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RESILIENCE AND SUSTAINABLE POVERTY ESCAPES IN RURAL CAMBODIA

Report

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CONTENTS

EXECUTIVE SUMMARY	3
1. INTRODUCTION	5
2. MACRO DRIVERS OF POVERTY REDUCTION	5
3. MESO-LEVEL DRIVERS OF POVERTY MOBILITY	7
4. AN OVERVIEW OF POVERTY DYNAMICS	10
5. WHY DO SOME HOUSEHOLDS ESCAPE POVERTY ONLY TO FALL BACK INTO IT, WHILE OTHERS ESCAPE POVERTY AND REMAIN OUT OF POVERTY OVER TIME?	11
INITIAL HOUSEHOLD RESOURCE BASE	12
HOUSEHOLD CHARACTERISTICS	14
HOUSEHOLD ACTIVITIES	17
HOUSEHOLD SHOCKS AND STRESSORS	20
6. STRATEGIES FOR SUSTAINED POVERTY ESCAPES	24
7. CONCLUDING REMARKS	26
REFERENCES	29
ANNEXES	32
A. STUDY SITES	32
B. PEOPLE MET	34
C. NOTE ON RESEARCH METHODS	1
D. NOTE ON POVERTY IN CAMBODIA	3
E. SUMMARY STATISTICS	6
F. REGRESSION RESULTS	8
G. LIFE HISTORY INTERVIEW CHECKLIST	10

EXECUTIVE SUMMARY

The focus of this report is on household poverty escapes and what explains why some households escape poverty and remain out of poverty (sustainable poverty escape, or resilience), while other households escape poverty only to fall back into poverty (transitory poverty escape) and still other descend into poverty for the first time (impoverishment). Analysis of four rounds of the panel Agriculture, Rural Development and Poverty Reduction Survey in Cambodia spanning 2008-2017 for this case study reveals that just under one fifth of households escaped poverty sustainably, while almost the same share (20%) escaped only to fall back in, or became impoverished for the first time, over the study period. There is considerable dynamism in rural household's poverty status with almost 4 in 5 households living in poverty during at least one of the 2008-17 survey years.

This report combines analysis from four rounds of the panel survey with qualitative research approaches, in particular, key informant interviews, life histories, and participatory wealth ranking in 6 study sites across Cambodia major agro-ecological zones to further investigate the drivers of changes in poverty status. Specifically, it examines why some households are able to escape poverty and remain out of it—that is, they experience sustained escapes from poverty—while others escape poverty only to return to living in it again (i.e., transitory). The report investigates the resources (land, livestock, and other assets), attributes (household composition and education level), and activities (including jobs and engagement in non-farm activities) of households that enable them to escape poverty sustainably and minimize the likelihood of returning to living in poverty again.

Key findings suggest that in Cambodia, the following factors contribute to sustainable poverty escapes:

Initial household resource base

- Initial conditions matter, with transitory escapers from poverty shown by the panel data analysis to be farther below the poverty line compared to sustained escapers in 2008. These initial conditions are influenced by the intergenerational transmission of poverty, with qualitative evidence indicating that parental asset holdings, parental education and parental occupation all influencing the poverty status for the next generation.
- Agricultural land for life history interviewees is important to protect household wellbeing, despite low holdings observed in the panel data and low and variable returns to agriculture observed in the qualitative data.
- In the regression analysis, livestock is the resource variable that is associated with the largest reduction in the risk of a poverty escape being transitory rather than sustained. The qualitative analysis supports this finding as livestock ownership was revealed to protect households from downward mobility, performing an important protective function. This is despite the prevalence of risk associated with livestock rearing and the high levels of initial investment necessary.

Household characteristics

- An increase in the dependency ratio in the household is associated with a reduced risk of impoverishment relative to a sustained escape from poverty in the regression results. In the qualitative findings, the presence of older children in the household can contribute to household income and is crucial for poverty escapes, although younger children and other dependents not economically active lower household wellbeing.
- High capabilities are associated with sustained escapes from poverty, and in particular education and skills enable access to better earnings in the qualitative data. Regression results further identified that household heads who have completed primary or secondary education experience a much lower risk of a poverty escape being transitory rather than sustained- the strongest risk reducer across household characteristic variables.
- Psychosocial factors, such as alcohol and drug abuse/dependence and violence in marital relationships were noted to contribute to downward mobility from in the qualitative findings. Conversely, cooperative spousal relationships, strong kinship networks and supportive social relations were found to be important in enabling successful livelihood strategies in the qualitative

analysis.

- Increased inequality, marketisation of previous collective institutions and increased individualism leaves some excluded and others adversely included according to qualitative findings.

Household activities

- Agriculture is a core livelihood activity for most rural households, but marginal landholdings (panel analysis) and low and variable profit margins (qualitative analysis) mean that sustained poverty escapes cannot be achieved through agriculture alone.
- Regression results reveal that employment of the household head in a non-farm sector is associated with a 70% lower risk of impoverishment relative to a sustained escape from poverty. Qualitative evidence suggests that sustained economic growth has generated these non-farm employment opportunities for poor people in construction, retail, the garments sector and tourism, supporting poverty escapes.
- Regression results indicate that remittances are associated with a 57% lower risk of a transitory rather than sustained escape from poverty - the largest risk reducing variable amongst economic activities. Migration and the sending of remittances are crucial sources of income diversification in quantitative and qualitative data analysis, contributing to poverty escapes for some.
- Loans are associated with a 65% lower risk of chronic poverty relative to a sustained escape in the regression results. In the qualitative data, borrowing is both a source of investment and working capital and a key source of coping following shocks. Many benefit from access to credit but cycles of debt, default and the loss of assets is also a frequent driver of downward mobility.

Household shocks and stressors

- Health shocks in the panel analysis were most common driver of downward mobility, followed by harvest failures.
- According to the qualitative data, poor disaster preparedness leaves farmers highly exposed to uninsured agricultural shocks. Humanitarian responses are short-term and inadequate to enable households to rapidly recover their livelihoods and rebuild their asset bases.
- Low cost health and crop insurance, coupled with enhanced micro-saving opportunities can support resilience and promote sustained escapes according to qualitative data analysis.
- Erosion of common properties (forests, fish stocks) has undermined rural livelihoods, with particularly negative consequences for poorer households interviewed.
- Distress migration has risen as sources of coping are eroded (decline in Common Property Resources, mechanization erodes opportunities for local casual work) while risk exposure remains high and indebtedness grows in the qualitative study sites.

Household strategies resulting in sustained poverty escapes are strongly influenced by diversification and migration, often in conjunction with human capital improvements and underpinned by flexibility to changing contexts.

Note: The report is accompanied by a separate policy brief (Shepherd et al., 2018) which presents policy implications for sustaining poverty escapes in rural Cambodia that emerge from the analysis presented in this study.

I. INTRODUCTION

The focus of this report is to examine the drivers of sustained escapes from poverty (see Box 1). It brings together:

- New **quantitative analysis** of four rounds spanning 2008-2017 of the panel Agriculture, Rural Development and Poverty Reduction Survey in Cambodia.
- Insights from 21 **key informant interviews** with development stakeholders in Phnom Penh, and interviews with knowledgeable community leaders in six village communities: Andong Trach and Khsach Chi Ros (both in Tonle Sap Plain), Ba Baong (Mekong Plain), Dang Kdar and Kanchor (both in Upland Plateau), and Kompong Tnoat (Coastal). These six sites were chosen as analysis of the Agriculture, Rural Development and Poverty Reduction Survey in Cambodia revealed they had high shares of households that were transitory escapers and sustained escapers, and as they are in USAID areas of interest. (See Annex A for a location map and brief description of livelihood systems at the study sites).
- Information from 36 **focus group discussions** (FGDs), separately for men and women and differentiated by poverty trajectory, was used to create historical participatory wealth ranking in the six study villages. These community FGDs provided a snapshot through which to better understand the meso-level drivers of mobility in wellbeing.
- **Life history interviews** with 60 men and women in the six sites, identified from the panel data analysis and confirmed during the participatory wealth ranking as being on the different poverty trajectories. Note: all names of life history respondents have been anonymized in this report.
- **Wider literature** on poverty reduction and poverty dynamics in Cambodia.

Box 1: Definitions of poverty trajectories used in the study

Impoverishment in this study refers to the process whereby a person or household that is non-poor slips into poverty. **Chronic poverty** is long-term poverty that persists over many years or even a lifetime, and is often transmitted intergenerationally. **Transitory poverty escapes** refer to individuals or households that used to live in poverty, succeeded in escaping poverty, and then subsequently fell back into poverty. USAID defines resilience as “the ability of people, households, communities, countries and systems to mitigate, adapt to and recover from shocks and stresses in a manner that reduces chronic vulnerability and facilitates inclusive growth” (USAID, 2015). In this work, resilience is viewed as a set of capacities enabling households to escape poverty and remain out of poverty over the long term (a **sustained poverty escape**), even in the face of shocks and stresses. In other words, in this study, the capacity to be resilient means an individual or household is ultimately able to avoid becoming impoverished or a poverty escape that is transitory.

2. MACRO DRIVERS OF POVERTY REDUCTION

This section draws on the literature and insights from the qualitative fieldwork (FGDs and KIIs, where indicated) to describe how the macro-context, over the previous 10 years, has supported, and in some cases, constrained the opportunities for households to escape poverty sustainably.

Enablers for poverty reduction

Cambodia has experienced **rapid and sustained economic growth** averaging 7.6% per annum between 1994 and 2015, ranking sixth in the world for growth and attaining middle income status in 2015 (World Bank, 2018). This is matched by **impressive poverty reduction**, which fell from 52.2 per cent in 2004 to 18.9 per cent in 2012 and 13.5% by 2014 according to national poverty lines of KHR4,886 per person in 2017, roughly equal to \$1.21 (ADB, 2014; MOP & UNDP, 2018).

Cambodia is undergoing rapid rural transformation, with changes in farming systems (increased capital intensity in agriculture, mechanization, introduction of hybrid rice varieties, and adoption of agro-chemicals), rural society and cultural norms, supported by better linkages to national

and international markets (including input and finance markets), as well as greater exposure to competitive imports in rice and horticulture markets. **Rapid expansion of financial service markets** has had a transformative effect on local economies, with investments in housing, enterprise and agricultural mechanization and intensification. These changes have been supported by **substantial government investment in infrastructure (rural roads, irrigation, electrification, health clinics, schools, and WATSAN)** and for example **membership of the WTO**, and have occurred alongside the widespread out-migration of, particularly, young people (source: national level KIIs, local FGDs and LHIs).

The **labor market has also grown and structurally transformed towards wage-based employment** in manufacturing and services sectors and increased diversity in rural incomes (World Bank, 2018). Growth in textile and apparel exports, the tourism and agriculture sector, and agricultural commodities (e.g., paddy rice and cassava) have helped drive poverty reduction (World Bank, 2018), with employment growth in garments and construction providing **low skill, low barrier to entry work, particularly for large numbers of poorly educated rural women**.

State investments in human capital are supporting Cambodia's growth and economic transformation (national KIIs). Increased school enrolment and retention has been supported by **investments in education capital stock**. This has been matched by **improved health care service provision**. More rural clinics have been built and training has been provided in rural communities to increase health seeking behavior (FGDs). The **rolling out of the ID Poor Card system** has given access to health care free at the point of delivery to those of the poorest included in the scheme (National KIIs, FGDS, LHIs). **Quality improvements in health service provision** have been seen, but there are still **concerns about education quality** and completion rates (particularly for the children from the poorest households), particularly in rural areas (National KIIs).

Migration and **remittances have also a positive effect**, on average, for recipient household wellbeing across the wealth distribution (e.g., Roth and Luca, 2017; Chan and Acharya, 2002; World Bank, 2018). Migration, particularly to Thailand, contributes to upward mobility and for better-off households to further diversify their income sources (Fitzgerald and So, 2002). In addition, the introduction of a minimum wage (USD170/month) in 2018 has been pro-poor. The Labor Advisory Committee, a tripartite body in Cambodia which decides the minimum wage, recently concluded discussions for the 2019 minimum wage and is likely to set the figure at USD182 per month. These changes have increased household income of those in poorly paid employment (World Bank, 2018).

Weak regulation of common properties (forestry, fisheries) has generated short-run benefits for some households, creating opportunities for accumulation through illegal logging and informal privatization of forest lands or through over-fishing (qualitative research finding). However, the costs have been felt widely and are discussed elsewhere in this paper.

Constraints to poverty reduction

In spite of strong rates of poverty reduction, the global financial, food and fuel price crises negatively affected Cambodia's economic growth in 2009. The poorest 20% were the worst affected, experiencing the biggest reduction in consumption during and after the crisis (GoC, 2011).

Partly as a result of these difficulties, many who managed to escape poverty remain close to the poverty line and a very **large proportion of the population is concentrated at the bottom of the income distribution** (ADB, 2014). For example, 1 in 3 rural households surveyed were over the poverty line in 2017, yet with per capita expenditures less than 1.5 times the poverty line (authors' analysis). Moreover, around half a million children under 5 are stunted due to inadequate nutrition, and Cambodia is still categorized by the United Nations as a least developed country (WFP, 2018).

In addition to income vulnerability, a **number of development challenges remain**, including “the need for good quality public service delivery, inclusive development, better land administration and natural resources management, environmental sustainability, and good governance” (World Bank,

2018). Cambodia remains a post-conflict state in many respects, and this influences both governance and the state-citizen compact and the governance of key institutions, including common property resources (CPRs) (national level Key Informant Interviews).

Many key informants felt that **WTO accession may have come too soon for Cambodia**, as the import of key agricultural crops (rice, horticulture) from neighboring Thailand and Vietnam has undercut domestic producers. This also had implications for farm-gate prices, margins and the ability of domestic producers to compete in domestic markets, which in turn has contributed to widespread distress migration of farmers (FGDs). **Increased market integration has also been associated with both social transformation and increased risk exposure.** Some households with low levels of assets, capabilities and social status have struggled to engage with markets on good terms, particularly where there has been an adverse interlocking of social and market relationships, exposing them to new sources of risks and increasing their vulnerability (LHIs, national level KIIs). Mechanization moreover has **reduced the availability of casual agricultural employment**, affecting young males, in particular. Alternatives include informal sector self-employment and migration but poverty, low capabilities and limited social capital (preventing chain migration) can act as barriers (LHIs, FGDs).

Limited availability of social protection (OECD, 2017) has been associated with **the use of credit for consumption smoothing and to fund contingencies** in the face of household and widespread shocks (national level KIIs, FGDs, LHIs). Increased climate and market variability and the squeeze on farm incomes has seen **high levels of default amongst both enterprise and household borrowers**, associated with the distress sales of farms and homes and abrupt downward mobility (LHIs, FGDs, national level KIIs).

Changes in forest management during the post-Khmer Rouge period reduced monitoring and sanctioning of illegal logging. Some households in the life history analysis gained income from illegal logging, clearing land, making informal land claims and establishing cashew, rubber and cassava plantations. These were dwarfed by government awarded land concessions, which resulted in the development of large scale plantations (LHIs, FGDs). The net effect of both these developments has been **the widespread loss of forest managed as common property resources.** This has impacted disproportionately on the poorest, who have been harmed by no longer being able to collect wild foods, palm leaves for construction and firewood.

Loss of common property resources is in the context of governance challenges in Cambodia, including an inadequate separation of powers. **Inadequate separation of powers** between the branches of government (executive, parliament, judiciary) and market integration into key decisions around natural resource allocation undermines its transparency and accountability. This, and the absence of an independent media, places barriers in the way of individuals and groups seeking to highlight breaches of property rights or the constitution.

3. MESO-LEVEL DRIVERS OF POVERTY MOBILITY

This section summarizes findings from FGDs and KIIs with local knowledgeable people to investigate poverty mobility within the six fieldwork communities. Table I lists the key drivers of mobility across sites, followed by an overview of some differences by gender, age group, and poverty status.

Table I: Meso-level drivers of mobility

Drivers of upward mobility	Drivers of downward mobility
<p>Agriculture</p> <ul style="list-style-type: none"> • Expansion from a successful agricultural base: rice growing, with profits invested in diversified livelihoods – able to avoid borrowing 	<p>Agriculture</p> <ul style="list-style-type: none"> • High levels of uninsured agricultural risk: climate change and disasters, harvest failures (flood, drought, pest attack), livestock deaths, price variability - leading to indebtedness (arrears in

- **Livestock rearing for sale:** chickens, ducks, pigs, cattle
- **Higher farmgate prices:** rice, cassava, cashew. In Dang Kdar, agricultural commodity prices had increased 2008-18 (FGD, TE Males, Dang Kdar).
- **Diversification on-farm:** cash crop plantations
- **Intensification of agriculture:** mechanization, adoption of hybrid rice varieties and agro-chemicals. *“In 2000, our land was not flattened and did not have levees for irrigation. We did not have a good road. Rice production was lower and we did not get agro-traders come to the village to collect our rice. Life is better now that the road is improved (following a food for work program in 2005). Families with land next to the new irrigation channel have better yields, too.”* (FGD, SE Men, Ksach Chiros).

Market development/ integration

- Widespread availability of **credit**, enabling investment in agricultural mechanization, intensification and livelihood diversification into village-level non-farm enterprise. *“90% of the villagers have taken out loans from ACLEDA and AMK microfinance institutions in order to purchase chemical fertilizer, petrol, pesticides and as seed funds for small family business. To deal with this, the villagers use dry season rice farming to pay for the loans”* (FGD, TE Males, Ksach Chiros).

Migration

- Migration is a strategy for survival for some households. *“About 70% of the villagers have migrated to Thailand or the Khmer-Thai border. They do not have enough land to farm and fish have declined so much that they do not have enough for their meals”* (FDG CP Males, Andong Trach).
- For others, migration allows for capital accumulation. *“Families with children working in Thailand (construction workers, work in corn or cassava farm) can repay their debts and may even be able to save money and buy things for their house.”* (FGD CP Women, Babaong).

Macro-economic factors

- **Employment opportunities:** economic growth leading to an increase in non-farm employment opportunities elsewhere in Cambodia (garment factories, vegetable selling in Phnom Penh, domestic work, construction)
- **High farm-gate prices**

Enabling environment

- **Financial services:** improved credit availability enabling investment in agriculture and enterprises
- **Investment in infrastructure:** improved irrigation enables some farmers to grow three rice harvests/year. *“In 2016, the local irrigation channel was improved with an additional 10km government-funded project and connected to existing Chinese-built irrigation/water channel, providing important water source to farms. This meant that farmers with fields in the right place could cultivate an extra crop of rice per year.”* (FGD SE Males, Andong Trach). Improved

repaying seasonal loans and, for some, destitution following distress sale of land and home)

- **Farm-gate price variability**
- **Low level of investment in irrigation**
- **Marginal land holdings:** *“Since 2015 there has been a mass flow of migrants, with people leaving because they have small rice lands and do not produce enough to feed the family, particularly from the ‘medium’ and ‘very poor’ class.”* (FGD TE Males, Ksach Chiros).

Market development/ integration

- **Widespread availability of credit**, leading to indebtedness and downward mobility for some. *“People borrow from microfinance organizations at 3% per month to pay for farming inputs and to cover living expenses. They depend on remittances from their children to repay. Some have to borrow from moneylenders at 15% per month.”* (FGD, CP Men, Andong Trach).
- Credit has enabled **mechanization and greater use of agro-chemicals** resulting in fewer casual agricultural laboring jobs, affecting the poorest

Natural disasters

- Natural disasters, particularly frequent floods and pest attacks, lead to harvest failure and downward mobility for some. *“In 2017, flooding destroyed 60% of the rice lands in our village. Because of the climate change people have shifted to cultivating cassava. They think that it is the only solution.”* (FGD, CP Women, Dang Kdar). *“In 2014/15 there was a drought that destroyed three quarters of the rice crop and 95% of households had to get loans to survive.”* (FGD, SE Women, Ksach Chiros).

Policy failures

- **Inadequate regulation of formal sector financial services:** indebtedness with multiple loans from different lenders; poor access for poorer households, leading to borrowing from moneylenders
- **Exclusion from health services:** targeting errors in assessing for ID Poor Cards, inadequate supervision of health staff; distance from services. *“Most very poor people have a poverty note (ID Poor Card), but they do not use it as they have no motorbike to travel the ten km to hospital. Also, nurses and doctors will not take care of them and give them treatment because they are not able to pay for medical care or treatment.”* (FGD, CP Women, Babaong)

Poor regulation of common property resources:

- Erosion of common property resources over fishing and reduction in fish stocks, deforestation - with disproportionate implications for poor people. *“Just five years ago fishermen used to be able to get 50kg fish per day during the season. Now they get half that. This is because of overfishing with illegal equipment. People from outside the village. If we use illegal fishing equipment, we will get arrested, but people with large fishing boats and people with*

<p>road network reduces journey times, increasing market links: <i>“In 2014, the government built a national road which greatly help us to commute for work and to transport our agricultural and fishing products”</i> (FGD TE Women, Ksach Chiros).</p> <ul style="list-style-type: none"> • Improved education provision: transferring ‘soft’ and ‘hard’ skills, able to migrate, access formal employment • Well-functioning land rental markets: households able to rent in land to increase acreage • Regulatory environment enables deforestation: income source – logging, sale of illegally claimed land. <i>“In 2012, people began to make the charcoal from trees cut down 1km away from the village. Around 50% of households in the village now work in this but they are cutting forest which is 20km away from the village”</i> (FGD, CP Males, Dang Kdar). <p>External programs</p> <ul style="list-style-type: none"> • External programs provided by WFP, NGOs (and occasionally government) provide support. Some of this is short-term and benefits individual or household (e.g. humanitarian response following a natural disaster), some longer term (house building), others have individual and community wide benefits (Food for Work building irrigation channels or roads, agricultural technical training, infrastructure investments). <i>“In 2013, Caritas helped build a road on the south bank of the local lake by employing local villagers through a food for work program. Their pay included 4kg of rice, vegetable oil and canned fish per square meter of road</i> (FGD, TE Males, Ksach Chiros) 	<p><i>connections get away with it”</i> (FGD, SE Women, Ksach Chiros)</p> <ul style="list-style-type: none"> • Insecure land tenure: property grabbing by private companies • Education provision poorly matched with market demand, meaning that returns to education are poor unless individuals complete secondary or at least primary education • Inadequate policy interventions to keep poor children in school: long distances to secondary and high schools; lack of transport to distant schools; high drop-out rates; • Low irrigation coverage <p>Adverse social and economic relationships</p> <ul style="list-style-type: none"> • Landlessness: and marginality of land holdings • Adverse inclusion: unable to negotiate good wages for casual employment • Gender inequality: sexual and gender-based violence, limited women’s mobility and economic engagement, lack of cooperation between spouses • Land grabbing: <i>“In 2011, locals were unlawfully and forcibly evicted from their land by companies who wanted it to grow rubber. Some families were paid \$100-200 in compensation, but some weren’t”</i> (FGD, SE Men, Babaong). • Social problems -post-conflict & dynamic social change: gambling, alcohol dependency, drug addiction, crime/ theft/ fraud. <i>“Since 2011, there has been an inflow of drugs into the village. This increased a lot in 2015. The people who migrate to Phnom Penh are the ones that bring and spread the drugs. This affects to the poor and medium category villager. Rich ones are well educated enough to not able to be affected by the drugs”</i> (FGD, SE Women, Babaong).
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There are also differences in these drivers according to gender, age, and poverty status. Some examples are noted here. Risks and opportunities by the **agriculture, fishery and forestry** sectors changed over the last decade, with deforestation and over-fishing squeezing the livelihoods that can be gained through access to common property resources (CPRs). **Weak regulation of CPRs** led to a dramatic decline in livelihoods reliant on forestry and fisheries. The impact has been felt strongly in fisheries since 2008 (Kompong Thnoat) and 2005 in forestry, resulting in adaptive livelihoods including migration. The impacts on the poorest households have been particularly strong. The predominantly male activities of fishing and logging have also become less rewarding. In its place, rice and horticulture imports have grown dramatically in the last 14 years, since Cambodia’s WTO accession, undercutting local farmers who face higher production costs than farmers in neighboring Thailand and Vietnam.

Some have found alternative seasonal employment in plantation agriculture (cashew, cassava, rubber), others have migrated in search of work. Migration expanded over the last decade and increased further within the last five years, with some rural villages hollowed out of older teenagers and younger adults of both sexes. Economic growth offered opportunities for **domestic migration** by both women (for work in the garments sector, tourism, retail and services) and men (construction, agriculture, logging, security, retail and services), sometimes by whole families (construction, agriculture) and for some internationally (largely for work in agriculture and fisheries, sometimes services) has grown as a phenomenon over the last decade and particularly over the last 5 years, meaning that in some rural villages the majority of young people (aged 18-35) have migrated. This provides an important source of **remittances** but places a labor constraint on local livelihoods and changes the nature of village society. Some young people have returned with different social attitudes and expectation to the older generation through access to new ‘reference groups’ and some with drug and alcohol problems.

4. AN OVERVIEW OF POVERTY DYNAMICS

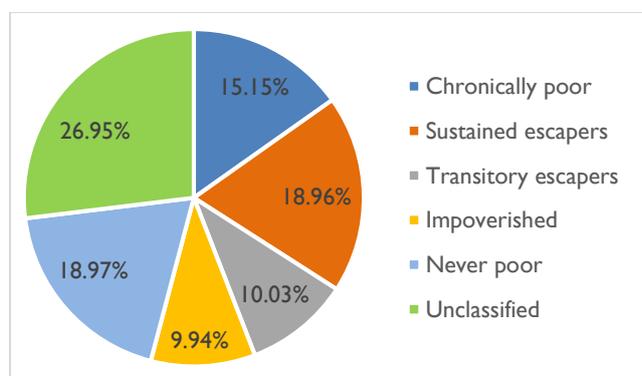
This section introduces analysis of the panel component of CDRI’s Agriculture, Rural Development and Poverty Reduction Survey in Cambodia, which tracked 852 households in rural Cambodia across survey years. This report uses the latest rounds of the survey from 2008, 2011, 2014, and 2017.

In the rural villages surveyed within the CDRI panel, poverty fell rapidly from 54% in 2008 to 39% in 2017 using national poverty lines, representing an annualized reduction of 3% a year. The headcount ratio only spans select villages broadly characterizing the various agro-ecological zones in the country as outlined in the Annex, and so is higher than national poverty rates which also include urban areas where poverty is lower. As noted earlier, nationally, poverty fell from 52.2 per cent in 2004 to 13.5% by 2014 according to national poverty lines of KHR4,886 per person in 2017 (ADB, 2014; MOP & UNDP, 2018).

Examining poverty trajectories across the four survey waves reveals that 19% of households escaped poverty sustainably, while almost the same share (20%) escaped only to fall back in, or became impoverished for the first time between 2008 and 2017.¹ Moreover, almost 4 in 5 households were poor during at least one of the 2008-17 survey years.

Regionally, chronic poverty and transitory poverty escapes were high in comparison to sustained poverty escapes in the Tonle Sap and Plateau regions of Cambodia. Poverty incidence is higher in Tonle Sap (65 per cent in 2008, 51 in 2017) and Plateau (61 per cent in 2008, 43 in 2017) regions, than in Mekong Plain and Coastal provinces, with Tonle Sap households relying strongly on rice cultivation and fishing-based livelihoods, and Plateau households relying on a combination of farming and forest harvests (both logging and NTFPs) from common property resources.

Figure 1: Poverty trajectories in rural Cambodia, percent of households, 2008-2017²



¹ We also compare the 2008-2017 period to the earlier 2000-2008 period for illustrative purposes. This is not strictly comparable in a statistical sense as it employs different weights to account for attrition between 2001 - 2008 compared to 2008-2017. Illustratively, we observe rates of impoverishment significantly reduced over time, affecting 2 in 10 households in 2001-2008 but only 1 in 10 households in 2008-2017. The share of sustained escapers also increased in the recent period, reflecting more upward mobility in later years.

² In the panel dataset, the following identifications are made- Chronic poverty: Poor (P) in 2008, P in 2011, P in 2014, and P in 2017 (PPPP). Sustained escapers: P in 2008, P in 2011, Nonpoor (N) in 2014, N in 2017 (PPNN); or PNNN. Transitory escapers: PNNP, PPNP, or PNPP. Impoverished: NPPP, NNPP, or NNNP. Never poor: NNNN. Unclassified: all other combinations.

The dynamism of poverty in Cambodia and the high share of sustained escapers (2008-2017) makes it attractive to analyze the drivers of the varied poverty trajectories to identify how best to promote escapes from poverty in rural Cambodia that are sustained over time.

5. WHY DO SOME HOUSEHOLDS ESCAPE POVERTY ONLY TO FALL BACK INTO IT, WHILE OTHERS ESCAPE POVERTY AND REMAIN OUT OF POVERTY OVER TIME?

This section investigates the extent to which various factors help promote or constrain the ability of households to escape poverty sustainably. These factors are grouped into those relating to: (i) household resource base; (ii) household attributes and capacities; (iii) engagement in certain activities; and (iv) shocks. The investigation relies on mixed methods research, comprising:

- Analysis of 2008, 2011, 2014, and 2017 waves of the Agriculture, Rural Development and Poverty Reduction Survey in Cambodia rural livelihoods panel. The study sites represent all four of the country’s main rural agro-ecological regions: the Mekong plains; Tonle Sap; upland plateaus; and coastal region. See Annex A for a map of study sites and a description of key village characteristics. See Box 3 for the quantitative approach, and the Annex E and F for regression results and summary statistics based on survey data; and
- Life history interviews with 60 rural households on different poverty trajectories; 36 village-level Focus Group Discussions (FGDs) of men and women; 13 village level Key Informant Interviews (KIs) (with village chiefs and members of their committee, with locally knowledgeable persons, and 1 thematic KI); and 21 national-level KIs. (See Annex C for a note on research methods, which includes a summary of the qualitative approach to data collection and analysis employed in this paper.)

Box 2: Micro poverty correlates from the literature

A panel study of rural livelihoods in 15 rural Cambodian villages between 2008 and 2012 found that households adapt livelihood strategies in response to changing pressures, incentives and opportunities (Jiao et al., 2017). In 2008, key livelihood strategies were subsistence farming (43% of households) and both livestock rearing and the collection of timber and NTFPs (37%). By 2012, these declined in importance as more households shifted to wage labour, migration and medium-scale crop production, indicating a possible trend towards “de-agrarianisation”.

Depletion of agricultural and common property resources, particularly fisheries and forests, has led to rural households reducing their reliance on income from these sources including from non-timber forest products (Chan and Acharya, 2002; Fitzgerald and So, 2002). This placed heavy pressure on household livelihoods, particularly those of the poor who increased their reliance on working for others, for example as casual labourers (Jiao, Pouliot and Walelign, 2017; Fitzgerald and So, 2002).

Household characteristics matter and having a better educated household head and owning more assets were associated with the adoption of high return livelihood activities (Jiao, Pouliot and Walelign, 2017). Conversely, households with poorer adult levels of education and fewer assets find poverty escapes more difficult (ibid).

Box 3: Approach to quantitative analysis

This study employs multinomial logistic regressions to investigate determinants of transitory poverty escapes and impoverishment in Cambodia, relative to sustained poverty escapes. Our equation is similar to that employed in Diwakar (2016), where:

$$Pr(Poverty\ Trajectory_{i,t} = 1 \mid \beta, v_{i,t}) = F(\beta_0 + \beta_1 Head_{i,t} + \beta_2 Region_{i,t} + \beta_3 H_{i,t})$$

for $v_i = (1, Head_i, Region_i, H_i)$

where *Poverty Trajectory_i* is probability of the household *i* experiencing a transitory poverty escape, becoming impoverished, being chronically poor, or sustaining a poverty escape, *Head* is a vector of variables defining the characteristics and activities of the household head, *Region* is a set of dummy variables on village of residence, and *H* is a vector of household specific controls.

The base outcome is whether a household has experienced a sustained poverty escape. A variable coefficient that is greater than one indicates that a household has a higher risk ratio of the outcome (transitory poverty escape or impoverishment) relative to the reference group of sustained escapers. In the analysis that follows, we only comment on regression results that are statistically significant at conventional levels ($p < 0.05$; where $0.05 < p < 0.10$ this is explicitly highlighted as marginally significant).

Note: The (total) poverty line, in this study, is the average amount of money a person needs to spend in order to obtain a daily diet of 2,100 kilo calories by consuming reference food bundle plus the cost of obtaining the items in the non-food allowance (World Bank, 2009). Finally, to account for an attrition rate of 17% across survey years, inverse probability weights have been calculated.

This report aims to understand the drivers of poverty escapes that are transitory rather than sustained. The findings in this section draw on a combination of quantitative and/or qualitative research analysis, as specified in the text.

INITIAL HOUSEHOLD RESOURCE BASE

Key Messages:

- **Initial conditions matter, with transitory escapers from poverty being farther below the poverty line compared to sustained escapers in 2008.**
- **Agricultural land for life history interviewees provides a consumption floor, an important foundational asset, and is important for household wellbeing, despite low holdings observed in the panel data and low and variable returns to agriculture observed in the qualitative data.**
- **In the regression analysis, livestock is the resource variable that is associated with the largest reduction in the risk of a poverty escape being transitory rather than sustained. Qualitative analysis reveals that livestock ownership often protects households from downward mobility, performing an important protective function.**

A household's initial conditions matter. The **severity of poverty influences subsequent poverty trajectories**, with transitory poverty escapers experiencing deeper poverty in 2008 (the initial year of survey analysis) compared to sustained escapers (descriptive statistics, panel data analysis).

Land ownership important even amidst low holdings

These initial conditions also include the amount of land owned. Agricultural land is a crucial resource for rural households in Cambodia according to the qualitative findings, even where agriculture is no longer the principle income source in their diversified livelihoods. **Important pathways to gaining access to land for the purpose of farming include through inheritance, government donation, illegal land clearance/ deforestation, land purchase and land rental.** Landlessness and not inheriting any land were identified by the qualitative research as putting households at a disadvantage at all study sites and by all wealth groups.

In the panel data, however, mean land holdings sizes are low, with a low variation around the mean, and cultivable land area is not a statistically significant correlate of sustained escapes in the regression analysis. All trajectory groups in the panel data have land holdings sizes clustered strongly around the 1.1-1.5 hectare size, other than households that are never poor, who have mean holdings of 1.93 hectares – still under 2 hectares. **Even 2 hectares of rice in the qualitative data was noted to deliver an annual profit of no more than \$200, and so rice farming alone is unlikely to**

enable poverty escapes, which may help explain the lack of statistical significance.

Livestock for productivity and insurance

Livestock ownership is important, with 30 out of 60 life history interviews discussing livestock (12 SE cases, 12 TE cases and 6 CP cases). Panel data analysis shows that, **of resource base related variables, livestock is the variable associated with the largest reduction in the risk of a poverty escape being transitory rather than sustained.** Households that own a value of livestock that is more than the median have a 66% lower risk of experiencing a transitory rather than sustained escape from poverty, the largest risk reduction of all resource variables investigated. Descriptively, too, in the panel data, we observe larger livestock holdings amongst sustained poverty escapers (63% with livestock value more than the median).

However, **livestock rearing appears to predominantly be part of a protective rather than an accumulative strategy.** It is not associated with poverty escapes in the qualitative data, due to a lack of technical knowledge and the high risks associated with livestock disease. Instead, households rely on livestock for household consumption and as stores of value for use in coping, as cattle can be sold relatively fast following a shock. It was found to be rare to develop livestock enterprises as an income source, with only one household during the study period (2008-2017) rearing livestock for sale and another engaging in cattle trading and later moving into butchering, meat processing and retailing. The qualitative research revealed that the frequent purchase by community members of meat products on credit and a subsequent failure to repay their loans acted as a constraint to profitable livestock enterprises. *‘Before chickens they raised pigs and sold the pork. They started that enterprise in 1998. The more they were in the business the more people bought on credit. So, they swapped to chickens. The same thing happened, with people buying on credit and not repaying.’* (Lav Rithy, SE, Babaong).

Box 4: Sources of Sustained Escapes: Stories from Life Histories

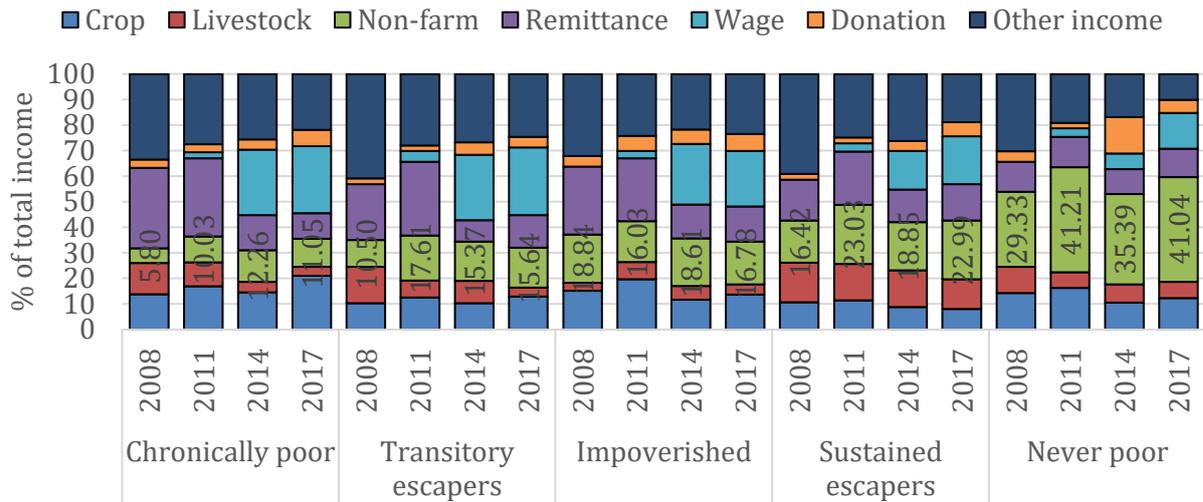
Soeung Ra (68, Sustained Escaper, male), from Andong Trach depends on cattle rearing and remittances from his son, who migrated to Thailand. As a child, his family was poor and lived on a boat. During the Pol Pot regime, he was sent with his wife to dig irrigation channels and farm rice. They did not have enough to eat. Afterwards, he was unemployed and from 1980 lived in a refugee camp. They survived through his wife making and selling Khmer cakes. In 1994 they returned to Andong Trach and he began selling groceries and porridge from his home. Their standard of living increased. Later, his children migrated to Thailand for work and his standard of living increased again, through receiving remittances and selling cattle. All the other Sustained Escaper households from Andong Trach have migrated in the past or currently receive remittances from family members.

Sok Heang (54, Sustained Escaper, female), from Kompong Thnoat, relies on rice farming, fishing (fish, shrimp and crab) and remittances. Three of her children have migrated to Sihanoukville Province and send back USD50-100 per month. She now has a good standard of living, but it has not always been easy. She worked helping her mother fish when she was a child, having dropped out of school in grade 2. During the Pol Pot regime, she did not have enough to eat, and she was separated from her mother and siblings. In 1990 a heavy storm damaged their home and she had to move in with her in-laws. Then, in 1992 her husband became ill and she had to sell all their assets including their residential land to pay for his treatment. Her in-laws gave her a plot of residential land and they rebuilt. Although they still farm and fish, escaping from poverty has depended on her children migrating and sending home remittances. All other Sustained Escapers from Kompong Thnoat receive remittances, too, though some have more diverse livelihoods, incorporating retail and other non-farm enterprises.

Sim Beat (53, Sustained Escaper, male), from Khsach Chiros, has moved slowly out of poverty. His livelihoods center on rice farming and fish farming. He also receives remittances (USD100/month) from his son who works in South Korea (two other children migrated to Phnom Penh – one is a monk and the other is a factory worker). When he was younger he had no residential land. His brother gave him some residential land in 1987 and he cleared one hectare of forest to develop a farm. He also

fished and his wife processed the fish, making Paork and Prahok. In 1988 he used savings to buy a cow, which had 2 calves. He reared the cows and exchanged them for two thin buffaloes. He looked after them and used them to clear more forest land (2.7 ha) and in 1994 he sold 4 buffaloes and got a loan so that he could buy a hand tractor, so that he could farm cleared land. He repaid the loan in 1995. In 2008 he was wrongly arrested for illegal logging and had to spend USD575 to get his freedom. In 2011 3 of his sons were ill. He thought that it was witchcraft and he had to spend USD875 on their treatment, which he had to borrow. In 2018 he began fish farming.

Figure 2: Relative share of household real per capita income sources to total income (constant 2008 price), by poverty trajectory and year



Non-farm assets also affect poverty dynamics

Interestingly, in the regressions, an increase in the share of households who have access to electricity in the village is associated with a 13% less risk of chronic poverty, but a marginal 4% higher risk of transitory escapes and 5% higher risk of impoverishment relative to a sustained escape from poverty. This could reflect the **increased coverage of electricity contributing to a reduced comparative advantage for better-off households in the village**. The reduced risk of being chronically poor might be explained by the ‘neighborhood effect’ (Ravallion and Wodon, 1999) but this does not help to explain greater risks of downward mobility, though it is possible that the presence of electricity encourages greater entrepreneurialism and also greater capital intensification of agriculture, thus intensifying a household’s risk exposure.

Other resource-base variables also affect other poverty trajectories. An increase in asset value and rooms per person are associated with a lower risk of chronic poverty relative to sustaining an escape from poverty in the regression results. In the qualitative analysis, **ownership of productive assets was vital, with further asset accumulation and poverty exits depending on a mix of initial asset ownership, capabilities, asset accumulation, hard work and good fortune**. We turn to these characteristics next.

HOUSEHOLD CHARACTERISTICS

Key Messages:

- An increase in the dependency ratio in the household is associated with a reduced risk of impoverishment relative to a sustained escape from poverty in the regression results. In the qualitative findings, the presence of older children in the household can contribute to household income and is crucial for poverty escapes, although younger children and other dependents not economically active lower household wellbeing.
- High capabilities are associated with sustained escapes from poverty, and in particular

education and skills enable access to better earnings in the qualitative data. Regression results further identified that household heads who have completed primary or secondary education experience a much lower risk of a poverty escape being transitory rather than sustained- the strongest risk reducer across variables, although the secondary education result is only marginally significant.

- Psychosocial factors, such as alcohol and drug abuse/dependence and violence in marital relationships were noted to contribute to downward mobility from in the qualitative findings. Conversely, cooperative spousal relationships, strong kinship networks and supportive social relations were found to be important in enabling successful livelihood strategies in the qualitative analysis.
- Increased inequality, marketisation of previous collective institutions and increased individualism leaves some marginalized and excluded and others adversely included according to qualitative findings.

Dependency ratios a burden depending on household composition

An increase in the dependency ratio in the household is associated with a reduced risk of impoverishment relative to a sustained escape from poverty in the regression results. This depends on the structure of dependents. In the fieldwork, **the presence of adult children still living as part of the household who can contribute to household incomes (either through migration and remittances or through either local livelihood diversification or working on the family farm) was crucial for poverty escapes** (LHIs, FGDs across all study sites and all wealth groups). Even so, limited employment opportunities in the rural economy for young women and men has led to many migrating for work, leaving older people with fewer ‘working age’ household members, with implications for labor availability for household agriculture (qualitative findings).

In the qualitative findings, young children and much older or ill household members were found to be a driver of downward mobility (in particular, many young children rather than working adolescents; chronically ill, disabled or mentally ill household members, old people and few/no economically active household members). This is more pressing today than in the past. **In Cambodia, rapid social change has accompanied the process of economic transformation and there has been a shift from collective activities and responsibilities after the Khmer Rouge regime.** This has seen, for example, reciprocal group labor replaced by marketized approaches to agricultural labor. Richer households – relieved of dense social and economic obligations predicated on reciprocity – are now more able to purchase labor for their enterprises and withdraw from providing their own labor and shared livestock to neighbors. This leaves their poor neighbors without access to the necessary agricultural labor, with substantial negative consequences for their livelihoods, and well-being (life history interviews). This has a stronger impact on households who do not contain healthy young adult members.

Regression analysis also shows that **households with an older household head who moved out of poverty were less able to sustain their progress and more likely to move back into poverty.** For transitory escapers, household heads in the latest survey year were on average 54 years old. The qualitative field work found that the reduced physical strength of older people made the hard physical labor associated with rice farming difficult to sustain and these households were more likely to rent out their rice fields as a source of income than other households. Older people were also more likely to experience health shocks and the associated loss of labor, increased care burden and health costs, leading potentially to downward mobility, a point we return to later (qualitative finding).

Capability development for sustained escapes are crucial

In contrast, having **high capabilities (high education and skills -both soft and hard; entrepreneurial skills; personal characteristics including a strong work ethic, being creative and entrepreneurial) were identified as key characteristics of individuals who led**

their households out of poverty- though these are largely based on elite perceptions of poverty, as many respondents in the village level KIs and FGDs were non-poor (FGDs)³. These traits contributed to the ability of individuals to identify promising livelihood options, be entrepreneurial and imaginative, communicate and negotiate well and work hard (FGDs, LHIs)).

Some of these characteristics may be developed through education. **Regressions identified that household heads who have completed primary or secondary education experience a much lower risk of a poverty escape being transitory rather than sustained, the strongest reduction in risk across variables**. The protective effect is higher for those that have completed their secondary education and is the highest risk-reducing variable in the regression results, albeit only statistically significant at marginal levels.

However, secondary education rates are low, comprising just 10%-12% of transitory and sustained escaper households, as opposed to those that have only primary education, comprising around 58-62% of transitory and sustained escaper households. Moreover, it is not easy for poor people to ensure that their children complete their education. *“Even though education is supposed to be free, we have to pay for food and revision sessions before exams. If parents are too poor to pay for the session, their child cannot go. This is one of the reasons poor children do not do so well at school and drop out”* (FGD, Chronically Poor Men, Kanhchor). In addition, **although education was identified by many as important, high levels of education were necessary to open up to access formal sector employment** (LHIs). *“You need to have completed high school for your education to help you. Then you can go and get a formal sector job. If you have been to school but did not work hard you won’t do well. It is working hard that makes the difference. Those who study hard do so because they want to leave farming”* (Chey Thean, young male FGD respondent, Transitory Escaper, Babaong).

Social phenomena and networks make or break poverty escapes

Even for households with good education and low dependencies, certain social phenomena were found to negatively affect poverty dynamics. In particular, **‘social ills’ – gambling and alcohol dependence (in some sites drug addiction was also mentioned) and a ‘lack of cooperation within the household’ were identified as key poverty drivers at all study sites** (FGDs). Conversely, **cooperation between spouses is crucial to the success of households in maintaining a sustained escape from poverty**, with spouses working together collaboratively and communicating effectively around financial planning and enterprise management (FGDs, LHIs).

Social and kinship networks serve a protective function following livelihood or household shocks, enabling households to employ effective coping strategies (qualitative finding). They can also enable economic progress, providing informal transfers and interest free loans as well as enabling chain migration (LHIs). For example, Lao Ty (SE, Babaong) was given an interest free loan by a relative who had developed an ice factory and the loan allowed him to buy a trailer and start wholesale and retail ice enterprise. The success of this business has allowed him and his wife to invest and expand their business, buy agricultural land, build property and move out of poverty.

³ Village level Key Informant Interviews were conducted with Village Chiefs and members of the village committee. They were almost always members of the local elite. Focus Group Discussions were conducted with groups of chronically poor, transitory escapers and sustained escapers. People from the transitory escaper and sustained escaper categories tended to have elite perceptions of the factors trapping people in chronic poverty.

Conversely, **social exclusion, having limited social networks or being networked solely with other poor people impairs resilience** (qualitative data). Such exclusion can be compounded by the reduced mutuality and reciprocity associated with intensified market penetration and individualism in rural Cambodia. Yan Sophal is a chronically poor widow. In her life history interview, she described the social exclusion experienced by poor families in her village, Baboang. When her husband was alive, he was friendly and liked by everyone. He had many friends who used to come and drink at their compound. Yan felt well connected to her community. But, in retrospect, she feels that they were interested in him because he used to work for them as a laborer (cooperation). When he died, people stopped visiting. She felt left out. She felt that they were not interested in her. She commented that in her village, rich people do not invite poor people to their celebrations because they cannot offer a financial contribution. So, rich people talk to rich people and poor people talk to poor people and the poorest people have very few who will socialize with them. Relatedly, **adverse inclusion⁴ was found to affect some households, with social standing impairing the ability of some to secure average wage rates for casual labor** (qualitative data).

HOUSEHOLD ACTIVITIES

Key Messages:

- **Agriculture is a core livelihood activity for most rural households, but marginal landholdings (panel analysis) and low and variable profit margins (qualitative analysis) mean that sustained poverty escapes cannot be achieved through agriculture alone.**
- **Regression results reveal that employment of the household head in a non-farm sector is associated with a 71% lower risk of impoverishment relative to a sustained escape from poverty in the regression results. Qualitative evidence suggests that sustained economic growth has generated these non-farm employment opportunities for poor people in construction, retail, the garments sector and tourism, supporting poverty escapes.**
- **Remittances are associated with a 57% lower risk of a transitory rather than sustained escape from poverty - the largest risk reducing variable amongst economic activities (regression results). Migration and the sending of remittances are crucial sources of income diversification in quantitative and qualitative data analysis, contributing to poverty escapes for some.**
- **Loans are associated with a 65% lower risk of chronic poverty relative to a sustained escape in the regression results. In the qualitative data, borrowing is both a source of investment and working capital and a key source of coping following shocks. Many benefit from access to credit but cycles of debt, default and the loss of assets is also a frequent driver of downward mobility.**

Agriculture: A pathway of decreasing importance

Agricultural incomes have fallen and agriculture is no longer a dominant source of household income, irrespective of wealth group, including the poorest (panel data analysis). For some, an increase in the cost of inputs and fluctuations in farmgate prices leave them with low profits. Lim Nye, 47 reports *“I have a lot of land, but I have to spend a lot on inputs, so farming is not helping me accumulate. I am stuck in one place. You can’t get rich on farming alone because if you get a good yield so does everyone else and the price goes down”* (Transitory Escaper, FGD respondent, Babaong). *“We are*

⁴ When people are adversely included into social, economic or political processes and institutions, they are included on poor terms.

just farmers. That's what we do. If you are poor you only do farming. Rich people can afford to invest in business and become a trader. Our farms are small so we cannot escape poverty" (Chronically Poor Woman, FGD, Kanhchor).

Nevertheless, agriculture plays a central role in rural livelihoods. *"I have never seen anyone without land climb out of poverty"* (Chronically Poor Man, FGD, Kanhchor). Agriculture allows accumulation and reinvestment for some, as well as serving more widely a 'backstopping' protective, function (panel data analysis). Although land holdings are small across all study sites, **rice cultivation plays a central role in the livelihoods of most households across the study sites, securing home consumption and, in good years, delivering profits that can be reinvested to enable intensification of rice production and diversification into non-agricultural enterprises** (qualitative analysis). However, while chronically poor households rely disproportionately on crop production, the never poor receive proportionately more of their income from self-employment.

Relatedly, **market integration has benefitted some farm households across poverty trajectories, enabling capital intensification with the adoption of hybrid rice varieties, agro-chemicals and mechanization.** Cheak Khoeun a female sustained escaper LHI respondent from Babaong, was able to buy a hand tractor and water pump by drawing on savings from rice farming and fishing, supplemented by borrowing. This has helped to intensify her rice production.

Non-agricultural self-employment and wage income: Increasingly important pathways

Households are increasingly dependent on self-employment and wage income (panel data analysis) and poverty escapes rely on non-farm activities (qualitative analysis). In the panel data, **employment of the household head in non-farm sector (palm juice/ sugar production, small business/petty trade, land sales, migration) is associated with a 71% lower risk of impoverishment relative to a sustained escape from poverty in the regression results.** Income sources have changed since 2008 with wages becoming markedly more important in 2011 (5% of all income), 2014 (22% of all income) and 2017 (23% of all income). Seeking work as a casual agricultural laborer is adopted as a coping strategy by some following harvest failure or other shocks, as it will provide a daily income, but for others from poorer households, casual work is an important component of a diversified livelihood (life history interviews) and casual agricultural work is identified in 14 of the 60 life history interviews. However, laboring for someone else had status implications for some respondents, who made it clear that they would avoid such a role if they could.

Women's economic empowerment and access to labor markets is important for poverty exits in Cambodia. **An increase in the number of working age women within a household is associated with a reduced risk of impoverishment and transitory escapes relative to sustained escapes,** in the regression results. A high proportion of young women from the study sites migrate to work in factories (particularly the garments sector) (qualitative findings) and, until they marry and form their own households, send remittances home.

Migration: expanding opportunities and important source of coping

There is a **trend towards widespread migration into stratified labor markets** domestically and internationally. Thailand, Malaysia and Korea are the most common international destinations in the panel analysis, and are more accessible for the less poor, who are more able to afford a passport and travel costs and more likely to have the social network to enable chain migration. In the qualitative work, 31 of the 60 life history respondents came from a household containing a member who had migrated out of the area (12 from sustained escaper households, 14 from transitory escaper and 5 from chronically poor households), with 33 of the 60 households receiving remittances (see Box 5). *"About half of the households in this village have someone who is migrating for work. They go to Thailand instead of Malaysia because wages are better and it is closer to home. They have had to go because our forest has gone, the population has increased and there are fewer fish because of falling of water level in the river"* (Female FGD, Transitory Escapers. Kanhchor).

Young women are attracted to work in the garments sector, with other opportunities in agriculture, tourism, retail, construction and micro-enterprise (LHIs, FGDs, local KIIs). Despite very substantial deforestation, men from rural villages still travel within Cambodia to engage in (illegal) logging, which was mentioned in 22 of the 60 life history interviews (8 sustained escaper households, 9 transitory escaper and 5 chronically poor) as described in Box 5 (LHIs). Others travel within Cambodia in search of seasonal agricultural employment (LHIs). Economic growth has also driven a boom in the construction sector and the creation of unskilled and semi-skilled jobs, with some whole families migrating from rural villages to work in construction (LHIs, FGDs, local KIIs).

Remittances are associated with a 60% lower risk of a transitory rather than sustained escape from poverty - the largest risk reducing variable amongst economic activities (regression results). Remittances are invested and used in income smoothing and managing contingencies. They are also reported to have increased the localized reserve price of labor, creating wider benefits (qualitative analysis). The panel data shows that in 2014, for instance, about 60% of households with a migrant in all poverty trajectories reported having received in-cash and in-kind transfers from the last 6 months. The proportion (80%) is higher among the sustained escapers than that among households in other poverty categories in the panel data—an indication that remittance can help households move out and stay out of poverty.

The panel data also shows that sustained escapers (58%) relied more on migration to other provinces than households from other poverty trajectories. International migration is important in driving poverty escapes but requires resources (costs of passport and transport, social networks to support chain migration or capabilities to access employment alone), limiting scope for chronically poor people to access these opportunities. *“Those who have passports get higher wages than those who have none.”* (FGD, Men from Transitory Escaper households, Babaong Village,).

Box 5: Migration and remittances

Economic transformation in Cambodia has stimulated widespread rural migration, both seasonal and long-term, to both domestic and international destinations. Individuals from over two thirds of households from all poverty trajectories migrated in 2014 according to the panel data analysis (chronically poor, 70 per cent; 74 transitory escapers, 79 impoverished, 82 sustained escapers, 81 never poor). By 2017 the proportions of households engaged in migration had gone down slightly for all poverty trajectories, except the chronically poor. They were increasingly young (average age of 21.7 in 2014 falling to 18.5 in 2017).

A high proportion of migrants from the study villages have Phnom Penh as their destination. This is complemented by migration to other destinations in Cambodia. International migration is relatively unimportant in 6 of the 9 2017 study sites (ranging from 1% in Kanhchor to 11% in Babaong) but a bigger share in Khsach Chiros (33%), Andong Trach (50%) and Tuol Krasaing (90%), with the variation partially driven by distance from the Thai border).

Many migrants send remittances back to their families, while the proportion receiving remittances dropped between 2014 and 2017. In addition, the relative importance of remittances as a component of household income dropped from 19 per cent in 2008 to 12 per cent in 2017. Over the same period, the role of wages increased from zero in 2008 to 22 per cent in 2017.

Borrowing and debt

Loans are associated with a 65% lower risk of chronic poverty relative to a sustained escape in the regression results. Descriptively, half of the surveyed panel households reported having outstanding loans for the last 6 months and credit or borrowing is present in 36 of the 60 life history interviews. There was moreover a statistically significant increase in the use of formal loans between 2008 and 2017 in the panel data. However, access to formal loans (NGOs/MFIs) is still relatively low among the chronically poor and transitory escapers compared to the sustained escapers.

Poorer households reported in the qualitative research that they are more likely to face barriers to accessing formal credit, meaning that they often pay more for credit accessed through village-level money lenders.

Reasons for borrowing differ with wealth group (seasonal credit for agricultural inputs or short term borrowing to invest in an enterprise for richer households, versus credit for consumption smoothing to cover contingencies, including paying for health care costs for poorer households). While borrowing can be important for being able to afford medical treatment or meet basic needs and can enable investment, accumulation and poverty escape, it can also push some households into a spiral of debt and for even the non-poor it can increase vulnerability in the face of uninsured agricultural and enterprise risk. There is also variation in the way loans from different sources are used. For instance, credit from informal sources was more commonly used to invest in agriculture (42% of loans) than formally sourced credit (23%), but the reverse was found for investment in non-farm enterprise (11% informal, 26% formal). The data also show that households are more likely to turn to informal lenders to fund medical treatment or to offset short-term food shortage.

The impact of debt on households was described by respondents in the qualitative research, with the distress sale of land and other assets following falling into arrears and default. Some households in this situation had been previously doing well and had used seasonal credit to pay for agricultural inputs, but after a harvest failure had been forced to sell land to repay a loan. Others had fallen into a cycle of debt following paying for expensive medical treatment or the failure of an enterprise. Over two thirds of LHI respondents discussed debt (36) (13 sustained escaper, 17 transitory escaper and 6 chronically poor). The importance of debt leading to distress sales is echoed by the panel data analysis, which identified that **land sales provides a higher percentage of total income amongst transitory compared to sustained escapers or impoverished households** (descriptive analysis of panel data).

Social networks for improved livelihoods

The social and economic relations between wealth groups can be an important factor driving poverty differentials. For instance, some non-poor households are able to mechanize, invest in irrigation, employ casual laborers and diversify into non-agricultural enterprises, including retail and moneylending. Others, do not have the savings or income to allow them to make the same choices and with implications for a divergence of consumption levels and asset holdings. For some, **poverty or destitution forced them to engage in highly asymmetric patron-client relationships**, where they provided labor in return for credit or contracted to provide labor for future seasons in return for food and accommodation. This was not discussed in terms of debt bondage but rather seen as the unavoidable consequence of a livelihood shock. However, in the reported cases, such arrangements did take the borrower away from cultivating their own land in a timely way, slowing their recovery from the shock that forced them to borrow in the first place.

HOUSEHOLD SHOCKS AND STRESSORS

Key Messages:

- **Health shocks in the panel analysis were most common driver of downward mobility, followed by harvest failures.**
- **According to the qualitative data, poor disaster preparedness leaves farmers highly exposed to uninsured agricultural shocks. Humanitarian responses are short-term and inadequate to enable households to rapidly recover their livelihoods and rebuild their asset bases.**
- **Low cost health and crop insurance, coupled with enhanced micro-saving opportunities can support resilience and promote sustained escapes according to qualitative data analysis.**

- **Erosion of common properties (forests, fish stocks) has undermined rural livelihoods, with particularly negative consequences for poorer households interviewed.**
- **Distress migration has risen as sources of coping are eroded (Common Property Resources decline, mechanization erodes opportunities for local casual work) while risk exposure remains high and indebtedness grows in the qualitative study sites.**

Shocks do not necessarily impact on a household's ability to sustain a poverty escape. This depends on the nature of the shock and its severity and whether it is idiosyncratic or covariant, sequenced or compound. In the panel data, health shocks were the most commonly reported shock in each panel wave, affecting 60% of the panel household between 2008 and 2017. This is compared with the relative prevalence of the second and third most important shocks, animal deaths, which accounted for only 21-25 per cent of shocks and crop failures, only 12-21 per cent. In the qualitative data, 39 LHI respondents (7 chronically poor, 15 sustained escaper, 17 transitory escaper) discuss health shocks. Relatedly, regressions reveal that an increase in monthly health expenditures is associated with a higher risk of downward mobility, that is increasing both the risk of impoverishment and making it more likely that a poverty escape will be transitory.

Health shocks

Health shocks emerge in the qualitative data as a major driver of downward mobility, with multiple transmission mechanisms. Where an economically productive member of the household becomes ill, the ratio of active members to dependents shifts (illness, additional care needs), while expenditure spikes (transport; food and lodging costs for other household members, when away from home; direct cost of diagnostic tests and/or medical care and/or prescription costs). Even households that were previously non-poor reported that the costs of accessing health care and the loss of earnings from the illness (particularly chronic illness) of a working member could exhaust savings, driving indebtedness and pushing households into downward mobility.

Examples from the LHIs include Leang Leak (female LHI respondent, TE, Baboang) who in 2017, sold 3 cows for USD 900 (KHR 3.6m) and borrowed USD 750 (KHR 3 million) at 2% interest per month to pay for her mother's medical treatment and subsequently her funeral. This was one of the factors that prevented her poverty escape from being sustained. In another example, Suon Ly (male LHI respondent, TE Baboang) sold 5 cows, using savings and borrowed money in 2015 to cover his wife's medical bills (USD3,000) when she was diagnosed with cancer. He added to the loan to meet other contingencies and was still repaying it 3 years later. Meas Thon (female LHI respondent, SE, Kanhchor) sold land in 1998 to pay USD 200 for her parents' medical treatment. In 2018 she had to have surgery for a tumor on her spine, costing USD 5-6,000. She drew down on savings, borrowed from family as well as USD2,000 from AMK microfinance, USD1,000 from her husband's employer.

Access to health care which is free at the point of delivery can serve an important protective function. Holders of ID Poor 1 cards are exempted from direct medical costs, if they attend certain medical facilities. They still face the remainder of health shock related costs and only the very poorest can access free health care through receipt of an ID Poor card. Yet there are known exclusion errors, and the system is not agile enough to keep track of changes in well-being in between assessment periods (qualitative data). Only 6 of the 60 life history respondents in this study had an IDPoor card (3 were chronically poor, 3 transitory poor) and only 38 per cent of chronically poor households reported free or subsidized access to health care in the 2017 panel wave. However, the ID Poor card does not guarantee access. *"The destitute and poor just stay home using traditional treatment in the village. They only go to hospital when they have a serious illness. Even though they have an ID Poor Card they do not use it as they do not have a motorbike to take them the 10km to hospital. Also, nurses and doctors*

will not take care of them and give them treatment because they are not able to pay for it.” (Chronically Poor woman. FGD respondent. Dang Kdar).⁵

The **death of a household member, particularly the male or female heads of household, can have negative consequences for the household as a whole, resulting in downward mobility** (qualitative data). Meeting funeral costs is a contributing factor and this is addressed by burial societies or group insurance schemes, in some study sites, where members pay small monthly dues for disbursements in the event of the death of a household member of the group. A number of older widows relied on non-farm enterprises, partly as a response to the labor constraint following the death of their husband. These ranged from survival level agro-processing enterprises, where women cooked Khmer cakes or smoked fish through to successful enterprises selling second hand clothes (e.g. Mol Sinhet, female SE, Kanchor).

Agriculture-related shocks

The **second and third most commonly reported shock in the panel dataset was animal loss through death or theft, and crop failure, respectively**. Regression results highlight that animal loss is associated with a risk of impoverishment that is increased by over nine times relative to a sustained escape from poverty. Chronically poor and impoverished households were also exposed to crop failure, as crop farming is one of their main economic and livelihood activities. However, high levels of indebtedness mean that many households are balancing on a knife edge, risking default followed by the distress sale of assets and downward mobility. Crop failure as a result of drought, flood or pest attack were repeatedly cited by life history, FGD and KII respondents as undermining livelihoods to such an extent that they, their relatives or neighbors had been forced to sell land or other assets in order to repay seasonal loans or maintain consumption.

Another type of shock is of deforestation, outcomes from overfishing, and other aspects related to forestry and common property resource management. These are explored in Box 5.

Box 5: Forestry and common property resource management

Traditionally in Dang Kdar, villagers engaged in forest-based rice cultivation, using a clearance-fallow system and gathered rattan, vines, vegetables and resin from the forest to use at home and make a living. Forest management was tightly regulated in past decades. However, following the Khmer Rouge regime, regulations loosened with stark implications for forestry and fishing. By 2010 much of the forest had gone and in 2011 many of their young people (particularly women from poorer families) started to migrate for work, going to Thailand, Malaysia, Korea and Phnom Penh. Deforestation sped up between 2013 and 2017. By 2015 there were no large trees left to cut down and by 2018 the forest had been converted into a rubber plantation (FGDs. Dang Kdar).

Now, households mix rain fed rice cultivation, for home consumption, going into the forest to illegally cut trees for firewood or charcoal, risking their chain saws and other tools impounded by ‘environmentalists’, fines, or even arrest. Or, the richer families use former forest lands for plantation agriculture (cassava, rubber, cashew nut). This privatization of common properties has driven up inequality with a huge difference between rich households who illegally obtained large land holdings (up to 30 hectares) through forest clearance in around 2001 and the poorest, who are landless (Female

⁵ This respondent may be referring to an experience some time in the past and some commentators state that ‘under the table payments’ for health service provision have now been eliminated. For more on the health sector see the accompanying policy implications brief by Shepherd et al., 2018.

FGD, Sustained Escapers and Transitory Escapers, Dang Kdar).

Deforestation and the **privatization of large tracts of former forest lands** has limited opportunities for income earning through **illegal logging, charcoal making** or the **collection of Non Timber Forest Products** (qualitative data). Some illegal logging opportunities remain, with men travelling long distances and risking arrest and the confiscation of their equipment. Some households still engage in charcoal making too, but smaller numbers and at a smaller scale (qualitative data). NTFPs are now almost entirely exhausted, with implications particularly for the poorest who used to rely on the forest for food, building materials, firewood, edible plants and meat (qualitative sources).

Overfishing has **eroded fish stocks**, meaning that there are fewer fish and they are smaller in size. *“About half of all households’ fish but it is less profitable now than it was in 2008. There are increasing numbers of fishermen, and that combined with illegal fishing activities – using long, fine mesh fishing nets – is exhausting fish stocks. In 2008 they could find 10kg of fish per day compared to less than 1 kg now. This is consumed at home, rather than sold, but sometimes is not even enough to meet their needs at home”* (Chronically Poor woman, FGD respondent, Andong Trach). This is reiterated by another respondent *“Since the abolition of fishing lots an anarchic approach to fishing has emerged, using non-standardized nets that catch even the tiny fish, leading to a decline in fish populations”* (FGD, Sustained Escaper woman, Andong Trach).

Since the abolition of fishing lots, there emerged anarchic fishing using unstandardized net that catch even the tiny fish, leading to the decline of fish population (FGD, Female Sustained Escapers, Andong Trach). In Kampong Thnoat, a coastal village, where fishing, fish and seafood processing and artisanal salt production are key livelihoods *“people are migrating to Thailand to repay loans or improve their standard of living. They need to do this because of typhoons and declining fish yields”* (due to illegal overfishing from people from outside the village, using trawlers with fine meshed nets, since 2012) (FGD, Female Transitory Escapers, Kampong Thnoat). As a result of declining fish catches, fewer work as fisherfolk (70 per cent in 2013, 50 per cent in 2018) and some are now migrating to work as construction or garment workers in Phnom Penh and Kampot (FGD, Male Sustained and Transitory Escapers, Kampong Thnoat).

The erosion of common property resources has strongly negative implications for livelihoods, disproportionately borne by the poorest households. In panel locations, this has had strong effects in Tonle Sap, which relies on rice cultivation and fishing based livelihoods, and the Plateau region, which relies on a combination of farming and forest harvests (both logging and NTFPs) (panel data analysis). Panel data analysis shows an 11 per cent decline in access to common property resources in just 3 years (2014 -2017) and a dramatic jump in the proportion of households reporting a decline in the availability of a range of timber and NTFPs. For example, 52 per cent of panel households reported that the availability of firewood had declined between 2011-14. By 2014-17, this had increased to 63 per cent. Over the same time periods, those reporting declines in fish increased from 70 to 75 per cent, bamboo and cane from 65 to 100 per cent and timber from 95 to 100 per cent.

Deforestation is also reportedly having **localized climate impacts**, with hotter weather and more frequent and severe droughts and floods. This has greatest implications for the poorest households, as they have less resilience to withstand shocks.

Coping strategies

Coping strategies vary with the household’s initial conditions, capabilities, wealth grouping and livelihood strategy. **In response to shocks, the majority utilized savings, borrowed or sought assistance from relatives or friends** (descriptive analysis of panel data). Many households in the qualitative data did not have adequate savings, livestock herds or other stores of value to meet contingencies without having to adopt abrupt coping strategies. Some were able to borrow informally from their kinship or social networks, but others had to borrow from moneylenders, placing them at risk of entering a debt spiral. In each village, a small number of wealthy individuals act as informal

moneylenders, providing seasonal credit and lending to enable neighbors to meet contingencies (e.g. pay health care costs). Information asymmetries are low, as members of the same community tend to know a great deal about each other's character and circumstances, reducing risk for the lender. But interest rates are high (3-5% per month, compared to 1.5% when borrowing from a bank or MFI) and households that fall into arrears or default can be pushed to sell their assets in order to repay the debt, sometimes even their home and farm (qualitative analysis).

Interestingly, **in the panel data no transitory escaper received assistance from relatives or friends, compared to 4% of sustained poverty escapers in 2017**, reflecting an absence of social capital from which to draw in times of crises. Analysis of the life history interviews showed that livestock was sold to meet contingencies as a form of insurance for transitory escapers and the chronic poor, particularly health shocks.

Reduced opportunities for casual agricultural work in the study sites has limited coping strategies to obtaining help from friends and relatives; borrowing; migrating; withdrawing children from school; reducing consumption; sale of livestock and sale of land, home and other assets and dissolution of the family unit. **The qualitative fieldwork identified a range of adverse coping strategies were being employed, including distress migration and that downward mobility was resulting in some households becoming locked in debt, with arrears driving the distress sale of productive assets and even driving homelessness and the breakup of family units in an attempt to avoid destitution.** Support from NGOs and development programs was also important (identified in 29 of the 60 life history interviews) and included inclusion in savings schemes, receipt of care packages following floods and house building programs).

6. STRATEGIES FOR SUSTAINED POVERTY ESCAPES

Household strategies resulting in sustained poverty escapes occur within an environment influenced by macro and contextual factors. Important macro factors include the sustained economic growth that Cambodia has enjoyed, the growth of employment opportunities in the garments and other sectors, the rapid transformation of the agricultural sector and rural economy, improved rural infrastructure (including roads, water and sanitation, electrification) and education and health provision. Greater integration of rural areas into national and international markets, including labor markets and financial services markets, also provides important context. High levels of risk exposure driven by climatic and market price variability influences investment and enterprise decisions, particularly given the absence of suitable insurance products and the limited availability of social protection instruments.

Against this backdrop, household strategies to sustain poverty escapes respond to opportunities. Quantitative and qualitative research findings indicate that these sustained escapes from poverty are strongly influenced by diversification and migration, often in conjunction with human capital improvements and underpinned by flexibility to changing contexts.

Diversification

Diversification strategies in rural Cambodia depend on household members migrating in search of work and developing non-farm enterprises in addition to the agriculturally based livelihoods of other household members. These migration strategies depend strongly on the household's capabilities and human capital. Qualitative evidence found that on-farm and non-farm diversification was crucial, with few households specializing. Life history evidence shows that of the 24 sustained escapers households in the dataset, 6 have diversified their livelihood strategies over time, following the sequence of deforestation followed by farming (plus some agricultural wage labor migration), then adding in cattle rearing (for household purposes) and then small scale manufacturing production (agro-processing such as running a rice mill, meat processing or cooking) or services (such as transport for people or goods), without abandoning farming.

In terms of **non-farm activities, small scale agro-processing (smoking fish, cooking Khmer cakes, distilling rice wine, producing Khmer noodles) and retail is widespread, along with migration and remittances, and illegal logging.** Some non-poor households have the resources to move into shop-based retail, agro-trading or moneylending. Having a household member in formal sector employment provides greater income stability and is sought after by those with the education or connections necessary, and migration is a source of income diversification for many others.

A key point for sustained escapes is that non-farm and farm activities coexist. **Agricultural intensification within the context of household livelihood diversification into non-farm activities was enabled by irrigation, mechanization, improved availability of seasonal credit and the adoption of hybrid rice varieties and agro-chemicals.** Improved irrigation was made possible by investment in irrigation channels and greater access to electricity (to power irrigation pumps). Further development of the Cambodian irrigation system has the potential to bring all rice farmers into irrigated production and should be explored.

With regards to their agricultural activities, **some households have also been able to expand rice production through the purchase of additional land, others have developed cash crop plantations** (cashew nut, cassava, rubber) (either through illegal forest clearing or land purchase). Mechanization through hand held tractors has freed wealthier rice farmers from dependence on seasonal casual labor, and is mentioned in 28 of the 60 life history interviews (6 sustained escaper households, 5 transitory escaper and 3 chronically poor). Labor constraints, following widespread youth migration, has driven mechanization, but mechanization has in turn reduced casual employment for people from poorer households, cutting off a useful source of coping following shocks⁶. Greater credit availability, technical training and increased local availability of hybrid rice varieties and agro-chemicals. This has boosted rice yields, increasing agricultural incomes but it has also increased risk exposure, as harvest failure remains high and higher input regimes relies heavily on seasonal credit, exposing some producers to falling into default and the distress sale of productive assets.

Acquiring forest land allows households to develop plantation agriculture, growing cash crops and diversifying their rice and fishery-based livelihoods (qualitative data). Many households reported reinvesting profits from rice cultivation and from remittances into improved housing, livestock rearing, transport (motorbikes, cars, trailers) and non-farm enterprises.

Migration

Migration is also important for households across all wealth groups, with some choosing to migrate to support income diversification and accumulation and others pushed into distress migration to avoid destitution (qualitative data). **Particularly where migration is chosen and where an educated migrant can gain formal sector employment their remittances can be important in enabling accumulation and promoting a sustained escape from poverty for the whole family.** The qualitative research found that remittances are used in a range of ways including supporting consumption, investment in improved housing, enterprise diversification or in the accumulation of productive assets. International migration was important, with chain migration and education and skills enabling access to opportunities.

⁶ This finding is supported by Chhun et al., (2015), which finds that the outmigration from rural areas has had significant impacts on farming practices. Farmers no longer able to depend on a ready supply of labourers, have invested in agricultural machinery to maintain production and productivity.

Adaptability capabilities

Qualitative findings illustrate the **powerful and positive impact of adaptive entrepreneurialism**, with people from all wealth groups engaging with imagination and verve with markets – locking together labor, assets and capabilities to generate income streams through non-farm enterprise. Examples include an older widow (ID Poor 1, homeless and chronically poor) who, as she aged and became less physically able, adjusted her livelihood activities. She stopped farming and moved into agro-processing, preparing cooked sweet corn for sale to school children. When this work became too heavy for her, she moved into preparing and both wholesaling and retailing sweet steamed rice (Khmer cakes) and smoked fish. Another example is of a couple who had developed a livestock trading enterprise. The husband had combed the local countryside identifying market-ready cattle to buy and sell on to Vietnamese and domestic agro-traders. They responded to a change in market conditions by obtaining a butchery license and slaughtering the animals themselves, retailing the meat as raw beef from a kiosk on the national highway and by adding value through spicing and drying the meat and selling locally as biltong. **This adaptability relied not only on their entrepreneurial spirit but also on the household's strong asset base, the couple's education, their knowledge of market conditions, their good social network and their cooperative and mutually supportive approach.**

Having the **capabilities, education and skills is identified at all study sites as important in supporting this adaptability, in the diversification of household livelihoods, and the movement into higher return activities and so build resilience over time. Individuals with secondary education are more likely to be able to access formal sector employment.** However, this route to improved life-long earnings and poverty escape was out of reach for many from the poorest families. The qualitative data showed that in many study sites, distance to high schools and secondary schools and the absence of public or school transport meant that access either required ownership of a motorbike. This was particularly the case for girls, given parental anxieties about SGBV. Not owning transport sharply increased the risk of school drop-out, contributing to higher drop-out rates amongst children from poorer families.

7. CONCLUDING REMARKS

Cambodia has experienced rapid and sustained growth. This has enabled poverty reduction, with strong growth in unskilled and semi-skilled employment. Investment in improved rural infrastructure (rural roads, electricity, water and sanitation and buildings for both education and medical facilities) has improved access to markets and to both education and health.

Rural households commonly have rice farming as a central livelihood activity, but this alone cannot enable a poverty escape as the land holdings are typically too small and profit margins too small and variable. The erosion of common property resources, following the loosening of forestry and fishery regulations and the widespread awarding of commercial forestry concessions, has enabled some to privatize resources. However, it has had negative consequences for forest and fishery-based livelihoods, particularly for the poorest, which has pushed some further into poverty and into distress migration. It has also resulted in damage to biodiversity, river flows, local air temperatures and rainfall patterns.

Diversification into non-farm livelihoods, while remaining engaged in rice farming, has been important for livelihood security and accumulation. Mechanization and increased use of agro-chemicals has freed labor from agriculture and employment opportunities in the garments and construction sectors have combined to enable migration, creating a flow of remittances to support enhanced consumption and investment in rural households. For many this has been a crucial source of accumulation and poverty escape.

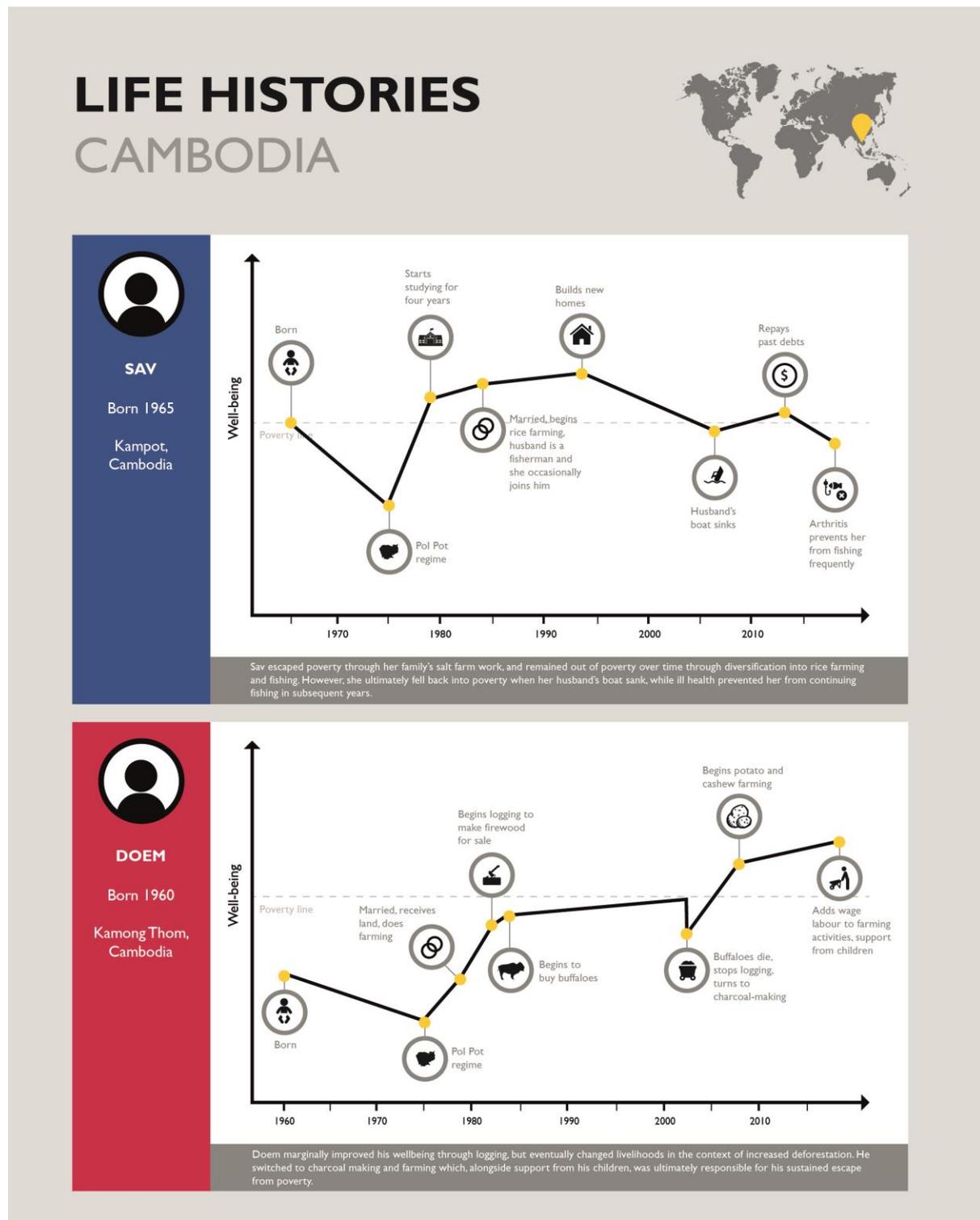
The development of financial services markets has extended seasonal finance to farmers, enabling them

to mechanize and adopt both high yielding varieties and agro-chemicals. However, price variability and the risk of harvest failure has left farmers vulnerable to default and subsequent downward mobility. High input costs and competitive rice and horticulture imports have placed pressure on profit margins, undermining farm-based livelihoods.

Inadequate attention to disaster risk reduction and social protection has meant that rural households are highly exposed to uninsured and poorly mitigated risks, resulting in poverty escapes being reversed as a result of health shocks, crop failure (including as a result of floods, pest attacks and typhoons), livestock deaths and enterprise failure.

The policy implications of these findings are explored in Shepherd et al., 2018.

Figure 3: Life history diagrams



REFERENCES

- ADB (2014) Cambodia Country Poverty Analysis. Manila: Asian Development Bank.
- Asian Development Bank. 2008. *Food Prices and Inflation in Developing Asia: Is Poverty Reduction Coming to an End?* Manila: ADB
- Bader, Christoph, Sabin Bieri, Urs Wiesmann and Andreas Heinemann. 2017. "Is Economic Growth Increasing Disparities? A Multidimensional Analysis of Poverty in the Lao PDR between 2003 and 2013." *Journal of Development Studies* 53(12): 2067-2085.
- Banerjee, Abhijit, Dean Karlan and Jonathan Zinman. 2015. "Six Randomized Evaluations of Microcredit: Introduction and Further Steps." *American Economic Journal: Applied Economics* 7(1): 1-21.
- Baulch, Bob and Agnes Quisumbing. 2011. *Testing and adjusting for attrition in household panel data*. Toolkit Note. Chronic Poverty Research Centre.
- Baulch, Bob and John Hoddinott. 2000. "Economic Mobility and Poverty Dynamics in Developing Countries." *Journal of Development Studies* 36(6): 1-24.
- CARE Cambodia (2013) Promoting Safety of Women Workers in the Beer Industry: Significant Change Stories. London: CARE International.
- CARE Cambodia (2015) Safe Workplaces, Safe Communities: CARE's work with marginalised women in Cambodia to reduce gender-based violence.
- CARE Cambodia (2017) Safe Workplaces, Safe Communities Project
- Carletto, Calogero, Sara Savastano and Alberto Zezza. 2013. "Fact or artifact: The impact of measurement errors on the farm size-productivity relationship." *Journal of Development Economics* 103: 254-261.
- Chan, Sophal and Sarthi Acharya. 2002. *Facing the Challenges of Rural Livelihoods: A Perspective from Nine Villages in Cambodia*. CDRI Working Paper Series No. 25. Phnom Penh: CDRI.
- Chhun, C., Bora, B., and Sothy, E. (2015) *Effect of Labour Movement on Agricultural Mechanisation in Cambodia*. CDRI Working Paper No. 107. Phnom Penh, CDRI.
- Dang, H. Hai-Anh and Peter F. Lanjouw. 2015. *Poverty Dynamics in India between 2004 and 2012: Insights from Longitudinal Analysis Using Synthetic Panel Data*. Washington, D.C: World Bank
- d'Errico, Marco and Stefania Di Giuseppe. 2018. "Resilience mobility in Uganda: A dynamic analysis." *World Development* 104:78-96.
- Ellis, Frank. 1998. "Household strategies and rural livelihood diversification." *Journal of Development Studies* 35(1): 1-38.
- Fitzgerald, Ingrid and So Sovannarith. 2007. *Moving Out of Poverty: Trends in Community Well-Being and Household Mobility in Nine Cambodian Villages*. Phnom Penh: CDRI.
- Fitzgerald, John, Peter Gottschalk and Robert Moffitt. 1998. "An Analysis of Sample Attrition in Panel Data: The Michigan Panel Study of Income Dynamics." *Journal of Human Resources* 33(2): 251-299.
- Government of Cambodia (2011) National Social Protection Strategy for the Poor and Vulnerable. Phnom Penh: Government of Cambodia.
- Government of Cambodia (2014) National Strategy for Food Security and Nutrition (2014-2018). Phnom Penh: Government of Cambodia.
- Haddad, Lawrence and Akhter Ahmed. 2003. "Chronic and Transitory Poverty: Evidence from Egypt, 1997-99." *World Development* 31(1): 71-85.

- Islam, Asadul. 2011. "Medium- and Long-Term Participation in Microcredit: An Evaluation Using a New Panel Dataset from Bangladesh." *American Journal of Agricultural Economics* 93(3): 847-866.
- Jalan, Jyotsna and Martin Ravallion. 2000. "Is transitory poverty different? Evidence for rural China." *Journal of Development Studies* 36(6):82-99.
- Jiao, Xi, Mariève Pouliot and Solomon Zena Walelign. 2017. "Livelihood Strategies and Dynamics in Rural Cambodia." *World Development* 57: 266-278.
- Kang, Chandararot and Dannel Liv. 2011. "Impact of Microfinance Services in Cambodia." Phnom Penh: Cambodia Microfinance Association.
- Ly, S. (2016) Cambodia is now a lower-middle income economy: What does this mean? Blog. World Bank. Washington: World Bank.
- McCulloch, Neil and Bob Baulch. 2000. "Simulating the impact of policy upon chronic and transitory poverty in rural Pakistan." *Journal of Development Studies* 36(6): 100-130.
- Ministry of Agriculture, Forestry and Fisheries. 2017. *Annual Report 2017*. Phnom Penh: MAFF.
- MOP & UNDP (2018) Joint Press Release 8th October 2018. Royal Government of Cambodia, Ministry of Planning, United National Development Programme in Cambodia. Phnom Penh
- National Bank of Cambodia. 2016. *Annual Report 2016*. Phnom Penh: NBC.
- Ngo, Sothath and Chan Sophal. 2010. *The Impact of the Economic Downturn on Households and Communities in Cambodia. Research Report I*. Phnom Penh: Cambodian Economic Association.
- Nielsen, Juul Øystein, Santosh Rayamajhi, Patricia Uberhuaga, Henrik Meilby and Carsten Smith-Hall. 2013. "Quantifying rural livelihood strategies in developing countries using an activity choice approach." *Agricultural Economics* 44:57-71.
- OECD/CDRI. 2017. *Interrelations between Public Policies, Migration and Development in Cambodia*, OECD Publishing, Paris. <http://dx.doi.org/10.1787/9789264273634-en>
- OECD (2017) *Social Protection System Review of Cambodia*. Paris: OECD.
- Oseni, Gbemisola, Kevin McGee and Andrew Dabalen. 2014. *Can Agricultural Households Farm Their Way out of Poverty?* Policy Research Working Paper 7093. Washington, DC: World Bank.
- Oxford Poverty and Human Development Initiative (2017). "Cambodia Country Briefing", Multidimensional Poverty Index Data Bank. OPHI, University of Oxford. Available at: www.ophi.org.uk/multidimensional-poverty-index/mp-i-country-briefings/
- Ravallion, M., and Wodon, Q. 1999 Poor areas, or only poor people? *Journal of Regional Science*, 39/4, 689-711.
- Rigg, Jonathan and Alber Salamanca. 2015. "The devil in the detail interpreting livelihood turbulence from a 25-year panel study from Thailand." *Area* 74(3): 296-304.
- Roth, Vathana and Luca Tiberti. 2017. "Economic Effects of Migration on the Left-Behind in Cambodia." *Journal of Development Studies* 53(11): 1787-1805.
- Roth, Vathana, Abdelkrim Araar, Bopharath Sry and Dalis Phann. 2017. "The dynamics of microcredit borrowings in Cambodia." Working Paper 17, Partnership for Economic Policy.
- Scott, D. Christopher. 2000. "Mixed fortunes: A study of poverty mobility among small farm households in Chile, 1968-86." *Journal of Development Studies* 36(6): 155-180.
- Seng, Kimty. 2017. Rethinking the Effects of Microcredit on Household Welfare in Cambodia. *Journal of Development Studies*. doi: 10.1080/00220388.2016.1214718.

- Sophal and Acharya (2002) *Facing the Challenge of Rural Livelihoods: A perspective from 9 villages in Cambodia*. CDRI Working Paper No. 25. Phnom Penh: CDRI.
- Tong, Kimsun and Phay Sokcheng. 2013. *The Role of Income Diversification during the Global Financial Crisis: Evidence from the Nine Villages in Cambodia*. CDRI Working Paper Series No. 78. Phnom Penh: CDRI.
- Tong, Kimsun, Saing Chan Hang and Hem Socheth. 2009. *Trends in Living Standards of 90 Rural Households in Poverty Dynamics Study Villages*, mimeo (Phnom Penh: CDRI).
- Tong, Kimsun. 2012. *Understanding Poverty Dynamics: Evidence from Nine Villages in Cambodia*. CDRI Working Paper Series No. 69. Phnom Penh: CDRI.
- Tong, Kinsun. (2011). Migration, remittances and poverty reduction: Evidence from Cambodia. *CDRI Cambodia Development Review*, 15(4), 7-12.
- UNDP. 2017. *Graduation-based Social Protection for Cambodia's Extreme Poor: A general equilibrium analysis of economic and poverty impacts*. Phnom Penh: UNDP.
- UNICEF (2008) Cambodia Anthropometrics Survey. Phnom Penh: UNICEF Cambodia.
- USAID (2017) Agriculture and Food Security. Accessed online (8th November, 2018) <https://www.usaid.gov/cambodia/agriculture-and-food-security>
- World Bank (2013) Where have all the poor gone?: Cambodia poverty assessment 2013. World Bank. Washington: World Bank. <http://documents.worldbank.org/curated/en/824341468017405577/Where-have-all-the-poor-gone-Cambodia-poverty-assessment-2013>
- World Bank (2016) Cambodia Economic Update, April 2016: Improving Macroeconomic and Financial Resilience. World Bank. Washington: World Bank. <http://www.worldbank.org/en/country/cambodia/publication/cambodia-economic-update-april-2016>
- World Bank (2018) The World Bank In Cambodia. World Bank. Washington: <http://www.worldbank.org/en/country/cambodia/overview>
- World Bank. 2009. *Poverty Profile and Trends in Cambodia: Findings from the 2007 Cambodia Socio-Economy Survey*. Report No. 48618-KH. Washington, DC: World Bank.
- World Bank. 2017. *World Development Indicators 2017*. Washington, D.C.: World Bank.
- World Bank. 2018. *Cambodia Economic Update: Recent Economic Developments and Outlook*. Washington, D.C.: World Bank.
- World Food Program (2011) *Cambodia School Feeding Impact Evaluation*. Evaluation Brief. Rome. World Food Program Office of Evaluation. World Food Program.
- World Food Program (2018) Cambodia. (Accessed online. Download 19th September 2018. <http://www.wfp.org/countries/cambodia>)
- Ziliak, James P. and Thomas J. Kniesner. 1998. "The Importance of Sample Attrition in Life Cycle Labor Supply Estimation." *Journal of Human Resources* 33(2): 507-530.

ANNEXES

A. STUDY SITES

Figure A1: Agriculture, Rural Development and Poverty Reduction Survey in Cambodia Panel Study Sites



Table A1: Agriculture, Rural Development and Poverty Reduction Survey in Cambodia Panel Study: key characteristics

Agro ecological zone	Province	District	Village	Characteristics
Tonle Sap Plain	Battambang	Thmar Korl	Krasaing	Substantial amount of wet season rice grown on land flooded by the Tonle Sap. Out migration #
Tonle Sap Plain	Battambang	Sangke	Andong Trach	Rain-fed rice farming (70 per cent of households), freshwater fishing (50 per cent of households), migrating to Thai-Khmer border to work in agriculture, Phnom Penh and Thailand*. Wet season rice grown in land flooded by Tonle Sap. Resettlement area for returnees from border camps. #
Tonle Sap Plain	Kampong Thom	Kampong Svay	Khsach Chiros	Irrigated rice production (twice a year, unmechanized) and freshwater fishing (70 per cent of households), fish farming (10 households), livestock rearing, migration – domestically since 1992, to Malaysia, Thailand and South Korea and to Phnom Penh (since 2003, increased since 2012, much increased since 2015 due to harvest failure and low fish catches)*. Floating rice plus freshwater fishing in flooded Tonle Sap. #
Mekong Plain	Prey Veng	Peam Ro	Babaong	Large centralized village. Semi-urban. Rainfed and irrigated rice production (some producing up to 3 harvests per year), non-farm enterprise, migration – mostly domestic*
Mekong Plain	Kandal	Lvea Em	Prek Khmeng	Dry season rice and substantial fishing #
Upland Plateau	Kampong Thom	Santouk	Dang Kdar	Former forest land. Logging, cutting and sale of firewood, charcoal production, (low yield #) rain fed rice production for home consumption, plantation agriculture (richer households) – cashew, cassava, migration*. Formerly dependence on forest #. Deforestation.
Upland Plateau	Kratie	Chhlong	Kanchor	Former forest land. Rice farming, non-farm enterprise, logging, migration*
Upland Plateau	Kampong Speu	Oudong	Trapeang Prei	Low yield wet season rice and dependence on hiring out labor # Wage employment is common, particularly in the garments sector. Opportunities are easier to access with factories being located closer to the provincial town. Increase in large scale plantations.
Coastal	Kampot	Kampot	Kompong Thnoat	Low yield wet season rice. # Coastal mangrove forest. Salt pans - artisanal salt production. Fishing for seafood. Crab, clam, prawn and whelk fishing. Crab (and seafood) processing for sale since 2000. Casual labor (fishing). Livestock rearing. Labor intensive organic rain fed farming largely for home consumption. Migration.*

* Descriptions drawn from village-level FGDs; # From Sophal and Acharya (2002) *Facing the Challenge of Rural Livelihoods: A perspective from 9 villages in Cambodia*. CDRI Working Paper No. 25. Phnom Penh: CDRI.

B. PEOPLE MET

No.	Name	Position	Institution
1	Mr KEO Ouly	Director of IDPoor Department	Ministry of Planning
2	Mr. Richard Marshall	Economist	United Nations Development Programme
3	Dr. Tong Kimsun	Economist	World Bank
4	Ms. Solinn Lim	Country Director	Oxfam
5	Mr. Chan Sophal	Director	Center for Policy Studies
6	Mr. Chea Vibol	Social Policy Specialist	UNICEF
7	H.E Hong Choeun	Head of National Employment Agency	Ministry of Labor and Vocational Training
8	H.E Touch Channy	Director General	Min of Social Affairs Veteran & Youth Rehabilitation & DAC
	Mr. Chhour Sopannha	Director of Social Welfare Department	Min of Social Affairs Veteran & Youth Rehabilitation & DAC
	Mr. Mey Yoeun	Deputy Director of Social Welfare Department,	Min of Social Affairs Veteran & Youth Rehabilitation & DAC
9	H.E Dr. Chan Darong	Director General of Technical Affairs	Ministry of Rural Development
10	Mr. Ly Chea Piseth	Deputy Head of Marketing	Amret Microfinance Plc.
11	Mr. Hean Sokhom,	Director	Centre for Advanced Studies
12	Mr Jan Hansen	Senior Country Economist	Asian Development Bank
13	Mr. Sam Sam Oeun	Managing Director	Buddhism for Health
14	Mr TEK Vannara	Executive Director	NGO Forum
		Deputy Director, Gender and Health Department	Ministry of Women's Affairs
15	Ms. Seng Phal Davin	Department	Ministry of Women's Affairs
16	Ms. Leng Monipheap	Director, Gender and Health Department	Ministry of Women's Affairs
17	Ms. Nom Bophary	Deputy Director, Gender and Education	Ministry of Women's Affairs
18	Ms. Soth Sithon	Director of Economic Development Department	Ministry of Women's Affairs
19	Mr. Mey Yoeun,	Deputy Director of Social Welfare Department	Ministry of Social Affair Veterans and Youth Rehabilitation
20	Indira Bose	Cambodia Country Program	World Food Program
	Andre Martinez	Cambodia Country Program	World Food Program
21	Tim Conway	Senior Social Development Advisor	Department for International Development, UK

C. NOTE ON RESEARCH METHODS

This study adopts a Q-Squared approach in which a mix of qualitative and quantitative methods are sequenced in order to explore poverty dynamics in Cambodia. Four waves of the 2001-2017 Agriculture, Rural Development and Poverty Reduction Survey in Cambodia panel (undertaken by Cambodia Development Resource Institute (CDRI)) were analyzed (2008, 2011, 2014, 2017).

The panel study sites represent the main agro-ecological zones in Cambodia, and while the study villages were purposively selected, they were carefully chosen to be broadly representative of the agro-ecological zone in which they were located.

Quantitative data analysis

The survey instrument used for the Agriculture, Rural Development and Poverty Reduction Survey in Cambodia panel allows for the analysis of the extent of poverty and its dimensions. It is a multi-topic study with the purpose to evaluate poverty and living conditions in Cambodia. This study analyzed the four latest rounds of the panel survey, providing a very recent and topical analysis of poverty to be undertaken. In particular, it analyzed data on 852 panel households which posted consumption aggregates across the survey years. This allowed the study to develop a transition matrix, from which poverty trajectories were mapped and respondents identified for inclusion in key elements of the village-level qualitative work (Focus Group Discussions (FGDs) and Life History Interviews (LHIs)). Subsequently, descriptive statistics were produced, followed by running a range of correlations and regressions. These helped to develop an understanding of the factors associated with the differential poverty trajectories seen in the study sites, so as to examine drivers of transitory and sustained poverty escapes. This analysis used multinomial logit regressions.

Qualitative data collection and analysis

Of the 9 sites covered by the 2008-17 panel waves, 6 sites were identified for in-depth qualitative exploration, based on the presence of sufficient numbers of Sustained Escaper households (SE), Transitory Escaper households (TE) and Chronically Poor households (CP) to enable robust selection of respondents for the qualitative research exercises in the transition matrix for that study site. Qualitative research was then undertaken in each of the six selected study sites using a range of research instruments: Key Informant Interviews (KIIs), Focus Group Discussions (FGDs) and Life History Interviews (LHIs). Respondents for the KIIs were purposively selected in order to allow the research team to explore emerging themes in greater depth.

Two FGDs with Knowledgeable Persons were conducted at the start of work in each study site. This enabled the research team to speak separately to the (politically appointed) village chief and members of his committee and purposively selected older people. During these initial FGDs, the research team produced a historical timeline of key events in the village's recent history (2000-2018), extending further back in time where important events still affected community or household well-being today. They mapped changes in aggregate community well-being against this timeline; identified key shocks and coping strategies and the locally articulated drivers, maintainers and interrupters of poverty. These exercises also adjusted the 'universal well-being scheme' to include locally accepted names and indicators.

Six focus group discussions were then undertaken in each study site (SE women, SE men, TE women, TE men, CP women, CP men), which 'fact-checked' the historical timeline and well-being map, verified the localization of the well-being scheme and the analysis of the key shocks and coping strategies and drivers, maintainers and interrupters of poverty (see annexed checklist).

Life History Interviews were conducted with 4 adults representing Sustained Escaper households (two female heads of household (or their spouse), two male heads of household), 4 adults representing

Transitory Escaper households (2 women, 2 men) and 2 adults representing Chronically Poor households (1 woman, 1 man). These semi-structured interviews (see annexed checklist) sought to understand changes in well-being during the respondents' life course, particularly focusing on, and seeking to understand, changes in livelihood, asset holdings and income (see annexed checklist).

This research material was transcribed (and gaps filled in notes using audio recordings), translated, coded and analyzed using both qualitative analysis software and narrative analysis.

This micro-data was contextualized by an analysis of the international literature and 21 Phnom Penh-based Key Informant Interviews (see annexed B for the list of people met).

D. NOTE ON POVERTY IN CAMBODIA

Box D1: Cambodia Poverty Trends (2000-2018)

Income poverty has fallen dramatically in Cambodia since 2000 and between 2004-2012 the official poverty rate fell sharply from 52.2% to 18.9% (52.2% in 2004, 47.8% in 2007 to 22.9% in 2009, 19.8% in 2011, and in 18.9% in 2012) (ADB, 2014). This was accompanied by a sharp fall in extreme poverty (those living on below \$1.25 per person per day, expressed in 2005 purchasing power parity (PPP) dollars). In 2011, 10% of the population lived on less than \$1.25 per day, down from 31% in 2007, a drop of 21 percentage points in 4 years (ADB, 2014).

While there is widespread agreement that Cambodia has seen rapid and sustained economic growth and poverty reduction there is some controversy over the exact figures (see Box D2, below).

Official figures suggest that most of those who escaped poverty during this period stayed close to the poverty line and poverty figures are sensitive to where the poverty line is drawn (ADB, 2014). A very large share of the population is concentrated at the bottom of the income distribution (ADB, 2014). Vulnerability has grown: in 2007, 28.5% fell between the \$1.25 and \$2.00 per day poverty lines. By 2011, this had grown to 31.2% of the population, or about 4 million people (ADB, 2014). These people remain highly vulnerable to even small shocks which could quickly bring them back into poverty (World Bank, 2013).

Cambodia is a highly rural economy, with an estimated 65% are still dependent on agriculture, fisheries and forestry for their livelihoods (USAID, 2017). So, the rural nature of Cambodia's poverty matters, and official figures suggest that 90% of poor people are rural (ADB, 2014). However, following the finance, food and fuel crisis around 2008, national household data suggested that urban poverty might be on the rise (ADB, 2014). It was 16.3% in 2012 in Phnom Penh and 14.5% in other urban areas (ADB, 2014). It is suggested that urban poverty reduction has been driven by the expansion of the construction and services sectors (World Bank, 2016) and better wages for the urban labor force (World Bank, 2013). Improved health and education and greater investment in infrastructure is also seen as having enabled poor people to exit poverty (World Bank, 2013)

Inequality. The Gini coefficient increased between 2004 and 2007 and then decreased every year until 2011. However, the actual gap between rich and poor has increased in absolute terms between 2004 and 2011 (World Bank, 2013)

Box D2: Cambodia Poverty Discourses

There is disagreement about poverty figures in Cambodia. Officially, poverty in Cambodia fell dramatically from 52.2% in 2004 to 18.9% in 2012, with particularly dramatic poverty reduction took place between 2007 and 2009 during the height of the food, fuel and financial crisis (ADB, 2014). Others suggest these figures are implausible, with economic growth rates peaking at 0.1% during the height of the crisis occurring, supposedly, alongside sustained poverty reduction rates of 7% per annum. These would have required poverty elasticities of growth unseen anywhere in the world, at any time, before.

What are the main points of disagreement?

Poverty reduction continued during the food, fuel and financial crisis.

Rapid and sustained poverty reduction apparently continued during the food, fuel and financial crisis that occurred in (and following) 2008, with household consumption increasing by 40% between 2004 and 2011 (World Bank, 2013). These increases were pro-poor, with higher percentage increases experienced by poor households than the rich (ibid.). The poorest quintile – increased consumption by 56.5% and the richest quintile increased by 26.8% (World Bank, 2013). It is unclear how households funded this.

Poverty reduction did not continue during the food, fuel and financial crisis.

This improvement is not reflected in trends for U5 Stunting and Wasting (children under five years) which show a slight increase from 2005 to 2008 (UNICEF, 2008) and four times more children were found to be wasted than in ‘a healthy population’ (ibid.). Wasting also increased in urban areas over this period, from 9.6% in 2005 to nearly 16% in 2008 (UNICEF, 2008). U5 underweight children decreased by 2.1 percentage points per year, from 2000 to 2005, going from 38.4% to 28.2%. However, no change was seen between 2005 and 2008 and, in fact, 28.8% of children were underweight in 2008, nearly thirteen times higher than the percentage found in a healthy population (UNICEF, 2008)

Poverty figures and the Cambodia food basket

Poverty statistics in Cambodia are based on consumption, with a large survey collected every 5 years (2004, 2009, 2014 etc.). In 2014, data was collected through use of consumption diaries covering a 14 day period, with 7 days recall. However, some of the experts interviewed as part of this study suggest that this does not capture consumption properly, with 60 per cent of households from Phnom Penh not purchasing rice during the 14-day reference period in 2014, simply because rice is an infrequent bulk purchase. The absence of rice from the consumption diaries skews the data as 70 per cent of the poverty line (2,200 calories) is made up of food, and rice remains significant in the consumption basket. There have also been suggestions to improve the questionnaire with more detailed expenditure items and with questions about quantity. In addition, poverty figures are not disaggregated by geographical region, but Phnom Penh, other urban and rural.

Analysis of the Agriculture, Rural Development and Poverty Reduction Survey in Cambodia panel shows negative growth was experienced in all income groups in the 2008-II period, immediately following the global financial crisis (see growth incidence curve, Annex G). This calls into question the credibility of the poverty reduction figures for this period, which suggest that GDP growth of 0.1% delivered 7% poverty reduction per year, with remarkable poverty elasticities of growth. Looking at the longer period of 2008-2011, all groups saw positive income growth, except for the very poorest decile, but only the top decile saw income growth in excess of 5% suggesting that current growth processes are supporting an intensification of inequality.

The sharp reduction in poverty between 2007 and 2009 was achieved by an increase in the price of rice (ADB, 2014). The World Bank largely agrees with this analysis, stating that rural poverty reduction driven by an increase in non-agricultural income sources (World Bank, 2016), better rice prices, better wages for agricultural workers and better income for non-agricultural businesses (World Bank, 2013)

The ADB explains this reduction in poverty by highlighting that rice production increased (23 percent), there were also better rural wages (16 percent) and improved income from non-farm self-employment (19 percent). Migration and remittances may also have had a role - cash and in-kind remittances contribute to increased consumption for many rural households. Income from remittances and transfers increased by 25% between 2004 and 2009, and 43% of households received remittances in 2011 (ADB, 2014)

Perceived well-being: “The regular Survey of Cambodian Public Opinion assesses subjective well-being. In August 2009, the survey asked respondents if their families were richer, the same, or poorer than 1 year earlier. Three out of four respondents felt they were the same or poorer, and only one in four felt they were richer. This result is interesting in light of the dramatic decrease in official poverty incidence from 2007 to 2009, perhaps underscoring that families may have moved only very slightly above the poverty line, resulting in minimal differences in their perceived well-being.” (ADB, 2014)

Box D3: Poverty line and poverty calculations used in Agriculture, Rural Development and Poverty Reduction Survey in Cambodia panel analysis

The (total) poverty line, in this study, is the average amount of money a person needs to spend in order to obtain a daily diet of 2,100 kilo calories by consuming reference food bundle plus the cost of obtaining the items in the non-food allowance (World Bank, 2009). Overall, the cost of consuming the required kilo calories and the non-food allowance per person per day increased by 4.965 per cent per annum between 2008 and 2017, reaching a daily cost of KHR4,886 per person in 2017. In the same period, villages which had seen bigger annual increases in the cost of daily consumption, per person, relative to that of other study sites include Babaong (7.716 per cent annually), Prek Khmeng (6.434 percent) and Tuol Krasaing (6.013 percent). A possible explanation could be that these villages are close to the capital or to a provincial town or market. If true, this suggests that market integration in Cambodia is incomplete. It should also be noted that the estimated food and total poverty lines in this study are quite close to the national rural poverty lines set by the World Bank (2014). For instance, the national rural poverty line in 2011 was KHR4,422 per person per day, whereas our estimate is KHR3,655, a difference of only KHR767.

E. SUMMARY STATISTICS

	Chronically poor		Transitory Escapers		Impoverished		Sustained escapers	
	Obs.	Mean [S.D.]	Obs.	Mean [S.D.]	Obs.	Mean [S.D.]	Obs.	Mean [S.D.]
Resource base								
Real per capita monthly expenditure (1,000 riels)	155	66.823*** [18.625]	82	73.849*** [15.648]	92	67.593*** [16.648]	109	156.531 [67.078]
Asset value (10,000 riels)	155	448.480 [589.244]	82	508.759 [615.490]	92	396.550* [405.671]	109	580.835 [695.474]
Agricultural land area owned (ha)	155	1.404 [1.846]	82	1.515 [1.922]	92	1.121 [1.764]	109	1.420 [2.037]
Livestock>median	155	0.393*** [0.490]	82	0.311*** [0.466]	92	0.347*** [0.479]	109	0.630 [0.485]
Rooms per person	155	0.129*** [0.181]	82	0.159** [0.199]	92	0.124*** [0.174]	109	0.244 [0.259]
Private toilet	155	0.451*** [0.499]	82	0.545 [0.501]	92	0.625 [0.487]	109	0.702 [0.459]
Electricity (%)	155	64.164*** [38.753]	82	82.009* [26.105]	92	86.454 [12.496]	109	88.227 [16.940]
Attributes and capacities								
Household size	155	5.451*** [2.160]	82	5.391*** [2.006]	92	5.260*** [2.092]	109	4.091 [1.379]
Child dependency ratio (0-14)	151	0.530*** [0.403]	82	0.505** [0.374]	88	0.610*** [0.397]	104	0.330 [0.386]
Aged dependency ratio (65+)	151	0.215 [0.341]	78	0.173 [0.327]	88	0.346 [0.385]	104	0.210 [0.351]
(Total) Dependency ratio	151	0.662*** [0.374]	78	0.579* [0.357]	88	0.750 [0.351]	109	0.456 [0.377]
# of male adults (15-64)	155	1.640* [1.032]	82	1.730 [1.213]	92	1.299 [1.031]	109	1.287 [0.935]
# of female adults (15-64)	155	1.635 [0.974]	82	1.686 [0.778]	92	1.470 [0.787]	109	1.607 [0.915]
Age of household head	155	56.454** [11.258]	82	53.678 [11.247]	92	61.098** [15.710]	109	55.373 [11.922]
Female headed household	155	0.331 [0.472]	82	0.268 [0.446]	92	0.347* [0.479]	109	0.191 [0.395]
Head with primary education	155	0.495 [0.502]	82	0.576 [0.497]	92	0.579 [0.496]	109	0.616 [0.489]
Head with secondary education	155	0.089 [0.285]	82	0.120 [0.327]	92	0.085 [0.280]	109	0.095 [0.295]
HH average years of education	153	4.213*** [1.786]	80	5.639 [2.684]	84	4.820* [1.872]	106	5.743 [2.200]
Activities								
HH head is employed	155	0.469 [0.501]	82	0.665 [0.475]	92	0.226*** [0.420]	109	0.587 [0.495]
Head is employed in non-farm	155	0.293 [0.457]	82	0.345 [0.478]	92	0.073*** [0.261]	109	0.332 [0.473]
Share of employed people (%)	155	0.294** [0.231]	82	0.376 [0.254]	92	0.248*** [0.197]	109	0.396 [0.290]
Received assistance	155	0.314 [0.476]	82	0.259** [0.441]	92	0.473 [0.502]	109	0.449 [0.500]
Received remittances	155	0.586 [0.494]	82	0.405* [0.494]	92	0.464 [0.501]	109	0.605 [0.491]
Received loan	155	0.600** [0.492]	82	0.589 [0.495]	92	0.507 [0.503]	109	0.422 [0.495]
Negative shocks								
Presence of negative shocks	155	0.239 [0.428]	82	0.192 [0.396]	92	0.083* [0.278]	109	0.192 [0.396]

# of negative shocks	155	0.229 [0.441]	82	0.247 [0.548]	92	0.077** [0.293]	109	0.249 [0.567]
Human capital shocks	155	0.123 [0.330]	82	0.087 [0.284]	92	0.070 [0.256]	109	0.128 0.336
Environmental shocks	155	0.108 [0.311]	82	0.105 [0.308]	92	0.013 [0.116]	109	0.090 0.288
Business shocks	155	0.008 [0.091]	82	0.015 [0.121]	92	0.007 [0.084]	109	0.008 0.087
Coping strategies								
Savings	155	0.036 [0.188]	82	0.083 [0.277]	92	0.000 [0.000]	109	0.075 [0.265]
Reduced consumption	155	0.003 [0.055]	82	0.000 [0.000]	92	0.000 [0.000]	109	0.000 [0.000]
Borrows	155	0.042 [0.202]	82	0.055 [0.228]	92	0.024 [0.153]	109	0.040 [0.198]
Sales and rents	155	0.021 [0.143]	82	0.000 [0.000]	92	0.007 [0.084]	109	0.018 [0.135]
Assistance	155	0.039 [0.195]	82	0.000 [0.000]	92	0.039 [0.194]	109	0.042 [0.202]
Migration and child labor	155	0.051 [0.221]	82	0.016 [0.126]	92	0.007 [0.084]	109	0.011 [0.105]
Health and Disability								
Per capita monthly health expenditure (1,000 riels)	155	5.445*** [10.913]	82	7.145*** [9.567]	92	8.081*** [9.164]	109	26.773 [83.396]
Household with disabled member	155	0.117*** [0.323]	82	0.041 [0.199]	92	0.011 [0.103]	109	0.011 [0.105]
Context and region								
Distance to the market (km)	155	12.092*** [3.130]	82	11.162 [4.010]	92	9.613*** [4.715]	109	10.936 [3.350]

Notes: refers to values in latest survey year. Characteristics of households who are 5 per cent below or above the total poverty line are excluded. Adjusted Wald test is used to test the null hypothesis of equal means of chronically poor, transitory escapers and impoverishment with those of sustained escapers. *** indicates statistical significance at 1% confidence level, ** 5% and * 10%. Linearized standard errors of the differences are not reported, but available upon request.

F. REGRESSION RESULTS

	Regressions with farm employment variable			Regressions with off-farm variable		
	Chronically poor	Transitory escapers	Impoverished	Chronically poor	Transitory escapers	Impoverished
Resource base						
Asset values (log)	0.7715* [0.1027]	1.1466 [0.1758]	1.3261** [0.1909]	0.7915* [0.1029]	1.1497 [0.1792]	1.3119* [0.1919]
Cultivable land area owned (ha)	1.0184 [0.1046]	0.8527 [0.1130]	0.9873 [0.1071]	0.9885 [0.1018]	0.8490 [0.1132]	0.9777 [0.1057]
The values of livestock (1/0)	1.6747 [0.7523]	0.3423** [0.1624]	0.5214 [0.2423]	1.4979 [0.6622]	0.2866*** [0.1374]	0.4716 [0.2183]
Rooms per person	0.0160*** [0.0233]	1.1431 [1.6326]	0.7036 [0.8930]	0.0137*** [0.0200]	1.6614 [2.4442]	1.1456 [1.5107]
Private toilet (1/0)	0.3714 [0.2851]	2.9858* [1.8908]	3.7625** [2.3384]	0.3251 [0.2497]	2.6554 [1.7213]	3.4238* [2.1565]
Households who access to electricity in the village (%)	0.8748*** [0.0429]	1.0357** [0.0158]	1.0479*** [0.0156]	0.8709*** [0.0430]	1.0390** [0.0158]	1.0501*** [0.0156]
Attributes and capacities						
(Total) Dependency ratio	0.7642 [0.5065]	0.5661 [0.4311]	0.1264*** [0.0892]	0.7738 [0.5042]	0.6498 [0.4981]	0.1432*** [0.1002]
# of working age women (15-64)	0.9336 [0.2113]	0.5539** [0.1540]	0.4464*** [0.1159]	0.9179 [0.2087]	0.5438** [0.1541]	0.4361*** [0.1150]
# of working age men (15-64)	1.2446 [0.2642]	0.8675 [0.2089]	0.7622 [0.1794]	1.2960 [0.2747]	0.9113 [0.2204]	0.8370 [0.1954]
Age of household head	0.8580 [0.1079]	1.3900** [0.2182]	1.2311 [0.1676]	0.8281 [0.1053]	1.4483** [0.2325]	1.2544 [0.1735]
Squared age of household head	1.0016 [0.0012]	0.9971* [0.0015]	0.9983 [0.0013]	1.0020 [0.0013]	0.9966** [0.0015]	0.9982 [0.0013]
Sex of household head (1/0)	0.5319 [0.2542]	1.5819 [0.8387]	1.6510 [0.7948]	0.5585 [0.2580]	1.8586 [0.9953]	2.3279* [1.1191]
Primary education of household head (1/0)	0.3721 [0.5771]	0.0911** [0.1087]	0.3486 [0.4450]	0.3903 [0.6824]	0.0690** [0.0826]	0.2696 [0.3486]
Secondary education of household head (1/0)	0.5349 [0.8618]	0.0795* [0.1047]	0.9785 [1.3241]	0.6086 [1.0937]	0.0629** [0.0833]	0.7684 [1.0500]
Average completed years of schooling of household members (years)	0.6626*** [0.0857]	1.1921 [0.1676]	0.8030 [0.1093]	0.6489*** [0.0843]	1.2232 [0.1736]	0.8354 [0.1151]
Activities						
Occupation of household head: agriculture (1/0)	0.8500 [0.3381]	1.3985 [0.6676]	0.5514 [0.2603]			
Occupation of household head: Off-farm (1/0)				1.3165 [0.5061]	0.2925*** [0.1376]	0.4731* [0.2017]
Share of employed people to household size (%)	0.6828 [0.4767]	0.4304 [0.4149]	0.5741 [0.5155]	0.6248 [0.4502]	0.7114 [0.6858]	0.6059 [0.5608]
Monetary receipts from charity, NGOs, red-cross, political party (1/0)	0.5571 [0.2111]	1.1888 [0.5334]	1.2215 [0.5088]	0.5020* [0.1899]	1.2370 [0.5585]	1.3263 [0.5503]
Remittance (1/0)	1.8776 [0.7344]	0.4041** [0.1835]	1.0260 [0.4365]	1.6895 [0.6518]	0.3391** [0.1560]	0.8831 [0.3759]

Household borrowing (1/0)	0.3483*** [0.1366]	1.0211 [0.4838]	0.8673 [0.3799]	0.3564*** [0.1378]	0.7964 [0.3826]	0.6505 [0.2854]
Negative shocks						
Presence of negative shocks (1/0)	0.5581 [0.2137]	0.4301* [0.2117]	0.4899 [0.2188]			
# of negative shocks	1.4067 [0.3824]	0.7731 [0.2729]	1.2209 [0.3363]	1.4728 [0.4011]	0.7204 [0.2547]	1.1709 [0.3204]
Health and Disability						
Household with disabled members (1/0)	2.1634 [2.8459]	0.5107 [0.5348]	0.3654 [0.4031]	2.1903 [2.8039]	0.3868 [0.4149]	0.3526 [0.3911]
Monthly health expenditure (log)	0.9156 [0.0849]	1.5331*** [0.1692]	1.3671*** [0.1292]	0.8863 [0.0828]	1.5606*** [0.1759]	1.3827*** [0.1331]
Context and region						
Distance to the nearest amenity/services from this village (km)	0.9190*** [0.0259]	1.0455 [0.0353]	0.9095*** [0.0285]	0.9139*** [0.0256]	1.0516 [0.0360]	0.9155*** [0.0283]
Households in the village who have access to piped water (%)	1.0487*** [0.0113]	1.0070 [0.0114]	1.0025 [0.0106]	1.0521*** [0.0113]	1.0135 [0.0114]	1.0060 [0.0105]
Mekong plain	0.8088 [0.4354]	0.6529 [0.3963]	3.8686** [2.3488]	0.9302 [0.4981]	0.8116 [0.4967]	5.4975*** [3.3346]
Plateau	0.1895** [0.1242]	0.7261 [0.5587]	5.0880** [3.5088]	0.1800*** [0.1142]	0.5254 [0.4016]	4.5313** [3.0507]
Coastal	3.5903 [3.3603]	0.1794* [0.1581]	0.1211** [0.1134]	4.1955 [3.9039]	0.1486** [0.1313]	0.1194** [0.1118]
Obs.	382			388		
Log likelihood	-315.6588			-317.31967		
Prob>chi2	0.0000			0.0000		
Pseudo R2	0.3814			0.3850		

Standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1

G. LIFE HISTORY INTERVIEW CHECKLIST

Introduction to The Life History Interviewees

Introduce yourself and the research.

Explain our focus: in as much depth as you need to – that you want to understand changes in assets and well-being during their life and to learn more about why such changes happened. Positive and negative events.

Explain to them that you will be asking questions about their life at five different points in their lives and what has enabled them to improve their lives? (Or if they have fallen back into poverty then why has this happened?)

Obtain informed consent- i.e. ensure respondent understands how their information will be used and agrees to take part in the interview.

- The interview will be anonymous – it won't have their name on it.
- Note taking: you are going to take notes
 - these notes will only be seen by other members of the research team.
 - we will also write short stories from the interview – some of these (without your name) will be seen by other people.
- Audio recording: You are going to record the interview. The recording will only be made available anonymously to the people who will be transcribing the interview.
- Photographs: ask permission to take a photograph of them. Explain that other people will see their photograph (without their name), but they will not be told your name or the name of your village. You can tell us if you do not want us to take your photograph.

If you do not want us to interview you, we will respect your decision.

If you agree to talk to us, but this is not a convenient time, please let us know and we will arrange to come back.

Getting Started

- Write down interviewee's name, age, gender (and interviewer's name).
- Note down individual's appearance and demeanor (happy, sad, anxious, etc.).
- Describe house and compound (and take a photograph of the compound)

Household

Draw a diagram showing the members of the nuclear household (family tree). Note sex/ages (date birth) (if there are other family members living on the same homestead, include those members); who's married to whom; include multiple spouses and circle the participant's household.

Level of education of each household member (especially the person being interviewed, and the spouse). If it's a female-headed household, ask how it became female headed (for example, death of husband or migration or...?)

Focus on people who are living/ eating in that house, rather than trying to cover to the same depth extended family members who live/ eat in other houses in the compound, for instance.

Livelihoods and Assets Now

- Can you rank your livelihood activities now? (i.e. primary, secondary, tertiary livelihood) in terms of time allocation and income.
- For the household (i.e. The sources of livelihoods not just for that individual but for all household members)

Note getting an accurate picture of assets ownership today can be difficult to obtain at the beginning of an interview -so **get a rough estimate now**, then gather a more accurate estimate as the life history proceeds. Please identify reasons for changes in asset holdings over the life course.

Assets:

- What assets does your household own?
 - Rank them by market value?
- Do you own the land you work on? If you had to sell it, whose decision would it be? (sharecropping, leasing, mortgaging- which type?) Or are you working off someone else's land?
- Do you have a mobile phone?
- Do you have jewelery, watches or other valuables?

Physical assets may include land, livestock, implements – hoes, trailers, cart, plough, tractors, power tillers, house(s), 'state' of houses (i.e. iron roof or tiled roof?), household items, mode of transport, consumer durables (e.g. mobile phone, sewing machine) etc.

Get as accurate estimate as possible, but rough magnitude is better than no magnitude at all e.g. More than 5 cows but less than 20].

Other wealth indicators:

- Do you have savings? Do you have credit/ debt?
- Does your house have electricity?

[note to researcher: this is a good point in the interview to locate the current well-being category of the respondent].

Childhood and Adolescence – Approximately 0 To 17 Years Old

[note to researcher: at this point we are getting at parent's livelihood and assets].

Date and place of your birth

- Parents: Where are your parents from? (Origins of the family - in the case of migration from another place, when did they move and why?).
- Siblings – how many? Which birth order? Are they sisters or brothers?

Education:

- What level of education did your parents have? What level of education do you and your siblings have? How was your education, and your siblings' education, funded?

Affirmative action and discrimination:

- Did you or your family receive any benefits (scholarships, stipends, social assistance...) based on your ethnicity during your school years? Did you experience jealousy from friends or family as a result?
 - Did you experience any stigma or discrimination in getting a place at school or during your time at school from anyone (teachers, other students, administration)?
 - What type of discrimination did you face?

Livelihood of parents:

- Rank your parents' livelihoods during your childhood - by income, by food security (What was the main occupation of your parents? What was their second occupation/ source of income? What was their third occupation/ source of income?)
 - If involved in crop/tree agriculture, which ones and why?
 - Who were the crops sold to? Who did you get agricultural inputs from?
 - What was the nature of those relationships (i.e. Selling crops/getting inputs/etc)?

- If involved agribusiness (crop trading, input selling) what type?
- If involved in livestock keeping – what type (goats, cattle, other).

Assets of parents:

- List assets?
- Rank them by value, by importance for income generation

House and compound:

- Describe your house and compound you were a small child (e.g. At age 8 years old)
 - Electricity,
 - Building materials,
 - How did it compare with other compounds in your village?
 - How did it compare with the house that you live in now (much better, better, the same, worse, much worse)?

[note to researcher: this is a good point to locate the participant during childhood in a well-being category].

Home life:

- Relationship with parents and siblings; include step-parents
- Responsibilities – what were your chores?
- Child labor why? Did it affect your decisions regarding education?
- Paid and unpaid labor outside house?
- How was work divided among different members of the family (young, old, men, women)?
- Food – and type of food and number of meals/day?
- Leisure activities?
- Health of interviewee and family during childhood?

Relationships: what relationships were important for building your livelihoods or coping with shocks?

- Key relationships: landlords, friends, employers, richer households, social networks, neighbors, kinship networks, employment relations, cooperatives, banks

Shocks:

- Looking back over this early part of your life, do any difficult events or periods stand out?
- Any health shocks? If so, what was the impact on household well-being?
- Any influential livestock deaths?
- Probe shocks, coping strategies taken, channels of support (relatives, friends, NGOs, religious organizations, moneylender etc)

Changes in assets and livelihoods

- Note carefully all changes in asset levels, ask if there are any assets that have been particularly important for escaping poverty? Any death of livestock that has been influential?
- Note all changes in livelihoods. Any non-farm income/ activity/ enterprise? How did they get this?
- Looking back over this early part of your life are there any positive events or periods that stand out?

Youth – Approximately 13 Years to Marriage (Or 20 Years Old, Whichever Is More Appropriate)

Education:

- When did you leave school? Which school primary or secondary or vocational?
- Probe around if, when and why participant left school?

Assets during youth and before marriage/starting own household:

- What assets did you have before starting own household? (rank by value/ importance for livelihoods)
- How does this compare with assets during childhood?
- Account for changes in asset holdings – probe reasons for sales and main source of finance for purchases or main reasons for acquisitions and from whom.

Livelihoods:

- **First** job/ enterprise/ livelihood activity: what was it?
 - How did you get this job/ start this enterprise/ move into this livelihood activity? Did you get help from anyone?
- What were your livelihood activities?
 - Rank them from the most important to the least, by income.
 - Rank them from the most important to the least by how they support food security (e.g. farming, livestock rearing, job, small enterprise...)?
- If involved in crop agriculture, which crops and why?
 - Who were the crops sold to?
 - Who did you get agricultural inputs from? What was the nature of that relationship?
- NFE:
 - If you started a non-farm enterprise, why?
 - Has it changed your level of well-being? In what way?
- Migration:
 - Was migration, or receiving remittances important to your family when you were a child/youth? Who migrated?
 - If you migrated away from the village, did you get the job before you went? How did you find this job? How did you send money back to your family?
- Constraints
 - Describe working conditions/ constraints/ profitability/ shocks/ risks/ coping strategies associated with the different livelihoods activities

Job, discrimination:

- Did you experience any stigma or discrimination in securing a job or while working by anyone, including line managers, other colleagues, or administration (or clients? service users? if in public-facing job)? Was this in any way related to your ethnicity?
 - Did you receive any different (positive) treatment when trying to get a job because of your ethnicity? Did you experience jealousy from friends or family as a result?
 - Has the government helped or hurt your ability to get a job? Have they taken any action to reduce discrimination that has benefited you specifically? Did you experience jealousy from friends or family as a result?

Any credit/ loan taken out? For what? Largest amount? Ever taken loans to repay loan?

Social protection:

- Any participation or engagement in social safety nets? How important is this for your household? When/ in what event has it been especially important?

Highlights/ lows:

- Looking back over your childhood and youth are there any difficult events or periods that stand out? (use this question to probe shocks, coping strategies, changes in asset levels, changes in livelihood strategies)

- Looking back over your youth are there any positive events or periods that stand out? (use this question to probe opportunities, investments, resilience)

Relationships: what relationships have been important for building your livelihoods or coping with shocks?

- Key relationships: landlords, friends, employers, richer households, social networks, kinship networks, employment relations, cooperatives, banks

Young Adulthood

Marriage:

- Are you married?
- How did you meet your husband/ wife?
- Parent's/ family's views of the match?
- How much was the dowry? Was all of it able to be paid? What was the source of the dowry and where did it go?
- Move to your spouse's village – feelings about that/ problems; setting up home; relationship with in-laws/ extended family/ community; relationship with spouse.

Assets at marriage

- List productive assets at marriage. (e.g. livestock, agricultural implements, land etc.)
- Rank by market value/ importance for livelihood

Livelihoods:

- What were your livelihood activities?
 - Rank them from the most important to the least, by income.
 - Rank them from the most important to the least by how they support food security (e.g. farming, livestock rearing, job, small enterprise...)?
- Which assets were most important for each activity?
- If involved in crop agriculture, which crops and why?
 - Who were the crops sold to?
 - Who did you get agricultural inputs from? What was the nature of that relationship?
 - Who owns the land which you farm on? If sharecropping/ leasing what are the arrangements of this? Is it easy to find land to sharecrop/ lease here?
 - Have price changes of agriculture goods (either inputs such as seeds or the sales price for crops) affected you? How?
- NFE:
 - If you started a non-farm enterprise, why?
 - Has it changed your level of well-being? In what way?
- Migration:
 - Was migration, or receiving remittances important to your family between 2010-2018? Who migrated?
 - If you (or a family member) migrated away from the village, did you (they) get the job before you (they) went? How did you find this job? How did you send money back to your family?
- Constraints
 - Describe working conditions/ constraints/ profitability/ shocks/ risks/ coping strategies associated with the different livelihoods activities
- Opportunities? Did you get any better livelihoods during these years? If so, how?
- Any credit/ loan taken out? For what? Largest amount? Ever taken loans to repay loan?

Children:

- Dates of births for all children
- Any difficulty with births?
- How have you paid for your children's education?
- Remittances from older children/ kin?

Health of family members:

- Health of interviewee and family?
- Any periods of sickness? If so, of who and where did you go for treatment? How much did it cost and how did you find that money?
- Impact of any ill-health on household well-being?

Relationships: what relationships have been important for building your livelihoods or coping with shocks?

- Key relationships: landlords, friends, employers, richer households, social networks, kinship networks, employment relations, cooperatives, banks
- Social networks that helped you get the jobs/work?
- Any participation or engagement in social safety nets? How important is this for your household? When/ in what event has it been especially important?
- Looking back over your early adulthood are there any difficult events or periods that stand out? (use this question to probe shocks, coping strategies, channels of support [relatives, friends, NGOs, church, moneylender etc], changes in asset levels, changes in livelihood strategies).
- Looking back over your early adulthood are there any positive events or periods that stand out? (use this question to probe opportunities, investments, aspiration, resilience)

Late Adulthood

Assets now

- List productive assets now. (e.g. livestock, agricultural implements, land etc.)
- Rank by market value/ importance for livelihood
- Compare assets at marriage and now and account for changes. Account for changes in asset holdings – probe reasons for sales and main source of finance for purchases or main reasons for acquisitions and from whom
- Were any assets particularly important for escaping poverty? Has the loss of any asset been important in the household experiencing any downwards mobility? How did the household cope with the loss of this asset?

Livelihoods now – which assets are important for each livelihood activity?

- What were your livelihood activities?
 - Rank them from the most important to the least, by income.
 - Rank them from the most important to the least by how they support food security (e.g. farming, livestock rearing, job, small enterprise...)?
- Which assets were most important for each activity?
- Compare livelihoods at marriage and now and account for changes.
- Source of finance for any new enterprise/ activity? Why did they decide to start any new activity? Has it changed your level of well-being? In what way?
- If involved in crop agriculture, which crops and why?
 - Who were the crops sold to?
 - Who did you get agricultural inputs from? What was the nature of that relationship?

- Who owns the land which you farm on? If sharecropping/ leasing what are the arrangements of this? Is it easy to find land to sharecrop/ lease here?
- Have price changes of agriculture goods (either inputs such as seeds or the sales price for crops) affected you? How?
- Has there been any change in the profitability of these livelihoods between early adulthood and late adulthood? Has the nature of shocks facing these livelihoods changed over time?
- Constraints
 - Describe working conditions/ constraints/ profitability/ shocks/ risks/ coping strategies associated with the different livelihoods activities
- Opportunities? Did you get any better livelihoods during these years? If so, how?
- Any credit/ loan taken out? For what? Largest amount? Ever taken loans to repay loan?

Health of family members:

- Health of interviewee and family?
- Any periods of sickness? If so, of who and where did you go for treatment? How much did it cost and how did you find that money?
- Impact of any ill-health on household well-being?

Important relationships for sustaining livelihoods and coping with shocks:

- Key relationships: landlords, friends, employers, neighbors, richer households, social networks, kinship networks, employment relations, cooperatives, banks. If any of these relationships have been important, how have they been important?
- Any participation or engagement in social safety nets? How important is this for your household? When/ in what event has it been especially important?
- Looking back over your late adulthood are there any difficult events or periods that stand out? (use this question to probe shocks, coping strategies, channels of support [relatives, friends, NGOs, church, moneylender etc], changes in asset levels, changes in livelihood strategies).
- Looking back over your late adulthood are there any positive events or periods that stand out? (use this question to probe opportunities, investment, acquisition, aspiration, resilience)

Older Age

- How is life during older age?
- Working or not working? Are you able to support yourself? If not, who is supporting you?

Health of family members:

- Health of interviewee and family?
- Any periods of sickness? If so, of who and where did you go for treatment? How much did it cost and how did you find that money?
- Impact of any ill-health on household well-being?
- If you are taking regular medication, where do you get this from?

Widowhood: age when spouse died; implications; feelings; change in status

Relationships with others: responsibilities; support from children; role in community; status?

- Key relationships: landlords, friends, employers, richer households, social networks, kinship networks, employment relations, cooperatives, banks
- Social networks that helped you? How have they helped?
- Any participation or engagement in social safety nets? How important is this for your household? When/ in what event has it been especially important?
- Looking back over your older age are there any difficult events or periods that stand out? (use this question to probe shocks, coping strategies, channels of support [relatives, friends, NGOs, church, moneylender etc], changes in asset levels, changes in livelihood strategies)
- Looking back over your older age are there any positive events or periods that stand out? (use this question to probe opportunities, investment, acquisition, aspiration, resilience)