Nepal Earthquake Response

Joint Assessment of Food Security, Livelihoods and Early Recovery

November 2015

Prepared in partnership with:

OCHA

WFP

FAO

UNDP

Nepal Red Cross Society

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FOOD SECURITY CLUSTER
Strengthening Humanitarian Response

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Cover image: Rice harvest in Gorkha, ©FAO, 2015

EXECUTIVE SUMMARY

On 25 April 2015, a 7.8 magnitude earthquake struck Nepal with its epicentre in Gorkha district, approximately 81km northwest of the capital, Kathmandu. Intense tremors, and subsequent aftershocks, landslides, and avalanches caused widespread damage to homes, land, public and private infrastructure and livelihoods, affecting millions of people across 39 out of 75 districts. The Nepalese government categorized 14 of these districts as severely affected: Dhading, Gorkha, Rasuwa, Kabhrepalanchok, Nuwakot, Dolakha, Sindhupalchok, Kathmandu, Ramechhap, Bhaktapur, Lalitpur, Makawanpur, Sindhuli and Okhaldhunga. Combined, over five million people reside in these districts.

Amid ongoing emergency relief efforts following the initial earthquake, Nepal was struck by a second earthquake on 12 May 2015, which registered a magnitude of 7.4 on the Richter scale. The epicentre of the second earthquake was located further east than the first, on the confluence of Sindhupalchok and Dolakha districts, compounding the initial devastation in already affected areas. According to government estimates, the earthquakes combined caused over 8,790 casualties and 22,300 injuries, and left over 500,000 houses and hundreds of historical and cultural monuments destroyed. It is estimated that the earthquakes affected the lives of approximately eight million people, constituting more than a quarter of the population of Nepal.

In light of this, in May, the World Food Programme, in partnership with the Government's Nepal Food Security Monitoring System (NeKSAP) and the Food Security Cluster, conducted a food security assessment in 11 of the aforementioned districts, excluding the three districts of Kathmandu Valley. This baseline facilitated and informed the immediate emergency response.

The following joint assessment, conducted over the course of September and October 2015, was designed both as a monitoring exercise and to further inform broader early recovery efforts identified as priorities in the Post-Disaster Needs Assessment, including food security, livelihoods, agriculture, service access and protection. To that end, in addition to the partners in the May assessment, it also included more partners, including OCHA, FAO, UNDP, REACH, the Early Recovery and Protection Clusters, and the Nepal Red Cross Society.

The assessment sought to: a) update information on key thematic areas included in the Post Disaster Needs Assessment, b) identify and measure changes since the May 2015 baseline assessment, c) identify key trends, gaps and risks across the assessed sectors and d) enable all stakeholders to derive the information they need to define their own cluster or agency-specific early recovery and development strategy.

Key findings from the assessment are presented below, which have been agreed upon jointly by all partners. The results presented here are for households in 11 districts worst affected by the earthquake and capture the situation at one point in time, mid-September to mid-October, which follows the end of the lean season in August/September and the end of the monsoon in September and precedes the festival season in October/November and the harvest of summer crops in November/December. The results should be interpreted with these contextual factors in mind. Furthermore, because of the geographic focus and timing of the joint assessment the results are not generalizable to other parts of Nepal nor to other times of the year. For nationally representative data, the readers should refer to the latest Nepal Living Standards Survey and Nepal Demographic and Health Survey.

Demographics

With an average size of five individuals, Nepali households are relatively large and exhibit high rates of dependency, mostly due to the presence of children which account for a third of the population across the assessed areas. Average dependency ratios approach one, suggesting one dependent per economically active individual or caregiver. Over a fifth of households are headed by women, with over a quarter of urban households headed by women relative to under 20% of rural households. This is likely due to high levels of male out-migration, as well as potentially higher male death rates, rising divorce rates and female emancipation. When examined by self-reported caste or ethnicity, Janajati households were the most common, accounting for over half (57.7%) of households; Brahmin/Chhetri households comprised a third (32.9%) and Dalits a tenth (9.2%) of all households. It is worth noting that the results of this survey vary from other studies conducted on social composition primarily because various Janajati sub-groups were brought under the Janajati umbrella group.

More than a third (37.3%) of households were reportedly hosting vulnerable individuals, including people with disabilities, chronically ill persons and pregnant and/or lactating women. Among these households, chronic illness was the most commonly reported vulnerability, present in nearly a fifth (18.9%) of these households, followed by pregnant and/or lactating women (12.3%) and people with disabilities (11.3%).

Migration

Reported migration rates since the earthquake were highest in Ramechhap, where 8% of individuals aged 17 or older at the time of the earthquakes had reportedly migrated away from their previous location; Sindhupalchok, where 6.5% had done so; and Gorkha, 6%. The vast majority (82%) of all individuals who had reportedly migrated elsewhere since the earthquake were male. Approximately 4% of individuals aged 17 or over reported intending to migrate either within Nepal or abroad within the three months following the survey, indicating a continued rate of migration in the medium term at least. Of these, an estimated 84.2% are also male and aged 17 or over.

Food Security

The survey shows a significant improvement across all food security indicators since May 2015, with less than one fifth (17.7%) of all households falling below the acceptable threshold for food consumption as of September, relative to 45.9% in May.[1] This improvement is likely due to several factors, including the large amount of humanitarian assistance provided, the start of the harvest of summer crops, and the restoration of access to markets and improvements to their general functionality.

Pockets of food insecurity and vulnerability do persist however, most notably in Dolakha, Sindhupalchok, Gorkha, Sindhuli and Ramechhap, where more than a fifth of all households had inadequate (poor and borderline) food consumption at the time of the assessment. Elevation was found to be a strong determinant of food consumption, with the proportion of households with inadequate food consumption at 14.6% in the low hills and 26.5% in the high hills.

Higher levels of inadequate food consumption were noted in rural areas, where a fifth (19.8%) of households were deemed food insecure, relative to only 6.4% in urban areas. Following on from this, households relying primarily on agriculture, agricultural on-farm labour and low-skilled daily labour were found to have lower food consumption scores, lagging behind other livelihood groups. Inadequate food consumption was highest amongst Dalit households, over a third of whom (33.6%) fell below the acceptable threshold for food consumption, making caste an important factor of food security status at household level.

Dietary diversity was also found to have recovered since May 2015, in line with food consumption levels. The average frequency of consumption, in days per week, of animal protein has increased by an entire day from 0.7 in May to 1.7 in September. The same is true for the consumption of vegetables, which registered a significant increase in consumption from 3.3 days per week in May to 5.8 days per week in September. Dietary diversity scores (DDS) largely reflect these consumption patterns, with two thirds (66%) of households found to exhibit high dietary diversity, a third (32.0%) a medium dietary diversity and an estimated 2% of households having a low dietary diversity.

Overall, 20.6% of households reported that they had adopted any form of food-based coping strategy, a substantial decrease from May when 68.7% of households reported doing so, suggesting that the need to use them has since diminished in line with the wider recovery in food consumption. Furthermore, fewer households were frequently adopting food-based coping strategies, with 6.7% in September compared to 15.9% in May.

Market availability of food items has generally increased since May: more than 90% of surveyed households reported increased availability of cereals, pulses, vegetables and oil in their nearest food market. A positive correlation between a household's food market access (in travel time) and their food consumption status is observed. The nearer the food market is, the better off the households' food consumption and dietary diversity are.

Nevertheless, a majority (84.8%) of households reported the need for food or cash assistance in the next six months, reflecting the need to continue supporting household

[1] For each relevant time-series comparison of food security indicators (FSC, DDS, rCSI, market access) in this report, a two-sample t-test was conducted. Results showed that the differences between May and September results are all significant at 1% significance level (CI=99%), making all comparisons presented in this report statistically significant and not due to chance.

recovery, boost purchasing power and smooth overall consumption during the upcoming winter period. Among these households, overall, the top-five reported needs (as a percentage of households) included rice (73.8%), one-off cash grant (60.5%), pulses and lentils (57%), vegetable oil (44.7%) and cash for work (25.6%).

Livelihoods

Being a labour intensive, predominantly agrarian economy, labour market participation was generally high for working age individuals aged 17 and older. Findings indicate that more than half (54.3%) of individuals belonging to this age group were reportedly engaged in some form of income-generating activity. Reported employment rates were highest in Ramechhap, Sindhupalchok and Gorkha where an estimated 60% of individuals aged 17 and older were engaged in some form of productive labour. Participation rates were lowest in Makawanpur and Kabhrepalanchok districts, where less than half (43.4%) of surveyed individuals were working.

Agriculture was the most commonly reported current income source for both men and women, with a slightly higher proportion of households reporting this as the primary source of income for women (65%) as opposed to men (63%). The proportion of households reporting women as economically inactive (21.8%) at the time of the assessment was also much higher than the corresponding figure for men (8.3%); further, a higher proportion of women in urban areas (27.6%) were deemed economically inactive when compared to rural areas (20.7%), owing largely to the widespread practice of agricultural activities. Finally, assessed households reported that men (14%) were more likely to receive remittances than women (3%), whilst women were in turn more likely than their male counterparts to receive welfare payments. This is not to say that women did not access remittances, simply that men were the primary recipients.

Households reportedly earned an average of 12,322 Nepali Rupees (NPR) in the 30 days prior to the survey. Average reported household incomes were lowest in Dolakha (8,903 NPR), Sindhupalchok (9,204 NPR) and Okhaldhunga (9,293 NPR). Households residing in rural areas generally earn less than counterparts residing in larger urban areas. The same relationship holds for elevation, whereby incomes steadily diminish in line with increasing altitude.

Overall, an estimated 78.9% of households reported holding debt at the time of the assessment, with high outstanding debt loads across the board. On average, debt loads were reported to exceed average monthly incomes by a ratio of 24:1, indicating a high propensity for debt accumulation. In addition, rural household debt exceeded urban household debt by a ratio of 4:1, suggesting much higher rates of borrowing in rural areas. Debt levels also steadily diminished with increasing elevation, indicating constrained access to credit in high hill areas. A quarter of all outstanding debt was accumulated in the six months following the earthquake, suggesting that the ability to take on debt has been a cornerstone of the household recovery effort for many.

The majority of lost or damaged assets, as a result of the earthquake, were reportedly tools and infrastructure associated with agricultural livelihoods, which is reflected in lower expectations of agricultural production and higher debt levels. The infrastructure and assets which were reported to have incurred the most damage include livestock sheds (reported by 30.8%), produce storage facilities (21.7%), sickles (17.8%), spades (17.5%), doko baskets (16.7%) and other agricultural tools (12.8%). With the most significant and the most difficult to recover infrastructure, such as buildings and storage facilities, having incurred the most damage, this not only diminishes productive capacity, but also household wealth in the process.

Agriculture

In the high hills, 73.8% of the population surveyed relied at least partly on agriculture. Farms in these areas are typically smallholdings or less than one hectare, with the main cereal crops maize and paddy rice. In addition, potato production represents a third of staple and pulse production. For almost three quarters of these households, the lack of irrigation systems means they can only grow one crop cycle annually. Livestock raising, mostly sheep and goats, is therefore an important complement for 88% of them. At the time of the survey, 43% of these households relied on their own production for cereal consumption, 64% for milk and 82% for vegetables.

In the mid hills, 80% of the population consider themselves farmers, and 91% own livestock. This is the most heavily agrarian region of the three. 50% of households relied on their own production for cereal consumption. While areas in the lower hills were found to have a lower

share of households reporting agriculture as their main livelihood (65%) since this is a more urban region, 84% of these households reported to own livestock.

Brahmin/Chhetri households are three times as likely to sell their agricultural products (30%) than Dalits (10%), but this difference narrows down between male (22%) and female (19%) headed households. The unequal distribution of land and varying yields by ecological belt mean the vast majority of farming households do not produce enough for their household needs, and rely on additional income sources.

Farming tools were largely destroyed by the collapse of houses and landslides that followed the earthquakes and have not yet been recovered. While this most likely has a direct influence on farmers' productivity, the physical destruction of (any) physical asset also acts as a proxy for earthquake and landslide intensity. Five months after the event, 36.6% of households surveyed reported still having damaged or unusable tools, while the most affected districts were Sindhulpalchok (79%), Rasuwa (69%) and Dolakha (67%).

Across the 11 districts, the near totality of households reported damage to their storage capacity which has not yet been recovered, and 44% reported that their facilities were almost entirely destroyed. Damage appears particularly acute in Sindhulpachok (80%), Dolakha (62%), Rasuwa (59%), and Gorkha (55%). Grain and seed storage bags are therefore among the top three priority needs for 28% of farmers surveyed. In addition, these households are particularly food insecure, as they lost their food and seeds stocks, having lower food consumption scores than others assessed.

In the 11 districts surveyed, around one third of agricultural households report having an irrigation system. This proportion varies with elevation, with households in higher hills least likely to have an irrigation system (24%) and those in low hills most likely to have one (43%). Caste is also correlated with access to irrigation systems, in favour of Brahmin/Chhetri households (46%) over Janajatis (29.8%) and Dalits (19.5%). Overall, 53.8% of irrigation systems were damaged in one way or another. This proportion is particularly high in Sindhupalchok (87.8%), Rasuwa (76.3%), Ramechhap (76.3%) and Kabhrepalanchok (75%).

Among households who reported to have irrigation systems, those reporting damages are significantly more likely to expect reduced crops and to have a lower income.

Overall, 88.3% of the population surveyed reported to own livestock, although this varies across districts with Dhading, Okhaldhunga, Ramechhap and Sindhuli registering the highest share of livestock breeders (all over 94%). The animals most commonly bred are cattle (by 80% of households), followed by chickens, and sheep or goats (by 68 and 69% of households respectively).

Across the board, a majority of agricultural households (54%) do not report earning any income from agriculture, despite relying on it as part of their livelihoods for subsistence; only 27% report selling any crop and 22% sell either milk or meat. Crop sellers have significantly higher production than non-sellers of rice (nearly twice as much) and potatoes (over four times as much). Livestock product sellers (meat and milk), particularly poultry breeders, own twice as many animals on average (12) than non-sellers (6). These households suffered extensively from shelter collapse, as chickens were kept indoors at the time of structural collapse. 60% of sellers report decreased income from cereal sales and so do 53% and 34% of meat and milk sellers respectively. Households reporting damaged assets were found to be slightly more likely to report decreased income, however pre-existing patterns such as caste, the number of animals owned before the earthquake or crop production, as well as distance from markets are much more important determinants of agricultural product commercialization.

Access to Services

Access to services and resources, including secured water sources, improved sanitation facilities, health, education and finances was generally quite high but did exhibit variation across the assessed geographic areas. However, no significant relationship was found between levels of service access and socioeconomic characteristics. Nearly three in four (72.8%) households reported piped, municipal water as their primary drinking water source across all assessed areas, indicating steady supply and access to this public service, largely in line with pre-earthquake figures.[2] The remaining households relied on a mix of protected

[2] According to the World Bank, an estimated 68% of households used piped water as a primary water source. Available at: http://data.worldbank.org/indicator/SH.STA.ACSN.UR

(5.2%) and unprotected wells (5.7%), surface water, including natural springs and rivers (13.9%), and privately sourced bottled and trucked water (0.7%).

The use of surface water as a primary source of drinking water was nominally higher amongst rural households, 15% of whom sourced surface water for drinking, than amongst urban households, 8.2% of whom used this source. Similarly, use of surface water was more common amongst households in the high (16.4%) and mid hills (16.2%), in line with the general trend of reduced service provision in more hard-to-reach areas.

Access to basic sanitation infrastructure was much poorer. Overall, more than one in ten (12.6%) households had no access to latrines, indicating a high rate of open defecation. For instance, a quarter (24.5%) of households in Nuwakot, and over a fifth of households in Ramechhap (21.6%) and Rasuwa (21%) had no access to toilets.[3]

Access to health services was generally high, although again, different levels of access were observed across the assessed geographic areas. Overall, 15.5% of households reported experiencing constraints when attempting to access health services. The sex of the head of household was not found to be a determinant of service access, suggesting that access issues are primarily related to service supply rather than exclusionary practices. The district of residence of a given household seems to be a potent predictor of service access constraints, with 42.8% of households in Okhaldhunga, 33.4% of households in Rasuwa and 37.4% of households in Sindhupalchok reporting access constraints.

Access to education for children aged 5-16 was generally found to be high and at an estimated 95%, approaching universal enrolment across the assessed areas. It also largely aligns with pre-earthquake attendance rates, even exhibiting marginal increases in some districts. No variation, statistically significant or otherwise, was observed across elevations, the rural-urban divide or castes and social groups, indicating high service coverage, reach and participation.

Protection

Overall, 38.9% of surveyed individuals reported that they did not possess citizenship and/or identification documentation (including birth certificates) at the time of the assessment, potentially due to loss or damage as a result of the earthquake. There was little variation between districts. Sindhuli had the highest proportion of individuals (41%) who reported not being in possession of such documentation. Fewer individuals in rural areas (60%) had access to key documentation than in urban areas (69%). Possession of documentation also varied by caste/ethnicity: 54.6% of Dalit individuals possessed identification documentation compared to 68.2% of Brahmin/Chhetri individuals.

An estimated 86.9% of all households reported being in possession of land or property deeds. However, nearly a fifth (18.2%) of households in Rasuwa, 16.5% of households in Sindhuli and 15% of households in Gorkha were not in possession of land and/or property deeds at the time of the survey. The rural-urban divide was again a powerful determinant of possession: 14% of all households residing in rural areas were not in possession of deeds, whilst only 7.2% of urban households were not. Lack of such documentation may leave households more vulnerable to abuse and predatory practices, including arbitrary evictions, predatory rent pricing, or land grabs.

[3] According to the World Bank, just over half (56%) of households across Nepal had access to improved sanitation facilities, suggesting that the rate of access for these districts is higher than the national rate. Available at: http://data.worldbank.org/indicator/SH.STA.ACSN.UR

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INTRODUCTION

Nepal is a landlocked, predominantly agrarian South Asian nation situated between India to the east, south and west, and China to the north. A low-income country ranked 145th out of 187 countries on the Human Development Index in 2014,[4] it has made steady progress over the course of the last decade, with gains across governance, service provision and household income. For instance, the proportion of people living below the international poverty line – those earning less than US$1.25 per day – has more than halved over the course of the last decade. By this measure of poverty, the percentage of poor people declined from 53.1% in 2003/2004 to 24.8% in 2010/2011 according to the World Bank.[5]

On 25 April 2015, a 7.8 magnitude earthquake struck Nepal with its epicentre in Gorkha district, approximately 81km northwest of the capital, Kathmandu. Intense tremors, and subsequent aftershocks, landslides, and avalanches caused widespread damage to homes, land, public and private infrastructure and livelihoods, affecting millions of people across 39 out of 75 districts. The Nepalese government categorized 14 of these districts as severely affected: Dhading, Gorkha, Rasuwa, Kabhrepalanchok, Nuwakot, Dolakha, Sindhupalchok, Kathmandu, Ramechhap, Bhaktapur, Lalitpur, Makawanpur, Sindhuli and Okhaldhunga. Combined, over five million people reside in these districts.[6]

Amid ongoing emergency relief efforts following the initial earthquake, Nepal was struck by a second earthquake on 12 May 2015, which registered a magnitude of 7.4 on the Richter scale. The epicentre of the second earthquake was located further east than the first, on the confluence of Sindhupalchok and Dolakha districts, causing yet more devastation in areas that had already been acutely affected. According to government estimates, the earthquakes combined caused over 8,790 casualties and 22,300 injuries, and left over 500,000 houses and hundreds of historical and cultural monuments destroyed. It is estimated that the earthquakes affected the lives of approximately eight million people, constituting more than a quarter of the population of Nepal.[7]

According to the Post-Disaster Needs Assessment (PDNA) conducted by the Government of Nepal, the total economic damage caused by the earthquakes was estimated at USD seven billion – equivalent to a third of Nepal's Gross Domestic Product (GDP). Detailed sectoral assessments contributed to the PDNA, one of which was conducted in May 2015 by the World Food Programme, in partnership with the Government's Nepal Food Security Monitoring System (NeKSAP) and Food Security Cluster, with a focus on food security, agriculture and livelihoods in 11 of the aforementioned 14 priority districts.[8] The assessment informed the immediate relief response and established a baseline against which recovery can be measured across time.

This second assessment conducted over the course of September and October 2015 was designed to complement, update and expand upon information on key thematic areas in the Post-Disaster Needs Assessment and the May baseline assessment with a view to informing a multi-cluster and governmental recovery response related to food security, livelihoods, agriculture, service provision and infrastructure, while mainstreaming protection and gender concerns with support from the Protection Cluster and inter-cluster gender working group.

[4] UNDP 2014, "Nepal Human Development Report", available at: http://www.undp.org/content/nepal/en/home/library/human_development/human-development-report-2014.html
[5] Available at: http://www.worldbank.org/en/country/nepal
[6] Of these, all 11 districts outside of Kathmandu Valley were selected for this assessment.
[7] National Planning Commission (2015) Post Disaster Needs Assessment, Vol. A: Key findings Nepal Earthquake 2015. Kathmandu: National Planning Commission, Government of Nepal.
[8] Nepal Food Security Monitoring System (2015). A Report on the Food Security Impact of the 2015 Earthquake, Government of Nepal, World Food Programme and Food Security Cluster.

METHODOLOGY

The methodology used for this assessment was a statistically significant, stratified cluster sample, representative to two strata: a) the district and b) elevation at the household level. The district strata were chosen and sampled on the basis of official Government of Nepal administrative boundaries, whilst the elevation strata refer to Central Bureau of Statistics elevation categories of low (<900 m), mid (900-1,700 m) and high (>1,700 m) hills. The districts are equal sized strata and the elevation strata are, in fact, an implicit stratification that simply ensures that households in every elevation are represented in accordance to their relative population. The sample was designed using the Central Bureau of Statistics' 2015 population projection data at ward level, with wards used as natural clusters of the surveyed statistical population – in this case, the household was used as a unit of sampling and analysis.

The sample was designed using the Probability Proportional to Size (PPS) method, meaning that the size of a given ward was proportional to its probability of being selected. Larger wards had a higher probability of being selected, and vice versa, in order to accurately reflect the geographic distribution of the statistical population. The number of surveys in each district was capped at 380, whilst the number of wards or clusters selected for surveying was fixed at 38. In order to obtain the desired statistical significance at a confidence level of 95% and a margin of error at 7%, the number of surveys in each ward was also fixed at 10, yielding a total of 380 surveys in each district.

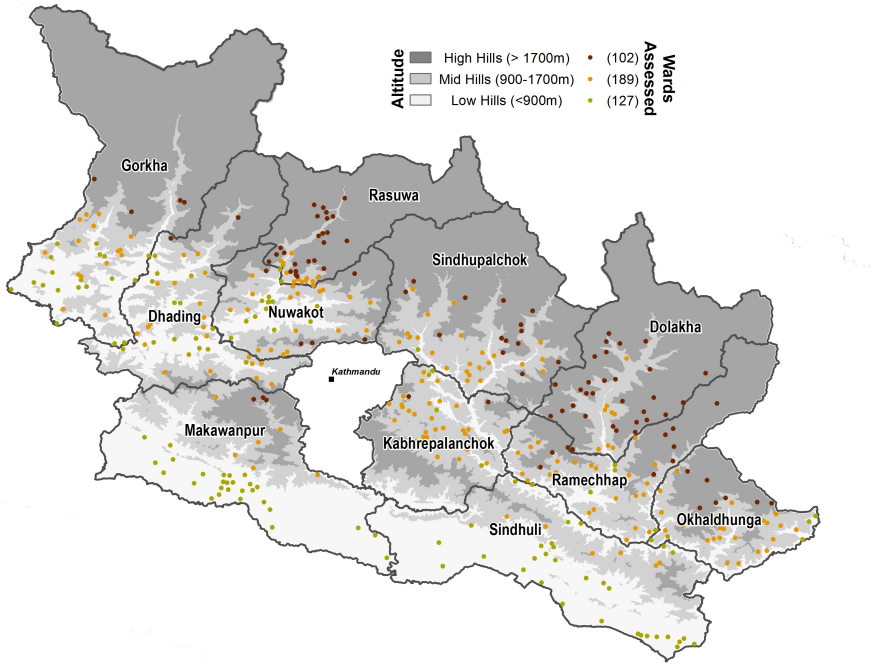
Data collection was structured according to two distinct phases. In the first, 11 team leaders from NeKSAP and 42 enumerators from Nepal Red Cross Society were trained together on the questionnaire over the course of two days, the first involving a question-by-question training and explanation session and role play interviews, and the second involving a pilot of the questionnaire and the methodology itself in the field. Once the pilot was completed, feedback was elicited by the Assessment Coordination team and the data collection tool was then finalized.

Phase two consisted of data collection in the field, conducted from 16 September to 12 October 2015. Upon arrival in a given ward, team leaders engaged with key informants (KIs), normally ward chairpersons, communal forestry management chairpersons or disaster relief committee coordinators, from whom population figures for the given ward were derived. In addition to this, a community or ward-level key informant interview was conducted with each ward key informant to elicit information on the state and condition of community infrastructure and services.[9] Field teams also elicited other information from these key informants, in particular the precise locations of settlements within the ward. Given how difficult Nepal's terrain is to traverse, this was done to ensure that no time was wasted on physically searching for households. Due to access constraints, 44 remote wards were accessed via helicopters from the United Nations Humanitarian Air Service (UNHAS).

Once household lists were obtained, households to-be-interviewed were chosen via a random selection method using a randomization table. Each enumerator was then allocated a given number of households and proceeded to conduct interviews until data collection in the given ward was completed. Selected households who were unwilling or unavailable to take part in the survey were replaced step-wise using the same randomization method. Data was then checked on a daily basis to identify and follow up on inconsistencies and prepare the data cleaning plan.

[9] These key informants almost always had up-to-date population and household numbers available due to the nature of their roles and their mandates as public officials.

Map 1: Wards selected for surveying according to the PPS method



Data collection was conducted on Android-based smartphones using the Open Data Kit data collection platform. This was done with a view to limiting data entry errors by building robust constraints and relevance expressions into the tool, whilst also enabling the geo-referencing of all surveys. As much as possible, all teams were recruited and trained to ensure a gender balance to address any cultural taboos during the interview process.

Table 1: Final sample sizes, by district

District	Final sample size
Dhading	382
Dolakha	380
Gorkha	378
Kabhrepalanchok	380
Makawanpur	380
Nuwakot	380
Okhaldhunga	383
Ramechhap	380
Rasuwa	380
Sindhuli	381
Sindhupalchok	380
Grand Total	**4184**

Due to a malfunctioning smartphone, three surveys conducted in Gorkha could not be retrieved. The lower number of surveys conducted in this district does not detract from the overall statistical significance levels established above.

Risks and Limitations

The most significant limitations of this study are related to the methodology and sample design. Due to the decision to opt for a cluster sampling method, the accuracy of the data is determined by the design effect. Some key definitions to consider when interpreting the limitations of this study include:

- Cluster sampling: a sampling technique used when natural but relatively homogeneous groupings are evident in a statistical population. In this technique, the total population is divided into self-contained, geographic clusters and a simple random sample of the population within the cluster is selected for surveying.
- Design effect: A design effect represents the combined effect of a number of components such as stratification, clustering and unequal selection probabilities which are a result of the way that the sample was designed and data collection implemented. Put simply, the

loss of effectiveness by virtue of the use of cluster sampling, instead of simple random sampling, can be defined as the design effect. The design effect is essentially the ratio of the actual variance, under the sampling method actually used, to the variance computed under the assumption of simple random sampling.

All analyses and figures which span the entire sample beyond the strata to which findings are representative (district and elevation) are weighted at district level. Weighting is used to adjust the results of a study to bring them more in line with what is known about a given statistical population – in this case, the distribution of the population across the 11 assessed districts and three elevations. Components, in this case households, are adjusted to reflect overall importance by value or proportion. Weights are equal to the inverse of their probability of being selected, in order to avoid misrepresentation of findings. Since PPS is used within districts, all households within districts have the same probability of being selected. However, because districts have a different population size, which is not accounted for in the sample (all districts are selected and all districts have the same sample size), district weights are used to correct household's unequal probability of selection across districts.

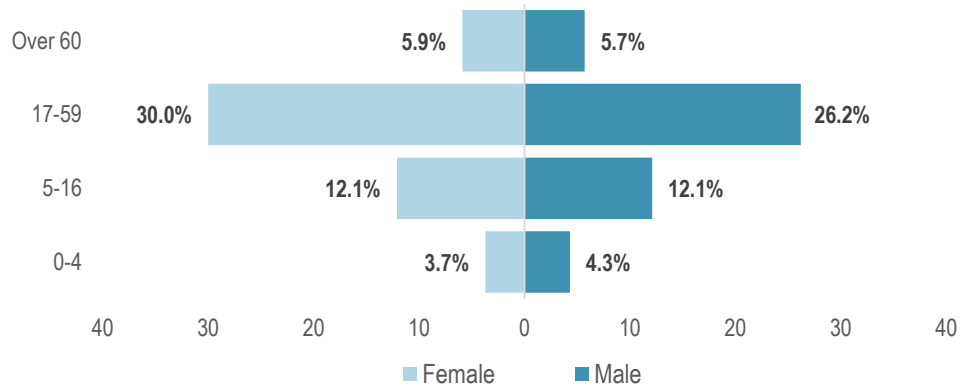
It is also worth noting that all non-responses (input as "999", for instance) and outliers of more than three standard deviations were removed from the analysis process to ensure consistency and avoid any misrepresentation of findings. These were most common for continuous variables, including income, debt, expenditure, and livestock numbers but have no effect on the statistical significance of findings presented.

KEY FINDINGS

DEMOGRAPHICS

Hosting an average of five individuals, households[10] are relatively large,[11] a trend which persists across all 11 assessed districts, albeit with modest variation. Rural households are, on average, slightly larger than urban households, hosting an average of 5.4 and 4.9 individuals, respectively, a trend typical of the rural-urban divide in most countries. Overall, women account for over half (52%) of the population, whilst minors under the age of 17 comprise nearly a third (32.2%) of the population across the 11 assessed districts.

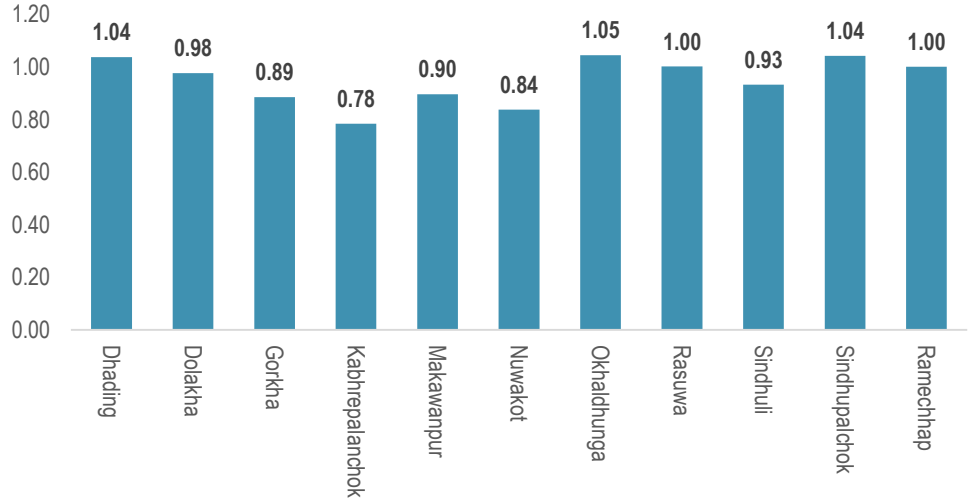
Figure 1 Population distribution by proportion (%) of each demographic group



Though Nepali households residing across the 11 surveyed districts may not necessarily be as young as their regional neighbours,[12] and even defy the nation-wide trend which places the proportion of minors under 17 at nearly 40%, they still exhibit a high overall rate of dependency, likely due to the high proportion of elderly individuals (nearly 12%). The dependency ratio,[13] for instance, stands at approximately 1, indicating, on average, at least one economically dependent individual per economically active individual in each household. Though this suggests a high degree of pressure on those deemed economically active – ostensibly, the 17-59 demographic – the average masks significant district-level variation.

Households residing in Dhading, Okhaldhunga and Sindhupalchok exhibit particularly high rates of dependency with, on average, more than one dependent per economically active individual. Delving further, higher elevation of residence was not found to be associated with higher rates of dependency, but rural households, which have an average ratio of 1, do appear to host higher numbers of dependents than urban counterparts (on average, 0.8). This trend is similar to the global urban-rural divide; rural households in primarily agrarian, low income nations exhibit naturally higher birth rates, leading to larger, more economically active – though not necessarily more productive – households.

Figure 2: Average dependency ratio by district



[10] For the purpose of this assessment, a household was defined as any shelter or dwelling permanently hosting a given number of individuals regularly sharing a food pot. Heads of households and other respondents were asked to define household boundaries themselves using these criteria.

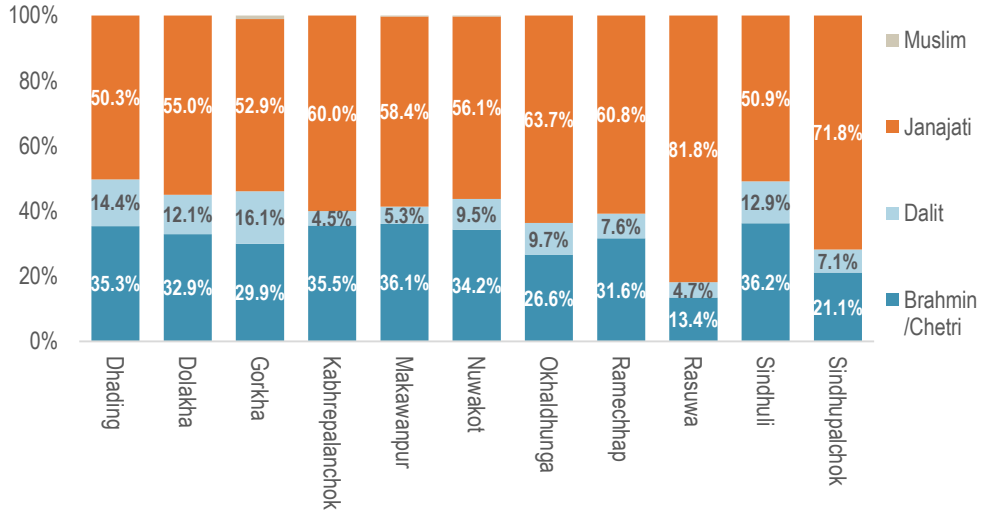
[11] Comparison is made with the OECD average of 2.63 individuals per household.

[12] In India, for instance, minors under the age of 17 account for over 40% of the total population of the country. Given the geographic scope of this survey, the findings may not necessarily be directly comparable but are nonetheless indicative of a regional demographic divergence. Data are sourced from the Government of India, Ministry of Home Affairs, Office of the Registrar General and Census Commissioner, available at: http://www.censusindia.gov.in/2011census/C-series/C-14.html

[13] The dependency ratio is a measure of the demographic pressure exerted by those deemed economically inactive (individuals aged 0-16 and 60+) on those deemed economically active (individuals aged 17-59). For the purpose of this survey it was calculated using the OECD standard of (total economically inactive) / (total economically active) at household level. This was then used to derive a district and population-wide average.

The assessment also sought to measure the caste or social group a given household belonged to – Brahmin/Chhetri, Janajati or Dalit. Households identifying as Muslim were captured as free-text responses and were later incorporated into the dataset and findings.[14] Overall, Janajati households were the most common, accounting for over half (57.7%) of households across the 11 districts. This was followed by Brahmin/Chhetri households, which comprised a third (32.9%) of households and finally, Dalits, accounting for around one tenth (9.2%) of households. The fact that Janajati households account for the majority is due to the way in which this was measured: Janajati is an umbrella sub-population grouping numerous communities and sub-castes which were not captured in the survey.[15]

Figure 3 Proportion (%) of households by caste and district



Brahmin/Chhetri households consistently comprised approximately a third of the households across the districts, except in Rasuwa and Sindhupalchok, where they accounted for 13.4% and 21.1% of households, respectively. The same trend holds for Dalit households – they consistently account for nearly a tenth of households across all districts except for in Rasuwa, where Janajati households accounted for the overwhelming majority (81.8%).

Overall, more than a third (37.3%) of households were reportedly hosting vulnerable individuals, including people with disabilities, chronically ill persons and pregnant and/or lactating women.[16] Within this subset of households, chronically ill persons were found to be the most common sub-group, hosted by nearly a fifth (18.9%) of households.[17] This is followed by pregnant and/or lactating women, hosted by 12.3% of households, and people with disabilities,[18] reportedly hosted by 11.3% of all households. Female-headed households were not found to host such groups in any greater measure than male-headed households, although people with disabilities were hosted by a slightly larger proportion of female-headed households (12.5%) than male-headed households (10.9%).[19] Though a minor variation, the task of caring for these individuals often falls on women. No households were found to host third gender persons, though this is likely under-reported given the taboos inherent in discussing such a private and socially sensitive topic. At this point, it is worth noting that chronic illnesses and disabilities are inherently more difficult to diagnose and capture in a household survey and should be interpreted as self-reported, indicative estimates only.[20]

At district level, the proportion of chronically ill persons was overall highest in Makawanpur (28.7%), Ramechhap (25.3%) and Rasuwa (22.6%), where an estimated one-in-five households were reportedly hosting chronically ill individuals. Similarly, households hosting pregnant and/or lactating women were most common in Okhaldhunga (17.5%) and Sindhuli (17.1%) districts, suggesting higher demand for specialized ante and post-natal care services across these areas. No rural-urban or elevation-related variation emerged from the data. There is thus a need to identify key actions to address this issue by reinforcing protection and health interventions to the most vulnerable, specifically in these areas.

[14] Given the small number of Muslim households (9 out of the total sample of 4184 households), the margin of error is higher than for other population groups discussed. In the small number of cases where comparisons have been made in this report, the limitations of these findings are clearly stated (p>1).
[15] Refer to the 2011 National Population and Housing Census and Nepal Living Standards Survey 2010/11 for more information on caste/ethnic groups and sub-groups.
[16] This a weighted finding, statistically significant (p<.001).
[17] For the purpose of this assessment, chronically ill persons were defined as any individuals suffering from chronic illnesses such as diabetes, bronchitis, cancer, and the like.
[18] For the purpose of this assessment, people with disabilities were defined as any individuals with physical, mental, visual, auditory, or speech impediments.
[19] p>1 and any variation is therefore due to chance, only.
[20] This may also be why such a high proportion of households reported hosting vulnerable individuals.

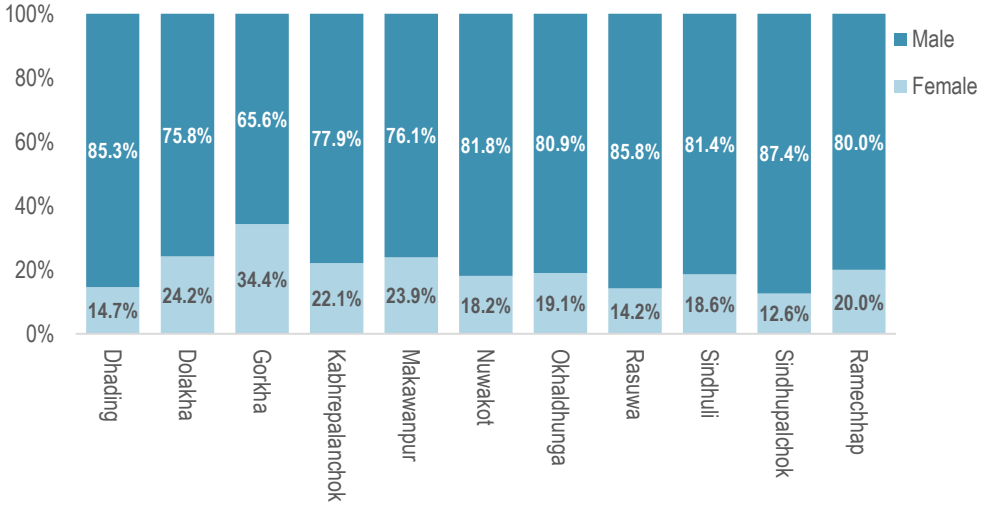
Figure 4: Proportion (%) of households reported as hosting vulnerable groups, by group and district

At 21.8%, women account for a significant proportion of heads of households.[21] This is likely attributable to male-dominated migration patterns where males are the primary migrants both within Nepal and abroad, a phenomenon explored later in this report.

Over a third (34.4%) of households in Gorkha are headed by women, whilst nearly a quarter are in Dolakha (24.2%) and Kabhrepalanchok (22.1%), respectively. Though the general trend of a high rate of female-headed households can be observed across all districts, these three districts emerge with the highest rates. Again, this is likely attributable to comparatively higher rates of pre and post-earthquake male migration in these three districts, higher divorce rates, higher male death rates and the like.

Elevation of residence was not found to increase the likelihood of a given house being headed by a woman, although the rural-urban divide was. Interestingly, a higher proportion of households in urban areas (26.6%) were headed by women in comparison to rural areas (20.9%). When triangulated with information from other related studies, this suggests two things: a) males are more likely to migrate from urban areas than from rural areas, and b) migration is probably external as opposed to internal or inter-regional (ie. abroad, rather than internally from rural to urban centres such as Kathmandu in search of employment).[22] This trend of male out-migration is explored further below and is something which has been well documented in other surveys and studies.

Figure 5: Proportion (%) of households by sex of head of household



It is worth noting that while Nepal is a predominantly agrarian, primary industry economy, a significant proportion of its Gross Domestic Product (GDP)[23] is derived from remittances, in itself a function of high rates of emigration.[24] That said, an estimated 4% of individuals aged 17-60 and above had reportedly migrated either within Nepal or abroad in search of employment since the earthquake. Of the total who had reportedly migrated elsewhere since

[21] This is in line with the Nepal 2011 population census data for the 11 surveyed districts, where 20% of households were reportedly headed by women.

[22] Centre for the Study of Labour and Mobility data puts the contribution of external migration to overall migration (internal and external) at just over 60%, suggesting that migration is predominantly external. Available at: http://ceslam.org/docs/publicationManagement/Survey_Migration_History_Nepal.pdf

[23] Overall, remittances are estimated to contribute to approximately 25%-30% of GDP. Sourced from the World Bank. World Bank Nepal Country Overview 2012, available at: http://www.worldbank.org/en/country/nepal

[24] Indeed, this steady reliance on remittances as primary sources of or supplements to incomes emerges quite clearly in our findings and will be explored later in the report.

the earthquakes, over 80% were reportedly male and aged 17-60 and above.[25] It is worth noting that the aim of this question was to measure rates of migration caused by the earthquake, meaning that the actual proportion of individuals who migrated prior to the earthquake is likely far higher but is not reflected here due to the limited recall period.[26]

Table 2: Rates of migration by sex and district for individuals aged 17+

District	Proportion (%) of individuals aged 17+ who have reportedly migrated since the earthquake	Males aged 17+ as a proportion (%) of all individuals who have migrated since the earthquake
Dhading	4.1	91.8
Dolakha	2.6	93.1
Gorkha	6.0	83.8
Kabhrepalanchok	2.9	91.1
Makawanpur	2.4	87.9
Nuwakot	5.1	90.1
Okhaldhunga	1.2	85.7
Ramechhap	8.1	66.3
Rasuwa	3.8	75.5
Sindhuli	5.0	91.2
Sindhupalchok	6.5	73.4

Reported migration rates were highest in Ramechhap, where 8% of individuals aged 17-60+ had migrated; Sindhupalchok, 6.5%; and Gorkha, 6%. Findings for Gorkha and Sindhupalchok, largely align with higher proportions of female-headed households observed in these districts. In turn, the vast majority (82%) of all individuals who had migrated since the earthquake were male, though female migration rates were also found to be high in Ramechhap and Rasuwa in particular.[27] Anecdotal evidence gathered during data collection and during the enumerator debriefing sessions suggests that this trend will likely continue in some form in the medium-to-long term.

The same trend holds for planned migration. Approximately 4% of individuals aged 17-60+ reported intending to migrate either within Nepal or abroad within the three months following the survey, indicating a continued rate of migration in the medium term at least. Of these, an estimated 84.2% are also male and aged 17-60+, much as with immediate, post-earthquake migration trends. As above, however, high rates of female migration in Ramechhap are set to continue, accounting for over 30% of all individuals who intend to migrate within this district.

[25] For the purpose of this assessment, migration is defined as the action or an act of moving from one place to another; the migrating of a person, a people, etc. from one country or place of residence to settle in another country or place of residence.

[26] This places the overall rate of migration for the 11 surveyed districts lower than the national rate of 9.2%, when compared with a World Bank study on remittances; "Large Scale Migration and Remittances in Nepal", World Bank Group, 2011.

[27] This is a weighted finding, statistically significant (p<.001).

FOOD SECURITY

Food consumption

Household food consumption was heavily affected by the earthquakes on 25 April and 12 May. According to the May assessment, more than a third (38%) of household food stocks were not recoverable when houses were damaged or destroyed. Loss of seed stocks was also widely reported. However, there was less reported impact on standing crops, which, when harvested later in the summer, replenished household food stocks in the short term. Despite this improvement, findings from this survey suggest that agricultural output has and will decrease overall, posing a medium term risk to food consumption levels.[28] Following the earthquakes, local markets were initially closed or only partially functioning in many areas, which, together with disruptions to road and trail networks and supply chains, resulted in limited available stocks and higher prices. These circumstances combined likely contributed to a reduction in food access in the immediate aftermath of the earthquakes, with 46% of households in the May assessment reporting inadequate food consumption and 19% poor dietary diversity[29].

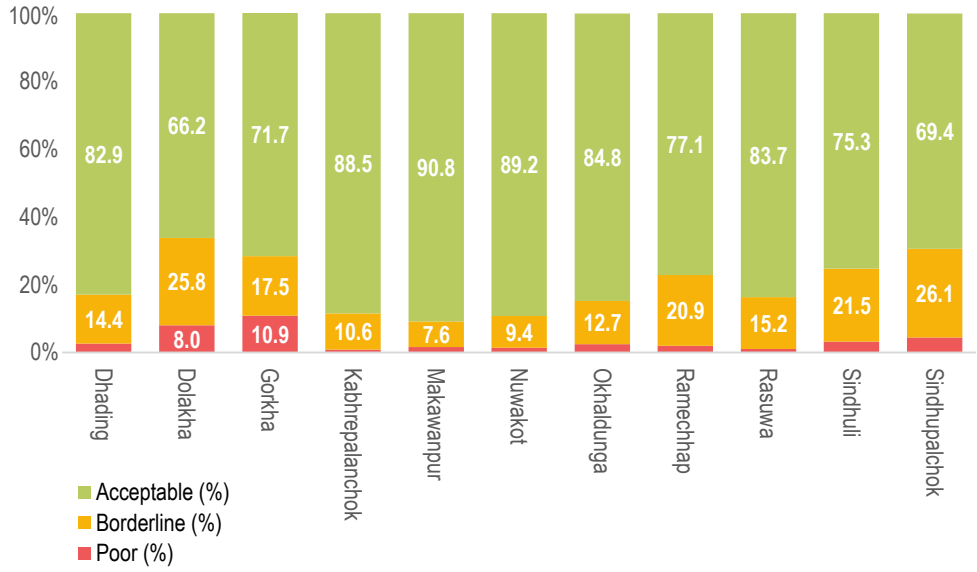
Findings from the current assessment indicate a large improvement in the overall food security situation across all key measured indicators and variables, including food consumption, dietary diversity as well as the use of food-based coping strategies since the May assessment.[30] The general improvement in the food security situation is likely attributable to a combination of factors, including improved access and concomitant improvements in the availability of key food-related items in markets, as well as widespread emergency food and cash assistance interventions[31] aimed at restoring and sustaining food consumption and other basic needs[32].

Another contributing factor is also the fact that a majority of the households across the assessed districts were engaged in some form of agricultural activity prior to the earthquake.

As the May assessment and subsequent NeKSAP district food security network meetings in July showed[33], the relatively minimal damage to standing crops and the subsequent winter crop harvest of wheat and potato enabled them to partially maintain consumption levels in the short term. Though this is likely to have helped, our analysis shows that other factors, including proximity and access to markets, also played a pivotal role.

Nevertheless, pockets of food insecurity and vulnerability persist in some districts and population groups and the results of this recent assessment indicate that the extent of recovery has varied between the assessed geographic areas.

Figure 6: Proportion (%) of households by food consumption group and district



[28] Nepal Food Security Bulletin, Issue 45. Available at: http://neksap.org.np/allpublications/food-security-bulletin-no-45

[29] Nepal Food Security Cluster. A report on the food security impact of the 2015 earthquake, Government of Nepal, Nepal Food Security Monitoring System and World Food Programme, May 2015. Available at: http://neksap.org.np/allpublications/nepal-a-report-on-the-food-security-impact-of-the-2015-earthquake-

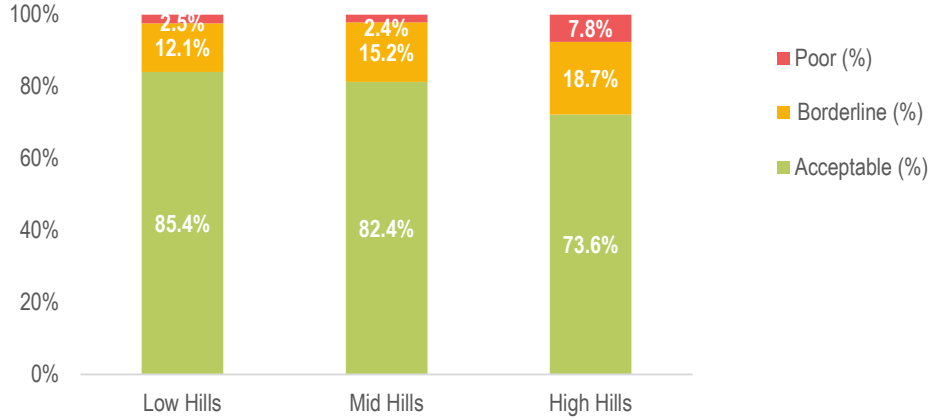
[30] It is worth noting that the May assessment was representative across the 11 districts as a whole, not to the level of the individual district. See Annex II: Methods in the May assessment report.

[31] According to the Nepal Food Security Cluster, this amounts to 17,000 MT in food commodities and US$5 million in cash transfers.

[32] MoAD and WFP, Nepal Food Security Bulletin, Issue 45. As part of the Nepal Food Security Monitoring System (NeKSAP), district food security networks met in late July to assess the current food security situation and determine the reasons behind changes since May. Where there were improvements, this was generally attributed to four reasons: the large amount of humanitarian assistance provided by the government and international organizations, the winter harvest (wheat, and potato), the resumption of markets and regular supply of food, and improved road access. Where there was a deterioration, this was generally attributed to monsoon-induced landslides and subsequent road closures and reduced access and insufficient humanitarian assistance. Available at: http://neksap.org.np/allpublications/food-security-bulletin-no-45

[33] ibid

Figure 7: Proportion (%) of households by food consumption group and elevation



In this assessment, nearly a fifth (17.7%) of all households were found to fall below the acceptable threshold for food consumption.[34] This represents a large decrease in the proportion of households falling below the acceptable threshold for food consumption since the May assessment, when it was 45.9%.[35] However, variation by district is evident, most notably in Dolakha, Sindhupalchok, Gorkha, Sindhuli and Ramechhap, where 33.8%, 30.6%, 28.4%, 24.7% and 22.9% of households were deemed to have inadequate (poor and borderline) food consumption at the time of the assessment, respectively.

Going beyond the district level, elevation and the rural-urban divide were both found to be related to food consumption levels, albeit to varying degrees. For instance, there is a clear, negative correlation between elevation of residence and food consumption: as elevation increases, food consumption levels decrease. Moving upwards from the low hills, the proportion of households deemed to have inadequate food consumption nearly doubles from just over 14.7% to an estimated 26.5% in the high hill areas. Elevation was found to be one of the powerful predictors of food consumption across our assessed areas. This is likely due to lower productivity, lower market access and reduced supply chain reach in these areas.

Following on from this, households relying primarily on agriculture, agricultural on-farm labour and low-skilled daily labour were found to have higher rates of inadequate food consumption, lagging behind other livelihood groups such as highly skilled and skilled labour. Overall, households involved primarily in agriculture, agricultural labour and low-skilled daily labour had rates of inadequate food consumption of 16.7%, 22.5% and 23.0%, respectively.[36] Higher levels of inadequate food consumption were noted in rural areas with a prevalence of 19.8% among all the households, relative to only 6.4% in urban areas.[37] Amounting to more than a three-fold increase in the proportion of households with inadequate food consumption, the rural-urban divide is one of the most powerful predictors of this indicator at the household level, which also suggests that though the capacity to replenish food stocks initially helped to restore consumption, rural, agricultural households now exhibit comparatively worse food consumption patterns.

In itself, this suggests that food insecurity in general in rural areas has recovered, but only to mirror pre-earthquake inequalities between rural and urban areas, supporting our earlier hypothesis that the recovery has been unequal. This is likely due to land devastation, poorer road access, and interruptions to the supply chain and general market function as a result of the earthquake which affect the supply of food to rural areas to a greater degree. It also suggests that what is grown locally or at the household level alone cannot meet the totality of consumption needs in rural areas—in fact, seven of the 11 districts in the assessment are currently classified by the Ministry of Agricultural Development as having a deficit in cereal self-sufficiency—and may therefore require supplementary support moving forward to smooth consumption and enable them to meet their daily intake requirements.[38] So, though practicing agriculture may help, decreased agricultural production and difficulties in accessing markets

[34] This is a weighted finding, statistically significant (p<.001)
[35] The Food Consumption Score is a composite index calculated on the basis of a household's 7-day recall of the consumption of key food groups. A weight is then applied to the frequency of consumption of a given food group on the basis of nutritional value to derive a continuous score ranging from 0-112. Using cut-offs of <28, 28-42 and >42, households are classified as having poor, borderline, or acceptable food consumption, respectively. Poor and borderline are combined as inadequate food consumption. For more information please see WFP's "Technical Guidance Sheet – Food Consumption".

[36] This a weighted finding, statistically significant (p<.001).
[37] This a weighted finding, statistically significant (p<.001).
[38] For the latest district-wise statistics and classification as cereal surplus or deficit, see: Nepal food security monitoring system, 2015. *Crop Situation Update*. Ministry of Agricultural Development, World Food Programme and Food and Agricultural Organization. Kathmandu, August 2015.

– more commonplace in rural settings – appear to have negatively affected levels of food consumption.

Differences were found, however, when other demographic factors were taken into account. Inadequate food consumption was highest among Dalit households, over a third of whom (33.6%) fell below the acceptable threshold for food consumption, making caste a strong predictor for this indicator at the household level, even when controlling for elevation and the rural-urban divide.[39] This was followed by Janajati households, 21.3% of whom were deemed to have inadequate food consumption at the time of the assessment, compared to only 6.8% of Brahmin/Chhetri households. As expected, households from wealthier social groups, with higher purchasing power and who do not necessarily rely wholly on their own production have better food consumption scores. It is worth noting that this survey did not capture intra-household differences in food consumption according to sex and age and thus certain inequalities in food consumption may not have been fully captured.

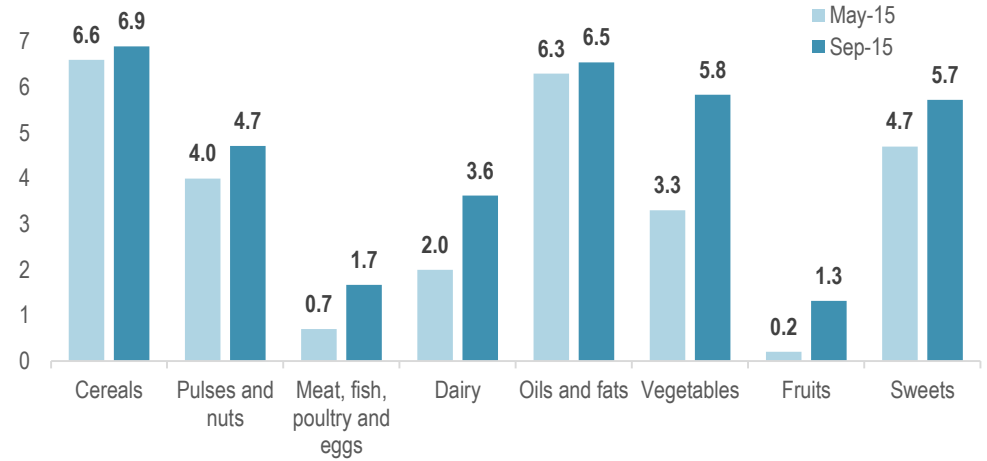
Finally, it is worth noting that the food consumption score as an overall proxy for household food insecurity is only based on current consumption and does not account for seasonality or vulnerability to future exogenous shocks, which could threaten future consumption patterns. Indeed, the current improvement in food consumption could be attributed to improved market access and the on-going harvest, resulting in improved access to food at the time of assessment.

Dietary Diversity

On average, the number of days on which different food groups were consumed has also recovered since May. When measured in food consumption days—the number of different food groups consumed by the household in the past seven days—dietary diversity has also recovered, increasing from 28 to 36 for households across the 11 districts. For instance, the average frequency of consumption, in days, of animal protein has increased by an entire day from 0.7 in May to 1.7 in September. The same trend holds true for the frequency of consumption of vegetables, which registered a significant increase in consumption from 3.3 days in May to 5.8 days in September; the difference in seasonal availability of vegetables in May (before the start of the monsoon) versus September (at the end of the monsoon) is likely to account for some of this improvement.

Overall, dietary diversity has improved in line with aggregate food consumption levels. On average, the most commonly consumed food groups were cereals, oils and fats and vegetables, at 6.9, 6.5 and 5.8 days, respectively, largely reflecting key staples grown by the majority of Nepali households: maize, wheat and rice.

Figure 8: Average number of food consumption days in the past 7 days, by food group[40]



Iron-rich pulses and nuts were consumed less frequently at an average of 4.7 days, whilst animal protein in the form of meat, fish poultry and eggs was, on average, consumed the least at 1.7 days. In fact, 82.8% of households consumed animal protein and a quarter (24.8%) consumed pulses and nuts for an average of 2 days per week or less. Cereals, on the other hand, were consumed each day of the week by over 95% of households, whilst oils and fats were consumed each day of the week preceding the assessment by over 90% of households across all assessed areas. Though vegetables were consumed often, a comparatively lower proportion of 61.8% of households consumed vegetables for each of the 7 days prior to the assessment.

[39] This a weighted finding, statistically significant (p<.001).

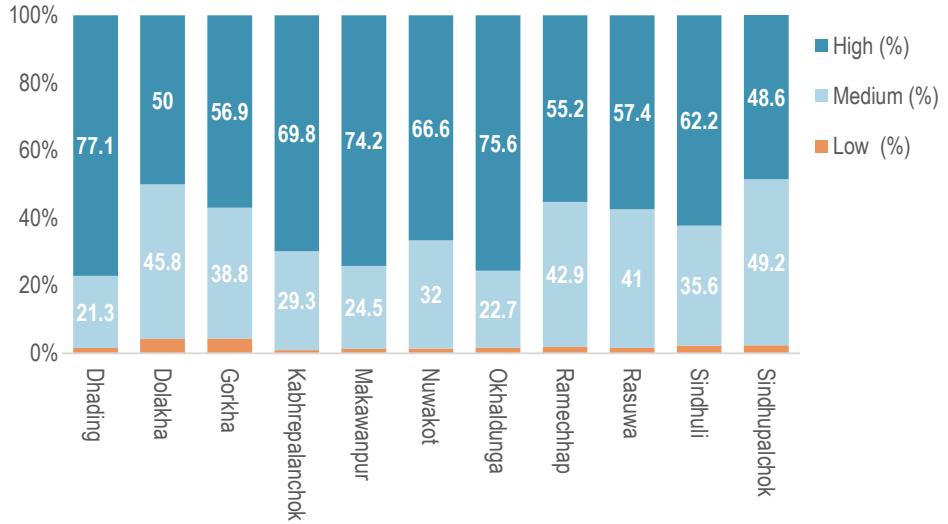
[40] All means presented in this graph are weighted.

Within the subset of households which registered inadequate food consumption (17.7%), dietary diversity was also lower; meat and animal protein was not consumed at all by an estimated third (32.4%) of these households, whilst pulses and nuts were consumed for two days or less by over 60% of these households. The consumption of cereals was largely maintained, having been consumed for the entirety of the seven days prior to the survey by 87.2% of these households.[41]

Though this dietary pattern does maintain aggregate consumption levels to ensure sustenance, with a high dependence on lower cost, cereal-based kilocalories, findings do indicate the potential existence – or at the very least the risk of - micronutrient deficiencies as a result of a less diverse diet. An example is iron-deficiency anaemia, which poses considerable health risks for children aged 0-59 months and pregnant and lactating women. Although this assessment did not measure individual nutritional outcomes the findings on food consumption and dietary diversity at the household level indicate that this is an area of concern that warrants further assessment.[42]

Dietary diversity scores (DDS) largely reflect these consumption patterns, with an estimated 2% of households having a low dietary diversity, a third (32%) having medium dietary diversity and over two thirds (66%) having high dietary diversity.[43] There is significant variation across the assessed districts.[44]

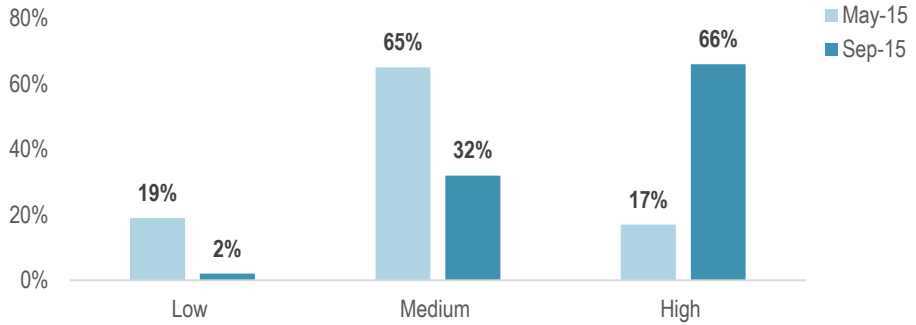
Figure 9: Proportion (%) of households by dietary diversity classification and district



Low dietary diversity was most common in Dolakha and Gorkha, where 4.2% and 4.3% of households exhibited low dietary diversity. Given how closely associated the DDS is with food consumption, it is understandable that these were also the districts with the highest rates of inadequate food consumption in general. On the high end of the spectrum, Dhading, Okhaldhunga and Makawanpur districts were host to the highest proportion of households with high dietary diversity, at 77.1%, 75.6% and 74.2% of households, respectively.

[41] This is a weighted result, statistically significant (o<.001).
[42] The Nutrition Cluster is currently planning a nutrition survey in the earthquake-affected areas.
[43] Dietary diversity is measured with the same food groups (excluding sweets/sugar) used to calculate the food consumption score. Households are categorized based on the number of food groups consumed in the past seven days: high dietary diversity (6-7 food groups consumed), medium dietary diversity (4-5 food groups consumed) and low dietary diversity (<4 food groups consumed).
[44] This is a weighted result, statistically significant (o<.001).

Figure 10: Proportion (%) of households by dietary diversity classification, comparison between May and September



Dietary diversity has also recovered in line with food consumption. Between May and September 2015, the proportion of households with low dietary diversity decreased from 19% to 2%, whilst the share of households with high dietary diversity increased from 17% to 66%, indicating a systematic improvement in dietary diversity over time, in line with the wider recovery in consumption patterns.

In line with food consumption adequacy, elevation, rural or urban area and caste were also found to have statistically significant effects on dietary diversity, albeit to varying degrees. The sex of head of household was found to have a marginal effect on dietary diversity: 3.2% of female-headed households had low dietary diversity compared to 1.6% of male-headed households. It should also be noted that a higher proportion of female-headed households had high dietary diversity relative to households headed by males.

Overall, elevation was found to have a negative effect on dietary diversity; as elevation increases, the diversity of food groups consumed decreases. For instance, the proportion of households with a high diversity score stood at 51.3% in the high hills, and 67.7% and 70.0% in the mid and low hills, respectively.[45] The same trend holds across the rural-urban divide. For instance, at 4.5 days per week, rural households consumed pulses and nuts an average of 1.5 days less than urban households (which consumed this food group an average of 6 days per week), when measured in terms of food consumption days.

The same holds for dairy consumption, whereby rural households consumed cheese, milk and other dairy products an average of 3.4 days, relative to 4.6 days amongst urban households. Consumption of meat, fish poultry and eggs was low overall, though frequency of intake was still higher in urban (2.1 days, on average) than in rural areas (1.6 days, on average).

This indicates greater access constraints in rural and high hill areas, including reduced road access and diminished supply chain reach, reduced capacity to diversify or increase crop production due to the terrain and diminished purchasing power resulting from lower incomes and productivity in general.

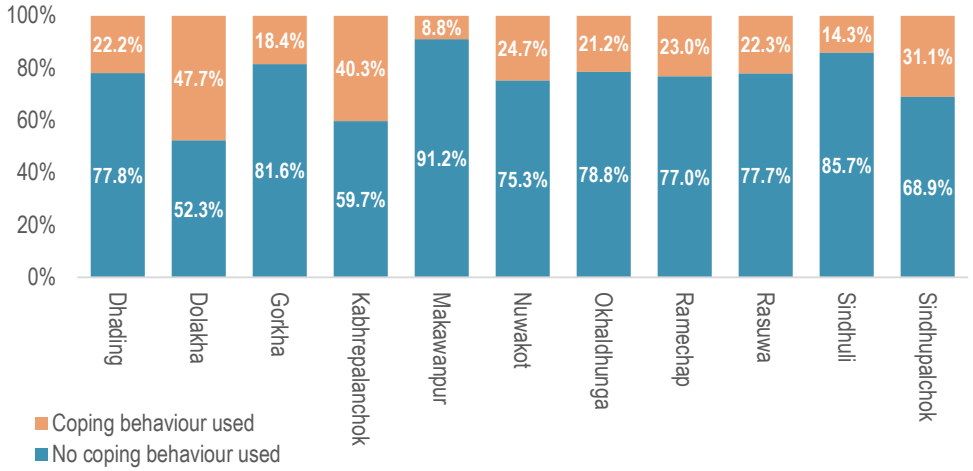
Adoption of Food-based Coping Strategies

In this assessment, an estimated 79.4% of households did not apply any form of food-based coping strategy in the seven days preceding the survey. Although the application and severity of food-based coping behaviours was higher in the immediate aftermath of the earthquake, this has since decreased. For instance, compared to May 2015, the proportion of households adopting food-based coping strategies fell from 68.7% to 20.6%, suggesting the reasons to use them have since diminished in line with the wider recovery in food consumption. Furthermore, fewer households were categorised as "high coping"—that is, frequently adopting food-based coping strategies—with 6.7% in September compared to 15.9% in May, according to the reduced coping strategies index (rCSI).[46] This will be explored and elaborated upon in greater detail in the coming paragraphs. The location in which a household resided, its elevation and caste were all found to have statistically significant effects on the need or decision to resort to a coping strategy to meet household food needs.

[45] This is a weighted result, statistically significant (o<.001).

[46] The rCSI is calculated by adding up the weighted coping strategy by their frequencies of adoption. Categorizing the numeric values of food-based coping strategy index by tercile, households with the top tercile of the index have been categorized as the ones with "high coping" in both May and September assessments. "High coping" indicates the frequent resort to coping behaviors and related vulnerability of the concerned households.

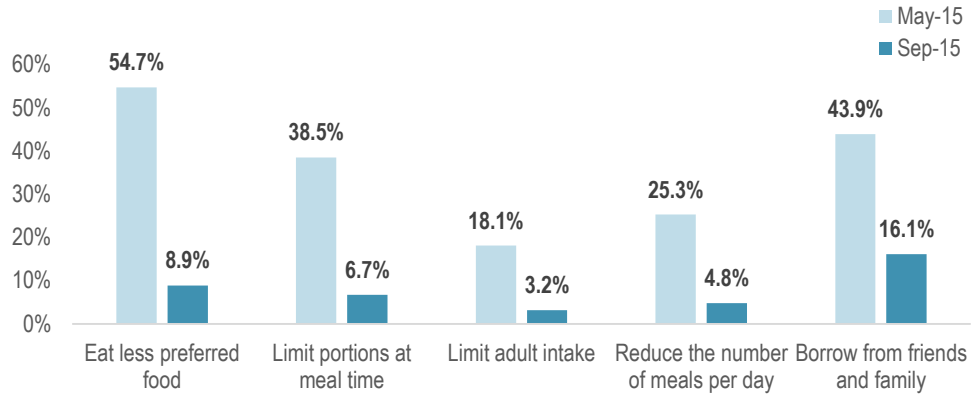
Figure 11: Proportion (%) of households reporting usage of any food-based coping strategy, by district



At 47.7%, the proportion of households who resorted to such strategies was highest in Dolakha, the district which also had the highest proportion of households with inadequate food consumption, indicating a direct and positive relationship between inadequate food consumption and reliance on coping mechanisms. This is not the case in Kabhrepalanchok, where inadequate food consumption was 10.3%, but where 40.3% of households reported resorting to some form of food-based coping strategy. The same is true of households in Nuwakot, suggesting that unlike in Dolakha, higher dependency on food-based coping strategies has served to maintain or increase overall consumption levels.

Following a trend observed across other food security indicators, the proportion of households adopting food-based coping strategies was higher in rural areas (21.9%) than in urban settings (13.5%), which is itself an outgrowth of higher food insecurity levels noted above.[47]. The same trend holds true for elevation; a third of (33.9%) households in high hill areas reported resorting to coping strategies in the seven days prior to the survey, whilst only 12.8% did in the low hill areas.[48] The sex of a head of household was not found to have any statistically significant effect on the decision to resort to a food-based coping strategy.

Figure 12: Proportion (%) of households reporting use of food-based coping strategies in May/September 2015, by strategy type



The most commonly reported food-based coping behavior was the act of borrowing food from friends and family, used at least once in the week prior to the survey by 16% of households. The second most commonly reported coping strategy was eating less preferred food, although even this was applied at least once in the week prior to the survey by 8.9% of households across all assessed areas. However, these are both considered relatively mild coping strategies. Again, although the use of more severe coping behaviours were more prevalent in the immediate aftermath of the earthquake, their use has since decreased in line with the recovery observed in food consumption.

No meaningful district-level trends in the usage and types of coping strategies applied can be drawn from the findings. Female-headed households were found to be more likely to rely on borrowing food more often than male-headed households,[49] whilst Dalit households were found to use coping behaviours more often compared to Brahmin/Chhetri and Janajati

[47] This is a weighted result, statistically significant (p<.001).
[48] This is a weighted result, statistically significant (p<.001).
[49] This is a weighted result, statistically significant (p<.005).

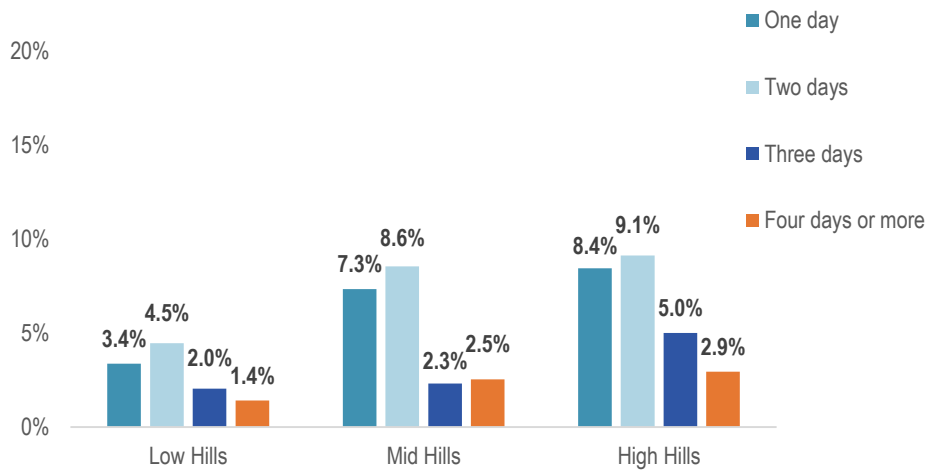
households.[50] For instance, Dalit and Janajati households – 34% and 22.4% of whom adopted coping strategies – were more likely to adopt a food-based coping strategy than Brahmin/Chhetri households (13.8% of whom did so). This is in turn reflected in the finding that a higher proportion of Dalit households (9.6%, overall) were deemed to fall in the high coping strategy category, i.e., frequently resorting to coping strategies, compared to 8% and 3.6% of Janajati and Brahmin/Chhetri households, respectively.[51]

Households with no reported income and households engaged in agricultural daily labour had the highest rates of adopting food-based coping strategies (34% and 27.8% respectively). Households reporting salaried/skilled employment and agriculture (crop farming and livestock raising) exhibited similar rates of coping strategy adoption at 21.7% and 19.5%, respectively, whilst households relying on remittances and wholesale/retail trading had the lowest rates, at 15.5% and 13.8%, respectively.

Elevation proved to be a strong predictor of food-based coping strategy adoption. A quarter (25.4%) of households residing in the high hills resorted to borrowing food at least once in the week prior to the survey, relative to only 11.3% of households in the low hills.[52] Overall, households residing in high hill areas of the 11 assessed districts are more likely to have inadequate food consumption, lower dietary diversity, and to rely on coping mechanisms more often to meet consumption needs.

It is worth noting that households may also apply other coping mechanisms leading to intra-household inequalities, which are not included in this survey questionnaire.

Figure 13: Proportion (%) of households by reported frequency of borrowing food (in days), by elevation



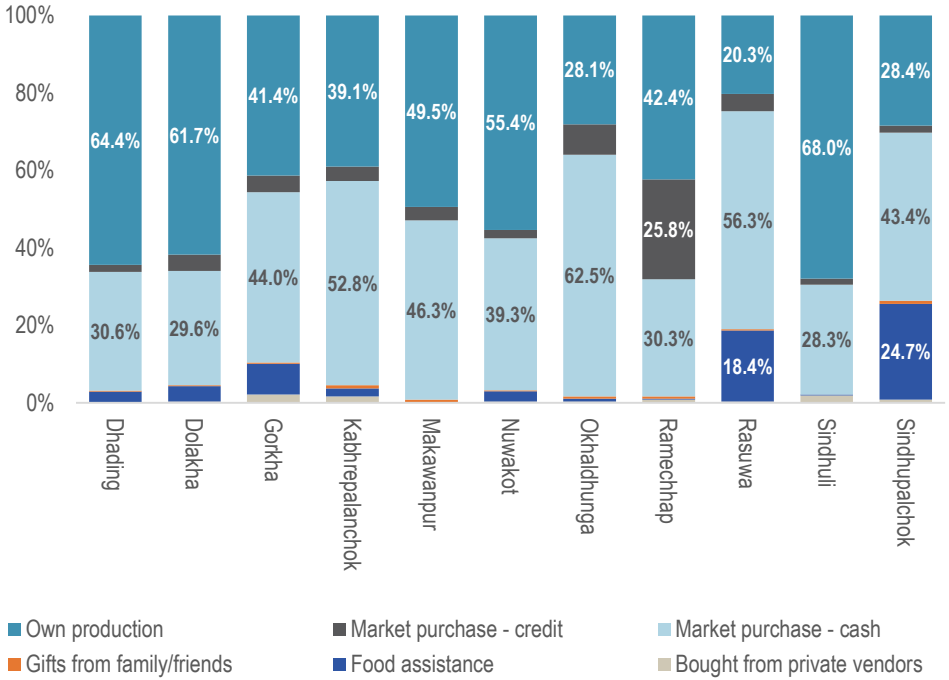
Sources of Food

Household food sources are highly dependent on the type of food in question, location and household profile. Key staples of the Nepali diet, including cereals, dairy and vegetables, are largely sourced through household production; this is likely why the consumption of these food groups recovered so well since the earthquake. More high-nutrient food groups, including pulses and nuts and meat, fish, poultry and eggs are either bought in markets or from private vendors, including neighbours and local producers who may not necessarily operate in formal marketplaces. These are both consumed far less often than cereals and vegetables, for instance, likely due to low purchasing power in general.

[50] This is a weighted result, statistically significant (p<.001).
[51] Due to the low rates of coping strategy adoption and thus smaller sampling size, the standard error of the sampling distribution for rCSI increases, which calls for caution when district-level results are interpreted

[52] This is a weighted result, statistically significant (p<.001).

Figure 14: Proportion (%) of households by primary reported source of cereals, by district



Cereals, the most frequently consumed food group, were drawn from two major sources: out-of-pocket purchases in markets, and own production, a trend observed across all 11 districts. Cereals provided through food assistance were more common in Rasuwa and Sindhupalchok, where it was reported to serve 18.4% and 24.7% of households respectively in these two districts.[53] With the exception of an estimated 25.8% of households in Ramechhap, credit-based purchases of cereals were not common, suggesting that when faced with shortages of cereals, households likely resort to borrowing from friends or family rather than incurring debt in shops or markets for such a widely available staple.

Own production was most common in the districts of Sindhuli (68.0%), Dhading (64.4%), Dolakha (61.7%) and Nuwakot (55.4%), whilst out-of-pocket purchases were most common in Okhaldhunga (62.5%), Rasuwa (56.3%) and Kabhrepalanchok (52.8%). Furthermore, a much higher proportion of households relied on out-of-pocket purchases in urban than in rural settings, reflecting the much greater dependence on markets in urban areas and the higher level of agricultural activity in rural areas.

In turn, food assistance as a primary source of cereals was most common in districts with some of the highest rates of inadequate food consumption; Rasuwa (18.4%) and Sindhupalchok (24.7%), though it was not found to be common in all areas with the highest rates of inadequate food consumption, namely Dolakha and Gorkha. It is also worth noting that food assistance was the primary source of cereals for 11.8% of all households residing in the high hills, suggesting a concerted effort to reach the most remote and food insecure population across the 11 assessed districts.

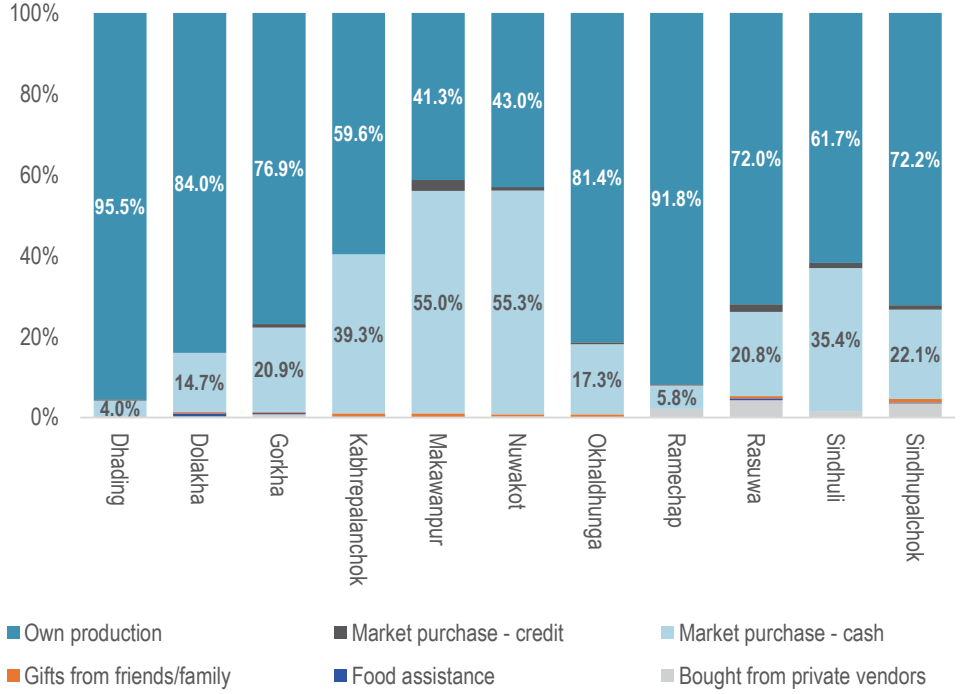
Food sources were generally more diverse in the high hills, with own production and out-of-pocket purchases still the most prevalent, but food assistance and credit-based consumption playing a more prominent role. This is understandable as households residing in the Nepali high hills are some of the most food insecure sub-populations in our study. We hypothesize that to hedge against or attenuate the risk of further shocks, households intentionally diversify food sources in case the primary source diminishes or disappears due to an exogenous shock. Overall, the sex of the head of household did not determine the manner in which food was sourced in any meaningful way, but it is worth noting that female-headed households did rely slightly more on out-of-pocket purchases for cereals and dairy relative to male-headed households.[54]

The same overarching trend is observed for the sourcing of dairy products and vegetables, where household level own production seems to serve the majority of household needs. For instance, over 60% of households reported own production as their primary source of dairy, whilst just over a quarter (26.7%),[55] reported out-of-pocket purchases to be their primary source of milk and dairy. Purchases from private vendors, including neighbours, friends,

[53] This is a weighted result, statistically significant (p<.001).
[54] This is a weighted result, statistically significant (p<.001).
[55] This is a weighted result, statistically significant (p<.001).

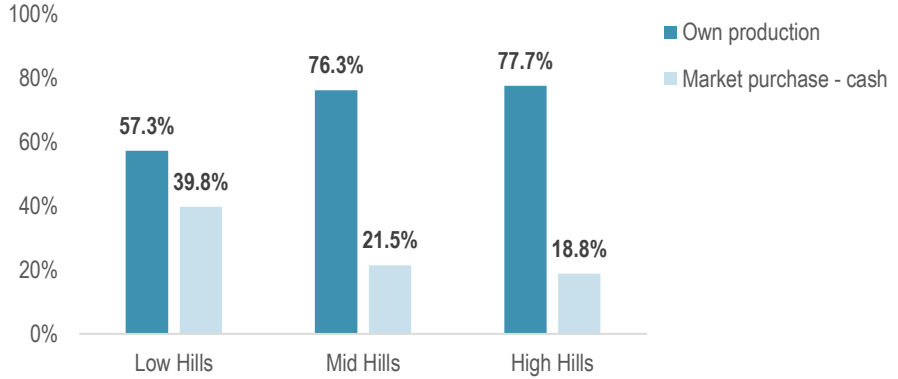
family or localized producers, were also common in Dolakha and Sindhuli, where these vendors serviced 21.6% and 10% of households, respectively.

Figure 15: Proportion (%) of households by primary reported sources of vegetables and district



An estimated 70% of households relied on their own means of production to source vegetables, with a majority of households relying on their own productive capacity for vegetables in all districts except Makawanpur and Nuwakot, where over half (55%) relied on out-of-pocket purchases. Large proportions of households also relied on private purchases in Kabhrepalanchok (39.3%) and Sindhuli (35.4%), though own production still dominated in these districts. That said, elevation of residence had a generally positive, statistically significant effect on the sourcing of vegetables; the propensity of a given household to grow their own food appears to increase as elevation increases, whilst reliance on cash purchases appears to decrease. This is likely a reflection of the traditional dependence on own production in the more remote areas where market access is limited.

Figure 16: Proportion (%) of households by primary reported sources of vegetables and elevation



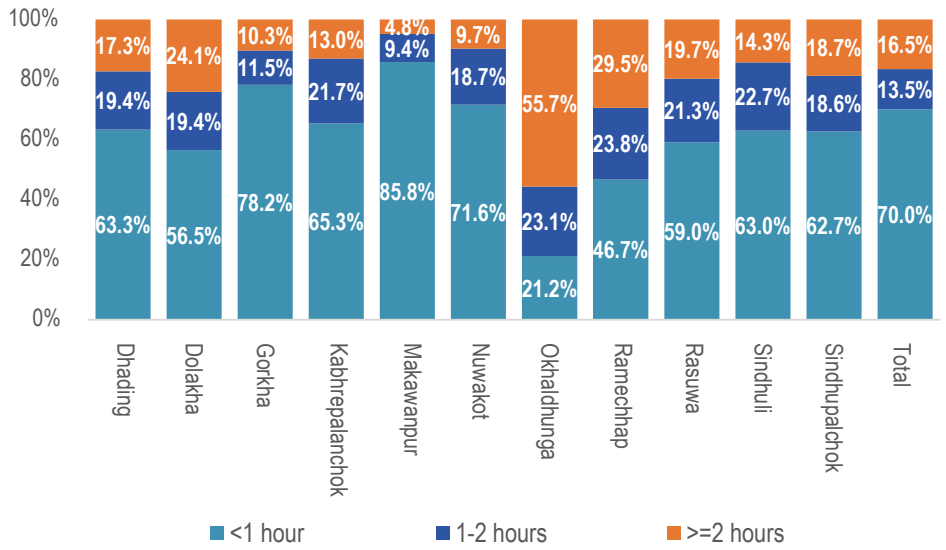
Iron-rich pulses and nuts and animal protein products were derived almost exclusively from cash purchases in markets. Animal protein in the form of meat, fish, poultry and eggs was sourced from markets by an estimated 82.3% of households, and from informal, local vendors, and friends and family by nearly one in ten (9.6%) of all households. Though pulses and nuts are also grown for consumption by 13.8% of households, nearly three quarters (72.8%) of households relied on market-based cash purchases. These sourcing strategies are also likely the reason that consumption of animal protein and pulses is comparatively lower than other food groups; low purchasing power limits the amount of meat a given household can buy, forcing them to substitute or forego the consumption of meat in favour of what is grown locally and at the household level.

Food Market Access and Availability of Goods

Earlier in the report, we hypothesized that a multitude of factors, including humanitarian assistance, own production, the recourse to debt and the improvement of road and market access as well as supply chain reach had helped drive the recovery in food consumption. In line with this, the time required to access the nearest market has also decreased since May 2015. For instance, the proportion of households spending more than two hours to access the nearest market has declined from 24.3% in May to 13.4% in September, despite the

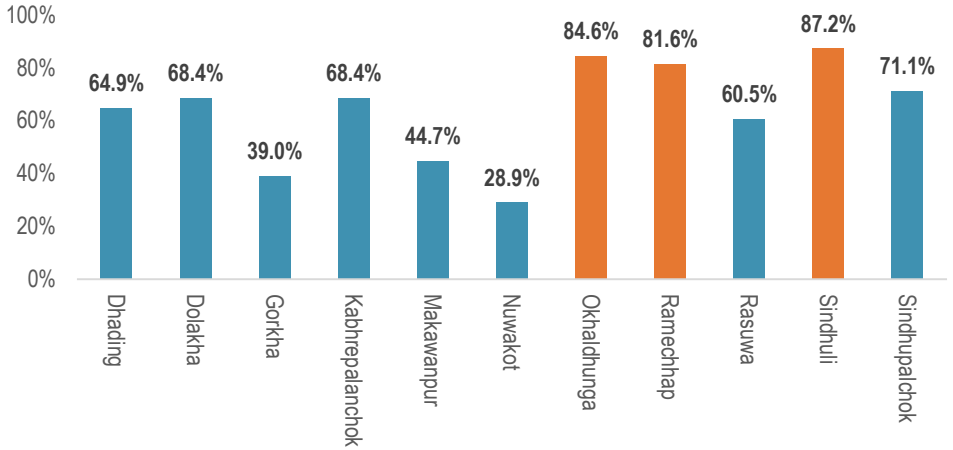
negative effects of the monsoon season on road access in general. The time taken to reach a market – a proxy for ease of access – is in turn inversely proportional to adequacy of food consumption. Simply put, the longer it takes to reach the nearest market, the lower household food consumption levels are, suggesting market access as a strong determinant of food consumption patterns.

Figure 17: Proportion (%) of households by reported time taken to reach nearest food market and district



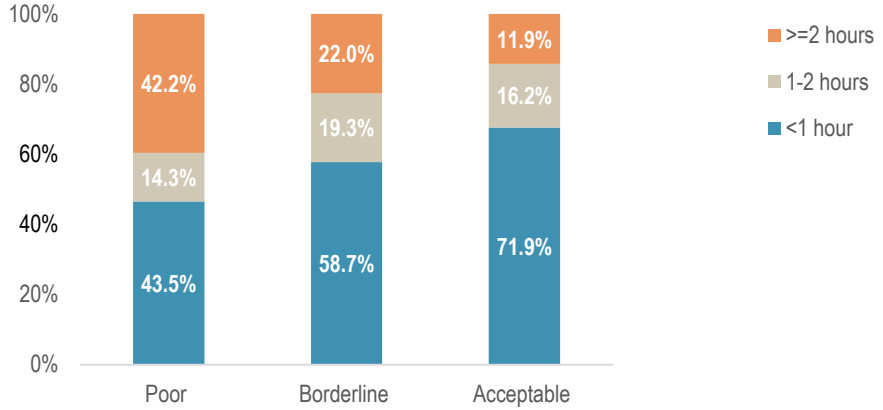
Overall, half (51.9%) of households reported needing 30 minutes or less to reach their nearest food market. At district level, access appeared to be easiest in Makawanpur, Gorkha, Nuwakot and Kabhrepalanchok, where 66.6%, 62%, 54.6% and 50.8% of households reported needing 30 minutes or less to gain access. In turn, though the proportion of households purportedly needing more than two hours to reach their nearest food market has decreased since May, access does appear to be constrained in districts such as Okhaldhunga, where more than half (55%) of households reported needing two hours or more to reach the nearest food market, whilst nearly a third (29.7%) of households in Ramechhap needed the same amount of time. A similar trend holds in Dolakha, where a quarter (24%) needed two hours or more. It is across these districts that the rates of inadequate food consumption were also amongst the highest across the assessed areas, which again attests to the importance of market access in restoring and sustaining food consumption, despite the widespread engagement in agricultural production.

Figure 18: Proportion (%) of wards with no market access within the ward, by district



Markets, on the other hand, were not present in nearly two thirds (63.5%) of all wards according to key informants interviewed in each surveyed ward. Although again, district-level figures exhibit substantial variation. The majority of wards in Dhading, Dolakha, Kabhrepalanchok, Okhaldhunga, Ramechhap, Rasuwa, Sindhuli and Sindhupalchok did not have access to markets within their wards. This means that where produce is not grown or sourced locally, households have to travel to adjacent wards or nearby urban centres to access key supplies, incurring a financial and opportunity cost in the process. The time taken to reach food markets aligns closely with the findings on the presence of markets within wards, as reported by our key informants. For instance, nearly 85% of surveyed wards in Okhaldhunga purportedly had no local markets, a trend reflected in the fact that over half of households in this district reportedly needed two or more hours to reach their nearest market.

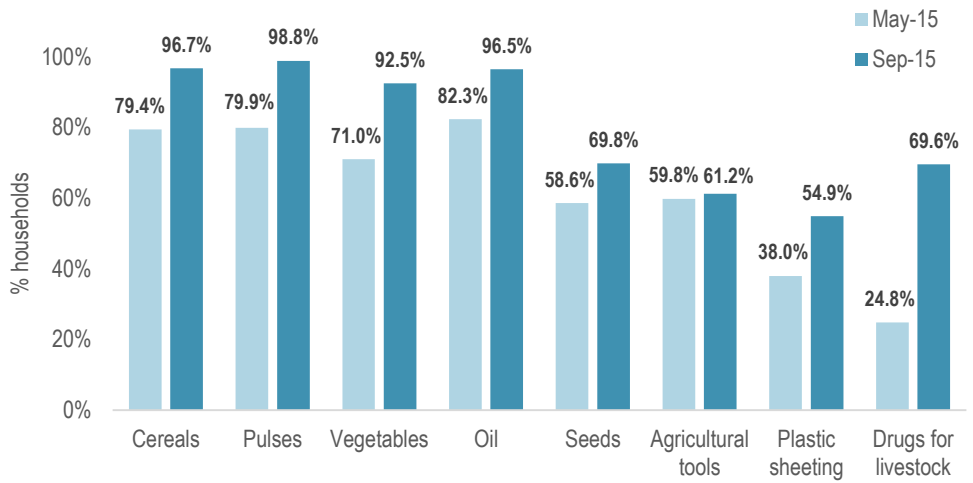
Figure 19: Proportion (%) of households by food consumption group and reported time taken to reach the nearest food market



Elevation of residence was also, as with other indicators, a factor. Given that road access diminishes with increasing elevation, largely due to terrain, market access also diminishes. For instance, nearly a third (28.8%) of households in the high hill areas reported spending two or more hours to reach their nearest food market, relative to 18.4% of households in the mid hills and 4.5% of households in the low hill areas. The same is true in Ramechhap and to a lesser extent, Sindhupalchok, with a higher proportion of households reporting needing more than an hour and a half to reach their closest market.

Building on this, there is a clear and positive correlation between time taken to reach a food market and food consumption levels; the nearer a market is or the easier it is to reach, the larger the gains in food consumption. An estimated 42.2% of households deemed to have poor food consumption took two hours or more to reach their nearest food market, whilst only 11.9% of households with acceptable food consumption did. The same trend holds for dietary diversity, with a third (33.9%) of households with low dietary diversity requiring two or more hours to reach their nearest market.

Figure 20: Reported availability of key food groups and goods in the nearest market, May/September comparison



In line with improved access, supply chain reach has also recovered, with across the board improvements in the availability of key food items and goods. The proportion of households reporting availability of dietary staples, including cereals, pulses, vegetables and oil in their local markets has increased since May 2015. As we hypothesized earlier it is this improvement, combined with widespread agricultural production that has at least partially enabled the recovery in food consumption and dietary diversity.

Nevertheless, where access remains an issue or where the provision of services is physically more difficult, as in high hill and rural areas, the availability of these foods and goods remains diminished and has likely contributed to lower food consumption levels noted earlier in the report. Though basic staples such as cereals and pulses were available across the board, the effect dissipates for more diversified and likely more expensive products such as vegetables, seeds, agricultural tools, and livestock drugs.

The same holds for seeds, agricultural tools, plastic sheeting, and livestock drugs in the high hills. As elevation increases, the availability of these goods diminishes; cereals and pulses remain widely available in line with high demand for these food groups, but vegetables

reportedly decrease in the mid and high hill areas. The same is true for seeds, with nearly 60.5% of households reporting their availability in the high hill areas when compared to 71.8% of households in the low hill areas. Similarly, the availability of plastic sheeting and agricultural tools is higher in the low hills (58.7% and 64%, respectively) than in the high hills (45% and 50.8%, respectively). With this in mind, any interventions designed to improve the availability of these goods across the affected districts should prioritise rural and high hill settings. Any such intervention to improve the supply of vegetables, tools or seeds would likely generate externalities and effect gains in food consumption levels as well as livelihoods.

Nevertheless, a majority (84.8%) of surveyed households reported the need for food or cash assistance in the next six months, reflecting the need to continue supporting household recovery, boost purchasing power and smooth overall consumption during the upcoming winter period. Among these households, overall, the top-five reported needs (as a percentage of households) included rice (73.8%), one-off cash grant (60.5%), pulses and lentils (57%), vegetable oil (44.7%) and cash for work (25.6%).

At the district level, the percentage of households who reported needs for rice varied from the lowest, 54%, in Makawanpur to the highest, 96.9%, in Rasuwa. Dhading, Dolakha, Ramechhap, Rasuwa and Sindupalchok had the highest reported need for rice, all of which were above 90% of households. Among different caste groups, Dalit households are more likely to be in need of rice, pulses and lentils and vegetable oil compared to Brahmin/Chhetri households and Janajati households.

INCOME AND LIVELIHOODS

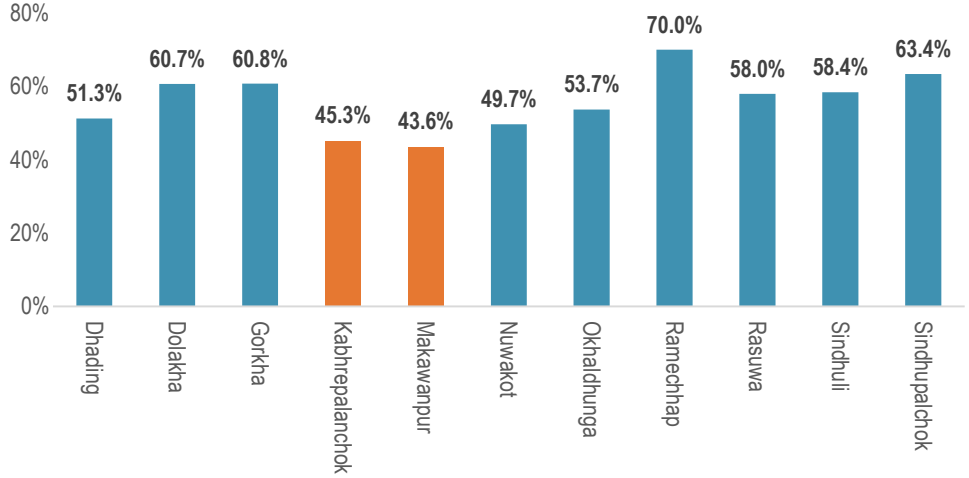
Employment and Income Sources

The following sections and paragraphs will explore the status of livelihoods across the 11 assessed districts. Given how broad this field is, this will be accomplished predominantly through analyses of key indicators measured in this survey, including, but not limited to: employment rates, income sources, debt and income levels as well as coping mechanisms. Given the size of the contribution of agriculture to Nepal's economy, this is treated subsequently in a separate section.

Being a labour intensive, predominantly agrarian economy, labour market participation was generally high for working age individuals aged 17 and over. Findings indicate that more than half (54.3%) of individuals belonging to this age class were reported as engaged in some form of income-generating activity over the course of the seven days prior to the survey.[56] Employment rates varied significantly between the assessed districts. Furthermore, neither caste nor the sex of a head of household were found to determine employment rates in any meaningful way, however, notable differences were recorded in relation to the sex of an individual.[57]

Departing from the general trend of inequality between rural and urban settings, the rural-urban divide was not found to influence employment rates. However, the profile of the jobs performed is necessarily different: labour intensive, agricultural activities were found to be far more prevalent in rural areas; whilst low skilled, skilled, and highly skilled jobs are more common in urban settings. The fact that employment rates are similar in the two is likely due to the higher supply of gainful and more diversified employment options in urban settings and the often agrarian, physical nature of work in rural areas.

Figure 21: Reported employment rates (%) for all individuals aged 17 and over, by district



Reported employment rates were highest in Ramechhap, Sindhupalchok and Gorkha where an estimated 60% of individuals aged 17-60+ were engaged in some form of remunerated labour. Participation rates were lowest in Makawanpur[58] and Kabhrepalanchok districts, where fewer than half (43.4%) of surveyed individuals were working in the seven days prior to the survey. This suggests that district level inequalities persist across multiple measurements, but are not necessarily inter-related. For instance, though Ramechhap, Sindhupalchok and Gorkha registered the lowest rates of food consumption—suggesting that higher employment rates are not necessarily and should not be considered a proxy for better food security—these differences are likely due to the types of jobs being performed, lower productivity, and differing income levels. What this suggests, and will be elaborated upon further, is that rather than being related to access to employment, food insecure households lack or have lost access to productive assets and inputs such as land, the primary determinant of income in agrarian economies such as Nepal.

Delving further, males aged 17-59 represent the bulk of labour market participation (with nearly 70% of this group reportedly in employment), whilst nearly half (49.3%) of women in the same age class were reported as working. Male employment rates were the same,

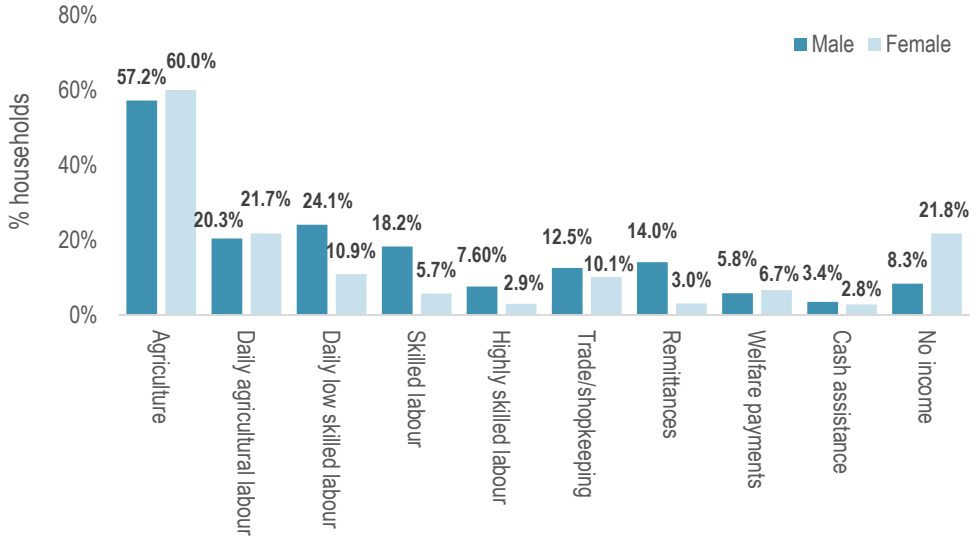
[56] A seven day recall period was chosen in order to capture seasonal or part-time employment and reduce the risk of recall bias.
[57] All employment rates, income and debt findings were calculated using the standardized, OECD method of calculation.

[58] Makawanpur also had the highest average income of the 11 assessed districts, which might be due to higher income-earning households in our sample which pushed the average up.

regardless of whether they resided in rural or urban settings, though female employment rates were generally much higher in rural areas (51.1%) than in urban settings (42.6%) for females aged 17-59. The same trend holds across elevation strata: participation in the labour market tends to increase as elevation increases. Again, this is likely due to the labour intensive nature of the agricultural activities, in which the majority of rural and high hill households are engaged.

At just over 3%, a modest rate of child labour was noted, with boys aged 5-16 reported as working at a slightly higher rate (3.4%) than girls (2.8%) in the same age group. District-level rates are largely constant except in Kabhrepalanchok, where 10.5% of boys and 9.3% of girls aged 5-16 were reported as working. In both cases, the gender balance reflects the wider trend of higher male rates of participation in the labour market.

Figure 22: Reported primary income sources for male and female (multiple options could be selected)[59]



[59] All findings are weighted and statistically significant (p<.001).

[60] Government of Nepal, Nepal Earthquake 2015 Post Disaster Needs Assessment Vol. B: Sectoral Reports, p. 81

[61] Though it is visible in the 11 assessed districts, this is also a nation-wide trend where over 80% of agricultural labour is carried out by women: Central Bureau of Statistics, 2011-12, National Sample Census of Agriculture

Agriculture was the most commonly reported current income source for both men and women, with a slightly higher proportion of households reporting this as the primary source of income for women (65%) as opposed to men (63%). This refers to agricultural labour on household farms (subsistence or otherwise), as well as ownership of commercial farms, for instance. This is followed by daily agricultural on-farm labour which was yet again reported by households as the primary source of income for more women (21.7%) than men (20.3%), and low skilled and skilled labour in which a high proportion of men participated.

As a result of male out-migration, the agriculture sector has experienced a shortage of male labour and has become increasingly dependent on women and older people.[60] According to the International Labour Organization (ILO) income opportunities in urban areas have incentivized male out-migration from rural areas to urban settings or abroad in search of higher-income employment, which has in turn increased the burden of farming on women. Due to this trend, nearly 22% of rural households are headed by women, who also take care of farm management in addition to other household work.[61]

The proportion of households reporting women as economically inactive (21.8%) at the time of the assessment was also much higher than the corresponding figure for men (8.3%); further, a higher proportion of women in urban areas (27.6%) were deemed economically inactive when compared to rural areas (20.7%).[62] Given the size of the contribution of agriculture to the Nepali economy, a separate dedicated section is included later in this report. A sizable proportion of households also reported to rely on cash transfers, including humanitarian cash assistance, remittances and public welfare payments, as their primary sources of income; altogether, 35.7% of men (14% of households) were reportedly more likely to receive remittances than women (3%), whilst women were in turn reported to be more likely to receive welfare payments. This is not to say that women did not access remittances, simply that men were the primary recipients within their household.

[62] Employment rates in each of these livelihood groups were not measured at the level of the individual but rather the household level. This means that employment rates cannot be derived by livelihood type. Rather, respondents were asked what the primary sources of income are for men and women, in a multiple choice format. Respondents were also asked this question with a 12 month recall period for both men and women to enable indicative comparisons across time.

Overall, households across the 11 assessed districts were heavily reliant on manual, low-productivity, primary industries and livelihoods. The survey has also shown that households have diverse sources of income and often rely on multiple livelihoods to generate an income and service needs. Much as with diversified food sources, this is a function of vulnerability. Where employment is scarce, low-paid, insecure or seasonal, households diversify income generation as a risk mitigation or survival strategy. This was likely done long before the earthquake to supplement and bolster existing incomes as well as to hedge against the very real risk of a single income source diminishing or dissipating altogether, as was likely the case in the immediate aftermath of the earthquake.

In general, income sources have remained constant over time in comparison to a year ago, bar some slight variations in certain professions. The proportion of households reporting agriculture or agricultural on-farm labour as their primary sources of income for both men and women has registered ostensibly no change. This holds both across the board and at district level, demonstrating the continued and heavy reliance on agriculture as a source of livelihood. The same is true for skilled and highly skilled labour and remittances, regardless of sex, elevation or whether a household resides in a rural or urban setting. What has changed is the increased reliance on humanitarian cash assistance, increased from 0.7% for men a year ago to 4.3% at the time of the assessment. The same is true for women; an increase is noted from 0.7% a year ago to 3.7% at the time of the assessment. This is understandable given the scale of the cash-based humanitarian response in the immediate aftermath of the earthquake.

Income and Debt

In line with this livelihoods profile, households purportedly earned an average of 12,322 Nepali Rupees (NPR), or roughly 116 USD, at the time of the assessment, with significant variation found between assessed districts. Incomes were, on average, lowest in Dolakha (8,903 NPR or 84 USD), Sindhupalchok (9,204 NPR or 87 USD) and Okhaldhunga (9,293 NPR or 88 USD); on average, this falls an estimated 3,189 NPR (30 USD) below the mean for the entire surveyed population, but follows a well-established trend of inter-district inequalities.

Figure 23: Average income in Nepalese Rupees (NPR) in the 30 days prior to the survey, by district

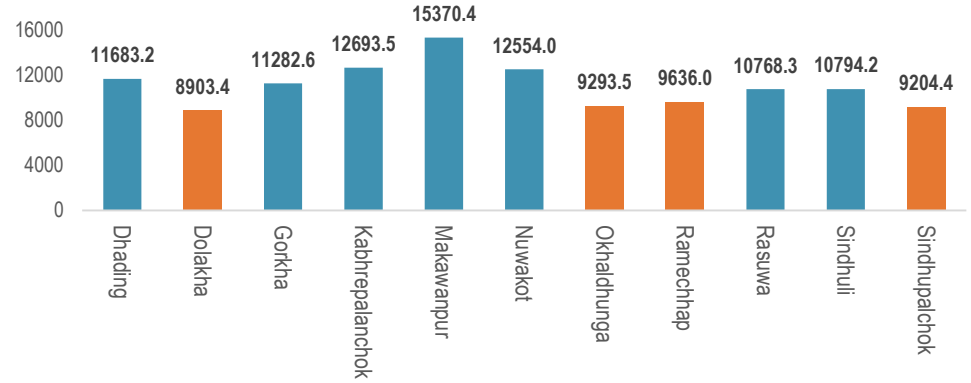
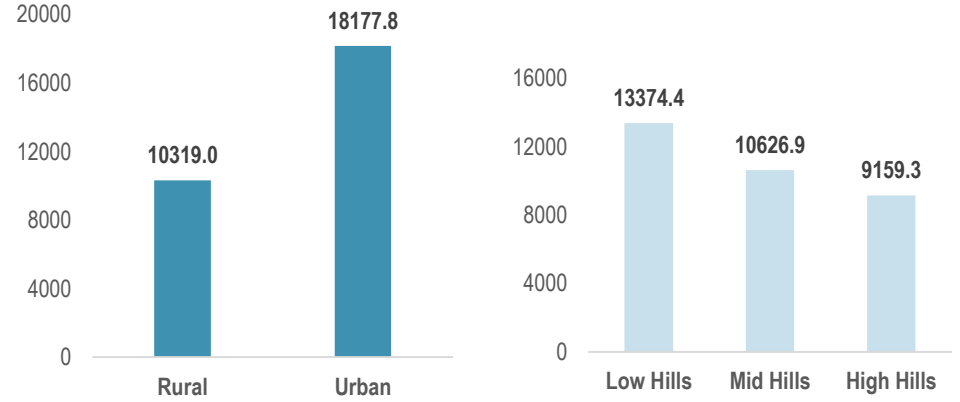


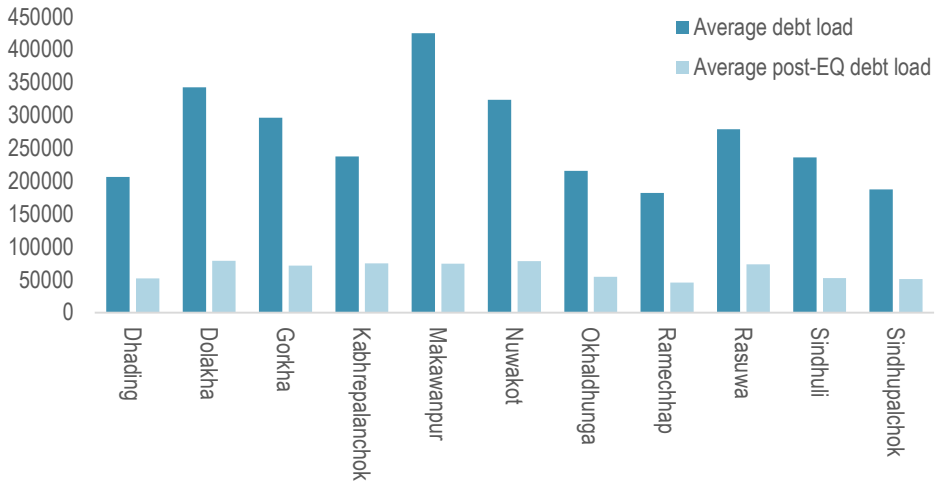
Figure 24: Average income (NPR) by rural-urban location (left), and by elevation (right)



This spatial inequality translates to other settings, too. Households residing in rural areas generally earn less than counterparts residing in larger urban centres and settlements where livelihoods were more diverse and where trading and shop keeping (25.8%) and highly skilled labour (10%) were more common. The same relationship holds for elevation, whereby incomes steadily diminish in line with increasing altitude due to less livestock, less irrigation and lower productivity as a result. Despite this, the sex of a head of household did not have a statistically significant effect on income levels, though caste did.

When comparing Dalit and Brahmin/Chhetri households, the former earned, on average, 3,785 Rupees less than the latter.[63]

Figure 25: Average of total and post-earthquake debt load (NPR) by district



Overall, an estimated 78.9%[64] of households reported holding debt at the time of the assessment, with outstanding debt loads high across the board, exceeding average monthly incomes by a ratio of 24:1. Debt-income ratios were overall highest in Dolakha at 38:1, Gorkha at 26:1 and Rasuwa at 26:1, but are consistently above the 20:1 threshold, indicating a high propensity for debt accumulation. Furthermore, though diversified income sources have contributed to the recovery noted above, a contributing factor may well be the high rate of debt accumulation. Indeed, a quarter of all outstanding debt was accumulated in the 6 months following the earthquake, suggesting that the ability to take on debt has been a cornerstone of household recovery efforts for many.[65] In the long-term, increasing debt burden may also incentivize higher rates of coping strategy use as a means of supplementing incomes and servicing mounting debt loads. No differences in the proportion of households holding debt were observed between male and female-headed households.

Though previous findings and our own quantitative and anecdotal evidence suggest that the recourse to debt is and has historically been a common means of supplementing incomes in Nepal, the contribution of post-earthquake debt to total debt does seem to suggest that the shock of the earthquake and the widespread damage it caused to productive assets have incentivized higher rates of borrowing as a coping mechanism. Unfortunately, no comparable, pre-earthquake data exists for the 11 districts, making the effect of the earthquake on the rate of borrowing difficult to determine. The paragraphs below elaborate on this further. No significant relationship was observed between debt and geographic location, either rural or urban, or by elevation.

Livelihood Coping Strategies

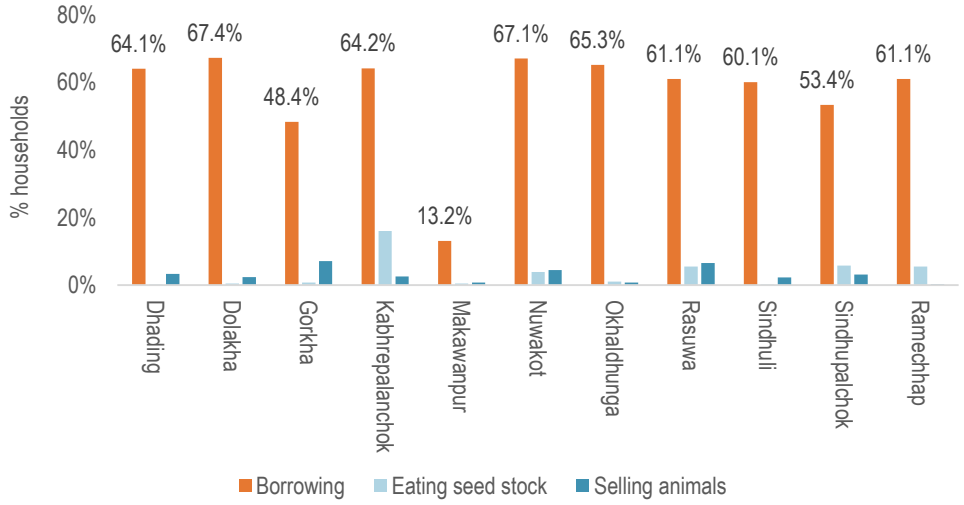
Overall, over 60% of households applied some form of livelihoods-based coping strategy, with borrowing from formal and informal lenders reported as the most common means of supplementing incomes, reported by nearly half (46.4%) of households since the earthquake. Eating seed stock and selling animals were a distant second, reported by just over 3% of households. Other, more severe and less reversible strategies such as the sale of household and productive assets, selling land or property or migrating, were not found to be common at all. Though the sale of animals was registered, it cannot be said that asset depletion is prevalent as a result.[66]

[63] This is a weighted result, statistically significant (p<.001).
[64] This is a weighted result, statistically significant (p<.001).

[65] This was calculated by summing debt accumulated in the aftermath of the earthquake and dividing it by all outstanding debt across all districts accumulated both before and after the earthquake.

[66] Figures did rise above 3% for certain coping behaviours in certain districts. For instance, nearly 4% of households in Nuwakot and Sindhupalchok reported sending away household members, whilst 4% of households in Rasuwa reported withdrawing children from school.

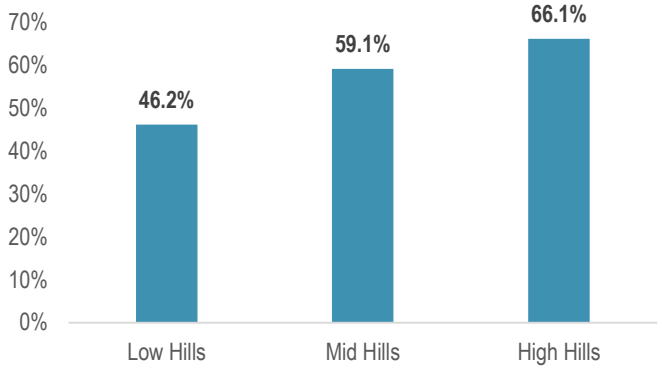
Figure 26: Top three reported coping behaviours, by district (multiple answers allowed)



Borrowing from banks and other formal financial institutions was reported to be most common in Dolakha (67.4% of households), Nuwakot (67.1%) and Odkhaldhunga (65.3%), and least common in Gorkha (48.4%) and Makawanpur (13.2%). Following this spatial trend, significant effects on the propensity to borrow were registered across rural and urban areas, by elevation, as well as across caste and social groups. That said, over half (58.3%) of Dalit households resorted to borrowing since the earthquake, relative to an estimated 45.2% of Brahmin/Chhetri and Janajati households.[67] As with other measurements, the sex of a head of household was not found to contribute to a higher or lower likelihood of taking on debt.

Vulnerability increased in tandem with elevation, with two thirds (66%) of high hill households resorting to debt accumulation, relative to 46.2% of low hills households. The same inequality emerges between rural and urban areas, with half (49.9%) of rural households resorting to debt, relative to 28% of households in urban settings.[68] Though debt is relatively high overall, the medium and long term effects of the debt burden are likely to be disproportionately borne by those most affected by the earthquake – rural and high hill households.

Figure 27: Proportion (%) of households reporting borrowing money, by elevation



Productive Asset Losses

The majority of lost or damaged assets are tools and infrastructure associated with agricultural livelihoods. So, although productive assets are not being sold to supplement incomes, heavy damage was incurred as a result of the earthquake, likely diminishing productivity as a result and actually reducing the availability of assets which can be readily sold. The infrastructure and assets which were reported to have incurred the most damage include livestock sheds (reported by 30.8%)[69] and produce storage facilities (21.7%), sickles (17.8%), spades (17.5%), doko baskets (16.7%) and other agricultural tools (12.8%).[70] This all speaks to the fact that the most widely owned, and the most difficult to recover

[67] This is a weighted result, statistically significant (p<.001).
[68] This is a weighted result, statistically significant (p<.001).
[69] This is a weighted result, statistically significant (p<.001).

[70] A substantial proportion of households also reported damage and devastation to housing and household assets, but this was captured in free text input responses and subsequently recoded into stand-alone variables. This will not be explored in this report, with the main thrust of the analysis on productive and household asset depletion. For a more detailed shelter damage assessment, please refer to: REACH & Shelter Cluster (2015) Shelter Cluster Monitoring Assessment, November 2015.

infrastructure (predominantly buildings) has incurred the most damage, not only diminishing productive capacity, but also household wealth in the process.

Figure 28: Proportion (%) of households reporting damaged productive assets, by district

District	Livestock shed	Storage facility	Sickle	Spade	Doko basket	Other agricultural tools
Dhading	65.4%	41.6%	18.8%	19.9%	14.4%	27.2%
Dolakha	41.6%	50.3%	40.5%	42.6%	39.5%	42.9%
Gorkha	27.2%	28.3%	15.1%	14.6%	16.7%	10.3%
Kabhrepalanchok	69.5%	19.2%	40.0%	40.8%	36.3%	15.8%
Makawanpur	3.4%	1.1%	0.5%	0.5%	0.3%	0.0%
Nuwakot	42.4%	39.2%	26.8%	24.2%	25.8%	13.4%
Okhaldhunga	21.1%	19.6%	8.4%	7.8%	7.6%	6.0%
Rasuwa	44.7%	47.4%	58.9%	51.3%	54.7%	18.9%
Sindhuli	15.5%	9.2%	2.4%	2.4%	2.1%	4.2%
Sindhupalchok	72.1%	52.9%	56.1%	55.0%	56.8%	49.5%
Ramechhap	45.3%	11.6%	19.7%	20.0%	15.0%	9.7%

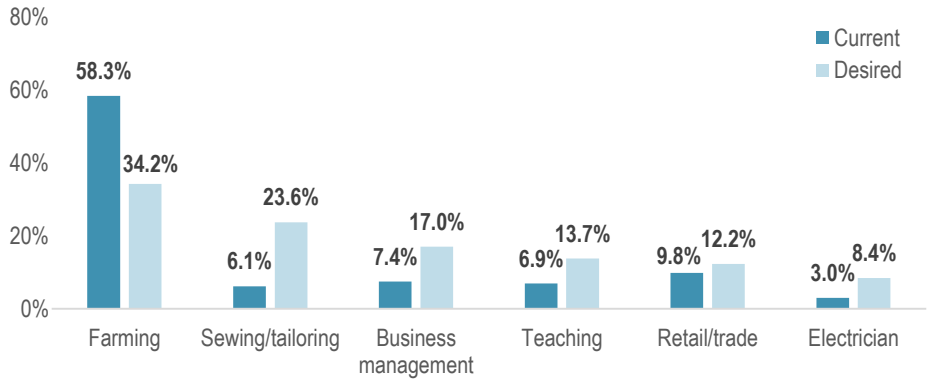
The highest proportion of livestock sheds were lost in the districts of Sindhupalchok (72.1%), Kabhrepalanchok (69.5%) and Dhading (65.4%), whilst losses of productive tools were largely equally distributed across districts. Damage to storage facilities largely aligned with the observed trends in livestock shed damage.

Building on this, though the highest proportion of livestock sheds was lost in the mid-hill areas of the 11 districts, losses were borne disproportionately by households residing in the high hills, where an estimated 40% of households reported that livestock sheds, storage facilities, sickles, spades, doko baskets and other agricultural tools were damaged or destroyed as a result of the earthquake. A similar disparity is visible between rural and urban areas, although this is understandable given the heavier reliance on agriculture in rural areas. This all suggests that any infrastructure and asset rehabilitation interventions should prioritise high hill areas.[71] It is also worth noting that higher rates of damage to assets in the high hill areas are also associated with a higher propensity to accumulate debt, suggesting that households resort to debt to supplement livelihoods affected by the earthquake.

Skill Profiling and Enhancement

Skill profiles and needs largely reflect the structure of the Nepali economy; manual, low and skilled physical labour and basic service professions, though aspirations to build on existing skill endowments are clearly visible. Delving further, an estimated 88.8% of households reported having at least one skill set within the household, with significant variation between districts and elevations, but none between the sex of a head of household, rural and urban settings or the various castes and social groups.[72]

Figure 29: Proportion (%) of households by top six current and desired skill sets

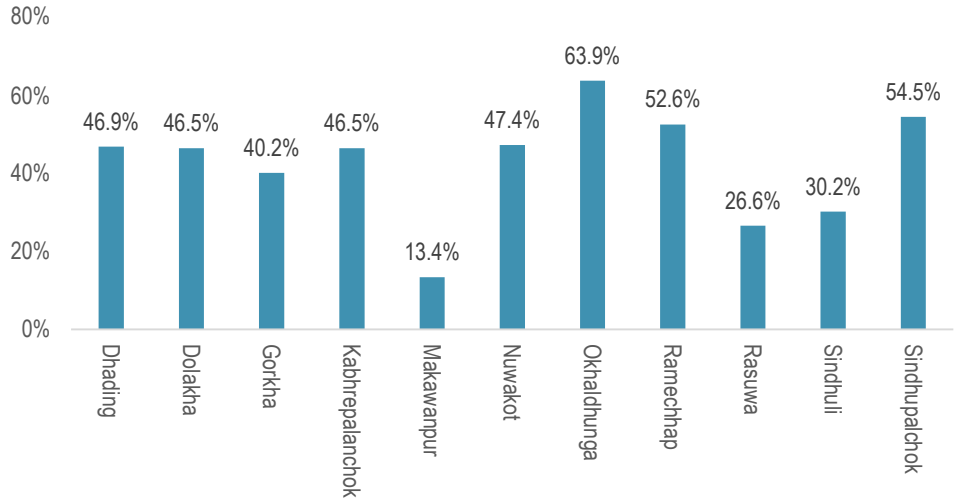


Being a predominantly agrarian economy, nearly two thirds (58.3%) of households reported being skilled farmers. This, in turn, helps to explain why the demand for further farming skills is lower; given diversified income sources, households aspire to diversify skill sets, too. This has shaped preferences across the top six desired skill sets outlined above. Though only 6% of households reported possessing sewing and tailoring skills, nearly a quarter (23.6%) reported wanting to develop this skill further. The same effect holds for business management, teaching, retail and vocational skills, albeit it to a lesser degree.

[71] Neither the sex of a head of household nor affiliation with a specific caste or social group was found to have a statistically significant or even indicative effect on asset losses.

[72] Any variation between rural and urban households and households belonging to different castes is not statistically significant and is entirely due to chance (p>.05).

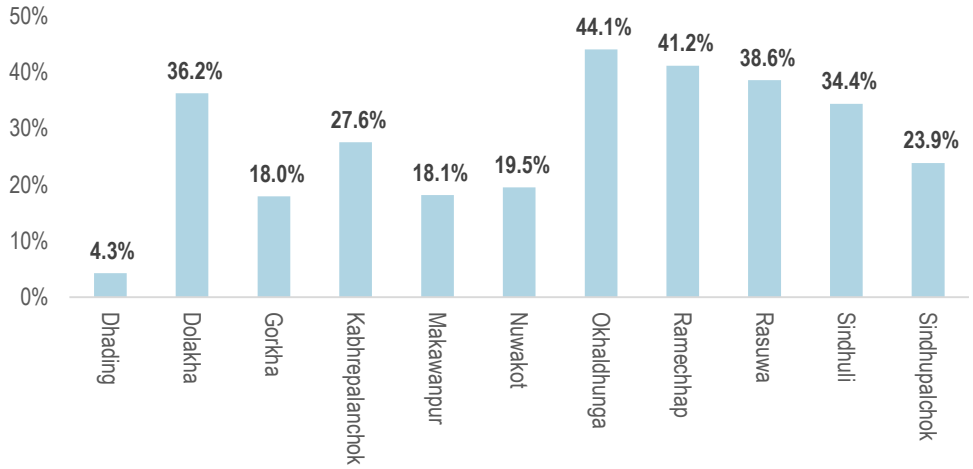
Figure 30: Proportion (%) of households reporting farming as a skill enhancement need



Nevertheless, farming was the most sought-after skill by a majority or near-majority of households across all districts except for Makawanpur, Rasuwa and Sindhuli. As expected, farming skills also generated higher demand in rural areas (37.7% of households) than in urban settings (15.7%).[73] It was also more sought-after amongst households residing in the mid-hills (45.7%) of households, than either amongst households residing in the low hills (23.8%) or the high hills (39.4%) of the assessed districts.[74]

In light of the importance attached to building sewing and tailoring skills, over a third of households (37.0%) residing across the districts of Dolakha, Kabhrepalanchok, Okhaldhunga, Ramechhap, Rasuwa, Sindhuli and Sindhupalchok reported wanting to develop sewing or tailoring skills. Further, this was more commonly sought after by rural households (24.7%), than urban counterparts (18.0%), and by households residing in the high hills, where a third of households reported this as a need (32.8%), relative to an estimated 21.1% of households in the low hills and 22.7% of households in the mid-hills.[75] Neither the sex of a head of household, nor affiliation with a given social group or caste, were found to determine preferences on any consistent, statistically significant basis.

Figure 31: Proportion (%) of households reporting sewing/tailoring as a skill enhancement need



[73] This is a weighted finding, statistically significant (p<.001).
[74] This is a weighted finding, statistically significant (p<.001).
[75] This is a weighted finding, statistically significant (p<.001).

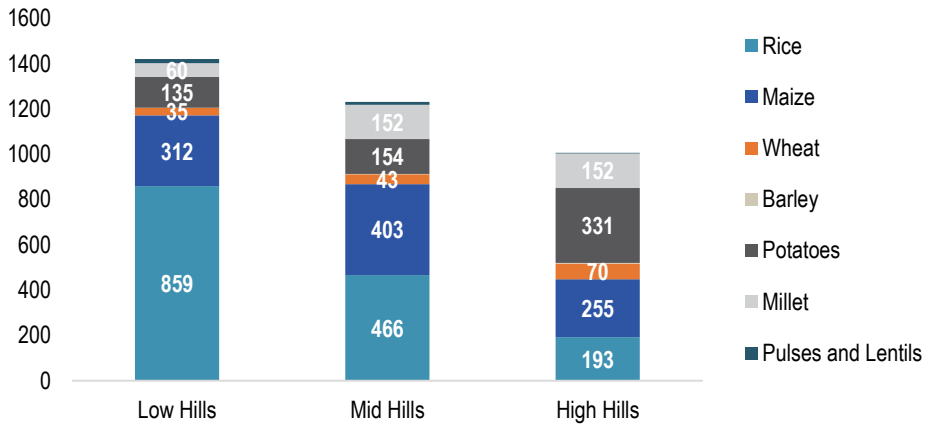
AGRICULTURE

Sectoral Overview

Nepal remains a largely agrarian economy with the agricultural sector accounting for 34% of GDP[76] and over 73.3% of the population surveyed involved in agriculture, mostly in subsistence farming. Elevation, ranging from 60 meters above sea level in the Terai to over 8,800 meters in the Himalayas, is an important determinant of yields and livelihoods, so the country is divided into three ecological belts: the Terai (plains), the hills and the mountains. Crop production varies significantly across elevation, with rice diminishing in importance as elevation increases and potatoes' relative importance increasing with elevation. Barley and pulses represent a minimal proportion of household food production across the country, while wheat only accounts for a small share of their overall output[77]. Similarly, the number of animal herds tends to decrease with elevation, while chicken production is most relevant for households in lower hills, due to proximity to markets.

In the high hills, 73.8% of the population surveyed relies at least partly on agriculture. Farms are typically smallholdings (less than one ha) and the main cereal crops are maize and paddy rice, but potato production has represented a third of their staple and pulses production, as rice yields are the lowest in the country.[78] For almost 75% of these households, the lack of irrigation systems means they can only grow one crop cycle annually. Livestock rearing, mostly sheep and goats, is therefore an important complement for 88% of these households. At the time of the survey, 43% of these households relied on their own production for cereal consumption, 64% for milk and 82% for vegetables. Gorkha, Okhaldhunga, Dhading, and Dolakha, located in higher hills, record smaller than average household production levels, and Dhading and Dolakha and Rasuwa were already in severe food deficit in the last winter season.[79]

Figure 32: Household crop production (kg) by elevation and crop



In the mid hill areas surveyed, 80% of the population consider themselves farmers, and 91% own livestock. This is the most heavily agrarian region of the three. 50% of these households relied on their own production for cereal consumption. Lower hills have a lower share of households reporting agriculture as their main livelihood (65%) since this is a more urban region, yet 84% own livestock. Land size is generally lower in mid and lower hills than in mountains (0.6 ha per household on average), and the principal crops are rice and maize, with the added benefit of higher rainfall than in the mountains.

High market demand around Kathmandu has incentivized potato, vegetable and small livestock production (poultry, sheep, and goats) for commercial purposes, sometimes substituting staple crops.[80] Overall, 72% of households relied on their own production for cereal consumption. Proximity to markets may have incentivized households in lower hills to invest more in agriculture as they stand out with more widespread irrigation systems (for 42.5% of households) and a much higher production of rice than in other elevations. Sindhuli, Ramechhap and Nuwakot had a substantial food surplus (>10%) in the last winter season.

[76] Cited by International Centre for Integrated Mountain Development, 2015, Strategic Framework for Resilient Livelihoods in Earthquake Affected Areas of Nepal

[77] For the latest statistics on cereal crop yields and production by district, see: See: Nepal Food Security Monitoring System, 2015. Crop Situation Update. Ministry of Agricultural Development, World Food Programme and Food and Agricultural Organization. Kathmandu, August 2015.

[78] International Centre for Integrated Mountain Development, 2015, Strategic Framework for Resilient Livelihoods in Earthquake Affected Areas of Nepal

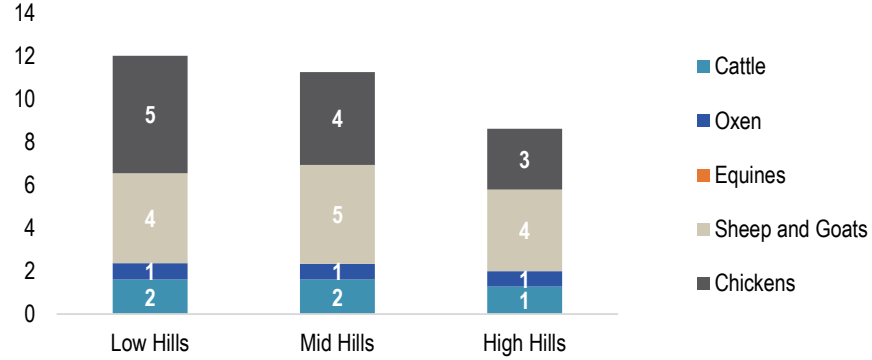
[79] Nepal Food Security Monitoring System, 2015. Crop Situation Update. Ministry of Agricultural Development, World Food Programme and Food and Agricultural Organization. Kathmandu, August 2015.

[80] International Centre for Integrated Mountain Development, 2015, Strategic Framework for Resilient Livelihoods in Earthquake Affected Areas of Nepal

Agricultural Household Profiles

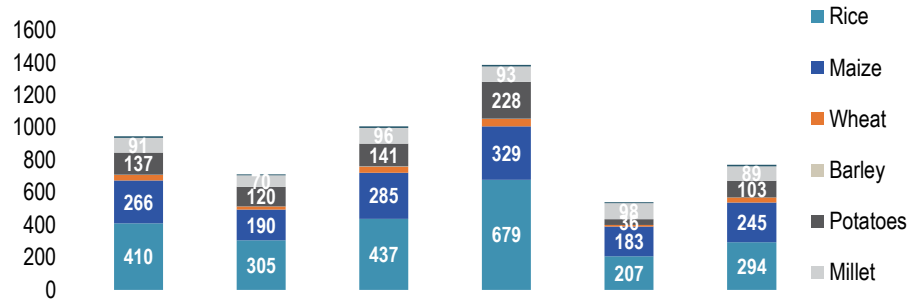
This assessment shows that 90% of assessed agricultural households hold property deeds, although this proportion varies by caste, with Dalits significantly less likely to possess land property deeds (84%) than others. Land size also varies significantly across area and household type, and population growth - together with a comparatively small proportion of arable land - has led to the fragmentation of parcels, resulting in a 50% reduction in average household farm sizes, from 0.88 ha on average in 1995 to 0.44 ha in 2011. Food insecure households hold smaller plots (0.39 ha on average) than food secure households (0.62 ha on average).[81] The agricultural census of 1995-1996 and 2003-2004 also found that despite having property rights, agricultural labourers' land parcels were extremely small (0.04 ha on average).

Figure 33: Average household livestock ownership by elevation and livestock type



As previously noted, caste remains an important determinant of household food production and food security (whether food consumption, dietary diversity or food–based coping strategies) in terms of household characteristics. Although the size of landholdings was not collected in this survey, significantly different production levels among caste and gender suggest land size varies significantly among these groups. Dalits' staple production is much lower than that of Janajatis or Brahmins, for instance.

Figure 34: Crop production (kg), by household profile and crop



Caste was also found to be correlated with access to irrigation systems, in favour of Brahmins and Chhetris (46%) over Janajatis (29.8) and Dalits (19.5%). The picture is more blurred regarding the difference between female and male-headed households for which there is no significant difference in access to irrigation systems (conditional on access to land). Brahmins and Chhetris are three times as likely to sell their agricultural product (30%) than Dalits (10%), but this difference narrows down between male (22%) and female (19%) headed households. The unequal distribution of land and varying yields by ecological belt mean the vast majority of farming households do not produce enough for their household needs, and rely on additional income sources, particularly men (99%). The poorest households (those with the highest food expenditure share) are more likely to have three or four income sources. The most common additional income sources for farmers are farm labour (28% for male and 31% for female) and off farm daily wages (23% and 13% respectively).

Although a trend towards a feminization of agriculture has been noted in previous surveys[82], the findings reported below show only a slight difference between men and women's engagement in agricultural livelihoods, with women slightly more likely to farm than men, within households (68% vs 65%). Although the ILO (2014) reported that 84% of women were engaged in some form of agricultural activity in Nepal, the basis of

[81] World Food Programme, 2007, Comprehensive Food Security and Vulnerability Analysis. Available at: https://www.wfp.org/content/nepal-comprehensive-food-security-and-vulnerability-analysis-2007

[82] Ibid

the 'feminisation of agriculture' effect – this survey finds that in the 11 assessed districts, female-headed households are actually less likely to report farming as one of their primary livelihoods and do not have a significantly lower income as a result.[83] WFP (2007)[84] found that women do however spend more time farming, hence the decrease in agricultural labour availability immediately after the earthquakes must have affected them particularly, at times when they needed additional labour[85]. On the other hand, female-headed households are less likely to be engaged in agriculture, perhaps as they have less access to land. They do not, however, have a significantly different income from their male counterpart, suggesting other livelihoods independent from access to land are available to them. Interestingly 26% of farming households thought they would benefit from sowing or tailoring skills.

Diversification of income is not the only household ambition, however, as 50% of farming households reported that they would benefit from farming skills and 18% from business management skills. 20% of farmers ranked training in crop production and commercialization among their top three priority needs.

Estimating the Impact of the Earthquakes on Crops

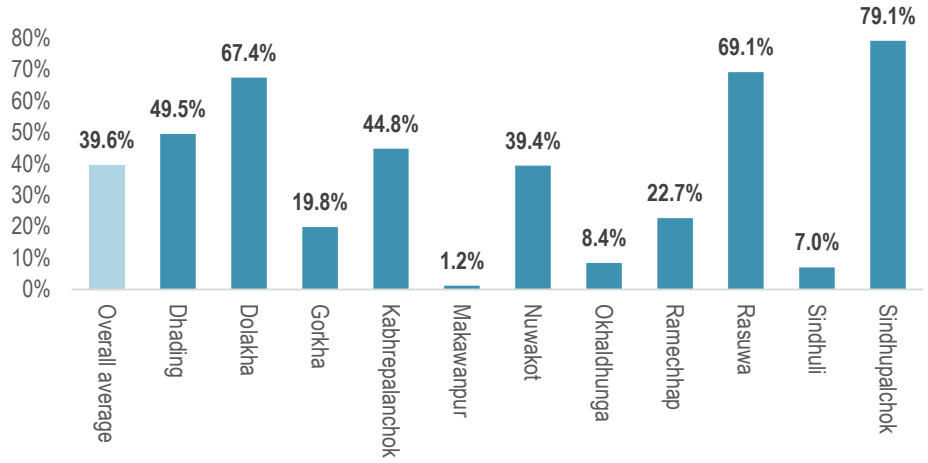
Located in the active seismic zone of the Himalayas, Nepal is prone to a range of hazards, from earthquakes and landslides to flood, windstorm, hail or epidemic diseases for livestock. The major earthquakes that occurred in April and May 2015 triggered a threefold increase in landslides between May and July 2015, with at least 2,780 such occurrences.[86] Other direct consequences of the earthquake were land cracks, the destruction of irrigation infrastructure, and changes in water sources, as well as loss of crop seeds. Household tools were often destroyed and their livestock injured or killed. In addition, the earthquakes happened at a critical time, during the wheat harvest and just before the rice planting season. Available labour for these crucial activities was significantly reduced due to the pressing need to rebuild homes as well as by reduced access, death and injury.

The earthquakes occurred at the end of the maize planting season, and just before the rice planting season. These two crops are the main crop staples in most districts, accounting for 28% and 43% respectively of agricultural households' production nationally. At the same time, over 50% of families in six most affected districts lost almost all of their seed stocks for crops under the rubble of their destroyed storage facilities.[87]

Physical Destruction of Farming Assets

Farming tools were largely destroyed by the collapse of houses and landslides that followed the earthquakes. While this most likely has a direct influence on farmers' productivity, the physical destruction of (any) physical asset also acts as a proxy for earthquake and landslides intensity. The graph below shows that five months after the event, 36.6% of households surveyed report still having damaged or unusable tools, while the most affected districts were Sindhulpalchok (79%), Rasuwa (69%) and Dolakha (67%).

Figure 35: Proportion (%) of households reporting at least one damaged agricultural tool, by district



[83] Nepal Labour Market Update, International Labour Organisation, November 2014. Available at: http://www.ilo.org/wcmsp5/groups/public/---asia/---ro-bangkok/---ilo-kathmandu/documents/publication/wcms_322446.pdf

[84] World Food Programme, 2007, Comprehensive Food Security and Vulnerability Analysis. Available at: https://www.wfp.org/content/nepal-comprehensive-food-security-and-vulnerability-analysis-2007

[85] Nepal Food Security Cluster, 2015, Nepal Earthquake, Agricultural Livelihood Impact Appraisal in Six Most Affected Districts

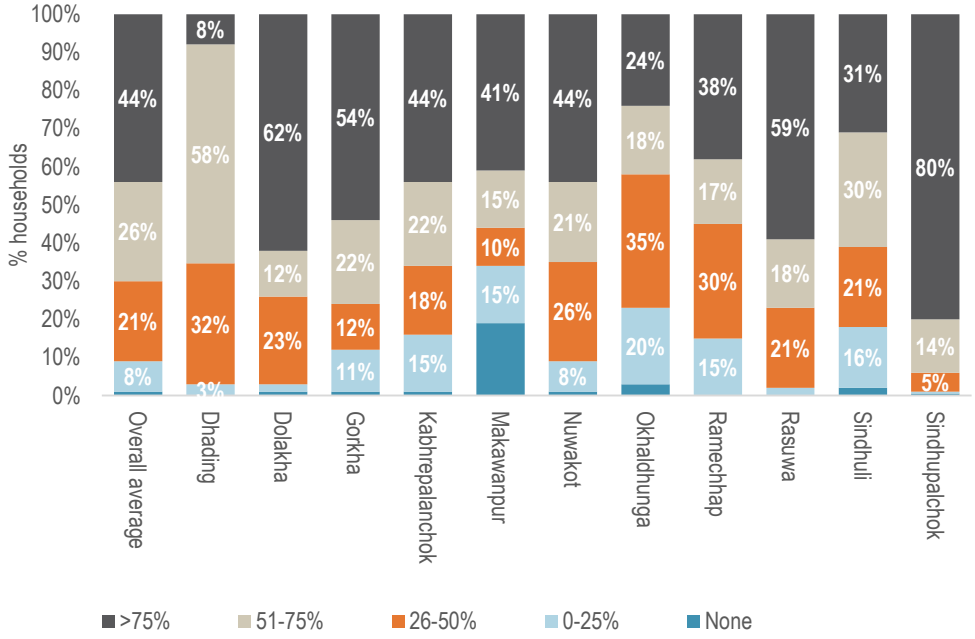
[86] GoN, Ministry of Science, Technology and Environment, 2015, Nepal Earthquake, Rapid Environmental Assessment

[87] Nepal Food Security Cluster, 2015, Nepal Earthquake, Agricultural Livelihood Impact Appraisal in Six Most Affected Districts

Damage to Storage Facilities

Across the 11 districts, the vast majority of households reported damage to their storage capacity, and 44% report that their facilities were almost entirely destroyed. This was particularly acute in Sindhulpachok (80%), Dolakha (62%), Rasuwa (59%) and Gorkha (55%). Grain and seed storage bags are therefore one of the top three priority needs for 28% of farmers surveyed. In addition, these households are particularly food insecure, as they lost their food and seeds stocks in the rubble, having lower food consumption scores than others. It is important to note, however, that the causes of their food insecurity go beyond simply a loss of storage, as this cannot be easily separated from other effects of the earthquake, such as crop destruction by landslides or higher expenditure on non-food items for reconstruction.

Figure 36: Reported levels of damage to household storage facilities, by district



Damage to Irrigation Systems

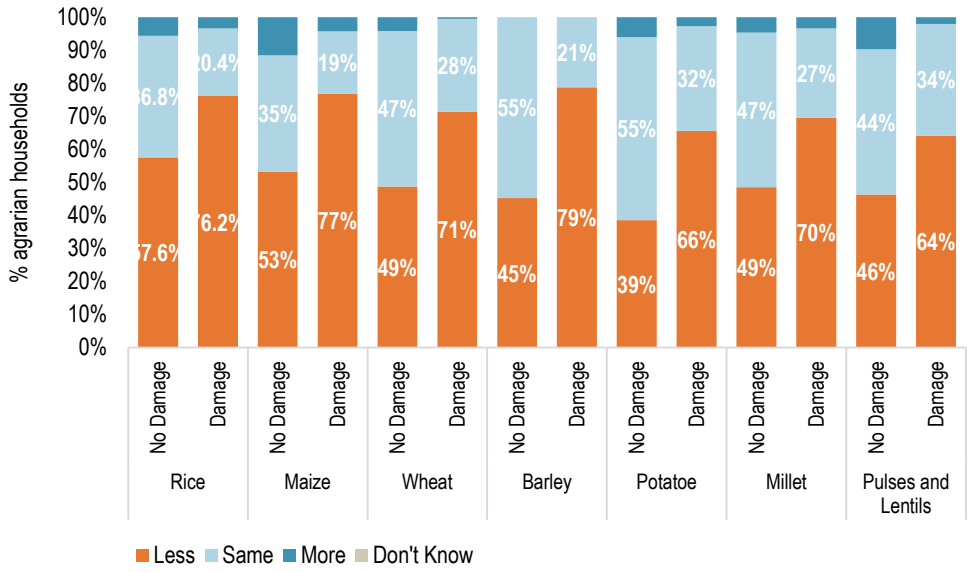
In the 11 districts surveyed, around a third of agricultural households reported having an irrigation system. Of these households, 3.5% reported that irrigation equipment had been damaged, 47% reported only partial functionality, while 11% reported that their irrigation systems were not functional at all. This may be the result not only of damage to the irrigation system, but also of land cracks, landslides, and changes of water sources.

Overall, 53.8% of irrigation systems were reportedly damaged in one way or another and have not yet been recovered. This proportion is particularly high in Sindhupalchok (87.8%), Rasuwa (76.3%), Ramechhap (76.3%) and Kabhrepalanchok (75%). Among households who have irrigation systems, those reporting damage are significantly more likely to expect reduced crops, and to have a lower income, perhaps as not only did the destruction of their irrigation system reduce their productive capacity, but lower income may be impeding them from repairing their assets. This finding is supported by key informants, who reported in 71% of wards that irrigation infrastructures were either partly (26%) or completely (45%) dysfunctional.

Crop Expectations

70.5% of households expected a reduction of their rice crop in the 2015 season, and similar proportions for the other crops. This proportion was particularly high in Sindhupalchok where 89% of households expected reduced harvests, as well as in Dhading (92%) and Ghorkha (82%), near the epicentres of the two major earthquakes. More households having directly experienced physical destruction of assets reported expecting reduced crops, which highlights the negative impact of the earthquake, potentially through heavy landslides, as well as the factors highlighted above. Across the 11 districts, the vast majority of households (93%) continue to request assistance. The most pressing need, for 60.2% of households, is seeds; followed by irrigation rehabilitation or construction (a priority for a third of households); and thirdly chemical inputs, as stocks of fertilizer were also largely destroyed.

Figure 37: Reported crop production expectations and reported damage levels, by crop



Estimating the Impact of the Earthquake on Livestock

88.3% of the population surveyed owns livestock, although this varies across districts with Dhading, Okaldhunga, Ramechhap and Sindhuli registering the highest share of livestock breeders (over 94%). The animals most commonly bred are cattle (by 80% of households), followed by chickens and sheep or goats (by 68 and 69% of households respectively) and oxen (46%) while pigs are only raised by a minority (20%). Often Dalit Households typically breed only a small number of animals, on average two cattle, one oxen, and five or six chickens, although Rasuwa, Gorkha and Nuwakot, stood out along with Makawanpur for an above average number of chickens (eight or nine) compared to other districts. Households in these former three districts, where most physical destruction took place, hold considerably less poultry today (-25% to -50%), as a result of widespread loss.

Households whose livestock shelter was destroyed experienced between two and three times as much reduction in cattle, oxen and sheep or goats heads (up to 15%) than those who did not. The highest number of animals lost was chickens, reaching 34% in damaged shelters.

Across the 11 assessed districts, two thirds of animal breeders reported that their livestock shelter was partially or totally destroyed by the earthquake or the ensuing landslides. 12.4% of households had not yet rebuilt a shelter, while 42.3% had rebuilt only temporary shelters. The proportion of shelter damage was particularly high in Sindhupalchock, Dhading and Kabhrepalchok, where this was reported by over 90% of livestock owners. 88% of livestock owners requested assistance for animal rearing, particularly veterinary services (72%), animal feed (61%), forage seeds (26%) and livestock shelter (41%).

The sale of more animals than usual, sometimes even the last reproductive female animal, is a common coping strategy used by households in either crisis level or severe food insecurity. Although a relatively small proportion of households had to resort to these measures, livestock breeders most affected by the earthquake (those who reported asset destruction) were substantially more likely to either sell more animals than usual (4% versus 1.6%) or sell their last female animal (2.3% vs 1.1%) than those who did not.

Figure 38: Proportion (%) of livestock-owning households by district

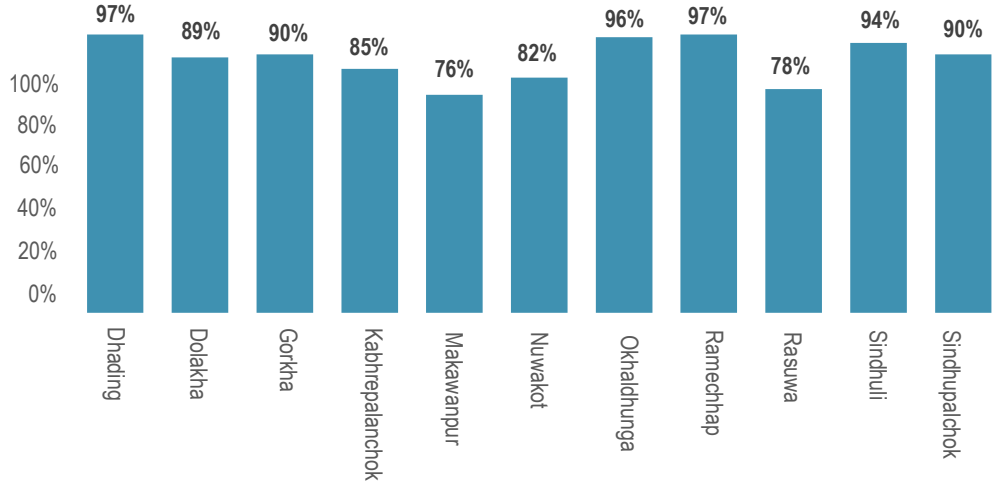
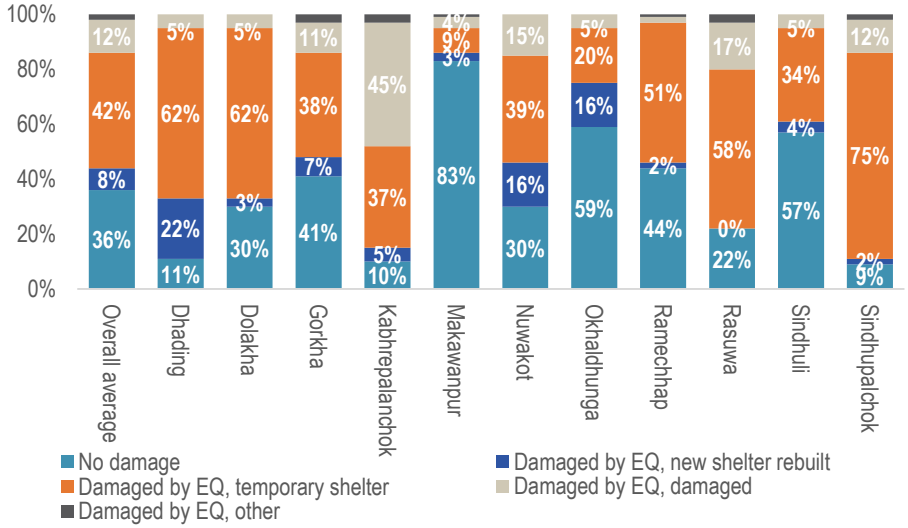
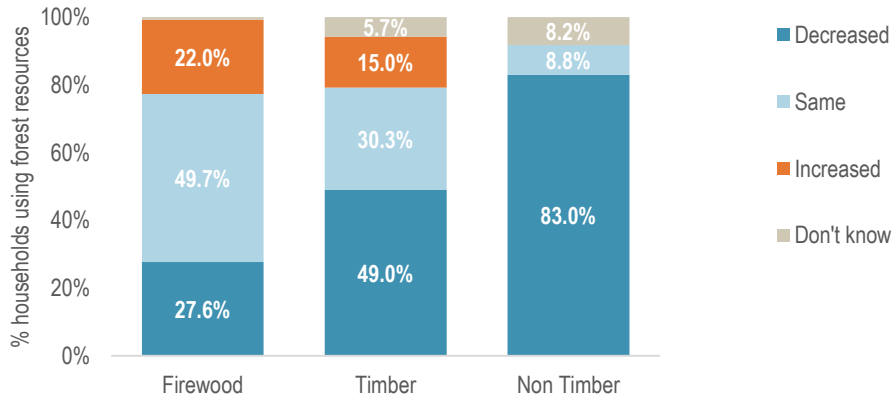


Figure 39: Proportion (%) of households by livestock shelter status and district



Forests

Figure 40: Reported change in use of forest resources since the earthquakes



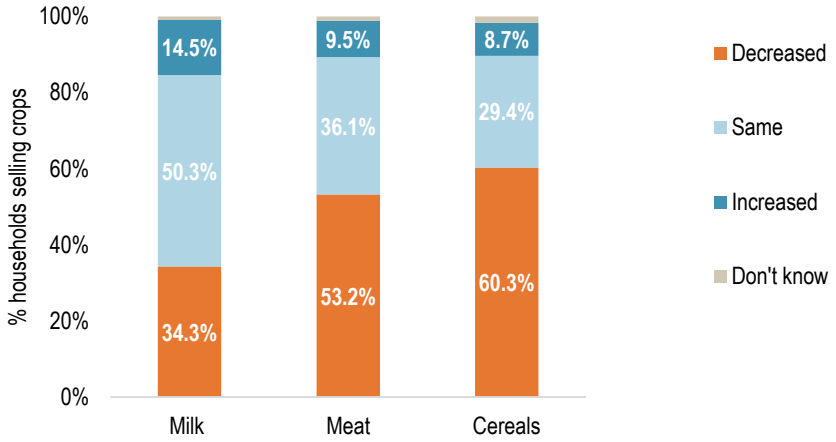
Despite fears that the collection of forest resources would increase as a coping strategy for households having lost food and income sources, this activity has actually decreased, particularly regarding timber and non-timber collection. Households in Sindhuli and Sindhupalchok were however considerably more likely to collect firewood than others (30% and 22% respectively, against an overall average of 10%). Sindhupalchok also stands out with a large share of households reporting increased collection of firewood (67%). In terms of household profile, Dalits were more likely to engage in this type of activity than other groups (15% vs 10%).

The poorest households' increased collection of forest resources suggests that this remains a coping strategy for the most vulnerable. However, the landslides and road blockages caused by the earthquakes and their many aftershocks also restricted access to forest areas. Households most affected by asset destruction – in areas most affected by earthquakes and landslides - were found to be the most likely to have decreased their resort to forest resources collection. As a result, it seems that understandable predictions that forests risked being overexploited for reconstruction and livelihood recovery did not materialize.

Commercialisation

Across the board, a majority of agricultural households (54%) do not report earning any income from agriculture, despite relying on it as part of their livelihoods, for subsistence; only 27% report selling any crop and 22% sell either milk or meat. Crop sellers have significantly higher production than non-sellers of rice (nearly twice as much) and potatoes (over four times as much). Livestock product sellers (meat and milk), particularly poultry breeders, own twice as many animals on average (12) than non-sellers (6). They suffered extensively from shelter collapse, as chickens were kept indoors. 60% of sellers report decreased income from cereal sales and so do 53% and 34% of meat and milk sellers respectively. Households having damaged assets are slightly more likely to report decreased income, however pre-existing patterns such as caste, the number of animals owned before the earthquake or crop production, as well as distance from markets are much more important determinants of agricultural products commercialization.

Figure 41: Reported change in income from crop sales since the earthquakes



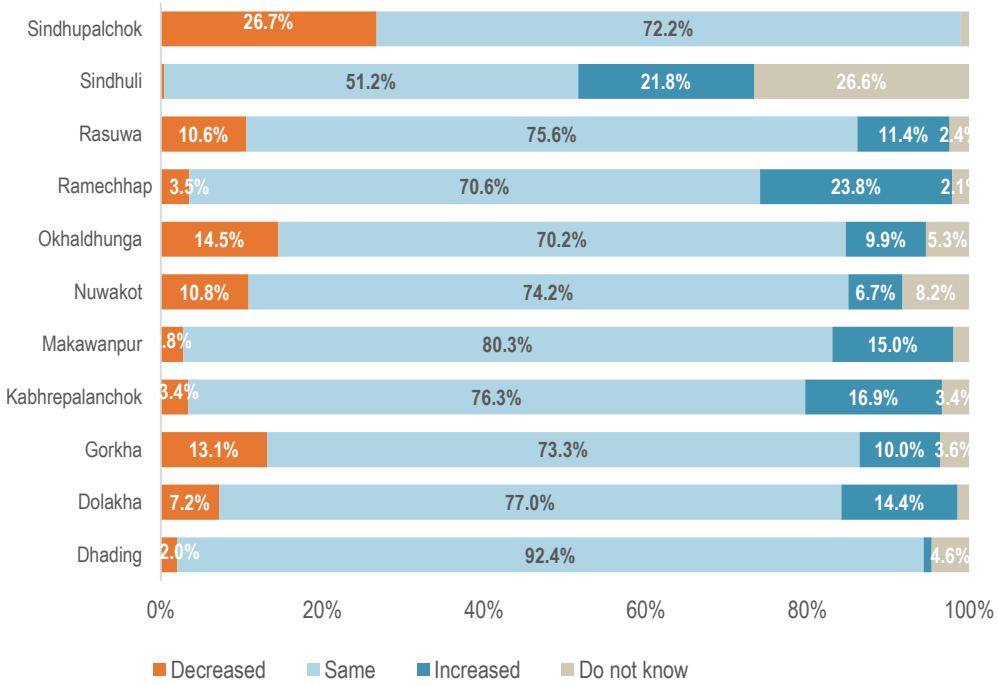
According to key informants, commercial farms were present in 40% of wards visited, mostly in Dhading and Nuwakot (over 50% of wards), and least present in Okhaldhunga, Sindhuli and Rasuwa (under 30% of wards). 2.5% of households report very large production levels (beyond three standard deviations) with over 6000kg of rice produced last year, and above 5200kg of potatoes, against an average household production of just 841kg and 390kg respectively when excluding these outliers. Inequalities in livestock rearing are less stark. 3.5% of these households own over 21 sheeps and goats or over 50 chickens. Out of all commercial farms, key informants report that 50% are either dysfunctional (13%) or partly functional (57%). In Ramechhap, Rasuwa and Sindupalchok, less than a quarter of commercial farms were reportedly functional at the time of assessment. Another indication of high inequality in access to productive assets is that, even though 8.5% of wards reported the presence of an aquaculture facility (out of which 50% are either partly or totally damaged), only four households out of the 4184 surveyed counted aquaculture as an income source.

Finally, value addition facilities[88] were only present in 14% of wards, and only 39% of these plants were functional after the earthquakes. They were particularly damaged in Gorkha, Sindulpachok, Okhaldhunga and Ramechhap where between 0% and 30% are left functional.

Nevertheless, from the household perspective, cooperatives have reportedly been successful in maintaining or increasing the amount of services provided and acting as key business partners for farmers. They were the most used financial service provider, reaching 58% of households across the 11 districts, far beyond formal banks (34%). Cooperatives were most active in Dhading, Dolakha and Kabhrepalanchok, where over 70% of households relied on these institutions to access credit. This is despite widespread physical damage of cooperative buildings in over 50% of the wards visited, particularly in Dolakha, Rasuwa, Sindhuli and Ramechhap where between 80% and 50% of cooperatives have been so damaged that the buildings are completely dysfunctional. The districts where most households report that cooperative services decreased are Sindhupalchok (26.7%) and Gorkha (13.1%), the epicentres of the earthquakes, where the physical damage may have truly impeded any resumption of activities, as well as Okhaldhunga (14%), which already registered the least number of cooperatives. In Rasuwa and Nuwakot, around 10% of households report that their cooperatives' services also decreased, perhaps due to large physical destruction, although physical damage leading to complete dysfunctionality of cooperative buildings affected 71% and 31% of wards respectively. This suggests that many cooperatives across the 11 districts resumed services in temporary shelters or alternative offices. Their key role in providing access to credit to farmers implies that they are most needed where farmers experienced the most damage, in terms of landslides, damage to irrigation structure and livestock loss.

[88] This refers to facilities that may add value to a given agricultural product by processing it in some way, such as the processing of wheat directly into flour.

Figure 42: Proportion (%) of households by district and perceived degree of functionality of cooperatives



Over 70% of households indicated that the cooperatives they use for financial services had either recovered or remained functional when compared to the pre-earthquake period. It is worth noting, however, that we did not seek to establish or measure the actual quality of service provision. Nearly one in ten households (9.4%) reported that the functionality of the service had increased, with over a fifth of households in Sindhuli (21.8%) and nearly a quarter (23.8%) of households in Ramechhap reporting increases. The districts where most households reported that cooperative services decreased are Sindhupalchok (26.7%) and Gorkha (13.1%), the epicentres of the earthquakes, where the physical damage may have truly impeded any resumption of activities, as well as Okhaldunga (14%), which already registered the least number of cooperatives.

Interestingly, no significant differences in the perceived functionality of cooperatives were observed between rural and urban settings, but are visible between elevations. For instance, 14.4% of high hill households reported an improvement of cooperative service provision and 14.8% reported this at low hill level. Apart from the district-level variation observed above, cooperative services seem to have recovered. This suggests that the high demand for cooperative services and their relatively well-established infrastructure across Nepal in general allowed them to recover relatively well.

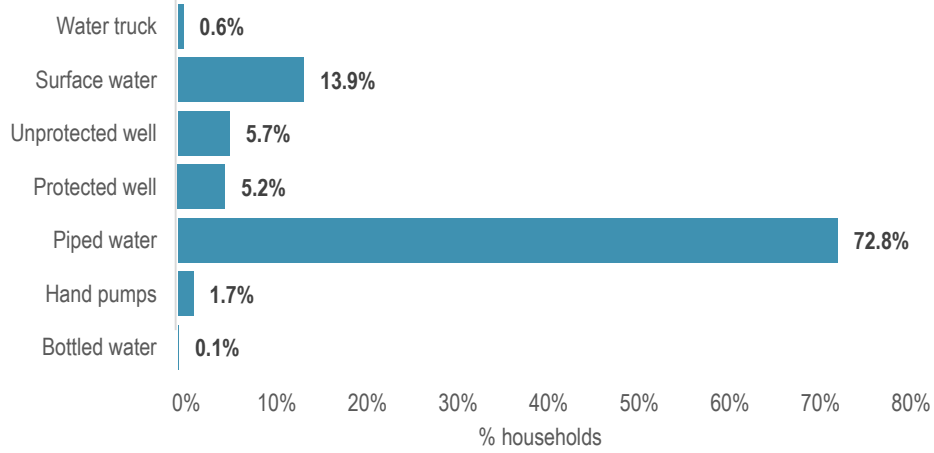
ACCESS TO SERVICES

Access to services and resources, including secured water sources, sanitation, health, education and finances was generally quite high but did exhibit variation across the assessed areas, although not between population groups. This is not to say that the supply of and access to these services was not drastically reduced in the immediate aftermath of the earthquake, merely that access appears to have recovered since then.

Water, Sanitation and Hygiene

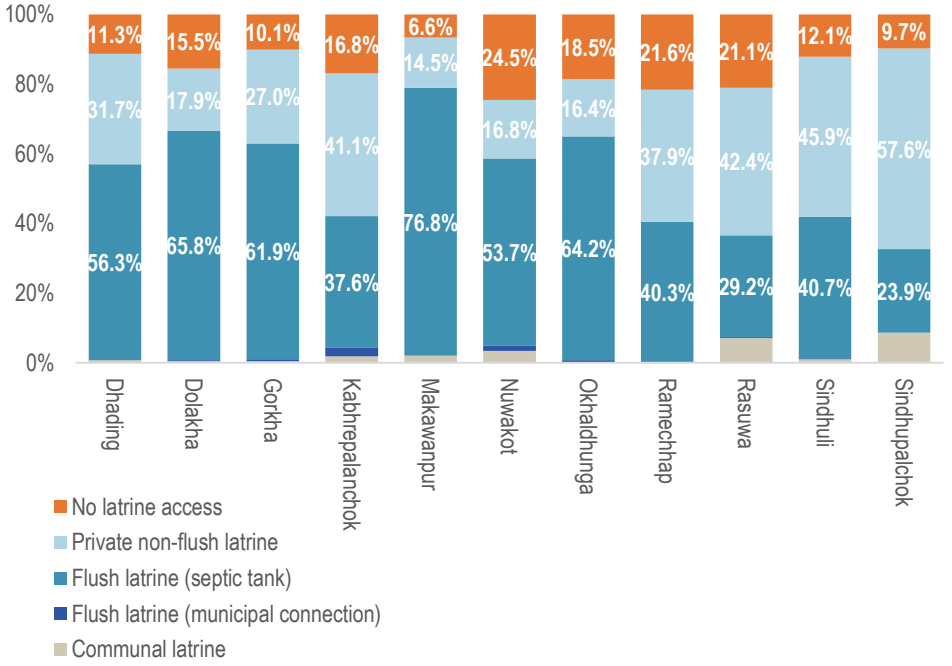
Nearly three in four (72.8%) households reported piped, municipal water as their primary drinking water source across all assessed areas, indicating steady supply and access to this public service. The remaining households relied on a mix of protected (5.2%) and unprotected wells (5.7%), surface water, including natural springs and rivers (13.9%), and privately sourced bottled and trucked water (0.7%). Hand pumps also accounted for 1.7% of all primary water sources, but it is difficult to ascertain whether this was sourced from wells or surface water sources as hand pumps are a means of extraction, rather than a water source in itself.[89]

Figure 43: Primary reported water source



Moreover, no significant disparities in reported access to a secured water sources were found to exist between rural and urban households and the high and low hills, allowing us to infer that the provision of and access to the service is generally quite high. Modest disparities between rural (71.8%) and urban (78.4%) households persist, but are symptomatic of better service provision in urban settings in general.[90] The same trend in access can be observed across altitudes. What follows is that the use of surface water as a primary source of drinking water was nominally higher amongst rural households, 15% of whom reported sourcing surface water for drinking, compared to 8.2% of urban households. Similarly, the use of surface water was more common amongst households in the high (16.4%) and mid hills (16.2%), in line with the general trend of reduced service provision in more hard-to-reach areas. Finally, no significant variation in the use of protected and unprotected wells was visible between rural and urban settings and elevations.

Figure 44: Proportion (%) of households by district and latrine type



[89] This is a weighted finding, statistically significant (p<.001).

[90] This is a weighted finding, statistically significant (p<.001).

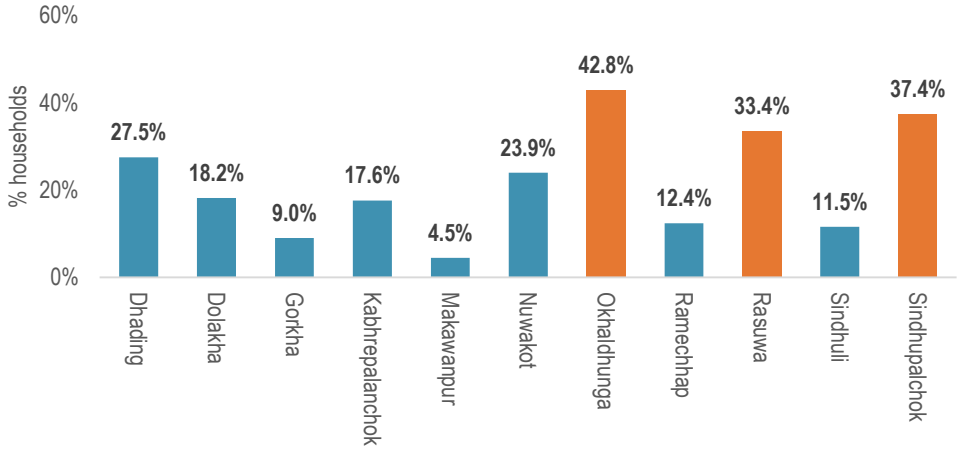
Departing from the trend of generally high rates of access to improved water sources, access to basic sanitation infrastructure was much poorer, though efforts are being made to improve this through the Open Defecation Free campaign.[91] Overall, more than one in ten (12.6%) households had no access to latrines, indicating a relatively high rate of open defecation. This runs contrary to the national trend; according to the World Bank, only an estimated 56% of households have access to improved sanitation facilities, indicating higher rates of access to improved sanitation across the 11 assessed districts.[92] For instance, a quarter (24.5%) of households in Nuwakot, and over a fifth of households in Ramechhap (21.6%) and Rasuwa (21.1%) reported having no access to toilets, whilst no access to toilets was more consistently reported across all other assessed districts. In line with a well-established trend, open defecation was higher amongst rural households, 13.7% of whom did not have access to latrines, in comparison to 6.7% of their urban counterparts. As many as one in five (20.2%) households residing in the high hills reported no latrine access, in comparison to 9.1% in the low hills, again attesting to the effects of location on welfare and service access.

Municipal flush latrines were not reported to be common at all, servicing only 0.5% of the assessed population, although were slightly more common in urban (2.0%) than in rural settings (0.2%). The most common toilet type was a flush latrine connected to a septic tank, servicing over half (57.2%) of households across assessed areas. Given the higher costs of installation, it was more common in urban than in rural areas, where 74.6% and 54% had such latrines, respectively.[93] The same variation is reflected across elevations, with households residing in the low hills exhibiting far greater access than households in the mid and high hill areas. This means that, understandably, sewage connections are more common in urban than in rural areas. It is also important to note that septic tanks cannot be installed everywhere due to access, logistical and terrain difficulties.

Health

Access to health services was generally high, if unequal across the assessed areas. Overall, 15.5% of households reported constraints to access health services, with substantial variation spanning districts, the rural-urban divide and elevation. As with other findings and outcomes, the sex of a head of household was not found to be a determinant of service access, suggesting that access issues are ones of service supply, not necessarily exclusionary practices.[94] Any differences in access difficulties between Dalit households and households belonging to other caste should be interpreted in light of the fact that over 90% of Dalit households reside in rural areas where service access is generally poorer, meaning that no linear relationship between caste and service access can be established.

Figure 45: Reported healthcare access constraints, by district



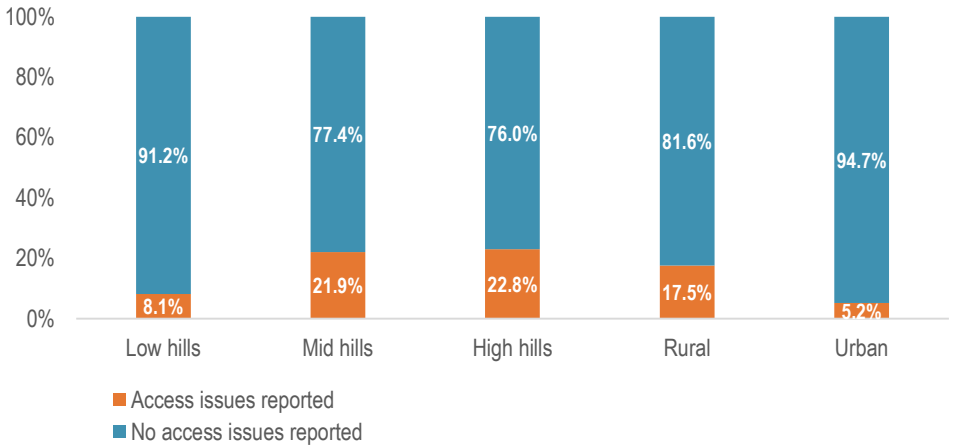
The district of residence of a given household seems to be a potent predictor of healthcare service access constraints, with 42.8% of households in Okhaldhunga, 33.4% of households in Rasuwa and 37.4% of households in Sindhupalchok reporting access constraints. Significantly higher than the population-wide rate, these districts appear to suffer from acute service provision issues. Beyond this, both elevation and residence in a rural area appeared to be the most significant determinants of difficulty of access. The proportions of households reporting access difficulties were highest in the mid and high hills (21.9% and 22.8%,

[91] Community Development and Environment Conservation Forum. Available at: http://www.cdecf.org.np/programs/current-programs/34-open-defecation-free-campaign
[92] World Bank, available at: http://data.worldbank.org/indicator/SH.STA.ACSN.UR
[93] This is a weighted finding, statistically significant (p<.001).
[94] In fact, a lower proportion of female-headed households (13.4%) reported access issues when compared with male-headed households (16.1%).

respectively) and in rural areas, where 17.5% reported experiencing difficulties when attempting to access health services.[95]

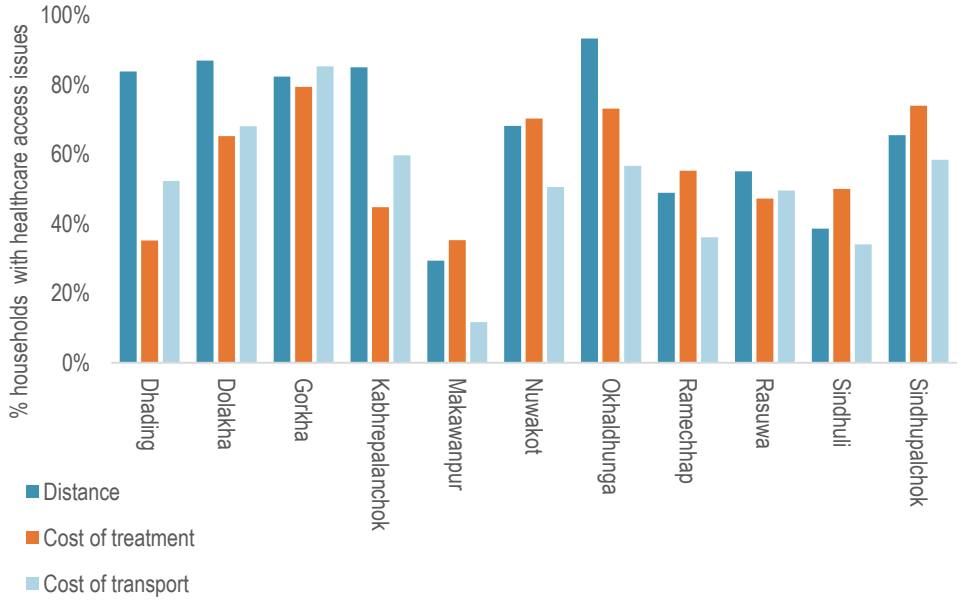
For the 15.5% of all households that reported facing access problems, the most commonly reported constraints were distance to service (68.3% of households), cost of treatment (55.7%) and cost of transport (51.2%),[96] meaning that the predominant constraints are due to the inadequate supply and coverage of health services and prohibitive pricing. Indeed, other reported reasons included inadequate equipment or medicine (22.2% of households) and lack of staff (21.3%). This helps to explain why Dalit households, for example, are not disproportionately affected. The lack of supply affects all groups, meaning that access constraints cannot be attributed to exclusionary or discriminatory practices.

Figure 46: Proportion (%) of households reporting health access issues by elevation and rural/urban location (excluding "do not know" responses)



It is only natural then that poor service coverage and high cost, affect more vulnerable households residing in hard-to-reach (high hill) areas. These households do not necessarily reside in rural or urban settings, where no significant disparities in reported access constraints could be observed.[97] As observed elsewhere, households residing in the high hills were found to be disproportionately affected by the distance factor as well as the cumulative costs associated with accessing health services.

Figure 47: Proportion (%) of households by district and reported top three types of constraints experienced



Education

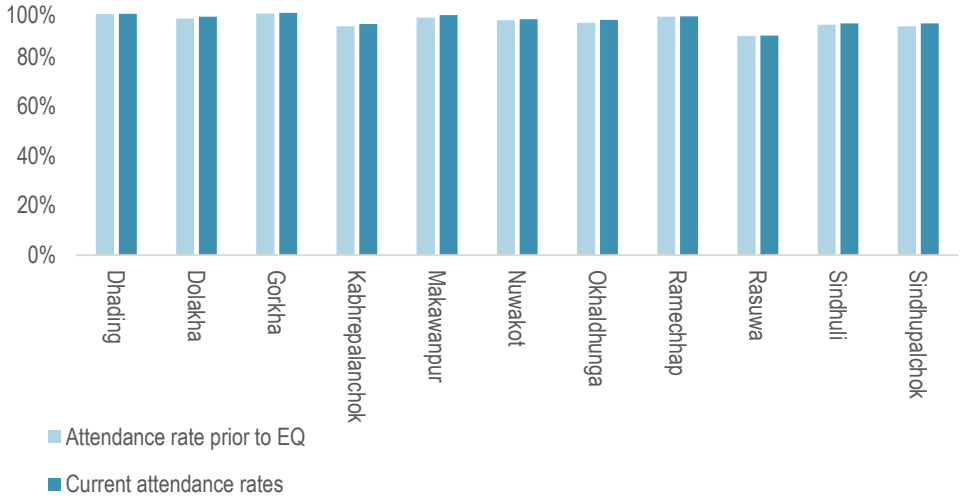
Access to education for children aged 5-16 was found to be generally high and approaching universal enrolment across the assessed areas, with 95% reportedly able to access school.[98] It also largely aligns with pre-earthquake attendance rates, even exhibiting marginal increases in some districts. This is not to say that attendance rates were not affected in the immediate aftermath of the earthquake, rather that they seem to have recovered and even shown some gains in the period between the earthquake and the period of data

[95] This is a weighted finding, statistically significant (p<.001).
[96] This is a weighted finding, statistically significant (p<.001).
[97] Though the cost of treatment was a more prevalent constraint in urban areas where costs are naturally higher.
[98] These figures diverge from the national rate of approximately 70% by a substantial margin, according to Government of Nepal, Ministry of Education data.

collection. No variation, statistically significant or otherwise, was observed across elevations, the rural-urban divide or castes and social groups, indicating high service coverage and reach.[99]

Reported attendance rates before and after the earthquake exceeded 90% in all districts apart from Rasuwa, where it stood at 88.5% of all school-aged children.[100] They were highest in Gorkha, both before and after the earthquake, and stood at 97.9% at the time of the assessment, actually increasing by 0.3%. Attendance rates in Dhading were similar at 97.5% and again, exhibited a marginal increase of 0.2%. The increase was highest in Makawanpur, where the attendance rate had increased by 1% from 95.9% in the period before the earthquake to 96.9% at the time of the assessment.[101]

Figure 48: Attendance rates (%) in formal education for children aged 5-16 by district, pre and post-earthquake



Financial Services

The assessment also sought to measure the effects of the earthquake on the functionality of and access to financial services, including formal banking institutions, cooperatives, money transfer operations and hundis.[102] Contrary to what findings indicate for health access, for instance, the vast majority of households reported that all financial services have either maintained their pre-earthquake service provision or have actually increased it across all service types. Again, this is not to say that financial service provision was unaffected in the immediate aftermath of the earthquake, but simply that functionality is perceived to have recovered since then, and is even reported to have increased in some areas. A small minority of approximately 10% of households reported that the functionality of these four key financial services has decreased relative to the pre-earthquake period.[103]

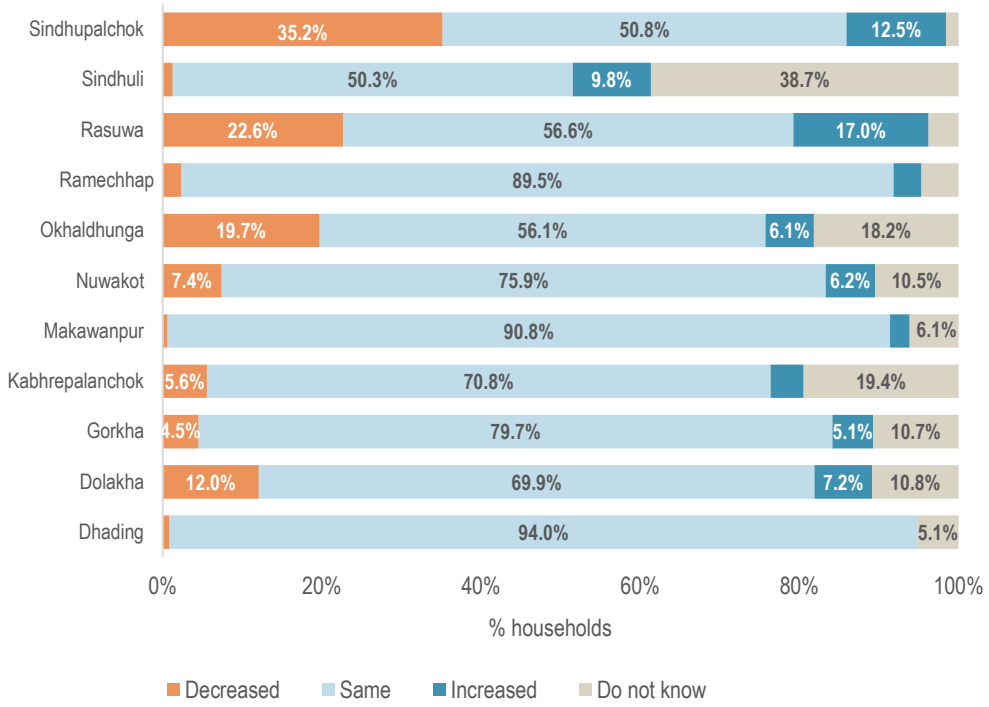
Of the households reporting using formal banking services, much the same trend of restoration of service recovery can be observed, following largely the same pattern across assessed districts. Formal banking services in Sindhupalchok were reported to be the most affected, with over a third (35.2%) of households reporting decreased functionality of service provision. This is followed by Rasuwa and Okhaldhunga, where just over a fifth (21.2%) of households reported decreased functionality when compared with the pre-earthquake period. Generally, however, the vast majority of households reported either restoration to pre-earthquake levels or improvements in service provision.

It is important to note that formal banking services mostly served urban and low hills areas where the required infrastructure, including road access, electricity and internet service provision, was in higher supply. For instance, an estimated 79.5% of urban households used formal banking services, compared to 57.4% of rural households and 32.7% of households in high hill areas. Though this points to good service coverage overall, household preferences

[99] The assessment made no attempt to gauge the quality of education services or the type of schooling the child attended. The objective was to simply measure attendance rates and, by proxy, service provision.
[100] Pre and post-earthquake attendance figures were collected during the interview process by asking respondents to recall attendance figures within their respective households.
[101] This may well be due to minor instances of recall bias, but the questionnaire was structured in such a way as to prevent this from occurring, constraining the number of attendees on the basis of the number of school-aged children in the household at the time. Further, any gains in attendance rates caused by newly eligible children (those aged 5 and above) would have been offset by those aged over 16 who had finished secondary schooling.
[102] An informal means of transferring money, now illegal.
[103] Respondents were asked to recall their perceptions of financial service provision prior to the earthquake and compare to what they now perceive their functionality to be. The assessment did not seek to gauge or assess actual quality of provision. The responses are therefore subjective and should be interpreted as such.

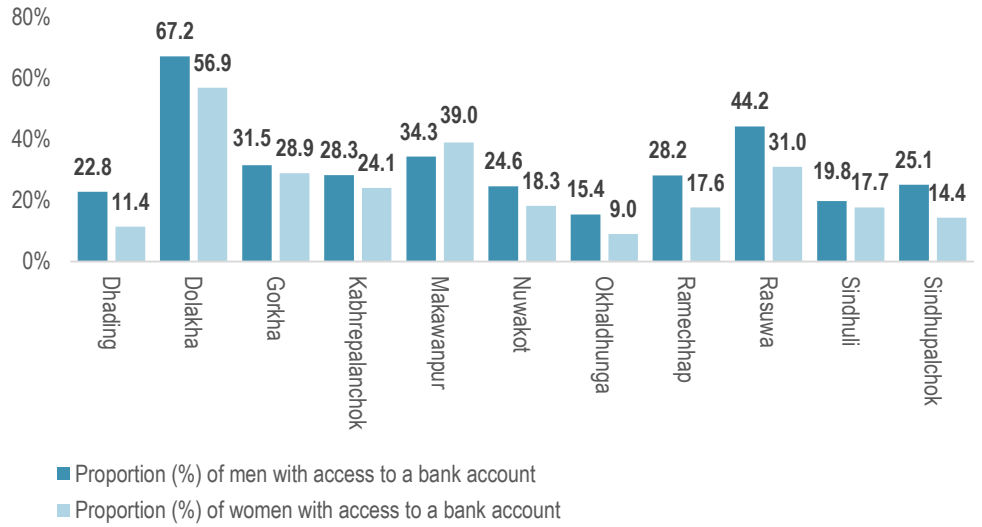
were found to converge on cooperatives in the majority of cases, with formal banking services used as a secondary service provider.

Figure 49: Perceived degree of functionality of formal banking services by households, by district



Building on this, just over a quarter (27.3%) of individuals aged 17 and above reported to have access to bank accounts across the assessed districts, with significant variation between districts and sex. Overall, nearly a third (30.6%) of men and a quarter (24.3%) of women reported to have access to a personal bank account; this disparity persists across most districts except for Makawanpur, where a slightly higher proportion of women (39.0%) had access to a bank account.

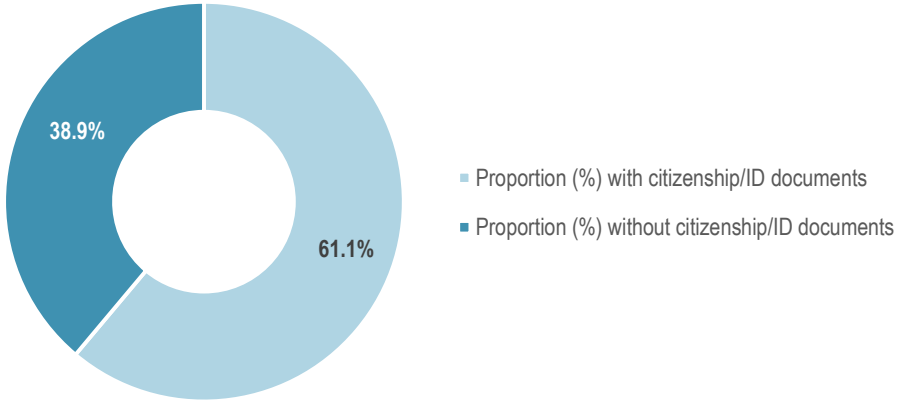
Figure 50: Proportion (%) of individuals aged 17 and above with access to a personal bank account, by district



With over half of all individuals aged 17 and above reportedly in possession of a personal bank account, Dolakha had the highest rate of access to formal banking services. Conversely, Okhaldhunga had the lowest rate of access at just over a tenth (12.2%) of individuals in possession of a personal bank account; Dhading, Sindhuli and Sindhupalchok exhibited slightly higher rates of access at 17.1%, 18.8% and 19.7%, respectively. These figures show that access to a personal bank account is not a norm across these districts, resulting in lower demand and perhaps a decreased supply of formal banking services in general. That said, the proportion of individuals with access to personal bank accounts was, understandably, much higher in urban (62%) than in rural areas (16%) where formal banking services are much more common and in higher demand.

PROTECTION

Figure 51: Proportion (%) of individuals reporting possession of citizenship/ID documents



Access to documentation is a key protection issue, with identity and citizenship documentation often a pre-requisite to secure private property rights, access basic services, as well as humanitarian and reconstruction assistance. 38.9% of surveyed individuals were found to not be in possession of citizenship and/or identification documentation, with little variation between districts. The largest gap was registered in Sindhuli, where an estimated 41% of people surveyed reported not being in possession of such documentation at the time of the assessment.[104] Fewer individuals in rural areas (60%) had access to key documentation than in urban areas (69%). This rate of possession is likely due to loss or damage as a result of the earthquake and the manner in which the data was collected.

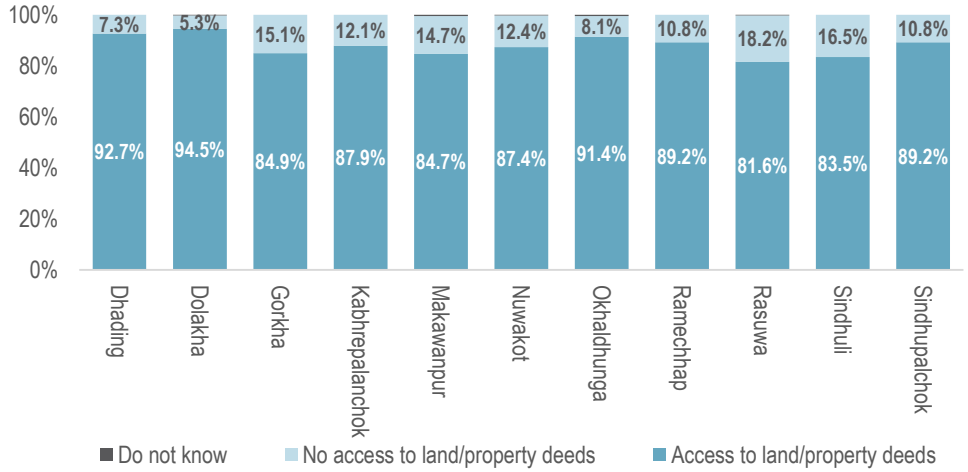
Notable differences in rates of possession of personal identification documents were between social groups. At 54.6%, the proportion of Dalit individuals in possession of key citizenship documentation was less than for Brahmin/Chhetri individuals, 68.2% of whom reported possessing such documentation at the time of the assessment. Janajati individuals[105] were also found to have lower rates of possession, with 60.4% found to possess citizenship/identification documentation.[106] The sex of the head of household was not found to determine rates of possession in any meaningful way.

Despite the high proportion of individuals without documentation, nearly 90% of households reported knowing where to replace lost or stolen identification documents including birth certificates, a trend held across most districts. The most significant outlier was Ramechhap, where a third (33.2%) of households did not know where to replace identity documentation. Though the proportion of households not knowing where to access this service increased in tandem with elevation, an estimated 83% of households in the high hills still purportedly knew where to seek the replacement of key identification documents. No differences could be observed across rural and urban areas and the sex of the head of a given household.

An estimated 86.9% of households reported being in possession of land or property deeds at the time of the assessment, with significant variation across the 11 assessed districts.[107] For instance, nearly a fifth (18.2%) of households in Rasuwa, 16.5% of households in Sindhuli and 15.1% of households in Gorkha were not in possession of land and/or property deeds at the time of the survey. The rural-urban divide was again a significant determinant: 14% of all households residing in rural areas were not in possession of deeds, whilst only 7.2% of urban households were not.[108] Delving further, of the 13% of households without property deeds, 91.3% were found to reside in rural areas[109].

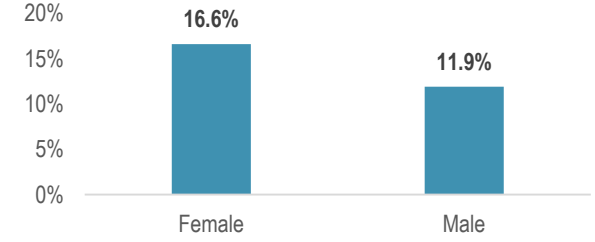
[104] It is worth noting that this question asked the total number of individuals, including minors who may not necessarily be eligible for these documents, whether they were in possession of citizenship/ID documents. This may not reflect the true proportion of individuals who are both eligible for and in possession of the documents.
[105] Indigenous Janajati communities were not disaggregated into their constituent groups for the purpose of this assessment and therefore no further disaggregated analysis is possible beyond Janajati.
[106] This a weighted finding, statistically significant (p<.001).
[107] This a weighted finding, statistically significant (p<.001). It is worth noting that this largely aligns with the data gathered for an assessment conducted by REACH on behalf of the Nepal Shelter Cluster. Here, 90% of households had access to land and/or property deeds, though this assessment covered all 14 priority districts (as well as Lamjung).
[108] This a weighted finding, statistically significant (p<.001).
[109] This a weighted finding, statistically significant (p<.001).

Figure 52: Proportion (%) of households by reported possession of land or property deeds



However, it is worth noting that according to the Post-Disaster Needs Assessment[110], only 19.7 percent of the women in Nepal own homes or land. The PDNA further emphasised that lack of house and land ownership among women and Dalits means that these groups are at risk of marginalisation and exclusion from the post-disaster reconstruction programmes. Further investigation may thus be needed to explore gender and caste based differences.

Figure 53: Proportion (%) of households not in possession of property deeds, by sex of head of household



Although the potential implications of a lack of proper identification and property ownership documents are difficult to measure in a household survey, they do include difficulties in registering for and accessing public services such as education and health services as well as humanitarian and reconstruction assistance. It can affect efforts to reunify separated and unaccompanied children with their families and can expose children and women to heightened risk of trafficking. Lack of documentation can also limit access to housing, land and private property rights and render individuals more susceptible to predatory practices in these sectors, including denial of or exclusion from public services, extractive and arbitrary rent pricing, arbitrary evictions and land grabs. Lack of documentation can also can limit individuals' mobility (internal and particularly external) and therefore the potential to access livelihoods opportunities outside their community. Further, lack of documentation is also an obstacle to political participation, in particular to vote and to stand for election.

Finally, households exhibited significant variation in regards to knowing where to seek assistance when faced with protection issues, including violence, personal insecurity, and exploitation. Overall, nearly a third of households did not know where to seek assistance or report protection issues, with substantial variation across districts. Though a greater proportion residing in urban areas reported knowing where to seek help than in rural areas or in the high hills, the largest information gaps were across the individual districts. For instance, nearly half (48.5%) of households in Dhading and Ramechhap reported that they did not know where to report protection concerns and issues, whilst over a third (an estimated 36%) did not know in Nuwakot and Sindhupalchok and a quarter (24.3%) did not know in Gorkha and Rasuwa.

[110] Nepal Earthquake 2015 Post Disaster Needs Assessment Vol. B: Sectoral Reports (June 2015), p. 225

CONCLUSION

In summary, the survey has found that across key welfare outcomes, Nepali households in the assessed areas have recovered significantly since the earthquake demonstrating considerable resilience. This improvement has generally been the result of substantial and well-targeted emergency humanitarian assistance, the restoration of access to markets and the resumption of livelihood activities. Nevertheless, risks remain, chief among them the widespread loss of productive assets, infrastructure and livestock, compounded by a trend towards credit-based consumption and lower agricultural production, which will likely heighten vulnerability and leave households ill-prepared to absorb and recover from future shocks. In a region prone to natural disasters and hazards, any recovery and resilience-building effort should take this into consideration. With this in mind, the following paragraphs briefly summarise some of the sector-specific trends which emerged from this assessment.

While the assessment shows significant improvement in all food security indicators since the May assessment, pockets of deprivation remain by geographic location, elevation and ethnic group. Food consumption and dietary diversity have recovered. This was initially due to the large amount of humanitarian assistance provided in the immediate aftermath of the earthquakes, but has since been bolstered by restored access to diversified food supplies, livelihoods and rising levels of debt. Nevertheless, the sustainability of these gains is put at risk by the wider issue of decreased agricultural production at the household level, in a context where agriculture is a primary food source for many key staples of the Nepali diet. Indeed, a majority of households (85%) reported needing food and cash assistance in the next six months. Moving forward, and as the international community begins concerted efforts to pursue long-term sustainable solutions, it is critical that these do not come at the expense of residual humanitarian needs in the immediate and medium term. Indeed, in light of the unfavorable monsoon rainfall and the impact this could have on the harvest of summer crops (maize and paddy), the ongoing fuel crisis and associated food price increases, and the early onset of winter, it is possible that the investment gains that have been realized since May in improving household food security could be reversed as households' food availability and access are affected by recent events.

Much the same can be said of livelihoods. The earthquake destroyed homes as well as productive assets and infrastructure, including storage facilities and agricultural tools. Though it is beyond the scope of this assessment to do so definitively, we can hypothesize that there has also been a negative effect on productivity because of the widespread loss of livestock and other agricultural inputs. Rising debt burdens become more of an issue when viewed against this backdrop; in an effort to offset losses, households appear to have begun to borrow at increased rates. Though we cannot measure the exact impact of this for the time being, going forward it may ultimately result in increased use of coping mechanisms at the expense of wider household welfare, including reversals in improvements to food consumption, increased child labour, and gender discrimination. That said, any recovery effort should aim to restore equitable and inclusive productive capacity in the settings affected by these losses the most; particularly rural and high hill areas.

With very high rates of subsistence farming even during the lean season, agricultural production remains critical to food security. Among the factors described above, pre-existing patterns of farming households' vulnerability remain a key determinant of food insecurity, with Dalit households and those living in the higher hills found to be the most vulnerable. The earthquake, which was most intense precisely in these areas, has had a significant effect on crops – which are overwhelmingly expected to reduce – and on livestock, particularly poultry. This is not only due to the impact of damaged tools and irrigation facilities or seed loss, but also the landslides that followed and devastated fields.

A reduction in food production may cause a rise in food insecurity, despite the temporary recovery observed currently which may be attributable to humanitarian assistance, remittances, and availability of labour opportunities related to reconstruction. However, the vast majority of agricultural households continue to request assistance (93%), particularly for seeds, irrigation repair, chemical inputs, and for livestock veterinary services and animal feed. Building back better entails increasing resilience to landslides and using storage facilities and shelters that are designed to better resist future earthquakes and therefore reduce losses such as livestock and seeds. A longer term strategy will also be needed to address low yields, particularly in higher hill areas where few irrigation systems exist; and also deter land fragmentation through the enhancement of off-farm opportunities. Improving equitable access to markets may also prove an effective way to increase smallholders' investments in infrastructure and chemical inputs.

Protection issues remain a concern, chiefly access to key documentation including documents of citizenship and land deeds. Being more problematic in rural areas, the manner in which this will affect the distribution of reconstruction assistance and other

household-level interventions for the most vulnerable rural and ethnic groups is of concern, especially once the scale of humanitarian assistance decreases. It also renders households more vulnerable to land fragmentation, arbitrary evictions and extortionate rent pricing in an agrarian setting where land is a key input into the income generation process, with consequences for other household welfare outcomes.

Ultimately, it is clear that though recovery has occurred, its sustainability remains tenuous and at risk of reversal from a range of factors, including further natural hazards and weather patterns, disruptions to supply chains and market activity, the long-term effects of the earthquake, rising debt levels and diminished productivity. This is especially true in the rural and high hill areas where welfare is generally lower and where physical access remains an issue. It may also mean that humanitarian assistance might need to be sustained in a targeted manner while broader recovery and reconstruction efforts are on-going, particularly in high hill and rural areas where losses to physical assets and livelihoods pose the greatest risk to food security and productivity.

ANNEXES

District Factsheets

Dhading
Dolakha
Gorkha
Kabhrepalanchok
Makawanpur
Nuwakot
Okhaldhunga
Ramechhap
Rasuwa
Sindhuli
Sindhupalchok

Maps

Food Security by District
Reported Income by District
Reported Agriculture and Livestock Losses
Reported Access to Facilities and Services

Nepal Earthquake Response

Dhading District - Profile

Joint Assessment of Food Security, Livelihoods and Early Recovery, November 2015

SUMMARY

This profile provides an overview of key indicators for Dhading district. Findings are based on primary data collected from September to October 2015 as part of a joint assessment of Food Security, Livelihoods and Early Recovery.

Findings are based on a statistically significant sample of 382 households at district level, with a 95% confidence level and 7% margin of error.

DEMOGRAPHICS

47% MALE / 53% FEMALE

7%	60+	6%
24%	17 - 59	29%
12%	5 - 16	14%
4%	0 - 4	4%

15% of households were led by a female head of household

PROTECTION

60% of individuals reported possessing citizenship/ID documents

95% of households reported knowing where to access documents

7% of households reported not possessing land/ property documents

4% of district population reported to have migrated since the earthquake

1% of individuals intending to migrate within the next 3 months

FOOD SECURITY

Food Consumption Score

HHs had the following Food Consumption Group:

83% Acceptable
14% Borderline
3% Poor

Reported time taken to access the closest market:

Up to 1 hour	**63% households**
1-2 hours	**20% households**
More than 2 hours	**17% households**

Dietary Diversity

HHs had the following Dietary Diversity Classification:

77% High
21% Medium
2% Low

22% of households reported using at least one coping behaviour

The top three coping strategies reported by households were:

64% Borrowing
3% Selling animals
0.3% Eating seed stock

INCOME AND LIVELIHOODS

85% of households reported outstanding debt

AGRICULTURE

Impact of Earthquakes

87% of households reported engagement in agricultural activities

82% of households reported to have no access to irrigation

Proportion of households reporting damage to assets:

Livestock shed	65%
Storage facility	42%
Sickle	19%
Spade	20%
Doko basket	14%
Other agricultural goods	27%

Reported degree of damage to irrigation infrastructure:

51% Functional
46% Partially functional
3% Not functional
0% Do not know

Reported degree of damage to storage facilities:

8% >75% damaged
57% 51-75% damaged
32% 26-50% damaged
3% 0-25% damaged
0% No damage

Reported degree of damage to animal shelters:

62% Damaged, temporary shelter built
22% Damaged, new shelter built
5% Damaged, remains damaged
0% Damaged, other
11% No damage

% of households reportedly expecting a loss of crops:

Rice	Maize	Wheat	Barley	Potato	Millet	Pulses
76%	79%	20%	3%	51%	60%	26%

ACCESS TO SERVICES

Households reported the following primary water sources:

82% Piped water
18% Surface water
0.3% Protected well
0% other

97% of HHs reported receiving aid since the earthquake

28% of HHs reported contraints to accessing healthcare

Of households reporting healthcare access constraints, the top three reasons were:

Distance	84%
Cost of transport	35%
Cost of treatment	52%

These factsheets were prepared in partnership with the Government of Nepal, OCHA, WFP, FAO, UNDP, Nepal Red Cross Society and REACH.

Nepal Earthquake Response
Dolakha District - Profile
Joint Assessment of Food Security, Livelihoods and Early Recovery, November 2015

SUMMARY

This profile provides an overview of key indicators for Dolakha district. Findings are based on primary data collected from September to October 2015 as part of a joint assessment of Food Security, Livelihoods and Early Recovery.

Findings are based on a statistically significant sample of 380 households at district level, with a 95% confidence level and 7% margin of error.

DEMOGRAPHICS

47% MALE / 53% FEMALE

6%	60+	7%
24%	17 - 59	31%
13%	5 - 16	12%
4%	0 - 4	3%

24% of households were led by a female head of household

PROTECTION

63% of individuals reported possessing citizenship/ID documents

92% of households reported knowing where to access documents

5% of households reported not possessing land/ property documents

3% of district population reported to have migrated since the earthquake

2% of individuals intending to migrate within the next 3 months

FOOD SECURITY

Food Consumption Score

HHs had the following Food Consumption Group:

66% Acceptable
26% Borderline
8% Poor

Reported time taken to access the closest market:

Up to 1 hour	**57% households**
1-2 hours	**19% households**
More than 2 hours	**24% households**

Dietary Diversity Score

HHs had the following Dietary Diversity Classification:

50% High
46% Medium
4% Low

48% of households reported using at least one coping behaviour

The top three coping strategies reported by households were:

67% Borrowing
2% Selling animals
1% Eating seed stock

INCOME AND LIVELIHOODS

84% of households reported outstanding debt

AGRICULTURE

Impact of Earthquakes

81% of households reported engagement in agricultural activities

72% of households reported to have no access to irrigation

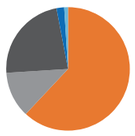
Proportion of households reporting damage to assets:

Livestock shed	41%
Storage facility	50%
Sickle	41%
Spade	43%
Doko basket	40%
Other agrilcultural goods	43%

Reported degree of damage to irrigation infrastructure:

54% Functional
28% Partially functional
18% Not functional
0% Do not know

Reported degree of damage to storage facilities:



62% >75% damaged
12% 51-75% damaged
23% 26-50% damaged
2% 0-25% damaged
1% No damage

Reported degree of damage to animal shelters:

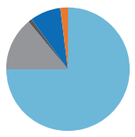
62% Damaged, temporary shelter built
3% Damaged, new shelter built
5% Damaged, remains damaged
0% Damaged, other
30% No damage

% of households reportedly expecting a loss of crops:

Rice	Maize	Wheat	Barley	Potato	Millet	Pulses
69%	64%	52%	42%	52%	49%	59%

ACCESS TO SERVICES

Households reported the following primary water sources:



75% Piped water
14% Surface water
1% Protected well
8% Water truck
2% Unprotected well

98% of HHs reported receiving aid since the earthquake

18% of HHs reported contraints to accessing healthcare

Of households reporting healthcare access constraints, the top three reasons were:

Distance	87%
Cost of transport	68%
Cost of treatment	65%

These factsheets were prepared in partnership with the Government of Nepal, OCHA, WFP, FAO, UNDP, Nepal Red Cross Society and REACH

Nepal Earthquake Response

Gorkha District - Profile

Joint Assessment of Food Security, Livelihoods and Early Recovery, November 2015

SUMMARY

This profile provides an overview of key indicators for Gorkha district. Findings are based on primary data collected from September to October 2015 as part of a joint assessment of Food Security, Livelihoods and Early Recovery.

Findings are based on a statistically significant sample of 378 households at district level, with a 95% confidence level and 7% margin of error.

DEMOGRAPHICS

48% MALE / 52% FEMALE

6%	60+	7%
25%	17 - 59	31%
13%	5 - 16	11%
4%	0 - 4	3%

34% of households were led by a female head of household

PROTECTION

67% of individuals reported possessing citizenship/ID documents

96% of households reported knowing where to access documents

15% of households reported not possessing land/ property documents

6% of district population reported to have migrated since the earthquake

5% of individuals intending to migrate within the next 3 months

FOOD SECURITY

Food Consumption Score

HHs had the following Food Consumption Group:

72% Acceptable
17% Borderline
11% Poor

Reported time taken to access the closest market:

Up to 1 hour	**78% households**
1-2 hours	**11% households**
More than 2 hours	**10% households**

Dietary Diversity Score

HHs had the following Dietary Diversity

Classification:

57% High
39% Medium
4% Low

18% of households reported using at least one coping behaviour

The top three coping strategies reported by households were:

48% Borrowing
7% Selling animals
1% Eating seed stock

INCOME AND LIVELIHOODS

67% of households reported outstanding debt

AGRICULTURE

Impact of Earthquakes

67% of households reported engagement in agricultural activities

68% of households reported to have no access to irrigation

Proportion of households reporting damage to assets:

Livestock shed	27%
Storage facility	28%
Sickle	15%
Spade	14%
Doko basket	17%
Other agricultural tools	10

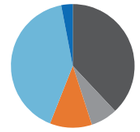
Reported degree of damage to irrigation infrastructure:

71% Functional
20% Partially functional
9% Not functional
0% Do not know

Reported degree of damage to storage facilities:

55% >75% damaged
22% 51-75% damaged
12% 26-50% damaged
10% 0-25% damaged
1% No damage

Reported degree of damage to animal shelters:



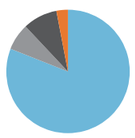
38% Damaged, temporary shelter built
7% Damaged, new shelter built
11% Damaged, remains damaged
3% Damaged, other
41% No damage

% of households reportedly expecting a loss of crops:

Rice	Maize	Wheat	Barley	Potato	Millet	Pulses
80%	42%	17%	25%	16%	43%	48%

ACCESS TO SERVICES

Households reported the following primary water sources:



81% Piped water
7% Surface water
9% Protected well
0% Water truck
3% Unprotected well

97% of HHs reported receiving aid since the earthquake

9% of HHs reported contraints to accessing healthcare

Of households reporting healthcare access constraints, the top three reasons were:

Distance	82%
Cost of transport	85%
Cost of treatment	79%

These factsheets were prepared in partnership with the Government of Nepal, OCHA, WFP, FAO, UNDP, Nepal Red Cross Society and REACH.

Nepal Earthquake Response

Kabhrepalanchok District - Profile

Joint Assessment of Food Security, Livelihoods and Early Recovery, November 2015

SUMMARY

This profile provides an overview of key indicators for Kabhrepalanchok district. Findings are based on primary data collected from September to October 2015 as part of a joint assessment of Food Security, Livelihoods and Early Recovery.

Findings are based on a statistically significant sample of 380 households at district level, with a 95% confidence level and 7% margin of error.

DEMOGRAPHICS

48% MALE / 52% FEMALE

5%	60+	6%
29%	17 - 59	31%
10%	5 - 16	11%
4%	0 - 4	4%

22% of households were led by a female head of household

PROTECTION

65% of individuals reported possessing citizenship/ID documents

84% of households reported knowing where to access documents

12% of households reported not possessing land/ property documents

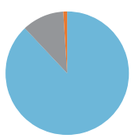
3% of district population reported to have migrated since the earthquake

3% of individuals intending to migrate within the next 3 months

FOOD SECURITY

Food Consumption Score

HHs had the following Food Consumption Group:



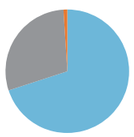
88% Acceptable
11% Borderline
1% Poor

Reported time taken to access the closest market:

Up to 1 hour	**65% households**
1-2 hours	**22% households**
More than 2 hours	**13% households**

Dietary Diversity Score

HHs had the following Dietary Diversity Classification:



70% High
29% Medium
1% Low

40% of households reported using at least one coping behaviour

The top three coping strategies reported by households were:

64% Borrowing
16% Selling animals
3% Eating seed stock

INCOME AND LIVELIHOODS

82% of households reported outstanding debt

AGRICULTURE

Impact of Earthquakes

71% of households reported engagement in agricultural activities

67% of households reported to have no access to irrigation

Proportion of households reporting damage to assets:

Livestock shed	70%
Storage facility	19%
Sickle	40%
Spade	41%
Doko basket	36%
Other agricultural tools	16

Reported degree of damage to irrigation infrastructure:

23% Functional
67% Partially functional
9% Not functional
0% Do not know

Reported degree of damage to storage facilities:

44% >75% damaged
22% 51-75% damaged
18% 26-50% damaged
15% 0-25% damaged
1% No damage

Reported degree of damage to animal shelters:

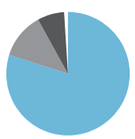
37% Damaged, temporary shelter built
5% Damaged, new shelter built
45% Damaged, remains damaged
3% Damaged, other
10% No damage

% of households reportedly expecting a loss of crops:

Rice	Maize	Wheat	Barley	Potato	Millet	Pulses
69%	80%	52%	37%	45%	74%	71%

ACCESS TO SERVICES

Households reported the following primary water sources:



80% Piped water
12% Surface water
7% Protected well
0.5% Hand pump
0.5% Unprotected well

95% of HHs reported receiving aid since the earthquake

18% of HHs reported contraints to accessing healthcare

Of households reporting healthcare access constraints, the top three reasons were:

Distance	85%
Cost of transport	60%
Cost of treatment	45%

These factsheets were prepared in partnership with the Government of Nepal, OCHA, WFP, FAO, UNDP, Nepal Red Cross Society and REACH.

Nepal Earthquake Response

Makawanpur District - Profile

Joint Assessment of Food Security, Livelihoods and Early Recovery, November 2015

SUMMARY

This profile provides an overview of key indicators for Makawanpur district. Findings are based on primary data collected from September to October 2015 as part of a joint assessment of Food Security, Livelihoods and Early Recovery.

Findings are based on a statistically significant sample of 380 households at district level, with a 95% confidence level and 7% margin of error.

DEMOGRAPHICS

50% MALE / 50% FEMALE

6%	60+	6%
28%	17 - 59	31%
12%	5 - 16	10%
4%	0 - 4	3%

24% of households were led by a female head of household

PROTECTION

66% of individuals reported possessing citizenship/ID documents

96% of households reported knowing where to access documents

15% of households reported not possessing land/ property documents

2% of district population reported to have migrated since the earthquake

3% of individuals intending to migrate within the next 3 months

FOOD SECURITY

Food Consumption Score

HHs had the following Food Consumption Group:

91% Acceptable
7% Borderline
2% Poor

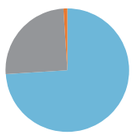
F

Reported time taken to access the closest market:

Up to 1 hour	**86% households**
1-2 hours	**9% households**
More than 2 hours	**5% households**

Dietary Diversity Score

HHs had the following Dietary Diversity Classification:



74% High
25% Medium
1% Low

9% of households reported using at least one coping behaviour

The top three coping strategies reported by households were:

13% Borrowing
1% Selling animals
1% Eating seed stock

INCOME AND LIVELIHOODS

75% of households reported outstanding debt

AGRICULTURE

Impact of Earthquakes

44% of households reported engagement in agricultural activities

64% of households reported to have no access to irrigation

Proportion of households reporting damage to assets:

Livestock shed	3%
Storage facility	1%
Sickle	1%
Spade	1%
Doko basket	0%
Other agricultural tools	0%

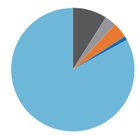
Reported degree of damage to irrigation infrastructure:

70% Functional
26% Partially functional
4% Not functional
0% Do not know

Reported degree of damage to storage facilities:

41% >75% damaged
15% 51-75% damaged
10% 26-50% damaged
15% 0-25% damaged
19% No damage

Reported degree of damage to animal shelters:



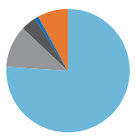
9% Damaged, temporary shelter built
3% Damaged, new shelter built
4% Damaged, remains damaged
1% Damaged, other
83% No damage

% of households reportedly expecting a loss of crops:

Rice	Maize	Wheat	Barley	Potato	Millet	Pulses
49%	36%	33%	20%	24%	32%	25%

ACCESS TO SERVICES

Households reported the following primary water sources:



76% Piped water
11% Surface water
4% Protected well
1% Hand pump
8% Unprotected well
0% Water truck

95% of HHs reported receiving aid since the earthquake

5% of HHs reported contraints to accessing healthcare

Of households reporting healthcare access constraints, the top three reasons were:

Distance	29%
Cost of transport	12%
Cost of treatment	35%

These factsheets were prepared in partnership with the Government of Nepal, OCHA, WFP, FAO, UNDP, Nepal Red Cross Society and REACH.

Nepal Earthquake Response

Nuwakot District - Profile

Joint Assessment of Food Security, Livelihoods and Early Recovery, November 2015

SUMMARY

This profile provides an overview of key indicators for Nuwakot district. Findings are based on primary data collected from September to October 2015 as part of a joint assessment of Food Security, Livelihoods and Early Recovery.

Findings are based on a statistically significant sample of 380 households at district level, with a 95% confidence level and 7% margin of error.

DEMOGRAPHICS

51% MALE / 49% FEMALE

6%	60+	5%
29%	17 - 59	30%
11%	5 - 16	10%
5%	0 - 4	4%

18% of households were led by a female head of household

PROTECTION

64% of individuals reported possessing citizenship/ID documents

88% of households reported knowing where to access documents

12% of households reported not possessing land/ property documents

5% of district population reported to have migrated since the earthquake

3% of individuals intending to migrate within the next 3 months

FOOD SECURITY

Food Consumption Score

HHs had the following Food Consumption Score:

89% Acceptable
10% Borderline
1% Poor

Reported time taken to access the closest market:

Up to 1 hour	**71% households**
1-2 hours	**19% households**
More than 2 hours	**10% households**

Dietary Diversity Score

HHs had the following Dietary Diversity Classification:

67% High
32% Medium
1% Low

25% of households reported using at least one coping behaviour

The top three coping strategies reported by households were:

67% Borrowing
5% Selling animals
4% Eating seed stock

INCOME AND LIVELIHOODS

78% of households reported outstanding debt

AGRICULTURE

Impact of Earthquakes

76% of households reported engagement in agricultural activities

65% of households reported to have no access to irrigation

Proportion of households reporting damage to assets:

Livestock shed	42%
Storage facility	39%
Sickle	27%
Spade	24%
Doko basket	26%
Other agricultural tools	13%

Reported degree of damage to irrigation infrastructure:

48% Functional
40% Partially functional
12% Not functional
0% Do not know

Reported degree of damage to storage facilities:

44% >75% damaged
21% 51-75% damaged
26% 26-50% damaged
8% 0-25% damaged
1% No damage

Reported degree of damage to animal shelters:

39% Damaged, temporary shelter built
16% Damaged, new shelter built
15% Damaged, remains damaged
0% Damaged, other
30% No damage

% of households reportedly expecting a loss of crops:

Rice	Maize	Wheat	Barley	Potato	Millet	Pulses
67%	81%	34%	2%	39%	57%	25%

ACCESS TO SERVICES

Households reported the following primary water sources:

68% Piped water
8% Surface water
10% Protected well
0% Hand pump
14% Unprotected well
0% Bottled water
0% Water truck

97% of HHs reported receiving aid since the earthquake

24% of HHs reported contraints to accessing healthcare

Of households reporting healthcare access constraints, the top three reasons were:

Distance	68%
Cost of transport	51%
Cost of treatment	70%

These factsheets were prepared in partnership with the Government of Nepal, OCHA, WFP, FAO, UNDP, Nepal Red Cross Society and REACH.

Nepal Earthquake Response

Okhaldhunga District - Profile

Joint Assessment of Food Security, Livelihoods and Early Recovery, November 2015

SUMMARY

This profile provides an overview of key indicators for Okhaldunga district. Findings are based on primary data collected from September to October 2015 as part of a joint assessment of Food Security, Livelihoods and Early Recovery.

Findings are based on a statistically significant sample of 383 households at district level, with a 95% confidence level and 7% margin of error.

DEMOGRAPHICS

47% MALE / 53% FEMALE

6%	60+	6%
24%	17 - 59	30%
12%	5 - 16	12%
5%	0 - 4	5%

19% of households were led by a female head of household

PROTECTION

59% of individuals reported possessing citizenship/ID documents

96% of households reported knowing where to access documents

8% of households reported not possessing land/ property documents

1% of district population reported to have migrated since the earthquake

2% of individuals intending to migrate within the next 3 months

FOOD SECURITY

Food Consumption Score

HHs had the following Food Consumption Group:

85% Acceptable
12% Borderline
3% Poor

Reported time taken to access the closest market:

Up to 1 hour	**21% households**
1-2 hours	**24% households**
More than 2 hours	**55% households**

Dietary Diversity Score

HHs had the following Dietary Diversity Classification:

75% High
23% Medium
2% Low

21% of households reported using at least one coping behaviour

The top three coping strategies reported by households were:

65% Borrowing
1% Selling animals
1% Eating seed stock

INCOME AND LIVELIHOODS

86% of households reported outstanding debt

AGRICULTURE

Impact of Earthquakes

91% of households reported engagement in agricultural activities

73% of households reported to have no access to irrigation

Proportion of households reporting damage to assets:

Livestock shed	21%
Storage facility	20%
Sickle	8%
Spade	8%
Doko basket	8%
Other agricultural tools	6%

Reported degree of damage to irrigation infrastructure:

29% Functional
54% Partially functional
17% Not functional
0% Do not know

Reported degree of damage to storage facilities:

24% >75% damaged
18% 51-75% damaged
35% 26-50% damaged
20% 0-25% damaged
3% No damage

Reported degree of damage to animal shelters:

20% Damaged, temporary shelter built
16% Damaged, new shelter built
5% Damaged, remains damaged
0% Damaged, other
59% No damage

% of households reportedly expecting a loss of crops:

Rice	Maize	Wheat	Barley	Potato	Millet	Pulses
29%	87%	43%	0%	40%	40%	35%

ACCESS TO SERVICES

Households reported the following primary water sources:

87% Piped water
7% Surface water
1% Protected well
0% Hand pump
5% Unprotected well
0% Bottled water
0% Water truck

84% of HHs reported receiving aid since the earthquake

42% of HHs reported contraints to accessing healthcare

Of households reporting healthcare access constraints, the top three reasons were:

Distance	93%
Cost of transport	57%
Cost of treatment	73%

These factsheets were prepared in partnership with the Government of Nepal, OCHA, WFP, FAO, UNDP, Nepal Red Cross Society and REACH.

Nepal Earthquake Response

Ramechhap District - Profile

Joint Assessment of Food Security, Livelihoods and Early Recovery, November 2015

SUMMARY

This profile provides an overview of key indicators for Ramechhap district. Findings are based on primary data collected from September to October 2015 as part of a joint assessment of Food Security, Livelihoods and Early Recovery.

Findings are based on a statistically significant sample of 380 households at district level, with a 95% confidence level and 7% margin of error.

DEMOGRAPHICS

47% MALE / 53% FEMALE

5%	60+	7%
24%	17 - 59	30%
14%	5 - 16	13%
4%	0 - 4	3%

20% of households were led by a female head of household

PROTECTION

59% of individuals reported possessing citizenship/ID documents

83% of households reported knowing where to access documents

11% of households reported not possessing land/ property documents

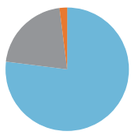
8% of district population reported to have migrated since the earthquake

7% of individuals intending to migrate within the next 3 months

FOOD SECURITY

Food Consumption Score

HHs had the following Food Consumption Group:



77% Acceptable
21% Borderline
2% Poor

Reported time taken to access the closest market:

Up to 1 hour	**47% households**
1-2 hours	**24% households**
More than 2 hours	**29% households**

Dietary Diversity

HHs had the following Dietary Diversity Classification:

55% High
43% Medium
2% Low

23% of households reported using at least one coping behaviour

The top three coping strategies reported by households were:

61% Borrowing
0% Selling animals
6% Eating seed stock

INCOME AND LIVELIHOODS

88% of households reported outstanding debt

AGRICULTURE

Impact of Earthquakes

92% of households reported engagement in agricultural activities

72% of households reported to have no access to irrigation

Proportion of households reporting damage to assets:

Livestock shed	45%
Storage facility	12%
Sickle	20%
Spade	20%
Doko basket	15%
Other agricultural tools	10%

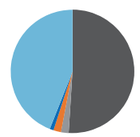
Reported degree of damage to irrigation infrastructure:

23% Functional
75% Partially functional
2% Not functional
0% Do not know

Reported degree of damage to storage facilities:

38% >75% damaged
17% 51-75% damaged
30% 26-50% damaged
15% 0-25% damaged
0% No damage

Reported degree of damage to animal shelters:



51% Damaged, temporary shelter built
2% Damaged, new shelter built
2% Damaged, remains damaged
1% Damaged, other
44% No damage

% of households reportedly expecting a loss of crops:

Rice	Maize	Wheat	Barley	Potato	Millet	Pulses
56%	73%	51%	60%	38%	44%	54%

ACCESS TO SERVICES

Households reported the following primary water sources:

18% Piped water
79% Surface water
1% Protected well
0% Hand pump
2% Unprotected well
0% Bottled water
0% Water truck

12% of HHs reported contraints to accessing healthcare

99% of HHs reported receiving aid since the earthquake

Of households reporting healthcare access constraints, the top three reasons were:

Distance	49%
Cost of transport	55%
Cost of treatment	36%

These factsheets were prepared in partnership with the Government of Nepal, OCHA, WFP, FAO, UNDP, Nepal Red Cross Society and REACH.

Nepal Earthquake Response

Rasuwa District - Profile

Joint Assessment of Food Security, Livelihoods and Early Recovery, November 2015

SUMMARY

This profile provides an overview of key indicators for Rasuwa district. Findings are based on primary data collected from September to October 2015 as part of a joint assessment of Food Security, Livelihoods and Early Recovery.

Findings are based on a statistically significant sample of 380 households at district level, with a 95% confidence level and 7% margin of error.

DEMOGRAPHICS

49% MALE / 51% FEMALE

5%	60+	5%
28%	17 - 59	29%
11%	5 - 16	12%
5%	0 - 4	5%

14% of households were led by a female head of household

PROTECTION

62% of individuals reported possessing citizenship/ID documents

88% of households reported knowing where to access documents

18% of households reported not possessing land/ property documents

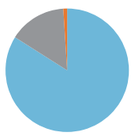
4% of district population reported to have migrated since the earthquake

4% of individuals intending to migrate within the next 3 months

FOOD SECURITY

Food Consumption Score

HHs had the following Food Consumption Group:



84% Acceptable
15% Borderline
1% Poor

Reported time taken to access the closest market:

Up to 1 hour	**58% households**
1-2 hours	**23% households**
More than 2 hours	**18% households**

Dietary Diversity Score

HHs had the following Dietary Diversity

Classification:

57% High DDS
41% Medium DDS
2% Low DDS

22% of households reported using at least one coping behaviour

The top three coping strategies reported by households were:

61% Borrowing
7% Selling animals
6% Eating seed stock

INCOME AND LIVELIHOODS

81% of households reported outstanding debt

AGRICULTURE

Impact of Earthquakes

65% of households reported engagement in agricultural activities

88% of households reported to have no access to irrigation

Proportion of households reporting damage to assets:

Livestock shed	45%
Storage facility	47%
Sickle	59%
Spade	51%
Doko basket	55%
Other agricultural tools	19%

Reported degree of damage to irrigation infrastructure:

19% Functional
68% Partially functional
13% Not functional
0% Do not know

Reported degree of damage to storage facilities:

59% >75% damaged
18% 51-75% damaged
21% 26-50% damaged
2% 0-25% damaged
0% No damage

Reported degree of damage to animal shelters:

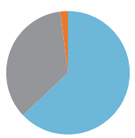
58% Damaged, temporary shelter built
0% Damaged, new shelter built
17% Damaged, remains damaged
3% Damaged, other
22% No damage

% of households reportedly expecting a loss of crops:

Rice	Maize	Wheat	Barley	Potato	Millet	Pulses
62%	88%	69%	65%	67%	57%	69%

ACCESS TO SERVICES

Households reported the following primary water sources:



63% Piped water
35% Surface water
0% Protected well
0% Hand pump
2% Unprotected well
0% Bottled water
0% Water truck

33% of HHs reported contraints to accessing healthcare

100% of HHs reported receiving aid since the earthquake

Of households reporting healthcare access constraints, the top three reasons were:

Distance	55%
Cost of transport	47%
Cost of treatment	50%

These factsheets were prepared in partnership with the Government of Nepal, OCHA, WFP, FAO, UNDP, Nepal Red Cross Society and REACH.

Nepal Earthquake Response

Sindhuli District - Profile

Joint Assessment of Food Security, Livelihoods and Early Recovery, November 2015

SUMMARY

This profile provides an overview of key indicators for Sindhuli district. Findings are based on primary data collected from September to October 2015 as part of a joint assessment of Food Security, Livelihoods and Early Recovery.

Findings are based on a statistically significant sample of 381 households at district level, with a 95% confidence level and 7% margin of error.

DEMOGRAPHICS

48% MALE / 53% FEMALE

5%	60+	5%
25%	17 - 59	30%
13%	5 - 16	14%
5%	0 - 4	4%

19% of households were led by a female head of household

PROTECTION

59% of individuals reported possessing citizenship/ID documents

97% of households reported knowing where to access documents

17% of households reported not possessing land/ property documents

5% of district population reported to have migrated since the earthquake

5% of individuals intending to migrate within the next 3 months

AGRICULTURE

Impact of Earthquakes

71% of households reported engagement in agricultural activities

Proportion of households reporting damage to assets:

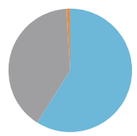
Livestock shed	16%
Storage facility	9%
Sickle	2%
Spade	2%
Doko basket	2%
Other agricultural tools	4%

Reported degree of damage to storage facilities:

31% >75% damaged
30% 51-75% damaged
21% 26-50% damaged
16% 0-25% damaged
2% No damage

42% of households reported to have no access to irrigation

Reported degree of damage to irrigation infrastructure:



60% Functional
40% Partially functional
1% Not functional
0% Do not know

Reported degree of damage to animal shelters:

34% Damaged, temporary shelter built
4% Damaged, new shelter built
5% Damaged, remains damaged
0% Damaged, other
57% No damage

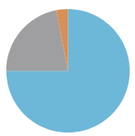
% of households reportedly expecting a loss of crops:

Rice	Maize	Wheat	Barley	Potato	Millet	Pulses
44%	46%	25%	17%	25%	32%	42%

FOOD SECURITY

Food Consumption Score

HHs had the following Food Consumption Group:



75% Acceptable
22% Borderline
3% Poor

Dietary Diversity Score

HHs had the following Dietary Diversity Classification:

62% High
36% Medium
2% Low

Reported time taken to access the closest market:

Up to 1 hour	63% households
1-2 hours	22% households
More than 2 hours	14% households

14% of households reported using at least one coping behaviour

The top three coping strategies reported by households were:

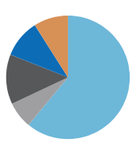
60% Borrowing
2% Selling animals
0% Eating seed stock

INCOME AND LIVELIHOODS

88% of households reported outstanding debt

ACCESS TO SERVICES

Households reported the following primary water sources:



61% Piped water
7% Surface water
13% Protected well
10% Hand pump
9% Unprotected well
0% Bottled water
0% Water truck

12% of HHs reported contraints to accessing healthcare

56% of HHs reported receiving aid since the earthquake

Of households reporting healthcare access constraints, the top three reasons were:

Distance	39%
Cost of transport	34%
Cost of treatment	50%

These factsheets were prepared in partnership with the Government of Nepal, OCHA, WFP, FAO, UNDP, Nepal Red Cross Society and REACH.

Nepal Earthquake Response

Sindhupalchok District - Profile

Joint Assessment of Food Security, Livelihoods and Early Recovery, November 2015

SUMMARY

This profile provides an overview of key indicators for Sindhupalchok district. Findings are based on primary data collected from September to October 2015 as part of a joint assessment of Food Security, Livelihoods and Early Recovery.

Findings are based on a statistically significant sample of 380 households at district level, with a 95% confidence level and 7% margin of error.

DEMOGRAPHICS

50% MALE / 50% FEMALE

6%	60+	6%
27%	17 - 59	28%
13%	5 - 16	13%
4%	0 - 4	3%

13% of households were led by a female head of household

PROTECTION

61% of individuals reported possessing citizenship/ID documents

87% of households reported knowing where to access documents

11% of households reported not possessing land/ property documents

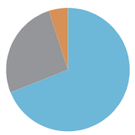
7% of district population reported to have migrated since the earthquake

6% of individuals intending to migrate within the next 3 months

FOOD SECURITY

Food Consumption Score

HHs had the following Food Consumption Group:



69% Acceptable
26% Borderline
5% Poor

Reported time taken to access the closest market:

Up to 1 hour	**63% households**
1-2 hours	**18% households**
More than 2 hours	**19% households**

Dietary Diversity Score

HHs had the following Dietary Diversity Classification:

49% High
49% Medium
2% Low

31% of households reported using at least one coping behaviour

The top three coping strategies reported by households were:

53% Borrowing
3% Selling animals
6% Eating seed stock

INCOME AND LIVELIHOODS

70% of households reported outstanding debt

AGRICULTURE

Impact of Earthquakes

86% of households reported engagement in agricultural activities

50% of households reported to have no access to irrigation

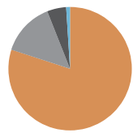
Proportion of households reporting damage to assets:

Livestock shed	72%
Storage facility	53%
Sickle	56%
Spade	55%
Doko basket	57%
Other agricultural tools	50%

Reported degree of damage to irrigation infrastructure:

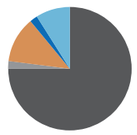
9% Functional
58% Partially functional
32% Not functional
1% Do not know

Reported degree of damage to storage facilities:



80% >75% damaged
14% 51-75% damaged
5% 26-50% damaged
0% 0-25% damaged
1% No damage

Reported degree of damage to animal shelters:



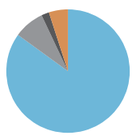
75% Damaged, temporary shelter built
2% Damaged, new shelter built
12% Damaged, remains damaged
2% Damaged, other
9% No damage

% of households reportedly expecting a loss of crops:

Rice	Maize	Wheat	Barley	Potato	Millet	Pulses
87%	90%	81%	90%	82%	83%	93%

ACCESS TO SERVICES

Households reported the following primary water sources:



85% Piped water
8% Surface water
2% Protected well
0% Hand pump
5% Unprotected well
0% Bottled water
0% Water truck

38% of HHs reported contraints to accessing healthcare

98% of HHs reported receiving aid since the earthquake

Of households reporting healthcare access constraints, the top three reasons were:

Distance	66%
Cost of transport	59%
Cost of treatment	74%

These factsheets were prepared in partnership with the Government of Nepal, OCHA, WFP, FAO, UNDP, Nepal Red Cross Society and REACH.

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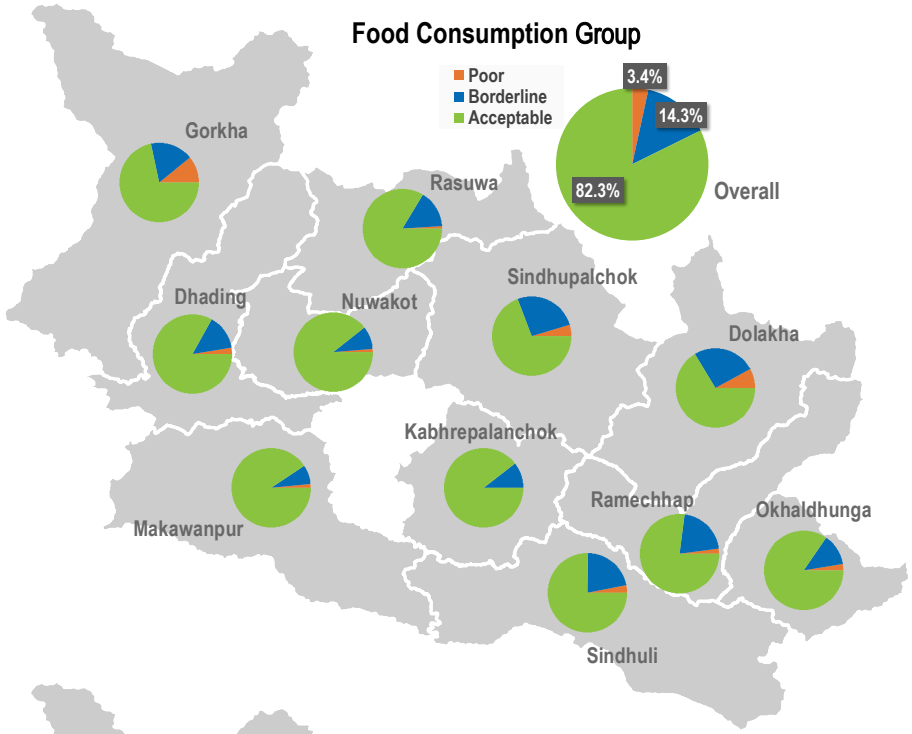
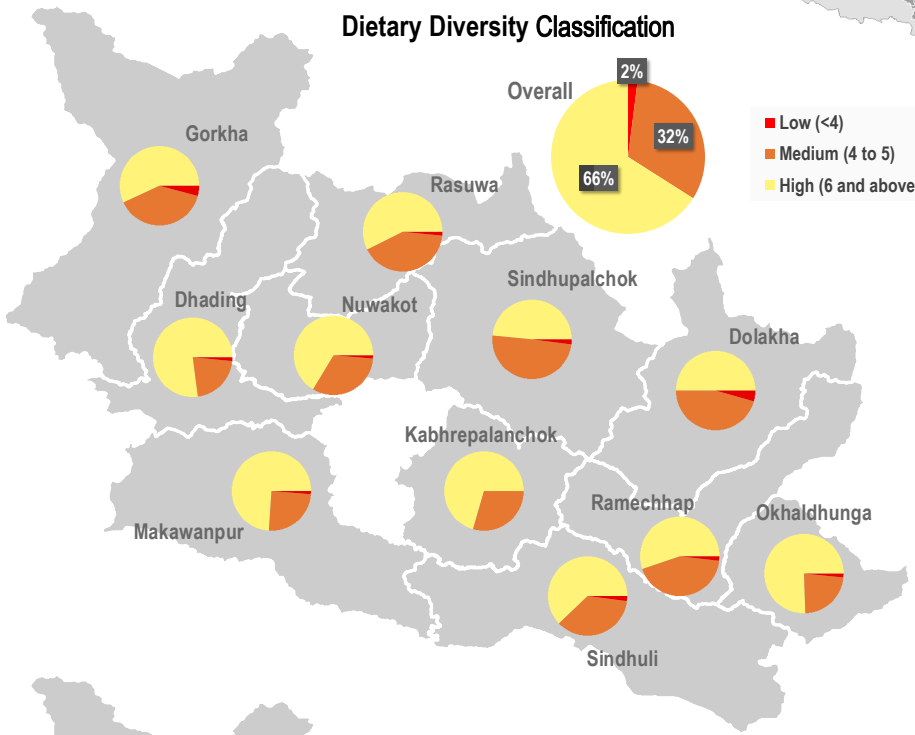
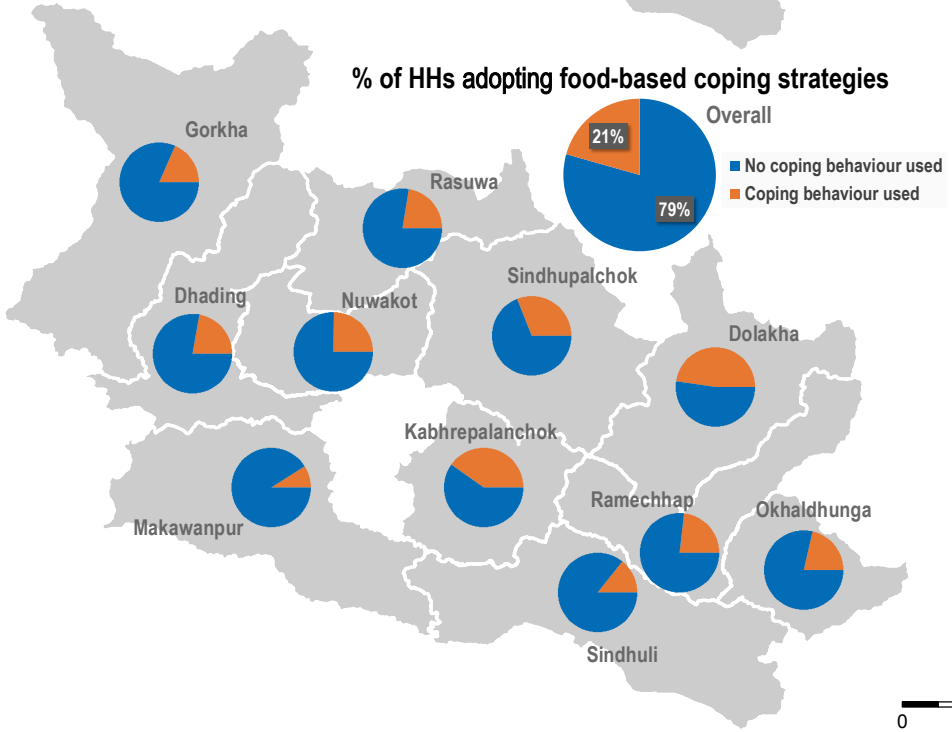
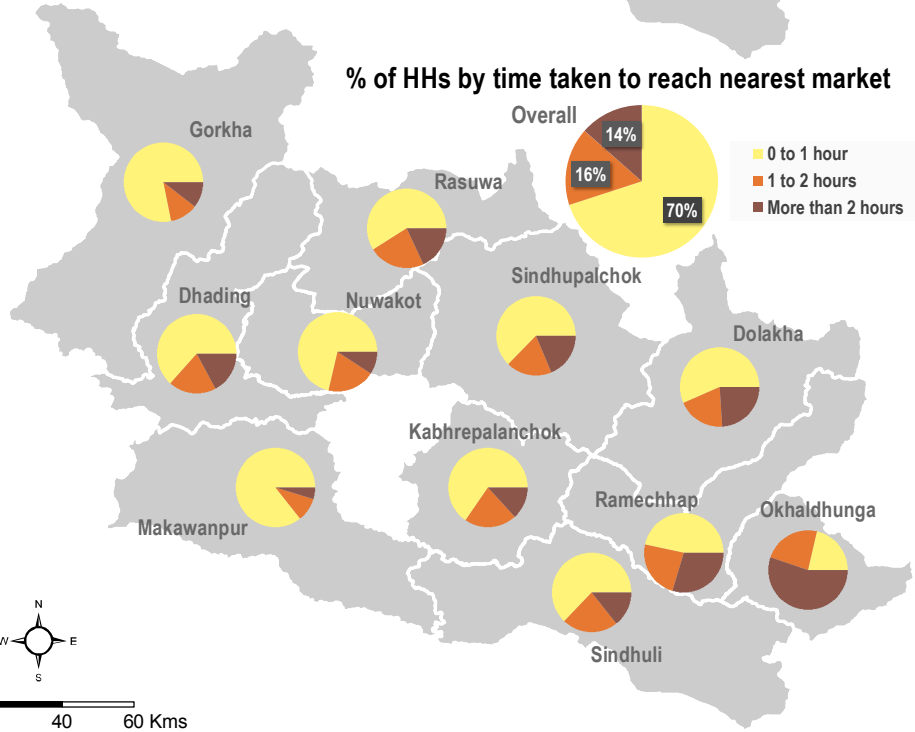
Food Security by District









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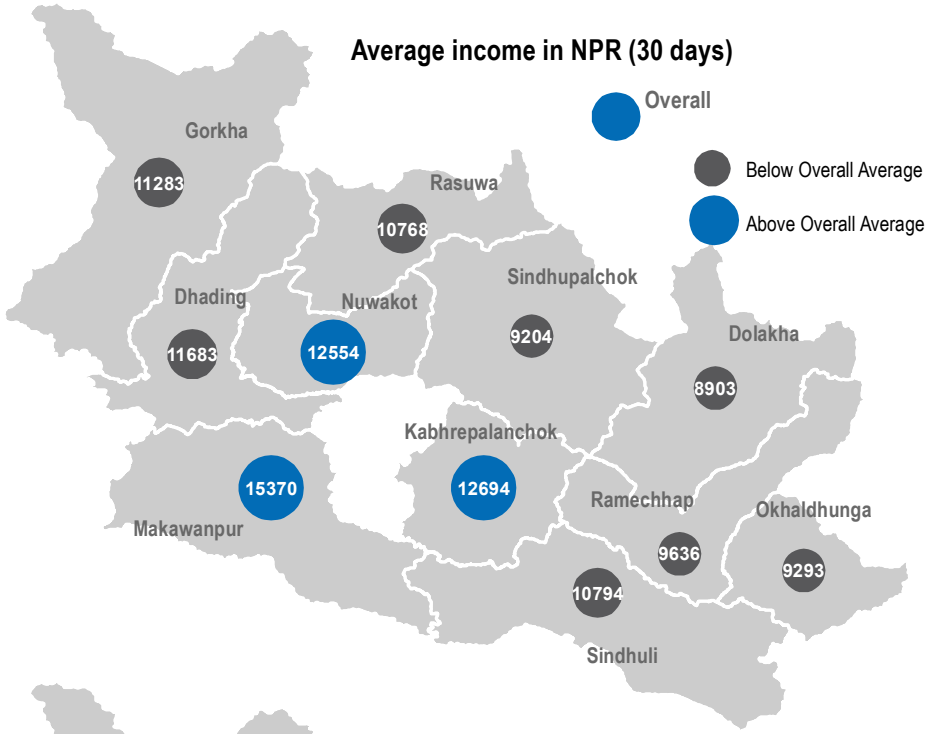
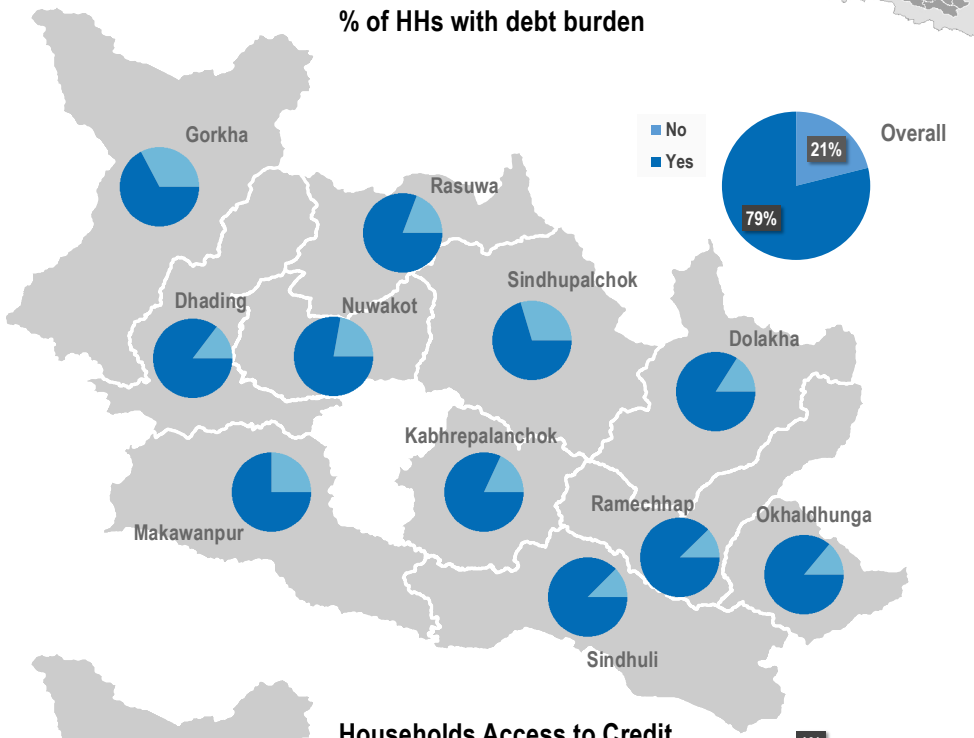
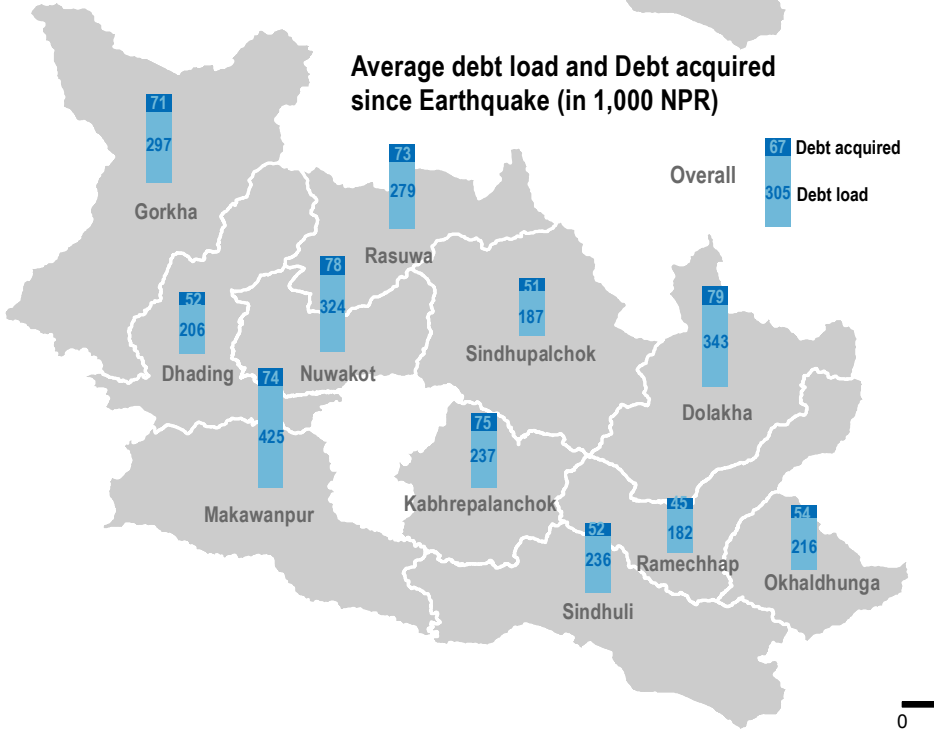
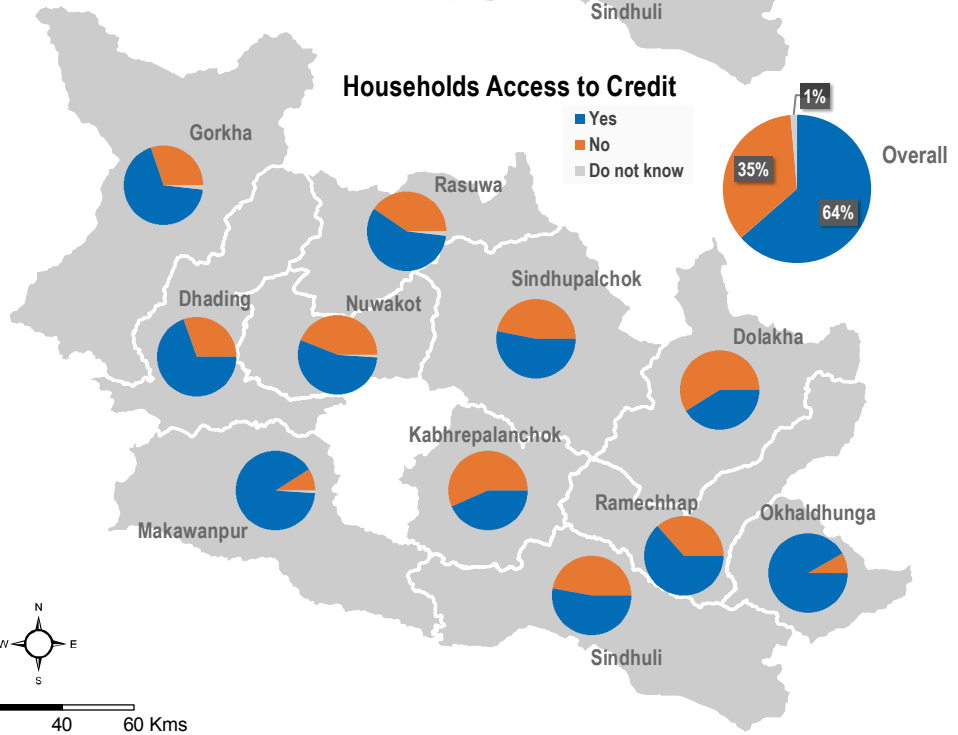
Reported Income by District









0 20 40 60 Kms

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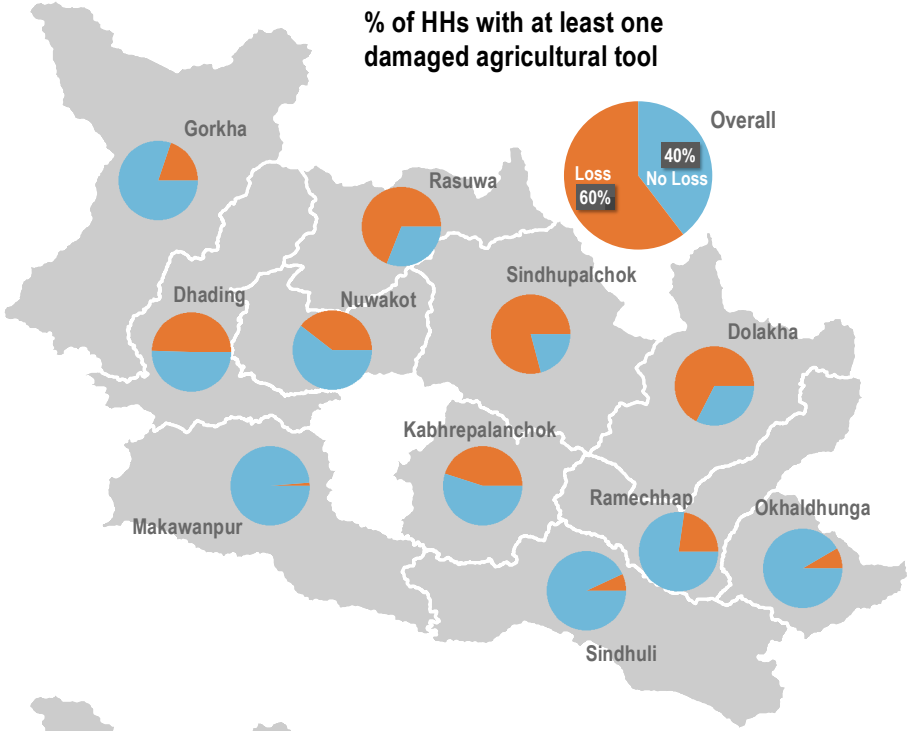
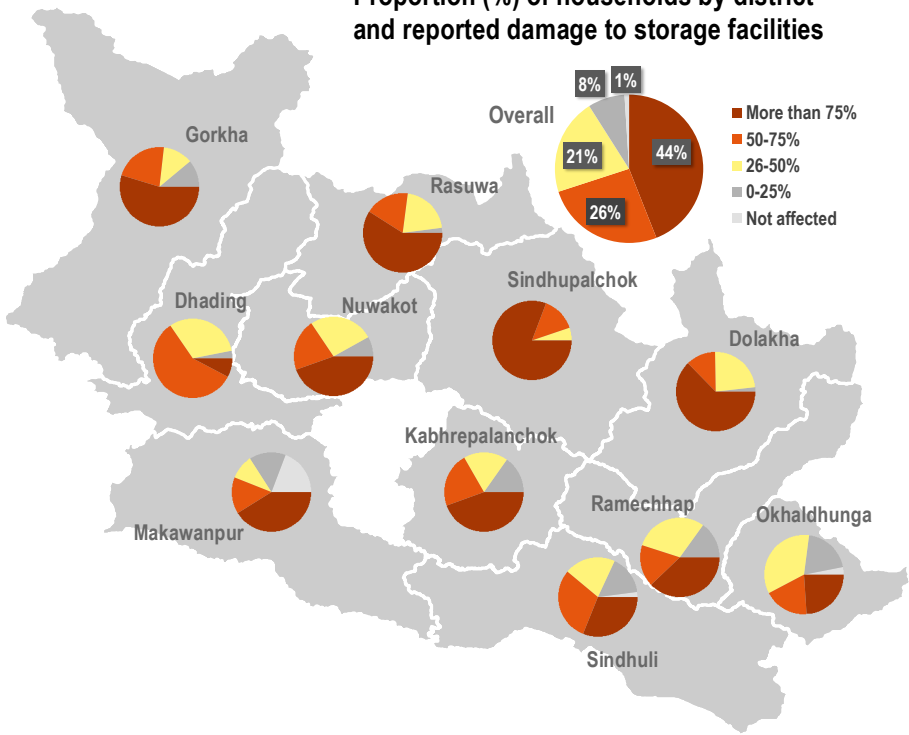
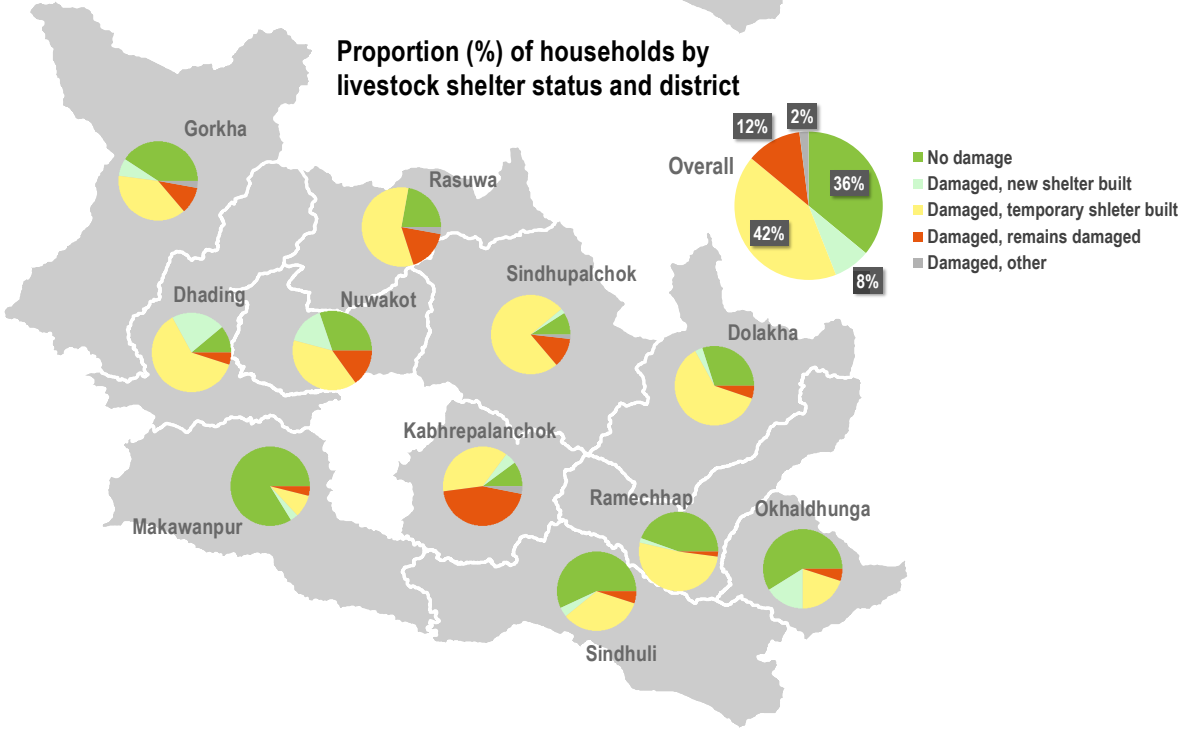
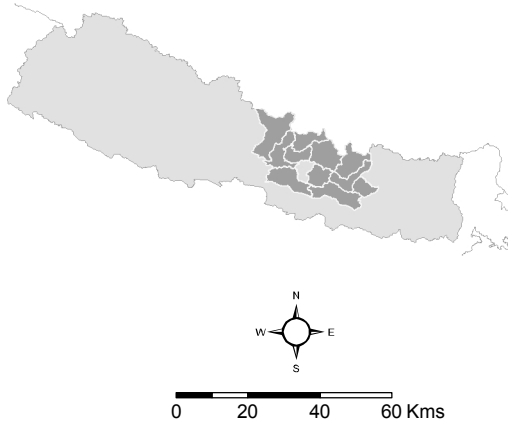
Reported Agriculture and Livestock Losses









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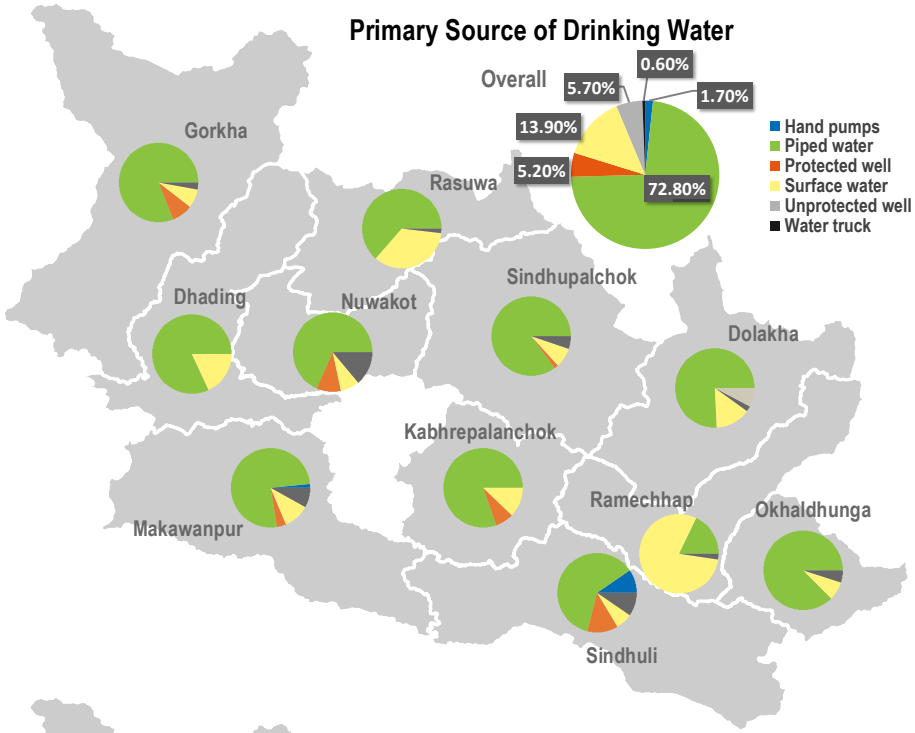
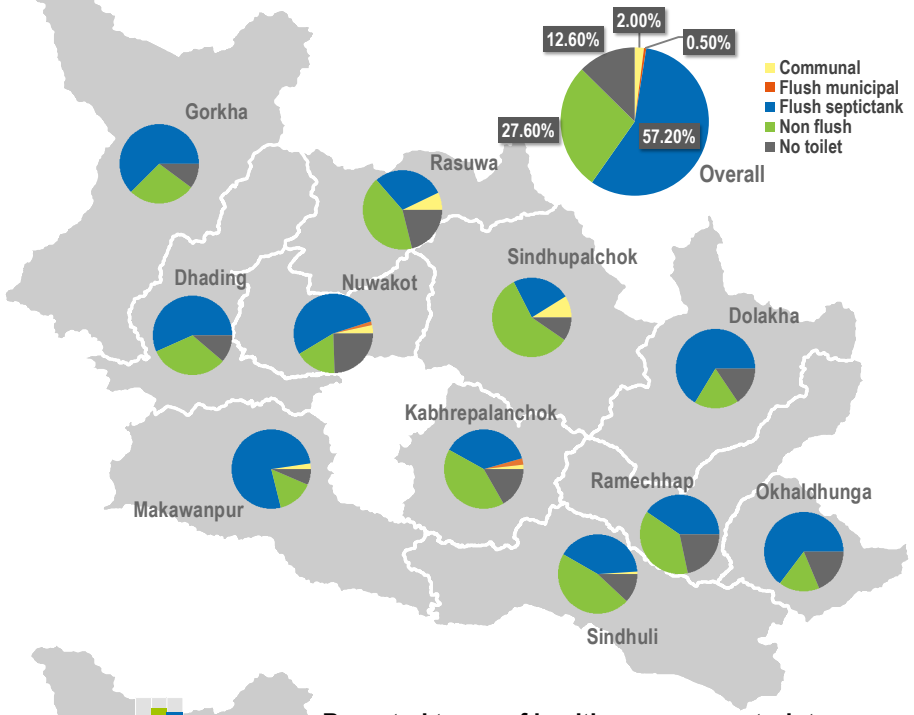
Reported Access to Facilities and Services

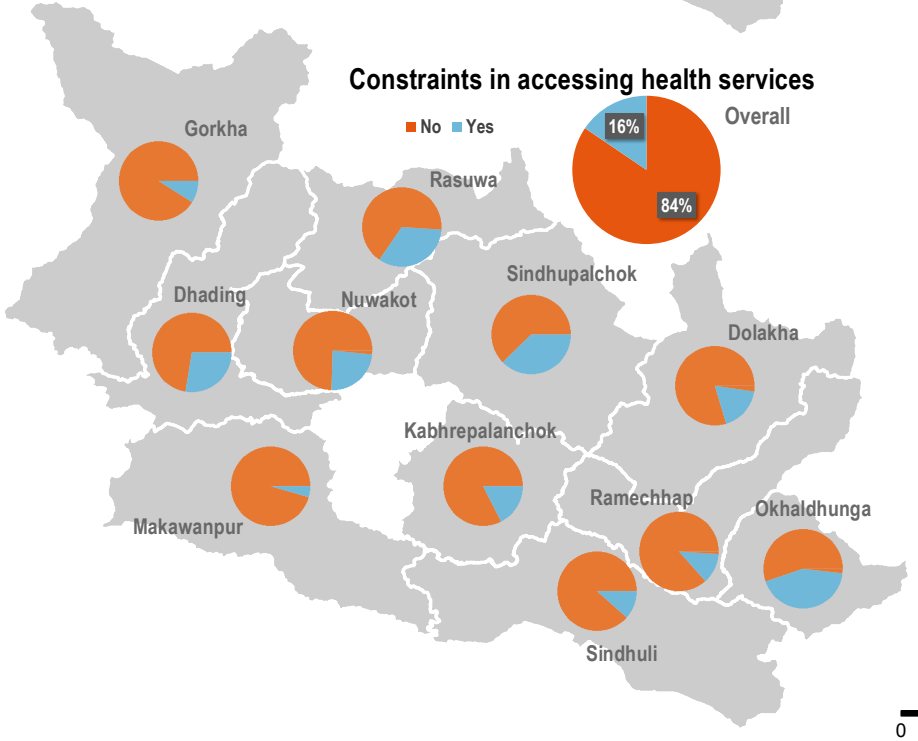
Primary Source of Drinking Water



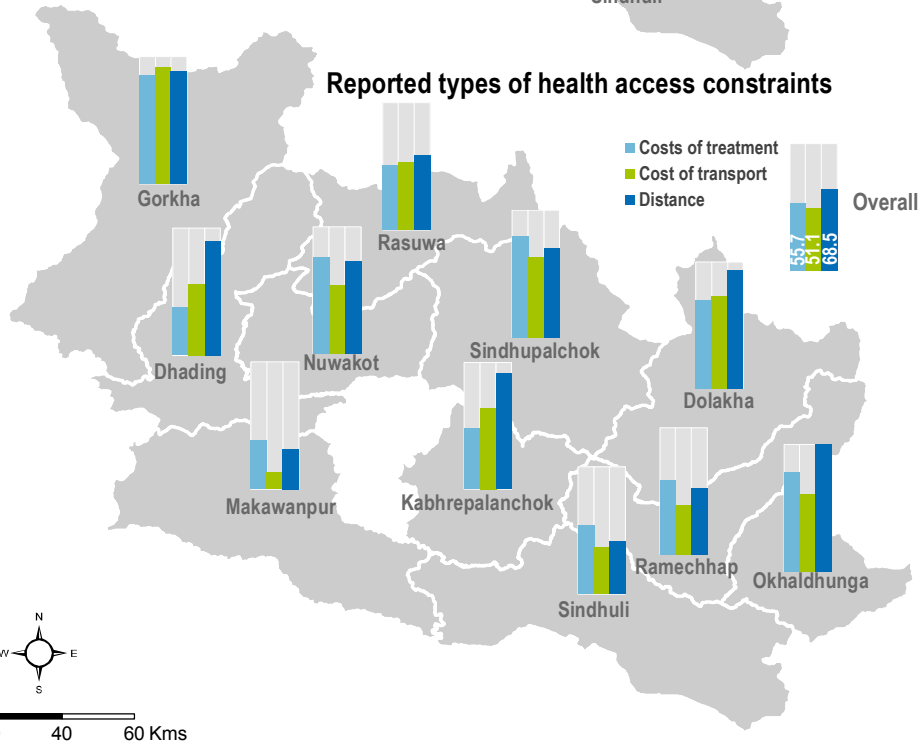
Primary Type of Latrine

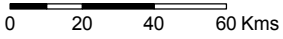


Constraints in accessing health services



Reported types of health access constraints





Key Informant Survey

Profile

1. District
   a) Dhading
   b) Dolakha
   c) Gorkha
   d) Kabhrepalanchok
   e) Makawanpur
   f) Nuwakot
   g) Okhaldhunga
   h) Ramechhap
   i) Rasuwa
   j) Sindhuli
   k) Sindhupalchok
2. Ward name
3. Is this site urban or rural? a) Urban b) Rural
4. What is the name of the respondent?
5. What is the gender of the respondent? a) Female b) Male
6. Mobile phone number of respondent:
7. What is the respondent's position/occupation? a) Ward Citizenship Forum Chairperson b) Other (specify)

Damage and Access

8. How was the site accessed during the monsoon this year and how is it accessed at present? **(select multiple)** a) Truck b) Four by four c) Motorbike d) Foot e) Helicopter
9. How functional was community infrastructure before the earthquake and what is the current status of community infrastructure? For each type of infrastructure that is present in the site, please specify whether it is: functional, partly functional, not functional or do not know. a) Irrigation infrastructure b) Aquaculture infrastructure c) Agricultural processing plants d) Commercial farms e) Roads and streets f) Bridges g) Drainage h) Water supply system i) Cooperative buildings j) Milk collection and production centre k) General collection centre l) Market place/haat basar m) Community centre n) Religious sites o) Heritage sites p) Early childhood development centre q) Biogas system r) Micro-hydropower system s) Solar power system t) Electrical distribution system
10. What are this community's top three reconstruction priorities? **(free text input)**
    a) First reconstruction priority
    b) Second reconstruction priority
    c) Third reconstruction priority

Community services and governance

11. What is the gender of the Ward Citizenship Forum chairperson? a) Male b) Female
12. How many males sit on the Ward Citizenship Forum?
13. How many females sit on the Ward Citizenship Forum?
14. What community groups are available in this community? **(select multiple)** a) Women's groups b) Farmer's cooperatives c) Religious groups d) Other (specify)
15. Has there been an increase in reported security concerns since the earthquake? a) Yes b) No c) Do not know
16. If yes, what types of concerns? **(select multiple)** a) Children missing b) Gender-based violence c) Physical violence d) Assault e) Human trafficking f) Robbery g) Other (specify)
17. Is there an early warning system in place in case of floods, landslides and other disasters? a) Yes b) No c) Do not know
18. Is there a market present in this ward? a) Yes b) No

Household Survey

Household Profiling

19. Which district is the household currently residing in?
    l) Dhading
    m) Dolakha
    n) Gorkha
    o) Kabhrepalanchok
    p) Makawanpur
    q) Nuwakot
    r) Okhaldhunga
    s) Ramechhap
    t) Rasuwa
    u) Sindhuli
    v) Sindhupalchok
20. Which ward is the household currently residing in?
21. What is the gender of the respondent? a) Female b) Male c) Other
22. What is the age of the respondent?
23. What is the gender of the head of household? a) Female b) Male c) Other
24. What is the marital status of the head of household? a) Single b) Married c) Divorced d) Widowed
25. Is the household hosting any individuals within the following groups? **(select multiple)**
    a) With disabilities b) Pregnant or lactating women c) Third gender persons d) Chronically ill persons e) None
26. Including yourself, how many individuals live in this household?
27. Including yourself, how many individuals belong to each of the following demographic groups?
    □ Male 0-4 □ Male 5-16 □ Male 17-59 □ Male over 60
    □ Female 0-4 □ Female 5-16 □ Female 17-59 □ Female over 60
28. How many children aged 5-16 attended formal education before the earthquake?
29. How many children aged 5-16 attend formal education at present?
30. How many members of your household worked during the last 7 days?
    □ Male 5-16 □ Male 17-59 □ Male over 60
    □ Female 5-16 □ Female 17-59 □ Female over 60
31. Which caste does this household belong to? a) Brahmin/Chhetri b) Dalit c) Janajati d) Other (specify)
32. Does this household access pensions and other similar social welfare payments on a regular basis? a) Yes b) No c) Do not know
33. How many members of this household possess citizenship and ID documents?
34. Does this household possess land or property deeds or agreements? a) Yes b) No c) Do not know
35. Have any household members migrated within Nepal or abroad in search of job opportunities in the last 3 months? a) Yes b) No
36. If yes, which members of your household migrated within Nepal or abroad after the earthquake in search of job opportunities?
    □ Male 5-16 □ Male 17-59 □ Male over 60
    □ Female 5-16 □ Female 17-59 □ Female over 60
37. Do any members of your household intend to migrate within Nepal or abroad in search of job opportunities within the next 3 months? a) Yes b) No
38. If yes, which members of your household intend to migrate within Nepal or abroad after the earthquake in search of job opportunities?
    □ Male 5-16 □ Male 17-59 □ Male over 60
    □ Female 5-16 □ Female 17-59 □ Female over 60

Food Security

39. How much did you spend on food, in NPR, over the last 7 days?
40. How much money did you spend on basic needs (including food, health, education, shelter, water, clothing, telecommunications and transport, for example) over the last 7 days?
41. Over the last 7 days, how many days did your household consume the following foods?
    a) Cereals and tubers
    b) Pulses, nuts and seeds (dahl, beans, etc.)
    c) Meat, fish and eggs
    d) Dairy (curd, liquid milk, powdered milk, etc.)
    e) Oils and fats (ghee, oil and butter, etc.)
    f) Vegetables and green leaves
    g) Fruits
    h) Sweets and sugar

42. For each of the above food groups, what is your household's primary source of food? **(repeat for all 8 food groups)** a) Own production b) Bought from private non-market vendors c) Market purchase – cash d) Market purchase – credit e) Food assistance f) Gifts from friends and family g) Other (specify)
43. During the last 7 days, how many times in days did your household have to employ one of the following strategies to meet household food needs? a) Eating less preferred food b) Borrowing food/money from friends c) Reduce number of meals eaten in a day d) Eaten smaller amounts of food than normal at meals e) Adults ate less so younger children could eat f) Go a whole day without a meal (anyone in the household, excluding fasting)
44. Do you need food or cash assistance in the following 6 months?
45. If yes, what are the top 3 types of assistance you will need in the following 6 months? **(select multiple)** a) Rice b) Pulses/lentils c) Vegetable oil d) supplementary food for pregnant women or children under 5 e) One-off cash grant f) In-phase cash for work g) Other (specify)

Income and livelihoods

46. What were the top 3 sources of income for males residing in this household 12 months ago? **(select multiple)** a) Agriculture b) Agricultural daily labour c) Other daily labour d) Skilled labour e) Highly skilled labour f) Trade/shop-keeping g) Tourism h) Remittances i) Social security payments j) Humanitarian cash assistance k) No income l) Other m) Do not know
47. What were the top 3 sources of income for females residing in this household 12 months ago? **(select multiple)** a) Agriculture b) Agricultural daily labour c) Other daily labour d) Skilled labour e) Highly skilled labour f) Trade/shop-keeping g) Tourism h) Remittances i) Social security payments j) Humanitarian cash assistance k) No income l) Other m) Do not know
48. What are the top 3 sources of income for males residing in this household at present? **(select multiple)** a) Agriculture b) Agricultural daily labour c) Other daily labour d) Skilled labour e) Highly skilled labour f) Trade/shop-keeping g) Tourism h) Remittances i) Social security payments j) Humanitarian cash assistance k) No income l) Other m) Do not know
49. What are the top 3 sources of income for females residing in this household at present? **(select multiple)** a) Agriculture b) Agricultural daily labour c) Other daily labour d) Skilled labour e) Highly skilled labour f) Trade/shop-keeping g) Tourism h) Remittances i) Social security payments j) Humanitarian cash assistance k) No income l) Other m) Do not know
50. If the household is involved in any form of agriculture, which of these activities provide a source of income at present? **(select multiple)** a) Aquaculture b) Sale of potatoes c) Sale of cultivated mushrooms d) Sale of other vegetables e) Sale of pulses f) Sale of milk g) Sale of meat h) Sale of cereals i) Rent of draught animals j) Sale of honey k) Sale of forest products l) Sale of fruits m) Sale of spices n) Not applicable o) Other p) Do not know
51. For each of the agricultural income sources above, please indicate whether this source of income decreased or increased in terms of amount of money made compared to last year? a) Decreased b) Increased c) Same as before d) Do not know
52. Since the earthquake, have members of your household had to adopt the below coping mechanisms to meet basic needs or supplement incomes? **(select multiple)** a) Borrowing money/food from a formal/informal lender (bank, relatices, neighbours, etc.) b) Selling more animals (non-productive) than usual c) Selling last female animals d) Selling household assets (radio, furniture, appliances, jewelry, etc.) e) Selling productive assets (agricultural tools, sewing machine, vehicles, etc.) f) Withdrawing children from school g) Eating seed stock h) Harvesting immature crops i) Selling house or land j) Sending household members away k) Sending children household members away l) Majority of household members migrated m) None
53. What was this household's total income over the course of the last 30 days, in NPR?
54. At present, does this household have any debt? a) Yes b) No
55. If yes, how much debt do you have in total, in NPR?
56. If yes, how much debt have you acquired since the earthquake, in NPR?
57. Does your household experience difficulties in repaying debt? a) Yes b) No c) Do not know
58. Do household members have access to credit? a) Yes b) No c) Do not know
59. What skills do your household members possess and practice to make a living? **(select multiple)** a) Artisan b) Electrician c) Mechanic d) Barber/hairdresser e) Carpenter f)

Masonry g) Plumbing h) Farming i) Retail j) Catering/restaurant k) Blacksmith l) Seamstress m) Business and management n) Medical training o) Teaching p) Driving heavy vehicles q) Other r) Do not know s) Not applicable

60. Which of the above skills would be beneficial for your household to acquire to increase your income in the future? **(select multiple)**
61. What losses or damage of assets have you experienced since the earthquake and still have not recovered that affect your livelihood? **(select multiple)** a) Plough b) Space c) Sickle d) Doko/basket e) Other agricultural tools f) Storage facility for grain or livestock g) Livestock shed h) Carts (livestock equipment) i) Small irrigation equipment and water tanks j) Aquaculture facilities or equipment k) Mobile phone l) Motorbike m) Tractor n) Workshop o) Electricity generator p) Tools for carpentry q) Baking oven r) Sewing machine s) Other t) Do not know u) No loss of assets

Agriculture (applies to all households which indicated agriculture as a form of income at present)

62. Does your household use an irrigation system? a) Yes b) No
63. If yes, what is the current status of your irrigation system? a) Functional b) Partially functional c) Not functional d) Do not know
64. For each of the following crops, please indicate how many kilograms of summer crops your household harvested by the end of the summer season last year and whether your expect the same volume of harvest (eg. Less, More, Same amount or Do not know) during this current season, compared to the same season last year? a) Rice b) Maize c) Wheat d) Barley e) Potato f) Millet g) Pulses and lentils
65. Has your storage capacity been affected by the earthquake? a) Yes b) No
66. If yes, how much storage capacity have you lost as a result of the earthquake? a) None b) 0-25% c) 26-50% d) 51-75% e) >75%
67. Does this household need agricultural assistance in the following 6 months? a) Yes b) No
68. If yes, what are the top 3 types of assistance you will need in the following 6 months? **(select multiple)** a) Crop seeds b) Vegetable seeds c) Storage bags or containers d) Agricultural tools e) Rehabilitation of irrigation infrastructure f) Rehabilitation of mushroom or vegetable tunnels g) Fertilisers and pesticides h) Access to agricultural loans i) Training on crop and vegetable seeds production and conservation j) Support to involve in new income generating agricultural activities k) Access to small agricultural machinery l) Support to processing and marketing of agricultural products m) Other (specify)
69. For each of the following resources, please specify whether you relied on any of them before the earthquake, whether you rely on them now and whether your reliance has changed (decreased, increased, same as before or do not know). a) Firewood b) Timber collection c) Other forest products (fruits, mushrooms, etc.)
70. Does your household own livestock? a) Yes b) No
71. For each of the following animals, please specify how many your household owned before the earthquake, how many you own at present and how many are sick, injured or malnourished at present.
    a) Cattle (cows, yaks and buffalo)
    b) Oxen
    c) Donkeys, mules and/or horses
    d) Sheep and goats
    e) Pigs
    f) Chickens
72. How many animals have you lost since the earthquake?
73. Since the earthquake, how many animals left your stock for the following reasons? a) Died b) Sold c) Disappeared d) Other
74. How would you describe the current status of livestock shelter compared to pre-earthquake conditions? a) No damage b) Damaged, has new permanent shelter c) Damaged, has temporary shelter d) Damaged, has no shelter e) Other (specify)
75. Do you need assistance for your livestock in the following 6 months? a) Yes b) No
76. If yes, what are the top 3 types of assistance you need for livestock in the next 6 months? **(select multiple)** a) Animal feed b) Animal mineral supplement c) Forage seeds d) Veterinary services e) Support for rehabilitation of livestock shelter f) Training g) Support to processing and marketing of livestock products h) Slaughtered for consumption or sale/gift i) Other

Access to markets and services

77. For each of the following markets, please specify the mode of transport you use to get there and the time it takes you to reach your closest market.
    a) Food market
    b) Agricultural market
    c) Seller's market
78. From the following list, which items are available in sufficient quantity in the market or shop you currently go to? a) Cereals b) Lentils/pulses c) Vegetables d) Oil e) Seeds f) Agricultural tools g) Plastic sheeting h) Drugs for livestock i) Fertiliser j) Pesticide k) None
79. Do you know how to access offices to replace damaged or destroyed identification documentation? a) Yes b) No
80. Do you know who (or where) to report or seek assistance when you or your household face any abuse, insecurity or exploitation in this area? a) Yes b) No
81. Do you have a plan on how to respond when a disaster happens (floods or earthquakes)? a) Yes b) No
82. How many household members have a bank account?
83. How many male household members have a bank account?
84. How many female household members have a bank account?
85. Of the following services, please indicate which you normally used for banking or collecting remittances before the earthquake and specify whether these still provide the same level of service (Decreased, Increased, Stayed the same or Do not know). a) Formal Bank b) Money Transfer Operation c) Hundi d) Cooperative
86. What is the main source of drinking water for this household? a) Hand pump b) Unprotected well c) Piped water d) Surface water (river/spring) e) Water truck f) Protected well
87. What is the main type of toilet used by this household? a) Household flush with a municipal connection b) Household flush connected to septic tank c) Household non-flush d) Communal latrine e) No toilet
88. If it is a communal latrine, then is it gender separated? a) Yes b) No
89. Do household members experience difficulties in accessing healthcare when sick or injured after the earthquake? a) Yes b) No c) Do not know
90. If yes, what are the main obstacles in accessing healthcare once a household member is sick or injured? a) Health post not functional b) Cost of treatment c) Cost of transport d) Distance e) Staff are not available f) Equipment/medicine are not available g) Not applicable h) Other (specify) i) Do not know
91. Have you received any assistance since the earthquake? a) Yes b) No c) Do not know
92. If yes, have you faced any of the following problems in receiving aid since the earthquake? Please indicate whether this was: no problem at all, a minor problem, a moderate problem, an important problem or not applicable. a) Lack of aid provision b) Physical access constraints due to landslides, road access c) Household members are disabled and unable to travel d) Fear of accessing aid due to personal safety concerns e) Denial of aid due to lack of documentation f) Denial of aid due to ethnicity or caste g) Denial of aid due to gender discrimination h) Denial of aid due to political affiliation i) Lack of information on aid being distributed

Contact information

93. Respondent name
94. Would you be available to discuss over the phone if we have some follow-up questions?
95. Phone number
96. Please record the GPS coordinates of this household to an accuracy of 5 meters.