

Researching livelihoods and  
services affected by conflict



# Surveying livelihoods, service delivery and governance: baseline evidence from Sri Lanka

Working Paper 20

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# About us

Secure Livelihoods Research Consortium (SLRC) aims to generate a stronger evidence base on how people in conflict-affected situations (CAS) make a living, access basic services like health care, education and water, and perceive and engage with governance at local and national levels. Providing better access to basic services, social protection and support to livelihoods matters for the human welfare of people affected by conflict, the achievement of development targets such as the Millennium Development Goals (MDGs) and international efforts at peace- and state-building.

At the centre of SLRC's research are three core themes, developed over the course of an intensive one-year inception phase:

- State legitimacy: experiences, perceptions and expectations of the state and local governance in conflict-affected situations
- State capacity: building effective states that deliver services and social protection in conflict-affected situations
- Livelihood trajectories and economic activity in conflict-affected situations

The Overseas Development Institute (ODI) is the lead organisation. SLRC partners include the Afghanistan Research and Evaluation Unit (AREU), the Centre for Poverty Analysis (CEPA) in Sri Lanka, Feinstein International Center (FIC, Tufts University), Focus1000 in Sierra Leone, Food and Agriculture Organization (FAO), Humanitarian Aid and Reconstruction of Wageningen University (WUR) in the Netherlands, the Nepal Centre for Contemporary Research (NCCR), and the Sustainable Development Policy Institute (SDPI) in Pakistan.

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# Preface

As a multi-year, cross-country research programme, one of the overarching aims of the Secure Livelihoods Research Consortium (SLRC) is to contribute towards a better understanding of what processes of livelihood recovery and state building look like following periods of conflict and how positive outcomes are achieved. Understanding socioeconomic change of this nature is possible only when appropriate evidence exists. This, in turn, requires the availability of reliable longitudinal data that are able to measure shifts, fluctuations and consistencies in the performance of a given unit of analysis (e.g., an individual, a household, an economy) against a set of outcome indicators between at least two points in time.

In order to directly address this need for appropriate evidence – evidence that tells us something about processes playing out over time and in more than a single context – SLRC is carrying out original panel surveys in five countries: the Democratic Republic of Congo (DRC), Nepal, Pakistan, Sri Lanka and Uganda. In two other countries, Afghanistan and South Sudan, we are following a slightly different process by tagging on to existing panel surveys. Designed to produce information on people's livelihoods (income-generating activities, asset portfolios, food security, constraining and enabling factors within the broader institutional and geographical context), their access to basic services (education, health, water), social protection and livelihoods assistance and their relationships with governance processes and practices (participation in public meetings, experience with grievance mechanisms, perceptions of major political actors), the surveys are being implemented twice in each country. The first round took place in late 2012 to early 2013, and the second round – where we will attempt to re-interview the same households – will take place in late 2015 to early 2016.

Undertaking a cross-country, comparative panel survey in difficult environments is far from a straightforward exercise. For purposes of transparency and clarity, we highlight the two major limitations of our baseline analyses and reports below.

The first limitation concerns the methods of statistical analysis used. In order to identify factors that appear to (partially) determine outcomes of various kinds – for example, food security or perceptions of state actors – and compare them across countries, it was necessary for SLRC researchers to carry out standardised regression analyses of the survey data. If the analysis were being carried out solely at the country level, what would ordinarily happen is that each country team would make their own decisions – based on theory, existing knowledge and context – about which dependent and independent variables to include in each of their regressions and which specific regression methods to use. In an attempt to generate findings that would usefully tell us something about patterns or discrepancies across countries, it was originally decided that each country team would include a standardised list of independent variables in each of their regressions and use the same regression techniques; this would then enable the global survey team to produce a synthesis based on similar-looking analyses at the country level. Following such an approach, however, creates a trade-off. For instance, including a long list of comparable independent variables means including certain variables that for some countries may be less relevant or even co-linear (an undesirable statistical situation that arises when two independent or explanatory variables share a strong linear relationship). As such, we have tested for multi-co-linearity in all regressions and have re-specified those that were affected by this problem – at the expense of some cross-country comparability. Other reasons the results are not completely comparable across countries include low numbers of responses for some questions/variables; and low levels of variation between responses for some questions/variables (when either situation arose, such variables were not included in the regression analysis).

The second limitation of the baseline reports is their absence of theory and contextualisation. Indeed, the reports focus primarily on empirical information generated through the surveys, rather than on a thorough theoretical or grounded explanation of findings. As such, direct attempts have not been made to reference the findings in relation to other relevant pieces of research or to provide theoretical explanations of relationships and patterns. This is the result of a choice actively made by SLRC researchers at the outset of the survey process. Rather than allocate additional resources to producing country reports that offer comprehensive explanations of findings, it was decided that the outputs emerging from the first survey round would constitute basic, relatively unembellished baseline reports. While still presenting information of interest, one of the primary purposes of the baseline reports is to provide a clear and solid basis against which the second-round survey data can be compared and interpreted. It is in those second-round reports that far greater attention will be paid to embedding the SLRC survey findings – findings that will be of greater value given their longitudinal and panel nature – in the appropriate theoretical and contextual foundations.

# Abbreviations and acronyms

ANOVA	Analysis of Variance
DCS	Department of Census and Statistics
DSD	Divisional Secretariat Division
ERD	European Report on Development
GND	Grama Niladari Division
MLR	Multinomial Logit Regression
NGO	Non-governmental Organisation
OECD	Organisation for Economic Co-operation and Development
OLS	Ordinary Least Square
SLRC	Secure Livelihoods Research Consortium
VIF	Variance Inflation Factor
ANOVA	Analysis of Variance
DCS	Department of Census and Statistics
DSD	Divisional Secretariat Division
ERD	European Report on Development
GND	Grama Niladari Division

# Executive summary

In 2012, the Sustainable Livelihoods Research Consortium (SLRC) implemented the first round of an original cross-country panel survey in Sri Lanka – a survey designed to produce information on:

- People's livelihoods (income-generating activities, asset portfolios, food security, constraining and enabling factors within the broader institutional and geographical context);
- Their access to basic services (education, health, water), social protection and livelihood assistance; and
- Their relationships with governance processes and practices (participation in public meetings, experience with grievance mechanisms, perceptions of major political actors).

This paper reports on the baseline findings emerging from statistical analysis of the Sri Lankan first-round data. We collected survey data from a sample of 1,377 households. Although the sample was drawn from three districts – Jaffna, Mannar and Trincomalee (purposely selected in order to capture geographic variation in conflict and return, resettlement and recovery time) – our data are not representative at the district level. They are representative, however, at both the grama niladari division (GND) level and village level. Our data are also statistically significant at both of these levels.

## Livelihood status

Four key findings emerge from our analysis of the livelihoods data.

First, **there is a limited set of variables that appear to be significant determinants of livelihood status** in relatively predictable ways. Such variables include level of education among adults, which, as expected, suggests higher levels of education reduce food insecurity and increase assets. Indeed, regression analyses show that the independent variable – ‘share of adults completing primary education’ – produces some of the largest effects on both food security and asset ownership (and is statistically significant at 1% in each case). Similarly, results indicate access to credit has a positive bearing on livelihood status outcomes (improved household wealth and reduced food insecurity), whereas having experienced a shock does not. Having family members who have migrated for employment led, as might be expected, to improved performance on the asset index. Interestingly, past displacement does not seem to impact on either food insecurity or assets.

Second, and perhaps more complex, is the situation with respect to the set of variables associated with access to and experience of services. **Several variables relating to the quality or availability of key public services have predictable effects.** For example, higher levels of satisfaction with the quality of health services are associated with both greater food security and higher wealth, and those receiving livelihoods assistance appear to have higher asset levels (or vice versa: those with greater assets may be more likely to receive livelihoods assistance). But **other effects need to be explored further** – for example, those households that have accessed social protection exhibit greater levels of food insecurity. It is likely this means social protection has been targeted towards less wealthy and more food-insecure households.

Third, **female-headed households** (measured as those households without a male income earner) **tend to do worse across a range of livelihood outcome indicators**, exhibiting lower levels of wealth and higher levels of food insecurity. These findings suggest a strong gendered dimension to livelihoods in the sampled population, and merit further analysis (particularly in order to determine the channels through which the gender effect operates).

Fourth, in explaining variations in levels of food insecurity, **neither being an ethnic minority in the location nor the household's primary livelihood activity appears important.** On the other hand, wealth – proxied by asset ownership – does appear to play a role in determining levels of food insecurity, with



wealthier households being less food insecure. In the case of assets, although being an ethnic minority in the location did not turn out to be significant, urban / rural location and self-assessed safety did: households in urban locations and those feeling safe are more likely to be better off. That asset ownership (wealth) varies by location – with surveyed households in Mannar exhibiting a lower mean asset index score than those in Jaffna and Trincomalee – is possibly a reflection of spatial differences in conflict dynamics and intensity. While both Trincomalee and Jaffna returned to a relative state of peace in 1990 and 1996, respectively, Mannar continued to experience intense periods of conflict up until 2009. The implication here is that household economic recovery takes time, and that additional years are needed for those in Mannar – where processes of resettlement have occurred far more recently – to ‘catch up’. The second round of this panel survey, due for completion in 2015/16, will shed light on whether these households have been able to do so.

### **Access to and satisfaction with services**

There are three key findings in relation to people’s access to, and satisfaction with, basic services.

First, in general, there are **relatively high levels of access to and satisfaction with a range of basic services** within our sample, including health, education and water. For example, less than 10% of each of our samples in Jaffna, Mannar and Trincomalee reported being dissatisfied with their local health clinic; less than 10% of each of our samples by ethnic group (Tamil, Sinhalese, Moor) reported being dissatisfied with the girls’ schools they accessed; and 98% of all households surveyed were able to access a water source in less than 30 minutes, with more than 85% of all respondents reporting that the water they accessed was safe and hygienic. Given that almost 30 years of war had an impact on the effectiveness of government services in many of the surveyed areas, these observed levels of service delivery and satisfaction within our sample arguably constitute a positive indication of the government’s attempts to rebuild social and physical infrastructure. That said, it should also be pointed out that, throughout the war, certain services continued to be delivered in affected areas. Thus, the situation we observe today has not emerged from a blank slate – and any comparisons made between then and now should take this into account.

Second, **respondents’ experiences with social protection, however, are not quite so encouraging.**

Across a range of different transfers – including those associated with the Samurdhi programme (the most commonly accessed form of social protection within our sample), the old-age pension and the disability allowance – by far the most common response when asked about (perceived) impact was ‘the transfer is too small to make a difference’ (more than 50% of responses in most cases). The only exception is the employment pension, where 30% of those who responded stated ‘the transfer helps quite a lot’. These responses stand in contrast with the reported impacts of livelihoods assistance, with the vast majority (more than 75% in most cases) of recipients of fertilisers, seeds and tools and fisher fuel subsidies reporting that the service had helped improve production. However, it should also be pointed out that many types of livelihoods assistance were accessed by only a relatively small number of households in our sample, particularly those pursuing fishing as a primary livelihood activity. Future SLRC qualitative research will help clarify and contextualise these findings.

Finally, although there is no consistent set of variables explaining why some respondents are more satisfied with services than others, there is some indication that **people’s specific personal experiences with the service heavily influences their overall level of satisfaction.** Regression analysis of respondents’ experience with both education and health suggests that factors such as ‘satisfaction with the availability of medicine’, ‘satisfaction with the waiting time in the clinic’, ‘satisfaction with the number of teachers’ and ‘satisfaction with the quality of the teaching staff’ are strongly and positively associated with higher levels of overall satisfaction with those services. For education and livelihoods assistance, we also find that participation in community meetings about schooling/livelihoods assistance appears to influence more positive perceptions of satisfaction. That said, we do not observe

these relationships across all services, suggesting people may attach different levels of importance to particular characteristics of different services.

## **Civic participation and perceptions of government**

Analysis and interpretation of our governance data – drawing on descriptive statistics and regression results – reveal four key findings.

First, a **high proportion of those surveyed – 63% of the sample – reported experiencing at least one service-related problem** within the previous year. Most of these were in relation to either health, water or livelihoods assistance. However, a fairly large proportion of those – often between 30% and 40% – were not aware of how to make a complaint or report their problem. Moreover, **of all the households that experienced a problem, only a minority both reported it to the government and received a response** – just 23% of those that experienced a problem with their health service, for example. Our data thus speak to a range of possible issues regarding people’s experiences with basic services and channels of accountability, including gaps in citizen knowledge about grievance mechanisms; a reluctance or lack of initiative on the part of citizens to make complaints; and/or mixed levels of government responsiveness and accountability. Future research could usefully explore these relationships and potential explanations in greater depth. Finally, it should be noted that respondents from households that experienced a service-related problem had worse perceptions of both local and central government.

Second, we find that the **vast majority of those who were aware of community meetings about service provision attended them**. Indeed, for meetings regarding all kinds of public services – including health, education, water, social protection and livelihoods assistance – more than 90% of households in our sample participated if they happened (and if they knew about them). This suggests that people, at least in our sample areas, are keen to engage in local decision-making processes concerning service provision, and that – if they are invited – will participate. There appear to be some relationships with people’s perceptions of government here: the higher the number of service-related community meetings held and the more frequently respondents were consulted otherwise, the more positive the respondent’s perceptions of local and central government was likely to be.

Third, although respondents’ perceptions of the government are mixed, we find that **local government is generally perceived more positively than central government**. For example, 53% of respondents felt the local government cared about their views; when asked the same about central government, the figure was 20 percentage points lower. Similarly, 34% of respondents felt the decisions of the local government (concerning service delivery) either ‘completely’ or ‘largely’ reflected their own priorities, compared with just 15% when asked about central government.

Fourth, we find (from regression analysis) that a number of factors concerning the provision of basic services appear to explain – at least in part – why perceptions of the government might vary across our sample. As indicated above, we observe particularly and consistently **strong associations between the number of service-related meetings held and better perceptions of both local and central government, a strong association between the number of service-related problems experienced and worse perceptions of central government** and strong associations between having to pay for water and worse perceptions of local and central government. For some services, we see associations between the respondent having positively experienced the service, and more positive perceptions of government. Although the specific causal mechanisms remain unclear, our findings suggest the possibility of linkages between one’s experience of service provision and certain attitudes towards the state.

# 1 Introduction

In 2012/13, the Secure Livelihoods Research Consortium (SLRC) designed and implemented the first round of a panel survey in five conflict-affected countries, generating cross-country data on livelihoods, access to and experience of basic services, exposure to shocks and coping strategies and people's perceptions of governance. This paper presents the findings of the Sri Lanka survey, which was delivered to 1,377 households between September and October 2012. It constitutes, in effect, the Sri Lanka baseline report, to be followed up by a subsequent report in 2015/16 when the second round of the panel survey is complete. The analysis presented within also informs, together with the five other country papers, the first-round synthesis report.

The paper is structured as follows. Section 2 provides a background to the survey, situating it in relation to the overarching themes of SLRC's research programme, outlining the objectives of the survey and presenting the analytical frameworks used to guide analysis of the survey data. Section 3 presents the survey methodology for Sri Lanka in greater detail, discussing the specific sampling methods used and describing the basic characteristics of the final sample. Sections 4-6 constitute the analytical core of the paper, respectively exploring which factors influence livelihood status; which factors influence people's access to and experience of services and social protection; and which factors influence people's perceptions of governance. Section 7 concludes with preliminary policy implications and suggestions for additional research moving forwards.

## 2 Background, objectives and analytical frameworks

This section is split into three parts. The first provides some background to the survey by situating it in relation to SLRC's broader research agenda. The second outlines the objectives of carrying out a panel survey. The third describes the basic analytical frameworks used to analyse the survey data.

### 2.1 Situating the survey within the research programme

The cross-country panel survey is directly relevant to the first and third themes of SLRC's six-year global research programme:

- 1 *Legitimacy*. What are people's perceptions, expectations and experiences of the state and of local-level governance? How does the way services are delivered and livelihoods are supported affect people's views on the legitimacy of the state?
- 2 *Capacity*. How do international actors interact with the state and local-level governance institutions? How successful are international attempts to build state capacity to deliver social protection, basic services and support to livelihoods?
- 3 *Livelihood trajectories*. What do livelihood trajectories in conflict-affected situations tell us about the role of governments, aid agencies, markets and the private sector in enabling people to make a secure living?

#### 1 Legitimacy: people's perceptions of governance and the role of service delivery

Establishing, building or strengthening state legitimacy is a major element of state building. The Organisation for Economic Co-operation and Development (OECD), for example, notes that, 'State legitimacy matters because it provides the basis for rule by consent rather than by coercion' (2010: 3). Indeed, a lack of state legitimacy is seen as a major contributor to state fragility because it undermines state authority. While the steps donors can take to influence state legitimacy are few, they do have an interest in developing a clearer understanding of the following: What leads to legitimacy? What, if anything, can they do to strengthen state-society relations? What might be the (unintended) positive and negative impacts of their programming on state legitimacy if they, for example, route development funding via bodies other than the formal organs of the state?

Literature reviews carried out during SLRC's inception year found very little evidence for the frequent assertion that improving access to services and social protection in conflict-affected situations contributes to state building (see, in particular, Carpenter et al., 2012). In the Pakistani context, there is a particularly weak evidence base on the role of aid in the processes of state building, as well as on the question of whether, or how well, livelihoods assistance and basic service delivery are addressing local needs (for details, see Shahbaz et al., 2012). Given the cited importance of legitimacy in state-building processes – as the European Report on Development (2009: 93) notes, 'State-building efforts are bound to fail if, in strengthening institutional capacities, the legitimacy of the state is not restored' – it is both surprising and of concern that we have so little robust knowledge about what leads to state legitimacy.

Despite these gaps, state building, encompassing both legitimacy and capacity, provides the organising framework for much international engagement in conflict-affected situations. In tackling this question, we are thus taking up the OECD's call for donors to 'seek a much better understanding – through perception surveys, research and local networking – of local people's perceptions and beliefs about what constitutes legitimate political authority and acceptable behaviour' (2010: 55).

## **2 Livelihood trajectories: tracking change and identifying determinants**

Literature reviews carried out during SLRC's inception year identified empirical and longitudinal research on livelihoods in conflict-affected situations as a key evidence gap. For instance, the Pakistan evidence paper produced by SLRC identified several gaps in the existing evidence base, such as research into the inclusion/exclusion of different social groups in terms of access to basic services and livelihood opportunities; gender-sensitive data in the context of conflict; data on market dynamics; and impact assessment of completed interventions (see, for details, Shahbaz et al., 2012). Although good in-depth case studies on livelihood strategies in particular contexts can sometimes be found, these are usually just snapshots. Qualitative case study approaches are also insufficiently linked to quantitative survey data. The literature reviews also revealed a significant gap in any comparative analysis of the effectiveness and impact of interventions to support livelihoods (see, in particular, Mallett and Slater, 2012). There are some evaluations available, and a scattering of academic literature that examines the impact of particular projects or programmes, but very little that looks at the overall significance of aid in people's livelihoods and compares the impacts of different approaches. SLRC's research programme aims to fill some of these gaps by building a picture of how people make a living in particular contexts, and tracking how this changes over time.

### **2.2 Objectives of the panel survey**

The panel survey will help us answer parts of our research questions appearing under the first and third themes of the research programme.

Regarding the first theme, legitimacy, our approach is centred on documenting and analysing people's views of governance in conflict-affected situations. It should be emphasised that we are interested here in not just the state but also a wider collection of governance actors. As such, we consider people's perceptions of both local and central government as well as of other forms of public authority.

Therefore, some obvious questions entailed asking people whether the central or local government shares their priorities, or whether local people participated in intervention-related activities. A cross-country panel survey incorporating questions about perceptions enables this, allowing us to investigate difficult-to-measure, subjective issues such as trust and satisfaction, and providing both a comparative snapshot and a longitudinal perspective.

Under the third theme, livelihood trajectories, SLRC is undertaking rigorous, longitudinal livelihoods research. Our aim is to build a clearer and more detailed picture of how people make a living in particular contexts, to track how this changes over time and to shed light on what causes change. We want to know whether people are recovering or starting to build stronger and more secure livelihoods, are stuck in poverty or are sliding into destitution, and how the broader political, economic and security environment affects this. Implementing a panel survey that captures both the dynamics and the determinants of people's livelihoods enables this.

The SLRC cross-country panel survey therefore combines elements of both perception and livelihoods surveys, enabling a dual focus on 1) governance and legitimacy and 2) livelihood trajectories. There are five points of added value in conducting a hybrid survey of this kind:

- 1** It allows us to link perceptions directly with experiences.
- 2** It generates rare panel data in fragile and conflict-affected contexts.
- 3** It allows us to identify similarities and differences between different fragile state contexts.
- 4** It allows us to differentiate between levels of government and different forms of governance.
- 5** It generates information on livelihoods beyond simple income measures.

## 2.3 Analytical frameworks

Three basic analytical frameworks emerged from the survey design process. These are outlined below (and in greater depth in the synthesis paper (download from [here](#)). It should be emphasised that, because this paper is based on the first round of the survey, the analysis is not geared towards identifying and explaining changes over time (which is why we talk about livelihood *status* as opposed to *trajectory* throughout the report). Rather, much of the analysis focuses on producing descriptive baseline statistics and identifying possible correlations and relationships between different sets of factors. The data collected also allow us to explain variations between Sri Lankan households across a range of outcomes.

### 1 Livelihood and wellbeing status

Livelihoods and wellbeing are broad concepts and cannot be captured meaningfully by a single indicator. We have chosen to measure it in two different ways by looking at:

- Household asset ownership (as a proxy for wealth);
- Food security (using the Coping Strategies Index).

In the synthesis report ([SLRC, forthcoming](#)), we argue that a number of different factors can explain variations in livelihood status. These include:

- 1 *Household factors*. These include demographic characteristics of the household, religion/ethnicity of the household and education and migration characteristics.
- 2 *Contextual factors*. These include location, indicators accounting for season, occurrence of conflict, perceptions of safety in the neighbourhood and moving to work, as well as other indicators on livelihood opportunities/constraints (e.g. availability of credit).
- 3 *Shocks experienced by a household*. These include natural disasters and economic shocks, as well as crime and conflict.
- 4 *Differential access to basic services, social protection and livelihood assistances and the quality of these services/transfers*.

The aim of the quantitative analysis is to estimate if and to what extent the above factors determine the main outcome (household assets/food insecurity).

### 2 Access to and experience of services, social protection and livelihood assistance

We are interested in which factors determine access to and experience of services. We measure access to services in terms of distance in minutes to the closest service provider last used (for health, education and water) and whether someone in the household has received a social protection transfer or livelihood assistance.

A number of different factors can explain variations in access to services. These include:

- 1 *Individual and household characteristics* (as discussed above);
- 2 *Contextual factors* (as discussed above);
- 3 *Shocks experienced by the household* (as discussed above);
- 4 *Implementation and performance of basic services, social protection and livelihood assistance*, for example regularity of provision and who provides the service, which may affect access to basic services, social protection and livelihood assistance.

The aim of the quantitative analysis is to estimate if and to what extent the above factors determine the main outcome (access).

We measure experience in terms of overall satisfaction with the service provided (health and education); if clean water is being provided (for water); and self-perceived impact for social protection and livelihood assistance.



In the [synthesis report](#), we argue that a number of different factors can explain variations in experience of services. These include:

- 1 *Individual and household characteristics* (as discussed above);
- 2 *Contextual factors* (as discussed above);
- 3 *Shocks experienced by the household* (as discussed above);
- 4 *Access to basic services*. We expect that distance to basic services is likely to affect experience of services;
- 5 *Implementation and performance of basic services, social protection and livelihood assistance* (as discussed above).

The aim of the quantitative analysis is to estimate if and to what extent the above factors determine the main outcome (satisfaction with the service/transfer).

### **3 People's perceptions of governance and the role of service delivery**

Analysis of people's perceptions of governance is more complicated. We propose that perceptions of governance be determined, as before, by individual and household characteristics, context and shocks experienced. Further factors are 1) access to basic services, social protection and livelihood assistance; 2) experience of using these; and 3) their implementation and performance.

We therefore propose that the following factors may determine people's perceptions of governance:

- 1 *Individual and household characteristics* (as discussed above);
- 2 *Contextual factors* (as discussed above);
- 3 *Shocks experienced by the household* (as discussed above);
- 4 *Access to basic services, social protection and livelihood assistance*. We expect that access to services and social protection and livelihood assistance affect perceptions of governance. In particular, not having access is likely to affect perceptions of certain governance actors;
- 5 *Experience of using basic services, social protection and livelihood assistance*. We expect that experience of using/receiving services and social protection and livelihood assistance affects perceptions of governance. In particular, having a negative experience is likely to affect perceptions of certain governance actors;
- 6 *Implementation and performance of basic services, social protection and livelihood assistance*. Implementation and performance of services and social protection and livelihood assistance may affect perceptions of governance. Waiting time, regularity and costs in accessing services and social protection are likely to determine how individuals perceive state governance, in particular if the transfer is government-provided.

The aim of the quantitative analysis is to estimate if and how much the above factors – and in particular those relating to services – determine the main outcome (perceptions of governance).

# 3 Research methodology and description of sample

This section first covers parts of the survey design process, highlighting in particular some of the challenges faced, before clarifying the sampling methods used and describing the characteristics of the final sample.

## 3.1 Research methodology

A core SLRC survey team based in London was responsible for developing a generic survey instrument for the countries participating in the research. The draft instrument was then carefully tailored in order to 1) fit the Sri Lankan context; and 2) reflect some of the research priorities specific to SLRC's Sri Lanka research programme. The names of the modules included in the Sri Lanka survey instrument are listed below, and more information on the instrument design process can be found in SLRC (2013):

- Basic household information;
- Basic individual information;
- Assets;
- Livelihood sources, with a particular focus on fishing;
- Food security;
- Shocks;
- Crime and safety;
- Basic services;
- Social protection;
- Livelihood assistance;
- Infrastructure and transportation services;
- The process of service delivery and civic participation;
- Perceptions of governance.

Panel surveys are particularly rare in fragile and conflict-affected contexts. Part of the reason for this is that panel surveys are at risk of attrition – that is, households dropping out of subsequent survey rounds – and it is assumed that, because conflict often results in displacement, attrition is too high in conflict-affected situations. As a result, we substantially increased the sample to account for attrition (see Section 3.2). The first round of the panel study was conducted in 2012 and the second round will be conducted in 2015.

The SLRC survey incorporates elements of both a livelihoods and a perception survey, which raises a methodological issue: while the ideal unit of analysis for the livelihoods survey is at the household level, for the perception survey it is at the individual level. Nevertheless, after extensive discussion and consultation, a decision was reached to combine them in one survey, partly because of logistical and budget considerations and partly in an active effort to link perceptions more directly to real and measurable changes in wellbeing. We opted for sample households, but enumerators were instructed specifically to seek out a varied range of individuals within households to avoid a strong bias of male household heads for the perception questions.

## 3.2 Sampling methods and sample structure

The sampling strategy was designed to select households relevant to the main research questions, while also being able to draw statistically significant conclusions at the study and village level. This was done by combining purposive and random sampling at different stages. Districts, divisional secretariat divisions (DSDs) and grama niladari divisions (GNDs) were purposively selected in order to locate the specific groups of interest and geographical locations relevant to the broader SLRC research areas.



Districts are the main administrative divisions of the country; DSDs are the administrative subdivisions of districts; and GNDs are the administrative subdivisions of DSDs.

Districts, DSDs and GNDs were selected purposively based on conflict-affectedness, having a mix of much earlier displaced (old displaced), recently displaced, returned and resettled households. Given that a major focus of the SLRC Sri Lanka research programme is on the livelihoods of fishers, selected locations had to have a substantial concentration of fishing populations. Accessibility, security and the feasibility of carrying out data collection were also taken into consideration. The base data used for selection of locations were data/information available on the Ministry of Resettlement's website and data collected during scoping visits. The three districts that satisfied the selection criteria were Jaffna, Mannar and Trincomalee (see Figure 1).

**Figure 1: Map of the survey areas**



The survey did not attempt to achieve representativeness at district level, but we did aim for representativeness at GND level through random sampling. Households were randomly selected using the fixed-interval method. Households were randomly selected within GNDs so the results were representative and statistically significant at the GND level and so a varied sample could be captured. Thus, the sample size was calculated with the aim of achieving statistical significance at the overall study level and at the GND level and taking into account the available budget, logistical limitations and the need to compensate for attrition between the surveys in 2012 and 2015. The minimum overall sample size required to achieve significance at the study level, given population and average household size in the districts, was calculated using a 95% confidence level and a confidence interval of 5. Finally, the sample was increased by 20% to account for attrition between 2012 and 2015, so the sample size in 2015 is still likely to be statistically significant. Table 1 shows the sample size per district, DSD and GND. We interviewed 1,377 households – exactly the number of households required for the proposed sampling strategy.

**Table 1: Structure of the sample**

District (no. of households)	DSD (no. of households)	No. of households per GND (site)
Mannar (455)	Musali (166)	Site 1 (81)
		Site 2 (85)
	Mantai West (289)	Site 3 (208)
		Site 4 (81)
Jaffna (462)	Tellippalai (317)	Site 5 (149)
		Site 6 (168)
	Maruthankerney (145)	Site 7 (71)
		Site 8 (74)
Trincomalee (460)	Kuchchveli (105)	Site 9 (63)
		Site 10 (42)
	Trinco Town Gravets (355)	Site 11 (191)
		Site 12 (164)

The sample included a mix of gender and age groups. Nearly two-thirds (61.7%) of respondents were female (see Table 1 in Annex). A total of 58% of respondents were in the age group 30-55 years, with the balance being younger (29 years or less) or older (more than 55 years) (see Table 2 in Annex). All respondents were above the age of 18 years.

### 3.3 Description of the sample

In this subsection, we provide information on some of the basic characteristics of our survey sample.

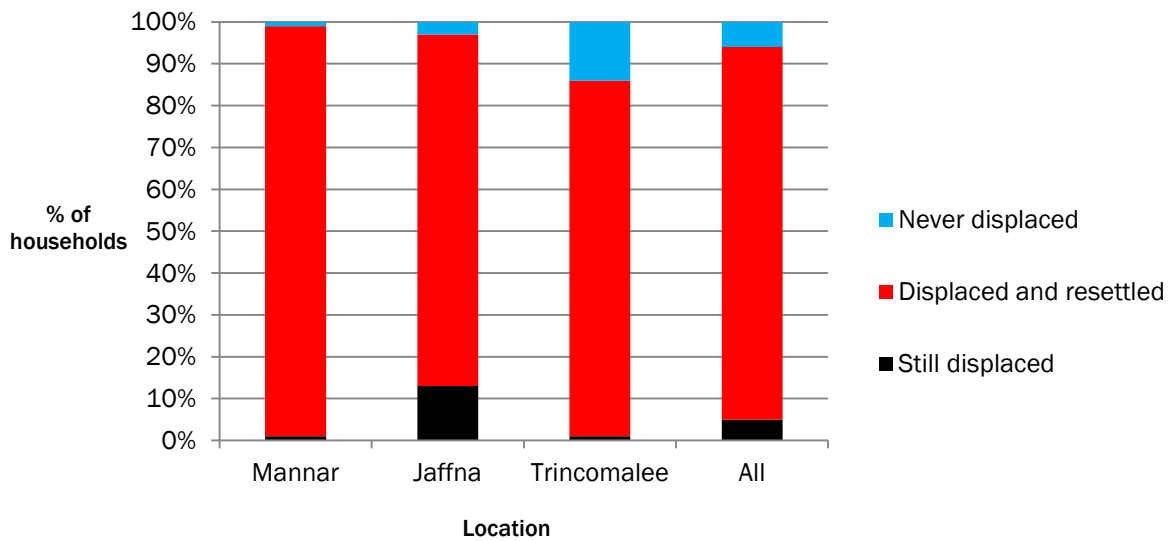
Table 2 illustrates the geographical and ethnic make-up of the sample, showing that, while the sample is split evenly across the three locations in the focus districts, the majority (66.5%) of households surveyed were of Tamil ethnicity.

**Table 2: Geographical and ethnic composition of the sample**

Ethnic group	Share in location (%)			Share of overall sample (%)
	Mannar	Jaffna	Trincomalee	
Sinhala	0.0	0.0	48.0	16.0
Tamil	81.8	99.6	18.3	66.5
Sri Lanka Moor	17.8	0.0	32.6	16.8
Other	0.4	0.4	1.1	0.7
All	100	100	100	100
Distribution by location	33.0	33.6	33.4	100

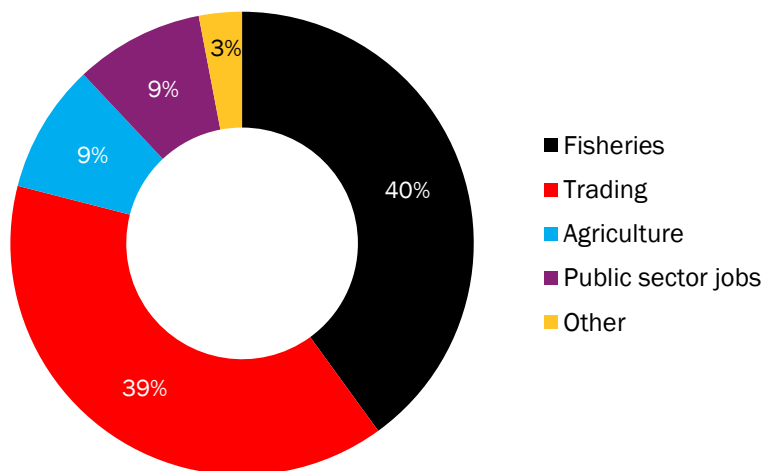
Displacement levels are high throughout the sample and across all surveyed locations in the districts, with 99% of those in Mannar, 97% of those in Jaffna and 86% of those in Trincomalee reporting having been displaced at least once (Figure 2). This is in line with existing knowledge about the strikingly high rates of displacement in the conflict-affected northern and eastern parts of Sri Lanka between 1983 and 2009. Most of those displaced have now returned or resettled, however, with just 4.9% reporting a current status of being displaced. Our data suggest the living conditions of those still displaced are poor, with nearly half of those still displaced living in dwellings constructed with temporary roofing material, 22.4% having to use a neighbour's toilet and 34.3% having to use a public toilet (for comparisons with currently non-displaced households, see Annex Table 3).

**Figure 2: Sampled households by displacement and resettlement, by location (%)**



In terms of sampled households’ current wellbeing, more than half own deeds or documents for their dwelling and the vast majority (94.7%) have at least one income earner (see Tables 4 and 5 in Annex). Of the households without an income earner – that is, 9.1% of surveyed households in Jaffna, 3.3% in Mannar and 3.5% in Trincomalee – 86% had been displaced but are now resettled. Figure 3 illustrates what surveyed households are currently doing to make a living in terms of primary occupation. For analytical purposes, we classified households into five main groups: fisher households,<sup>1</sup> agriculture households, households involved in trade/business/private sector employment, households working for the public sector and households pursuing other occupations.

**Figure 3: Primary occupation of households in the survey sample (%)**



Based on the classification noted above, in all the sampled communities a majority of households were engaged in the fisheries sector, which is to be expected given the coastal location of many of the

<sup>1</sup> Given that part of the focus of the Sri Lanka survey was on the livelihoods of fisheries households, we classified a household as a fisher household if at least one member pursued fishing/or a fishery-related occupation (e.g. fish trading) as a primary occupation. If no-one was occupied in fisheries but at least one person pursued agriculture then it was categorised as an agriculture household as the primary occupation. If no-one was occupied in fisheries or agriculture but at least one person pursued trading/services then it was categorised as a trading sector household. If no-one was occupied in fisheries or agriculture or trade but at least one member pursued an occupation in the public sector then it was categorised as a public sector-employed household.

households surveyed. The second-highest proportion of households was engaged primarily in trade/business/the private sector.

However, while most households in the sample had at least one income earner, their occupational diversity was very low. In (primary) fisher households – that is, households with members in fishing or in the fishing industry as a primary occupation – only 2% also had members pursuing agriculture (as a primary occupation), 16% trade/business/private sector occupations (as a primary occupation) and 4% working in the public sector (as a primary occupation). Further, almost 70% of all households in the sample reported being in debt. And, while most of these had borrowed from formal lenders or banks, around one-third had gone to their friends and relatives (higher for those still displaced).

On educational status and attendance, 98.2% of children aged 5-14 years (i.e. children who should be in school) in the sample households were enrolled in school (see Table 6 in Annex), which is only slightly lower than the national average (DCS, 2010). For individuals over 14 years of age, the proportion that had never been to school (2.7%) was equal to the proportion that had completed more than 13 years of schooling (2.7%), indicating that the vast majority had received at least some level of education.

Finally, while significant proportions of our sample had experienced various shocks in the previous three years, including inflation/price hikes (66.2%), floods (39.9%), long-term illnesses (22.2%) and drought (16.4%), experiences of crime were generally very rare, with 4.4% of households reporting theft, 1.9% house breaking and 1.6% cattle theft. Overall, less than 7% of households had experienced any form of crime in the previous three years.

## 4 Livelihoods and wellbeing

This section explores the livelihoods and wellbeing of households in our sample by analysing our two three main wellbeing indicators (food insecurity and household wealth) as well as livelihood activities.

The first of the indicators, food insecurity, is proxied using the Coping Strategies Index (see Maxwell and Caldwell, 2008). The index is a weighted sum reflecting the frequency with which households adopted particular behaviours over the course of the previous 30 days. The weights given to these coping strategies reflect their relative severity, as follows (weights in parenthesis):

- Had to rely on less preferred and less expensive food (1)
- Had to borrow food or rely on help from friends or relatives (2)
- Had to limit portion size at meal time (1)
- Had to restrict consumption by adults in order for small children to eat (3)
- Had to reduce number of meals eaten in a day (1).

Thus, a higher Coping Strategies Index score indicates a higher level of household food insecurity.

The second indicator, household wealth, is proxied by the assets owned by the household using the Morris Score Index (Morris et al., 1999). The Morris Score Index is a weighted asset indicator that weights each durable asset owned by the household by the share of households owning the asset. What this essentially means is that households are considered better off when they own assets not owned by most households in the sample.<sup>2</sup>

Livelihood activities and sources of household income are discussed in Section 4.1; Sections 4.2 and 4.3 look at household assets and food insecurity, respectively. Drawing on the findings of regression analyses, we also discuss the variables that appear to influence livelihood status and wellbeing.

### 4.1 Exploring the outcome indicators: household food insecurity and household wealth

We explore below what levels of household wealth and food insecurity look like across our sample, and draw on the results of regression analyses to suggest which factors appear to be influencing these outcomes. We start by discussing food insecurity before moving on to household wealth.

#### 4.1.1 Household food insecurity

Survey results indicate that food security was moderately good in the surveyed households over the 30 days preceding the survey.<sup>3</sup> Coping Strategies Index scores ranged between 0 and 32.0, with a mean value of 5.36 and a median value of 3.0; the distribution of food insecurity scores across all households in the sample shows that 61% of households fell below the mean. A total of 35% of surveyed households did not report using any food insecurity coping strategies, with a further 27.5% of households adopting such strategies only very rarely. Only 15.7% had to adopt coping strategies four to five times during the period in question.

Variations in food insecurity between the surveyed locations in the three districts are significant at a 99% level of confidence, as are differences between ethnic groups. Food insecurity was highest in the sampled areas in Mannar (6.78) and lowest in the sampled areas in Jaffna (4.37); in the sampled areas in Trincomalee it was 4.98. Among ethnic groups, Moor households in the sample reported the highest

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<sup>2</sup> A note on the regression model: all variables that have been hypothesised and hence used in the regression analysis (irrespective of the strength of correlation) are those specified by the general cross-country analytical framework in order to facilitate comparisons of findings across the five countries in which survey work has been carried out. As the coping strategies index and the Morris Score Index are scale/continuous variables, the Ordinary Least Square (OLS) method was used to estimate the multiple linear regression models. All binary and categorical explanatory variables were included as dummy variables in the model.

<sup>3</sup> It should be noted that, during the pilot, the survey team noticed an inclination to underreport the use of food insecurity coping strategies. However, based on discussions with the fieldwork team, this did not seem to be an issue during the actual survey.

levels of food insecurity (6.29) and Sinhalese households the lowest levels (5.14); the mean score for Tamils was 5.19.

When both location and ethnicity are considered, survey results suggest the most food-insecure households in the sample were Tamils and Moors living in Mannar. However, as there are no Sinhalese households in the Mannar sample, food insecurity in this case is likely to be a location-specific phenomenon (Table 3). That said, some of this variation might also be explained by length of time since resettlement: while both Trincomalee and Jaffna returned to a relative state of peace in 1990 and 1996, respectively, Mannar continued to experience intense periods of conflict up till 2009.

**Table 3: Coping Strategies Index mean scores by location and ethnicity**

Location	Ethnic group			Total
	Sinhala	Tamil	Moor	
Mannar	-	6.50	8.02	6.78***
Jaffna	-	4.37	-	4.37***
Trincomalee	5.14	3.92	5.35	4.98***
<b>Total</b>	<b>5.14***</b>	<b>5.19***</b>	<b>6.29***</b>	<b>5.36</b>

Note: Asterisks indicate whether the mean for each group is statistically different from the sampled population as a whole (\* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%).

Levels of food insecurity by displacement status are as follows: displaced and resettled (5.5); still displaced (4.5); and never displaced (3.8) (all statistically significant at the 5% level). Unsurprisingly, food insecurity was lowest among those who were never displaced. However, the fact that food insecurity was highest among the displaced and resettled rather than among households that were still in displacement is worth additional investigation. One hypothesis to be tested is the proposition that continued access to government support has helped address the basic food needs of those still in displacement, whereas those households displaced and resettled may have, as yet, been unable to establish similar levels of food security without that assistance.

Cutting the sample in a number of other ways also reveals a series of significant associations. If we consider, for example, how levels of food insecurity might vary by primary livelihood activity, we observe the following: fisher households (6.0), agriculture households (5.1), trade (4.8) and public sector-employed (2.4) with the association between primary livelihood activity and food insecurity all being statistically significant at 5%.<sup>4</sup> This shows that, within our sample, households working primarily in the public sector were on average more food secure than those primarily employed in the trade/business/private sector, in agriculture and in fisheries. Hypotheses to be explored here include unpacking the contributions of relative differences in the degree of stability and predictability in wage employment relative to that in fisheries and agriculture; potential effects of seasonality, droughts, floods and variability in crop production and fish stocks; and market conditions for agriculture and fishery.

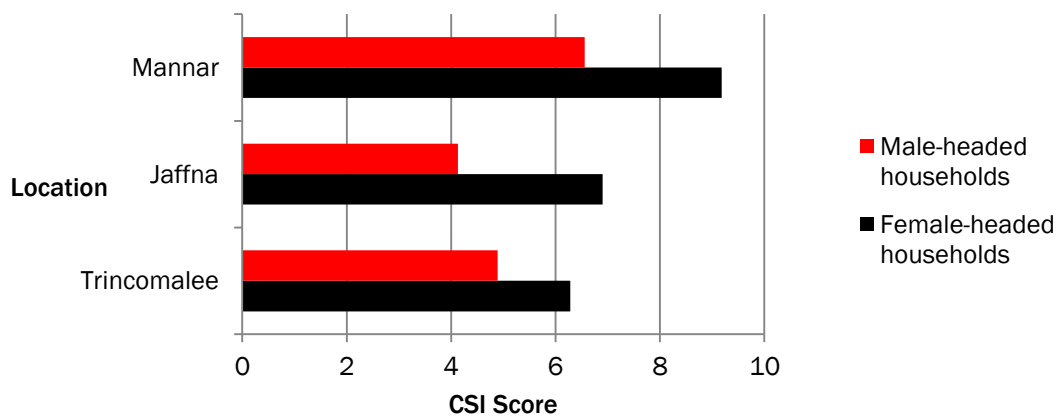
Further, analysis of correlations between food insecurity and household composition variables reveals a number of interesting relationships. First, there are positive correlations between food insecurity and proportion of children in the household, and between food insecurity and total household size, although the effects tend to be quite weak (i.e. small). There is a negative correlation between the Coping Strategies Index and the proportion of 15-45 year olds (Annex Table 7). Taken together, this indicates that food insecurity tends to be lower in households with a higher proportion of working-age population as defined here. This in itself is unsurprising, given the expected dependency burden imposed by a larger number of children; however, the results do indicate no equivalent significant correlation in the case of the proportion of those over 45 years of age.

<sup>4</sup> Based on Analysis of Variance (ANOVA) with  $F(3,1294) = 7.49$  significant at 95% level of confidence with  $p = 0.000$ .

We observe significant and negative correlations between food insecurity and household education variables, indicating that households with a higher proportion of educated members tend to be less food insecure, though the causal mechanism operating is unclear (Annex, Table 8). Hypotheses to be tested might include additional household wealth both contributing to food security and allowing families to educate their families to a higher level; and higher levels of education allowing individuals to either pursue more skilled professions (e.g. those in the public sector) or achieve greater efficiency in existing professions, both of which could improve earning capacity.

Finally, we see gendered differences in food security outcomes. As Figure 4 illustrates, female-headed households have higher mean levels of food insecurity, regardless of geographical location. On top of this, we find that higher food insecurity is significantly correlated (at 10%) with the number of women income earners within a household (as a proportion of all income earners), although the strength of the correlation is very low (0.068). It is not immediately clear why this might be the case, with hypotheses including lower earning capacity of women; a greater tendency for households to put women to work where earnings are not high enough to prevent food insecurity; or greater difficulty translating household earnings into household food requirements.

**Figure 4: Level of food insecurity in male- or female-headed households, by location**



Note: Differences between groups statistically significant at 5% significance level; female-headed households are those without a male adult income earner.

In order to understand what might be driving variations in levels of food insecurity, we explored the relationship between the Coping Strategies Index and a number of potential explanatory (or independent) variables. The regression results – including the coefficients of the variables, directions of influence and levels of statistical significance – are given in Table 9 in the Annex. With an R squared value of 0.14, our regression was capable of explaining 14% of the variation in food insecurity across households.

The results presented in Table 9 in the Annex suggest levels of food insecurity are more likely to be lower in households where more adults have completed primary education where households are wealthier or asset rich, where there is access to credit and livelihood assistance and where the households are satisfied with the quality of health services. This makes sense because these factors increase the earning capacity and purchasing power of the household, thus reducing food insecurity. However, while increased earnings are often associated with improved food security, it is important not to assume this mechanism always operates, particularly as market conditions may limit consumption, even where households have income to devote to food expenditure. Households with access to clean water also demonstrate lower levels of food insecurity, with the former potentially contributing to reducing food insecurity by easing food preparation and improving hydration.



The results also indicate that **food insecurity is higher in households that are headed by women and in households that have experienced shocks and/or crimes**. Food insecurity is also higher in households that have access to social protection. While we cannot assess causality, this suggests social protection has been well targeted towards vulnerable households. What is not immediately clear with respect to the latter is whether social protection is simply not having any effect on food insecurity or, instead, whether food insecurity would have been even worse in its absence.

#### 4.1.2 Household wealth

As outlined above, we use asset ownership as a proxy indicator for household wealth, measured in turn by the Morris Score Index. Overall, the score for all sampled households ranged between 0 and 10.74, with a mean value of 2.81 and a median of 2.58. This means the majority of households own fewer assets than the mean.

In terms of how levels of household wealth vary within the sample, we find that the mean scores on the index showed statistically significant (at a 1% level of confidence) differences across district locations and ethnic groups (see Table 4). The mean asset score was highest in the location surveyed in Trincomalee district (3.47), second highest in Jaffna (2.58) and lowest in Mannar (2.38). Among ethnic groups, the average asset score was lowest among Moor households (2.5) and Tamils (2.7) and highest among the Sinhala (3.6). The mean score was lowest among Moors in Mannar (1.45) and Tamils in Jaffna (2.57). Findings here closely resemble those for food insecurity outlined above, and lend further credibility to the hypothesis that areas with more recent experience of conflict (and later processes of resettlement) have not yet recovered to the same extent as other areas.

**Table 4: Mean scores on the Morris Score Index, by location and by ethnicity**

Location	Ethnic group			Total
	Sinhala	Tamil	Moor	
Mannar	-	2.58	1.45	2.38***
Jaffna	-	2.57	-	2.58***
Trincomalee	3.62	3.74	3.13	3.47***
Total	3.62***	2.68***	2.54***	2.81***

Note: Asterisks indicate whether the mean for each group is statistically different from the sampled population as a whole (\* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%).

Given the widely observed disruptive effects of being displaced, we then examined the relationship between wealth status and three different measures of displacement: 1) current status of displacement/resettlement; 2) minimum length of last displacement; and 3) number of times displaced. The mean score was found to be highest (3.26) among the never displaced and lowest (2.19) among those currently still experiencing displacement (at the time of the survey). For displaced and now resettled households, the score was 2.81. We find a statistically significant difference (at 5% significance) between the mean scores on the index and displacement status.<sup>5</sup>

We find a statistically significant association between the wealth of a household and the main livelihood activity pursued by that household (at 5% significance),<sup>6</sup> with mean scores highest for households classified as public sector households (3.9) and lower mean scores for fisher households (3.03), households engaged in agriculture (2.62) and households engaged in trade (2.55).

We also explored correlations with household composition, education levels, presence of income earners and experience of shocks, but coefficients for all suggest only a very weak relationship (see

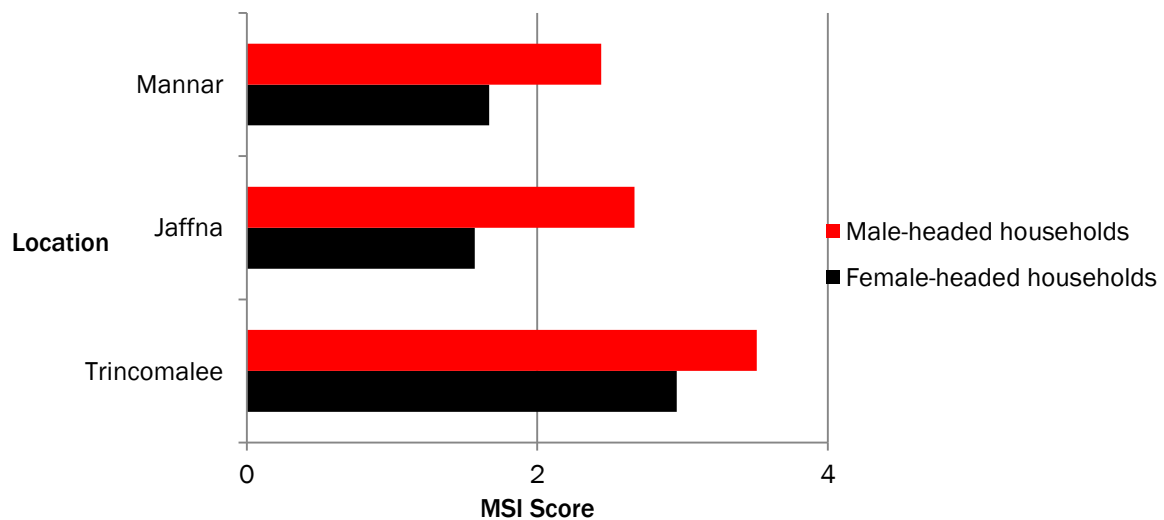
<sup>5</sup> Based on ANOVA with  $F(2, 1374) = 8.6$  and significant at 5% with  $p=0.000$ .

<sup>6</sup> Based on ANOVA with  $F(4, 1372) = 17.9$  and significant at 5% with  $p=0.000$ .



Annex, Tables 10, 11 and 12). However, Figure 5 shows that mean asset scores were consistently lower among female-headed households, regardless of which district the sample was located in.

**Figure 5: Asset levels in male- or female-headed household, by location**



Note: Differences between groups statistically significant at the 5% significance level.

In order to get a sense of what might cause variation in levels of household wealth, we carried out a regression analysis of the asset index and potential explanatory (or independent) variables (see Annex, Table 13). The regression R squared value was 0.28, indicating that the model explained 29% of the variation in asset index scores.

A number of findings are noteworthy here.

- 1 The female-headed household dummy variable<sup>7</sup> is statistically significant at the 1% level and has a negative sign indicating that **female-headed households are more likely to be asset poor.**
- 2 The proportion of adults completing primary education and households having members who have migrated for employment show positive and significant values, indicating that 1) **households with adult members that have higher education levels are likely to have more assets** (i.e. have greater wealth); and 2) **households with migrant members are likely to have more assets.**
- 3 The variables 'access to credit' and 'access to livelihood assistance' show positive and significant values, suggesting that, **when households have access to credit as well as livelihoods assistance, they are likely to have a greater number of assets.** This could be because access to both credit and livelihood assistance increase the productive capacity of the household. The number of shocks experienced by a household appears to be significantly associated (again, at 1%) with lower Morris Score Index scores, suggesting **the experience of multiple shocks negatively affects household wealth.** Finally, we find a **consistent relationship between access to services and asset ownership.** Although the coefficients are generally very weak, longer journey times to schools, clinics and water points are all associated with lower scores (all significant, except for water).

It should be noted that neither the ethnicity dummies nor the dummy variable for displacement turned out to be statistically significant, indicating that, up to three years after the end of the war, levels of household wealth are unlikely to be determined directly by conflict disturbances. Instead, they appear to be determined more by certain socioeconomic characteristics of the household.

<sup>7</sup> Notwithstanding the limitations of doing so, we defined female-headed households as those households that did not have any male income earners.

## 4.2 Summary of findings

In addition to the noteworthy findings that emerge from each of the individual livelihood status outcome indicators, looking across the results of the statistical analysis reveals a number of key issues with respect to livelihoods in the sampled population. We note four features in particular.

First, **there is a limited set of variables that appear to be significant determinants of livelihood status** in relatively predictable ways. Such variables include level of education among adults, which, as expected, suggests higher levels of education reduce food insecurity and increase assets. Indeed, regression analyses show the independent variable – ‘share of adults completing primary education’ – produces some of the largest effects on both food security and asset ownership (and is statistically significant at 1% in each case). Similarly, results indicate access to credit has a positive bearing on livelihood status outcomes (improved household wealth and reduced food insecurity), whereas having experienced a shock does not. Having family members who have migrated for employment led, as might be expected, to improved performance on the asset index. Interestingly, displacement does not seem to impact on either food insecurity or assets.

Second, and perhaps more complex, is the situation with respect to the set of variables associated with access to and experience of services. **Several variables relating to the quality or availability of key public services have predictable effects.** For example, higher levels of satisfaction with health services are associated with both greater food security and higher wealth, and those receiving livelihoods assistance appear to higher asset levels (or vice versa: those with greater assets may be more likely to receive livelihoods assistance). **But other effects need to be explored further** – for example, those households that have accessed social protection exhibit greater levels of food insecurity. This likely means social protection has been targeted at less wealthy households.

Third, **female-headed households** (measured as those households without a male income earner) **tend to do worse across a range of livelihood outcome indicators**, exhibiting lower levels of wealth and higher levels of food insecurity. These findings suggest a strong gendered dimension to livelihoods in the sampled population, and merit further analysis (particularly in order to determine the channels through which the gender effect operates).

Fourth, in explaining variations in levels of food insecurity, **neither being an ethnic minority in the location, nor a household’s primary livelihood activity appear important.** On the other hand, wealth – proxied by asset ownership – does appear to play a role in determining levels of food insecurity, with wealthier households less food insecure. In the case of assets, although being an ethnic minority in the location did not turn out to be significant, location and (self-assessed) safety are: households in urban locations and those feeling safe are more likely to be better off. That asset ownership (wealth) varies by location – with surveyed households in Mannar exhibiting a lower mean asset index score than those in Jaffna and Trincomalee – is possibly a reflection of spatial differences in conflict dynamics and intensity. As mentioned earlier, both Trincomalee and Jaffna returned to a relative state of peace in 1990 and 1996, respectively; Mannar continued to experience intense periods of conflict up until 2009. The implication here is that household economic recovery takes time, and that additional years are needed for those in Mannar – where processes of resettlement have occurred far more recently – to ‘catch up’. The second round of this panel survey, due for completion in 2015/16, will shed light on whether these households have been able to do so.

## 5 Basic services, social protection and livelihoods assistance

In this section, we look at people's access to and experience of a range of basic services, including health, education, water, public transport, social protection and livelihoods assistance. As before, we provide information on how access and experience vary across the sample, before drawing on regression findings to try and explain what might be driving the variations.

We use a simple indicator of access to basic services: journey time. For health services, this means the time in minutes taken to travel to the nearest health clinic; for education, it means the time in minutes taken to travel to the primary school used by the household (we asked this separately for girls and boys); and for water, it means the time in minutes taken to travel to the water access point used by the household (if that point is located outside of the dwelling). For social protection and livelihoods assistance, at least a single member of the household accessing the service was considered access to the service. An explanation and justification of the specific explanatory variables can be found in ([SLRC Synthesis, forthcoming](#)).

In exploring experience of services, we are particularly interested in how individuals perceive the service/social protection or livelihood transfer. For basic services, we consider individual-level perceptions of satisfaction with the basic service, in both an overall sense (i.e. 'Overall, how satisfied are you with the quality of the service on the basis of your most recent use of [insert service]?') and a more disaggregated sense (by asking people about their experience with particular characteristics of a service, such as waiting times, teacher attendance, language of communication and so on). For social protection and livelihood assistance, we use perceived impact as a measure of experience. An explanation and justification of the specific explanatory variables can be found in ([SLRC Synthesis, forthcoming](#)).<sup>8</sup>

### 5.1 Health

Households' access to health services is analysed using travel time to reach the nearest clinic. Although the average travel time to reach the clinic was 44 minutes, over 84% of households in the sampled areas reported travel time to the nearest clinic to be less than one hour.

If we look at how journey times differ within the sample, we see that average time taken to reach the health clinic varied by geographical location, displacement status and type of household livelihood activity (see Table 5). In the surveyed locations in Jaffna and Trincomalee, for more than 80% of households travel time was less than an hour, with respective mean times of 33 and 25 minutes. In Mannar, however, 36% of respondents reported it taking 90 minutes or longer (Table 5), with an average time of 75 minutes. On average, journey times are longer for resettled households (46 minutes) compared with both those who were never displaced (25 minutes) and those who are still displaced (28 minutes) (Table 5). We also find that households primarily pursuing fishing or agriculture activities tend to face longer journey times compared with households involved primarily in trade or public services.

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<sup>8</sup> In the following analysis, we examine cross-tabulations and correlations between different sets of factors, before exploring possible determinants of access and experience through regression analysis. Whenever the dependent variable was a scale variable we used the OLS method to estimate the multiple linear regression model; when the dependent variable was binary we used the logit model and when the variable was categorical/ordinal we used the multinomial logit regression (MLR) model. Whenever a MLR did not converge, then the categories of the dependent variable were combined so that it resulted in a binary variable and a logit regression method was used to estimate the model.

**Table 5: Time to reach health clinic, by sample location, livelihood activity type and displacement status**

	Average time taken to reach health clinic (minutes)	One and a half hours or more (%)	One to one and a half hours (%)	Less than one hour (%)
<b>Sample location</b>				
Mannar	75***	36.4***	20.1***	43.5***
Jaffna	33***	8.3***	10.7	81.1***
Trincomalee	25***	2.0***	2.9***	95.2***
<b>Activity type</b>				
Fisher	51***	21.3***	10.7	67.9***
Agriculture	47	13.7	19.4***	66.9*
Trade	35***	8.9***	9.4	81.7***
Public service	29	6.0	3.0	91.0
<b>Displacement</b>				
Still displaced	28***	4.5**	1.5**	94.0***
Resettled	46***	16.7***	12.1***	71.2***
Never displaced	25***	2.4***	4.8*	92.8***

Note: Asterisks indicate whether the mean for each group is statistically different from that of the sampled population as a whole (\* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%).

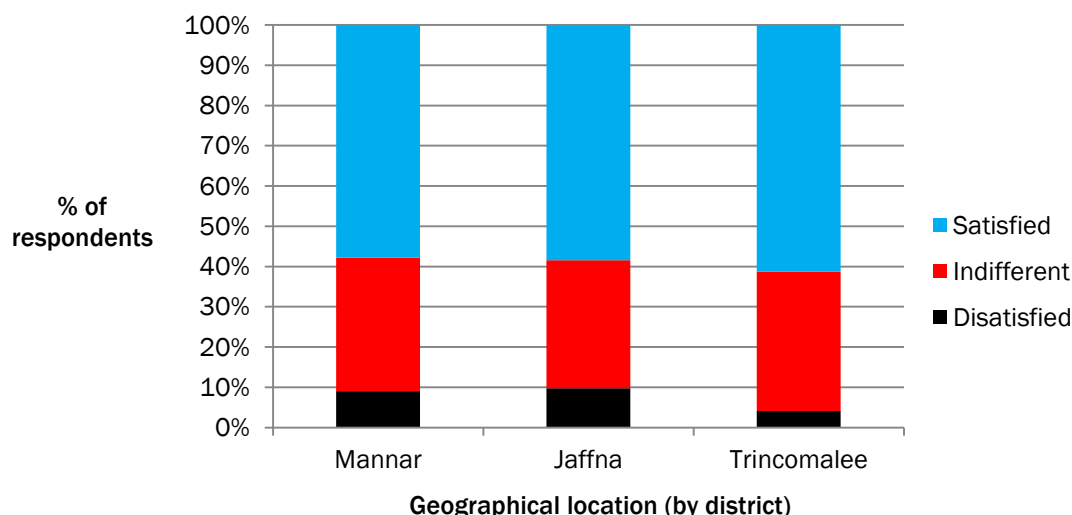
We might expect a range of factors to shape people's access to health services when measured by journey time (SLRC, forthcoming). OLS regression analysis in Table 14 in the Annex suggests wealthier, more educated households with younger members, those living in urban areas and those accessing government health services are likely to have shorter journey times to health clinics, indicating proximity between where they live and health clinics.<sup>9</sup> On the other hand, we find that households that belong to an ethnic minority in their particular location and households that have to pay informal fees in order to access health services tend to face longer journey times.<sup>10</sup> Notably, households displaced at least once during the conflict also have longer journey times on average.

Levels of satisfaction with health services were generally quite high (based on respondents' most recent visit to the local health clinic). In the surveyed locations in all three district samples, more than half of respondents felt satisfied with the quality of health services (i.e. they reported being either 'satisfied' or 'very satisfied' on the basis of their most recent visit), whereas less than 10% reported being either 'dissatisfied' or 'very dissatisfied' (see Figure 6).

<sup>9</sup> Given that the dependent variable – time taken to reach the health clinic measured in minutes – is a continuous variable, the MLR model was estimated using OLS. All binary and categorical explanatory variables were included as dummy variables in the model. With an R squared value of 0.45, it is estimated that our regression model explains 45% of the variation in the travel time to reach health clinics.

<sup>10</sup> When asked about informal fees and payments, respondents may have included transport costs, in which case longer journey times may be responsible for households having to pay informal fees (rather than vice versa).

**Figure 6: Levels of satisfaction with health services, by location (%)**



Note: Differences between groups statistically significant at 10% significance level

We also find that levels of satisfaction tended to be lower on average among the Sinhalese portion of the sample compared with other ethnicities (see Annex, Table 15). Part of the explanation for this may be related to geographical variations in conflict intensity and the possible impacts this has on people’s expectations of service provision. In the less afflicted areas of Trincomalee (where our entire Sinhalese population was sampled), people’s expectations of what the state should be doing may already be high compared with among those in our samples from Jaffna and Mannar, who may now be experiencing the positive outcomes of a peace dividend.

We might expect a range of factors to shape people’s experience of health services when measured by reported levels of satisfaction (SLRC, forthcoming). Our regression results suggest the way the service is implemented or run – or at least people’s perceptions of this – may be important in explaining people’s overall satisfaction with the health clinic (based on their most recent visit), with ‘satisfaction with the availability of medicine’ and ‘satisfaction with the waiting time in the clinic’ strongly and positively associated with the independent variable (see Annex, Table 16).<sup>11</sup> As the following subsection shows, a similar pattern can be observed regarding satisfaction with education services. We also find that being in an urban setting is strongly associated with higher levels of satisfaction with the health clinic, possibly because of the provision of better health service infrastructure relative to rural areas. Households that have been displaced at least once during the conflict are less likely to be satisfied with health services.

## 5.2 Education

In order to measure access to education, we consider time taken to reach boys’ and girls’ schools used by the household (if there is a distinction). Although we observe statistically significant differences (at 5%) in the average time taken to get to girls’ schools (26 minutes) and boys’ schools (23 minutes) (Table 6), over 88% of respondents reported that both boys’ schools and girls’ schools could be reached in less than 30 minutes (Annex, Table 17A).

Where we notice particular variations in journey times is between our sample in Trincomalee and those in Mannar and Jaffna. Households in Trincomalee face, on average, shorter journey times (significant at 5%) to schools used by both boys and girls. This may be a consequence of the urban location of much of

<sup>11</sup> A MLR of estimation of experience of health services (overall satisfaction with health services) led to a non-convergence issue in the estimation of the model. Therefore, the categories in the dependent variable were merged to form a binary variable (Satisfied=1, Otherwise=0), and a logit regression was estimated.

that sample, and the potential advantages this brings in terms of access to schools. We also see a fairly large and statistically significant difference (at 5%) in journey times to boys' schools between categories of displacement status, with households that have never been displaced facing, on average, shorter journeys by 10 minutes than displaced households (see Table 6).

**Table 6: Access to schools used by boys and girls, by location and displacement status**

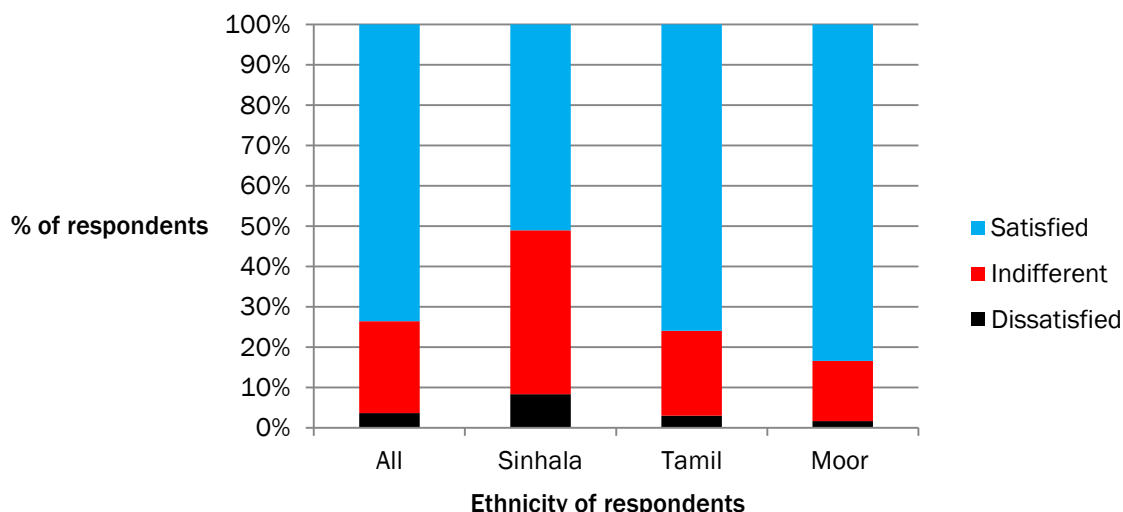
	Average time taken to reach school (minutes)	
	Boys	Girls
<b>All</b>	23	26
<b>Location**</b>		
Mannar	27	32
Jaffna	22	25
Trincomalee	18	19
<b>Displacement**</b>		
Still displaced	24	21
Resettled	23	26
Never displaced	14	22

Note: A t-test was performed to test for statistical significance. Asterisks indicate whether the mean for each group is statistically different from the sampled population as a whole (\* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%).

Using time taken to reach school as our dependent variable, OLS regression analysis suggests a number of factors may be important in explaining variations in access (see Annex Tables 18 and 19). We find ethnic minority households were more likely to face longer journey times to schools used by both girls and boys – possibly hinting at a degree of geographical marginalisation of minority groups – and satisfaction with transport was associated with shorter journey times to both. Households that experienced shocks and crimes also have longer journey times (only significant for boys). Higher household wealth (proxied by asset ownership) and urban location appears to reduce journey times for boys (at 1%) but not for girls. For both girls and boys, we also find that satisfaction with the number of teachers is associated with longer journey times, perhaps suggesting that households may be willing to travel further distances to schools where they perceive the quality to be better. Travel time is lower when the school is run by the government (only significant for school used by boys).

As with experiences of health services, our survey data suggest relatively high levels of satisfaction with the overall quality of schools used by boys and girls of the households– with no statistically significant differences between perceptions of each. Levels of satisfaction are relatively standardised by geography, though there is some variation when we split the sample by ethnic group, being considerably lower among Sinhalese respondents (see Figure 7 for levels of satisfaction with schools used by girls). That said, across all ethnic groups in our sample, reported levels of dissatisfaction were never higher than 10%. These generally high levels may reflect the fact that, in Sri Lanka, education and associated amenities and services (including textbooks, midday meals, uniforms) are provided free of charge. In addition, government investment in enhancing education quality is generally high across the country.

**Figure 7: Levels of satisfaction with girls' schools, by ethnicity (%)**



Note: Chi-squared testing indicates that differences between groups are statistically significant at the 5% level.

In a similar way to health services, regression analysis suggests overall satisfaction with schools may depend, to some degree at least, on the way they are implemented and run (see Annex Tables 20 and 21).<sup>12</sup> Indeed, in both regressions (i.e. for boys and for girls), three independent variables were found to be positively and significantly related to levels of satisfaction: satisfaction with the number of teachers (at 1%); satisfaction with the quality of teaching staff (at 1%); and participation in community meetings on education (at 5% for schools used by girls and 10% for schools used by boys). Interestingly, those households that paid informal fees were also more likely to be satisfied with both boys' and girls' education (10% level). Further research is needed to determine why this is the case. However, we also find satisfaction levels in girls' and boys' education may not be driven by a uniform set of factors. For example, respondents from households that had migrants and those that had experienced crimes were less likely to be satisfied with the quality of schools used by boys (but this was not significant for girls), whereas respondents who felt safe in their neighbourhood were more likely to be satisfied with the quality of schools used by girls (but not with those used by boys).

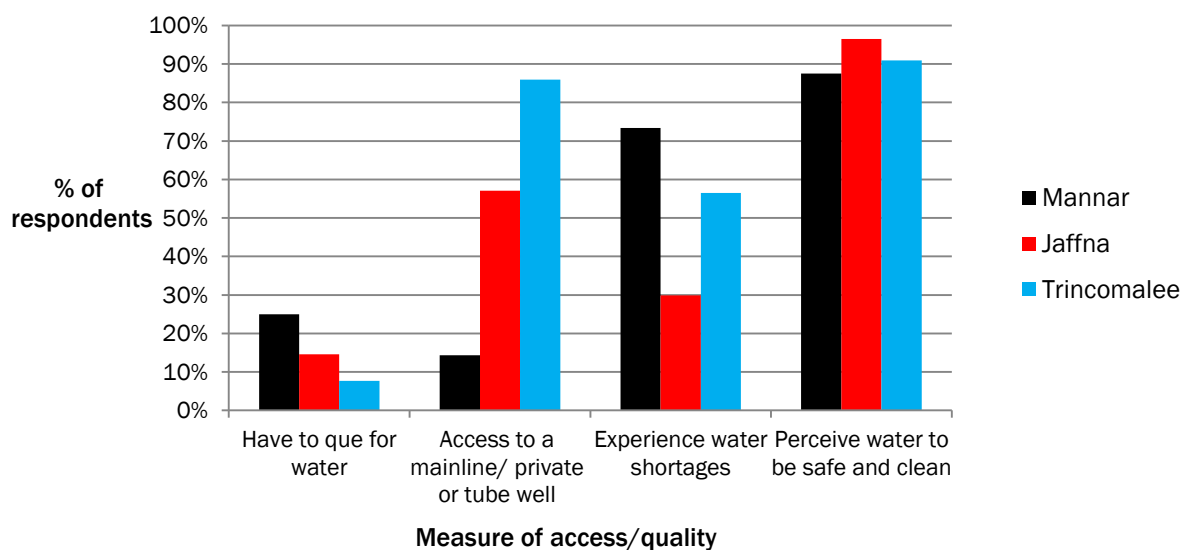
### 5.3 Water

Generally speaking, access to water sources is relatively good across the sample when measured by journey time, with 98% of surveyed households able to fetch water in less than 30 minutes. However, there are some quite striking variations between households in our Mannar sample and households in our Jaffna and Trincomalee samples. As Figure 8 shows, those in the Mannar sample are worse off across a range of measures, with proportionally more households having to queue and experience water shortages, and proportionally fewer households having access to a quality water source.

<sup>12</sup> An MLR of estimation of experience of education services (satisfaction with the quality of education services) led to a non-convergence issue in the estimation of the model. Therefore, the categories in the dependent variable were merged to form a binary variable (Satisfied=1, Otherwise=0), and a logit regression was estimated. (The 'satisfied' category includes the responses 'very satisfied' and 'satisfied'. The 'otherwise' category includes the responses 'indifferent', 'dissatisfied' and 'very dissatisfied'.)



**Figure 8: Access to water sources, by location (%)**



Note: Chi-squared testing indicates that differences between groups are statistically significant at the 5% level.

Around half of the households interviewed reported having to pay for water, which probably includes those paying the standard water charges to the local authorities providing water (see Annex Table 22). The high percentage of those paying for water in Trincomalee (76%) likely owes to the urban location of much of the sample there: households in urban areas tend to pay water charges to the local authority for a mainline supply. This would also explain why such a high share of the Sinhalese sample also reported having to pay. In contrast, we find that no households in our Jaffna sample were required to pay for water. There are some similarly striking differences across displacement status, with just 11.9% of those who were never displaced having to pay, compared with more than 45% of those who had been displaced at some point.<sup>13</sup>

Regression analysis suggests a great number of factors (most at the 1% significance level) may be influencing journey time to water points (see Annex Table 23).<sup>14</sup> In terms of factors that appear to increase journey time, we see that households that have been displaced, those paying for water, those using a water source provided by government, those that have to queue for water – and hence spend time in the queue – and those that participate in community meetings about water are likely to travel for longer. In the latter case, it may be that households are more likely to participate in meetings about water services precisely because collecting water takes so long and therefore want to do something about the situation. However, we have no additional evidence to support this. In terms of what factors appear to reduce journey time, we see associations – again at the 1% significance level – between the dependent variable and households situated in an urban location, with a migrant or with adults with a higher education level. The less food insecure the household, the shorter the travel time to the household, albeit with a small effect. These suggest households with migrants, with lower food insecurity, with more educated adults and in urban areas are more likely to have a water point in the house.

Although we find relatively high levels of satisfaction with water services, with more than 85% of all respondents reporting that the water they accessed was safe and hygienic, regression analysis suggests

<sup>13</sup> It is possible that variations in responses might be partially explained by different interpretations of the question. While some respondents might have understood the question to be in relation to water charges paid to the local administrative body, others might have understood it as having to pay for water more generally (e.g. bottled water, bowser).

<sup>14</sup> It is estimated that this regression explains 55% of the variation in outcomes.



that having to queue for water and having to pay for water may be associated with worse perceptions of water quality (significant at 1% and 5%, respectively) (Annex, Table 24).

## 5.4 Public transport

A total of 86% of households surveyed were public transport users. Of those, 11% used the service daily and 55% at least once a week. Most households had access to communication in their own language when using public transport, with relatively minor differences between the samples in each of the three districts. However, we find that respondents' satisfaction with the frequency and cost of public transport, as well as with the quality of roads, is consistently lowest within the Mannar sample. This is despite the fact that the costs of public transport are, in theory, fixed.

**Table 7: Access to public transport (%)**

	Location			Ethnicity			
	Mannar	Jaffna	Trincomalee	Sinhala	Tamil	Moor	Other
Have access to language*	98.1	99.7	95.6	88.7	99.0	99.5	100.0
Satisfied with frequency of access***	26.4	54.0	57.1	20.4	46.5	56.9	12.5
Satisfied with cost of transport***	16.9	37.1	45.1	15.5	31.4	48.2	0.0
Satisfaction with quality of roads***	20.5	59.3	61.5	32.4	45.7	56.9	37.5

Note: A Chi-squared test was performed to test for statistical significance. Asterisks indicate whether the difference between groups is statistically significant (\* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%).

## 5.5 Social protection and livelihoods assistance

Access to social protection is analysed focusing on whether at least one member of the household received a social protection transfer. In our sample of 1,377 households, 47% had at least one member over the age of 50 years. Of those, just 4.9% received an employment pension and 8.8% an old-age pension (Table 8).<sup>15</sup> A tiny minority of the sample received any disability allowances (0.7%), suggesting either low levels of disability within the sample or a lack of access, for whatever reason. By far the most widely received form of social protection among our sample households was the Samurdhi transfer (19.8%). Samurdhi is the largest social protection programme operational in Sri Lanka, dealing with poverty reduction and equity objectives. Table 8 shows that the overwhelming majority (81.6%) of those reporting receipt of Samurdhi were households from our Trincomalee sample, with regression results confirming a strong association (at 1% significance) between receipt of Samurdhi transfers and household location in an urban area (Annex, Table 25). In contrast, households in urban locations are significantly less likely – again, at 1% significance – to access livelihoods assistance. The higher levels of access to Samurdhi in our Trincomalee sample might also be explained by differences in rollout of the programme across districts, and/or by the presence of more developed (or less conflict-affected) administrative structures in urban areas.

<sup>15</sup> An individual receives an employment pension only if they were employed by the government and are 50 years or above. An individual receives an old-age pension if they are 50 years or above and have no other income or support.

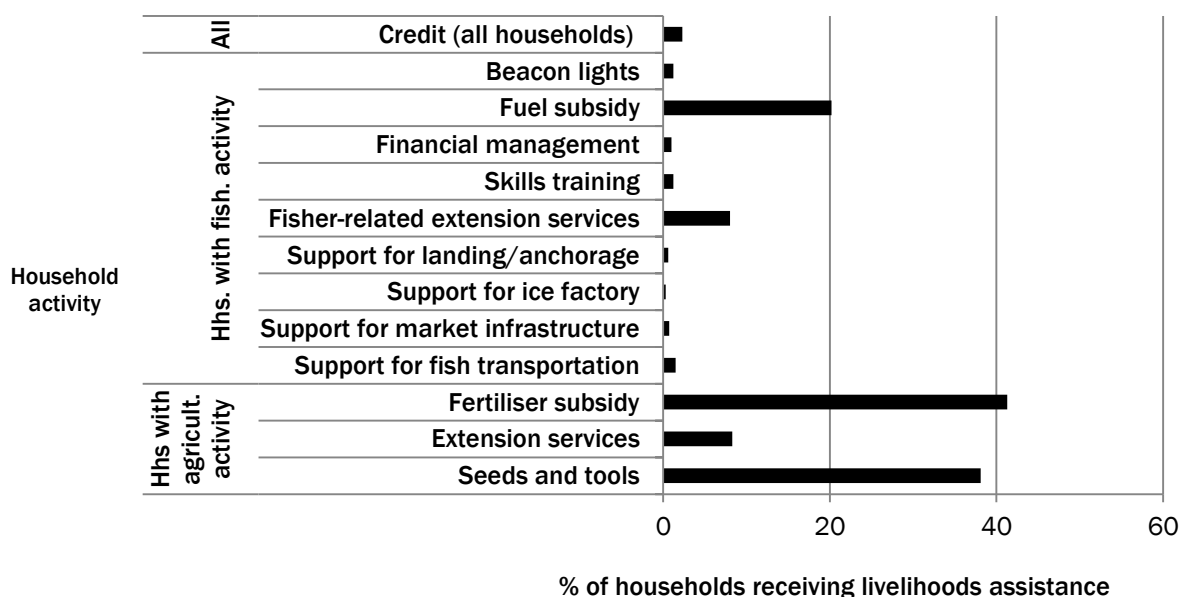
**Table 8: Household receiving a social protection transfer, by location and ethnicity (%)**

Type of protection	Total	Location			Ethnicity			
		Mannar	Jaffna	Trincomalee	Sinhala	Tamil	Moor	Other
Employment pension***	4.9	16.7	30	53.3	40	56.7	0	3.3
Old-age pension***	8.8	23.7	66	10.2	1.7	91.5	5.1	1.7
Disability allowance***	0.7	40	50%	10	10	90	0	0
Samurdhi***	19.8	2.2	16.2	81.6	45.2	30.5	23.2	1.1

Note: Proportions of those receiving calculated in relation to eligible sub-sample, not entire sample. A Chi-squared test was performed to test for statistical significance. Asterisks indicate whether the difference between groups is statistically significant (\* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%).

A larger proportion of sampled households (29%) received some form of livelihoods assistance, although just 2.3% of households in the sample had accessed credit. Among those households that had agriculture as either a primary or a secondary livelihood activity, 41.3% received the fertiliser subsidy, 38.1% had access to seeds and tools and 8.3% received extension services. Among the households that had fishing as either a primary or a secondary livelihood activity, 20.2% received the fuel subsidy and 8.0% received fisheries extension support, with lower percentages for other types of support (see Figure 9).<sup>16</sup>

**Figure 9: Households receiving livelihoods support, by household activity**



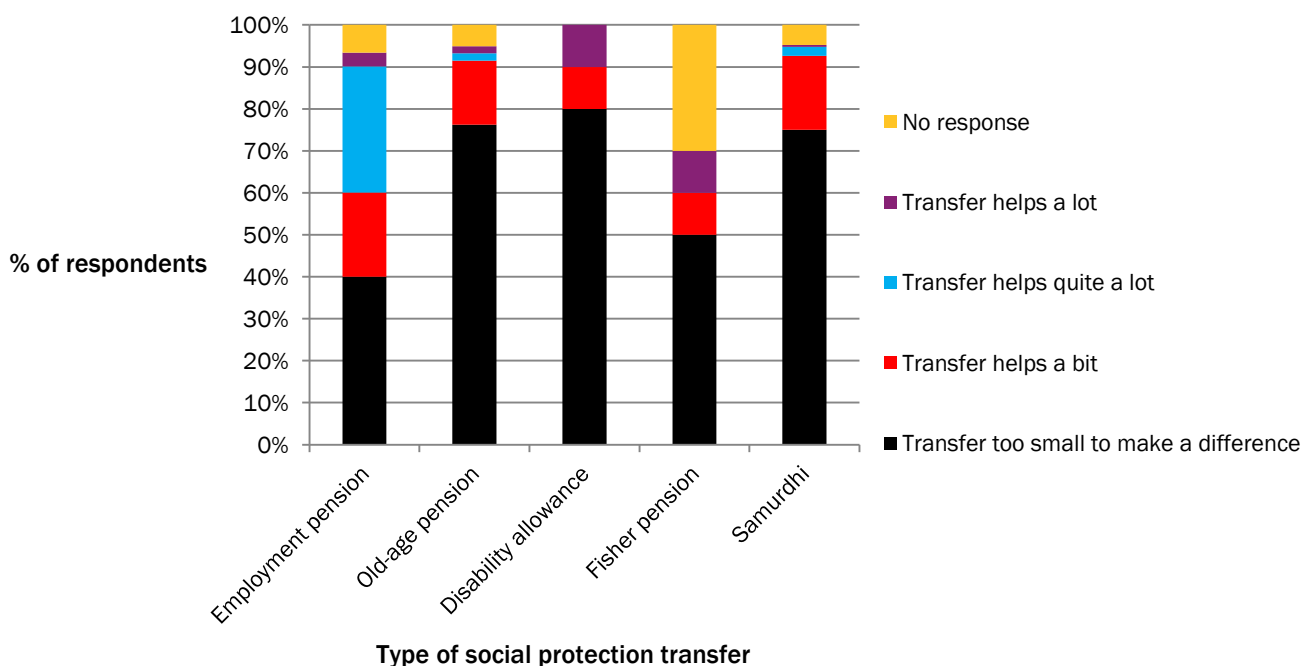
Regression results suggest that, while food-insecure households are more likely to receive Samurdhi transfers, food insecurity does not appear to affect whether a household receives livelihoods assistance (see Annex, Table 27). On the other hand, it seems that, although asset ownership does not appear to influence access to Samurdhi transfers, regression results suggest wealthier households are more likely to receive livelihoods assistance. On this, it is not clear whether access to livelihoods assistance has increased asset accumulation among recipient households (it is worth noting that respondents typically reported livelihoods assistance programmes as having positive impacts on productivity – see below), or

<sup>16</sup> These proportions have been calculated by taking into account the likely leakage of services. That is, we have removed observations where the household receiving the service did not pursue agriculture or fishing as either a primary or a secondary activity (depending on which service we are looking at).

whether better-off households simply have more ease in accessing livelihoods assistance in the first place. It is also interesting to note that households with migrants are more likely to receive either support, but that urban households are more likely to receive Samurdhi transfers but less likely to receive livelihoods assistance. Households that have participated in livelihoods meetings are more likely to have received a livelihoods transfer. Again, we cannot assess causality from the data: attendance at meetings may have led to potential beneficiaries learning about the support and then applying, or attendance of meetings may have been part of the livelihoods support programme.

In terms of the (perceived) impacts of these transfers, we find that large proportions of those who received some form of social protection did not find the transfers to be particularly useful (see Figure 10). We might argue that the one exception to the generally negative pattern displayed below is that of the employment pension – 30% of recipients believed it to ‘help quite a lot’.

**Figure 10: Perceived impacts of social protection programmes (%)**



Note: A Chi-squared test was performed to test for statistical significance. Asterisks indicate whether the difference between groups is statistically significant (\* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%).

Regression analysis suggests that more positive perceptions of the impact of Samurdhi transfers tend to follow when the respondent lives in a household with a high number of children, when the household has a low level of wealth (as measured by the Morris Score Index) and when the respondent is not in employment (all at 10%) (see Annex Table 26).<sup>17</sup> This suggests that Samurdhi matters more to respondents living in households characterised by more ‘difficult’ circumstances.

In contrast, the impacts of livelihoods assistance were generally viewed far more favourably by those receiving them than were the impacts of social protection (Table 9). Regression analysis found that, if the livelihood transfer was received on time, it made a substantial positive difference on whether the transfer had an impact (see Annex, Table 28).

<sup>17</sup> An MLR of estimation of experience of Samurdhi social protection (impact of the social protection transfer) led to a non-convergence issue in the estimation of the model. Therefore, the categories in the dependent variable were merged to form a binary variable (Social protection helped=1, Otherwise=0), and a logistic regression was estimated.

**Table 9: Impact of selected livelihood assistance on production**

Impact of livelihood assistance on production	Seeds and tools	Fertiliser subsidy	Credit (general)	Fisher skills training	Fisher fuel subsidy
No. of households receiving the support	83	90	32	8	137
Respondents among those who received support saying production improved (%)	89.2%	87.8%	81.3%	87.5%	77.4%
Impact of social protection transfer	Pension (and old-age pension)	Disability allowance	Fisher support schemes	Samurdhi	Sanitary facilities/ drinking water
No. of households receiving the support	89	10	45	272	11
Respondents among those who received support saying it helped 'a bit' or more (%)	32.1%	20.0%	73.7%	21.2%	0.0%

Note: Number of households receiving support looks at only those households in primary or secondary agriculture (seeds and tools, fertiliser subsidy) or that are primary or secondary fishers (fisher skills training, fisher fuel subsidy).

The experience of social protection and livelihoods assistance cannot be directly compared, as the interventions and questions asked about their effectiveness are substantially different. It seems from the survey data that, within our sample, respondents perceive livelihoods assistance to be more effective. This needs to be explored further in future fieldwork.

## 5.6 Summary of findings

In general, there are **relatively high levels of access to and satisfaction with a range of basic services** within our sample, including health, education and water. For example, less than 10% of each of our samples in Jaffna, Mannar and Trincomalee reported being dissatisfied with their local health clinic; less than 10% of each of our samples by ethnic group (Tamil, Sinhalese, Moor) reported being dissatisfied with the girls' schools they accessed; and, while 98% of all households surveyed were able to access a water source in less than 30 minutes, more than 85% of all respondents reported that the water they accessed was safe and hygienic. Given that almost 30 years of war had disrupted the government administration in many of the surveyed areas, these observed levels of service delivery and satisfaction within our sample arguably constitute a positive indication of the government's attempts to rebuild social and physical infrastructure. That said, it should also be pointed out that, throughout the war, services continued to be delivered in affected areas. Thus, the situation we observe today has not emerged from a blank slate – and any comparisons made between then and now should take this into account.

**Respondents' experiences with social protection, however, are not quite so encouraging.** Across a range of different transfers – including those associated with the Samurdhi programme (the most commonly accessed form of social protection within our sample), the old-age pension and the disability allowance – by far the most common response when asked about (perceived) impact was 'the transfer is too small to make a difference' (more than 50% of responses in most cases). The only exception is the employment pension, where 30% of responses were 'the transfer helps quite a lot'. These responses stand in contrast with the reported impacts of livelihoods assistance, with the vast majority (more than 75% in most cases) of recipients of fertilisers, seeds and tools and fisher fuel subsidies reporting that the service had helped improve production. However, it should also be pointed out that many types of livelihoods assistance were accessed by only a tiny minority of households in our sample. Future SLRC qualitative research will help clarify and contextualise these findings.

Finally, although there is no consistent set of variables explaining why some respondents are more satisfied with services than others, there is some indication that **people's specific personal experiences with the service heavily influences their overall level of satisfaction.** Regression analysis of respondents' experience with both education and health suggests that factors such as 'satisfaction with

the availability of medicine', 'satisfaction with the waiting time in the clinic', 'satisfaction with the number of teachers' and 'satisfaction with the quality of the teaching staff' are strongly and positively associated with higher levels of overall satisfaction with those services. For education and livelihoods assistance, we also find that participation in community meetings about schooling/livelihoods assistance appears to lead to more positive perceptions of satisfaction. That said, we do not observe these relations across all services, suggesting people may attach different levels of importance to particular characteristics of different services.

## 6 Governance

What do people in our sample think of governance in their area and how strong is their public participation? Using a series of outcome indicators – including attendance at public meetings, experience with service providers and levels of trust and confidence in local and central government – we examine people’s experiences with, and perceptions of, governance. We start by looking at the accountability and responsiveness of service providers, using complaints procedures as a mechanism to explore this issue, before describing people’s participation in local public meetings and decision-making processes. We then focus on respondents’ attitudes towards local and central government, and draw on regression analysis to suggest what might be driving negative or positive perceptions.

### 6.1 Responsiveness of service providers and levels of public participation in community meetings

Service delivery can be considered a site of interaction between citizens and their state (McLoughlin, 2013), and it is in relation to public service provision that people often ‘see’ and experience the state. We attempt to explore this relationship by looking at two measures of state–society interaction within the realm of service delivery: whether service delivery problems experienced by the household are reported to providers; and whether households attend local public meetings regarding service provision. We later use these measures as independent variables in regression analyses of perceptions of governance, to test whether these kinds of interactions are associated with more positive attitudes of local and central government actors.

Our survey data tell us that 63% of households reported experiencing at least one service delivery problem over the previous year. In terms of distribution by sector, 39.9% of the reported problems concerned water services, 29.9% health, 26.4% livelihoods assistance, 15% education and 6% social protection. Interestingly, there does not seem to be a linear relationship between satisfaction with a service and number of complaints; for example, satisfaction with health is very high, but at the same time respondents made the second-highest number of complaints about health (Table 10).

**Table 10: Incidence of service delivery problems and household responses (%)**

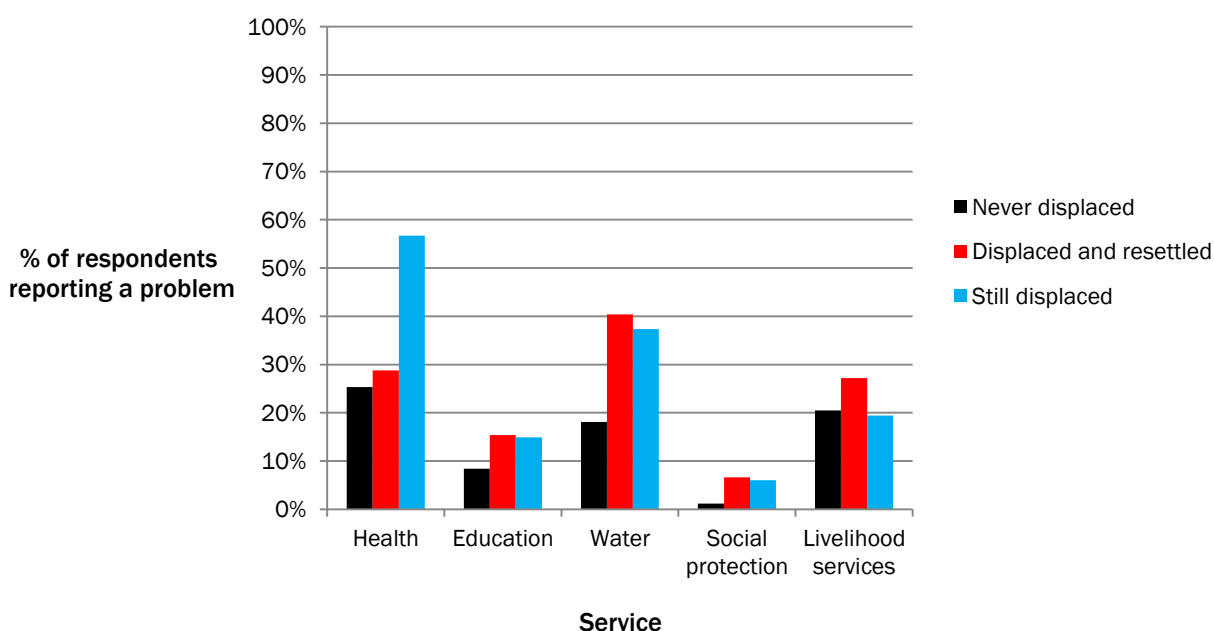
	Health	Education	Water	Social protection	Livelihood assistance	Overall
1. Encountered at least one service delivery problem	29.9	15.0	38.9	6.2	26.4	<b>63</b>
2. Had service delivery issues and knew how to make a complaint	64.6	61.7	68.5	60.5	55.8	<b>67.5</b>
3. Knew how to make a complaint and actually complained	84.6	75.6	87.2	82.7	84.7	<b>88.8</b>
4.1. Complained to local/central government/elected politician/defence force	85.3	81.3	87.5	88.4	94.2	<b>84.5*</b>
4.2. Complained to non-governmental organisation/international agency	9.3	7.3	7.2	0	0	<b>0**</b>
4.3. Complained to community/religious leader/private provider	4.0	10.4	4.7	9.3	5.2	<b>6.0***</b>
4.4. No response	1.3	1.0	0.6	2.3	0.6	<b>1.9</b>
5. Complained to government (as in 4.1) and received response to complaint	48.4	48.7	57.9	44.7	31.5	<b>51.2***</b>

Note: Computation of Row 2 – share of those who knew how to make a complaint from among those who faced a service delivery issue. Computation of Row 3 – share of those who actually made a complaint from among those who had a problem and knew how to make a complaint. Computation of Rows 4.1-4.4 – shares of to whom they complained from among those who had a problem and knew how to complain and who actually complained. Composition of last column in Table 11 – from among those who had a problem and who actually knew how to make a complaint and who actually made a complaint; shares in 4.1, 4.2 and 4.3 will not add up to 100% for obvious reasons and also there will be overlaps on who the respondent made a complaint to. Asterisks indicate whether the mean for each group is statistically different from the mean for the sample as a whole (\* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%).

While most households in our Mannar sample reported a problem (86%), a lower proportion in our Jaffna and Trincomalee samples – around half of the sample in each – reported a problem. We also see that incidence of reported service delivery problems is far lower proportionally for households in our sample that had never been displaced (Table 10).

The proportions of households reporting problems in our ‘still displaced’ and ‘displaced and resettled’ samples were generally quite similar, with the striking exception of health services (Figure 11). Whether this is a reflection of particularly inadequate provision of health services to displaced persons, relative to other kinds of basic services, is a question for future research.

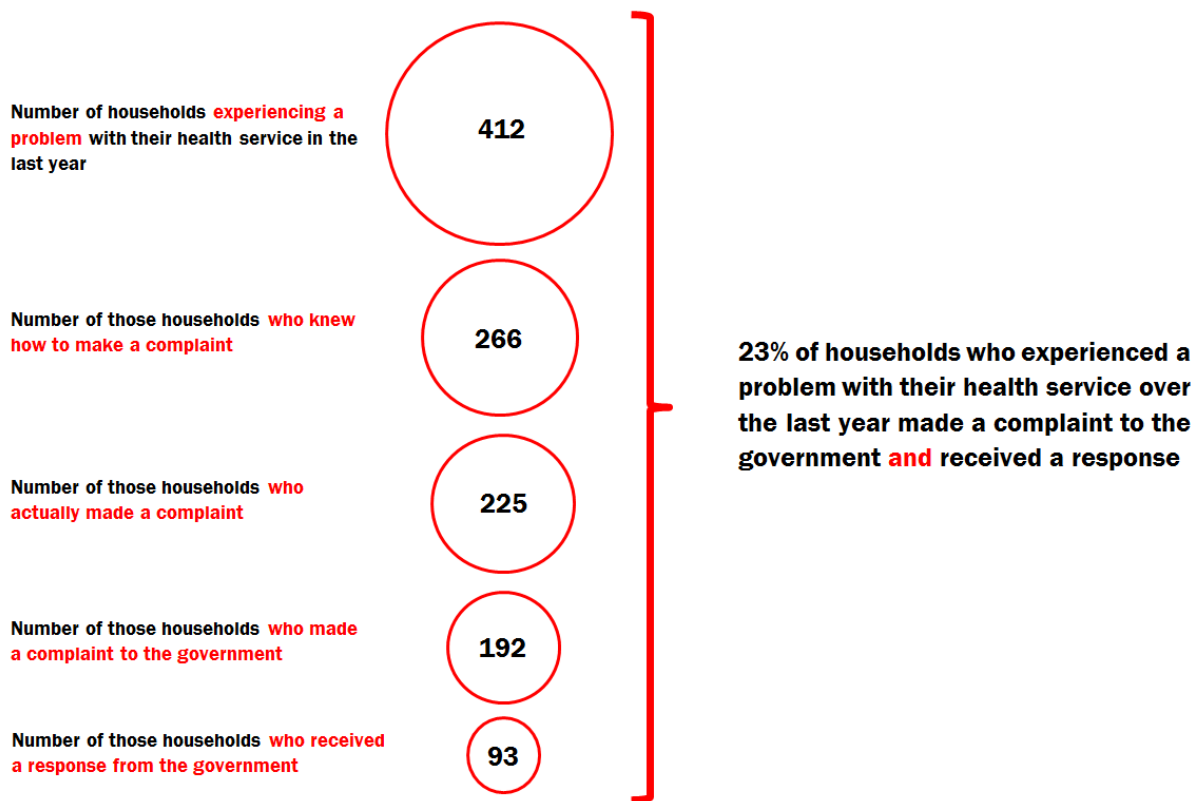
**Figure 11: Respondents reporting service delivery problems, by displacement status (%)**



Note: For each service, differences between groups are statistically significant at 5% significance level.

This information tells us that a significant number of households in our sample had experienced at least one service delivery-related problem in the previous year. But how many of those households did something about that problem? When asked about responses to their service delivery problem, more than two-thirds (67.5%) of respondents were aware of how to make an official complaint or raise a grievance (Table 10). Moreover, the vast majority of those who knew about this process did, in fact, make a complaint, often to the government and rarely to non-governmental organisations (NGOs) or community/private providers. Of those who made a complaint to the government, around half received a response, indicating a variable degree of government responsiveness regarding service delivery problems. With regard to health services, as illustrated in Figure 12, 23% of households that had experienced a problem with the health service had gone on to make a complaint to the government and receive a response.

**Figure 12: Households that experienced problems with health services in the previous year, made a complaint to their government *and* received a response**



As mentioned above, in addition to asking about people’s experiences with complaints procedures, our survey generated information on levels of public participation. More specifically, respondents were asked if any household member had attended any meetings or consultations regarding service provision in the past year.<sup>18</sup> As Table 11 shows, more than half the households in our sample reported there being a meeting held in relation to health services – a significantly greater proportion than for other services. The table also tells us that, generally speaking, community meetings are called and households are consulted by government officials. A smaller number of meetings and consultations are held by a mix of other authorities, including NGOs or religious leaders.

<sup>18</sup> Community meetings refer to meetings of groups of households (or individuals representing their household) held in order to discuss issues around a particular service. Consultations refer to occasions when an authority figure has consulted individual households about issues around a particular service.

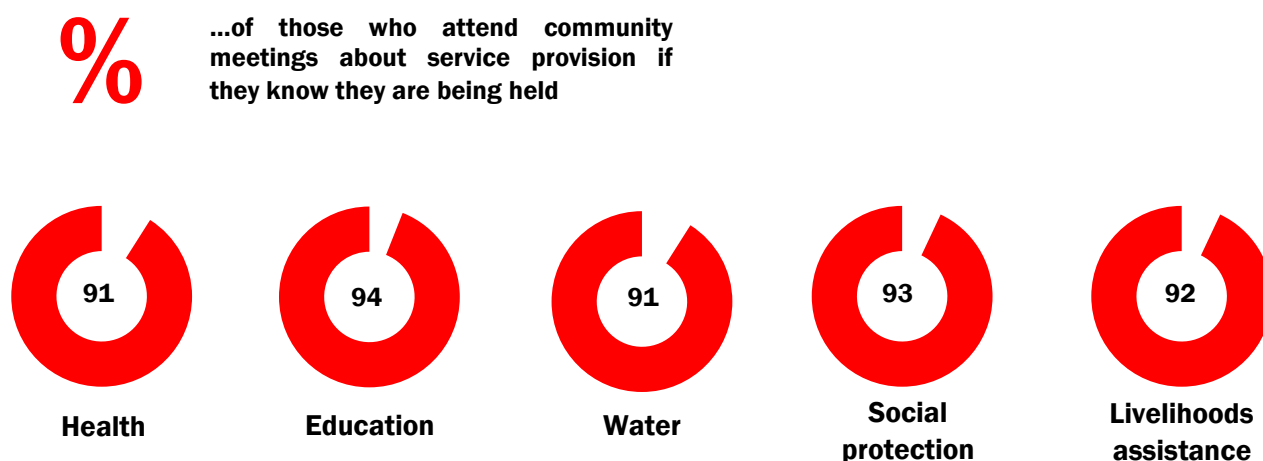


**Table 11: Attendance at community meetings and consultations, by issue**

	Health	Education	Water	Social protection	Livelihood assistance
<b>Community meetings</b>					
Was a community meeting about this particular service held in the past year? (% of households reporting 'yes')	56	23	18	16	16
If yes, did you attend? (% of applicable households reporting 'yes')	91	94	91	93	92
Was the meeting called by government officials? (% of applicable households reporting 'yes')	76	56	44	50	38
<b>Consultations</b>					
Have you been consulted about this particular service in the past year? (% of households reporting 'yes')	28	12	8	8	8
Was the consultation administered by government officials? (% of applicable households reporting 'yes')	75	66	69	70	49

However, what is striking about the data presented here is the high level of participation in community meetings – seemingly regardless of sector – if households are aware of them taking place (Figure 13). This suggests that, at least within our sample, people are keen to be actively engaged in local decision-making processes regarding service provision and that, if invited, are likely to attend such meetings.

**Figure 13: Levels of participation in community meetings about service provision**



## 6.2 Perceptions of local and central government

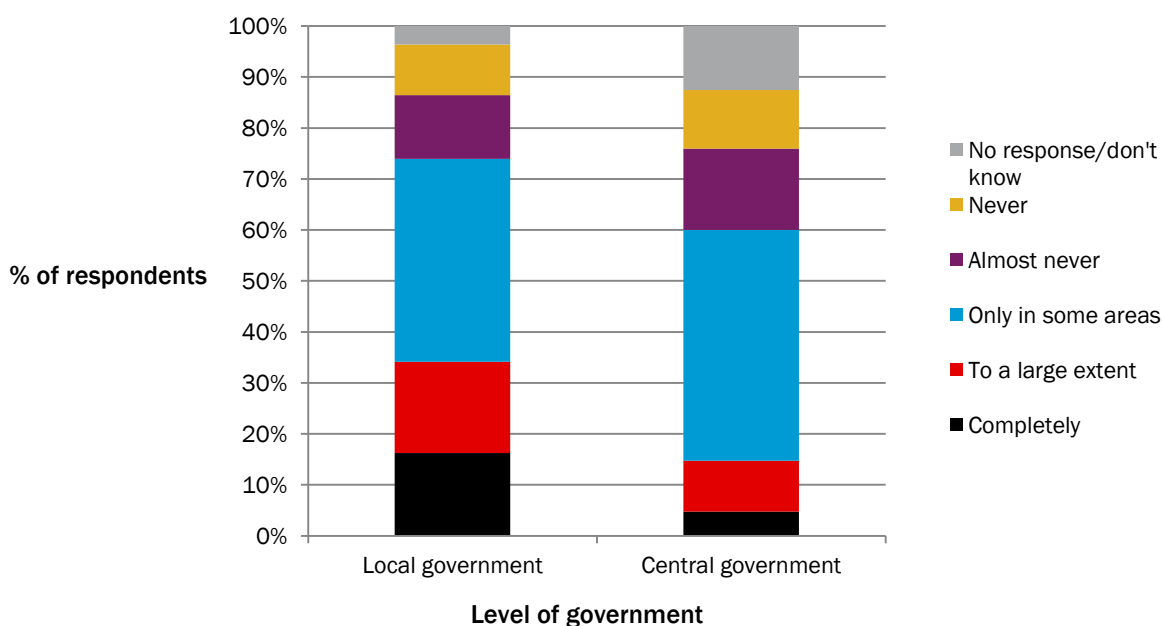
What do respondents within our sample think about the Sri Lankan government? This sub-section is based on a description and analysis of responses to two survey questions. The first asked respondents whether they agreed with the following statement: ‘The government is concerned about my views and

opinions'.<sup>19</sup> The second asked respondents the following: 'To what extent do you feel that the decisions of those in power in relation to service provision reflect your own priorities?'<sup>20</sup> Both of these were asked in relation to local as well as central government.

From the figures below, we can see that respondents in our sample had mixed views about whether local and central governments were concerned about their views and opinions (Figure 14). That said, while most (53.4%) had a positive perception of the local government in this respect, just one-third of respondents felt similarly about the central government.

We see a similar pattern when looking at responses to the second question. Although substantially more people felt that local and central government decisions regarding service provision reflected their priorities only 'in some areas' (when compared with any other type of response), once again relatively more respondents held more positive attitudes towards local government.

**Figure 14: Decisions made by local/ central government reflect respondent's priorities**



Note: Within each level of government, differences between groups are statistically significant at the 5% level.

Regression analyses provide some insights into what it might be that is influencing our respondents' perceptions of local and central government (see Annex, Tables 29-32).<sup>21</sup>

When focusing on the strongest confidence levels (usually at 1% or 5%), we do not observe any consistent relationships between perceptions and various livelihood-related variables, such as food insecurity or household wealth. The only exception is that those households with greater food insecurity are less likely to 'completely' or 'largely' agree with the statement that the local government's decisions reflect their own priorities. Likewise, few household-level variables are significant. Respondents who feel safe are more likely to have positive perceptions of local government and households that have experienced shocks have more negative perceptions of both levels of government (the latter is not significant in all regressions). Neither displacement status nor ethnicity appears to influence

<sup>19</sup> Possible answers included 'yes', 'no' and 'don't know'.

<sup>20</sup> Possible answers included 'completely', 'to a large extent', 'only in some areas', 'almost never', 'never' and 'don't know'.

<sup>21</sup> This sub-section draws on four separate pieces of regression analysis. The first two were executed as logit regressions, using, 'The government is concerned about my views and opinions' as the dependent variable. One logit regression was carried out for perceptions of the local government, another for perceptions of the central government. The second two regressions were executed as MLRs, using two sets of answers to the statement, 'The decisions of those in power in relation to service provision reflect my priorities' as the dependent variables: 'never' and 'almost never', and 'completely' and 'largely'. Interpretation of the regression results involved looking across all four regression tables in order to identify strong commonalities between local and central government and between the two outcome measures. Emphasis was placed on pulling out common associations that were at the strongest confidence levels (usually either 1% or 5%).

perceptions of government. Male respondents are less likely to have trust in central government and more educated respondents are more likely to have trust in local government, but no other individual characteristics are significant in other regressions.

However, what emerges most strongly from the regression analyses is the centrality of service-related factors in appearing to shape respondents' perceptions of the government, at both local and central levels. First, we consistently find that **public participation improves perceptions of both levels of government**. The higher the number of service-related community meetings held and the more frequently respondents were consulted otherwise, the more positive the respondent's perceptions of local and central government was likely to be.<sup>22</sup> The issue of such meetings comes out quite strongly from this as well as earlier analysis, which showed that, if people are aware of service-related meetings taking place, then most will attend them (Figure 13).

On a similar note, we also find **the higher the number of service-related problems experienced, the worse the respondent's perceptions of local and central government** is likely to be. However, positive experiences with some services or satisfaction with how some services are run seem to positively affect perceptions of government, especially local government, but not consistently so. For instance, those households satisfied with the health service or the provision of medicine are more likely to have trust in the local government, and those respondents living in households receiving livelihoods assistance are more likely to have trust in central government and more likely to 'completely' or 'largely agree' that the central and local government's priorities reflect their own.

Finally, we also find that **those who have to pay fees for water and who travel further to the water source are significantly more likely to hold worse perceptions of both local and central government**. Those paying formal/informal fees for education are more likely to have lower trust in local government, but higher trust in central government.<sup>23</sup> It is not clear why – further research has to disentangle this relationship. Respondents who used a health service being run by the government were more likely to agree that the local and central government's priorities 'never' or 'almost never' reflected their own. Further research should explore this finding further; in particular, it should be checked if this could be linked to service-related problems.

In addition to our findings on perceptions, the survey data suggest that the state of political engagement in the surveyed locations is quite encouraging: a large share (84%) of respondents had voted in elections in the previous three years and an even larger share (97%) expressed their desire to vote in future elections.

### 6.3 Summary of findings

Analysis and interpretation of our governance data – drawing on descriptive statistics and regression results – reveals four key findings.

First, a **high proportion of those surveyed – 63% of the sample – reported experiencing at least one service-related problem within the previous year**. Most of these were in relation to either health, water or livelihoods assistance. However, a fairly large proportion of those – often between 30% and 40% – were not aware of how to make a complaint or report their problem. Moreover, of all the households that experienced a problem, only a minority both reported it to the government and received a response – just 23% of those that experienced a problem with their health service, for example. Our data thus speak to a range of possible issues regarding people's experiences with basic services and channels of accountability, including gaps in citizen knowledge about grievance mechanisms; a reluctance or lack of initiative on the part of citizens to make complaints; and/or mixed levels of government responsiveness

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<sup>22</sup> These were significant in both local governance regressions. Only number of meetings attended was significant in the central governance logit regression and only number of consultations was significant in the central government multinomial logit regression,

<sup>23</sup> We ran a separate set of regressions for households with children of school age. They can be found in the Annex, in Tables 33-36.

and accountability. Future research could usefully explore these relationships and potential explanations in greater depth. Finally, it should be noted that respondents from households that experienced a service-related problem had worse perceptions of both local and central government.

Second, we find that **the vast majority of those who were aware of community meetings about service provision attended them.** Indeed, for meetings regarding all kinds of public services – including health, education, water, social protection and livelihoods assistance – more than 90% of households in our sample participated if they happened (and if they knew about them). This suggests that people, at least in our sample areas, are keen to engage in local decision-making processes concerning service provision, and that – if they are invited – will participate. This positively impacts on perceptions of government: the higher the number of service-related community meetings held and the more frequently respondents were consulted otherwise, the more positive the respondent's perceptions of local and central government was likely to be.

Third, although respondents' perceptions of the government are mixed, we find that **local government is generally perceived more positively than central government.** For example, 53% of respondents felt the local government cared about their views; when asked the same about central government, the figure was 20 percentage points lower. Similarly, 34% of respondents felt the decisions of the local government (concerning service delivery) either 'completely' or 'largely' reflected their own priorities, compared with just 15% when asked about central government.

Fourth, we find (from regression analysis) that a number of factors concerning the provision of basic services appear to explain – at least in part – why perceptions of the government might vary across our sample. As indicated above, **we observe particularly and consistently strong associations between the number of service-related meetings held and better perceptions of both local and central government, a strong association between the number of service-related problems experienced and worse perceptions of central government, and strong associations between having to pay for water and worse perceptions of local and central government.** For some services, we see associations between the respondent having positively experienced the service, and more positive perceptions of government. Although the specific causal mechanisms remain unclear, our findings suggest the possibility of linkages between one's experience of service provision and certain attitudes towards the state.

# 7 Conclusions

In 2012/13, SLRC implemented the first round of an original cross-country panel survey in Sri Lanka – a survey designed to produce information on:

- People's livelihoods (income-generating activities, asset portfolios, food security, constraining and enabling factors within the broader institutional and geographical context);
- Their access to basic services (education, health, water), social protection and livelihood assistance; and
- Their relationships with governance processes and practices (participation in public meetings, experience with grievance mechanisms, perceptions of major political actors).

This paper has reported on the baseline findings emerging from statistical analysis of the Sri Lankan first-round data. We now provide a recap of those findings. For reasons of ease and accessibility, we split this section into five: the first subsection provides some basic detail on the sample; the second to fourth revisit key findings on livelihoods, basic services and governance, respectively; and the fifth identifies research priorities to take forwards.

## 7.1 The survey sample

We collected survey data from a sample of 1,377 households. Although the sample was drawn from three districts – Jaffna, Mannar and Trincomalee (purposely selected in order to capture geographic variation in conflict and return, resettlement and recovery time) – our data are not representative at the district level. They are representative, however, at both the GND level and the village level. Our data are also statistically significant at both of these levels.

In terms of composition, around two-thirds of respondents were female and 58% were aged between 30 and 55 years. Displacement levels were high throughout the sample, with 99.3% of those in Mannar, 97% of those in Jaffna and 86.1% of those in Trincomalee having been displaced – figures that are broadly in line with existing district-level data. Most households in the sample were engaged in either fishing or trading as a primary occupation – this can be partly explained by a purposive sampling strategy at the district level – and 70% of households reported being in debt. Finally, while significant proportions of our sample had experienced various shocks in the previous three years, including inflation/price hikes (66.2%), floods (39.9%), long-term illnesses (22.2%) and drought (16.4%), experiences of crime were generally very rare. Overall, less than 7% of households had experienced any form of crime in the previous three years.

## 7.2 Livelihood status

Four key findings emerge from our analysis of the livelihoods data.

First, **there is a limited set of variables that appear to be significant determinants of livelihood status** in relatively predictable ways. Such variables include level of education among adults, which, as expected, suggests higher levels of education reduce food insecurity and increase assets. Indeed, regression analyses show that the independent variable – 'share of adults completing primary education' – produces some of the largest effects on both food security and asset ownership (and is statistically significant at 1% in each case). Similarly, results indicate access to credit has a positive bearing on livelihood status outcomes (improved household wealth and reduced food insecurity), whereas having experienced a shock does not. Having family members who have migrated for employment led, as might be expected, to improved performance on the asset index. Interestingly, displacement does not seem to impact on either food insecurity or assets.

Second, and perhaps more complex, is the situation with respect to the set of variables associated with access to and experience of services. **Several variables relating to the quality or availability of key**

**public services have predictable effects.** For example, higher levels of satisfaction with the quality of health services are associated with both greater food security and higher wealth, and those receiving livelihoods assistance appear to have higher assets (or vice versa). **But other effects need to be explored further.** For example, those households that have accessed social protection exhibit greater levels of food insecurity. It is likely this means social protection has been targeted towards less wealthy households.

Third, **female-headed households** (measured as those households without a male income earner) **tend to do worse across a range of livelihood outcome indicators**, exhibiting lower levels of wealth and higher levels of food insecurity. These findings suggest a strong gendered dimension to livelihoods in the sampled population, and merit further analysis (particularly in order to determine the channels through which the gender effect operates).

Fourth, in explaining variations in levels of food insecurity, **neither being an ethnic minority in the location nor the household's primary livelihood activity appears important.** On the other hand, wealth – proxied by asset ownership – does appear to play a role in determining levels of food insecurity, with wealthier households being less food insecure. In the case of assets, although being an ethnic minority in the location did not turn out to be significant, rural / urban location and self-assessed safety did: households in urban locations and those feeling safe are more likely to be better off. That asset ownership (wealth) varies by location – with surveyed households in Mannar exhibiting a lower mean asset index score than those in Jaffna and Trincomalee – is possibly a reflection of spatial differences in conflict dynamics and intensity. As mentioned earlier, while both Trincomalee and Jaffna returned to a relative state of peace in 1990 and 1996, respectively, Mannar continued to experience intense periods of conflict up until 2009. The implication here is that household economic recovery takes time, and that additional years are needed for those in Mannar – where processes of resettlement have occurred far more recently – to 'catch up'. The second round of this panel survey, due for completion in 2015/16, will shed light on whether these households have been able to do so.

### **7.3 Access to and satisfaction with services**

There are three key findings in relation to people's access to, and satisfaction with, basic services.

First, in general, there are **relatively high levels of access to and satisfaction with a range of basic services** within our sample, including health, education and water. For example, less than 10% of each of our samples in Jaffna, Mannar and Trincomalee reported being dissatisfied with their local health clinic; less than 10% of each of our samples by ethnic group (Tamil, Sinhalese, Moor) reported being dissatisfied with the schools girls accessed; and 98% of all households surveyed were able to access a water source in less than 30 minutes, with more than 85% of all respondents reporting that the water they accessed was safe and hygienic. Given that almost 30 years of war had an impact on the effectiveness of government services in many of the surveyed areas, these observed levels of service delivery and satisfaction within our sample arguably constitute a positive indication of the government's attempts to rebuild social and physical infrastructure. That said, it should also be pointed out that, throughout the war, services continued to be delivered in affected areas. Thus, the situation we observe today has not emerged from a blank slate – and any comparisons made between then and now should take this into account.

Second, **respondents' experiences with social protection, however, are not quite so encouraging.** Across a range of different transfers – including those associated with the Samurdhi programme (the most commonly accessed form of social protection within our sample), the old-age pension and the disability allowance – by far the most common response when asked about (perceived) impact was 'the transfer is too small to make a difference' (more than 50% of responses in most cases). The only exception is the employment pension, where 30% of those who responded stated 'the transfer helps quite a lot'. These responses stand in contrast with the reported impacts of livelihoods assistance, with



the vast majority (more than 75% in most cases) of recipients of fertilisers, seeds and tools and fisher fuel subsidies reporting that the service had helped improve production. However, it should also be pointed out that many types of livelihoods assistance were accessed by only a tiny minority of households in our sample, particularly those pursuing fishing as a primary livelihood activity. Future SLRC qualitative research will help clarify and contextualise these findings.

Finally, although there is no consistent set of variables explaining why some respondents are more satisfied with services than others, there is some indication that **people's specific personal experiences with the service heavily influences their overall level of satisfaction**. Regression analysis of respondents' experience with both education and health suggests factors such as 'satisfaction with the availability of medicine', 'satisfaction with the waiting time in the clinic', 'satisfaction with the number of teachers' and 'satisfaction with the quality of the teaching staff' are strongly and positively associated with higher levels of overall satisfaction with those services. For education and livelihoods assistance, we also find that participation in community meetings about schooling/livelihood assistance appears to influence more positive perceptions of satisfaction. That said, we do not observe these relations across all services, suggesting people may attach different levels of importance to particular characteristics of different services.

#### **7.4 Civic participation and perceptions of government**

Analysis and interpretation of our governance data – drawing on descriptive statistics and regression results – reveal four key findings.

First, **a high proportion of those surveyed – 63% of the sample – reported experiencing at least one service-related problem within the previous year**. Most of these were in relation to either health, water or livelihoods assistance. However, a fairly large proportion of those – often between 30% and 40% – were not aware of how to make a complaint or report their problem. Moreover, of all the households that experienced a problem, only a minority both reported it to the government and received a response – just 23% of those that experienced a problem with their health service, for example. Our data thus speak to a range of possible issues regarding people's experiences with basic services and channels of accountability, including gaps in citizen knowledge about grievance mechanisms; a reluctance or lack of initiative on the part of citizens to make complaints; and/or mixed levels of government responsiveness and accountability. Future research could usefully explore these relationships and potential explanations in greater depth. Finally, it should be noted that respondents from households that experienced a service-related problem had worse perceptions of both local and central government.

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## **7.5 Priorities for future research**

Despite the government’s development interventions to help war-affected people rebuild their livelihoods following conflict, the findings presented here suggest there are relatively low levels of access to social protection and livelihoods assistance services in our surveyed areas. Therefore, there is a need for more in-depth research into the kinds of people who are losing out in relation to service delivery, the specific forms of support required by still vulnerable households and the barriers preventing them from accessing what is already on offer.



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**Table 1: Gender composition of the respondents**

	Mannar	Jaffna	Trincomalee	All
Male	45.30%	31.80%	37.80%	38.30%
Female	54.70%	68.20%	62.20%	61.70%

**Table 2: Age of the respondent**

Age group	Mannar	Jaffna	Trincomalee	All
Young (up to 30yrs)	28.60%	19.50%	17.40%	21.80%
Middle aged (30 to 55 yrs)	57.80%	56.70%	61.50%	58.70%
Old (more than 55yrs)	13.60%	23.80%	21.10%	19.50%

**Table 3: Housing and sanitary conditions by status of displacement**

	Displaced and resettled	Still in displacement	Never displaced	All
<b>Poor housing conditions</b>				
Roof: tin/cadjan/vinyl/tarp	43.50%	70.10%	21.70%	43.50%
Walls: soil/mud/plank/cadjan/tin/tarp	24.50%	22.40%	6.00%	23.30%
Floor: earth/clay	12.00%	9.00%	10.80%	11.80%
<b>Access to toilet</b>				
No toilet	19.90%	6.00%	14.50%	18.90%
Private inside house/on plot	76.20%	37.30%	78.30%	74.40%
Using neighbours	3.70%	22.40%	6.00%	4.80%
Public toilet	0.20%	34.30%	1.20%	2.00%

**Table 4: Dwelling ownership by location**

House ownership	Mannar	Jaffna	Trincomalee	All
Own and have deeds/papers	67.70%	57.10%	48.70%	57.80%
Own, but no deeds	22.20%	22.30%	32.40%	25.60%
Rent	1.30%	3.00%	7.00%	3.80%
Live for free	7.70%	17.50%	12.00%	12.40%
No house	1.10%	0.00%	0.00%	0.40%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

**Table 5: Income earners by location and by ethnicity**

	Districts			Ethnicity				All
	Mannar	Jaffna	Trinco	Sinhala	Tamil	Moor	Other	
No income earners in the household	3.30%	9.10%	3.50%	3.20%	7.00%	0.90%	0.00%	5.30%
Have income earners	96.70%	90.90%	96.50%	96.80%	93.00%	99.10%	100%	94.70%
One income earner in the household	72.10%	65.80%	51.50%	41.20%	67.70%	65.80%	66.70%	63.10%
Two income earners in the household	17.80%	19.50%	30.70%	35.70%	19.30%	22.90%	33.30%	22.70%
Three earners	5.90%	5.00%	11.30%	16.30%	5.50%	6.90%	0.00%	7.40%
More than four	0.90%	0.60%	3.00%	3.60%	0.50%	3.50%	0.00%	1.50%

**Table 6: Education levels across household types**

	Fisher	Agriculture	Trade/ business/ private	Public sector	Other	All
<b>Children 5 to 14 yrs</b>						
Not in school	1.80%	2.20%	2.30%	0.00%	3.70%	1.80%
<b>Individuals above 14 years</b>						
No schooling	3.60%	1.70%	2.00%	1.20%	2.70%	2.70%
1-9 years (primary)	48.30%	41.00%	37.00%	19.40%	44.60%	42.50%
10-13 years (secondary)	45.70%	55.40%	55.60%	64.20%	48.90%	50.90%
13+ (university / professional)	1.20%	1.50%	4.20%	13.30%	0.50%	2.70%
Vocational/skills training	0.60%	0.40%	1.10%	1.80%	1.60%	0.80%

**Table 7: Correlations between food insecurity and household composition**

	Pearson correlation	CSI	HH size	Proportion of children	Proportion of 15 to 45 year persons	Proportion over 45
<b>Coping strategies index (CSI)</b>	Coefficient	1	.074**	.142**	-.111**	-0.029
	Probability		0.006	0	0	0.289
<b>Household size (Hhdsz)</b>	Coefficient	.074**	1	.395**	.151**	-.420**
	Probability	0.006		0	0	0
<b>Proportion of children</b>	Coefficient	.142**	.395**	1	-.136**	-.678**
	Probability	0	0		0	0
<b>Proportion of 15to45 year persons</b>	Coefficient	-.111**	.151**	-.136**	1	-.636**
	Probability	0	0	0		0
<b>Proportion over 45</b>	Coefficient	-0.029	-.420**	-.678**	-.636**	1
	Probability	0.289	0	0	0	

**Table 8: Correlations between food insecurity and household education**

	Pearson Correlation	CSI	Proportion of adults completing primary	Proportion of adults completing secondary
<b>CSI</b>	Coefficient	1	-.178**	-.101**
	Probability		0	0
<b>Proportion of adults completing primary</b>	Coefficient	-.178**	1	.219**
	Probability	0		0
<b>Proportion of adults completing secondary</b>	Coefficient	-.101**	.219**	1
	Probability	0	0	

**Table 9: Regression: Food insecurity status**

<b>Model: OLS</b>			
<b>Dependent variable: Food insecurity index</b>			
<b>Explanatory variables</b>	<b>B</b>	<b>Sig</b>	<b>VIF</b>
(Constant)	9.22	0	
Household head is female	1.783	.002***	1.18
Average age of household members	-0.067	.000***	1.277
Main activity of the household is fishing	0.63	0.329	4.019
Main activity of the household is agriculture	-0.571	0.478	2.293
Main activity of the household is trading	-0.523	0.397	3.277
Share of adults completing primary	-1.922	.000***	1.219
Employed migrants	0.583	0.127	1.153
Received remittances	0.534	0.371	1.084
Displaced at least once	0.839	0.229	1.066
Ethnic minority in location	0.57	0.273	1.154
Asset index	-0.664	.000***	1.397
Household is urban	0.175	0.694	1.815
Household feel safe	0.59	0.593	1.135
Household has access to credit	-1.263	.022**	1.069
Number of shocks	0.71	.000***	1.194
Number of crimes	1.087	.030**	1.054
Distance to health clinic	0	0.951	1.238
Distance to water	0.028	.036**	1.178
Received social protection	1.043	.012**	1.271
Received livelihood services	-0.159	0.687	1.318
Satisfied with health services	-0.888	.008**	1.058
Water is clean and safe	-1.274	.032**	1.043
Observations 1375 ; R squared .13			

Note: Asterisks indicate significance level (\*\*\* p<0.01, \*\* p<0.05, \* p<0.1).

**Table 10: Correlation between asset index and variables representing household composition**

	Pearson Correlations	Asset index	Average age of all hhd members	Proportion of children	Proportion of 15 to 45 year persons	Proportion over 45	Hhd size
Asset index	Coefficient	1	-.057*	-0.033	.131**	-.072**	.160**
	Probability		0.034	0.217	0	0.008	0
Average age of all hhd members	Coefficient	-.057*	1	-.757**	-.454**	.926**	-.461**
	Probability	0.034		0	0	0	0
Proportion of children	Coefficient	-0.033	-.757**	1	-.136**	-.678**	.395**
	Probability	0.217	0		0	0	0
Proportion of 15 to 45 year persons	Coefficient	.131**	-.454**	-.136**	1	-.636**	.151**
	Probability	0	0	0		0	0
Proportion over 45	Coefficient	-.072**	.926**	-.678**	-.636**	1	-.420**
	Probability	0.008	0	0	0		0
Hhd size	Coefficient	.160**	-.461**	.395**	.151**	-.420**	1
	Probability	0	0	0	0	0	

**Table 11: Correlation between asset index and education (adults)**

	Pearson Correlations	Asset index	Proportion of adults completing primary	Proportion of adults completing secondary
Asset index	Coefficient	1	.269**	.177**
	Probability		0	0
Proportion of adults completing primary	Coefficient	.269**	1	.219**
	Probability	0		0
Proportion of adults completing secondary	Coefficient	.177**	.219**	1
	Probability	0	0	

**Table 12: Correlation between asset index and earners (adults) in the household**

	Pearson Correlations	Asset index	Proportion of income earners	Proportion of women out of all earners	Share of remittances
Asset index	Coefficient	1	-0.016	-.096**	-0.013
	Probability		0.555	0	0.622
Proportion of income earners	Coefficient	-0.016	1	.416**	-.137**
	Probability	0.555		0	0
Proportion of women out of all adult earners	Coefficient	-.096**	.416**	1	-0.015
	Probability	0	0		0.57
Share of remittances	Coefficient	-0.013	-.137**	-0.015	1
	Probability	0.622	0	0.57	

**Table 13: Regression: Asset Index**

<b>Model: OLS</b>			
<b>Dependent variable : Asset index</b>			
<b>Explanatory variables</b>	<b>B</b>	<b>Sig</b>	<b>VIF</b>
(Constant)	1.01	0.009	
Household head is female	-0.467	.000***	1.169
Average age of household members	0.002	0.437	1.276
Main activity of the household is fishing	0.234	0.109	4.011
Main activity of the household is agriculture	-0.256	0.159	2.29
Main activity of the household is trading	-0.464	.001***	3.25
Share of adults completing primary	0.883	.000***	1.159
Employed migrants	0.361	.000***	1.138
Received remittances	0.032	0.813	1.084
Displaced at least once	-0.108	0.492	1.066
Ethnic minority in location	-0.015	0.9	1.153
Household is urban	0.79	.000***	1.733
Household feel safe	0.91	.000***	1.124
Household has access to credit	0.347	.005**	1.063
Number of shocks	-0.116	.000***	1.183
Number of crimes	0.192	.090*	1.051
Distance to clinic	-0.003	.000***	1.224
Distance to water	-0.004	0.175	1.176
Social protection received	-0.125	0.179	1.269
Livelihood service received	0.607	.000***	1.272
Quality of health service	0.227	.003***	1.051
Quality of water	-0.251	.062*	1.04
<b>Observations 1375; R squared 0.28</b>			

Note: Asterisks indicate significance level (\*\*\*)  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

**Table 14: Regression: Access to health services**

<b>Model: OLS</b>			
<b>Dependent variable: Distance to clinic</b>			
<b>Explanatory variables</b>	<b>B</b>	<b>sig</b>	<b>VIF</b>
(Constant)	93.002	0	
Household head is female	3.26	0.407	1.18
Average age of household members	-0.343	.001***	1.446
Main activity of the household is fishing	7.264	0.105	4.01
Main activity of the household is agriculture	-0.641	0.907	2.231
Main activity of the household is trading	1.133	0.794	3.367
Share of adults completing primary	-8.687	.011**	1.271
Employed migrants	-8.328	.002***	1.168
Received remittances	-0.377	0.928	1.098
Displaced at least once	10.06	.037**	1.072
Ethnic minority in location	20.942	.000***	1.129
Dependency ratio	1.126	0.593	1.245
Morris index	-3.655	.000***	1.368
Food insecurity index	0.165	0.386	1.144
Satisfied with access to transport	-23.135	.000***	1.435
Household is urban	-17.219	.000***	1.492
Household feel safe	-8.423	0.274	1.135
Number of shocks	2.131	.035**	1.193
Number of crimes	0.486	0.888	1.049
Satisfied with availability of medicine and equipment	9.44	.001***	1.446
Satisfied with Waiting time	6.151	.034**	1.55
Pay official fees	-10.749	0.103	3.483
Pay informal fees	13.311	.007**	1.116
Government is the provider	-21.134	.003***	3.363
Participate in health related community meeting	-1.388	0.55	1.081
Observations 1352; R squared 0.25			

Note: Asterisks indicate significance level (\*\*\*)  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .



**Table 15: Experience with health services**

Experience of health services	Mannar	Jaffna	Trincomalee	Sinhala	Tamil	Moor	Other
Dissatisfied	9.00%	9.70%	4.10%	8.60%	8.70%	3.00%	0.00%
Indifferent	33.20%	31.80%	34.60%	50.70%	32.00%	21.20%	33.30%
Satisfied	57.80%	58.40%	61.30%	40.70%	59.40%	75.80%	66.70%
	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

**Table 16: Regression: Experience of health services**

Model : Logit (Multinomial logit had convergence issues; therefore used logit)		
Dependent variable: Overall satisfaction with health services		
Explanatory variables	B	Sig.
Respondents sex (male )	-0.187	0.35
Respondents age	0	0.966
Respondents education (completed primary)	0.219	0.616
Respondents activity (employed)	0.184	0.337
Employed migrants	-0.255	0.143
Received remittances	0.504	.073*
Displaced at least once	-0.654	.046*
Ethnic minority in location	-0.201	0.391
Dependency ratio	0.24	0.067
Morris index	0.01	0.843
Food insecurity index	-0.006	0.634
Household is urban	0.827	.000***
Household feel safe	-0.124	0.808
Number of shocks	0.125	.059*
Number of crimes	0.018	0.937
Satisfied with availability of medicine and equipment	2.106	.000***
Satisfied with waiting time	2.501	.000***
Pay formal fees	-0.009	0.984
Pay informal fees	-0.113	0.737
Government provides	0.029	0.952
Participated in health meetings	0.012	0.938
Constant	-1.397	0.129
Observations 1352; R squared 0.39		

Note: Asterisks indicate significance level (\*\*\*) p<0.01, \*\* p<0.05, \* p<0.1).

**Table 17: Access to school**

	Average time taken to reach school (minutes)		Percentage number of households where children reach school in less than half an hour	
	Boys	Girls	Boys (%)	Girls (%)
All	23	26	88.10%	87.90%
<b>Location**</b>				
Mannar	27	32	86.4	81.6
Jaffna	22	25	89	87.4
Trincomalee	18	19	94.9	95.9
<b>Ethnicity**</b>				
Sinhala	17	22	96.2	97.9
Tamil	20	24	92.1	88.5
Moor	36	34	77.9	78.5
<b>Activity type**</b>				
Fisher	23	27	94	92.4
Agriculture	27	30	94.1	93.1
Trade	23	25	90.3	88.6
Public	24	25	88.1	80.5
<b>Displacement**</b>				
Still displaced	24	21	91	84.1
Resettled	23	26	93.1	91
Never displaced	14	22	87.2	93.1

\*\* Difference in average time taken to reach school significant at 95% level of confidence

**Table 18: Regression: Access to education (boys)**

<b>Model: OLS</b>			
<b>Dependent variable: Distance to school (boys)</b>			
<b>Explanatory variables</b>	<b>B</b>	<b>Sig</b>	<b>VIF</b>
(Constant)	44.859	0	
Household head is female	0.51	0.895	1.16
Average age of household members	-0.206	0.307	1.719
Main activity of the household is fishing	2.258	0.613	5.31
Main activity of the household is agriculture	2.301	0.662	2.851
Main activity of the household is trading	6.107	0.171	4.381
Share of adults completing primary	2.664	0.334	1.173
Employed migrants	0.946	0.685	1.179
Received remittances	-2.931	0.535	1.074
Displaced at least once	4.164	0.381	1.126
Ethnic minority in location	31.673	.000***	1.131
Dependency ratio	-2.345	0.21	1.741
Morris index	-2.256	.001***	1.382
Food insecurity index	0.021	0.892	1.165
Satisfied with access to transport	-12.689	.000***	1.328
Household is urban	-7.033	.006**	1.542
Household feel safe	-2.29	0.703	1.132
Number of shocks	2.177	.012**	1.163
Number of crimes	9.824	.009**	1.089
Satisfied with number of teachers	6.692	.004**	1.288
Satisfied with quality of equipment	3.545	0.163	1.408
Pay formal fees	2.853	0.247	1.621
Pay informal fees	3.802	0.116	1.527
Government provides service	-22.592	.000**	1.089
Participate in education meetings	-1.86	0.401	1.153
Observations 533; R squared 0.33			

Note: Asterisks indicate significance level (\*\*\*) p<0.01, \*\* p<0.05, \* p<0.1).

**Table 19: Regression: Access to education services (Girls)**

<b>Model: OLS</b>			
<b>Dependent variable: Distance to school (girls)</b>			
<b>Explanatory variables</b>	<b>B</b>	<b>Sig</b>	<b>VIF</b>
(Constant)	30.15	0.088	
Household head is female	1.441	0.768	1.153
Average age of household members	0.052	0.832	1.671
Main activity of the household is fishing	5.221	0.376	5.304
Main activity of the household is agriculture	5.745	0.403	2.918
Main activity of the household is trading	3.507	0.557	4.653
Share of adults completing primary	3.812	0.292	1.208
Employed migrants	-1.408	0.656	1.148
Received remittances	-2.721	0.626	1.084
Displaced at least once	6.32	0.241	1.114
Ethnic minority in location	26.336	.000**	1.184
Dependency ratio	-2.532	0.306	1.754
Morris index	-1.151	0.211	1.384
Food insecurity index	0.252	0.222	1.209
Satisfied with access to transport	-9.849	.003**	1.338
Household is urban	-5.647	0.089	1.543
Household feel safe	-11.781	0.184	1.133
Number of shocks	0.796	0.512	1.133
Number of crimes	9.743	0.025	1.059
Satisfied with number of teachers	9.611	.002***	1.272
Satisfied with quality of equipment	5.044	0.133	1.438
Pay formal fees	4.709	0.128	1.458
Pay informal fees	3.176	0.312	1.423
Government provides service	-12.084	0.146	1.064
Participate in education meetings	-0.806	0.787	1.139
Observations 577; R squared 0.17			

Note: Asterisks indicate significance level (\*\*\*)  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

**Table 20: Regression: Experience of education (boys)**

<b>Model : Logit (Multinomial logit had convergence issues; therefore used logit)</b>		
<b>Dependent variable: Overall satisfaction with education (boys education)</b>		
<b>Explanatory variables</b>	<b>B</b>	<b>Sig.</b>
Respondents sex (male )	0.472	0.254
Respondents age	-0.009	0.595
Respondents education (completed primary)	0.053	0.95
Respondents activity (employed)	-0.412	0.287
Household head is female	0.434	0.436
Average age of household members	-0.033	0.272
Main activity of the household is fishing	0.275	0.652
Main activity of the household is agriculture	0.99	0.198
Main activity of the household is trading	0.966	0.126
Share of adults completing primary	-0.581	0.132
Employed migrants	-0.693	.038**
Received remittances	1.189	0.155
Displaced at least once	-1.345	0.154
Ethnic minority in location	0.208	0.652
Dependency ratio	-0.033	0.897
Morris index	0.075	0.434
Food insecurity index	-0.019	0.345
Household is urban	0.279	0.452
Household feel safe	-0.033	0.968
Number of shocks	-0.154	0.196
Number of crimes	-1.336	.003***
Satisfied with number of teachers	2.254	.000***
Satisfied with equipment	2.005	.000***
Pay formal fees	0.186	0.569
Pay informal fees	0.527	.089*
Government provides	-0.075	0.939
Participation in education meetings	0.62	.050*
Constant	0.97	0.604
Observations 533; R squared 0.33		

Note: Asterisks indicate significance level (\*\*\* p<0.01, \*\* p<0.05, \* p<0.1).

**Table 21: Regression: Experience of education (Girls)**

<b>Model : Logit (Multinomial logit had convergence issues; therefore used logit)</b>		
<b>Dependent variable: Overall satisfaction with education (girls education)</b>		
<b>Explanatory variables</b>	<b>B</b>	<b>Sig.</b>
Respondents sex ( male )	0.783	0.058
Respondents age	-0.016	0.321
Respondents education (completed primary)	1.853	.005**
Respondents activity (employed)	-0.302	0.435
Household head is female	0.834	0.121
Average age of household members	-0.006	0.827
Main activity of the household is fishing	0.27	0.65
Main activity of the household is agriculture	1.476	.061*
Main activity of the household is trading	0.801	0.185
Share of adults completing primary	-0.736	.062*
Employed migrants	-0.369	0.26
Received remittances	0.98	0.186
Displaced at least once	-0.813	0.227
Ethnic minority in location	0.232	0.63
Dependency ratio	-0.055	0.83
Morris index	0.061	0.534
Food insecurity index	-0.052	.013**
Household is urban	0.504	0.2
Household feel safe	1.577	.047**
Number of shocks	0.018	0.884
Number of crimes	-0.324	0.425
Satisfied with number of teachers	2.642	.000***
Satisfied with equipment	1.911	.000***
Pay formal fees	0.163	0.621
Pay informal fees	0.555	.087*
Government provides	-19.107	0.998
Participation in education meetings	0.822	.014**
Constant	15.147	0.999
Observations 577 ; R squared 0.38		

Note: Asterisks indicate significance level (\*\*\* p<0.01, \*\* p<0.05, \* p<0.1).

**Table 22: Access to water**

	Average time taken to fetch water (minutes)	Take more than half hour to fetch water	Have to pay for water	Have to queue for water
All	6	2%	45%	11.40%
<b>Location**</b>				
Mannar	11	7.30%	59.00%	25.00%
Jaffna	4	0.40%	0.60%	14.60%
Trincomalee	2	0.40%	76.00%	7.70%
<b>Ethnicity**</b>				
Sinhala	1	0.00%	96.40%	3.90%
Tamil	6	2.50%	36.10%	17.90%
Moor	10	6.10%	32.00%	43.40%
<b>Activity type**</b>				
Fisher	6	3.6	60.3	15
Agriculture	7	2.1	8.5	9.9
Trade	5	1.1	34.1	9.5
Other	2	0.7	48.5	2.2
<b>Displacement**</b>				
Never displaced	3	0	11.9	10.4
Displaced and resettled	6	2.6	45.8	12.1
Still in displacement	6	0	67.7	2.4

Note: Asterisks indicate significance level (\*\*\*)  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

**Table 23: Regression: Access to water**

<b>Model: OLS</b>			
<b>Dependent variable: Distance to water</b>			
<b>Explanatory variables</b>	<b>B</b>	<b>Sig</b>	<b>VIF</b>
(Constant)	4.482	0	
Household head is female	-0.23	0.14	1.179
Average age of household members	-0.002	0.628	1.454
Main activity of the household is fishing	0.09	0.615	4.04
Main activity of the household is agriculture	0.38	.082*	2.234
Main activity of the household is trading	0.502	.004***	3.353
Share of adults completing primary	-0.315	.020**	1.28
Employed migrants	-0.344	.001***	1.157
Received remittances	-0.088	0.594	1.091
Displaced at least once	0.389	.044**	1.07
Ethnic minority in location	-1.551	.000***	1.165
Dependency ratio	0.195	.019**	1.252
Morris index	-0.009	0.774	1.362
Food insecurity index	-0.016	.034**	1.157
Satisfied with access to transport	0.211	.031**	1.144
Household is urban	-3.328	.000***	1.684
Household feel safe	0.04	0.896	1.145
Number of shocks	-0.154	.000***	1.193
Number of crimes	-0.361	.009**	1.059
Queue for water	0.989	.000***	1.24
Pay for water	0.311	.022**	2.3
Government is the provider of water	0.783	.000***	1.97
Participation in water related meetings	0.599	.000***	1.17
Observations 1374 ; R squared 0.55			

Note: Asterisks indicate significance level (\*\*\*)  $p < 0.01$ , (\*\*)  $p < 0.05$ , (\*)  $p < 0.1$ .

**Table 24: Regression: Experience of water services**

<b>Model: logit</b>		
<b>Dependent variable: Water is safe</b>		
<b>Explanatory variables</b>	<b>B</b>	<b>Sig.</b>
Respondents sex (male )	0.127	0.641
Respondents age	0.015	.070*
Respondents education (completed primary)	0.724	0.116
Respondents activity (employed)	-0.289	0.271
Employed migrants	0.002	0.995
Received remittances	0.347	0.444
Displaced at least once	-0.617	0.254
Ethnic minority in location	-0.069	0.83
Dependency ratio	0.137	0.427
Morris index	-0.14	.040**
Food insecurity index	-0.025	0.119
Household is urban	-0.018	0.947
Household feel safe	0.462	0.418
Number of shocks	-0.051	0.568
Number of crimes	-0.66	.004***
Queue for water	-1.332	.000***
Pay for water	-0.583	.043**
Government is the provider	-0.099	0.738
Participation in water related meetings	0.257	0.372
Constant	2.492	0.018
Observations 1377; R squared 0.05		

Note: Asterisks indicate significance level (\*\*\* p<0.01, \*\* p<0.05, \* p<0.1).



**Table 25: Regression: Access to Samurdhi Social Protection**

<b>Model: logit</b>		
<b>Dependent variable: Household receives Samurdhi social protection</b>		
<b>Explanatory variables</b>	<b>B</b>	<b>Sig.</b>
Household head is female	0.469	0.092
Average age of household members	0.019	.087*
Main activity of the household is fishing	1.716	.000***
Main activity of the household is agriculture	0.988	.029**
Main activity of the household is trading	0.819	.013**
Share of adults completing primary	0.026	0.91
Employed migrants	0.457	.025**
Received remittances	-0.216	0.448
Displaced at least once	-0.252	0.386
Ethnic minority in location	0.341	0.139
Number of children	0.171	.027**
Number of elders	0.018	0.906
Morris index	-0.073	0.213
Food insecurity index	0.033	.013**
Household is urban	2.676	.000***
Household feel safe	1.086	0.164
Number of shocks	0.091	0.223
Number of crimes	0.28	0.26
Participated in social protection meetings	0	0.119
Constant	-6.016	.000***
<b>Observations 1375 ; R squared 0.07</b>		

Note: Asterisks indicate significance level (\*\*\*)  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

Samurdhi social protection is delivered only by the GOVT. Therefore the earlier regression was replaced with this new regression, after excluding the variable 'admin of social protection'.

Same was done for social protection experience regression.

**Table 26: Regression: Experience of (Samurdhi) social protection services**

<b>Model : Logit (Multinomial logit had convergence issues; therefore used logit)</b>		
<b>Dependent variable: Impact of social protection</b>		
<b>Explanatory variables</b>	<b>B</b>	<b>Sig.</b>
Respondents sex (male )	0.503	0.756
Respondents age	0.123	.053*
Respondents education (completed primary)	17.517	0.999
Respondents activity (employed)	-2.427	0.135
Employed migrants	-2.935	.044**
Received remittances	0.959	0.518
Displaced at least once	0.95	0.67
Ethnic minority in location	-19.629	0.997
Number of children	1.006	0.143
Number of elders	-2.346	0.129
Morris index	-1.13	.096*
Food insecurity index	-0.022	0.816
Household is urban	2.543	0.182
Household feel safe	-2.76	1
Number of shocks	-1.384	.067*
Number of crimes	-15.118	0.998
Samurdhi right amount received	0.151	0.927
Samurdhi received in time	1.132	0.45
Participation in social protection meetings	0.13	0.922
Constant	-21.912	0.999
Observations 255 ; R squared 0.11		

Note: Asterisks indicate significance level (\*\*\*)  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

**Table 27: Regression: Access to livelihood services**

<b>Model : Logit</b>		
<b>Dependent variable: Household receive one/more livelihood services</b>		
<b>Explanatory variables</b>	<b>B</b>	<b>Sig.</b>
Household head is female	0.098	0.701
Average age of household members	0	0.958
Main activity of the household is fishing	1.498	.000***
Main activity of the household is agriculture	2.524	.000***
Main activity of the household is trading	0.406	0.235
Share of adults completing primary	0.202	0.321
Employed migrants	0.445	.006**
Received remittances	0.16	0.54
Displaced at least once	0.287	0.4
Ethnic minority in location	0.196	0.357
Dependency ratio	0.038	0.761
Own Land	-0.053	0.804
Morris index	0.33	.000***
Food insecurity index	-0.005	0.663
Household is urban	-1.041	.000***
Household feel safe	0.043	0.919
Number of shocks	0.325	.000***
Number of crimes	0.239	0.218
Participated in livelihood meetings	0.651	.000***
Constant	-4.026	.000***
Observations 1377; R squared 0.24		

Note: Asterisks indicate significance level (\*\*\*)  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

**Table 28: Regression: Experience of livelihood services**

<b>Model: logit</b>		
<b>Dependent variable: Impact of livelihood service on production</b>		
<b>Explanatory variables</b>	<b>B</b>	<b>Sig.</b>
Respondents sex (male )	0.388	0.391
Respondents age	-0.01	0.455
Respondents education (completed primary)	-0.224	0.816
Respondents activity (employed)	0.074	0.864
Employed migrants	0.951	.006**
Received remittances	-0.12	0.833
Displaced at least once	0.675	0.38
Ethnic minority in location	-0.799	.072*
Dependency ratio	-0.178	0.51
Own land	0.003	0.995
Morris index	0.021	0.85
Food insecurity index	-0.048	.052*
Household is urban	-0.516	0.235
Household feel safe	0.532	0.546
Number of shocks	0.054	0.688
Number of crimes	-0.354	0.345
Livelihood service received in time	3.14	.000***
Government provides	0.516	0.149
Participated in livelihood meetings	1.116	.011**
Constant	-2.418	0.155
Observations 446 ; R squared 0.27		

Note: Asterisks indicate significance level (\*\*\* p<0.01, \*\* p<0.05, \* p<0.1).

**Table 29: Regression: Perception of governance (Local government's concern about the respondent's views and opinions)**

<b>Model : Logit regression</b>		
<b>Dependent variable: : Local government care about views and opinion of respondent</b>		
<b>Explanatory variables</b>	<b>B</b>	<b>Sig.</b>
Respondents sex (male )	-0.469	0.008
Respondents age	-0.008	0.108
Respondents education (completed primary)	0.726	.064*
Respondents activity (employed)	0.126	0.464
Employed migrants	-0.123	0.426
Received remittances	0.395	0.127
Displaced at least once	-0.2	0.488
Ethnic minority in location	0.16	0.449
Dependency ratio	0.051	0.666
Morris index	-0.039	0.424
Food insecurity index	-0.015	0.181
Household is urban	-0.095	0.616
Household feel safe	1.182	.009**
Number of shocks	-0.065	0.287
Number of crimes	-0.329	.088*
Distance to health clinic	0.003	0.128
Distance to water	-0.012	.040**
Social protection received	-0.119	0.481
Livelihood service received	0.03	0.85
Experience with health service	0.378	.029**
Water is clean	0.199	0.419
Satisfied with availability of medicine	0.316	.062*
Satisfied with waiting time	-0.047	0.789
Queue for water	-0.11	0.644
Pay formal health fees	0.475	0.229
Pay informal health fees	-0.018	0.954
Pay for water	-0.872	.000***
Government provides health service	0.405	0.334
Government responsible for water	-0.155	0.433
Number of service delivery problems	-0.162	.038**
Knew how to complain	0.014	0.933
Number of meetings	0.534	.001***
Number of times participated in community meetings	-0.023	0.89
Number of times consulted	0.166	.053**
Constant	-1.432	0.105
Observations 1201; R squared 0.18		

Note: Asterisks indicate significance level (\*\*\*) p<0.01, \*\* p<0.05, \* p<0.1).

**Table 30: Regression: Perception of governance (Central government's concern about the respondent's views and opinions)**

<b>Model : Logit regression</b>		
<b>Dependent variable: : Central government care about views and opinion of respondent</b>		
<b>Explanatory variables</b>	<b>B</b>	<b>Sig.</b>
Respondents sex ( male )	-0.325	.085*
Respondents age	-0.003	0.545
Respondents education (completed primary)	0.201	0.653
Respondents activity (employed)	0.219	0.231
Employed migrants	0.051	0.756
Received remittances	0.21	0.413
Displaced at least once	-0.456	0.134
Ethnic minority in location	-0.283	0.239
Dependency ratio	0.329	.008**
Morris index	0.056	0.272
Food insecurity index	0.054	.000***
Household is urban	-0.032	0.869
Household feel safe	0.692	0.172
Number of shocks	-0.154	.019**
Number of crimes	-0.404	0.06
Distance to health clinic	-0.001	0.538
Distance to water	-0.009	0.152
Social protection received	-0.221	0.21
Livelihood service received	0.375	.021**
Experience with health service	0.269	0.135
Water is clean	-0.399	0.109
Satisfied with availability of medicine	0.227	0.205
Satisfied with waiting time	-0.308	.089*
Queue for water	-0.102	0.683
Pay formal health fees	-0.459	0.229
Pay informal health fees	0.422	0.184
Pay for water	-0.989	.000***
Government provides health service	-0.838	.042**
Government responsible for water	-0.015	0.941
Number of service delivery problems	-0.324	.000***
Knew how to complain	0.19	0.283
Number of meetings	-0.251	0.178
Number of times participated in community meetings	0.428	.023**
Number of times consulted	0.07	0.365
Constant	0.613	0.51
Observation 1016; R squared 0.14		

Note: Asterisks indicate significance level (\*\*\*) p<0.01, \*\* p<0.05, \* p<0.1).

**Table 31: Regression: Perceptions of governance (local government decisions reflect the priorities of the respondent)**

<b>Model : Multinomial logit</b>			
<b>Dependent variable: Local government decisions reflect respondent's priorities</b>			
<b>Explanatory variables</b>		<b>B</b>	<b>Sig.</b>
Completely/largely	Intercept	-1.216	0.242
	Age of respondent	0.004	0.519
	Dependency ratio	0.017	0.894
	Morris index	0.005	0.925
	Food insecurity index	-0.027	.027**
	Number of shocks	-0.019	0.783
	Number of crimes	-0.02	0.933
	Distance to clinic	0.001	0.57
	Distance to water	0	0.995
	Number of service delivery problems	-0.326	.000***
	Number of meetings	0.606	.000***
	Number of times participated in community meetings	-0.311	0.054
	Number of times consulted	0.536	.000***
	Respondents gender	-0.286	0.145
	Respondents activity	-0.038	0.838
	Respondents education	-0.419	0.332
	Employed migrant	-0.091	0.58
	Remittances received	0.097	0.701
	Displaced at least once	-0.258	0.395
	Ethnic minority	-0.716	.002***
	Household is urban	0.421	.034**
	Household feel safe	0.896	0.146
	Social protection received	-0.119	0.516
	Livelihood services received	-0.286	.097*
	Satisfied with quality of health service	0.599	.003***
	Water is clean	-0.163	0.565
	Satisfied with availability of medicine	-0.098	0.619
	Satisfied with waiting time	0.437	.014**
	Queue for water	-0.406	0.139
	Pay formal health fees	0.094	0.835
Pay informal health fees	0.069	0.844	
Pay for water	-0.48	.028**	
Government provides health services	0.437	0.358	
Government responsible for water	-0.077	0.707	
Knew how to complain	0.212	0.244	
Never/almost never	Intercept	-0.687	0.493
	Age of respondent	0.018	.002***
	Dependency ratio	-0.08	0.565
	Morris index	0.111	0.049
	Food insecurity index	0.005	0.715
	Number of shocks	0.184	.010**
	Number of crimes	0.085	0.712
	Distance to clinic	-0.002	0.375

Distance to water	0.011	.097*
Number of service delivery problems	0.062	0.484
Number of meetings	-0.336	0.119
Number of times participated in community meetings	0.153	0.487
Number of times consulted	-0.093	0.437
Respondents gender	0.345	.092*
Respondents activity	-0.268	0.178
Respondents education	-0.21	0.646
Employed migrant	0.362	.049*
Remittances received	-0.119	0.69
Displaced at least once	-0.21	0.549
Ethnic minority	-0.915	.001***
Household is urban	0.182	0.42
Household feel safe	-0.957	.050**
Social protection received	-0.1	0.613
Livelihood services received	-0.547	.003***
Satisfied with quality of health service	-0.224	0.256
Water is clean	-0.566	.033**
Satisfied with availability of medicine	-0.445	0.022
Satisfied with waiting time	0.117	0.571
Queue for water	0.158	0.557
Pay formal health fees	0.683	0.108
Pay informal health fees	-0.057	0.872
Pay for water	0.873	.000***
Government provides health services	0.819	.074*
Government responsible for water	-0.358	0.134
Knew how to complain	-0.1	0.607
Observations 1303 ; R squared 0.28		

Note: Asterisks indicate significance level (\*\*\*)  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .



**Table 32: Regression: Perceptions of governance (Central government decisions reflect the priorities of the respondent)**

<b>Model: Multinomial logit</b>			
<b>Dependent variable: Central government decisions reflect respondents priorities</b>			
<b>Explanatory variable</b>		<b>B</b>	<b>Sig.</b>
Completely/largely	Intercept	-0.595	0.611
	Age of respondent	0.008	0.26
	Dependency ratio	0.187	0.214
	Morris index	0.022	0.729
	Food insecurity index	-0.045	.005**
	Number of shocks	0.033	0.704
	Number of crimes	-0.368	0.237
	Distance to clinic	0	0.731
	Distance to water	0.011	0.244
	Number of service delivery problems	-0.346	.003***
	Number of meetings	-0.018	0.945
	Number of times participated in community meetings	0.067	0.792
	Number of times consulted	0.201	.042**
	Respondents gender	0.259	0.277
	Respondents activity	-0.194	0.4
	Respondents education	0.333	0.538
	Employed migrant	-0.077	0.714
	Remittances received	-0.05	0.874
	Displaced at least once	0.04	0.909
	Ethnic minority	-0.384	0.211
	Household is urban	0.684	.004**
	Household feel safe	-1.12	.092*
	Social protection received	0.406	.053*
	Livelihood services received	0.026	0.901
	Satisfied with quality of health service	0.258	0.294
	Water is clean	-0.793	.009**
	Satisfied with availability of medicine	-0.029	0.906
	Satisfied with waiting time	-0.071	0.748
	Queue for water	0.148	0.672
	Pay formal health fees	0.159	0.756
	Pay informal health fees	0.57	0.122
	Pay for water	-0.129	0.647
Government provides health services	0.197	0.706	
Government responsible for water	0.003	0.992	
Knew how to complain	0.062	0.79	
Never/almost never	Intercept	-1.659	.092*
	Age of respondent	0	0.98
	Dependency ratio	-0.193	0.128
	Morris index	-0.019	0.719
	Food insecurity index	-0.053	.000***
	Number of shocks	0.307	.000***
	Number of crimes	-0.141	0.508
	Distance to clinic	0	0.844

Distance to water	0.018	.008**
Number of service delivery problems	0.176	.028**
Number of meetings	-0.036	0.824
Number of times participated in community meetings	-0.011	0.949
Number of times consulted	-0.309	.000***
Respondents gender	0.117	0.542
Respondents activity	0.152	0.412
Respondents education	0.476	0.285
Employed migrant	-0.051	0.764
Remittances received	0.189	0.48
Displaced at least once	0.391	0.238
Ethnic minority	-0.127	0.597
Household is urban	0.402	.049**
Household feel safe	-1.353	.006**
Social protection received	0.207	0.26
Livelihood services received	-0.466	.008**
Satisfied with quality of health service	0.043	0.819
Water is clean	-0.111	0.679
Satisfied with availability of medicine	-0.273	0.145
Satisfied with waiting time	-0.164	0.367
Queue for water	0.347	0.169
Pay formal health fees	0.973	.019**
Pay informal health fees	0.445	0.176
Pay for water	0.945	.000***
Government provides health services	1.324	.004***
Government responsible for water	-0.335	0.118
Knew how to complain	0.011	0.95
Observations 1182; R squared 0.18		

Note: Asterisks indicate significance level (\*\*\*)  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

**Table 33: Regression: Perception of governance (Local government's concern about the respondent's views and opinions) including education variables**

<b>Model : Logit regression</b>		
<b>Dependent variable: : Local government care about views and opinion of respondent</b>		
<b>Explanatory variables</b>	<b>B</b>	<b>Sig.</b>
Respondents sex (male )	-0.283	0.287
Respondents age	-0.01	0.288
Respondents education (completed primary)	0.814	0.121
Respondents activity (employed)	-0.142	0.579
Employed migrants	-0.131	0.564
Received remittances	-0.342	0.426
Displaced at least once	-0.383	0.342
Ethnic minority in location	-0.272	0.376
Dependency ratio	0.15	0.34
Morris index	-0.036	0.588
Food insecurity index	-0.037	.014**
Household is urban	-0.359	0.207
Household feel safe	1.475	.009**
Number of shocks	-0.142	0.108
Number of crimes	-0.485	.099*
Distance to health clinic	0.007	0.016
Distance to school	0	0.96
Distance to water	-0.021	.010**
Social protection received	0.03	0.907
Livelihood service received	-0.376	.094*
Satisfied with quality of health service	0.612	.016**
Satisfied with quality of education	0.041	0.877
Water is clean	-0.123	0.722
Satisfied with availability of medicine	0.232	0.34
Satisfied with waiting time	-0.096	0.696
Satisfied with number of teachers	0.068	0.78
Satisfied with education equipment	0.269	0.26
Queue for water	-0.431	0.177
Pay health formal fees	0.65	0.216
Pay health informal fees	-0.045	0.919
Pay for water	-1.296	.000***
Pay education formal fees	-0.662	.003***
Pay education informal fees	0.209	0.337
Government is the health service provider	0.518	0.357
Government is responsible for water	-0.009	0.974
Government is the education service provider	0.645	0.244
Number of service delivery problems	-0.144	0.167
Knew how to complain	0.148	0.52
Number of meetings	0.441	.083*
Number of times participated in community meetings	0.066	0.797
Number of times consulted	0.143	0.218
Respondents sex (male )	-1.64	0.224
Number of observations 699; R square 0.27		

Note: Asterisks indicate significance level (\*\*\*) p<0.01, \*\* p<0.05, \* p<0.1).

**Table 34: Regression: Perception of governance (Central government's concern about the respondent's views and opinions) including education variables**

<b>Model : Logit regression</b>		
<b>Dependent variable: : Central government care about views and opinion of respondent</b>		
<b>Explanatory variables</b>	<b>B</b>	<b>Sig.</b>
Respondents sex (male )	-0.342	0.201
Respondents age	0.004	0.72
Respondents education (completed primary)	-0.186	0.74
Respondents activity (employed)	0.214	0.404
Employed migrants	0.04	0.861
Received remittances	0.002	0.997
Displaced at least once	-0.562	0.173
Ethnic minority in location	-0.234	0.486
Dependency ratio	0.403	.012**
Morris index	0.051	0.44
Food insecurity index	0.046	.002***
Household is urban	-0.139	0.61
Household feel safe	0.368	0.573
Number of shocks	-0.161	0.081
Number of crimes	-0.356	0.274
Distance to health clinic	0.003	0.235
Distance to water	-0.008	0.307
Distance to school	0	0.977
Social protection received	-0.206	0.415
Livelihood service received	0.445	.046**
Satisfied with quality of health service	0.28	0.277
Water is clean and safe	-0.304	0.377
Satisfied with quality of education	-0.296	0.273
Satisfied with availability of medicine	0.243	0.323
Satisfied with health waiting time	-0.403	0.107
Queue for water	-0.406	0.225
Satisfied with teachers	0.303	0.223
Satisfied with education equipment	0.342	0.151
Health formal fees	-0.513	0.296
Health informal fees	0.413	0.316
Pay for water	-0.83	.003***
Education formal fees	-0.011	0.962
Education informal fees	0.736	.001***
Government provides health	-0.776	0.156
Government responsible for water	-0.23	0.404
Education provider Government	0.49	0.445
Number of service delivery problems	-0.332	.001***
Knew how to complain	0.106	0.654
Number of meetings	-0.532	.049*
Number of times participated in community meetings	0.678	.012**
Number of times consulted	0.033	0.748
Constant	-0.134	0.923

Number of observations 586; R squared 0.17

Note: Asterisks indicate significance level (\*\*\*) p<0.01, \*\* p<0.05, \* p<0.1).

**Table 35: Regression: Perceptions of governance (local government decisions reflect the priorities of the respondent) including education variables**

<b>Model: Multinomial Logit</b>			
<b>Dependent variable: Local government decisions reflect respondents priorities</b>			
<b>Explanatory variables</b>		<b>B</b>	<b>Sig.</b>
Completely /largely	Intercept	-3.6	0.028
	Age of respondent	0.011	0.299
	Dependency ratio	0.148	0.368
	Morris index	-0.008	0.915
	Food insecurity index	-0.024	0.134
	Number of shocks	-0.037	0.704
	Number of crimes	-0.217	0.562
	Distance to clinic	0.002	0.533
	Distance to school	-0.009	.075*
	Distance to water	-0.002	0.824
	Number of service delivery problems	-0.35	.003***
	Number of meetings	0.638	.007**
	Number of times participated in community meetings	-0.325	0.167
	Number of times consulted	0.578	.000***
	Respondents gender	-0.271	0.332
	Respondents education	-0.185	0.742
	Respondents activity	-0.18	0.497
	Employed migrant	0.011	0.964
	Remittances received	0.4	0.347
	Displaced at least once	0.149	0.719
	Ethnic minority	-0.874	.012**
	Household is urban	0.423	0.147
	Household feel safe	0.517	0.494
	Social protection received	-0.179	0.515
	Livelihood services received	-0.25	0.295
	Satisfied with health service quality	0.386	0.178
	[Satisfied with education service quality	0.141	0.647
	Water is clean and safe	-0.225	0.563
	Satisfied with availability of medicine	-0.172	0.543
	Satisfied with waiting time	0.56	.025**
	Satisfied with the number of teachers	0.415	0.123
	Satisfied with the school equipment	0.325	0.23
	Queue for water	0.051	0.889
Pay formal health fees	0.2	0.729	
Pay informal health fees	0.197	0.687	
Pay formal fees for education	0.191	0.417	
Pay informal fees for education	-0.205	0.389	
Pay for water	-0.774	.009**	
Government is the health service provider	0.768	0.222	
Government is the education service provider	1.288	0.122	
Government is the water service provider	-0.052	0.851	
Knew how to complain	0.142	0.559	
Never/Almost	Intercept	-0.818	0.568

never

Age of respondent	0.018	.087*
Dependency ratio	-0.162	0.358
Morris index	0.063	0.39
Food insecurity index	0.003	0.862
Number of shocks	0.153	0.117
Number of crimes	0.058	0.866
Distance to clinic	-0.003	0.33
Distance to school	-0.002	0.695
Distance to water	0.018	0.029
Number of service delivery problems	-0.007	0.949
Number of meetings	-0.32	0.324
Number of times participated in community meetings	0.2	0.539
Number of times consulted	-0.14	0.366
Respondents gender	0.147	0.61
Respondents education	-0.201	0.719
Respondents activity	-0.281	0.307
Employed migrant	0.36	0.171
Remittances received	0.103	0.836
Displaced at least once	0.271	0.56
Ethnic minority	-0.765	.046**
Household is urban	0.522	0.107
Household feel safe	-1.208	0.051
Social protection received	-0.446	0.128
Livelihood services received	-0.464	0.064
Satisfied with health service quality	-0.256	0.343
[Satisfied with education service quality	-0.077	0.787
Water is clean and safe	-0.436	0.212
Satisfied with availability of medicine	-0.327	0.222
Satisfied with waiting time	0.065	0.816
Satisfied with the number of teachers	0.14	0.601
Satisfied with the school equipment	0.133	0.613
Queue for water	0.552	0.111
Pay formal health fees	0.591	0.263
Pay informal health fees	0.404	0.367
Pay formal fees for education	0.712	.005**
Pay informal fees for education	-0.024	0.921
Pay for water	0.692	.039**
Government is the health service provider	0.678	0.243
Government is the education service provider	-0.248	0.657
Government is the water service provider	-0.485	0.144
Knew how to complain	0.156	0.542
Number of observations 750; R squared 0.34		

Note: Asterisks indicate significance level (\*\*\*)  $p < 0.01$ , (\*\*)  $p < 0.05$ , (\*)  $p < 0.1$ .

**Table 36: Regression: Perceptions of governance (Central government decisions reflect the priorities of the respondent) including education variables**

<b>Model: Multinomial Logit</b>			
<b>Dependent variable: Central government decisions reflect respondents priorities</b>			
<b>Explanatory variables</b>		<b>B</b>	<b>Sig.</b>
Completely/largely	Intercept	-1.046	0.583
	Age of respondent	-0.003	0.836
	Dependency ratio	0.19	0.332
	Morris index	-0.033	0.692
	Food insecurity index	-0.029	0.154
	Number of shocks	-0.086	0.496
	Number of crimes	-0.372	0.411
	Distance to clinic	0	0.915
	Distance to school	0.004	0.482
	Distance to water	0.013	0.258
	Number of service delivery problems	-0.365	.010**
	Number of meetings	-2.004	.054*
	Number of times participated in community meetings	1.93	.063*
	Number of times consulted	0.305	.026**
	Respondents gender	0.447	0.191
	Respondents education	0.015	0.981
	Respondents activity	-0.209	0.529
	Employed migrant	0	0.998
	Remittances received	-0.307	0.595
	Displaced at least once	0.051	0.918
	Ethnic minority	-0.449	0.33
	Household is urban	0.992	.004***
	Household feel safe	-1.197	0.223
	Social protection received	0.266	0.393
	Livelihood services received	0.278	0.332
	Satisfied with health service quality	-0.33	0.361
	[Satisfied with education service quality	0.209	0.588
	Water is clean and safe	-0.918	.023**
	Satisfied with availability of medicine	-0.114	0.747
	Satisfied with waiting time	0.284	0.369
	Satisfied with the number of teachers	-0.999	.003***
	Satisfied with the school equipment	1.19	.001***
	Queue for water	-0.187	0.698
Pay formal health fees	0.191	0.77	
Pay informal health fees	0.456	0.373	
Pay formal fees for education	0.59	.036**	
Pay informal fees for education	0.382	0.186	
Pay for water	-0.755	.043**	
Government is the health service provider	0.561	0.42	
Government is the education service provider	0.628	0.512	
Government is the water service provider	0.401	0.248	
Knew how to complain	-0.174	0.563	
Never/ almost never	Intercept	0.051	0.971

Age of respondent	-0.009	0.36
Dependency ratio	-0.421	.012**
Morris index	-0.045	0.516
Food insecurity index	-0.044	.007**
Number of shocks	0.207	.023**
Number of crimes	0.099	0.744
Distance to clinic	0	0.895
Distance to school	0	0.945
Distance to water	0.021	.010**
Number of service delivery problems	0.116	0.271
Number of meetings	0.358	0.144
Number of times participated in community meetings	-0.369	0.133
Number of times consulted	-0.386	.001***
Respondents gender	0.227	0.403
Respondents education	0.752	0.199
Respondents activity	0.138	0.596
Employed migrant	-0.15	0.526
Remittances received	-0.031	0.942
Displaced at least once	0.241	0.572
Ethnic minority	0.013	0.972
Household is urban	0.698	0.015
Household feel safe	-2.119	.002***
Social protection received	0.262	0.316
Livelihood services received	-0.384	0.106
Satisfied with health service quality	0.012	0.962
[Satisfied with education service quality	0.435	0.128
Water is clean and safe	0.181	0.628
Satisfied with availability of medicine	-0.214	0.398
Satisfied with waiting time	-0.3	0.223
Satisfied with the number of teachers	-0.668	.011**
Satisfied with the school equipment	0.151	0.54
Queue for water	0.138	0.674
Pay formal health fees	0.63	0.248
Pay informal health fees	0.844	0.057
Pay formal fees for education	0.59	0.012
Pay informal fees for education	0.015	0.949
Pay for water	0.444	0.131
Government is the health service provider	1.242	.040**
Government is the education service provider	-0.871	0.146
Government is the water service provider	-0.144	0.616
Knew how to complain	0.39	0.101
Number of observations 691; R squared 0.26		

Note: Asterisks indicate significance level (\*\*\* p<0.01, \*\* p<0.05, \* p<0.1).





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SLRC Working Papers present research questions, methods, analysis and discussion of research results (from case studies or desk-based research) on issues relating to livelihoods, basic services and social protection in conflict-affected situations. They are intended to stimulate debate on policy implications of research findings.

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