37.1%	21.3%	30.7%	Less regular rain (22%) Less market access (8%)
Decreased livestock profit	23.0%	25.7%	14.9%	24.6%	25.7%	Animals died (42%) Prices lower (12%)
Decreased fisheries	48.3%	47.3%	28.0%	41.5%	51.9%	Worse price (23%)
Declined food security	15.3%	15.6%	9.5%	16.3%	23.1%	Less stable income (42%) Crop production worse (6.5%)
Decreased assets	15.6%	15.7%	14.4%	9.3%	26.4%	Lost to natural disaster (8.5%) Animals died (6%)
Declined health	24.4%	29.1%	21.3%	21.5%	27.1%	Family member major illness (28%) Older persons with illness (27%)
Worse debt	32.1%	22.1%	30.0%	28.4%	34.5%	Pay off more debt (64%) Could not afford to repay loan because of poor yield (crop or fisheries) (31%)
Worse social capital	7.7%	10.2%	6.1%	6.8%	8.5%	Too busy (30%)

Although correlation between self-reported and measured changes in income was not strong (this is explored in detail in the separate study on income and assets), there is strong correlation between exposure to shocks and changes to self-reported status, such as income, assets and debt. Exposure to any shock (moderate or severe), and exposure to specific shocks such as job loss, health and natural disaster, were all associated with a higher risk of negative changes to self-reported status. Table 3.5 shows the Odds Ratio (the increased likelihood) of reporting negative changes among those exposed to different shocks and stresses, compared with those who were not exposed.

Table 3.5 Odds ratio of reporting worsening status (self-reported) comparing households exposed to certain shocks, and households not exposed.

Shock (rated moderate or severe impact)	Income worse	Assets worse	Debt worse
Any shock	2.23 (CI 2.02-2.48)	2.45 (CI 2.14-2.8)	1.89 (CI 1.68-2.12)
Crop or livestock losses	1.99 (CI 1.75-2.26)	1.76 (CI 1.5-2)	1.59 (CI 1.38-1.83)
Job loss	2.7 (CI 2.2-3.3)	3.27 (CI 2.64-4.04)	1.65 (CI 1.33-2.04)
Health	1.94 (CI 1.7-2.2)	2.38 (CI 2.04-2.78)	1.93 (CI 1.68-2.22)
Natural disaster	1.77 (CI 1.4-2.28)	1.7 (CI 1.32-2.17)	1.44 (CI 1.14-1.81)

The most common coping responses associated with shocks was borrowing, with nearly half of all respondents reporting taking loans as the main response to shocks and stresses, followed by asset liquidation or drawing down savings (one in five households). However, 16 per cent did report 'starting a new job' as a coping response. Even where households reported receiving some form of assistance, the main form received was loans (84 per cent of all reported assistance), and the main source of assistance were relatives, neighbours or money lenders (61 per cent) or government (13 per cent). Few reported receiving assistance from NGOs (included MFIs), mainly due to the perception that MFI loans tended to be for livelihoods, rather than for emergencies. This is consistent with findings from several recent studies, where, for example, moneylenders were reported as the main source of loans for non-livelihood purposes (Luchtenburg 2018).

Table 3.6: Responses to shocks (all households, % reporting a specific action)

Response	% (of those who reported a specific response)	Response	% (of those who reported a specific response)
Borrowed money	49.3%	Took wages in advance	2.2%
Started new job	16.3%	Sold out the seeds for next year	0.8%
Spent saving money	8.3%	Evacuate to safe place	0.7%
Sold Animals	7.1%	Have emergency supplies e.g. torches, medication, food, fuel.	0.7%
Follow emergency plan	7.1%	Migrated	0.4%
Sold Gold/Jewellery or other valuable assets	4.0%	Saved on insurance for agricultural products	0.3%
Asked help from relatives/ Friends	2.8%		

The baseline qualitative study highlighted the changing nature of threats, with the “emergence of new hazards and re-iterations of older threats”. (Griffiths, 2017a, p. 2). “The complex association between development, and development interventions, and the reconfiguration of risks represent a huge challenge for many rural communities, whose existence is best described as precarious” (ibid). Findings from the 2017 study, conducted three years later, further highlighted both the changing nature of threats and the complex interrelationship between development and risks. Table 3.7 summarises findings from both the quantitative and qualitative studies at 2015/16 and 2017/18, also reporting on the findings from the shock and stress module used in the 2017 survey.

Table 3.7 Summary of changes from 2015/16 and 2017/18 quantitative and qualitative studies

	Trend from quantitative data	Self-assessed trend from quantitative data	Main shocks & stresses (quantitative)	Shocks & stresses (from 2015 qualitative)	Shocks & stresses (from 2017 qualitative)	Narrative trend from qualitative data
Chin State (Fallam)	Overall slight reduction in vulnerability, improvements in resilience, increased income	Higher incomes, better health, better food security	Crop & livestock loss, landslide, water shortage	Heavy rains leading to landslides	Water shortages, market instability, changes in social dynamics	Generally better, but concerns over reliance on cash crops and remittances
Shan State (Pinlaung/Pindaya)	Big increase (i.e. worse state) in vulnerability, slight improvements in resilience, decreased income	Lower incomes, FS, debt and food security and health not changed much	Loss/lower income	Declining water table, water pollution from mining, health	Market fluctuation, crop failure due to non-native varieties, monetization of agriculture, debt	Worse, mainly due to the effects of monetization of agriculture
Dry Zone (Pakokku/Yesagy/Monywa) (Pinlaung/)	Increase in vulnerability, slight improvement in resilience, income same	Lower incomes, worse health, worse debt, better food security	Crop losses, drought, lack of work/jobs	Less predictable rainfall, flooding	Debt cycle, non-viability of traditional agriculture,	Slightly worse, maintained status due to availability of off-farm construction work
Rakhine (Myepon)	Significant reduction in vulnerability, improvements in resilience, increased median incomes	Lower incomes, worse health, worse food security, worse debt	Crop & livestock losses, health, cyclone	Changing weather pattern and temperature	Extreme weather, environmental degradation affecting livelihoods, market instability	Some better, some worse. Development assistance more prominent, especially savings and loan groups.
Delta (Pyapon)	No significant change in vulnerability, slight improvements in resilience, increased income	Lower incomes, worse health, worse debt, worse food security	Livestock losses, income dropped, health	Unpredictable weather, new pests	New pests (golden snail), market volatility, debt cycle	Generally worse, due to legacy of Nargis, snail infestation and volatility of markets

Box 3.8 'not much has changed'

In terms of describing the overall changes in socio-economic conditions over the previous three years, the trend across the six areas sampled for the qualitative work was mixed, with townships in Chin State (Fallam) and Rakhine State (Myepon) most likely to report a more positive trend, Shan State (Pindaya) most likely to report a negative trend, and respondents in the Delta (Pyapon) and Dry Zone (Monywa and Yesagyo) tending to report a mixed picture, with improvements for some, and a deterioration in conditions for others.

"What has improved in the past two to three years? Honestly, not much. But it hasn't got worse either." : 66 year old male, Pyapon

The majority of respondents reported that their financial situation this year was worse than previous years, due to a combination of crop insufficiency, market volatility for agricultural goods, and an increase in the cost of living:

"This year is worse than two years ago." : 40 year old female, Myepon

"In the past three years, I would say, maybe two out of 10 households have got better, maybe three out of 10 are the same, and five out of 10 have got worse." : 52 year old male, Pyapon

"I'd say, of our 300 households, maybe 10 are quite comfortable, maybe 20 are OK, but you couldn't say they're rich. One hundred are in that state of hanging on, they have debt, but they can survive. The others [170 households] are really living day to day, it's hard for them." : 66 year old man, Pindaya

For many, expenditure exceeded income, meaning that loans were required for essential purchases such as food. This at times related to lowered or static income levels relative to rising costs, or to increased costs in other expenditure areas such as health. Again, for some, the only solution was either taking loans, or liquidising assets such as land:

"My expenditure is more than my income, maybe 1.5 times more. Some people can't continue like that, they have to sell land to cover their losses. So if they have five acres, maybe they will sell two acres. For sure, some richer people have got richer as well." : 69 year old male, Pyapon

"My debt is more this year than last year, I didn't have enough for food. This year it is much tighter [money]." : 35 year old female, Myepon

Visible improvements in infrastructure, such as roads and schools, were noted, particularly in Chin State, where the link between infrastructure improvements and commerce was also described:

"I would say that crops and yields have improved, maybe our business has improved by 30 per cent." : 54 year old village head, Fallam

“Well, many things have developed. Roads are better, that means we can get in and out with motorcycles and do business easier.” : 45 year old loan officer, Monywa

However, a recurrent theme was lack of work or livelihood opportunities, especially for younger people. This potentially links with the wider issues of the post-peasant economy where, as the viability of traditional agriculture as the mainstay of the rural household economy declines, the necessity of other, often non-agricultural income sources increases. Apart from regional variations in the reported trends in socio-economic status, gendered differences (considered in Chapter 9) and class differences were significant, with a tendency for female-headed households, poorer households and landless households to report a worsening household economy, and conversely, a tendency for slightly wealthier, landed households to report either a more positive

3.2 Vulnerability

Using the Umbrella model described briefly in the methodology section, households are classified as vulnerable or non-vulnerable, firstly at baseline in 2015 and then again in 2017. Using the model, analysis can also be made of which factors, such as livelihood diversity or health, are contributing to changes in household vulnerability. An initial overview is presented here, followed by a more detailed analysis of contributors to vulnerability. The overall reduction in the proportion of households classified as vulnerable, from **24.5 per cent in 2015 to 22.4 per cent in 2017**, derives from the net difference of 371 households in the cohort whose status changed from vulnerable to non-vulnerable (i.e. got better), and 323 whose status changed from non-vulnerable to vulnerable (i.e. got worse). Apart from changes to the numbers of households classified as vulnerable, there were changes in the time period in the patterns of vulnerability - meaning that there were differences in the percentages of households with vulnerabilities related to different aspects (such as assets, health etc.) The main drivers for changes in overall vulnerability status, either positive or negative, were changes in **asset, health, social capital and debt-related vulnerability**. The proportion of households with vulnerability related to **economic dependency, asset ownership, income, and water and sanitation decreased**, while the **proportion with vulnerability related to health, debt and social capital increased**. There was generally strong correlation between changes in vulnerability status and self-reported changes in status⁴ in income, debt, food security and social capital, such that households whose vulnerability status had improved from vulnerable to non-vulnerable were more likely to report positive changes to income, and

4. See table 3.4 in previous section

less likely to report negative changes, than households who became more vulnerable, or stayed vulnerable. **Exposure to shocks and stresses is a key driver for changes in vulnerability**, where exposure to a shock of any kind is associated with a 1.4 times increase in the risk of worsening vulnerability status. This is described in detail in the next section (3.3 Shocks, stresses and vulnerability).

Table 3.9 Overall changes in proportion of households classified as vulnerable

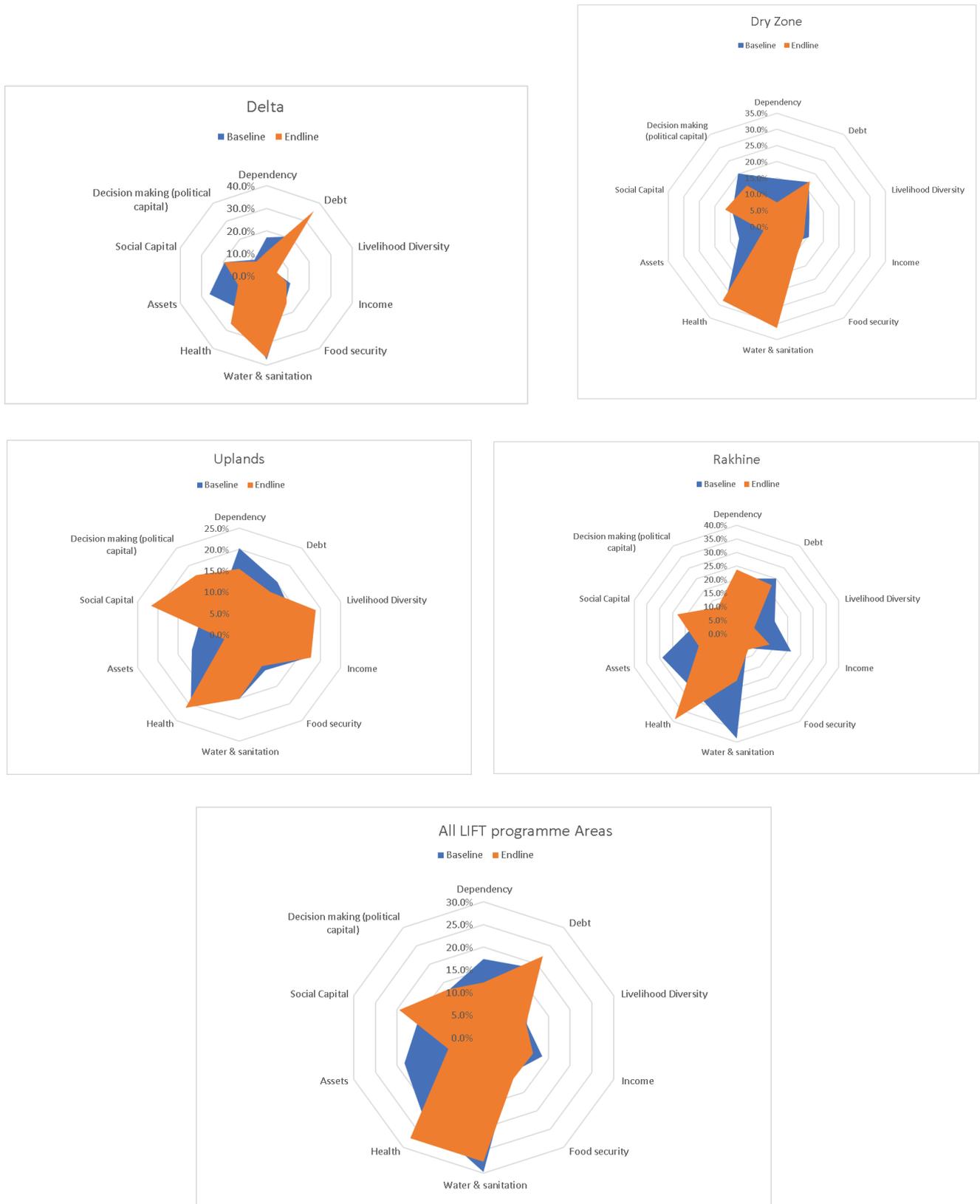
Region	Vulnerability at baseline	Vulnerability at endline	Significance	% reduction
Delta	27.9%	27.18%	Not significant	0.72%
Dry Zone	22.15%	18.35%	++	3.8%
Uplands	18.38%	21.66	+	-3.28%
Rakhine	34.78%	23.91%	+++	10.9%
All	24.5%	22.41%	++	2.09%

NS = Not Significant + = >90% confidence ++ = >95% confidence +++ = >99% confidence

Reductions in vulnerability were not seen in all regions. There was an increase in the proportion of households classified as vulnerable in Uplands programme areas (Figure 3.10). This was, however, not evenly distributed; rates of vulnerability remained stable in the areas sampled in Chin State, while the proportion of households classified as vulnerable doubled in the areas sampled in Shan State. The trend towards higher numbers of households classified as vulnerable in the Uplands Programme was driven mainly by changes in four townships: Myitkyina, Thant Lang, Pindaya⁵ and Pinlaung. The most striking changes were seen in Rakhine State, which were largely driven by positive changes in water, sanitation and assets.

5. In Pindaya, some unusual patterns for enumeration of social capital possibly contributed to erroneously high scores for social capital-related vulnerability, but closer analysis showed that this had no significant effect on the final outcome.

Fig. 3.10 Vulnerability profiles, LIFT programme areas



To examine drivers of changes in vulnerability in the different programme areas we can first look at the trends of vulnerability in each programme region, as shown in Figures 3.10. These show four key trends that are significant for programme areas: first, the increases in debt- and health-related vulnerability in the Delta, which appear to be interlinked, are a significant contributor to the lack of any significant reduction in the proportion of households in the Delta classified as vulnerable. Second, positive changes to assets and economic dependency are seen in the Dry Zone, with the changes to economic dependency most likely due to the effects of out-migration reducing the number of non-working adult dependents in the household. Third, in Rakhine, the positive trends in assets, water, sanitation, income and livelihood diversity are accompanied by negative trends in health and social capital; however, the result is an overall significantly positive trend. The key driver appears to be water and sanitation, where a mean reduction of 10 minutes per day required for obtaining water was offset by only marginal increases in the proportion of households buying water. Finally, the overall increase in households classified as vulnerable in the Uplands programme is related to an overall decrease in livelihood diversity, and an increase in social- and political capital-related vulnerability. Changes to livelihood diversity within the model are somewhat complex. The indicator is based on the number and spread of income sources, the number of income sources that provide regular income, and the diversification relative to household size. In the Uplands Programme, although indicators for the number of livelihood sources and spread of income sources showed positive trends, there was a corresponding increase in less reliable sources of income, such as casual labour. Hence, while the proportion of households reliant on casual labour as their main income sources decreased over the study period in the other programme areas, there was an increase from 18.8 per cent to 21.8 per cent of households reliant on casual labour as their main income source in the Upland programme areas. There was a shift away from agriculture as a main source in 2015 (48 per cent) towards selling, casual labour and livestock, all of which represent a diversification, but not necessarily reduced livelihood vulnerability. This trend in de-agrarianisation featured prominently in the qualitative discourses across all of the study areas (see Box 3.12 below). An appreciation of the wider backdrop of rural transition is critical to interpreting the overall impact of LIFT's activities in programme areas. Using multivariate regression analysis, the extent to which changes in different factors were associated with changes in vulnerability status are shown in Table 3.11 below. This looks at the extent to which changes in one dimension are likely to affect the overall vulnerability status, and essentially measures the degree to which differences in vulnerability status of different factors are associated with both positive and negative trends in overall vulnerability. In general, changes in four main categories (assets, health, social capital and debt) had the biggest influence on overall household vulnerability status, with some variation between regions.

Table 3.11 Drivers of changes to vulnerability status by programme area

LIFT Programme Area	Key drivers of changes to vulnerability status ⁶
Delta	Health, WATSAN, Debt
Dry Zone	Social Capital, Health, Food security
Uplands	Health, Decision making, WATSAN
Rakhine	Health, Debt, WATSAN, Income
All	Health, social capital, debt

In terms of external factors associated with changes to vulnerability, exposure to shocks and hazards is by far the most significant influence on whether vulnerability status changes, followed by exposure to assistance. This will be explored further in subsequent sections. The changes in overall vulnerability percentages result from a net difference between households graduating out of a vulnerable state, and those falling into it.

Box 3.12 De-agrarianisation and the post-peasant economy

“I am a peasant, I’ll keep working the land. That’s who I am, that’s what I do.” : 40 year old male, Monywa

“Well, the real famers are really scarce now.” : 65 year old village elder, Monywa

“We don’t have peasants in our village anymore.” : 30 year old woman, Yesagyo

One of the recurring themes in the majority of the interviews conducted across the six different geographical reasons was the nature of the transition taking place in rural areas, with a decline in the centrality and viability of both traditional agriculture, and agriculture in general. The decreased ability of agriculture-related livelihoods to maintain the household economy in rural areas is accompanied by a variety of livelihood strategies, many based around irregular day wage labour. This has been described as ‘post-peasant economy’ (Friedl 1964, Elson 2016, Rigg 2001). The data from this study points to a fairly

6. This table is reporting regression analysis, which looks at the extent to which changes in one factor result in changes to another-i.e. the relative influence of that factor in a model. What the analysis reveals is that changes to these particular factors (like health and social capital) have a greater influence on changes to the vulnerability status, whether positive or negative, than some of the other factors.

mixed picture of transition: a decline in the wider agricultural base as the core of the rural household economy, in many ways due to the chronic effects of many of the shocks and stresses described in the previous section, as well as the natural corollary of wider socio-economic changes taking place in urban and rural areas, bringing, on the one hand, greater access to more global markets for goods such as technology and transport, but also greater exposure to global markets, with all the volatility and opportunity that comes.

This 'post peasant' trend can also be used as a backdrop to analyse the effects of development interventions. With the inherent volatility and uncertainty of such transitions, normal assumptions of the likely effects of development assistance may not be valid. This usefully acknowledges the wider context of development, in terms of markets and issues such as inflation, which the kind of development assistance funded by LIFT do not (and cannot be expected to) explicitly address. In short, taking into consideration the nature of rural transformation, as moving towards a post-peasant economy, allows an analysis of the effects of LIFT's work against a context of considerable volatility and uncertainty, where it may be unreasonable to expect significant improvements in income and vulnerability against the backdrop of a messy and sometimes precarious transition. In *More than Soil*, geographer Professor Jonathan Rigg analysed the 'de-agrarianisation' of South-East Asia, considering not only the specifics of agricultural production, but the wider socio-political dimensions of change (Rigg, 2001, pp. 6-7). Four aspects of Rigg's analysis of the post-peasant economy in the rural areas were found in the qualitative study: firstly, the **decline of the agricultural base** as the core economic activity of rural households; secondly, a change in the nature of the agricultural activities, perhaps best described as the **increasing monetisation of farming**; thirdly, the **types and nature of the alternative economic means pursued by rural households**; and finally, an analysis of the current socio-economic conditions of rural households in this period of transition, best described as **precarious**, following Rigg et al (Rigg, Owen, Basyal, & Lamichhane, 2016).

Overall, four aspects of measured vulnerability showed a trend towards improvement: **assets, economic dependency, social capital, and water and sanitation**. Conversely, two aspects showed a trend towards a more negative status: **debt and health**.

The **most significant positive trend overall was the reduction in asset-related vulnerability**, where the trend towards both more assets, and more asset diversity, was found across all programme areas. This is also reflected in a reduction in the proportion of households who reported no livelihood or transport assets. Positive changes in asset-related vulnerability are a key driver in the overall reductions in vulnerability. The proportion of households with asset-related vulnerability decreased from 18.3 per cent in 2015 to 8.1 per cent in 2017. The indicator for asset vulnerability is based not only on the number of assets, but on their 'spread', so that accumulation of large numbers of one type of asset (e.g. chickens) will not necessarily

result in a high score for assets. The majority of households with increases in assets were those reporting more household assets (75 per cent) and/or livelihood assets (49 per cent) in 2017, compared to 2015.

The decrease in levels of economic dependency was in some ways harder to measure, given small differences in the recording of household member status in the two surveys. However, there was a significant increase in the proportion of working aged persons with disabilities reported as having livelihood participation, from 12 per cent in 2015 to 22 per cent in 2017.

Water and sanitation were significant drivers in reductions in vulnerability and were linked with health. Households whose water and sanitation vulnerability status had worsened since 2015 had, on average, a doubling of the amount of days lost to ill health; whereas those whose water and sanitation status had improved showed a two-thirds reduction in proportional spending on healthcare.

Debt, and changes in patterns of debt, were a key driver of changes to overall vulnerability status, particularly in the Delta and Rakhine. In the Delta, an increase in debt-related vulnerability tended to offset decreases in vulnerability related to other factors such as assets, meaning there was little net change in vulnerability. In Rakhine, the reduction in debt-related vulnerability was a significant contributing factor to the reduction in the proportion of households classified as vulnerable. Given the complexity of this, debt is addressed in a separate section (3.4 Debt and vulnerability). However, it should be stated again here, to avoid the risk of misinterpretation of individual findings, that the measure of debt-related vulnerability is NOT based on the total amount of debt, but rather on an assessment of the potential risk to the medium- and long-term sustainability of the household economy associated with different types and sources of borrowing. As explained in detail in section 3.4, borrowing itself is a significant part of normal economic behaviour and can be an important source of economic growth. A basic assumption behind the expansion of access to microfinance is that it reduces the reliance on village moneylenders, where interest rates, and subsequent debt burdens, tend to be higher (Mallick 2012, Islam, Nguyen et al. 2015). Based on this, the indicators used to measure debt-related vulnerability in this study are derived from this, and locally conducted research (Griffiths 2015) from which assumptions on the relative risk of different types of borrowing can be made.

The other **most significant negative trend from 2015 to 2017 was in health**, which in this study is measured based on the numbers of economically productive working days lost to ill health. The trend towards a higher number of days lost could reflect either more serious health issues and/or a change in the pattern of help-seeking behaviour. Better access to healthcare services also, paradoxically, may result in more time taken over health-related issues. This needs further exploration in qualitative studies.

However, in terms of self-reported health, households were more likely to report that their health got worse (27 per cent) than got better (only 20 per cent) over the three years. Proportional spending on health also increased slightly over the period, and the link between poor health and worsening debt status also suggests that **health crises continue to undermine resilience**. Households reporting a health crisis in the previous year had a doubling of reported incidence of high-risk, high interest loans, resulting in a nearly 40 per cent increase in the debt: income ratio, and much higher increases in the proportion of debt owed to more high-risk, high interest creditors. Ill health not only undermines the well-being of a household member but also undermines their capacity to maintain economic sufficiency⁷. Lost income, and as a corollary, probably increased expenditure due to healthcare needs and help-seeking behaviour, are critical factors in the coping capacity of a household.

The reported negative changes in health status are a major reason for such modest reductions in overall vulnerability, as they offset the positive changes in other dimensions of vulnerability. Only in the Dry Zone and Uplands were there any health indicators that were better in 2017 than they were in 2015. However, here the changes in overall days lost, although lower, were somewhat offset by a higher rate of days lost per income-generating household member. Correlation was also found between reported change in healthcare status and income changes, where households reporting better health status than before had an increase in income; those whose health status was remained the same had no significant changes to income; those who reported worse health had a decrease in income.

Box 3.13 One illness away-health and vulnerability

A significant theme in the 2015/2016 study was the effect of illness on resilience and vulnerability, where the inability to 'cope well' in response to challenges could often result in a rapid deterioration in the household economy. This is perhaps most evident in responses to health crises, which are associated with increased cost, and loss of livelihood earnings. Where households are not able to mobilise resources to address the costs of health-related challenges, at least five consequences result: unsustainable debt, asset depletion, children withdrawn from school to work, risky or degrading work, and indentured labour (Griffiths, 2017b, p. 17).

In the follow up interviews, the impact of illness, and in some cases the death of a family member was frequently part of a narrative of debt, asset liquidation and prolonged financial hardship. The loss of income, coupled with the high cost of healthcare led to loans, which frequently were described as high interest. In a number of cases, the loans were taken from sources normally associated with livelihood credit - again a possible

7. Referring to the ability to maintain the household economic status

pathway into higher interest loans being taken when there was not sufficient livelihood income to pay off the first loans.

“I’m old, and have a lot of health problems, and because of that I have a lot of debt. Because I can’t work, I can’t pay back the loans.” : 67 year old man, Fallam

“Then we get health problems, that costs money. We can borrow from these organisations, the interest rate is low, that’s good. But we have to find work to be able to repay [the loan]. That’s when we end up on high interest from low interest.” : 45 year old woman, Monywa

“I had cancer, I had to take a lot of loans. That was before my child was born. Now my child is born, and the child’s health isn’t good. So we still have these health costs. So the debt is quite high. I get loans from [name of NGO], from others, I try to maintain the cycle as best I can. If there’s a problem to pay back, I try to get help from others. If I can’t, I have to sell some things to pay back the debt. I keep trying so that one day, I can pay it all back.” : 58 year old woman, child with disabilities, Monywa

The extent to which health costs also consume income that might otherwise be spent on livelihood investment was also highlighted in the baseline, as the [d]epletion of assets, including livelihood assets, land and valuables, undermines the households’ future coping capacity (Griffiths, 2017b, p. 19).

“I have sold 5 acres over the past 10 years to pay off debts. Debts for health, debts for education. So now I don’t have much land left to work with.” : 52 year old male, Pindaya

“Because my child has a disability, I can’t go to the field myself. We have to call workers, we have to buy seed and fertilisers. When my child is unwell, we have expenses. But we don’t dare to borrow [from the MFIs]. If our crop isn’t OK, we have to sell our cows, and sell our seed for paddy [to survive].” : 32 year old woman, child with disabilities, Pindaya

In some places, there was also a sense of decline in social capital, linked in many ways to precarious economic circumstances, and in some cases, the decreased ability for localised welfare systems to continue to cope with rising needs. Despite reports of strengthened indigenous social organisations in parts of central Myanmar, at least for some, that assistance was not available.

“My child has a disability, my relatives support us because we don’t have enough income. Sometimes we have to get loans for the child’s health, sometimes from [name of NGO], sometimes from outside. I never got any help from village organisations. I do sewing, I earn 10,000 to 15,000 Kyat per day, but all of that is gone with the health costs. It’s just enough to patch the holes.” : 51 year old woman with a child with disabilities, Monywa

3.3 Shocks, stresses and vulnerability

Overall, over one-third of households in the LIFT programme areas reported at least one shock or stress that had a moderate or severe impact on the household (as perceived by respondents), with the highest reported rates in Rakhine. When exposed to shocks, different households were more or less likely to either become newly vulnerable or remain vulnerable, such as female-headed households and households with persons with disabilities (PwDs), landless, and households dependent on casual labour. Table 3.14 shows the Odds ratio (the relative increase in likelihood or risk of remaining or being newly classified as vulnerable), comparing female-headed with male-headed households, households with PwDs with households without PwDs, households classified as landless in 2015 with those who were not, and households classified as dependent on casual labour in 2015 with those which were not dependent on casual labour as their main income sources.

Table 3.14 Differential rates of remaining or being newly classified as vulnerable when exposed to shocks

	Odds ratio of staying vulnerable or becoming newly vulnerable
Female-headed households (compared to male-headed)	1.6 (CI 1-2.4)
Households with PwDs (compared to non-PwD)	1.8 (CI 1.2-2.7)
Landless (compared to landed)	2.1 (CI 1.5-3)
Dependent on casual labour (at baseline)	1.8 (CI 1.3-2.7)

Shocks tended to have the most significant effect on health, debt and dependency-related vulnerability, but there is also clear correlation between exposure to shocks and increased vulnerability due to declining income, asset depletion, food insecurity and decreased resilience, particularly where households were exposed to shocks but did not receive any assistance. In terms of the type of shock, health shocks were the most likely to be associated with worsening vulnerability, and also more likely to be associated with other erosive coping strategies such as asset depletion and high interest loans. Health shocks were experienced by nearly one-quarter of households, and of those, nearly two-thirds described the shock as having a moderate or severe impact (as perceived by respondents). Households experiencing a health shock of moderate or severe impact (as perceived by respondents) were nearly twice as likely to become vulnerable, or remain vulnerable, as those who did not. Generally, changes in

vulnerability were also correlated with coping behaviours. Households engaging in negative coping strategies such as selling assets, taking high interest loans or other negative coping strategies were more likely to become newly vulnerable, or remain vulnerable, illustrating the links between resilience as patterns of behaviour and vulnerability. Exposure to shocks or stresses, rated by the respondent as having 'moderate' or 'severe' impact, was associated with higher risk of worsening vulnerability over the study period (Odds Ratio **1.4** (CI 1.1-1.8)). However, there were significant differences in exposure to shocks by LIFT programme area, and the extent to which exposure to shocks was associated with a higher risk of worsening vulnerability, with the highest degree of impact in Rakhine, and the lowest in the Dry Zone. However, these figures are significantly influenced by access to assistance; hence, **among households NOT receiving any development assistance the increased risk of worsening vulnerability compared to exposed households who did receive assistance was 1.8.** This will be considered more in the following chapter (Part 4) that looks more specifically at the impact of assistance. The risk of worsening vulnerability after exposure to shocks and stress is attenuated by access to assistance, such that, when including all households who did and did not receive assistance when exposed to shock, the Odds Ratio of worsening vulnerability drops to **1.43**. The impact of different types of coping on outcomes is explored in section 3.8, and the potential impact of LIFT assistance on outcomes is considered in Part 4.

Table 3.15 Odds Ratio with 95% confidence interval of worsening vulnerability status when exposed to shock with moderate or severe impact (any)

LIFT Programme Area	Odds ratio for increased likelihood of vulnerability when exposed to shocks (moderate/severe)
Delta	1.5 (CI 0.95-2.33)
Dry Zone	1.18 (CI 0.7-1.96)
Uplands	1.5 (CI 0.875-2.53)
Rakhine	5.9 (CI 3.2-11.34)
All	1.43 (CI 1.1-1.85)

3.4 Borrowing, debt and vulnerability

“We borrow, we pay back. We borrow, we pay back. That’s our life. We can’t get out of that.” : 45 year old woman, Monywa

The analysis of debt relating to vulnerability is complex: not only is debt itself a complex issue, but varying ideological perspectives on debt, credit and borrowing influence interpretative perspectives and even choice of terminology. The analysis presented here is based on three assumptions. Firstly, as shown below, that debt, and borrowing, are a historical and contemporary ‘fact of life’ in rural communities. Secondly, that borrowing and debt are terms used to describe a financial ecology that includes a wide range of practices, risks and benefits, meaning that in a general sense, indebtedness is not considered either a positive or negative phenomenon. Thirdly, this analysis assumes that different forms of borrowing, from different sources, and for different reasons, do in turn carry different risks and benefits to households. Hence, it is not indebtedness per se, or even the gross volume of debt, but the nature and circumstances of debt, and of borrowing, which are analysed in relation to risk.

Box 3.16 The ubiquity of debt

A significant element of the precarity described by Rigg et al in Nepal, and in our findings from rural households in Myanmar, is the changing nature of debt, both in terms of the sources and risk profiles of credit sources, but also the way in which debt is structured in the socio-economic framework, which engender new forms of vulnerability. The ubiquity of debt as part of the household rural economy in many ways obscures the ways in which debt is changing, and the way in which debt is ‘central to a range of pressing development problems as well as their proposed solutions [and] its potential to both generate and constrain opportunity’ (Asia Research Institute, 2019, p. N.P.).

Ubiquity of debt: borrowing as a way of life. Of the more than 120 interviews conducted with households from a range of different socio-economic strata in the six different regions, debt was explicitly mentioned in all but 12 interviews, in most cases with little or no prompting from the interviewers. Of the main topics discussed in the narratives, debt was by far the most ubiquitous, and described in the most emotive and colourful terms.

“I’m old, so I can’t work. I have to borrow, and it’s hard to pay back. I have to pay interest every month, 6,000 [MMK] on a loan of 100,000. It’s hard for me.” : 63 year old man, Fallam

“I try hard to repay, I want to repay. But this is our life of poverty. If I can’t pay back

my debt, I'll have to ask forgiveness from the creditor." : 27 year old woman, Yesagyo

"I don't have land, so have to buy rice. So it's difficult, I have to borrow from others." : 40 year old female, Myepon

"I borrowed money [from the organisation] to breed ducks, for duck eggs. When the weather is hotter, they don't lay eggs. And then, when the price of eggs drops, the price of feed goes up so much, I lose a lot. Then it's hard to repay the loan [to the organisation] so I have to borrow from outside, at high interest, to pay back. In the past two years, I have got worse, physically and emotionally. I got depressed because of so much stress. It's not that I don't have enough to eat-I have food. But I'm just worried all the time about not being able to pay back [the loan]." : 40 year old woman, Pyapon

The patterns of household debt in households in the LIFT programme areas overall showed a slight trend towards more households with debt and higher levels of debt. Of note, baseline debt levels were much higher in the Delta than in other places, with median levels at baseline double that of other areas, and with median debt levels also doubled from 2015 when measured in 2017.

Table 3.17 Debt (% of households with debt, and levels)

LIFT Programme Area	% with debt (baseline)	% with debt (endline)	Mean debt amount (baseline) MMK	Mean Debt amount (endline) MMK
Delta	74.2%	90.5%	522,691	795,327
Dry Zone	69.4%	77.0%	317,373	541,767
Uplands	65.4%	74.9%	310,179	442,964
Rakhine	69.9%	81.9%	293,976	579,484
All	69.9%	81.1%	373,649	598,770

However, gross debt levels in themselves may not increase vulnerability. The indicator used to measure debt-related vulnerability in the umbrella model is based on two parts: firstly, the debt: income ratio, and secondly the proportion of debt owed to higher risk, higher interest rate creditors: village moneylenders, village shops and to 'bosses' (for example, the owners of fishing equipment or farm implements, or merchants who pre-purchase crops). Debt riskiness is measured by looking at the proportion of debt owed to these higher-interest, higher-risk sources where interest rates may be as high as 20 per cent. This does not make a blanket assumption that debt owed to moneylenders or merchants is 'bad': but three statistics from the household surveys demonstrate evidence of the increased risk and financial burden incurred when household borrowing moves to these sources.

Firstly, among households exposed to shocks and stresses between 2015 and 2017, those whose main creditor at baseline was classified as 'higher risk' were less likely to have positive changes to measured income. The mean increase in annual household income from 2015 to 2017 among households exposed to shocks and stresses, but whose main creditors at baseline **were not high risk** was MMK 411,583 (USD 304), compared to MMK 136,411 (USD 100) for households exposed to shocks and stresses, but whose main creditors at baseline were **high risk**.

Secondly, when looking at the trend of borrowing, households reporting an increase in the proportion of their debt owed to high-risk creditors tended to report a corresponding increase in the proportion of income used to service debt over the three years. While the trend across the panel study showed a reduction in the reported percentage of income used to repay debt, among households exposed to shocks and stresses reported to have had a moderate or severe impact, the changes in proportions of income spent on debt repayments were most significant among households who had reduced the amount owed to higher-risk creditors. Thirdly, median income increases were highest amongst households whose borrowing profile showed a trend towards a lower proportion owed to higher-risk, higher interest creditors in 2017.

Table 3.19 Debt (% of households with debt, and levels)

Programme Area	Baseline debt: income ratio	Endline debt: income ratio	% of debt to high risk creditor baseline	% of debt to high risk creditor endline
Delta	30.6%	33.8%	38.2%	51.8%
Dry Zone	25.8%	31.6%	35.3%	35.5%
Uplands	25.4%	36.5%	30.5%	27.5%
Rakhine	35.0%	40.0%	36.5%	37.3%
All	28.2%	34.4%	35.2%	38.7%

This is shown by the analysis of main creditors in table 3.20, where a slight trend to lower-risk sources is driven by the increased likelihood of new borrowers having access to lower-cost finance, such as that provided by government. Of those who had no debt at baseline, 17 per cent reported government as their main source of credit in 2017, reflecting the expanded access to microfinance provided by government sources such as the Department of Rural Development's Evergreen Village project.

Table 3.20 Debt by lending source (% of households with debt, and levels)

Lending Source	% of all households whose main debt is with this source (baseline)	% of all households whose main debt is with this source (endline)
None	30%	26%
Bank	0.3%	0.7%
Microfinance	11.4%	13.5%
Village/community organization	4.1%	3.5%
Family/friends	12.4%	10.5%
Money-lender	14.4%	16.6%
Shop	3.5%	5%
Private company	1%	1.4%
Co-operative	4%	4%
Pre-harvest trader	1.2%	1.3%
Government	17%	16.5%
Other	0.7%	1%

Interestingly, the proportion of income spent on debt repayments decreased slightly from 2015 (15.2 per cent) to 2017 (13.3 per cent). There was at the same time an increased proportion in those reporting loans for consumption (such as food shortages and health), although the change in proportion of overall debt represented by such loans could not be measured due to changes in indicator structure between the two surveys. However, while the proportion of households in 2015 reporting that consumption (referring to loans for meeting food security needs) was the major reason for taking loans in nearly 40 per cent of cases, this was the main reason for 35 per cent of loans reported in 2017, accounting for 29 per cent of the debt burden of those with consumptive loans. In contrast, 46 per cent of loans in 2017 were for livelihoods, accounting for over 80 per cent of the debt burden of those taking such loans. Households classified as vulnerable in 2015 were more likely to take consumptive loans, and have a higher proportion of their overall debt from consumptive loans than households not classified as vulnerable in 2015.

Table 3.21 Expenditure on debt servicing and proportions taking loans for consumption

LIFT Programme Area	% of income spent on debt repayment (baseline)	% of income spent on debt repayment (endline)	% taking consumptive loans (baseline)	% taking consumptive loans (endline)
Delta	17.8%	16.8%	24.5%	49.2%
Dry Zone	14.3%	11.0%	29.2%	57.5%
Uplands	14.8%	12.7%	20.7%	26.9%
Rakhine	12.6%	12.7%	36.2%	56.2%
All	15.2%	13.3%	26.7%	47.8%

Debt is also associated with exposure to shocks, and to assistance, although the relationship is complex. Mean levels of change in overall debt were highest amongst households not exposed to shocks, with debt more likely to be due to investments. The lowest levels of increase in debt came in households who were exposed to shocks but who also received development assistance (of any kind). The median increase in debt amongst households exposed to shocks receiving any kind of assistance was MMK 200,000 (USD 148), compared to MMK 231,000 (USD 170) among households not exposed to shocks. In summary, the analysis of debt illustrates a complex pattern: both increased indebtedness, and in some areas increases in debt risk, but some evidence of the positive effects of increasing availability of lower-cost financial instruments, particularly for investing in economically productive activities.

Box 3.22 Problem debt

The debt cycle is a narrative of worsening debt burdens, and the socio-economic problems associated with problem debt. This was less related to the size of the principle, but instead was assessed as problematic based on the extent to which the household income was not sufficient to manage payments even to maintain the debt in its current form.

“I’m old, and have a lot of health problems, and because of that I have a lot of debt. Because I can’t work, I can’t pay back the loans.” : 67 year old man Fallam

“Some people took out loans and got into trouble. We have many like that here.” : 40 year old male, Monywa

One of the pathways into problem debt can relate to microfinance practices designed to protect poor clients. When borrowing to start a livelihood a poor household may initially be eligible to borrow only a small amount, not sufficient to purchase the capital items

they need. Yet, there is an expectation that when the MFI organisation comes to collect:

“Other organisations [MFI] come to help the village. But it can cause harm, because of the interest system, it drowns the village. Now they can borrow more, bigger amounts, but the interest is more. So they buy a cow, five or six lakh. They borrow 1.5 lakh from [name of NGO]. Then they have to borrow the rest from outside at high interest. They have to show the cow to Proximity. So the problem is they have to extend themselves to buy something to show [name of NGO] that they did some livelihood. But they are left with a big loan.” : 27 year old woman, Monywa

This over-extension was described as being due to, at least in part, the availability of cheaper finance, but on terms which resulted in a higher-risk debt for the borrower. Sometimes, illness, injury or sudden loss of income sources reduced income, rendering a previously manageable debt burden into one that became a risk. This illustrates the relationship between debt and precarity, where often small changes in circumstance - even the loss of a few days' work-can have catastrophic consequences due to unmanageable debt.

“ I couldn't work because of ill health, so it was really difficult. I had to take a loan for giving birth to my child, 1 million Kyat. The interest is 10 per cent. It is very difficult.” : 25 year old woman, Myepon

The second, similar pattern, relates to borrowing for spending on health, from a low-interest (usually micro-finance) provider. A lack of income, particularly to pay off the interest rates, sometimes collected every 14 days, then results in taking higher interest loans to pay back. In some cases, this then was the pathway by which small, low-risk loans led to a much higher interest burden, which is described by the respondents as the debt cycle.

“Then we get health problems, that costs money. We can borrow from these organisations, the interest rate is low, that's good. But we have to find work to be able to repay [the loan]. That's when we end up on high interest from low interest.” : 45 year old woman, Monywa

“Back then, we didn't have much debt. Now, it's more, and it gets worse. You borrow at 1 per cent, you can't pay back, so you borrow at 5 per cent. Then you can't pay back so its 10 per cent. You started at 1 per cent, now its 10 per cent. It's a cycle.” : 52 year old male, Pindaya

The compounding of interest, particularly on non-formal debt, frequently results in staggering debt loads:

“I do day labour when the organisations came [microfinance] I did pig breeding. I gave birth to my child, and then my husband can't work because he injured his eye. So I had to take a loan. From a 100,000 Kyat loan, I then had 200,000 Kyat interest. Whatever I take, it doubles. I can't pay back. I borrowed 25 din of rice, but when I had to pay back, 5 years, I have to pay back 215 din. The interest? It's 190 din.” : 36 year old woman, Pyapon)

What are the consequences, or options, for those whose debt has simply become unmanageable? Several respondents described a reduction in food consumption or liquidation of assets such as land to repay debts, in turn undermining resilience and future economic capacity.

“We have debt, it’s hard to repay. Sometimes we have to reduce our food to save money to stay afloat with our debt.” : 27 year old woman, Yesagyio

“Some people got into big debt problems, they had to sell homes, land.” : 60 year old, female-headed household, Monywa

Q: “How can you pay back?” A: “Well, I have to consider selling my stuff, my home, my land. That’s the only way.” : 48 year old woman, Pindaya

The typical course of action involved, firstly, borrowing from high-interest sources such as village money lenders, or where possible, from family members, to pay off more ‘formal’ loans such as those from banks and microfinance organisations. These loans were then repaid either with income, or asset liquidation. There were few who reported that assets would be seized by creditors - as many of those creditors would be fellow villagers. Some reported being able to ask for ‘forgiveness’ or leniency, and this might then enable an extra time period to repay, or in some cases, the creditor requiring the borrowers to work to pay off interest.

Q: “If they really can’t pay back, then what happens?” A: “Well, they would ask forgiveness [from the creditor] maybe he will make them work, like cutting [wood] or clearing [fields]. Like that. Whatever the boss makes them do, they have to do it.” : 45 year old male, Pyapon

3.5 Vulnerability and gender, disability and landlessness

In most programme areas, there were more households improving, than declining, leading to net reductions in numbers of households classified as vulnerable. **The biggest ‘gains’ in terms of reductions in vulnerability were among household dependent on casual labour, landless households and households classified in the lowest income quintile at baseline.**

Table 3..23 Vulnerability levels and profiles for different categories of household

	Vulnerability at baseline	Vulnerability at endline	% reduction	Significance	Note
Landless	36%	30%	6%	+++	85% of those landless at 2015 were still landless at 2017
Casual labour dependent	40%	31%	9%	+++	47% were still dependent on casual labour in 2017. Those that improved were through increased diversity and non-farm work
Lowest income quintile at baseline	51%	26%	25%	+++	Only 32% remained in the lowest quintile in 2017
Female headed	29.8%	29.3%	0.5%	NS	HH classified as female headed in 2017
PwD	31.3%	30.7%	0.6%	NS	Excluding HH whose disability status from baseline changed to non-PwD by 2017

NS = Not Significant + = >90% confidence ++ = >95% confidence +++ = >99% confidence

Landless, poor and casual labour-dependent households had significantly higher mean increases in household income compared to other households. They also tended to have the highest levels of vulnerability in 2015 and were also more likely than other households to receive assistance from LIFT (indicating the trend towards more pro-poor practice).

The inequalities associated with female-headed households or households with PwD were more pronounced in 2017, possibly due to a higher rate of exposure to shocks, higher existing rates of vulnerability and lower rates of access to assistance.

Table 3..24 Inequalities in risk of classification as vulnerable in 2015 and 2017, female-headed households and households with persons with disabilities

	Odds ratio of being classified as vulnerable at baseline	Odds ratio of being classified as vulnerable at endline	Note
Female Headed (compared to male-headed)	1.4 (CI 1-1.8)	1.6 (CI 1.2 -2)	Degree of inequality higher at endline
PwD (compared to non-PwD)	1.5 (CI 1.1-2)	1.7 (CI 1.24-2.2)	Degree of inequality higher at endline

Changes in income from 2015 to 2017 were also significantly different for female-headed households and households with PwDs. While male-headed households had an average annual income increase of MMK 550,000 (USD 406), the average increase for female-headed households was only MMK 70,000 (USD 52). One third (34 per cent) of female-headed households had worse income in 2017, compared with only 27 per cent of male-headed households. Likewise, for households with PwDs, the annual increase was MMK 200,000 (USD 148) lower than for non-PwD households, and PwD households were significantly more likely to report a decrease in household income in 2017 than non-PwD households.

Perhaps surprisingly, female-headed households were less likely to receive development assistance from LIFT-funded projects, as were households with persons with disabilities, although the latter was not statistically significant. Households with one or more persons with disabilities were also more likely to report shocks of moderate or significant impact, mainly due to a higher rate of reporting health shocks; but they were less likely than households with a person with a disability to receive assistance. This is most likely due to the relative scarcity of interventions addressing health shocks specifically. However, although female-headed households had the same level of exposure to shocks as male-headed households, female-headed households were less likely than male-headed households to receive assistance from LIFT.

Table 3.25 Shocks, stresses and exposure to LIFT-supported assistance

	Shock index (composite of reported exposure, frequency and severity)⁸	Shock index (composite of reported exposure, frequency and severity)	% reporting any shock of moderate/severe impact	% of households reporting any shock of moderate/severe impact exposed to LIFT-supported assistance	% of all households in this category exposed to LIFT-supported assistance	Notes
Female headed	1.8	1.8	36%	38% (+)	36% (++)	Lower rates of assistance mainly in Delta and Dry Zone
Male-headed	1.9	1.9	35%	47%	43%	
PwD	2.5 (+++)	2.5 (+++)	47% (+++)	39% (+)	42%	Main difference due to increased reporting of moderate/severe health shocks by households with PwDs
Non-PwD	1.8	1.8	33%	46%	40%	

NS = Not Significant + = >90% confidence ++ = >95% confidence +++ = >99% confidence

The differences in reported exposure to LIFT-supported assistance were mainly due to differences in financial inclusion from LIFT-supported projects, where rates of reporting financial inclusion from LIFT-supported programmes were lower for female-headed households and households with persons with disabilities. The differences in reporting access to other types of assistance were not statistically significantly different due to smaller sample sizes. The inequalities associated with female-headed households or households with PwD were more pronounced in 2017, possibly due to a higher rate of exposure to shocks, higher existing rates of

8. The composite index for shocks and stresses is derived from the number of different shocks and stresses to which the household reported being exposed to, each multiplied by the perceived severity of impact. The higher the number, the greater number of shocks and/or higher level of reported impact)

vulnerability, and lower rates of access to assistance. Analysis of the narratives, both in 2015 and 2017 revealed a perception of persistent inequality in access to assistance by female-headed households, as described in Box 3.26.

Box 3.26 Gender, disability and vulnerability

A number of observations made have already indicated the gendered nature of vulnerability, and the role of gendered differences in access to, and impact of, development assistance. Particularly prominent are the narratives of widows, often describing a calamitous descent into economic vulnerability after the passing of their husband: a story not found with any such frequency among male respondents who lost their wives. Debt was, as ever, a major part of these narratives, and the contrast with a male respondent who lost his wife and brother recently is striking: his response could be strategic, and he could plan a debt reduction programme to ensure that his own demise would not adversely affect his family. The widows, however, lost everything 'except the debt'.

"The problem was, we took a loan to do farming. Then my husband died suddenly, and I had no way to pay back the loan. I do some weaving of cow's tethers now, but it gives just enough for snack money for the children." : 36 year old female household head, Yesagyo

"Well, back then we did paddy planting. But 15 years ago my husband died. I have two sons and two daughters, it was really hard. We live hand to mouth, I pick betel leaves, one son works in a noodle factory. When my husband died, I lost everything, everything except the debt. Couldn't plant, I just had to leave the debt, couldn't [pay it]." : 60 year old female headed household, Monywa

Opportunities for off-farm work were considered more scarce for women, and paid less. Some project-based off-farm work, such as beekeeping, was considered 'for men' and if only women were left in the programme, they returned the equipment.

"There is some seasonal work, but it isn't regular, especially for women. We can get some work in monsoon, but not other times." : 19 year old woman from neighbouring village, part of beekeeping programme, Pindaya

"The bee project, that's for the men. I get some extra income making candles. I don't have a big machine, just do small scale in my home." : 47 year old woman, loan group member, Pindaya

"We get day wages, maybe 4,000 or 5,000 Kyat as women. But some months we can't get work. In the hot season, we can't get work. Its very tight, very hard. We have to borrow to eat." : 45 year old woman, Monywa

However, some off-farm work, such as blanket sewing, provided income that was then controlled by the female earner, rather than by the male household-head.

Lower rates of overall education and female literacy may also be a factor in the lower rates of financial literacy, and thus inability to understand and access more complex, MFI-provided microfinance.

In Pyapon, there was also a perception that female-headed households were more likely to be those in the worst state of financial ruin from unsustainable debt. The reasons for this were not clear, but possibly due to a combination of lower income-generating potential meaning that they were less likely to be able to access more favourable credit, and in turn, also then less likely to be able to repay the higher interest loans, leading in some cases to asset forfeiture. Potentially too, the option of providing hard labour to repay loans is not necessarily possible to older female household-heads.

“I’d say about half the village has this debt problem. A few are basically at the end, they have no way out. It’s mostly female-headed households.” : 31year old woman, Pyapon

In households with disabilities, narratives revolved around three main areas: the cost of healthcare for people with disabilities, the constraints on livelihood participation either by people with disabilities themselves, or for those needing to care for a household member with disabilities, and the relative scarcity of accessible, appropriate and sufficient help in addressing the needs of persons with disabilities.

“My child is deaf. I do farming, breed cows. We have to take loans to do that. I had cancer, I had to take a lot of loans. That was before my child was born. Now my child is born, and the child’s health isn’t good. So we still have these health costs. So the debt is quite high. I get loans from [name of NGO], from others, I try to maintain the cycle as best I can. If there’s a problem to pay back, I try to get help from others. If I can’t, I have to sell some things to pay back the debt. I keep trying so that one day, I can pay it all back.” : 58 year old woman, child with disabilities, Monywa

“My child has a disability, my relatives support us because we don’t have enough income. Sometimes we have to get loans for the child’s health, sometimes from [name of NGO], sometimes from outside. I never got any help from village organisations. Our village has developed, there’s a school, there’s electricity. I do sewing, I can earn 10,000 to 15,000 Kyat per day, but all of that is gone with the health costs. It’s just enough to patch the holes.” : 51 year old woman with child with disabilities, Monywa

As shown above, narratives of health, illness, disability and debt are intertwined, and while some do report being able to borrow from MFIs, others reported more difficulties in accessing funds, possibly due to different MFI arrangements in different areas.

“Because my child has disability, I can’t go to the field myself. We have to call workers, we have to buy seed and fertilisers. When my child is unwell, we have expenses, But we don’t dare to borrow [from the MFIs]. If our crop isn’t OK, we have to sell our cows, and sell our seed for paddy [to survive].” : 32 year old woman, with a child with disabilities, Pindaya

Panel data analysis showed that only 20 per cent of working aged persons with disabilities reported participating in livelihood activities - a figure that did not significantly change from 2015 to 2017. Perhaps surprisingly, households with a person of working age with a disability who did participate in livelihood activities were more likely to be vulnerable, and tended to show a trend to reduced income. However, on closer inspection, this is due to two factors: firstly, households where the working aged PwD was employed tended to have a smaller number of household members - and so quite possibly more pressure on a person with disabilities to find work - any kind of work - to support the household. Secondly, while being able to work, remunerations were likely to be lower, from less secure, reliable sources.

“I do general work, whatever anyone makes me do (carrying, cutting wood). If I don’t work, I have nothing to eat. Nobody will come and give to me. So even if I am not well, I have to work so I can eat. My youngest child supports a little, but it is not enough to live on.” : 55 year old woman, female-headed household and person with disability, Myepon

3.6 Livelihood diversification

Livelihood diversity is measured in three ways: firstly, looking at the number of income sources at household level; secondly, looking at the distribution of income generation between sources; and thirdly, looking at those two factors in relation to household profile, in terms of household members and dependents. As described earlier, the relationship between livelihood diversity and vulnerability is complex. While some forms of diversification may represent more planned, strategic ‘stepping up/out’ measures, others are more of a desperate scramble for sufficiency from whatever sources possible.

Looking first at the changes to diversity in terms of increased sources, and increased spread of income across sources, we can see that there is a general trend towards more diversification based on those indicators, particularly in the Delta and Uplands. However, as has been noted in previous studies, and above, diversification per se does not necessarily imply positive diversification, and hence a more nuanced analysis is required to look at the correlation between diversity and changes to socio-economic status, particularly vulnerability.

Table 3.27 Changes to livelihood diversity

	Mean change in income source number ⁹	SDI baseline ¹⁰	SDI endline	Mean change in SDI
Delta	0.57	0.35	0.45	0.29
Dry Zone	0.34	0.38	0.43	0.27
Uplands	0.40	0.34	0.43	0.32
Rakhine	0.29	0.33	0.40	0.31
LIFT	0.42	0.36	0.43	0.29

There was a strong association between exposure to LIFT assistance and an increase in the number of income sources, where households exposed to LIFT assistance of any kind were over twice as likely to have an increased number of income sources in 2017 compared to 2015 (Odds ratio: R 2.4, CI 1.8-3). Likewise, exposure to LIFT assistance was associated with more positive trends in the spread of income across different sources, as reflected in the changes to the diversification indicator (SDI). In particular, **LIFT assistance was associated with an increased proportion of income derived from agriculture, livestock and remittances, and a decrease in the proportion of income derived from irregular day wages.** The strongest association between LIFT assistance and positive changes in diversification were found in the Rakhine Programme. In general, we can conclude that there is a **trend towards more positive livelihood diversification.** Overall, a more even spread of income sources was associated with a decreased likelihood of negative changes to vulnerability status. Where there was an increased share of income from selling (anything from snacks to vegetables, clothes or meat and fish), and from remittances, there was an increased likelihood of a positive change in vulnerability status (i.e. change from vulnerable to non-vulnerable), whereas increased shares of income from casual labour, agriculture and fishing were associated with a higher likelihood of worsened vulnerability status. Diversification associated with an increased share of income from agriculture, livestock, selling or remittances was associated with significant increases in household income, whereas an increased share from casual labour was associated¹¹ with decreased household income.

9. This records the average increase in income sources per household, but does not reflect the degree of distribution of income across sources

10. SDI = Simpson's diversity index. This measures the number of sources, and the extent to which income is spread evenly across all sources (giving a higher score) or is mainly derived from one source (giving a lower score).

11. Here, I use the term 'associated with' to indicate that there is some relationship between these two factors. It is difficult, however, to attribute causality, i.e. to say that the increased share of income from casual labour caused the household to have a lower income.

Box 3.28 Post-peasant livelihoods

Decline of agricultural base: A common point of discussion in narratives from the six regions was the **decline in traditional agriculture**, mainly rice planting, as the main economic activity of rural households. The decline was attributed mainly to changes in weather, but also to fluctuations in market prices, and wider changes to the socio-economic context of rural areas.

“We did previously plant paddy, but the weather has changed. It is not good now. Water levels are too low. But 15-20 miles away, in other villages, they still plant paddy.” :30 year old woman, Yesagyo

However, sustained losses in many cases prompted diversification, seeking income from other activities. For some farmers, agricultural day-labour represented an additional income source, but many looked to non-farm income sources. This is not necessarily a new phenomenon, as some described the different strategies used in previous times to maintain the household economy. But the nature of the opportunities is changing, perhaps best described as increasingly remote from the ‘core’ of agricultural livelihoods, as well as geographically more remote from the household itself.

“We don’t have peasants in our village any more. We hire machines. Now, we survive by doing business.” : 30 year old woman, Yesagyo

“Now, being a farmer is more like being a day-labourer, you work from day to day. People finding outside work are better off. Year on year, with bad weather and low prices, farming gets harder, and so many people just won’t do it any more.” : 36 year old male, village committee member, Monywa

Linked to the changing nature and viability of agricultural practice is the increased **monetisation of agricultural processes**, mainly of the costs of production. The trend towards having to buy seed, fertiliser and even water then increases the exposure of the rural economy to “fluctuations in the real value of money” (Sengupta, 1957, p. 22), where previous less monetised arrangements, while having their own inherent vulnerabilities, enabled farmers to manage risks differently.

“These days, we have to buy everything [for agriculture]. We have to buy seed, we have to buy fertiliser, we have to buy cow dung. We borrow for fertiliser, for cow dung, for day labour wages. So now we’re in a debt cycle.” : 66 year old man, Pindaya

“The problem is, we lost the paddy. Not just the sale paddy, but then we have no seed. So to plant in winter we have to buy seed. For that we have to take loans.” : 71 year old male, Pyapon

In a more monetised system, prices rises, particularly seasonal rises, can further undermine

the viability of agriculture. This is particularly true of seed purchases, where, in Pyapon and Myepon, damage to paddy crops meant that they had to purchase rice for seed, which at the time of planting was more expensive than at the time of paddy sales. In Pindaya, the lack of durability of imported potato varieties also then meant a need to purchase potatoes for seed, as well as increasing amounts of pesticides and fertilisers. The costs, and risks involved in a more monetised system, may be a significant factor in the more risk-averse agricultural practice seen in some areas.

“There hasn’t been much improvement, but I will keep trying. But I don’t dare to expand. The cost is too much, you have to buy everything, seed, fertilisers. It is too risky.” : 64 year old male, Pindaya

“We used to plant paddy ourselves and we didn’t need to buy rice. Now, the weather patterns changed, we have to find investment [to plant] but we make losses. Nothing grows from that paddy, so we have to buy rice [for eating and seed]. It has been like that for four or five years now. So we don’t plant paddy much anymore, just buy rice.” : 40 year old woman, Yesagyo

Availability & nature of off-farm work: The decline in the viability of core agricultural work to maintain the household economy has been accompanied by a diverse, and far-reaching set of strategies for income generation from non-agricultural sources, either by migrating to other areas, or in some cases, by finding work locally. In the two villages in Yesagyo, almost all households had members engaged in day-wages work, either in nearby towns doing construction, or in mining and oil drilling. Many pointed to the lack of viable opportunities in their villages. Much migration was seasonal, and domestic, either to agricultural or construction work in other areas, or to mining.

“It’s hard to find money in the village, so most people go to other places.” 27 year old female, Yesagyo

“There’s some work with tyres, making blankets and pillows. But a lot of the old work has ‘gone dim’. We used to be the place for that.” : 65 year old village elder, Monywa

A significant number of women in the Dry Zone villages in Yesagyo, and some in the Monywa area also did blanket stuffing and sewing, getting paid a piece-rate for completed items. This provided a flexible, if irregular source of income, which also went directly to the women, enabling them to have some control over the expenditure at least of that income. However, this tended to be limited to the cooler months, when demand for blankets was higher.

“There are difficulties. Not big, maybe, but still we have problems. But if we don’t [get money] here, we get [money] from there. Previously we didn’t have this blanket-making business. Now we can do that.” : 30 year old woman Yesagyo

The vulnerability to wider global economic trends was not just referenced in agriculture, but was also considered a significant factor in some off-farm work, even the blanket stuffing and sewing.

“There are more ways now to find other income, there’s blanket making and pillows. But it is not certain, it depends on the global situation. If the global situation is tight, it is tight here too. It depends on the demand from the owners.” : 36 year old male, village committee member, Monywa

“This year, it has got harder. This year, tree cutting isn’t so good, mainly because of the heavy rains. We don’t have trees in our village anymore, so we go to other villages to cut down trees. The cost of living has really gone up. It’s also harder because I have children in school, and that is expensive.” : 40 year old female, Myepon

“Many families now, they’re living day to day, if they don’t get work today, its hard.” : 65 year old village elder, Monywa

The intersection of urban and rural economies also takes many forms, not least in the way increasingly, both urban-based day labour, and remittances from family members working in urban settings contribute to the household economy in rural areas. However, in some cases, even migration to urban settings did not result in improvements, with meagre rural incomes being sent to subsidise the urban migrants’ low wage.

“My daughter lives in the city and sends some money. With that money I can pay the [regular] interest on the [agriculture] loan. (60 year old female headed household, Myepon)

“I do selling, that’s our household income. When it’s not OK, I borrow from the organisations. My son works in Yangon, but he doesn’t get income. So I have to support him. I get some loans from the savings and loans groups, I try to repay with income from selling.” : 42 year old female household head, Monywa)

Whilst this effective subsidization of the rural economy by urban livelihoods brings an additional means of maintaining the viability of the rural household economy, it also brings an additional vulnerability. Changes in the global economy (for example economic sanctions such as those imposed on Myanmar from the late 1990’s, resulting in factory closures, can represent a risk to the rural economy as well, where there is a dependence on urban work to sustain the rural household economy.

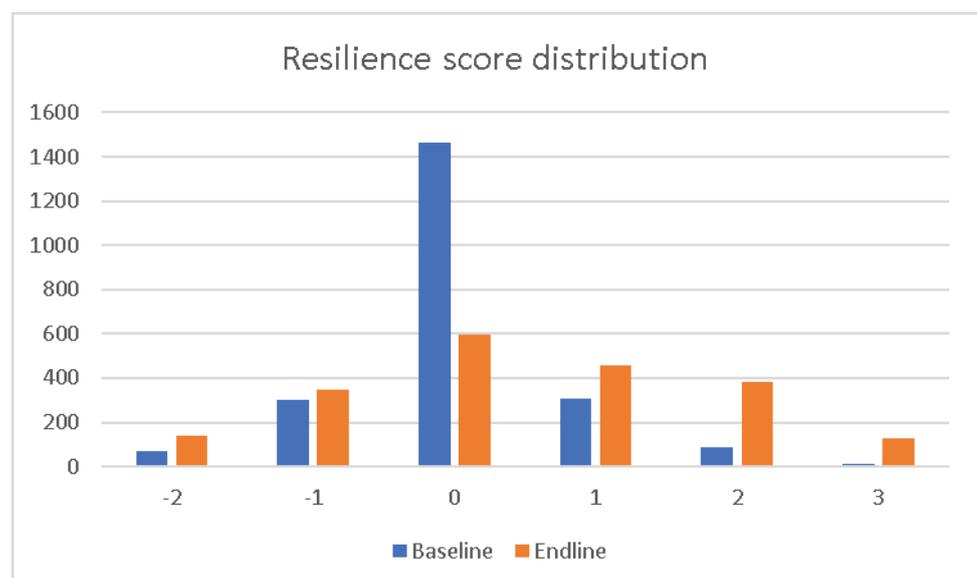
3.7 Resilience

This section analyses the changes in resilience among households. Analysis of the contribution of LIFT-supported activities to changes in resilience is considered in Section 4. **Positive trends were seen in terms of resilience, revealed here by an index that measures the balance between erosive coping (such as high-interest, consumptive loans) and investive coping**

(livelihood investment and savings). In this study, resilience was measured by considering the balance between erosive and investive coping, using a number of different indicators from the household survey in a composite index, whereby scores above 0 represent a higher rate of investive coping and scores below zero represent a greater rate of erosive coping. In essence, the indicator was looking to capture evidence of coping behaviour. Over the previous three years, did this household show a greater tendency to borrow money, at high interest, for food shortages? Were they able to spend a higher proportion of their expenditure on livelihoods or savings? What was the overall trend in the balance between these types of behaviours - one that would tend to erode household capital, and one that would represent an investment? It is acknowledged that this index of resilience captures only a limited spectrum of resilience-related behaviour, and indeed represents only a fairly crude approximation of such behaviour. However, resilience status correlated well with patterns of change in self-reported status of indicators such as income, food security, health and debt, suggesting that the indicator represents a reasonable approximation.

Overall, the trends in resilience show a tendency for both consumptive and investive indicators to increase. More households took loans reportedly used for consumption, and at the same time, households on average reported a higher proportion of spending on livelihood-related items. This resulted in a finding, firstly, of a more diffuse distribution of scores (see figure 3.29) where the proportion of households whose erosive behaviour more or less equalled their investive behaviour decreased, resulting in a higher proportion of households with lower scores, as well as a higher proportion with higher scores, when compared to the baseline distribution.

Fig. 3.29 Distribution of resilience scores, baseline and endline, number of households



Overall though, the trend over 2015-2017 towards higher scores was evident in all programme areas. This is mainly driven by increases in investive behaviour, with levels of erosive coping also increasing, but at a lower rate. This suggests an inherent precarity of the household economy, which will be considered later in this section. As with changes in vulnerability, the positive trends in resilience were less pronounced among female-headed households, households with persons with disabilities, but also less pronounced among landless households and poorer households. Amongst these households, changes in resilience was likely to be marginal, or even negative.

This shows firstly a general trend towards more resilient patterns of behaviour, driven mainly by increases in investive behaviour. This is consistent with the income/expenditure analysis showing a shift away from expenditure on debt servicing towards more expenditure on livelihoods, with the result that the majority of households in LIFT's programme areas had shifted from a mean resilience score of zero to a score of one, or close to one. In all likelihood, this is has resulted from increased access to lower-cost finance, and increased options for loans in different circumstances (see Part 4).

Table 3.30 shows the changes to the two parts of the indicator: measures of consumptive and investive behaviour. While scores for consumptive behaviour did increase from 2015, these were outweighed by larger positive trends in investive behaviour. While over one-quarter (26 per cent) of households had an increase in scores for consumptive behaviour (indicating more negative coping), 41 per cent had an increase in investive behaviour (indicating more positive coping), and even among those with an increase in scores for consumptive behaviour, nearly one-third also had an increase in score for investive behaviour, illustrating how different strategies often co-exist.

Table 3.30 Changes in resilience scores, baseline and endline

Region	Consumptive 2015	Consumptive 2017	Investive 2015	Investive 2017	Resilience 2015	Resilience 2017
Delta	0.24	0.49	1.12	1.36	0.01	0.69
Dry Zone	0.29	0.57	0.99	1.36	0.13	0.58
Uplands	0.21	0.27	1.03	1.37	0.05	0.87
Rakhine	0.36	0.56	0.71	1.33	-0.17	0.55
All	0.28	0.48	1.00	1.35	0.07	0.76

The proportion of households reporting borrowing high interest loans for consumption (in this case, mainly food shortages) increased from 27 per cent to 40 per cent, with increases in all areas. However, the proportion of borrowing represented by consumptive loans decreased, as an effect of greater levels of borrowing, usually at lower interest, for livelihoods. So, overall, levels of debt did increase, and the frequency of borrowing for consumption also increased. However, at the same time, better access to finance appears to have resulted in two changes: firstly, a higher proportion of debt derived from loans for livelihoods, and secondly, a reduction in the overall debt burden, as the overall cost of borrowing has declined. Another possible trend, perhaps similar to findings from studies in other countries, is that while there is an increased frequency of borrowing from high-interest sources such as moneylenders, the duration of borrowing may have decreased, and in some cases, there were reports of moneylender interest rates reducing in the face of competition from microfinance institutions (MFIs) (see section 4, Box 4.22). Closer analysis of borrowing patterns also points to different interest rates linked to the nature of borrowing, particularly when borrowing from non-formal sources. Thus, when borrowing from moneylenders or shops, interest rates when borrowing for consumptive purposes were higher than for borrowing attributed to other reasons. However, the difference in interest rates related to the reason for borrowing was less pronounced when borrowing from village savings and loans associations or MFIs, which together accounted for nearly 20 per cent of the reported source frequency for consumptive borrowing. This returns to the points made in the earlier sections on debt: the issue is not borrowing per se, but the type of credit, which can be associated with higher or lower interest burdens and risk.

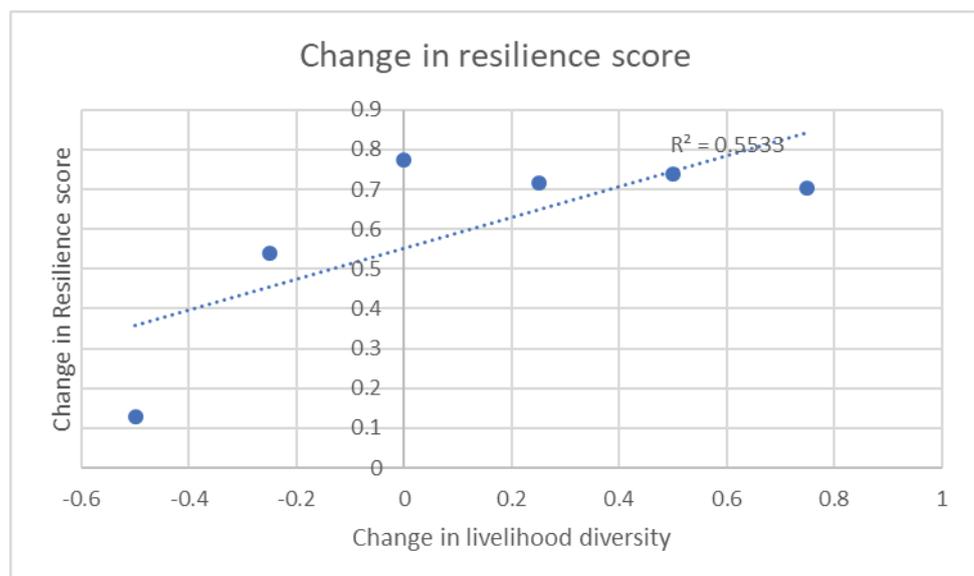
Table 3.31 Interest rates on consumptive loan vs. other loans, by source

	Moneylender	Shop	MFI/VSLA
Interest rate for consumptive borrowing (food, health, funerals)	10.2%	6.5%	2.3%
Interest rate for borrowing for other reasons (Home improvement, tool/asset purchase, livelihood investment, education)	8.5%	4.9%	2%

What the findings also show, with the wider distribution of scores, is that change and development are uneven, with upward mobility (in terms of increased income and reduced vulnerability) for some households, but equally, downward changes for others. This needs to be interpreted in light of earlier comments on post-peasant economics and the volatility of rural transformation, as well as against the backdrop of widening inequalities in Myanmar generally. While over half of households showed a more positive trend in terms of coping, nearly one-quarter showed a negative trend

towards more erosive coping. Landless households, households with persons with disabilities, and female-headed households had lower rates of positive trends in resilience compared to other households. This was particularly true when considering behaviour trends among households reporting exposure to shocks and stresses. What factors, apart from specific development assistance from LIFT-funded projects (which will be considered in the next chapter), may be contributing to greater resilience? Firstly, there was strong correlation between livelihood diversification, as measured by the SDI score, and positive changes in resilience. Figure 3.32 shows a scale of changes in livelihood diversity, from 1 (much worse diversity in 2017 compared to 2015) to 4 (no change) to 8 (major improvement in diversification in 2017 compared to 2015). Positive changes in livelihood diversity were strongly associated with positive trends in resilience behaviour.

Fig. 3.32 Correlation between changes in livelihood diversity and changes in resilience scores



The nature of diversification is significant, however, dependent on the context and the nature of the pressure to diversify, as to whether this allows for more strategic diversification, or results in diversification as a more desperate measure (see Box 3.33).

Secondly, there is a strong correlation between levels of political capital (measured in the vulnerability index based on active participation by household members and household women in village events and meetings) and subsequent positive trends in resilience. This suggests a potential role of 'governing frameworks' whereby the capacity to act may be enabled or

constrained by aspects of power, and social and political capital. This may also help to explain why female-headed households, and particularly those with low baseline scores for participation, were less likely to report positive changes in resilience. Thirdly, in general terms, access to assistance for households exposed to shocks and stresses was associated with a greater likelihood of improved resilience scores (Odds ratio 1.5 (0.98-2.4) and a lower likelihood of worsening resilience. The specifics of this will be explored in the next chapter.

Box 3.33 Resilience building and adaptation: voices from below

“In our village, the income isn’t enough. There are difficulties for daily living. It’s impossible to really improve our livelihoods.” : 64 year old male, former village head, Myepon

“How to be more resilient? Well, we’re traditional. My family worked this land, so one way or another, we’ll keep working this land. I won’t sell up.” : 45 year old loan officer, Monywa

In the baseline study, narratives of resilience demonstrated a rather paradoxical trend: a modest improvement in resilience, alongside slight improvements in vulnerability. The narratives suggested three reasons for this. Firstly, while the wider socio-economic conditions of the rural economy, as mentioned earlier, could be considered as both precarious and challenging, the increased access to affordable finance enabled in many cases income smoothing, a maintenance of investment, and in some cases, new or increased investments in livelihoods, where previously, more negative coping strategies may have been employed.

“I can overcome my economic problems if I get help. All I needed was a loan to start breeding pigs and chickens.” : 32 year old, female-headed household, Fallam

“Loans are very helpful for people on lower incomes.” : 32 year old woman, Fallam

“Now it is easier for poorer people to get loans, that has helped them. Previously they couldn’t get loans. Before, they’d have to borrow from relatives, and people didn’t really trust them. So they’d ask for 100,000 Kya, but only get 50,000.” : 40 year old man, Monywa

The opportunity to diversify, either in terms of different crops, or other livelihoods, is key. Diversification can be analysed using two main matrices: the degree of strategic process involved, and the proximity to the main agricultural livelihood base. This is based on an analysis of the narratives themselves, taking into account the description of the socio-economic context of the respondent household.

	Strategic	Desperate/distress
Localised	Crop diversity, animal husbandry, blanket-work	Firewood, casual labour, indentured labour
Remote	Off-farm construction, seasonal agriculture, overseas migration, selling	Rock mining, jade mining

In assessing the narratives, around one-third of respondents indicated localised, strategic diversification, with another third describing diversification, which was still more of a strategic, planned choice, but required migration to cities or other locations. Around one-quarter then described measures that took place in a context of few other options; but were local. The remainder, just under 10 per cent, described a process that resulted from more restricted circumstances, and required more distant migration. This perhaps gives a more nuanced picture than the ‘Hanging In, Stepping Up, Stepping Out’ framework proposed by Dorward, which is complicated by the lack of homogeneity in some categories, particularly that of ‘stepping out’, which ranges from a well-planned, strategic migration to a desperate flight from precarious living.

Strategic diversification within agriculture, either switching crops or planting different crops, was potentially limited by three factors: lack of access to land, lack of access to sufficient capital, and lack of knowledge. Land access was linked to the legacy of land sales, but also to the sluggish performance of land registry processes, where the lack of clarity on ownership meant that land could not be transferred from one person to another, often remaining fallow.

“The problem also is there is limited space to try and plant things, so some things you have to reduce or change around to adjust to the land you have.” : 45 year old loan officer, Monywa

“A problem is land registration. The government needs to do that more quickly. Otherwise, we can’t buy or sell land, so those who want to buy and do more, can’t do it because the registration process is not clear.” : 64 year old male, Pindaya

Land access is key to more strategic coping: those with land were not surprisingly more likely to describe more strategic approaches to diversification. Limitations in finance were a common complaint: loans not big enough, loans not at the right time, and loans not on repayment terms suitable for agricultural diversification and expansion. Access to technology was also a common request, but as noted earlier, the uptake of new techniques is less enthusiastic. Most would use self-research and studying the practices of peers in order to get new ideas.

Q: “How would you find out how to plant new things?” A: “I would go and learn from others who are planting that [crop] I’d visit some nearby villages.” : 66 year old man, Pindaya

A number of respondents described detailed processes of research and diversification of crops, based on careful study of market trends and investment levels. In Monywa, a significant diversification into growing betel leaves, and **engaging in 'selling'** – where fresh produce, snacks and other goods were sold in the surrounding villages by a fleet of motorcycle-riding small scale merchants - had resulted in a major economic uplift for those involved, much to the chagrin of those who had stuck to more traditional farming.

“Paddy farming, you can’t rely on it like before. It’s hard, it’s hard to find enough money. You know, those people, they do business selling, they get this much gold [showing up to mid-arm]. This couple, they did selling, it was OK, they got 2,000 to 3,000 Kyat per day. They start with a bicycle, they can get a motorbike, they get this much gold [shows up to the mid-point of his forearm]. My family, doing farming, we don’t have gold, we don’t have silver. I have to go to them if I want to borrow money.”
: 45 year old man, Monywa

For women, securing a small amount of investment could enable them to **open home-based shops and businesses**, such as a young woman selling camphor oil in Pindaya. However, not all diversification is strategic: in a number of cases, especially in Myepon, **'last-resort' activities such as cutting down trees for firewood** were widely reported, at the same time as reports of the decline of available forest wood, said to be due to commercial logging taking place in the past decade.

“When fishing isn’t OK, I’ll do firewood cutting. If I don’t have income, I have to borrow. I can repay when I get work. I haven’t taken big loans, but I’ll try and settle next year.”
: 35 year old female, Myepon

More remote, but strategic diversification included **migration, often seasonal, to do construction, or agriculture work**. The boundary between strategic and desperate remains somewhat blurred. For some, it represents a last resort, but for others, a more planned approach to supplement income insufficiency where local means were inadequate. Typically, the extent of desperation is reflected in the terms of work: a spectrum of more difficult, dangerous and less well-remunerated work undertaken by those with less time, and resources, to choose. Remittance income from urban, and overseas migrants, was reported as a significant source in a number of households, particularly those in the Pyapon (with migrants in Yangon) and Fallam (with overseas migrants).

3.8 Coping- Who is coping better and why?

While there are relatively few differences between types of households in terms of the category of coping behaviour, households show different levels of outcomes of coping with shocks and stresses, in terms of measured indicators such as income and vulnerability. Female-headed households undertaking asset depletion or migration as a coping strategy have overall worse outcomes than male-headed households.

The same is true when comparing households with persons with disabilities,

or landless households reporting trying income diversification in response to shocks & stresses and having fewer positive outcomes than landed households reporting the same category of activity. This is likely derived from three possible factors. Firstly, the indicator does not measure the value of the coping response, so asset depletion may depend on the value of the liquidated asset to derive its effect on better coping. Equally, secondly, the nature of an action such as livelihood diversification, or migration, is in many ways related to the context in which it is taking place. ‘Distress migration’, taking place in a context of limited choice, may well be associated with negative outcomes derived from the broader circumstantial household state, rather than the migration itself. Thus, a poorer household, faced with little other choices, may see a household member migrate, but the measured effects in terms of indicators may reflect the background economic ‘crisis’ rather than any changes effected by migration. Thirdly, so-called ‘governing frameworks’ such as gender may influence the ability of an action to effect an outcome. The qualitative data points to persistent constraints on female-headed households being able to enact new strategies for livelihoods because they cannot access the necessary finance, resources and markets.

Table 3.34 Coping methods and outcomes by household type

	% reporting asset depletion as coping method	% reporting migration as coping method	% reporting new job as coping method	Decreased Vulnerability	Increased income	Improved resilience
Female-headed	32%	4%	7%	33%	29%	46%
Male-headed	31%	3%	6%	37%	49%+++	51%
PwD households	29%	4%	6%	34%	45%	42%
Non-PwD household	31%	3%	6%	37%	45%	52%++
Households with migrants	31%	2%	5%	36%	50%	50%
No migrants	31%	3%	6%	37%	44%	50%
>2 income sources at baseline	31%	1%	6%	32%	48%	54%
2 or fewer	31%	4%	6%	38%+	44%	49%
Landless	27%	3%	5%	39%	48%+	40%
Landed	33%	3%	6%	35%	43%	57%+++

NS = Not Significant + = >90% confidence ++ = >95% confidence +++ = >99% confidence

Analysis of the outcome trajectories of different coping strategies of households exposed to shocks and stresses, shows statistically significant differences in some measured coping outcomes (changes in vulnerability, resilience and income) related to different coping strategies. Overall asset depletion and reduction in food consumption were associated with more negative trends in outcome, while migration, and starting a new job, were generally associated with positive trends. While taking loans as a coping mechanisms was not associated with either a positive or negative trend in outcomes, the nature and source of borrowing were associated with different outcomes.

Table 3.35 Outcomes of different coping responses (households exposed to shocks and stresses)

	Trend in vulnerability	Trend in Income	Trend in resilience	Trend in self-reported status change
Asset depletion	Worse	No difference	No difference	No difference
Loans	No difference	No difference	No difference	No difference
Migration	Better	No difference	No difference	No difference
Other negative (reduce food, withdraw children from school)	Worse	No difference	No difference	No difference
Positive (e.g. new job)	No difference	No difference	Better	Better

VULNERABILITY / RESILIENCE

4. LIFT AND VULNERABILITY/ RESILIENCE

4.1 WHO GOT (WHAT KIND OF) HELP?

4.2 AGRICULTURAL TRAINING AND INPUTS

4.3 WATER & SANITATION

4.4 FINANCIAL INCLUSION

4.5 NUTRITION AND MCCTS

4.6 LIFT'S THEORY OF CHANGE AND
RESILIENCE/VULNERABILITY

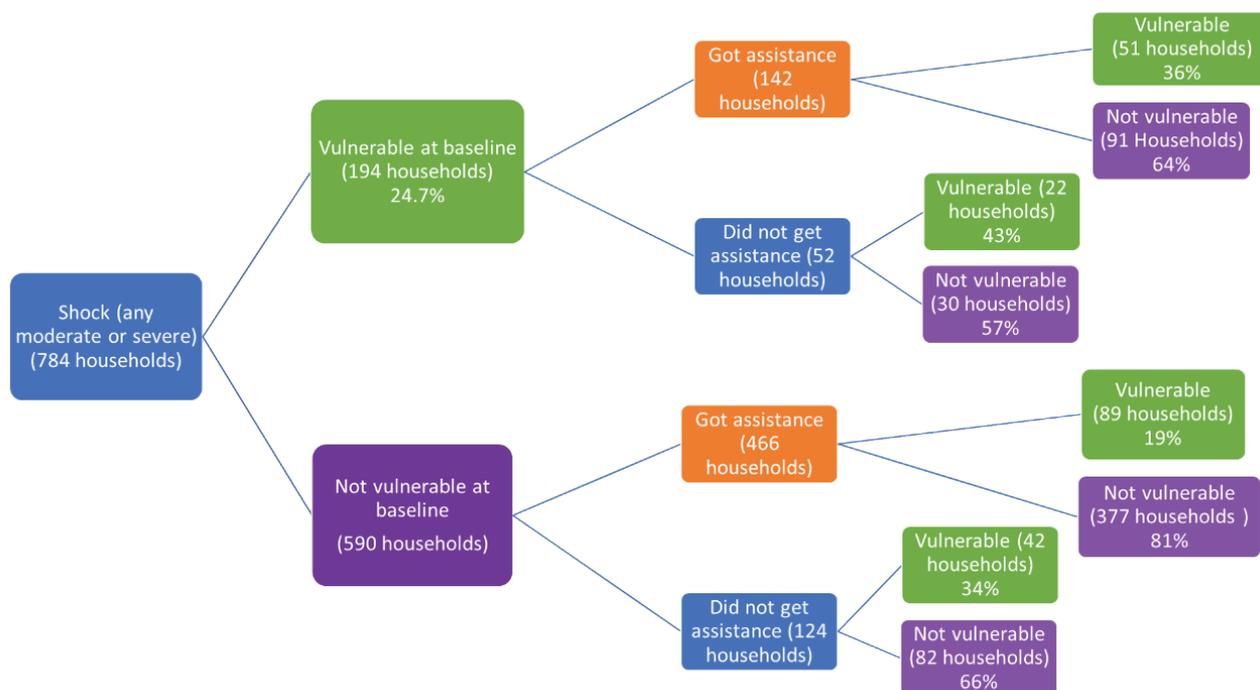


4. LIFT AND VULNERABILITY/ RESILIENCE

LIFT assistance is clearly associated with reductions in the risk of worsening vulnerability, and conversely, increases in the increased likelihood of improved vulnerability status among households exposed to shocks and stresses. This was linked with changes to income status, where households who remained non-vulnerable, or whose status changed to non-vulnerable had significant increases in mean annual household income compared with households who became vulnerable, or who stayed vulnerable.

The figure below illustrates the probability tree of households exposed to shocks based on (a) their vulnerability status in 2015; and (b) whether or not, they received assistance.

Fig. 4.1 LIFT assistance and vulnerability outcomes in households experiencing moderate or severe shock or stress



What this shows is three main trends:

Firstly, that overall, exposure to shocks was associated with an overall increase in the proportion of households classified as vulnerable, from 194 (24.7 per cent) to 204 (26 per cent). Secondly, that of those households classified as vulnerable in 2015 and who experienced a shock or stress, 121 (62 per cent) became non-vulnerable, and 73 (38 per cent) remained vulnerable. However, LIFT assistance was associated with a **higher likelihood of becoming non-vulnerable** after exposure to shocks. Thirdly, among households exposed to shocks who were not classified as vulnerable in 2015, 131 (22 per cent) became vulnerable, and the remaining 459 (78 per cent) remained non-vulnerable. However, LIFT assistance was associated with a **lower likelihood of becoming newly vulnerable when exposed** to shocks.

The net effect then is a vulnerability rate in 2017 of 23.4 per cent among those receiving assistance, and 36.4 per cent among those who did not.

Households exposed to shocks who did not receive assistance were more likely to become newly vulnerable, or to remain vulnerable in 2017 than those who did receive assistance. This trend was true for assistance attributed to NGOs and government, but not private sector, where the data suggests that isolated provision of financial instruments by MFIs is more frequent among less vulnerable households, and less effective at reducing vulnerability. LIFT assistance is associated with reducing the risk of vulnerability particularly in relation to exposure to health-related shocks, where LIFT assistance is also associated with a reduced risk of income decline.

The broader picture demonstrates that the overall effect of LIFT assistance across this study period has been to prevent worsening of vulnerability status and income status among households exposed to shocks, resulting in fewer households declining in status, and more households improving in status despite experiencing significant shocks. The reduction in the proportions of households classified as vulnerable (i.e. improved status) is directly correlated with the degree of exposure to interventions, as a dose-related effect, where households receiving more than three interventions of any kind had increased likelihood of positive changes to their vulnerability status (38 per cent vs. 35 per cent).

Likewise, **LIFT assistance is associated with positive improvements in resilience**, and again, this was associated with changes in household income, whereby households whose resilience index scores decreased also had a decrease in average household incomes, compared with those whose resilience scores were either unchanged or increased.

Resilience patterns were also strongly correlated with assistance; the mean score changes among households exposed to shock, but receiving

assistance, were nearly three times as high as those exposed to shocks but receiving no assistance (see table 4.7), with LIFT assistance associated with the achievement of positive change in just under 200 households that were exposed to shocks. **What may have been the impact of development interventions on resilience?** When comparing resilience status at 2015 and 2017, there is significant correlation between the provision of inputs such as nutrition (associated with a mean net change in resilience scores of +0.80) and financial inclusion (associated with a mean net change in resilience scores of +0.65), where the households also reported exposure to shocks. The overall association with changes in resilience related to nutrition was highest in the Delta and Rakhine, and the changes in resilience related to financial inclusion were only seen among those who experienced shocks and stresses, particularly in the Dry Zone and Uplands, but not in Rakhine. This may relate to programmatic differences in both types of activity.

As noted in the introduction, given that LIFT works through other organisations that actually implement the projects, it is often difficult for respondents to identify if they are in LIFT-supported households or not. However, by the nature and scale of LIFT's activities and the survey's targeted sampling procedures, it is assumed that LIFT has contributed to the measured changes in significant ways.

4.1 Who got (what kind of) help?

Overall levels of households reporting receiving development assistance was high: 75 per cent of households reported receiving some form of assistance from any source, and over half reported receiving an input of any kind. The most commonly reported assistance was financial inclusion (over half of all households) followed by livelihoods. The analysis here compares those who received assistance from any source, and where indicated, those who received assistance attributed to LIFT. This also risks some bias, where the characteristics of households who did, and who did not receive assistance may also be different, thus reducing the validity of comparisons of outcomes. There is also the potential of mislabelling the source of assistance.

Table 4.2 shows the proportions of households reporting receiving any assistance, by type, source and attribution. The highest rates of assistance, both in terms of number of reporting households, and intensity (number of different interventions) were in Rakhine State.

Table 4.2 Households receiving assistance by programme area

	Any assistance	Any training/ advice	Any input	Any group	Any NGO	Any Govt	Any private sector
Delta	76%	51%	57%	45%	47%	41%	23%
Dry Zone	73%	47%	59%	43%	48%	35%	27%
Uplands	78%	58%	64%	50%	53%	33%	31%
Rakhine	75%	59%	63%	43%	57%	31%	28%
All	74%	52%	60%	45%	50%	36%	27%

There was a tendency for households receiving LIFT assistance to be more likely to be those reliant on casual labour and landless. Likewise, households experiencing shocks or stresses were also more likely to have received assistance, although it is not possible to determine from the data whether the assistance was before or after the shock. However, despite a greater likelihood of being classified as vulnerable in 2015, households with persons with disabilities were not more likely to receive assistance, and female-headed households were less likely to receive assistance (see Table 4.3). This was particularly the case for the Delta and Dry Zone, whereas there were no significant differences in assistance rates between male- and female-headed households in the Uplands or Rakhine programme areas. In the Delta and Rakhine, households with a person with disabilities were also significantly less likely to receive assistance than others, whereas in the Uplands Programme, they were significantly more likely to receive assistance.

Table 4.3 % of households receiving assistance supported by LIFT, by household category

	Vulnerable at Baseline	FHH	PwD	Landless	Reliant on Casual labour	In lowest income quintile	Experienced shock or stress
Yes	41%	36%+++	42%	44%++	44%+	40%	45%+++
No	42%	43%	40%	40%	40%	42%	40%

NS = Not Significant + = >90% confidence ++ = >95% confidence +++ = >99% confidence

Table 4.4 Proportion of households reporting receiving interventions by intervention focus and programme areas

	Agricultural livelihoods	Nutrition	WASH	Financial inclusion
Delta	25%	17%	18%	59%
Dry Zone	18%	13%	20%	58%
Uplands	26%	10%	18%	48%
Rakhine	30%	38%	49%	52%
All	24%	17%	22%	55%

Households exposed to shocks and receiving assistance from LIFT tended to be more vulnerable at baseline than other shock-exposed households who received assistance from other sources, such as the private sector. Likewise, the impact of assistance on reducing vulnerability was greater when the assistance was received from LIFT. Livelihood assistance and WASH were associated with higher rates of reduction in vulnerability.

Table 4.5 Vulnerability changes in households exposed to shock (any) and receiving assistance (considered attributable to LIFT where noted)

	% vulnerable at baseline	% vulnerable at endline	Significance
Any shock exposure, no assistance	29%	36%	(confidence)
Any shock exposure, any assistance	26%	27%	++
Any shock, NGO assistance	26%	23%	NS
Any shock, government assistance (any)	26%	26%	++
Any shock, private sector assistance (any)	25%	29%	NS
Any shock, agricultural livelihood assistance	23%	20%	NS
Any shock, nutrition assistance	28%	28%	NS
Any shock, WASH assistance	30%	18%	NS
Any shock, financial inclusion assistance	28%	22%	++
			+

NS = Not Significant + = >90% confidence ++ = >95% confidence +++ = >99% confidence

Table 4.6 follows the reasoning laid out above, and compares households that received assistance, and those that did not. The table shows a trend for LIFT assistance to be associated with a decreased risk of vulnerability, particularly in relation to health-related shocks, as well as a reduced risk of worsening income status. LIFT assistance was also associated with increased rates of positive patterns of resilience, where households were exposed to shocks and stresses.

Table 4.6 Probable impact of LIFT attributed assistance, summarising Odds ratios, comparing households who were and were not exposed

	Did LIFT assistance reduce risk of vulnerability?	Did LIFT assistance reduce risk of lower income?	Did LIFT assistance reduce risk of asset depletion?	Did LIFT assistance reduce risk of food insecurity?	Did LIFT assistance reduce risk of decreased self-reported income?	Did LIFT assistance reduce risk of worsening resilience?
Unexpected Crop failure	NS	+	+	+	+	+
Unexpected death livestock	NS	NS	NS	NS	NS	NS
Lost regular Job/income	+	++	+	NS	+	NS
Severe illness/ injury/ death	++	++	+	+	++	NS
Natural disaster	+	+	+	+	+	NS
Any shock	+	++	+	+	+	NS

NS = Not Significant + = >90% confidence ++ = >95% confidence +++ = >99% confidence

Likewise, households who were exposed to shocks and stresses and received assistance from LIFT, had much bigger increases in resilience scores compared to those that were exposed to shocks but did not receive assistance from LIFT ++.

Table 4.7 Changes in resilience, baseline and endline, households exposed to shocks with and without LIFT assistance

	2015 Baseline resilience	2017 Endline resilience	Mean change in score
Shock, no assistance	-.017	0.119	0.136
Shock, any LIFT supported assistance	0.028	0.6	0.572

Overall, households exposed to shocks and receiving assistance had a shift from a median score of 0 to 1, effectively moving them into a positive trend of coping, as opposed to households not receiving assistance, whose median remained 0, reflecting a neutral state of coping (i.e. one where their more investive coping was more or less equal to their erosive coping).

Table 4.8 Households with change in resilience status, exposed to shocks and with or without LIFT assistance

	No Change	Worse	Better	Net gain/loss
Shock, no assistance	99	118	213	+95 (meaning, more households who have worse resilience)
Shock, assistance	76	82	196	+114 (meaning more households with better resilience)

This translates to an Odds Ratio of **1.7** (CI: 1.2-2.3) of the **likelihood of positive changes in resilience when receiving LIFT assistance in the face of exposure to shocks**. In terms of trajectory, the majority of those demonstrating behaviour classified as 'Hanging In' were classified as vulnerable at baseline, but as has been shown, the receipt of assistance from LIFT did in a significant proportion of cases result in a better 'Hanging In'¹² with less overall negative coping (such as asset depletion or use of high-interest loans).

12. Hanging In is one of the three livelihood strategies presented by Andrew Dorward, and describes as situation where where 'assets are held and activities are engaged in to maintain livelihood levels, often in the face of adverse socio-economic circumstances' (Dorward 2009, p.4)

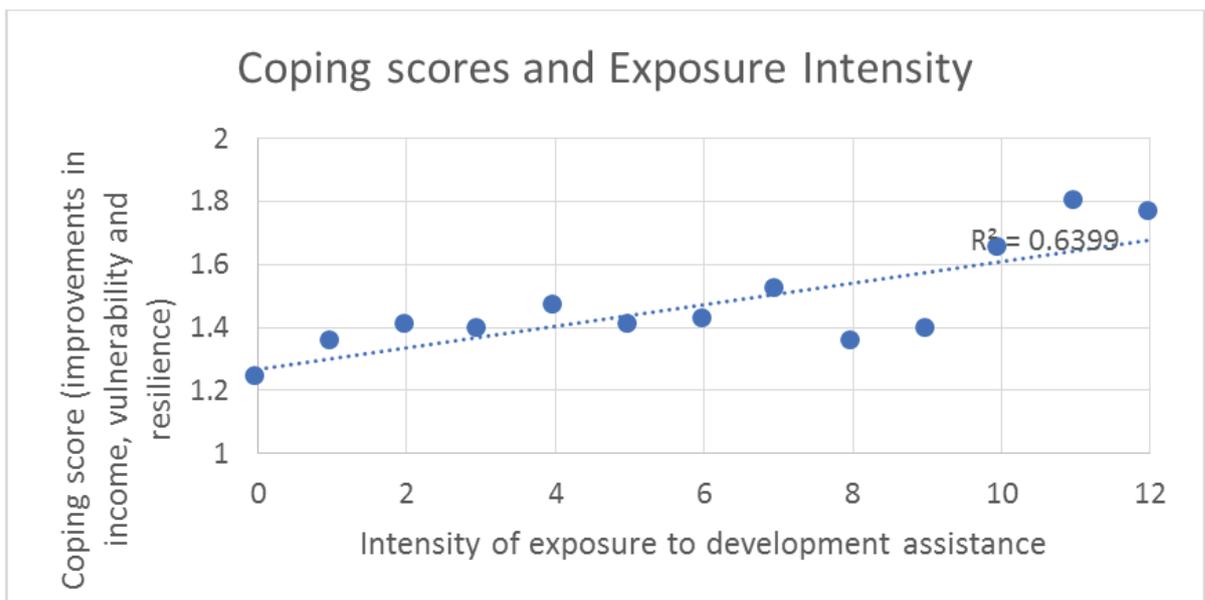
Table 4.9 'Hanging in' and vulnerability status of HH exposed to shock

	Baseline vulnerability	Endline vulnerability	% with worse vulnerability score at endline	% with improved vulnerability score at endline	% reporting asset depletion as coping
Hanging In- got LIFT assistance	40%	35%	32%	45%	29%
Hanging in – did not get assistance	38%	43%	41%	40%	38%

Four main categories of assistance will now be analysed with respect to their possible contribution to changes in vulnerability and resilience: livelihood interventions (mainly agricultural training and inputs); water and sanitation; nutrition (including maternal and cash transfer schemes) and financial inclusion.

Of households who received any form of assistance, nearly 70 per cent were exposed to multiple (three or more) activities or inputs. Overall there is a correlation between higher intensity of exposure to interventions and better outcomes in vulnerability, income and resilience, as shown in the graph below:

Fig. 4.10 Correlation between intensity of exposure to development assistance and coping scores



However, both exposure and effect were not equally experienced. Among households exposed to shocks and stresses, female-headed households and households with persons with disabilities were not only less likely to be exposed to ANY development assistance, but even among those with any exposure, they were statistically less likely to have 'high-intensity' exposure, classified here as exposure to three or more different development assistance interventions. Outcomes if exposed to higher intensity were also different: female-headed households that did have higher-intensity exposure had worse outcomes than male-headed households exposed to higher-intensity assistance, whereas among poorer households, and households classified as vulnerable in 2015, the outcomes associated with more intense exposure were better.

Table 4.11 Likelihood of intense exposure and associated outcomes, different household types

	Likelihood of high intensity exposure	Positive impact with intense exposure
Female-headed	Lower	Lower
PwD	Lower	No difference
Landless	No difference	No difference
Lowest income quintile	No difference	Higher
Vulnerable at baseline	No difference	Higher

There were no statistically significant differences in outcomes with different combinations of assistance (e.g. combinations of financial inclusion and livelihoods, or WASH and nutrition).

Box 4.12 LIFT assistance and resilience-a qualitative perspective

“Social ecological systems exist in ways whereby a small change may result in a disproportionate effect, meaning that the relationship between different components of a system has a significant effect on how that system works. Because of the existence of multiple relationships, of differing quality and nature, there are many possible effects [...] there are often thresholds (tipping points), where a small change may ‘push’ something over a threshold, or vice-versa-more input above a certain threshold may not have any effect at all. [Also..] there are unknown factors within the system, as well as the potential impact of other interconnected systems on the one which we are studying.” (Griffiths, 2017b, p. 38)

The locations for the qualitative study were chosen to reflect not only geographical and programme area diversity, but also a diversity of programme activities funded by LIFT (see Appendix 5). Thus, the villages in the Pyapon, in the Delta, had received assistance for microfinance and off-farm livelihoods, such as fish farming. Villages in Myepon, in the Rakhine programme, had received a range of assistance, including agriculture training and inputs, CBO formation, WASH, financial inclusion, health and nutrition training, and maternal and child cash transfers (MCCT). Pindaya, in Shan State, and part of the Uplands Programme, had projects delivering microfinance and migration/off-farm livelihood-related activities (in this area, wild bee cultivation). In Fallam, in Chin State, again part of the Uplands Programme, a range of development assistance including training on agriculture techniques, MCCT and nutrition training was received. This area also reported a significant number of other development assistance from other government, UN and INGO partners. In Yesagyo, in the Dry Zone, the main activities were microfinance and MCCT, and in Monywa, the only LIFT-funded activity was microfinance, delivered through microfinance institutions.

Profiles of intersecting risk in rural communities

	What was done (as described in narratives)	What got better	What got worse	Main enabler of resilience	Main constraint to resilience	Narrative trend
Chin State (Fallam)	Infrastructure development, educational support, MCCT, livelihood	Transportation and links to market chains	Prices more unstable, water shortages, change in social dynamics due to out-migration	Self-reliance, overseas remittance	Market instability, political uncertainty	Generally better, but concerns over reliance on cash crops and remittances
Shan State (Pindaya)	Micro-finance, off-farm work (bee cultivation)	Infrastructure	Water supply, debt burden, price instability	Access to land	Debt, foreign seed types, monetization of agriculture process	Worse, mainly due to the effects of monetization of agriculture
Dry Zone (Magwe and Monywa)	Micro-finance, MCCT	More accessible finance	Debt burden, lack of jobs, climate change, price instability	Availability of off-farm work	Debt burdened, precarious non-farm work	Slightly worse, but maintained status due to availability of off-farm construction work
Rakhine	Livelihood, WASH, MCCT, financial inclusion	Access to finance, sanitation access	Irregularity of income, decline in viability of 'last resort' incomes such as firewood	Access to finance	Poor land access, poor resilience to adverse weather	Slight improvement in coping, but continued struggle with income insufficiency
Delta (Pyapon)	Micro-finance, infrastructure (irrigation)	Slow improvement in snail infestation in one village	Declining crop yields due to infestation, unstable prices	Availability of off-farm work, winter paddy	Debt burden, lack of control over sales	Generally worse, or no better

4.3 Agricultural training and inputs

Agricultural training and inputs were reportedly received by 14 per cent of households, and typically these were households that were male-headed, landed, and had lower baseline vulnerability than households that did not receive this type of intervention from LIFT. However, these households also had a significant reduction in the proportion classified as vulnerable in 2017, and had greater increases in positive resilience trends than those who did not receive agricultural assistance. They were also more likely to report positive changes to crop profits and income than those who did not receive this assistance.

Table 4.13 Resilience and vulnerability changes in households receiving agricultural training and inputs from LIFT

	Baseline resilience	Endline Resilience	Baseline vulnerable	Endline vulnerable
No agricultural assistance	0.03	0.63	24.8%	23.0%
Agricultural assistance	0.09	0.93	22.7%	18.5%

However, analysis of the household surveys' panel study shows there was a much higher proportion of households in Rakhine State who reported agricultural assistance from LIFT, and on closer inspection, the overall finding of positive reductions in vulnerability are almost entirely derived from households in Rakhine, where the 2015 vulnerability rate of 50 per cent among households who received agricultural inputs was reduced to 25 per cent, with the other regions showing no changes at all between 2015 and 2017 vulnerability rates. This corresponds well with the qualitative findings, which reported highly effective agricultural inputs (such as provision of seeds) in Myepon Township, but in other places, with a focus more on technical knowledge and systems, the success was less demonstrable. This is perhaps for two reasons: firstly, the inputs in Rakhine State appeared to be provided to households whose 2015 vulnerability was much lower, and who had had minimal exposure to other development assistance. Secondly, when the focus was more on technical interventions there were complex issues affecting uptake of technology and new varieties. The qualitative study showed a tendency of farmers in the Dry Zone, Delta and Shan State to rely more on indigenous knowledge, or on peer-to-peer knowledge, rather than knowledge from external sources (see Box 4.14). Likewise, some elements of agricultural assistance, such as the introduction of new seed types (not necessarily by LIFT) were also met with mixed success, such as that reported in Pindaya, Shan State. A critical element of

future research is the pathways of changes in practice among farmers, looking not only at information dissemination, but also on pathways to translation of new knowledge into changes in practice.

One of the observations was the seemingly modest role of the provision of training on agricultural methods on actual practice, such that even when faced with major issues such as snail infestations of paddy, few farmers described help-seeking behaviour that involved seeking knowledge outside the traditional boundaries of the 'known world' of their rural ecology. This relates, in part, to the bounded ecology of 'peasantry', with a repository of hereditary and experiential knowledge informing practice, but also hints at the lack of genuine penetration of new ideas into agricultural practice.

"We work it out ourselves, how to plant [like this]. No-one is going to come and help us. You do based on your own knowledge." : 69 year old man, Pindaya

"We solve it with our own way, our own knowledge. We do it by trial and error. We try something, see if it works. We didn't get any help, we tried ourselves." : 71 year old male, Pyapon

Although the demand for knowledge was, on one hand, frequently expressed, at times the assistance was not considered relevant or applicable to the problem at hand, sometimes due to the high finance requirements of changing to new crops, but in many cases, a risk-averse approach to agriculture persisted and farmers would tend to stay with tried and tested methods, even if these were associated with dwindling yields and profits.

"[Name of NGO] came and did some agricultural training. But it wasn't suitable, you would need so much investment, much more than our normal way. So I didn't try." : 45 year old woman, Pindaya

Where new approaches, crops and techniques were tried, the knowledge was often acquired by self-study, visiting other villages and nearby farmers to study their approaches, as well as consulting with other peers about market trends. This highlights the peer-exchange process of agricultural knowledge diffusion, within the bounded ecology of the peasant economy.

Q-"How do you learn how to plant new things? Do you get any training?" A – "I go and ask other people who are planting it. If you plant cauliflower, how much of this [fertiliser]? How much will the seeds costs? What was the selling price last year? I study in that way. I didn't get training from any organisation." : 45 year old loan officer, Monywa

Another key factor in the dissemination of information, and new ideas, is the role of the private sector: seed, fertiliser and pesticide companies, and the role of brokers in transmitting knowledge of market trends.

“We are pretty much bound to buy the seeds that are sold to us by the seed merchants. I don’t think we can overcome these difficulties. We can just do what we can with what strength we have.” : 69 year old man, Pindaya

“Sometimes the vendors in Yangon and Mandalay, they don’t like the foreign varieties, so we can’t sell. We have to sell via brokers.” : 69 year old man, Pindaya

The difficulties with ‘foreign varieties’- called ‘Myo Dukkha’ by respondents in Pindaya, related to how newer, imported varieties of potato, and cauliflower, would not ‘keep’ well. In the case of potatoes, local varieties could be kept for months, to be used as seed the following year. But less stable, imported varieties would decay more quickly, meaning they had to buy seed for the following planting season.

“We’re peasants, so we depend on agriculture. But times change, so does the way we do agriculture. But the new varieties are not successful. We call it ‘Myo Dukkha’, these foreign varieties. They’re from the Netherlands, Thailand. But they’re not the same as local ones. They don’t keep, so after a few months they go bad. Our local varieties, they keep well so we can use for seed next year (69 year old man, Pindaya)

4.4 Water & sanitation

Assistance for water and sanitation-related activities, which included training on hygiene, and household and community targeted interventions for sanitation and water access, were reported by 13 per cent of households, although the majority of the WASH-related activities were in the Rakhine programme area.

Table 4.15 Households reporting exposure to WASH-related assistance

Delta	Dry	Hilly	Rakhine	Rakhine
7.66%	12.78%	4.84%	40.94%	40.94%

The reductions in WASH-related vulnerability were again most significant in Rakhine State, which was also starting from a high baseline of WASH-related vulnerability. Strong results were also seen in the Dry Zone. The overall effects were fourfold: firstly, a reduction in the time taken to get water resulting in lower consumption of livelihood-related time. This led to reductions in the WASH-related vulnerability indicator, and this in turn was a factor in the overall reduction in vulnerability among households who had received WASH-related interventions. When compared with households who did not receive WASH interventions, those that did receive WASH interventions tended to be more vulnerable in 2015 and have a lower reported resilience score. However, these households were more likely to have a significant reduction in vulnerability in 2017. They were also more likely than households who had not had WASH interventions to report improvements in health status and income on the self-reported questions in the household survey.

Table 4.16 Water and sanitation interventions and vulnerability

Households receiving WASH interventions (by Programme Area)	2015 vulnerable	2017 vulnerable	WASH vulnerable 2015	WASH vulnerable 2017	Time taken for water (2015)	Time taken for water (2017)	Buy water (2015)	Buy water (2017)
Delta	%29.4	%19.6	%45.1	%39.2	31.63	26.19	%43.1	%60.8
Dry	%19.8	%10.9	%39.6	%27.7	23.74	15.55	%64.4	%71.3
Hilly	%28.0	%20.0	%4.0	%0.0	6.72	4.92	%0.0	%0.0
Rakhine	%37.2	%20.4	%34.5	%19.5	27.73	17.24	%7.1	%7.1
Total	%29.0	%16.9	%35.5	%24.1	25.21	17.16	%32.8	%38.3
No WASH intervention (all regions)	%23.9	%23.2	%28.8	%28.0	21.11	20.08	%34.7	%51.7

This is Phase 2 of a project started in 2013, and the current phase was implemented between January 2016 and December 2018 by the International Rescue Committee (IRC) in 259 villages in cyclone-prone areas in Myepon and Minbya Townships in Rakhine State. The project's theory of change placed a high value on process, linking community participation with development outcomes. In this way, a portfolio of activities, including livelihood-related training and inputs, nutrition, knowledge transfer activities, infrastructure and WASH were expected to result in changes to food security and incomes of households in target communities.

The integration, or inter-connectedness, of different activities within the theory of change, and indeed the implementation, enabled different activities to complement others in the overall pursuit of improved food security and incomes.

A mid-term evaluation found significant success in three areas: Village Savings & Loans Associations, nutrition security and improved hygiene practice. In each case, involvement of Village Development Committees (VDC), formed as part of the project, were significant in implementation.

Nutrition activities included training on nutrition, health, hygiene and maternal care, as well as cash grants (MCCT) for the first 1,000 days.

WASH activities included improved WASH infrastructure for water management, as well as bio-sand filters for drinking water, latrines and training on hygiene practices.

In relation to WASH, the role of community processes in changing community perceptions and norms on hygiene practice was important, and likewise, peer-to-peer messaging was an important factor in changing norms and practices around nutrition.

While the theory of change did not explicitly address vulnerability, reductions in vulnerability from 2015 to 2017 were significant in the project areas, and changes to vulnerability status, based on panel data, were mainly due to reductions in vulnerability related to WASH, food security, livelihood diversity, decision making and assets.

Qualitative analysis from villages included in this project also indicated the value of the integrated approach to development, whereby the benefits of specific interventions were enhanced by synergies with others. Thus, greater access to finance through VSLAs was seen as empowering of some more excluded households, and the provision of specific inputs, such as seeds, alongside technical knowledge, was also cited as enabling more diversification.

4.5 Financial inclusion

Participation in financial inclusion-related activities was reported by just under one-quarter of households, with a higher proportion in Rakhine and the Delta. The activities appeared to have been implemented differently, although data to effectively distinguish between different implementation

modalities was not available through the household survey. However, qualitative studies showed a stronger emphasis on financial literacy as part of enabling access to finance in Rakhine State, whereas other areas appeared to focus more on access to financial instruments such as loans.

Table 4.18 Households reporting LIFT financial inclusion activities

Delta	Dry	Hilly	Rakhine	Total
29.28%	25.95%	11.22%	30.43%	24.10%

Box 4.19 Case study: establishing MFIS

Myanmar Access to Rural Credit through Institutional Strengthening (MARC) project Microfinance and other financial inclusion interventions are a key element of LIFT's support to households to enhance or improve both agricultural and non-agricultural livelihoods. LIFT supported PACT Microfinance Global Fund (PGMF) between July 2012 and June 2018 to create nine local microfinance institutions (MFI) that would provide microfinance services to rural populations in LIFT programme areas.

Through the establishment of nine local MFI's, over 250,000 agricultural and non-agricultural loans were provided to clients (mainly women), and over 60,000 clients were part of social welfare programmes.

The project methodology, while focusing mainly on the sustainability of the MFIs, nonetheless included specific pathways by which improved access to finance could reduce vulnerability among rural households, particularly women. These included:

- Reduction in the use of moneylenders
- Less debt burden
- Better money management
- Expansion of business or diversification of business
- More assets
- Ability to spend more money on future investment strategies like school fees
- Access to loans, assistance or savings for emergencies
- Increase social capital

A March 2018 evaluation noted that overall, the project had met, and in many cases exceeded its targets, with high levels of user satisfaction, repayment rates, and sustainability of the local MFIs. While reporting multiple borrowing, the evaluation did not find 'over-indebtedness', in this case described as "borrowing from one source in order to pay off another source or selling assets to pay loans". Based on the evaluation findings, the likely pathways to reduced vulnerability among beneficiaries of this project were related to livelihood enhancement and strengthening, and reduction in debt burden due to increased access to lower-cost loans from MFIs. The actual uptake of 'social loans' for education or health, was low (2.4 per cent of all loans), and utilisation of savings for emergencies was reported in less than 1 per cent of all participating in savings and social welfare schemes, which is consistent with findings both from this research, and other studies in rural Myanmar.

Overall, although baseline indicators were similar, households who had received financial inclusion support from LIFT tended to show greater reductions in vulnerability compared to households who had not received such support. Those households also showed a small but statistically significant reduction in the likelihood of resorting to asset liquidation to respond to shocks and stresses.

Table 4.20 Financial inclusion (FI) and vulnerability

	2015 Resilience	2017 Resilience	2015 Vulnerable	2017 Vulnerable	Asset depletion for crisis	High interest loan for crisis
All	0.01-	0.66	%24.5	%19.4	%29.2	%22.3
FI only from LIFT	0.00	0.61	%25.7	%21.1	%28	%22
FI from mixed sources	0.04-	0.87	%19.8	%12.3	%34	%23.5
FI only from non-LIFT	0.11	0.71	%21.4	%18.4	%34	%25.2
No FI at all	0.01	0.66	%26.8	%26.9	%32.3	%22.8

A comparison can be made between households in villages included in LIFT programme areas who received financial inclusion only from LIFT (19.3 per cent), with those who received from LIFT and other sources (mixed 4.7 per cent), with those whose financial inclusion services came only from non-LIFT sources (such as government) (31.2 per cent), and with those who did not report receiving any financial inclusion services at all (44.3 per cent). Households receiving from non-LIFT sources, or not at all, were more likely to be female-headed than those receiving from LIFT, either exclusively or mixed (18 per cent vs. 14 per cent) and to have a person with disabilities (12.4 per cent vs. 10.5 per cent). However, those receiving services exclusively from LIFT were more likely to be in the lowest two income quintiles in 2015 (31 per cent) than those receiving from multiple sources (20.7 per cent) or those receiving from non-LIFT sources (27 per cent). However, those who did not receive any financial inclusion were also likely to be poorer.

Looking at the comparisons, receiving financial inclusion support from any source was associated with significant reductions in vulnerability; all groups did show positive trends in resilience scores. However, compared to households that received mixed, other provider or no financial inclusion support, households that exclusively received LIFT support were less likely to report asset depletion as a coping response in crisis (28 per cent vs. 33

per cent, $p < 0.05$), less likely to have a worsening vulnerability status (Odds ratio 0.5, CI 0.31-0.98) and to have a bigger reduction in the vulnerability score in 2017 ($p < 0.05$). Households receiving financial inclusion assistance were more likely to report positive changes in self-reported income and debt status than households that did not receive financial assistance. However, several notes of caution should be introduced here. Firstly, this is a somewhat complex picture, where financial assistance provided by LIFT represents one of many different options for households. Although this analysis does to some degree attempt to separate these out, the reality, as found in the qualitative analysis, is inevitably more complex. Secondly, while the cost of borrowing appears to have reduced, the well-reported phenomenon of borrowing from high-interest sources to meet due payments on lower-interest, MFI loans may well mask longer-term effects of greater financial access, or possibly undermine the apparent gains of greater access to lower interest MFI loans.

Table 4.21 financial inclusion (FI) and debt

FI assistance	High risk debt baseline	High risk debt endline	Debt repayments baseline	Debt repayment endline	Main creditor high risk baseline	Main creditor high risk endline	Debt: income ratio baseline	Debt: income ratio endline
No FI from LIFT	%34.8	%38.2	%14.5	%12.5	%18.6	%23.5	0.266	0.330
FI from LIFT	%36.6	%40.5	%17.7	%16.0	%20.5	%22.1	0.330	0.383

Overall, in both groups - those who did and who did not receive financial assistance from LIFT-funded projects - there were trends towards a greater proportion of debt being borrowed from high-risk, potentially higher-interest rate sources, such as moneylenders, and rising debt : income ratios. These are potentially offset somewhat by the lower cost of borrowing, including the effect, in some situations, of reduced interest rates from moneylenders in the face of competition from MFIs, as well as the potential effect of more frequent borrowing, for shorter periods, from moneylenders. Thus, overall, debt repayments consumed a smaller proportion of household expenditure in 2017, with similar reductions in both groups. At least as many households reported receiving financial assistance from other groups as from LIFT-funded projects. Of those who had received from LIFT-funded projects, nearly one-third reported receiving from other sources as well. Note that this figure tends to exclude non-formal credit sources. It is, therefore, difficult to draw conclusions on the impact of LIFT's financial inclusion activities, given the complex ecology of debt in rural communities.

Box 4.22 The complex legacy of microfinance

“I’m able to get through with borrowing from savings & loan group & [name of NGO].” : 60 year old, female headed household, Myepon

Assistance to develop livelihoods, particularly credit, is both widely reported and requested (Griffiths, 2017b, p. 37). Studies of poverty, vulnerability and social protection, conducted in 2015, showed that, when asked what they wished the government to do to reduce rural poverty, the overwhelming response, from 75 per cent of households, was for better access to low or no interest credit (Griffiths, 2016). Financial inclusion, in the form of expanding access to both credit and financial literacy, forms a major part of LIFT’s programme activities in Myanmar, accounting for a significant proportion of the programme budget. When analysing the provision and likely impact of financial inclusion activities of LIFT, it is important, again, to consider the wider context, not only background socio-economic conditions and other concurrent development interventions, but also the wider ecology of debt, where microfinance forms one part of a much bigger web of borrowing, and where LIFT-funded financial inclusion and microfinance forms only one part of the available finance options in many places. This necessarily makes us cautious about attributing positive or negative causality to LIFT-funded financial literacy in some places, particularly the Dry Zone, where the ecology of borrowing, debt and microfinance is dense and complex. Thus, in places like Yesagyo and Monywa, there is significant choice for borrowing, from government, private and microfinance institution sources.

“We have eight microfinance organisations in our village.” : 30 year old woman, Yesagyo

“I could get a health loan from ‘Than Myanmar’. I could also get a loan from Mya Sein Yaung.” : 36 year old, female-household head, Yesagyo

“We can get loans from PACT and Mya Sein Yaung.” : 27 year old woman, Yesagyo

However, in some places, such as Myepon and Fallam, access to finance was more limited, and here, the provision of financial literacy through savings and loans groups was extremely well received, particularly by households typically less likely to be able to access loans, such as female-headed households.

“We have than le than, PACT, Red Cross, savings & loans groups, IRC, agriculture group. PACT we have to give the interest twice a month. The saving and loans group is better, you can save as much as you want and then take out at the end of the year.” : 24 year old woman, Myepon

“It is better now that I have joined the savings and loan group. We save twice a month, and you can borrow from that.” : 33 year old man, Myepon

These groups, by promoting financial literacy, by encouraging savings, and by enabling

access to lower-interest loans, enabling income smoothing and investment at much lower interest rates, and lower risk, than the other alternative, village moneylenders, whose interest rates often exceed 10 per cent, collected either monthly, or compounded at the end of a set period.

“I have joined the savings and loans group, and I can borrow from there. It is 5 per cent. It’s OK. So you can put in money when you get some, and then borrow when you don’t have work. So it’s better.” : 35 year old woman, Myepon

In other areas, the availability of lower-cost, lower risk finance was seen as making a significant contribution to the socio-economic well-being of rural households, particularly poorer households, who previously would not have been able to borrow, and if they could, would only be able to borrow limited amounts, at high interest rates.

“Now it is easier for poorer people to get loans, that has helped them. Previously they couldn’t get loans. Before, they’d have to borrow from relatives, and people didn’t really trust them. So they’d ask for 100,000 Kyat, but only get 50,000.” : 40 year old man, Monywa

In at least one area, respondents also pointed to the effect of increased availability of microfinance from MFIs as having an effect on interest rates from non-formal sources.

“Before we only had loans at 8 per cent. Now the organisations came, they had lower interest. So the outside groups reduced their interest to 5 per cent. Sometimes, if you know the person [lender] well, they would give you at 2 per cent. Year on year, we borrow and repay. It’s OK, year on year.” : 24 year old woman, Yesagyo

However, three significant issues potentially limit the effectiveness of expanded financial inclusion to reach the poorest or most excluded were highlighted by respondents. Firstly, several of the implementation models required the formation of groups, to establish a form of mutual responsibility and peer assurance. This process, however, relies on sufficient social capital, which in some cases could still result in exclusion, with the majority of reported exclusions being women, or female-headed households.

“We form loans groups, people form with people they know. With [name of NGO], maybe we form a group of five people. But we do it carefully, we see if this person is able to settle their loans on time. Then we form the group. If we have a member who can’t settle, the other four members lose out. So we’re careful about forming groups.” : 43 year old man, member of loan group, Monywa

“There are savings and loans groups in the village, I have heard about them. You borrow 10,000 Kyat, you put in 1,000. But I don’t dare to join. I don’t understand it. They don’t let me join. You have to make a group of five, and they didn’t let me join. I went to look, but the group was already full, so I couldn’t join. So I have to do my own way.” : 35 year old woman, Monywa

Secondly, the lack of financial literacy in some cases also acted as a barrier to participating in MFI-led financial inclusion programmes. This highlights the success of the implementation in Myepon, which appears to have introduced financial literacy and savings concurrently with access to finance. In some areas, respondents - and again, predominantly female respondents - reported that they were not able, or in some cases not willing to access finance from MFIs, because they didn't understand how it worked.

"I didn't take a loan, I didn't understand it. I don't dare to take it, I worry I won't be able to repay it on the day." : 19 year old woman from neighbouring village, part of bee programme, Pindaya

Thirdly, issues of timing of loans, especially in areas like Pindaya where large loans were required at specific times, and the amount of loans, were frequently cited as limitations. Thus, people would report borrowing from multiple organisations, managing an often quite complex portfolio of debt. In the end, the stop-gap is the village moneylender, so when the time comes to repay, if income is not sufficient, and if other lines of credit have been exhausted, this remains the source for many rural households. This again brings into consideration the wider ecology of debt, and as described in the earlier section on debt, the pathways which link, both as entry and exit points, microfinance with problem debt.

"We had to buy seed, so we had to take loans. I borrowed 200,000 Kyat, interest is 10 per cent. If you can't repay, you can't borrow again, if you can't pay again, they might take your assets. Even if you're late, you have to pay a month's worth of interest. I'd say about half the village has this debt problem." : 31 year old woman, Pyapon

4.6 Nutrition and MCCTs

Quantitative analysis of data on nutrition and MCCT activities funded by LIFT from the household survey panel study is somewhat challenging, given the different operational modalities implemented by different LIFT-funded projects. For a more comprehensive analysis, a dedicated nutrition outcome study has been prepared as part of the series of outcome studies. This section here presents analysis of a fairly limited set of data available from the household survey and the qualitative study. Just over 16 per cent of households reported receiving any nutrition-related assistance, and of those, two-thirds described the assistance they received as attributable to LIFT. Of those households reporting LIFT-funded nutritional assistance,

most were in the Dry Zone and Rakhine. Households receiving nutritional assistance from LIFT were less likely to be female-headed, reflecting the demographic focus on women of child-bearing age enrolling in MCCT programmes. These households tended to have higher 2015 vulnerability and experienced greater reductions in vulnerability in 2017 than households who did not receive nutritional-related assistance. Furthermore, when comparing households experiencing any shock or stress of moderate or severe impact, households that did not receive nutritional assistance were likely to experience a worsening of vulnerability status, whereas those that did receive nutritional assistance tended to at least maintain their status, and not get worse. Overall, households receiving LIFT’s nutritional assistance were also more likely to see a reduction in the likelihood of food-security related vulnerability by 2017, compared to an increase in food-security-related vulnerability among households not receiving LIFT’s nutritional assistance.

Table 4.23 Nutritional assistance and vulnerability

	Vulnerability baseline	Vulnerability endline	Food security vulnerability baseline	Food security vulnerability endline
No nutritional assistance	%24.3	%22.4	%10.0	%11.9
LIFT nutrition assistance	%26.3	%22.3	%8.6	%6.5

The delivery mechanisms, and programme components appear significant: qualitative studies identified MCCT delivery in the Dry Zone and Rakhine State, but the provision of nutritional training was provided in some villages and not others. In the narratives, this resulted in quite striking differences both in terms of practice and agency. Where nutritional training had been provided, the reported use of MCCT was more likely to be for the child’s nutrition, with strong agency from the mothers themselves. In the absence of nutritional training, the usage was more likely to be reported as for various vitamins and supplements, mainly at the direction of health professionals (see Box 4.24 below).

Table 4.23 Nutritional assistance and vulnerability

The provision of maternal and child cash grants, through a number of different modalities, aims to provide the means to deliver sufficient nutrition to the first 1,000 days of the lives of children, from the in-utero stage to age two. Several LIFT-funded projects have reported the impact of delivering MCCTs through different modalities, such as using community organisations (SPPRG). Consistent with global research, the impact of the cash grant itself appears highly conditional on the context of delivery, in terms of access to services and general socio-economic conditions, where outcomes, particularly medium and long-term outcomes, “depend on a variety of mediating factors, including service quality and availability, prevailing social norms, and parents’ human capital” (Hagen-Zanker et al., 2016, p. 6). In these study areas, MCCT was being delivered on a significant scale in Yesagyo, where the main focus of the qualitative interviews was on this, and to a lesser extent in Myepon and Fallam. In Yesagyo, the delivery of the MCCT was done through an NGO, who also concurrently implemented a microfinance programme, often at the same time.

“[Name of NGO] gives the MCCT at the same time as they do the loans,” : 36 year old woman, household head, Yesagyo

Firstly, and critically, the concurrent provision of nutritional training was clearly associated with different patterns of reported usage of the grant. In one village, there had been no nutritional training, and the reported usage of the grants was mostly on vitamins, snacks and nutritional supplements.

“We didn’t get any nutritional training in our village.” : 23 year old woman, Yesagyo

“Well, we use the MCCT to buy vitamins and snacks.” : 22 year old woman, Yesagyo

“I can use the MCCT money to buy the vitamins the midwives recommend.” : 36 year old woman, household head, Yesagyo

In the second village, the nutritional training was received and was being consistently reinforced by the midwives. Here, the reported pattern of use appeared more focused on nutrition.

“We received training on nutrition, so we know more about what to feed our family. We get training every month from the midwives.” : 32 year old woman, Yesagyo

“I used the MCCT for getting the right nutrition to help my child’s development.” : 32 year old woman, Yesagyo

“We’ll pass on the knowledge we got from them to others, even after there is no MCCT.” : 32 year old woman, Yesagyo

“The nutrition education is very important, just as important as the money.” : 32 year old woman, Yesagyo

Secondly, while respondents clearly valued the MCCT, it was not clear the extent to which the provision of the MCCT had made a significant contribution to the households' economy. Analysis of an MCCT programme in nearby Myaung Township was found to have a significantly positive impact in reducing overall household vulnerability. There was an expectation that, particularly in the presence of the NGO, and as part of a programme of evaluation by the main donor, that there would be a stronger expression of how valuable the MCCT had been, and how it should be continued. However, in the villages studied in Yesagyo, the general response was appreciative but lukewarm: it had been helpful, but if we don't get it in the future, 'so what'. There was some confusion even over amounts received.

“It is a little better now with MCCT.” : 36 year old, household head, Yesagyo

“I'm not sure how much we get from the MCCT. 35,000 Kyat? Every month? I'm not sure.” : 23 year old woman, Yesagyo

“If the MCCT is continued, it should be just given equally to everyone who is eligible. It shouldn't depend on if they are rich or poor.” : 23 year old woman, Yesagyo

This may relate to the economic circumstances of the area, which, while reporting a number of challenges, was generally better off than nearby Myaung Township, where the aforementioned MCCT programme had taken place, or in Myepon. There, economic hardship also meant that for some, the grant was not able to be used for children's nutrition but seemed to play a significant part in the wider income smoothing of the household economy.

“I got 10,000 [MMK] a month from [name of NGO] for child's nutrition. But because of our difficulties with daily income we can't spend it on our child's nutrition.” : 24 year old woman, Myepon

There was some concern, however, at the co-distribution of MCCT with loans, such that some respondents appeared to confuse the receipt of MCCT payments with loans and loan repayments. Interest on loans was collected every 14 days, and MCCT payments made each month.

4.8 LIFT's Theory of change and Resilience/vulnerability

As described in the introduction, LIFT has a goal of **sustainably reducing the number of people living in hunger and poverty**. The purpose statement is to strengthen the resilience and sustainable livelihoods of the rural poor population in Myanmar. This includes four specific outcomes:

1. Increased incomes of rural households
2. Decreased vulnerability of poor rural households and communities to shocks, stresses, and adverse trends
3. Improved nutrition for women and children
4. Improved policies and effective public expenditure for pro-poor rural development

In order to achieve the goal, purpose and outcomes, a theory of change identifies eight key purpose outcomes, which form pathways by which LIFT-supported development assistance can contribute to overall changes: Improved nutrition, sanitation, and hygiene practices; Improved market access and market terms for smallholder farmers; Increased sustainable agricultural and farm-based production by smallholder farmers; Increased and safe employment in non-farm activities for smallholders and landless; Increased access to adequate and affordable financial services by smallholders and landless; Safeguarded access to and sustainable use of natural resources for smallholder and landless; Strengthened local capacity to support and promote food and livelihoods security; and generation of policy relevant evidence regarding pro-poor development. Reflecting specifically on LIFT's Theory of Change, five questions are considered, as described in the introduction:

1. What is the evidence of achievement at the high level, of contributing to the goal of **sustainably reducing the number of people living in hunger and poverty in Myanmar?**

This study has not recorded indicators specifically measuring poverty and hunger, and measures of changes in food security, income and assets show a mixed picture of progress. Qualitative assessments would generally point to a 'holding pattern', with little evidence of substantial progress. However, findings of increased resilience, and a small but significant reduction in vulnerability, suggest that **against a backdrop of fairly volatile conditions of rural transition, more sustainable foundations are being laid that should bear fruit, in terms of measurable changes in poverty and food security, within the next decade.**

2. Has there been a **strengthening of resilience and sustainable livelihoods of poor people** in Myanmar?

In terms of measures of resilience, there is a significant trend towards more investive, and less consumptive patterns of coping, most likely

the result of better access to lower cost finance. A general trend towards more productive livelihood diversification has also occurred, although three significant caveats remain. Firstly, although there is a trend towards more investive coping, the proportion of households reporting taking loans for consumption in the previous 12 months increased over three years, highlighting the absence of effective safety nets. The main difference is that such borrowing is potentially less risky, with more choice of credit providers. But the main coping mechanisms for shocks and stresses remains taking loans, often still at high interest rates. Secondly, the issue of the debt cycle, and problem debt, remains a major challenge. Again, while lower cost finance has in general reduced the cost of borrowing, an alarming trend of progression from low to high interest loans, resulting in unsustainable debt burdens, was a common narrative finding. Thirdly, this study also highlights the precarity of rural livelihoods. Whilst the increase in off-farm income-generating opportunities has increased, these also tend to be less reliable options, resulting in conditions best described as precarious.

3. Has there been a **decrease in vulnerability for poor households to shocks, stresses and adverse trends?**

The small but significant reduction in vulnerability among households in most regions (apart from Shan State) perhaps masked the extent to which LIFT assistance was a significant contributor to the prevention of worsening vulnerability among households experiencing shocks and stresses. Moreover, the wider context of increasingly precarious conditions, an expected feature of rural transition into a post-peasant economy, also suggest that the achievements of even a modest reduction in the proportion of households classified as vulnerable is a significant achievement in the current context.

4. What have been the contribution of specific programme outcomes to changes in **vulnerability and resilience?**

Here, the findings of both the qualitative and quantitative analyses included in this study are summarised in Table 4.26. In some cases (such as for natural resources use), the evidence supporting changes was simply not available in the studies, and so little can be said of the potential contribution of LIFT's programme activities to programme and purpose-level outcomes. However, in most cases, the evidence can be assessed, and is reported as 'Strong' if the evidence clearly shows the achievement of the changes to the programme outcome and the contribution to changes in resilience and vulnerability; 'Medium' if either the evidence is weak, or if the changes and contribution to changes are considered to be less strong, or mixed, and 'Weak' if either the evidence for the programme outcome itself, or the evidence for contribution to changes in vulnerability or resilience, were either unclear, ambiguous, or lacked sufficient statistical or analytical strength. In the analysis shown in Table 4.25 below, the evidence for both programme outcomes, and the contribution of the changes in programme outcomes to overall changes in vulnerability and resilience,

is relatively strong for improved **water access and sanitation**. In the cases of **financial inclusion and nutrition**, the evidence is sufficient to make assessments of likely impacts of outcomes on resilience and vulnerability, but the evidence itself points to a mixed picture of impact. Financial inclusion access was associated with reductions in vulnerability, but concerns remain about the association between increased access to finance and problem debt, a finding shown in both the quantitative and qualitative analysis. Likewise, the evidence for the programme-level effects of nutrition-related activities is reasonable, and likewise reductions in vulnerability can be shown to be associated with the provision of nutrition-related assistance. However, two significant concerns emerge: firstly, the finding of significantly higher levels of worsening health-related vulnerability among households with children aged under five (the typical demographic for MCCT-related assistance) in those who received nutrition-related assistance from LIFT and those who did not, and the impact of the delivery mechanism - essentially the provision of nutritional training as a component of MCCT activities - on the usage of cash. The rather underwhelming narrative of the impact of MCCTs from beneficiary women in Yesagyo also makes the evidence for the impact of MCCTs somewhat less robust. For market access, very little evidence was available to make a clear assessment, but narrative findings of worsening market volatility suggest that the changes in market access, if they have occurred, were not sufficiently widespread to make a significant impact. Although the increase in the proportion of income derived from non-farm activities was also widely reported in both quantitative and qualitative analysis, there was little evidence to show how this was the result of LIFT's programme activities. For agricultural training and inputs, the evidence is again mixed. There was strong evidence from Rakhine of the benefits of direct inputs, particularly of seeds, in enabling agriculture and reducing the up-front credit demands for agriculture. However, agricultural training appeared to have a more mixed effect, in part due to a more risk-averse approach among farmers, and a tendency to look to peers for new technology and techniques, rather than outside organisations. Despite these concerns, there was reasonable evidence to show the contribution of LIFT's work in this area to more sustainable livelihoods.

5. To what extent is there evidence of **gender equity and social inclusion**, not only in the delivery of assistance, but in specific outcomes indicating achievements of greater equity and inclusion?

Here, the findings are mixed: while some programmes have specifically targeted vulnerable households, including female-headed, poor and landless households, there is some evidence suggesting that, particularly for female-headed households and households with persons with disabilities, rates of assistance were in fact lower than for male-headed/non-PwD households, and that the high degree of inequality found in 2015 not only persisted, but increased by 2017.

While some programmes incorporated gender-sensitive programming and targeting, and there was clearer evidence of landless and poor households being increasingly more likely to receive LIFT-supported assistance, the persistence of inequalities of outcome for female-headed and households with persons with disabilities suggests a weakness or absence of effective activities for inclusion for some vulnerable households. Overall, this analysis demonstrates that the key pathways by which LIFT's programme activities have led to both improved resilience and reduced vulnerability relate to three factors:

1. The effects of direct inputs for agriculture and WASH in Rakhine
2. The effect of increased access to affordable finance in promoting more sustainable coping
3. The effect of LIFT's focus on some more vulnerable groups such as poor or landless households

Table 4.23 Nutritional assistance and vulnerability

	Evidence for improvements in outcome	Quantitative evidence for changes in vulnerability and resilience	Qualitative evidence for changes in vulnerability or resilience	Key example in qualitative study	Contributory pathway	Note
	Strong	Strong	Medium-strong	Provision of toilets and soap in Myepon	Reduction in time taken to get water frees up time for livelihoods	Strongest evidence in Rakhine
Improved sanitation and hygiene	Medium	Medium	Weak-Medium	MCCT in Yesagyo	Reported to be beneficial in terms of improved health	In the absence of nutritional training, the use of MCCT was influenced strongly by midwives' medical concerns, rather than nutritional norms.
Improved nutrition	No evidence	No evidence	Evidence suggests this remains a key stress	Market volatility widely reported as key shock/stress	Mainly by strengthening access to antenatal care.	Concerns about increased health-related vulnerability amongst households receiving nutritional assistance
Improved market access and market terms for smallholders	Medium	Medium, mainly from Rakhine	Medium	Seed provision & training in Fallam and Myepon		The indicators were insufficient to adequately capture this

Increased sustainable agriculture and farm-based production by smallholders	Weak	Weak (small reported numbers)	Weak	Wild bee project, Pindaya	In the context of better road access, and access to finance, provision of seed and new techniques enabled diversification	Some evidence that external knowledge is not readily applied, either due to concerns of risk, or due to a lack of trust of outside knowledge.
Increased safe employment in non-farm activities	Strong	Mixed	Medium-strong	Savings & loans group in Myepon	Designed to provide viable alternative income for young people, but little evidence from this study that it worked	Appears to not have a viable market linkage
Financial inclusion	No evidence	No evidence	Evidence of decline of forest around villages in Myepon due to commercial logging	No evidence	Enabling less risky borrowing, income smoothing and financial literacy.	In contexts of multiple providers, may be associated with increased problem debt. Concern over exclusion of semi-literate women
Safeguard access to sustainable use of natural resources	No evidence	No evidence	No evidence	No evidence	Strongest effect of LIFT's inputs in areas of low penetration of MFIs.	The indicators were insufficient to adequately capture this
Strengthen local capacity to support and promote food and livelihood security					No evidence	The indicators were insufficient to adequately capture this
					No evidence	

Box 4.26 Precarity of rural livelihoods

“To be honest, it [farming] isn’t really viable. For our household, we have to have many different ways to get income. We do chickens, we do pig rearing, we do paddy. My daughter works in a factory in Yangon. My husband drives a small boat.” : 44 year old female, Pyapon

“Back then, if I did the paddy, it would be enough, the others didn’t need to work. Now, we all have to work, even then it’s not enough.” : 62 year old man, Pyapon

This illustrates the nature of emergent post-peasant rural household economics, which is best described as precarious. In their study of socio-economic changes in rural Nepal, Rigg et al (2016) discuss the contrast between vulnerability as “as a reflection of a pre-existing state of marginality or exposure” and precarity as “new, produced poverty” resulting in the context of other development processes which inadvertently produce new inequalities” (Rigg et al., 2016, pp. 63-64). This ‘produced’ vulnerability arises from policies and processes, including land **dispossession** (and resettlement to less arable land), **market dependencies, unsustainable debt, rising inequalities, out-migration and erosion of the ‘community covenant’** (Rigg et al., 2016, p. 66). The narratives from the six regions sampled here describe in vivid detail at least six of these factors: **insecure and unreliable income sources, unsustainable debt, market dependencies** (and the additional vulnerabilities thus engendered-described in the previous section), **rising inequalities, out-migration and, in some cases, the erosion of the community covenant.** Land dispossession was also noted in some areas. The unreliability of off-farm work, a kind of rural gig economy, was widely evident, and was associated with survival and coping strategies usually involving borrowing money to smooth income in the lean times.

“Well, you get money when you get money, and when you don’t it’s hard. It’s not regular, it is very unreliable.” : 25 year old woman, Yesagy

“My husband does toddy palm juice. But he can’t do in the rainy season. So in that time, I have to live on loans. My husband goes to the oil fields in the rainy season. But during the rainy season, we have to live on loans, usually 5 per cent interest.” : 33 year old woman, Yesagy

The vulnerability to wider global economic trends was not just referenced in agriculture, but was also considered a significant factor in some off-farm work, even the blanket stuffing and sewing. Land dispossession, in terms of explicit forced dispossession, was not reported in any of the areas sampled. However, the insecurity of land tenure where land was either used as collateral for debt, or where merchants came to buy land en bloc for larger agricultural projects, bringing a high degree of pressure to sell.

“Many don’t work their land now, they sold it, sold it to Chinese. So some have no

land now. In fact, if you don't sell [your land] you'll lose it anyway ." : 19 year old woman from neighbouring village, part of bee programme, Pindaya

The absence of social protection and social safety nets in rural areas has been well noted in previous research (Griffiths, 2016; Nishino & Koehler, 2011), and the absence of adequate provision for health shocks and educational costs continues to undermine household economic capital. The lack of provision for livelihood shocks was also noted, with the only available measures being taking loans from wealthier people in the village.

"The thing is, we have to plant, even if we lose. If we don't plant, we'll go hungry. No-ones going to come and feed us! We have big debt problems [...] we have to go and get loans." : 69 year old man, Pindaya

Inequalities in rural areas do appear to be increasing. Although some communities reported that the community social capital had improved, others described the inability of traditional mechanisms of reciprocity to cope with change:

"I think the social character of the village has declined, we're not able to help those who have healthcare needs. The cost of healthcare has really gone up, some just can't afford it" (66 year old male, Pyapon)

CONCLUSION(S) AND RECOMMENDATIONS

5. CONCLUSION(S) AND RECOMMENDATIONS

- 5.1 THE IMPORTANCE OF CONTEXT
- 5.2 AGRICULTURAL TRAINING AND INPUTS
- 5.3 LIFT'S ACHIEVEMENTS IN CONTEXT
- 5.4 AREAS FOR IMPROVEMENT
- 5.5 RECOMMENDATIONS



5. CONCLUSION(S) AND RECOMMENDATIONS

5.1 The importance of context

Participation in financial inclusion-related activities was reported by just under one-quarter of households, with a higher proportion in Rakhine and the Delta. The activities appeared to have been implemented differently, although data to effectively distinguish between different implementation modalities was not available through the household survey. However, qualitative studies showed a stronger emphasis on financial literacy as part of enabling access to finance in Rakhine State, whereas other areas appeared to focus more on access to financial instruments such as loans.

In conclusion, what does this study tell us is: firstly about the overall socio-economic conditions in rural areas in Myanmar, secondly about the changes in vulnerability and resilience, which may or may not have taken place over the prior three years, and thirdly, what the contribution of LIFT to those changes may have been?

Firstly, this study provides a useful commentary to the general narratives of growth and development in rural areas, which describe significant improvements in areas such as electricity, consumer goods ownership, and access to improved water supply (World Bank, 2018). Other studies have suggested increases in rural incomes associated with rural transformation (Belton, 2017). These narratives on their own, however, present only a partial picture, with a number of ethnographic studies presenting a far more mixed picture (Bloem, Boughton, Htoo, Hein, & Payongayong, 2018; Griffiths, 2018; Grunbuhel, 2017).

Noting growing inequalities against a backdrop of significant poverty reduction, an IMF paper warned also of the vulnerability in many rural households linked to erosive coping, and the impact of unsustainable debt

“Households prone to shocks take actions that affect their ability to bounce back and escape poverty, including cutting back on their investments, selling core productive assets, and withdrawing children from school. Poorer households have more limited recourse to formal credit or relatives that can help them to weather large shocks, leading to households taking out high interest loans that they may struggle to pay back. A fifth of all households in Myanmar are estimated to be heavily indebted and nearly one in five households has taken out a loan to cover basic food needs” (International Monetary Fund, 2018, p. 15).

This illustrates the need for a nuanced analysis of rural conditions that can provide insights into poverty, vulnerability and resilience not simply from a limited set of quantitative indicators, but by trying to gauge the lived experience of rural households.

Based on the analysis presented here, the overall conditions of a significant proportion of rural households may be best described as precarious: not in the sense that they are in imminent danger of collapse or demise; rather that precarity, i.e. ‘produced’ vulnerability, is increasingly applicable to many households. In essence, this can explain the slightly odd finding that, on one hand, income levels and asset levels may have increased, but on the other hand, many measures of vulnerability and well-being have not. The overwhelming sense from both this study and the quantitative study is that, even if people’s incomes and assets have improved, only a small proportion consider that their living conditions have improved. Now, either this is simply a standard phenomenon that people tend to under-report positive changes and over-report negative ones, or there are some other dynamics that shape their narratives.

From this study, we could point to three main dynamics that may explain this rather complex initial finding. Firstly, as described in earlier chapters, is the backdrop of rural transformation, essentially a ***de-agrarianisation of the rural landscape***. This ‘post-peasant’ economy describes a context where core agriculture becomes increasingly less viable and relevant as the main source of income, off-farm work opportunities increase in importance, a degree of rural ‘urbanisation’ takes place, and environmental effects undermine agriculture as a livelihood. However, the process of change is rarely smooth, and the increased exposure to more national and global economic trends presents both opportunities and risks, but also increased the volatility of markets and prices. Unlike some other countries in the region, in the Myanmar context, this is not taking place in the context of rapid industrialisation, so the trend for rural-urban migration into waged factory work is less prominent than in some other contexts.

In this type of transitional period we may even expect vulnerability to increase, as households are increasingly exposed to both traditional vulnerabilities, such as unpredictable weather, and produced risk, such as globalised market volatilities. In the process of transition, then, volatility is to be expected, and to result in uneven development, perhaps more vulnerability, and again, conditions perhaps best described as precarious.

5.2 LIFT’s achievements in context

In that context, the quantitative and qualitative accounts describing challenges and difficulties also described coping, and an increasing diversity in the strategies of coping. It is reasonable to conclude that these

narratives have shown a shift towards better, less erosive coping, and thus support the quantitative findings of improvements in resilience as a measure of enacted behaviour towards less erosive coping. This is a positive observation that should enable a maintenance of current levels of vulnerability, and potentially a reduction in vulnerability in the future. This resilience appears to have been enabled by three factors: firstly, the availability of off-farm work, coupled with increased mobility through improved communication infrastructure; secondly, through measures, including infrastructure and preparedness, which have reduced the negative impacts of natural disasters; and thirdly, through the availability of lower-cost loans to enable income smoothing.

The availability of loans, while presenting a mixed legacy, nonetheless is a prominent element of coping narratives. While borrowing remained a common recourse for times of income insufficiency in 2017, compared to 2015, there is evidence that the borrowing had become less risky. This was perhaps more the case in areas where there were fewer MFIs, such as Rakhine and Chin States. A key lesson from the study here is the need to better understand the place of microfinance in the ecology of debt and borrowing, and to strengthen the provision of financial literacy as part of MFI activities.

In what ways have LIFT-funded activities potentially contributed to improved resilience? Firstly, a key finding is that, in the context of post-peasant transition and the likelihood of volatility, vulnerability levels did not increase, and in fact slightly decreased, should be taken as a significant positive result. This is in turn linked to the finding that several LIFT-funded activities have likely contributed to positive changes in resilience. Of these, the evidence is strongest for financial inclusion, and particularly projects where microfinance was provided together with financial inclusion training and support, such as savings and loans groups. As described in the study, by enabling a lower-risk, lower-cost process of income smoothing, and access to modest, but low-risk investment funds, these activities have contributed to a shift in expenditure patterns towards more investive behaviour, and away from more erosive forms of coping. The picture is not all rosy, however, as ample evidence also points to the mounting problem debt, particularly in areas where multiple loan providers operate.

Secondly, targeted agricultural inputs, again most prominently in Rakhine and Chin States, were also strongly associated with evidence suggesting more resilient behaviour. Again, the context is key: provision of training in the absence of adequate finance, or market access, was in other areas noted to be less effective. This points to the complex inter-relationship between different development tracks and the importance of a co-ordinated, and integrated approach to development.

The contribution of MCCTs to resilience is not clear, perhaps due to issues with the interviewing itself. Other studies have demonstrated the strong

correlation between MCCTs given in the context of developing community welfare organisations. Strangely, there was little enthusiasm for the benefits of the MCCT in the villages in Yesagyo; it was seen as a nice, but fairly non-essential bonus. The provision of nutritional training appears to be a critical element in ensuring that the usage is not influenced by medical professionals' ideas on food supplements rather than nutrition, and here, the main benefits of the MCCT are, as suggested in other review papers, likely to only emerge much later.

There was very limited evidence available to analyse the potential contribution of LIFT's work to off-farm and migration related activities.

5.3 Areas for improvement

There are a number of reasons to be optimistic that the impact of LIFT's work will, in several years' time, be more visibly demonstrable. At the same time, there are several findings which give cause for concern.

Firstly, the bulk of the more positive findings were from areas where development activities have been taking place only more recently - Rakhine and Chin, while in the more 'established' areas such as the Dry Zone, Delta and Shan State, the findings were more equivocal. The 'low-hanging fruit' have perhaps now been gathered, and the more challenging task of analysing and addressing vulnerability in the more established areas remains.

Secondly, the issues of changing patterns of borrowing and debt, a retreat from traditional agriculture, and unstable markets, all make rural transformation in these areas challenging. While the benefits of microfinance were seen most clearly in less well-penetrated areas, it should be a concern that the benefits of microfinance in areas where there are multiple providers is less positive. If many households are, as they say, literally using one loan to pay another, at some point, the credit sources will run dry. While some evaluative studies did not find significant levels of using loans to repay other loans, more recent studies of MFI users found that more than 90 per cent of MFI borrowers reported 'frequently' borrowing from other sources to repay loans (Cordaid 2019). A better analysis of the debt ecology in the Dry Zone, Delta and Shan State is urgently needed.

Thirdly, the finding of persistent (and increased) inequalities of outcomes for female-headed households and households with persons with disabilities suggests that more work is needed to enable inclusive programming and activities, which are able to address specific barriers to inclusion that not only facilitate access, but also enable greater equality of outcomes. If female-headed households and households with persons with disabilities had experienced the same degree of exposure and impact

from LIFT-supported activities as male-headed and non-PwD households, the potential reduction in vulnerability is estimated to be an additional 1.2 per cent (from 24.5 per cent in 2015 to 21.2 per cent at 2017).

Fourthly, the relatively slow and confused nature of land reforms, and the uncertain economic path of Myanmar lend a rather shaky governing framework to the rural economy. The findings of a relatively risk-averse approach to livelihoods in rural areas was still prominent in this follow up study, and the existing policy frameworks, and volatile economic conditions, will do little to change that.

Finally, apart from the provision of MCCTs and the national rollout of the social pension plan, little progress was evident in the area of social protection and social welfare, despite the advent in 2015 of the National Strategic Plan of Action for Social Protection. The absence of genuine political will to provide key public services such as health and education, and support for people with disabilities in rural areas means that illness, education costs and disability continue to undermine economic capital, and result in widening inequalities.

5.4 Recommendations

- 1. Longitudinal studies capturing wider rural trends are invaluable for ongoing analysis of LIFT's work, and for wider stakeholders, and should be continued.** The value of this and other contributing studies extends well beyond an appraisal of the contribution of LIFT's programme to its goals of sustainable livelihoods and poverty reduction. These studies, by providing a longitudinal analysis similar to the LIFT and World Bank Qualitative Socioeconomic Monitoring (QSEM) series, enable a more comprehensive understanding of the trends in the socio-economic conditions of rural areas. An understanding of these trends in turn can better inform not only the appraisal of LIFT's impact, but also future policy developments. In particular, by highlighting the volatile nature of rural transformation, and framing the developments in terms of precarity, this study enables a more satisfactory explanation of the apparently contradictory findings of, on the one hand, positive trends in asset ownership and communications, and on the other, a lack of significant appreciable improvements in household income and vulnerability.
- 2. A detailed study of rural debt should be conducted,** to enable a more nuanced appreciation of the positive and negative contributions of microfinance to economic development and precarity in rural areas. The findings of this study highlight the worrying trend towards a greater indebtedness of the rural economy. While the increase in debt amounts is in itself not necessarily alarming, the data from both quantitative and qualitative studies suggests that the degree to which debt represents a threat to the economic sustainability of a sub-section

of rural households is rising. The increased availability of cheaper loans has resulted in increased borrowing, and lower interest rates, but in a significant number of cases has, in the medium term, resulted in more, not less problem debt. Debt is a complex ecology, and there is an urgent need to study the phenomenon of debt in rural Myanmar beyond a simple focus on credit provision, to enable a more detailed and comprehensive understanding of how and why people borrow, and what informs their choices of creditors. Longitudinal studies can also look at medium- and long-term impacts of different borrowing strategies.

3. The delivery of LIFT-supported assistance needs to be more effectively inclusive of more vulnerable households such as female-headed households and households with persons with disabilities.

As described in the previous section, analysis in this study points to persistent inequalities in access and outcomes. For female-headed households, issues relating to wider social inclusion (for example, the lack of social standing that potentially reduces the chance of being accepted into a loan group) may be significant. For persons with disabilities, a complex set of societal, physical, attitudinal and institutional barriers requires intentional programming to enable inclusion.

4. Related to the above point is the need for future LIFT programme design and theory of change to more **clearly incorporate social protection**, and particularly the strengthening of access to assistance for health shocks, as a critical cross-cutting component. The deleterious effect of health shocks, in particular, on vulnerability and resilience was strongly evidenced from this study. Likewise, the measurable impact of LIFT's programme work was arguably most demonstrable in the prevention of worsening vulnerability among households exposed to health shocks. However, this appears to be the case despite any clear pathways in LIFT's Theory of Change for social protection and social assistance, apart from MCCTs. The finding, on the one hand, of shocks and stresses - and again particularly health - as being a strong driver in increasing vulnerability, and on the other hand, the benefits of LIFT's programme work in preventing worsening vulnerability among those exposed, suggests that incorporating social protection more explicitly in LIFT's Theory of Change would not only enhance the impact of LIFT's activities in reducing vulnerability, but also enable such impact to be more clearly demonstrated in future impact studies.

REFERENCE

- Adger, W. N., Brooks, N., Bentham, G., Agnew, M., & Eriksen, S. (2004). *New indicators of vulnerability and adaptive capacity* (Vol. 122): Tyndall Centre for Climate Change Research Norwich.
- Akamani, K. (2012). A community resilience model for understanding and assessing the sustainability of forest-dependent communities.
- Asia Research Institute. (2019). *Debt, Freedom, and Development: Insights from Asia*. Paper presented at the Debt, Freedom, and Development: Insights from Asia, Singapore. <https://ari.nus.edu.sg/Event/Detail/a641d0a4-86a2-4bf7-af6f-cae1e6d7ae81>
- Barrientos, A., & DeJong, J. (2006). Reducing child poverty with cash transfers: A sure thing? *Development Policy Review*, 24(5), 537-552.
- Belton, B., Filipski M., Chaoran Hu, Aung Tun Oo and Aung Htun. (2017). *Rural Transformation in Myanmar: results from the Rural Economy and Agriculture Dry Zone Community Survey*. Retrieved from <http://ageconsearch.umn.edu/record/261673/files/FSP%20Resarch%20Paper%2064.pdf>
- Bloem, J. R., Boughton, D., Htoo, K., Hein, A., & Payongayong, E. (2018). Measuring Hope: A Quantitative Approach with Validation in Rural Myanmar. *The Journal of Development Studies*, 54(11), 2078-2094.
- Charli Carpenter, R. (2005). "Women, children and other vulnerable groups": gender, strategic frames and the protection of civilians as a transnational issue. *International Studies Quarterly*, 49(2), 295-334.
- Comfort, L. K., Boin, A., & Demchak, C. C. (2010). *Designing resilience: Preparing for extreme events*: University of Pittsburgh Pre.
- Cordaid (2019). Multiple borrowing amongst MFI clients in Myanmar Cordaid.
- Elson, R. E. (2016). *The end of the peasantry in Southeast Asia: A social and economic history of peasant livelihood, 1800-1990s*: Springer.
- Friedl, E. (1964). Lagging Emulation in Post-Peasant Society. *American Anthropologist*, 66(3), 569-586.
- Graeber, D. (2012). *Debt: The first 5000 years*, Penguin UK.
- Griffiths, M. (2012). *Using the Umbrella Model to measure Household Vulnerability: application in Myanmar to assess disability related vulnerability* Paper presented at the 1st Global CBR Congress, Agra, India.
- Griffiths, M. (2015). "Definitions and Dimensions of Poverty and Social Protection in rural and fishing communities: qualitative survey of three regions in Myanmar."
- Griffiths, M. (2016). *Dimensions of poverty, vulnerability, and social protection in rural communities in Myanmar*. Retrieved from Rome, Italy: <http://www.fao.org/3/a-i5348e.pdf>
- Griffiths, M. (2016). Poverty Reduction through Rural Development: the Evergreen Village Project. Nay Pyi Taw, SPPRG/DRD.

- Griffiths, M. (2017). Building resilience in rural communities in Myanmar. Climate Change Governance. Asia Research Institute, National University of Singapore.
- Griffiths, M. (2017a). *Resilience and Vulnerability in Rural Communities in Myanmar*. Retrieved from Yangon, Myanmar:
- Griffiths, M. (2017b). *Resilience in Rural Myanmar: qualitative analysis of rural household narratives*.
- Griffiths, M. (2018). Emerging co-dependent networks: Precarity and community social organizations in rural Myanmar. *Journal of Contemporary Asia*, TBC(TBC).
- Griffiths, M. (2019). Networks of reciprocity: Precarity and community social organizations in rural Myanmar. *Journal of Contemporary Asia*.
- Grunbuhel, C. (2017). Rural changes. *Partners in Research for Development*(2), 30.
- Hagen-Zanker, J., Bastagli, F., Harman, L., Barca, V., Sturge, G., & Schmidt, T. (2016). Understanding the impact of cash transfers: the evidence. *ODI Briefing*. London: Overseas Development Institute.
- Henly-Shepard, S., Anderson, C., Burnett, K., Cox, L. J., Kittinger, J. N., & Ka'aumoana, M. a. (2015). Quantifying household social resilience: a place-based approach in a rapidly transforming community. *Natural Hazards*, 75(1), 343-363.
- Horgan, M., & Liinamaa, S. (2012). *Double precarity: Experiences of former seasonal agricultural workers who settle in rural Nova Scotia* (Vol. 46). Halifax, Nova Scotia: Atlantic Metropolis Centre.
- International Monetary Fund. (2018). *Myanmar: selected issues*. Retrieved from <https://www.imf.org/~media/Files/Publications/CR/2018/cr1891.ashx>
- Islam, R., & Walkerden, G. How do links between households and NGOs promote disaster resilience and recovery?: A case study of linking social networks on the Bangladeshi coast. *Natural Hazards*, 1-21.
- Islam, A., et al. (2015). "Does microfinance change informal lending in village economies? Evidence from Bangladesh." *Journal of Banking & Finance* 50: 141-156.
- Lebot, V., & Siméoni, P. (2015). Community Food Security: Resilience and Vulnerability in Vanuatu. *Human Ecology*, 43(6), 827-842.
- LIFT/UNPOS. (2009). *Vulnerability Analysis: The Building Blocks of a Successful Livelihood Intervention*.
- Luchtenburg, P. (2018). *Findings on Credit Access and Delivery & Universal Standards*. Yangon, UNCDF.
- Makkonen, T. (2002). Multiple, compound and intersectional discrimination: Bringing the experiences of the most marginalized to the fore. *Institute for Human Rights, Åbo Akademi University*.
- Mallick, D. (2012). "Microfinance and moneylender interest rate: evidence from Bangladesh." *World Development* 40(6): 1181-1189.
- Manyena, S. B. (2006). The concept of resilience revisited. *Disasters*, 30(4), 434-450.
- McCarthy, J. J. (2001). *Climate change 2001: impacts, adaptation, and*

vulnerability: contribution of Working Group II to the third assessment report of the Intergovernmental Panel on Climate Change: Cambridge University Press.

- Nishino, Y., & Koehler, G. (2011). Social protection in Myanmar: Making the case for holistic policy reform. *IDS Working Papers*, 2011(386), 1-27.
- Parpart, J. L. (1995). Deconstructing the development "expert": gender development and the "vulnerable groups".
- Partridge, T. (2012). Organizing process, organizing life: collective responses to precarity in Ecuador. *Interface*.
- Pasteur, K. (2011). *From Vulnerability to Resilience: A framework for analysis and action to build community resilience*: Practical Action Publishing Rugby.
- Pelling, M. (2010). *Adaptation to climate change: from resilience to transformation*: Routledge.
- Riessman, C. K. (2008). *Narrative methods for the human sciences*: Sage.
- Rigg, J. (2001). *More than the soil : rural change in Southeast Asia*. Harlow :: Prentice Hall.
- Rigg, J., Oven, K. J., Basyal, G. K., & Lamichhane, R. (2016). Between a rock and a hard place: Vulnerability and precarity in rural Nepal. *Geoforum*, 76, 63-74.
- Saatcioglu, B., & Corus, C. (2014). Poverty and intersectionality: A multidimensional look into the lives of the impoverished. *Journal of Macromarketing*, 34(2), 122-132.
- Schipper, E. L. F., & Langston, L. (2015). A comparative overview of resilience measurement frameworks.
- Sengupta, J. (1957). Role of Monetisation in Agriculture. *Indian Journal of Agricultural Economics*, 12(4), 19.
- Sibrian, R. (2008). Deriving food security information from national household budget surveys: experiences, achievements, challenges.
- SPPRG. (2018). *Reduction in Household Vulnerability through community-led social protection and maternal-child cash transfers: 40 village Pilot Project in Myaung Township, Sagaing Region, Myanmar*. Retrieved from Yangon:
- Truong, T.-D., & Quesada-Bondad, A. (2014). 12 Intersectionality, Structural Vulnerability, and Access to Sexual and Reproductive Health Services: Filipina Domestic Workers in Hong Kong, Singapore, and Qatar *Migration, Gender and Social Justice* (pp. 227-239): Springer.
- World Bank. (2018). 2017 *Living Conditions Survey*. Retrieved from Yangon: <http://www.mm.undp.org/content/dam/myanmar/docs/Publications/PovRedu/MLCS-2017.pdf>

APPENDIX 1

DETAILED METHODOLOGY FOR VULNERABILITY INDICATOR

Vulnerability is the product of three components; exposure to risks; sensitivity (likelihood of damage and extent of damage if exposed) and adaptive capacity (McCarthy, 2001). Here, 'The vulnerability of any system to an external stress (or collection of stresses) is a function of exposure, sensitivity, and adaptive capacity' (McCarthy, 2001, p. 2). The overlaps between vulnerability and resilience occur mainly in the area of absorptive and adaptive capacity, where capacities can influence the degree of damage if exposed, and the ability to 'bounce back'. Briefly, then, vulnerability tends more towards a focus on the actual conditions of risk (who is at risk, to what, and their capacity to respond) whereas resilience looks more at the extent to which behaviours are enacted as coping responses. (Horgan & Liinamaa, 2012; Partridge, 2012). The mere existence of a threat does not necessarily result in vulnerability; likewise, the possession of capacity does not automatically translate into greater resilience, if the capacity is not able to be utilized due to internal constraints (lack of intention) or external constraints (such as gender inequality). This study also demonstrates the relationship between vulnerability and resilience, whereby LIFT's activities at programme level which contribute to building resilience potentially reduce vulnerability, and vice-versa.

The indicators used to study vulnerability make no immediate assumptions about vulnerability based on biological criteria, such as maleness or femaleness, or disability. Rather, by assessing vulnerability based on a set of capability and capacity indicators, the model can then make a better analysis of the nature of vulnerability. This avoids obscuring the capacities of women and people with disabilities, and also enables better study of the structural constraints which may render them less able to either build or deploy their capacity (Charli Carpenter, 2005; Parpart, 1995). It also takes into consideration key intersectionalities in vulnerability (Makkonen, 2002; Saatcioglu & Corus, 2014; Truong & Quesada-Bondad, 2014), whereby a number of factors 'collide' to produce higher levels of vulnerability, or to render somebody more or less vulnerable (for example, disability and gender strongly intersect, as do issues such as landlessness and gender)¹³.

This model has been applied in six large studies in Myanmar, including the REVEAL project (Griffiths, 2012a; LIFT, 2014) where it was used as a baseline and endline measurement; as a baseline and endline measurement approach for a livelihoods project for persons with disabilities implemented by the Leprosy Mission; an analysis of rural household vulnerability conducted in the Dry Zone by ActionAid in 2012 (Griffiths, 2012b); a large rural household survey by the Department of Rural Development

13. A more detailed description of the theoretical foundations for the conceptualization of both vulnerability and resilience, and the indicators used, are available in Griffiths (2017) *Resilience in rural Myanmar: a conceptual analysis*, available from LIFT/UNOPS.

conducted in all States and Regions in 2015 (Griffiths, 2015); a baseline survey conducted by the Department of Rural Development of the Mya-Sein Yaung project in 2016 (Griffiths, 2016b) and a follow up survey of Mya Sein Yaung project villages in Yangon Region in 2017. Thus, the model has been tested in various contexts to assess its suitability in determining vulnerability and in assisting beneficiary selection. Generally speaking, the model offers a superior approach to more crude tools such as wealth ranking, as it can identify households who are not the 'poorest of the poor' but who nonetheless are at risk of becoming so. Field testing has demonstrated high levels of satisfaction amongst users and households. Validation is challenging, as there is no comparable 'gold standard'. However, the tool has been used as a baseline for several development projects, and final end-project assessment is expected to demonstrate whether or not the model was useful in enabling accurate profiling and targeting of vulnerable households. When compared with standard demographic profiling (which would identify as 'vulnerable' any household which is either landless, female headed, has a person with disability, or an older person), the umbrella model has higher specificity and a strongly positive f-test, indicating a high degree of effectiveness in identifying households who would be considered poor or vulnerable by other means. How well does this vulnerability index link with resilience? Based on the theoretical discussions from the previous sections, we would expect that a model of vulnerability based on capacities would predict some, but not all resilience. Why? As stated before, the mere presence of capacity does not automatically lead to resilient behaviour: an enabling governing framework, and an intention to act are also required to utilize capacity towards resilient behaviour. Thus, we would expect some households which are classified as vulnerable to nonetheless have normal or even high resilience scores; and vice versa: some households classified as non-vulnerable may also have low resilience scores.

Drawing on data from two of the surveys mentioned above (the DRD rural household surveys), higher vulnerability scores were strongly predictive of an increased likelihood of low resilience (Odds ratio 1.7, $p < 0.001$). However, a number of households were classified as having low resilience despite not being classified as vulnerable; and likewise, a number of non-vulnerable households were also classified as not having low resilience. Looking at the first group (not vulnerable but not resilient either) there were three characteristics which differed between them and households which were not-vulnerable and resilient: the non-resilient, non-vulnerable households were more likely to be female-headed, to have experienced food insecurity in the previous year, and to have lower degrees of political capital. This suggests the theory proposed earlier: that capacities alone-in this case reasonably favourable-do not necessarily lead to resilience. What of the vulnerable households who were nonetheless more resilient? Again-these were less likely to be female headed than non-resilient households, less likely to have experienced food insecurity, and less likely to be asset poor than the non-resilient, vulnerable households. Overall, then, the vulnerability model is able to identify sub-groups of households which are

less likely to be resilient, and within this, also enable more detailed analysis of underlying contributory factors to resilience.

Indicators used and definitions:

The indicators used in this study are based on data available from the 2016 Baseline survey, which was adapted in some places to include specific questions relevant to the construction of the umbrella model for vulnerability. Here, key indicators are described, together with a summary of how the vulnerability indicator was calculated for that particular domain

Assets: the questionnaire recorded total numbers of different types of assets in five categories: household goods (e.g. generator, telephone); livelihood assets (animals, tools, nets, boats) transport assets (bicycles, trawlawgi, boats etc.; household valuables such as gold and housing quality. Land was not included in the asset list, as issues of ownership are often complex to describe. Land use and ownership was recorded separately. Given the difficulty and inconsistency in calculating monetary value of assets, and in particular the regional variation in monetary value, an alternative scoring system was used to calculate asset value. The total score for asset value was calculated using assigned values for different types of asset. To assess vulnerability, the total scores for assets in each category were capped at a maximum level, as vulnerability reflects risk as well as overall value. For example-a household may have 1,000 chickens-but if that represents the sum total of their assets, it represents a risky profile, as the entire asset value could be lost by an outbreak of bird flu.

Asset poverty: asset poverty is measured by calculating the asset value of the lowest quintile and then classifying as 'asset poor' those who fall below that level.

Asset vulnerability: asset vulnerability is measured by calculating the weighted score for assets in the five categories, and if that score is lower than one standard deviation below the population mean, that households is considered 'asset vulnerable'

Debt: the measurement of debt was undertaken not on the total monetary value of the debt, but on the extent to which the degree and nature of indebtedness posed a risk to the household. Hence, debt was measured by 2 factors: the debt: income ratio and the identity of the major creditors for that household's debt. Whilst there are inevitable variations in practice, qualitative research undertaken in Myanmar has demonstrated that rural households perceive debt from family members or relatives and NGOs to be low risk, with typically lower interest rates, as compared to loans from community money lenders, banks and 'bosses'. Hence, it is a reasonable assumption that a household whose debt is mostly owned by village money lenders is likely to be paying higher interest rates, and to be at higher risk of negative consequences if they default, than a household whose debt is primarily from family members. Households were asked to again use the ten seeds method to indicate what proportion of their debt was owed to which type of creditor. A formula was devised to assign risk

weighting to the type of creditor. This was combined with the percentage score for proportion of income consumed by debt repayments to calculate an overall 'debt' score.

Debt vulnerability: the overall debt score was inverted (lower score = higher risk) and having calculated an overall debt score, households whose score was more than 1 standard deviation below the mean are considered vulnerable in the debt category.

Decision making: part of the overall measure of poverty and vulnerability takes into account power differentials and participation in decision making. Earlier research by SPPRG has demonstrated a strong correlation between degrees of equality in participation in village decision making and overall poverty rates at village level. Here, decision making was measured in two ways: firstly, an index cataloguing the degree of participation of the household head in village decision making process. The indicator measured the degree of participation at three levels: attending meetings (how often) participating in discussions (how frequently) and influencing decisions (to what extent). A formula was devised to allocate scores to the degree of participation, with higher scores allocated to the 'influencing decision' category. The same questions were then asked about the participation of the women in that household in the village decision making processes. These two scores were combined, and as with the other main indicators was converted to a scale from 0-1 for the purposes of the umbrella model. **Decision making related vulnerability:** the overall score was inverted (lower score = higher risk) and having calculated an overall score, households whose score was more than 1 standard deviation below the mean are considered vulnerable in the decision making category.

Dependency: the initial part of the survey catalogued details of each household member, including the way in which they participated in, or contributed to, the household income generation. This allowed for broad categories such as family business, waged employment, daily labourer (casual) student and 'own work'/'own business' and of course, 'other'. Based on this, household members could be defined as economically dependent or not. This category is primarily measuring economic dependency, whereby household members who are active, and perhaps engaged in domestic activities such as child care or care for elderly, are nonetheless not included as economically active unless specified by the respondents. A dependency ratio is then determined by calculating the proportion of household members who are economically dependent. This excludes school aged children who are listed as students, but school age children who are listed as being economically active are included. **Dependency vulnerability:** the overall score was inverted (lower score = higher risk) and having calculated an overall score, households whose score was more than 1 standard deviation below the mean are considered vulnerable in the dependency category.

Disability: the national disability survey conducted by DSW and TLMI in 2009-2010 used a hybrid approach to measure disability, with a national prevalence of 2.32%. A more functional based approach was used by the national census, which yielded a prevalence of 4.6%, with the difference almost entirely due to higher prevalence of age-related functional decline. Surveys in the Delta and the Dry Zone using a self-designation approach have typically yielded prevalence rates between 3 and 4%. For the purposes of this survey, self-designation was used, whereby household members were asked whether they had household members who were considered disabled. A short text and accompanying pictures were used to illustrate types of disability for households who were not familiar with the concept. According to the census and DSW criteria, the main types of disability recorded were physical, hearing, seeing and intellectual/mental.

Expenditure: measuring household income is challenging, particularly in rural contexts where income is often seasonal and consumption is potentially reliant on acquired goods as well as monetary income. Likewise, assigning monetary value to income can be problematic, especially where purchasing power of cash varies from region to region. This means that the absolute monetary value of household income does not necessarily correlate with income security. However, measuring expenditure profiles can contribute to the estimation of a reasonable proxy for relative income security. Households who spend the majority of their income on essentials such as food are more likely to be experience food poverty. However, prior research in Myanmar categorized the main types of household expenditure in rural households as follows: Food, Health, Debt repayments and servicing, Education, Livelihoods (including purchase of tools, fertilizers, repair of Equipment etc.), Travel, savings and 'Official and social' which includes various voluntary and non-voluntary contributions such as official and unofficial taxes, donations and contributions. Households were asked to describe what proportion of their income was spent on what type of expenditure, using the ten seeds method. The number of seeds allocated to each category was then converted into a percentage (1 seed = 10%) for each category. Members could allocate half a seed to a category.

Expenditure related vulnerability: expenditure profile was calculated by measuring the proportion of expenditure in three 'essential' categories: food, debt repayment and health. The overall score was inverted (lower score = higher risk) and having calculated an overall score, households whose score was more than 1 standard deviation below the mean are considered vulnerable in the expenditure category.

Food insecurity: the data collected in the Household survey asked questions on consumption frequency of different types of food by the household in the previous week.

Food security related vulnerability: the consumption score was converted into a 0-1 scale for the purposes of the vulnerability model. The overall score was inverted (lower score = higher risk) and having calculated an

overall score, households whose score was more than 1 standard deviation below the mean are considered vulnerable in the food security category.

Health: indicators for health were measured in two ways. Firstly, the proportion of household expenditure consumed by health costs was calculated. Secondly, the impact on livelihoods of ill health was measured. This was measured in two ways. In the initial section of the questionnaire, questions were asked of each household member as to how many productive working days had been lost to ill health in the previous year, firstly through the ill health of that household member, and secondly, the days lost by that household member in caring for another household member who was sick. In the final analysis, data was cross-matched with recorded data on whether or not that household member was economically active or not, to accurately capture the extent to which ill health in that household had reduced the number of economically productive days. This can be expressed in several ways: firstly, as the average number of days lost by economically active household members to ill health or to being a carer; secondly, the total number of economically productive days lost by that household; and thirdly, the average number of days lost relative to the number of income generating members in that household.

Health vulnerability: health vulnerability was estimated using the a formula to calculate the average number of days lost relative to the number of income generating members in that household, which was converted into a 0-1 scale for the purposes of the vulnerability model. The overall score was inverted (lower score = higher risk) and having calculated an overall score, households whose score was more than 1 standard deviation below the mean are considered vulnerable in the health category.

Household head: household head was recorded in the household profile section, according to the response of the respondent.

Livelihood diversity: one the key elements of the survey are to measure livelihood diversity at household level. Livelihood diversity is measured in three ways: firstly, by the number of different types of source from which the household derives its income. Secondly, the proportion of income which is derived from different income source, indicating the degree of dependency on a particular source of income thirdly, whether those different sources are regular or seasonal, which further indicates the degree to which the household has regular or irregular income flow. The questionnaire asked each household to use the ten seeds method to indicate what proportion of their income was derived from which source. The main categories for rural livelihoods were derived the household survey. After allocating seeds according to the proportion of income derived from each source, household members indicated whether those source were regular or seasonal. From this, the number of income sources for that household can be measured, as well as the extent to which the household has a well-diversified livelihood portfolio.

Livelihood diversity related vulnerability: the livelihood diversity index utilizes existing formulae to calculate the number of livelihood sources in relation to the household size, further adjusted by the extent to which the household is reliant on more, or fewer income sources, and whether these sources are regular or not. A household with few members with two main income sources, one of which is regular, may be less vulnerable than a larger household with three sources, but which receives 80% of its income from one, irregular source. This does not calculate the monetary value of the derived income, but the extent to which the livelihood portfolio is diversified to ensure that if one source dries up, there is still other potential income streams which can supply family income. The overall score was inverted (lower score = higher risk) and having calculated an overall score, households whose score was more than 1 standard deviation below the mean are considered vulnerable in the livelihood diversity category.

Social capital: the links between social capital and poverty are well established. Less universally acknowledged are methods to measure social capital. Where social capital can be constructed in negative and positive forms, the measurement of social capital needs to be done using contextually relevant factors. The underlying assumption is that households with members who play an active role in community events or activities are more likely to have positive social capital, which can in turn result in increased likelihood of receiving assistance from fellow villagers in times of crisis. Field testing demonstrates this to be the case: most respondents in the pilot testing affirmed that, although households were not intentionally excluded from receiving assistance if they were less involved in community activities, that 'active' households were perceived more favourably as those who had contributed to the community's well-being and so were more likely to receive assistance. In this study, households were asked to indicate the frequency of participation in three types of community events: household events such as anniversaries, birthdays, to which near-neighbours would be invited, but not the whole village. Second tier events would be ones where the whole village would be expected to be invited, such as weddings, funerals and religious festivals. Third tier events are official village meetings, such as ones held for planning, information giving etc. This overlaps slightly with the meetings measured in the 'Decision Making' category, but measure frequency of attendance only. The score was derived by multiplying the frequency category ('Always', 'Often', 'Sometimes' and 'Never') by the value of the activity, with third-tier activities being more 'valuable' in terms of building social capital.

Social capital related vulnerability: social capital related vulnerability was estimated using a formula to calculate the overall score for social capital for members in that household, which was converted into a 0-1 scale for the purposes of the vulnerability model. Households whose score was more than 1 standard deviation below the mean are considered vulnerable in the health category.

Water/Sanitation: water and sanitation was measured with specific reference to livelihood related vulnerability. There is a link between water scarcity, the time/resources consumed to meet household water requirements, and livelihoods, whereby time and resources consumed for water acquisition are taken from productive economic activity. Hence, this study measured water and sanitation based on three factors: time taken to acquire household water in the dry season, time taken to acquire household water in the rainy season, and whether the household regularly bought water with cash. These were combined to calculate an overall water and sanitation index.

Water/Sanitation related vulnerability: vulnerability was estimated using a formula to calculate the overall score for water and sanitation based on the average time taken to get water, with additional scoring if water was regularly purchased with cash. This was then inverted and was converted into a 0-1 scale for the purposes of the vulnerability model, so that a lower score constituted higher risk. Households whose score was more than 1 standard deviation below the mean were considered vulnerable in the water and sanitation category.

APPENDIX 2

NOTES ON RESILIENCE

Models of resilience should be context-specific, and need to take into account threats/disturbances which are experienced or perceived locally¹⁴, as well as capacities and governing frameworks which are relevant to the context, in this case rural communities in Myanmar. This study uses models for resilience which incorporate elements from empirically grounded models of resilience (M Griffiths, 2016d; Mercy Corps, 2016). The conceptual framework developed by LIFT in 2017, drawing on both established research and local empirical research, defines resilience in the context of rural households as:

*The capacity of a social system (organization, community, household) to **actualize behaviour** to proactively adapt and recover from external stresses and disturbances in ways which maintain or strengthen future coping capacity and human flourishing (adapted from (Adger, Brooks, Bentham, Agnew, & Eriksen, 2004; Comfort, Boin, & Demchak, 2010; Pelling, 2010))*

14. Which may nonetheless have non-local, or global origins, such as climate change

This incorporates three key elements: the existence of **threats and hazards**; the ability to adapt (**adaptive capacity**) and the ability to respond in ways which are non-erosive-which do not undermine future coping capacity. An additional element of resilience is the ability of individuals, communities and organizations to go beyond 'coping' to more pro-active responses to address the causes of threats and disturbances-the notion of '**engaged resilience**' (Chandler & Reid, 2016). **Adaptive capacity** is defined as 'the set of available inputs that determine coping capacity' (Pelling, 2010, p. 36), and is best described in the form of a 'coping ladder' where adaptation enables coping which does not erode household sustainability, and which maintains or enhances future choices (Pelling, 2010, p. 35).

A key concept which links 'capacity' with the achievement of better adaptation is the effect of '**governing frameworks**' – factors such as gender, policies, geography, ethnic exclusion- which enable or constrain the ability of an individual, household or community to effectively use their resources to achieve adaptation and better coping (Archer, 2003; Elder-Vass, 2007). This assumes that whilst individual entities may possess the same resource, their ability to effectively use it may be different, due to the impact of governing frameworks.

APPENDIX 3

SHOCKS AND STRESS MODULE

The self-assessment of status module asked respondents to assess whether, over the previous 12 months, the following had improved, stayed the same or got worse:

- Income
- Non-agricultural income
- Crop profits
- Livestock profits
- Fisheries profits
- Food security
- Assets
- Health
- Debt
- Social Capital

For each of these, changes in status (better or worse) were rated as major or minor, and respondents were asked to select from a list of possibilities any particular challenges to the status of that factor. For example, where a

household described income as being worse than the previous year, a list of possible reasons for that included less produce, lower process, job losses, increased production costs, loss to natural disaster, decrease in remittances, and a number of other options. Respondents were also asked to identify any particular strategies they used to mitigate worsening situations, or things they had done which they felt had enabled an improvement in circumstances. Finally, they were asked to identify any assistance they had received, and from whom. Based on these responses, analysis can be made to compare households who were, and were not exposed to certain shocks, and amongst those exposed, whether certain types of assistance, such as agricultural assistance, water/sanitation, nutrition, financial inclusion and other forms of assistance, may have been provided by LIFT-funded programmes, was associated with a more positive trend in coping. The self-assessment of factors like income, health and debt also provides a useful corollary to the quantitative data, where there may be differences between an externally measured status, such as poverty, and the lived experience of poverty.

APPENDIX 4

DETAILED METHODOLOGY FOR NARRATIVE RESEARCH

Methodology: The qualitative survey aims to capture more ‘organic’ and ‘process’ elements pertaining to vulnerability resilience by using a “Narrative Analysis” approach to record community members’ ‘stories’ of change in vulnerability and resilience and explore ways in which communities have responded to internal and external pressures (Riessman, 2008). The use of narratives is most appropriate, as the qualitative part of the research aims to capture stories of change, or survival, or adaptation, in ways which can then provide insights into pathways of change and coping. For narratives interviews, there is an interview guide with a broad set of topics which act as guiding questions, rather than a structured interview. This means that the form of the interview is less structured, and the respondent has more flexibility to tell their experiences in their own way. The author has used this method extensively in Myanmar, and has trained numerous researchers to use it.

The review process involved in-depth narrative interviews with community members in rural communities to qualitatively explore the mechanisms by which community organizations contribute to resilience. These were conducted by the author and his team of researchers, in Burmese language, except for Chin and Rakhine, where local language researchers, trained in the previous round of baseline interviews, were used as primary interviewers. In most cases, a team of four or five researchers would visit one community together, meaning that each member would conduct two to three interviews in one day. In each community, at least ten interviews were

conducted, with one or two being with key informants, and the remainder being a purposive selection of community members to ensure at least 50% of the respondents are women, at least one representing a female-headed household, one representing a household with one or more household members with disabilities, and one older person

Overall, the research involved collecting and analysing over 200 narrative interviews, from the baseline and endline, which were transcribed into Burmese. Where the interviews were conducted in another language, these were translated and transcribed into Burmese. Analysis was conducted on the Burmese language text by Dr. Mike Griffiths and his team. Overall, interviews and field notes from both phases yielded just under 2,000 pages of transcribed text. Analysis of the transcriptions was done in two stages: firstly, a collaborative process of interpretation and discussion conducted with the main interviewers, grouped around key themes and questions, followed by the construction of theory. This enabled theoretical constructs to emerge from the original text, rather than translated texts, which enabled a more rigorous evaluation of narratives.

Narrative interview questions:

- Disruptions/threats: what are the type and frequency of disruptions/threats (and changes in patterns) in different households and communities? How have these changed? What may be the causes of these changes?
- Coping mechanisms: what are the approaches to dealing with different threats in different households and communities? How have these changed? What may have contributed to these changes? What new approaches were tried? What resources were available to making coping more effective? (and underlying this are questions to explore the role of development actors/LIFT funded projects in this process)
- Adaptation and learning: What have been the changes in how different pressures are dealt with? How has learning taken place? What has been the role of training, or community organizations, in facilitating acquisition of new knowledge and skills? What new skills have been acquired and applied? How have these skills been acquired? Which skills and learning seems to have been most useful? What factors seem to influence the uptake and application of new skills & technology?
- Change to status: Do they feel their situation has changed, for better or for worse? Why? What have been the changes in how different pressures are dealt with? How has learning taken place? What has been the role of NGOs, or community organizations, in facilitating acquisition of new knowledge and skills?
- Perception of vulnerability and resilience: How do households perceive their own vulnerability? Do they feel that they are becoming more or less vulnerable? What do they feel would reduce their own vulnerability? What are the barriers to enacting that reduction in vulnerability? What has helped to decrease their vulnerability? What resources or activities,

or new skills were important to developing more resilience?

Methodology of narrative research. Whilst it may be possible to gain some meaningful insights through more direct lines of inquiry, such as 'what do you think makes your community more resilient?', narrative research is a useful approach for research focusing on lived experience (Clandinin, 2006; Kramp, 2004); "By collecting stories [...] by listening and comparing different accounts, by investigating how narratives are constructed around specific events, by examining which events in an organization's history generate stories and which ones fail to do so, we gain access to deeper organizational realities, closely linked to their members' experiences. In this way, stories enable us to study organizational politics, culture and change in uniquely illuminating ways, revealing how wider organizational issues are viewed, commented upon and worked upon by their members" (Symon, 1998, pp. 135-136). Whilst the weaknesses of narrative research are manifold (researcher/interpreter bias, inappropriate regard for stories as objective facts, representativeness (Symon, 1998, p. 156), the value of analysing narratives is clear, allowing researchers to "pursue different lines of inquiry-into organizational politics and resistance, dissemination of organizational knowledge, into culture and symbolism, into interpretation or into the process of storytelling itself"(Symon, 1998, p. 156). Narrative analysis takes the whole narrative as the basic unit of data. The narrative approach is also useful when studying processes involving time and change: events of birth (genesis), illness (crisis), recovery (resolution), re-orientation (change and new status) and sometimes death (endings) and conflict are commonly woven into different narrative forms (Ricoeur, 2010), linked in some way or other by time. Furthermore, analysis of these events, as they are told, may inform our understanding of underlying beliefs, values, fears, needs, influences, challenges, personalities and hopes which influenced, and continue to influence the formation and ongoing life of the organization. These may be voiced unintentionally by the narrator, as narratives are a "creative re-description of the world such that hidden patterns and hitherto unexplored meanings can unfold" (Kearney, 2002, p. 12) The power of narratives is that 'our sense of self, others, and social and organizational life emerges in our moment-to-moment, relationally responsive, talk-entwined activities, specifically, in oral encounters and reciprocal speech'(Shotter, 1993, p. 29)

Resilience narratives: whose stories? There are three key questions relevant to the data collection: who provides the narratives (choosing the storytellers); how are the narratives are solicited (guiding the storyteller) and how the narratives are represented (translating the stories-and not just linguistic translation). The 'who' of storytelling is crucial: if one considers the implications of microstoria analysis, with its focus on ante-narrative and excluded voices, and plot analysis (looking at rights to 'authorship' of a story) then the selection of voices may bias the response before even beginning if certain narrators are not included. But here, the researcher operates on presuppositions of who might be excluded and

makes efforts to include them-which may then distort the process. Insightful selection, with a running commentary to justify selections, may counteract that bias, or at least provide information on why certain voices may be excluded. The how of narrative gathering is also crucial: not just the mechanics of recording, but the process of consent, of explaining the nature of research, of providing the background to what the researcher is interested to hear about (else a thousand side-tracks), how the researcher uses probes and questions to prompt the narrator, and how the narrator in turn is able to exercise autonomy in the research process. Finally, the representation of narratives: when collected in another language, these are transcribed, verbatim, which preserves the original text. Analysis is conducted in the original language (Griffiths, 2015) but for publication, translation is needed. Ideally, all the text of all interviews are translated; where that is not possible, justification of the selection of narratives, passages, words and phrases and the manner of their rendering into another language is a significant step which should be accompanied by commentary. The selection criteria for respondents are designed to enable the capture, as far as possible, a range of narratives from different perspectives within the community-from the empowered elite, usually those in authority, from the 'elders' who may or may not be in authority, but who represent informal power within the community; from more those more at the margins of the community (poorer household, persons with disabilities) and from households considered 'typical' in socio-economic terms in the community. In villages with mixed ethnicity, respondents were purposively selected to ensure inclusion of different groups. These selection criteria are based on a number of assumptions (such as who is likely to be excluded) and so the criteria function only for initial selection: at analysis, the narratives may well contradict the selection (for example, a household with a person with disabilities may in fact not be marginalized). The resilience narratives aim to work from the experiences of community members, recognizing the possibility of multiple different entry points, narrative arcs and subjects. Thus, the interview guide provides three basic topic areas which are of interest to the interviewers, and suggested 'prompts' or 'hints', but do not represent an 'interview schedule' (Hollway & Jefferson, 1997) The narrative process may be supported by techniques such as timeline mapping (Kolar, Ahmad, Chan, & Erickson, 2015) which can assist respondents who wish to construct a more time-based narrative. The schemata show below should not be considered a rigid 'pro-forma' but rather an overview of what is hoped to be covered by the narratives during their collection.

Analysing narratives. The interpretative process, critical in the analysis of narratives, will focus primarily on 'coherence' on the three levels described earlier: global, local and themal, will utilize elements of microstoria, plot and themal analysis to draw meaning from the data around the research questions. Global coherence, where the goal of the communication by the narrator is analysed, is significant: what does the narrator hope to achieve through the telling of this story, using these words, in this way. Thus a

narrator has global coherence in terms of a goal of the communication, has local coherence in terms of particular linguistic devices, and themal coherence in terms of repeated chunks of narrative relating to a theme. Key themes for analysis also relate to the key questions and issues, where the aspect of origins looks at the 'shaping forces' both internal and external (and which will incorporate elements of religious values, beliefs etc.) , the aspect of process looks at the way in which the 'artefact' is sustained (and which will incorporate elements of how social cohesion is maintained, and also look for who is excluded) and the aspect of achievements, which looks at self-perception and reflections on how respondents themselves conceptualize resilience.

Narrative analysis as an approach to qualitative research differs from many other forms of qualitative research in that, by seeking to elicit a whole narrative as the basic unit of data, the person being interviewed is less guided by specific questions from the researcher. This may help avoid the pitfall of the interviewee attempting to give the 'hoped for response' to the researcher. Moreover, by analysing whole narratives, this approach also takes note of data in the wider context of the 'story', both in terms of what else is revealed in the story, as well as the order and structure of the story itself. The nature of narrative research means that large volumes of data are gathered from a smaller sample size. With an emphasis on depth, rather than breadth, this form of research places value on openness, attempting to reduce responder bias often inherent to more closed inquiry techniques such as questionnaires. Where such open techniques are used, with such small sample sizes, critical questions need to be addressed regarding first the validity, and then the generalizability of the research findings. In considering the issue of validity in narrative analysis, Catherine Riessman proposes four approaches. First is the criterion of persuasiveness. "Is the interpretation reasonable and convincing?" (Riessman, 1993, p. 65) She posits that "Persuasiveness is at its greatest when theoretical claims are supported with evidence from the informants' accounts and when alternative interpretations of the data are considered" (Riessman, 1993, p. 65) Secondly, "an investigator can take results back to those studied". (Riessman, 1993, p. 66), essentially 'testing' the hypothesis with the original researchee community. Thirdly, Riessman describes 'coherence' on three levels: global, local and themal. Thus a narrator has global coherence in terms of a goal of the communication, has local coherence in terms of particular linguistic devices, and themal coherence in terms of repeated chunks of narrative relating to a theme. Finally, there is the future orientated criterion of pragmatic use, whereby the validity of the interpretation is measured by the extent to which it becomes the basis for others' work. This criterion is "socially constricted, and assumes the socially constructed nature of science".(Riessman, 1993, p. 68) In considering the validity of narrative research projects, ultimately it is the reader who, applying these and other criterion, makes a judgement regarding validity.

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APPENDIX 5

RESEARCH SITES FOR QUALITATIVE RESEARCH

The fieldwork for the follow up narratives took place between October and December in 2016, and during the same period in 2018, in twelve communities selected from LIFT's programme areas to represent the three main geographical areas of Myanmar, as well as to include a range of different programme activities. The selection of villages in 2018 included a mixture of communities which were sampled at baseline in 2016, and four new villages, in Yesagyo and Pindaya, to enable the inclusion of a wide range of development activities as well as specific follow up of anomalies identified in the quantitative analysis. This included selecting two villages in Yesagyo to allow capture of narratives concerning implementation of the Maternal and Child Cash Transfer (MCCT) activities, and two villages in Pindaya, to look for narratives to explain the finding of increased vulnerability in that area on quantitative analysis. The sample also includes at least one large (more than 200 households) village and at least one small (fewer than 100 households) village in each geographical area. The selected communities are shown in the table below.

Programme Area	State/Region	Township	Village	Notes	Programme activities (LIFT database)
Delta	Ayeyarwaddy	Pyapon	The Main Kong,	Riverine large community, follow up	Microfinance & off-farm
	Ayeyarwaddy	Pyapon	The Ein Kyaung Su	Riverine small community, new	Microfinance & off-farm
Rakhine	Rakhine	Myebon	The Chaung	Coastal, large, follow up	Agriculture training & inputs, CBO formation, WASH, FI, Health & nutrition training, MCCT
	Rakhine	Myebon	Pa Soe Pyauk	Coastal, small, follow up	Agriculture training & inputs, CBO formation, WASH, FI, Health & nutrition training, MCCT
Uplands	Shan	Pindaya	Myin Mu	Hilly large, new,	Microfinance, migration/ off farm
	Shan	Pindaya	Yae Chan Sin	Hilly small, new	Microfinance, migration/ off farm
	Chin	Falam	Laizo	Hilly small	Agriculture training, MCCT, nutrition training
	Chin	Falam	Long Haw	Hilly large	Agriculture training, MCCT, nutrition training
Dry Zone	Magwe	Yesagyo	Kyet Su Kyin	Lowland, riverine, small, new	Microfinance, MCCT, nutrition training
	Magwe	Yesagyo	Htan Se Pin	Lowland, riverine, large, new	Microfinance, MCCT
	Sagaing	Monywa	Monyway, Kyar Paing	Lowland small, follow up	Microfinance
	Sagaing	Monywa		Lowland, large, follow up	Microfinance

The selection process for communities to be included in the study involved consultation with LIFT, with the implementing partners (IPs) operating in the respective areas, and with government counterparts. The primary objective of sampling in qualitative research is not representativeness, but rather diversity, and the villages sampled here were selected in a way to capture different types of villages in different parts of the country. These included smaller, more remote villages in Chin State, coastal fishing villages in Rakhine State, Delta rice-growing communities, Dry-Zone mixed-agriculture communities, post-narco-trade villages in Shan State undergoing livelihood transitions, and peri-urban villages, were represented in several places in the Dry Zone. In each place, a smaller and larger village, where possible were selected. Two villages in **Pyapon Township** in **Ayeyarwaddy Region** were selected; one, (**The Ein Kyaung Su**) is located a short distance from Pyapon Town, but accessible only by boat. Once there, the village is spread along a slightly raised brick-sand pathways connecting households in the villages, with rice-paddy fields behind the main village. The main issue is the emergence of the golden snail plague, and because of this they lose most of their monsoon paddy. They can only survive with a second, cool season paddy. There is some non-farm work, but there is little access to technology and information to enable greater livelihood diversification.



The Main Kong, on the other hand, is a larger village built around the main road, with a high school and several government offices. Here, the main occupation is rice-paddy farming. This time, our interviews took place not in the village administrators house on the main road,

but in a smaller home located in the 'back' part of the village, accessible by narrow raised footpaths and small bridges across streams. The golden snail problem is abating, but their main issue is to do with low prices at harvest time. They reckon to be holding steady, but little more. Those that can move away go to find work in Yangon, so that the youth don't stay in the village.

In **Chin State**, two villages were included in **Falam Township**. **Lung Haw** village is located in the eastern part of Falam and about 37 kilometres away from Falam; the 150 houses in Lung Haw village and 30 houses in Far So village combine into one village, which is



predominantly Christian. Because of water supply, the village was situated in the foot of a hill where there is good water supply. The village itself is more than 2 kilometres away from main road. Far So village was formerly known as Leprosy village. Most of them are farmers and work in their hill-side cultivation which is not permanent cultivation. Because of a landslide in 2015, the whole of **Laizo** village was destroyed and moved to new place between Falam and Haka which is ten kilometres away from Falam. There are about 40 houses in the village. Most of them are farmers who work on hill-side cultivation. Overall, both villages are more developed in terms of infrastructure. Much has been done to reduce the risk of landslides on key roads, and infrastructure development such as schools and electricity have brought a noticeable different to the villages. Livelihoods remain steady, although there seems more smoothing of income now compared to before. Overseas remittance income is fairly obvious in the form of better houses,



but there is also a general absence of working aged adults in the village itself, with the population skewed towards older adults and younger children. In **Pindaya Township in Shan State**, two villages were selected with a particular view to explore findings from the quantitative study,

which showed a significant increase in the proportion of households vulnerable compared to baseline, with negative changes in social capital. Located in the Danu self-administered zone, both Myinmu village, with over 300 households, and Yae Chan Sin village, slightly smaller with 200 households, are close to main road links, and have access to fertile land for a range of agriculture. The general level of infrastructural development is high (roads, electricity, schools) but last 2-3 years have been difficult economically mainly due to crop failures. Both villages have in theory been

recipients of TAG's wild bee project and some aspect of PACT's microfinance, which at some points was referred to as the UNDP women's microfinance project.

In **Myepon Township, Rakhine State, The Chaung Village**, accessible by large boat



through a well-constructed water dyke/channel, was the larger of the two villages selected, with 137 households, compared to the 67 households in the less accessible **Pa Soe Pyauk**. At baseline, Pa Soe Pyauk had no significant buildings, but by endline, the village had been able to build a



school building, and others showed signs of general development. Livelihoods remain challenging, and there is still little opportunity to do agriculture. But NGO activities are more prominent, and small savings groups are helping. Much depends on fisheries, so the visage of the

community is replete with nets stretched out in the sun, ngapi-making, and of course, boats. The dykes protecting waterways remain a crucial infrastructure, enabling not only water access, but protection from saline intrusion of the limited space for agriculture. The image is of a community squeezed between the shoreline and the mountain behind, which is becoming increasingly bare due to copious timber extraction-said to be by commercial companies, but also for local consumption.

We once again visited **Monyway** village, located a few miles out of **Monywa** town in **Sagaing Region**, on the main road, which was previously a well-known site for copper and metal work. Monyway is also famous for teak buildings held together only with wooden nails. **Kyar Paing** village, also a few miles out of Monywa Town, whilst being in a relatively flood-prone and low-lying area, had well-constructed flood defences and dykes which had reduced flood risk in recent years. Both villages relied on mixed agriculture, with both rice paddy and other crops such as beans and pulses being the main livelihood-although one increasingly under threat from changing markets and weather patterns. Here, traditional agriculture is being

replaced by a more urban economy of small-scale trading, as well as increasing levels of out-migration, both domestically and overseas. In Monywa, the respondents were very open and animated, providing a detailed description of the 'debt cycle' and how they have limited number of

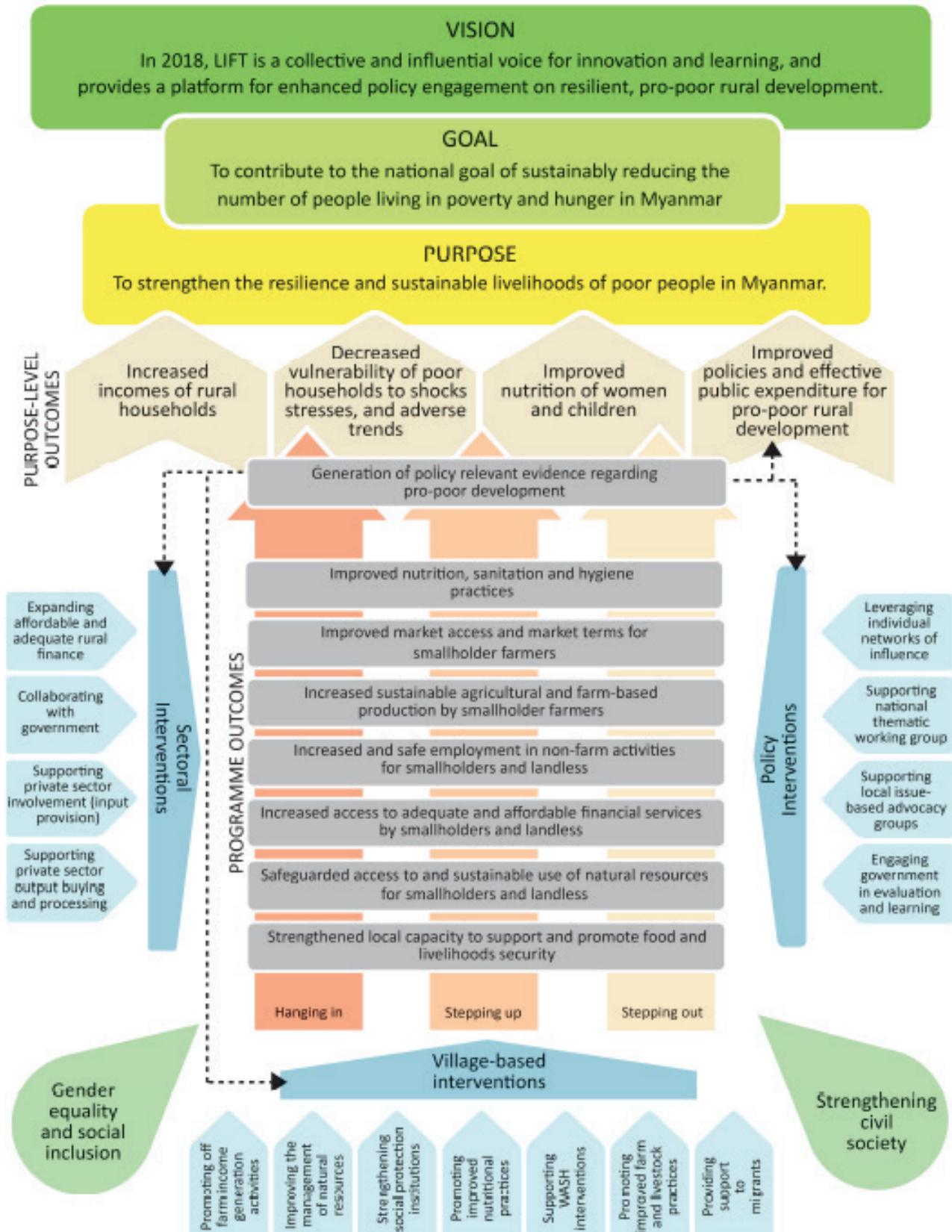


micro-finance operators in the village. Economically, they report to be holding steady at best, with lack of work, volatile crop prices and rising cost of living making life more difficult. Kya Paing was more visibly developed than on the previous visit, and their main trajectory has been to be sellers and merchants. They are blessed with land and easy access to buyers of betel leaf, and that has helped lift many up out of poverty. However, there is now an issue of rising inequality.

The two villages in **Yesagyo Township, Magwe Region**, were selected to enable study of the effects of MCCT related activities. Whilst **Htan Se Pin** was closer to Yesagyo town, **Kyet Su Kyin**, with its historic pagodas also had good road access. Htan See Pin on one level appeared more developed, with a base of traditional farming supplemented with thanaka, blanket making and day labour. But many households rely on seasonal out-migration. MCCT has been operational since June 2016, organized by village volunteers linked to midwife, and delivered by PACT, without any accompanying nutrition training. Kyet Suu Kyin was a deceptively small village with impressive historic pagoda at the entrance. There was a huge hospital being built, and school, all funded by the village abbot. The village has only just over 100 households, and a neighbouring village has only 50 households, although historically they have been larger. In both villages, the presence of accompanying NGO staff seemed to intimidate respondents, who were reluctant to say anything apart from saying that 'everything is okay, there are no difficulties', although after careful probing more detailed responses told a different story. As with Htan See Pin, high rates of out-migration meant that most households had at least one migrant. The main change is that now women as well as men migrate. Blanket-making is done by piece-work, and sent to local factory for finishing. This gives some income which can be managed by the women themselves.

APPENDIX 6

LIFT THEORY OF CHANGE





L i v e l i h o o d s a n d F o o d S e c u r i t y F u n d



